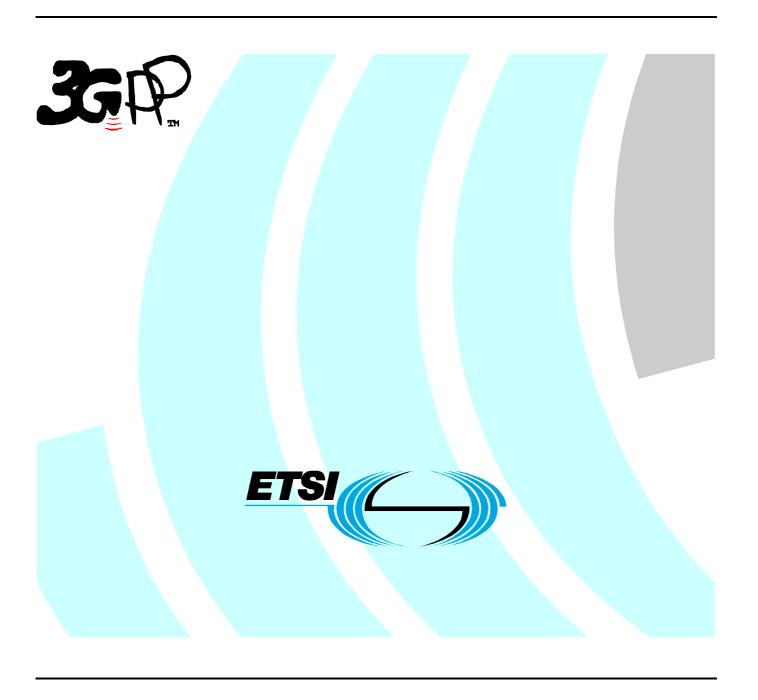
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## **Foreword**

This Technical Specification (TS) has been produced by the 3<sup>rd</sup> Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

#### where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

## 1 Scope

[19]

The present document specifies the radio network layer signalling procedures of the control plane between RNCs in UTRAN.

## 2 References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.
- [1] 3GPP TS 23.003: "Numbering, addressing and identification". [2] 3GPP TS 25.413: "UTRAN Iu Interface RANAP Signalling". 3GPP TS 25.426: "UTRAN Iur and Iub Interface Data Transport & Transport Layer Signalling for [3] DCH Data Streams". [4] 3GPP TS 25.427: "UTRAN Iur and Iub Interface User Plane Protocols for DCH Data Streams". [5] 3GPP TS 25.435: "UTRAN Iub interface User Plane Protocols for Common Transport Channel Data Streams". [6] 3GPP TS 25.104: "UTRA (BS) FDD; Radio transmission and Reception". [7] 3GPP TS 25.105: "UTRA (BS) TDD; Radio Transmission and Reception". [8] 3GPP TS 25.211: "Physical Channels and Mapping of Transport Channels onto Physical Channels (FDD)". 3GPP TS 25.212: "Multiplexing and Channel Coding (FDD)". [9] [10] 3GPP TS 25.214: "Physical Layer Procedures (FDD)". 3GPP TS 25.215: "Physical Layer – Measurements (FDD)". [11] [12] 3GPP TS 25.221: "Physical Channels and Mapping of Transport Channels onto Physical Channels (TDD)". 3GPP TS 25.223: "Spreading and Modulation (TDD)". [13] 3GPP TS 25.225: "Physical Layer - Measurements (TDD)". [14] 3GPP TS 25.304: "UE Procedures in Idle Mode" [15] [16] 3GPP TS 25.331: "RRC Protocol Specification". 3GPP TS 25.402: "Synchronisation in UTRAN, Stage 2". [17] ITU-T Recommendation X.680 (12/97): "Information technology - Abstract Syntax Notation One [18] (ASN.1): Specification of basic notation".

(ASN.1): Information object specification".

ITU-T Recommendation X.681 (12/97): "Information technology - Abstract Syntax Notation One

[20]	ITU-T Recommendation X.691 (12/97): "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)".
[21]	3GPP TS 25.213: "Spreading and modulation (FDD)".
[22]	3GPP TS 25.224: "Physical Layer Procedures (TDD)".
[23]	3GPP TS 25.133: "Requirements for support of Radio Resource management (FDD)".
[24]	3GPP TS 25.123: "Requirements for support of Radio Resource management (TDD)".
[25]	3GPP TS 23.032: "Universal Graphical Area Description (GAD)".
[26]	3GPP TS 25.302: "Services Provided by the Physical Layer".
[27]	3GPP TS 25.213: "Spreading and modulation (FDD)".
[28]	3GPP TR 25.921: "Guidelines and Principles for Protocol Description and Error Handling".
[29]	GSM TS 05.05: "Digital cellular telecommunications system (Phase $2+$ ); Radio transmission and reception".
[30]	ICD-GPS-200: "Navstar GPS Space Segment/Navigation User Interface".
[31]	RTCM-SC104: "RTCM Recommended Standards for Differential GNSS Service (v.2.2)".
[32]	3GPP TS 25.425: "UTRAN Iur and Iub Interface User Plane Protocols for Common Transport Channel data streams ".

## 3 Definitions, Symbols and Abbreviations

## 3.1 Definitions

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

**Elementary Procedure:** 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 has been successfully completed with the receipt of the response.

#### Unsuccessful

- A signalling message explicitly indicates that the EP failed.

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.

**UE Context:** The UE Context contains the necessary information for the DRNC to communicate with a specific UE. The UE Context is created by the Radio Link Setup procedure or by the Uplink Signalling Transfer procedure when the UE makes its first access in a cell controlled by the DRNS. The UE Context is deleted by the Radio Link Deletion

procedure, by the Common Transport Channel Resources Release procedure, or by the Downlink Signalling Transfer procedure when neither any Radio Links nor any common transport channels are established towards the concerned UE. The UE Context is identified by the SCCP Connection for messages using connection oriented mode of the signalling bearer and the D-RNTI for messages using connectionless mode of the signalling bearer, unless specified otherwise in the procedure text.

**Distant RNC Context:** The Distant RNC context is created by the first Common Measurement Initiation Procedure or Information Exchange Initiation Procedure initiated by one RNC and requested from another RNC. The Distant RNC Context is deleted after the Common Measurement Termination, the Common Measurement Failure, the Information Exchange Termination or the Information Exchange Failure procedure when there is no more Common Measurement and no more Information to be provided by the requested RNC to the requesting RNC. The Distant RNC Context is identified by an SCCP connection as, for common measurements and information exchange, only the connection oriented mode of the signalling bearer is used.

## 3.2 Symbols

Void.

#### 3.3 Abbreviations

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

A-GPS Assisted-GPS

ASN.1 Abstract Syntax Notation One

BER Bit Error Rate
BLER Block Error Rate

CCCH Common Control Channel

CCPCH Common Control Physical Channel CCTrCH Coded Composite Transport Channel

CFN Connection Frame Number

C-ID Cell Identifier
CM Compressed Mode
CN Core Network

CPCH Common Packet Channel
CPICH Common Pilot Channel
CRNC Controlling RNC

C-RNTI Cell Radio Network Temporary Identifier

CS Circuit Switched

CTFC Calculated Transport Format Combination

DCH Dedicated Channel
DGPS Differential GPS
DL Downlink

DPC Downlink Power Control

DPCCH Dedicated Physical Control Channel

DPCH Dedicated Physical Channel
DPDCH Dedicated Physical Data Channel
DRAC Dynamic Radio Access Control

DRNC Drift RNC DRNS Drift RNS

D-RNTI Drift Radio Network Temporary Identifier

DRX Discontinuous Reception
DSCH Downlink Shared Channel
Ec Energy in single Code

EDSCHPC Enhanced Downlink Shared Channel Power Control

EP Elementary Procedure
FACH Forward Access Channel
FDD Frequency Division Duplex

FN Frame Number FP Frame Protocol GA Geographical Area GAI Geographical Area Identifier
GPS Global Positioning System
GSM Global System Mobile

HW Hardware

IB Information Block
ID Identity or Identifier
IE Information Element

IMSI International Mobile Subscriber Identity

IPDL Idle Period DownLink

ISCP Interference Signal Code Power

LAC Location Area Code
LCR Low Chip Rate (1.28 Mcps)
LCS Location Services

MAC Medium Access Control
NAS Non Access Stratum
No Reference Noise

O&M Operation and Maintenance OTD Observed Time Difference

P(-)CCPCH Primary CCPCH
PCH Paging Channel
P(-)CPICH Primary CPICH

PCPCH Physical Common Packet Channel PCS Personal Communcation Services PDSCH Physical Downlink Shared Channel

PDU Protocol Data Unit PhCH Physical Channel

PICH Paging Indication Channel Pos Position or Positioning

PRACH Physical Random Access Channel

PS Packet Switched
QE Quality Estimate
RAC Routing Area Code
RACH Random Access Channel
RAN Radio Access Network

RANAP Radio Access Network Application Part

RB Radio Bearer RL Radio Link

RLC Radio Link Control
RLS Radio Link Set
RM Rate Matching

RNC Radio Network Controller RNS Radio Network Subsystem

RNSAP Radio Network Subsystem Application Part
RNTI Radio Network Temporary Identifier

RRC Radio Resource Control
RSCP Received Signal Code Power
Rx Receive or Reception

Sat Satellite

SCCP Signalling Connection Control Part

S(-)CCPCH Secondary CCPCH
SCH Synchronisation Channel
SCTD Space Code Transmit Diversity

SDU Service Data Unit SF System Frame SFN System Frame Number

SHCCH Shared Control Channel
SIR Signal-to-Interference Ratio

SRNC Serving RNC SRNS Serving RNS

S-RNTI Serving Radio Network Temporary Identifier SSDT Site Selection Diversity Transmission

STTD Space Time Transmit Diversity

TDD Time Division Duplex TF Transport Format

TFCI Transport Format Combination Indicator
TFCS Transport Format Combination Set

TFS Transport Format Set

TGCFN Transmission Gap Connection Frame Number

ToAWE Time of Arrival Window Endpoint ToAWS Time of Arrival Window Startpoint

TPC Transmit Power Control
TrCh Transport Channel
TS Time Slot

TSG Technical Specification Group
TSTD Time Switched Transmit Diversity
TTI Transmission Time Interval

TTI Transmission Time Interval TX Transmit or Transmission

UARFCN UTRA Absolute Radio Frequency Channel Number

UC-ID UTRAN Cell Identifier UE User Equipment

UL Uplink

UMTS Universal Mobile Telecommunications System

URA UTRAN Registration Area

U-RNTI UTRAN Radio Network Temporary Identifier

USCH Uplink Shared Channel

UTRA Universal Terrestrial Radio Access

UTRAN Universal Terrestrial Radio Access Network

## 4 General

## 4.1 Procedure Specification Principles

The principle for specifying the procedure logic is to specify the functional behaviour of the DRNC/CRNC exactly and completely. The SRNC functional behaviour is left unspecified. The Physical Channel Reconfiguration procedure is an exception from this principle.

The following specification principles have been applied for the procedure text in subclause 8:

- The procedure text discriminates between:
  - 1) Functionality which "shall" be executed

The procedure text indicates that the receiving node "shall" perform a certain function Y under a certain condition. If the receiving node supports procedure X but cannot perform functionality Y requested in the REQUEST message of a Class 1 EP, the receiving node shall respond with the message used to report unsuccessful outcome for this procedure, containing an appropriate cause value.

2) Functionality which "shall, if supported" be executed

The procedure text indicates that the receiving node "shall, if supported," perform a certain function Y under a certain condition. If the receiving node supports procedure X, but does not support functionality Y, the receiving node shall proceed with the execution of the EP, possibly informing the requesting node about the not supported functionality.

- Any required inclusion of an optional IE in a response message is explicitly indicated in the procedure text. If the procedure text does not explicitly indicate that an optional IE shall be included in a response message, the optional IE shall not be included. For requirements on including *Criticality Diagnostics* IE, see section 10. For examples on how to use the *Criticality Diagnostics* IE, see Annex C.

## 4.2 Forwards and Backwards Compatibility

The forwards and backwards compatibility of the protocol is assured by a mechanism in which all current and future messages, and IEs or groups of related IEs, include ID and criticality fields that are coded in a standard format that will not be changed in the future. These parts can always be decoded regardless of the standard version.

## 4.3 Source Signalling Address Handling

The sender of an RNSAP messages shall include the Source Signalling Address, i.e. the Signalling Address of the sending node.

## 4.4 Specification Notations

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

- [FDD] This tagging of a word indicates that the word preceding the tag "[FDD]" applies only to FDD. This tagging of a heading indicates that the heading preceding the tag "[FDD]" and the section following the heading applies only to FDD.
- [TDD] This tagging of a word indicates that the word preceding the tag "[TDD]" applies only to TDD, including 3.84Mcps TDD and 1.28Mcps TDD. This tagging of a heading indicates that the heading preceding the tag "[TDD]" and the section following the heading applies only to TDD, including 3.84Mcps TDD and 1.28Mcps TDD.
- [3.84Mcps TDD] This tagging of a word indicates that the word preceding the tag "[3.84Mcps TDD]" applies only to 3.84Mcps TDD. This tagging of a heading indicates that the heading preceding the tag "[3.84Mcps TDD]" and the section following the heading applies only to 3.84Mcps TDD.
- [1.28Mcps TDD] This tagging of a word indicates that the word preceding the tag "[1.28Mcps TDD]" applies only to 1.28Mcps TDD. This tagging of a heading indicates that the heading preceding the tag "[1.28Mcps TDD]" and the section following the heading applies only to 1.28Mcps TDD.
- [FDD ...] This tagging indicates that the enclosed text following the "[FDD " applies only to FDD.

  Multiple sequential paragraphs applying only to FDD are enclosed separately to enable insertion of TDD specific (or common) paragraphs between the FDD specific paragraphs.
- [TDD ...] This tagging indicates that the enclosed text following the "[TDD " applies only to TDD including 3.84Mcps TDD and 1.28Mcps TDD. Multiple sequential paragraphs applying only to TDD are enclosed separately to enable insertion of FDD specific (or common) paragraphs between the TDD specific paragraphs.
- [3.84Mcps TDD ...] This tagging indicates that the enclosed text following the "[3.84Mcps TDD " applies only to 3.84Mcps TDD. Multiple sequential paragraphs applying only to 3.84Mcps TDD are enclosed separately to enable insertion of FDD and TDD specific (or common) paragraphs between the 3.84Mcps TDD specific paragraphs.
- [1.28Mcps TDD ...] This tagging indicates that the enclosed text following the "[1.28Mcps TDD " applies only to 1.28Mcps TDD. Multiple sequential paragraphs applying only to 1.28Mcps TDD are enclosed separately to enable insertion of FDD and TDD specific (or common) paragraphs between the 1.28Mcps TDD specific paragraphs.
- Procedure When referring to an elementary procedure in the specification, the Procedure Name is written with the first letters in each word in upper case characters followed by the word "procedure", e.g. Radio Link Setup procedure.
- Message When referring to a message in the specification, the MESSAGE NAME is written with all letters in upper case characters followed by the word "message", e.g. RADIO LINK SETUP REQUEST message.

When referring to an information element (IE) in the specification, the *Information Element Name* is written with the first letters in each word in upper case characters and all letters in Italic font

followed by the abbreviation "IE", e.g. Transport Format Set IE.

Value of an IE When referring to the value of an information element (IE) in the specification, the "Value" is

written as it is specified in subclause 9.2 enclosed by quotation marks, e.g. "Abstract Syntax Error

(Reject)" or "SSDT Active in the UE".

## 5 RNSAP Services

#### 5.1 RNSAP Procedure Modules

The Iur interface RNSAP procedures are divided into four modules as follows:

- 1. RNSAP Basic Mobility Procedures;
- 2. RNSAP DCH Procedures;
- 3. RNSAP Common Transport Channel Procedures;
- 4. RNSAP Global Procedures.

The Basic Mobility Procedures module contains procedures used to handle the mobility within UTRAN.

The DCH Procedures module contains procedures that are used to handle DCHs, DSCHs, and USCHs between two RNSs. If procedures from this module are not used in a specific Iur, then the usage of DCH, DSCH, and USCH traffic between corresponding RNSs is not possible.

The Common Transport Channel Procedures module contains procedures that are used to control common transport channel data streams (excluding the DSCH and USCH) over Iur interface.

The Global Procedures module contains procedures that are not related to a specific UE. The procedures in this module are in contrast to the above modules involving two peer CRNCs.

#### 5.2 Parallel Transactions

Unless explicitly indicated in the procedure specification, at any instance in time one protocol peer shall have a maximum of one ongoing RNSAP DCH procedure related to a certain UE.

## 6 Services Expected from Signalling Transport

The signalling transport shall provide two different service modes for the RNSAP.

- Connection oriented data transfer service. This service is supported by a signalling connection between two RNCs. It shall be possible to dynamically establish and release signalling connections based on the need. Each active UE shall have its own signalling connection. The signalling connection shall provide in sequence delivery of RNSAP messages. RNSAP shall be notified if the signalling connection breaks.
- 2. Connectionless data transfer service. RNSAP shall be notified in case a RNSAP message did not reach the intended peer RNSAP entity.

## 7 Functions of RNSAP

The RNSAP protocol provides the following functions:

- Radio Link Management. This function allows the SRNC to manage radio links using dedicated resources in a DRNS;

- Physical Channel Reconfiguration. This function allows the DRNC to reallocate the physical channel resources for a Radio Link:
- Radio Link Supervision. This function allows the DRNC to report failures and restorations of a Radio Link;
- Compressed Mode Control [FDD]. This function allows the SRNC to control the usage of compressed mode within a DRNS:
- Measurements on Dedicated Resources. This function allows the SRNC to initiate measurements on dedicated resources in the DRNS. The function also allows the DRNC to report the result of the measurements;
- DL Power Drifting Correction [FDD]. This function allows the SRNC to adjust the DL power level of one or more Radio Links in order to avoid DL power drifting between the Radio Links;
- DCH Rate Control. This function allows the DRNC to limit the rate of each DCH configured for the Radio Link(s) of a UE in order to avoid congestion situations in a cell;
- CCCH Signalling Transfer. This function allows the SRNC and DRNC to pass information between the UE and the SRNC on a CCCH controlled by the DRNS;
- Paging. This function allows the SRNC to page a UE in a URA or a cell in the DRNS;
- Common Transport Channel Resources Management. This function allows the SRNC to utilise Common Transport Channel Resources within the DRNS (excluding DSCH resources for FDD);
- Relocation Execution. This function allows the SRNC to finalise a Relocation previously prepared via other interfaces;
- Reporting of General Error Situations. This function allows reporting of general error situations, for which function specific error messages have not been defined.
- DL Power Timeslot Correction [TDD]. This function enables the DRNS to apply an individual offset to the transmission power in each timeslot according to the downlink interference level at the UE.
- Measurements on Common Resources. This function allows an RNC to request from another RNC to initiate
  measurements on Common Resources. The function also allows the requested RNC to report the result of the
  measurements.
- Information Exchange. This function allows an RNC to request from another RNC the transfer of information. The function also allows the requested RNC to report the requested information.

The mapping between the above functions and RNSAP elementary procedures is shown in the Table 1.

Table 1: Mapping between functions and RNSAP elementary procedures

Radio Link Management  a) Radio Link Setup b) Radio Link Addition c) Radio Link Reconfiguration d) Unsynchronised Radio Link Reconfiguration e) Synchronised Radio Link Reconfiguration Preparation f) Synchronised Radio Link Reconfiguration Commit g) Synchronised Radio Link Reconfiguration Cancellation h) Radio Link Pre-emption Physical Channel Reconfiguration Radio Link Supervision  Physical Channel Reconfiguration Radio Link Supervision  Physical Channel Reconfiguration a) Radio Link Restoration a) Radio Link Restoration a) Radio Link Restoration b) Radio Link Restoration c) Radio Link Restoration a) Radio Link Restoration a) Radio Link Reconfiguration c) Synchronised Radio Link Reconfiguration e) Synchronised Radio Link Reconfiguration Preparation f) Synchronised Radio Link Reconfiguration Commit g) Dedicated Measurement Initiation b) Dedicated Measurement Reporting c) Dedicated Measurement Failure DL Power Drifting Correction [FDD] DCH Rate Control DCH Rate Control g) Radio Link Setup b) Radio Link Reconfiguration c) Unsynchronised Radio Link Reconfiguration d) Synchronised Radio Link Reconfiguration Preparation c) Unsynchronised Radio Link Reconfiguration preparation e) Radio Link Congestion a) Uplink Signalling Transfer b) Downlink Signalling Transfer Common Transport Channel Resources Initiation b) Common Transport Channel Resources Release Relocation Commit Error Indication Freparition F	Function	Elementary Procedure(s)	
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d) Common Measurement Failure			
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b) Information Exchange initiation			
c) Information Exchange Termination			
d) Information Exchange Failure			
DL Power Timeslot Correction [TDD] Downlink Power Timeslot Control			

## 8 RNSAP Procedures

## 8.1 Elementary Procedures

In the following tables, all EPs are divided into Class 1 and Class 2 EPs.

**Table 2: Class 1 Elementary Procedures** 

Elementary	Initiating Message	Successful Outcome	Unsuccessful Outcome
Procedure		Response message	Response message
Radio Link Setup	RADIO LINK SETUP	RADIO LINK SETUP	RADIO LINK SETUP
	REQUEST	RESPONSE	FAILURE
Radio Link	RADIO LINK	RADIO LINK	RADIO LINK ADDITION
Addition	ADDITION REQUEST	ADDITION	FAILURE
		RESPONSE	
Radio Link	RADIO LINK	RADIO LINK	
Deletion	DELETION REQUEST	DELETION	
		RESPONSE	
Synchronised	RADIO LINK	RADIO LINK	RADIO LINK
Radio Link	RECONFIGURATION	RECONFIGURATION	RECONFIGURATION
Reconfiguration	PREPARE	READY	FAILURE
Preparation			
Unsynchronised	RADIO LINK	RADIO LINK	RADIO LINK
Radio Link	RECONFIGURATION	RECONFIGURATION	RECONFIGURATION
Reconfiguration	REQUEST	RESPONSE	FAILURE
Physical Channel	PHYSICAL CHANNEL	PHYSICAL CHANNEL	PHYSICAL CHANNEL
Reconfiguration	RECONFIGURATION	RECONFIGURATION	RECONFIGURATION
D !! !	REQUEST	COMMAND	FAILURE
Dedicated	DEDICATED	DEDICATED	DEDICATED
Measurement	MEASUREMENT	MEASUREMENT	MEASUREMENT
Initiation	INITIATION REQUEST	INITIATION	INITIATION FAILURE
0	CONANAONI	RESPONSE	COMMON TRANSPORT
Common	COMMON TRANSPORT	COMMON TRANSPORT	COMMON TRANSPORT CHANNEL RESOURCES
Transport Channel	CHANNEL	CHANNEL	FAILURE
Resources	RESOURCES	RESOURCES	FAILURE
Initialisation	REQUEST	RESPONSE	
Common	COMMON	COMMON	COMMON
Measurement	MEASUREMENT	MEASUREMENT	MEASUREMENT
Initiation	INITIATION REQUEST	INITIATION	INITIATION FAILURE
midation	INTERCED IN THE COLOT	RESPONSE	INTERNATION FAILURE
Information	INFORMATION	INFORMATION	INFORMATION
Exchange	EXCHANGE	EXCHANGE	EXCHANGE INITIATION
Initiation	INITIATION REQUEST	INITIATION	FAILURE
		RESPONSE	

**Table 3: Class 2 Elementary Procedures** 

Elementary Procedure	Initiating Message	
Uplink Signalling Transfer	UPLINK SIGNALLING TRANSFER	
Topinin organization	INDICATION	
Downlink Signalling Transfer	DOWNLINK SIGNALLING	
	TRANSFER REQUEST	
Relocation Commit	RELOCATION COMMIT	
Paging	PAGING REQUEST	
Synchronised Radio Link	RADIO LINK RECONFIGURATION	
Reconfiguration Commit	COMMIT	
Synchronised Radio Link	RADIO LINK RECONFIGURATION	
Reconfiguration Cancellation	CANCEL	
Radio Link Failure	RADIO LINK FAILURE INDICATION	
Radio Link Restoration	RADIO LINK RESTORE INDICATION	
Dedicated Measurement Reporting	DEDICATED MEASUREMENT	
	REPORT	
Dedicated Measurement	DEDICATED MEASUREMENT	
Termination	TERMINATION REQUEST	
Dedicated Measurement Failure	DEDICATED MEASUREMENT	
	FAILURE INDICATION	
Downlink Power Control [FDD]	DL POWER CONTROL REQUEST	
Compressed Mode Command	COMPRESSED MODE COMMAND	
[FDD]		
Common Transport Channel	COMMON TRANSPORT CHANNEL	
Resources Release	RESOURCES RELEASE REQUEST	
Error Indication	ERROR INDICATION	
Downlink Power Timeslot Control	DL POWER TIMESLOT CONTROL	
[TDD]	REQUEST	
Radio Link Pre-emption	RADIO LINK PREEMPTION	
	REQUIRED INDICATION	
Radio Link Congestion	RADIO LINK CONGESTION	
	INDICATION	
Common Measurement Reporting	COMMON MEASUREMENT	
	REPORT	
Common Measurement	COMMON MEASUREMENT	
Termination	TERMINATION REQUEST	
Common Measurement Failure	COMMON MEASUREMENT	
1.6	FAILURE INDICATION	
Information Reporting	INFORMATION REPORT	
Information Exchange Termination	INFORMATION EXCHANGE	
1.6 =	TERMINATION REQUEST	
Information Exchange Failure	INFORMATION EXCHANGE	
	FAILURE INDICATION	

## 8.2 Basic Mobility Procedures

## 8.2.1 Uplink Signalling Transfer

#### 8.2.1.1 General

The procedure is used by the DRNC to forward a Uu message received on the CCCH to the SRNC.

This procedure shall use the connectionless mode of the signalling bearer.

#### 8.2.1.2 Successful Operation

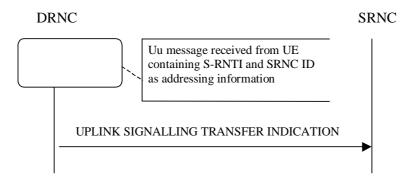


Figure 1: Uplink Signalling Transfer procedure, Successful Operation

When the DRNC receives an Uu message on the CCCH in which the UE addressing information is U-RNTI, i.e. S-RNTI and SRNC-ID, DRNC shall send the UPLINK SIGNALLING TRANSFER INDICATION message to the SRNC identified by the SRNC-ID received from the UE.

If at least one URA Identity is being broadcast in the cell where the Uu message was received (the accessed cell), the DRNC shall include a URA Identity for this cell in the *URA ID* IE, the *Multiple URAs Indicator* IE indicating whether or not multiple URA Identities are being broadcast in the accessed cell, and the RNC Identity of all other RNCs that are having at least one cell within the URA where the Uu message was received in the *URA Information* IE in the UPLINK SIGNALLING TRANSFER INDICATION message.

The DRNC shall include in the message the C-RNTI that it allocates to identify the UE in the radio interface in the accessed cell. If there is no valid C-RNTI for the UE in the accessed cell , the DRNS shall allocate a new C-RNTI for the UE. If the DRNS allocates a new C-RNTI it shall also release any C-RNTI previously allocated for the UE.

If the DRNS has any RACH, [FDD - CPCH], and/or FACH resources allocated for the UE identified by the U-RNTI in another cell than the accessed cell, the DRNS shall release these RACH, [FDD - CPCH,] and/or FACH resources.

If no context exists for this UE in the DRNC, the DRNC shall create a UE Context for this UE, allocate a D-RNTI for the UE Context, and include the *D-RNTI* IE and the identifiers for the CN CS Domain and CN PS Domain that the DRNC is connected to in the UPLINK SIGNALLING TRANSFER INDICATION message. These CN Domain Identifiers shall be based on the LAC and RAC respectively of the cell where the message was received from the UE.

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell, represented either by the *Cell GAI* IE or by the *Cell GA Additional Shapes* IE, where the Uu message was received in the UPLINK SIGNALLING TRANSFER INDICATION message. If the DRNC includes the *Cell GA Additional Shapes* IE in the UPLINK SIGNALLING TRANSFER INDICATION message, it shall also include the *Cell GAI* IE.

[FDD - The DRNC shall include the *DPC Mode Change Support Indicator* IE in the UPLINK SIGNALLING TRANSFER INDICATION message if the accessed cell supports DPC mode change.]

#### 8.2.1.3 Abnormal Conditions

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## 8.2.2 Downlink Signalling Transfer

#### 8.2.2.1 General

The procedure is used by the SRNC to request to the DRNC the transfer of a Uu message on the CCCH in a cell. When used, the procedure is in response to a received Uplink Signalling Transfer procedure.

This procedure shall use the connectionless mode of the signalling bearer.

#### 8.2.2.2 Successful Operation



Figure 2: Downlink Signalling Transfer procedure, Successful Operation

The procedure consists of the DOWNLINK SIGNALLING TRANSFER REQUEST message sent by the SRNC to the DRNC.

The message contains the Cell Identifier (C-ID) contained in the received UPLINK SIGNALLING TRANSFER INDICATION message and the D-RNTI.

Upon receipt of the message, the DRNC shall send the L3 Information on the CCCH in the cell indicated by the *C-ID* IE to the UE identified by the *D-RNTI* IE.

If the *D-RNTI Release Indication* IE is set to "Release D-RNTI" and the DRNS has no dedicated resources (DCH, [TDD - USCH,] and/or DSCH) allocated for the UE, the DRNS shall release the D-RNTI, the UE Context, any RACH, [FDD - CPCH,] and FACH resources and any C-RNTI allocated to the UE Context upon receipt of the DOWNLINK SIGNALLING TRANSFER REQUEST message.

If the *D-RNTI Release Indication* IE is set to "Release D-RNTI" and the DRNS has dedicated resources allocated for the UE, the DRNS shall only release any RACH, [FDD - CPCH,] and FACH resources and any C-RNTI allocated to the UE Context upon receipt of the DOWNLINK SIGNALLING TRANSFER REQUEST message.

#### 8.2.2.3 Abnormal Conditions

If the user identified by the *D-RNTI* IE has already accessed another cell controlled by the DRNC than the cell identified by the *C-ID* IE in the DOWNLINK SIGNALLING TRANSFER REQUEST message, the message shall be ignored.

#### 8.2.3 Relocation Commit

#### 8.2.3.1 General

The Relocation Commit procedure is used by source RNC to execute the Relocation. This procedure supports the Relocation procedures described in [2].

This procedure shall use the signalling bearer mode specified below.

#### 8.2.3.2 Successful Operation



Figure 3: Relocation Commit procedure, Successful Operation

The source RNC sends the RELOCATION COMMIT message to the target RNC to request the target RNC to proceed with the Relocation. When the UE is utilising one or more radio links in the DRNC, the message shall be sent using the

connection oriented service of the signalling bearer and no further identification of the UE Context in the DRNC is required. If on the other hand, the UE is not utilising any radio link, the message shall be sent using the connectionless service of the signalling bearer and the *D-RNTI* IE shall be included in the message to identify the UE Context in the DRNC.

Upon receipt of the RELOCATION COMMIT message from the source RNC, the target RNC finalises the Relocation. If the message contains the transparent *RANAP Relocation Information* IE, the target RNC shall use this information when finalising the Relocation.

#### 8.2.3.3 Abnormal Conditions

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#### 8.2.4 Paging

#### 8.2.4.1 General

This procedure is used by the SRNC to indicate to a CRNC that a UE shall be paged in a cell or URA that is under the control of the CRNC.

This procedure shall use the connectionless mode of the signalling bearer.

#### 8.2.4.2 Successful Operation



Figure 4: Paging procedure, Successful Operation

The procedure is initiated with a PAGING REQUEST message sent from the SRNC to the CRNC.

If the message contains the *C-ID* IE, the CRNC shall page in the indicated cell. Alternatively, if the message contains the *URA-ID* IE, the CRNC shall page in all cells that it controls in the indicated URA.

If the PAGING REQUEST message includes the *CN Originated Page to Connected Mode UE* IE, the CRNC shall include the information contained in the *CN Originated Page to Connected Mode UE* IE when paging the UE.

The CRNC shall calculate the Paging Occasions from the *IMSI* IE and the *DRX Cycle Length Coefficient* IE according to specification in ref. [15] and apply transmission on PICH and PCH accordingly.

#### 8.2.4.3 Abnormal Conditions

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## 8.3 DCH Procedures

## 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.

The connection-oriented service of the signalling bearer shall be established in conjunction with this procedure.

#### 8.3.1.2 Successful Operation

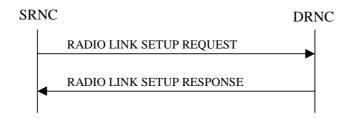


Figure 5: Radio Link Setup procedure: Successful Operation

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 UE-UTRAN connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request establishment of the radio link(s). The Radio Link Setup procedure is initiated with this RADIO LINK SETUP REQUEST message sent from the SRNC to the DRNC.

Upon receipt of the RADIO LINK SETUP REQUEST message, 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.

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

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request for a time period not exceedingthe value of the *Allowed Queuing Time* IE before starting to execute the request.

#### **Transport Channels Handling:**

#### DCH(s):

[TDD - If the *DCH Information* IE is present in the RADIO LINK SETUP REQUEST message, the DRNS shall configure the new DCHs according to the parameters given in the message.]

If the RADIO LINK SETUP REQUEST message includes a *DCH Information* IE with multiple *DCH Specific Info* IEs, then the DRNS shall treat the DCHs in the *DCH Information* IE as a set of co-ordinated DCHs.

[FDD - For each DCH which does not belong to a set of co-ordinated DCHs, and which includes a *QE-Selector* IE set to "selected", the DRNS shall use the Transport channel BER from that DCH for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH, the DRNS shall use the Physical channel BER for the QE, ref. [4]. If the *QE-Selector* IE is set to "non-selected", the DRNS shall use the Physical channel BER for the QE in the UL data frames, ref. [4].]

For a set of co-ordinated DCHs, the DRNS shall use the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" for the QE in the UL data frames, ref. [4]. [FDD - If no Transport channel BER is available for the selected DCH, the DRNS shall use the Physical channel BER for the QE, ref. [4]. If all DCHs have *QE-Selector* IE set to "non-selected", the DRNS shall use the Physical channel BER for the QE, ref. [4].] [TDD - If no Transport channel BER is available for the selected DCH, the DRNS shall use 0 for the QE, ref. [4].]

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH or a set of co-ordinated DCHs as the DCH FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs.

The DRNS shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs as the Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs.

The DRNS shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs as the Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs.

The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise between different frames of the data frames of the DCHs in the downlink on the radio interface in congestion situations once the new RL(s) have been activated.

If the *DCH Information* IE contains a *DCH Specific Info* IE which includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:

- If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS shall apply the Guaranteed Rate in the uplink of this DCH. The DRNS may decide to request the SRNC to limit the user rate of the uplink of the DCH at any point in time. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to only reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCH Information* IE does not include the *Guaranteed UL Rate* IE, the DRNS shall not limit the user rate of the uplink of the DCH.
- If the Guaranteed Rate Information IE includes the Guaranteed DL Rate IE, the DRNS shall apply the Guaranteed Rate in the downlink of this DCH. The DRNS may decide to request the SRNC to limit the user rate of the downlink of the DCH at any point in time. The DRNS may request the SRNC to reduce the user rate of the downlink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to only reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the DCH Specific Info IE in the DCH Information IE does not include the Guaranteed DL Rate IE, the DRNS shall not limit the user rate of the downlink of the DCH.

#### DSCH(s):

If the *DSCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNC shall establish the requested DSCHs [FDD - on the RL indicated by the *PDSCH RL ID* IE]. In addition, the DRNC shall send a valid set of *DSCH Scheduling Priority* IE and *MAC-c/sh SDU Length* IE parameters to the SRNC in the RADIO LINK SETUP RESPONSE message. If the *PDSCH RL ID* IE indicates a radio link in the DRNS, then the DRNC shall allocate a DSCH-RNTI to the UE Context and include the *DSCH-RNTI* IE in the RADIO LINK SETUP RESPONSE message.

#### [TDD - USCH(s)]:

[TDD - If the *USCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNS shall establish the requested USCHs, and the DRNC shall provide the *USCH Information Response* IE in the RADIO LINK SETUP RESPONSE message.]

[TDD – The DRNS shall use the list of RB Identities in the *RB Info* IE in the *USCH information* IE to map each *RB Identity* IE to the corresponding USCH.]

#### [TDD - CCTrCH Handling]:

[TDD – If the *UL CCTrCH Information* IE is present in the RADIO LINK SETUP REQUEST message, the DRNS shall configure the new UL CCTrCH(s) according to the parameters given in the message.]

[1.28Mcps TDD - If the *UL CCTrCH Information LCR* IE includes the *TDD TPC Uplink Step Size* IE, the DRNS shall configure the uplink TPC step size according to the parameters given in the message.]

[TDD – If the *DL CCTrCH Information* IE is present in the RADIO LINK SETUP REQUEST message, the DRNS shall configure the new DL CCTrCH(s) according to the parameters given in the message.]

[TDD – If the *TPC CCTrCH List* IE is present in the RADIO LINK SETUP REQUEST message, the DRNS shall configure the identified UL CCTrCHs with TPC according to the parameters given in the message.]

#### **Physical Channels Handling:**

#### [FDD - Compressed Mode]:

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE, the DRNS shall use the information to activate the indicated Transmission Gap Pattern Sequence(s) in the new RL. The received *CM Configuration* 

Change CFN IE refers to latest passed CFN with that value. The DRNS shall treat the received TGCFN IEs as follows:]

- [FDD If any received *TGCFN* IE has the same value as the received *CM Configuration Change CFN* IE, the DRNS shall consider the concerned Transmission Gap Pattern Sequence as activated at that CFN.]
- [FDD If any received *TGCFN* IE does not have the same value as the received *CM Configuration Change CFN* IE but the first CFN after the CM Configuration Change CFN with a value equal to the *TGCFN* IE has already passed, the DRNS shall consider the concerned Transmission Gap Pattern Sequence as activated at that CFN.]
- [FDD For all other Transmission Gap Pattern Sequences included in the *Active Pattern Sequence Information* IE, the DRNS shall activate each Transmission Gap Pattern Sequence at the first CFN after the CM Configuration Change CFN with a value equal to the *TGCFN* IE for the Transmission Gap Pattern Sequence.][FDD- If the *Downlink Compressed Mode Method* IE in one or more Transmission Gap Pattern Sequence is set to "SF/2" in the RADIO LINK SETUP REQUEST message, the DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information* IE in the RADIO LINK SETUP RESPONSE message indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

#### [FDD - DL Code Information]:

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

#### General:

[FDD - If the *Propagation Delay* IE is included, the DRNS may use this information to speed up the detection of UL synchronisation on the Uu interface.]

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

#### **Radio Link Handling:**

#### **Diversity Combination Control:**

[FDD - The *Diversity Control Field* IE indicates for each RL, except for the first RL whether the DRNS shall combine the RL with any of the other RLs or not.

- If the *Diversity Control Field* IE is set to "May" (be combined with another RL), the DRNS shall decide for any of the alternatives.
- If the *Diversity Control Field* IE is set to "Must", the DRNS shall combine the RL with one of the other RLs. When an RL is to be combined, the DRNS shall choose which RL(s) to combine it with.
- If the *Diversity Control Field* IE is set to "Must not", the DRNS shall not combine the RL with any other existing RL.]

[FDD - In the RADIO LINK SETUP RESPONSE message, the DRNC shall indicate for each RL with the Diversity Indication in the *RL Information Response* IE whether the RL is combined or not.

- [FDD In case of not combining with a RL previously listed in the RADIO LINK SETUP RESPONSE message or for the first RL in the RADIO LINK SETUP RESPONSE message, the DRNC shall include in the *DCH Information Response* IE in the RADIO LINK SETUP RESPONSE message the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DCH of this RL.]
- [FDD Otherwise in case of combining, the *RL ID* IE indicates (one of) the RL(s) previously listed in this RADIO LINK SETUP RESPONSE message with which the concerned RL is combined.]

[TDD - The DRNC shall always include in the RADIO LINK SETUP RESPONSE message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH,] DSCH and USCH] of the RL.]

In the case of a set of co-ordinated DCHs requiring a new transport bearer the *Binding ID* IE and the *Transport Layer Address* IE shall be included in the RADIO LINK SETUP RESPONSE message for only one of the DCHs in the set of co-ordinated DCHs.

#### [FDD-Transmit Diversity]:

[FDD – If the cell in which the RL is being set up is capable to provide Close loop Tx diversity, the DRNC shall include the *Closed Loop Timing Adjustment Mode* IE in the RADIO LINK SETUP RESPONSE message indicating the configured Closed loop timing adjustment mode of the cell.]

[FDD – When the *Diversity Mode* IE is set to "STTD", "Closed loop mode1", or "Closed loop mode2", the DRNC shall activate/deactivate the Transmit Diversity for each Radio Link in accordance with the *Transmit Diversity Indicator* IE].

#### **DL Power Control:**

[FDD - If both the *Initial DL TX Power* IE and *Uplink SIR Target* IE are included in the message, the DRNS shall use the indicated DL TX Power and Uplink SIR Target as initial value. If the value of the *Initial DL TX Power* IE is outside the configured DL TX power range, the DRNS shall apply these constrains when setting the initial DL TX power. The DRNS shall also include the configured DL TX power range defined by *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK SETUP RESPONSE message. The DRNS shall not transmit with a higher power than indicated by the *Maximum DL TX Power* IE or lower than indicated by the *Minimum DL TX Power* IE on any DL DPCH of the RL except during compressed mode, when the  $\delta P_{curr}$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

[FDD - If both the *Initial DL TX Power* and the *Uplink SIR Target* IEs are not included in the RADIO LINK SETUP REQUEST message, then DRNC shall determine the initial Uplink SIR Target and include it in the *Uplink SIR Target* IE in the RADIO LINK SETUP RESPONSE message.]

[FDD - If the *Primary CPICH Ec/No* IE is present, the DRNC should use the indicated value when deciding the Initial DL TX Power.]

[TDD - If the *Primary CCPCH RSCP* IE [3.84Mcps TDD - and/or the *DL Time Slot ISCP Info* IE] [1.28Mcps TDD - and/or the *DL Time Slot ISCP Info LCR* IE] are present, the DRNC should use the indicated values when deciding the Initial DL TX Power for the Radio Link. The DRNS shall use the indicated DL Timeslot ISCP when determining the initial DL power per timeslot as specified in [22], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged.]

[1.28McpsTDD - If the *TSTD Support Indicator* IE is present, the DRNS shall apply this information when configuring the transmit diversity for the new radio link..]

[FDD – The DRNS shall start the DL transmission using the indicated DL TX power level (if received) or the decided DL TX power level on each DL channelisation code of a RL until UL synchronisation is achieved on the Uu interface for the concerned RLS or Power Balancing is activated. No inner loop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10] subclause 5.2.1.2) and the power control procedure (see 8.3.7).]

[TDD – The DRNS shall start the DL transmission using the decided DL TX power level on each DL channelisation code and on each Time Slot of a RL until UL synchronisation is achieved on the Uu interface for the concerned RL. No inner loop power control shall be performed during this period. Then after UL synchronisation, the DL power shall vary according to the inner loop power control (see ref. [22] subclause 4.2.3.3).]

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

[FDD - If the *DPC Mode* IE is present in the RADIO LINK SETUP REQUEST message, the DRNC shall apply the DPC mode indicated in the message, and be prepared that the DPC mode may be changed during the life time of the RL. If the *DPC Mode* IE is not present in the RADIO LINK SETUP REQUEST message, DPC mode 0 shall be applied (see ref. [10]).]

#### **Neighbouring Cell Handling:**

If there are UMTS neighbouring cell(s) to the cell in which a Radio Link was established then:

- The DRNC shall include in the RADIO LINK SETUP RESPONSE message the Neighbouring FDD Cell Information IE and/or Neighbouring TDD Cell Information IE in the Neighbouring UMTS Cell Information IE for each neighbouring FDD cell and/or TDD cell respectively. In addition, if the information is available, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the Frame Offset IE, Primary CPICH Power IE, Cell Individual Offset IE, STTD Support Indicator IE, Closed Loop Model Support Indicator IE and Closed Loop Model Support Indicator IE in the Neighbouring FDD Cell Information IE, and the Frame Offset IE, Cell Individual Offset IE, DPCH Constant Value IE and the PCCPCH Power IE in the Neighbouring TDD Cell Information IE or the Neighbouring TDD Cell Information LCR IE.If the Neighbouring TDD Cell Information IE includes the Sync Case IE for the set to "Case1", the DRNC shall include the Time Slot For SCH IE in the Neighbouring TDD Cell Information IE. If the Neighbouring TDD Cell Information IE includes Sync Case IE set to "Case2", the DRNC shall include the SCH Time Slot IE in the Neighbouring TDD Cell Information IE.
- If a UMTS neighbouring cell is not controlled by the same DRNC, the DRNC shall also include in the RADIO LINK SETUP RESPONSE message the *CN PS Domain Identifier* IE and/or *CN CS Domain Identifier* IE which are the identifiers of the CN nodes connected to the RNC controlling the UMTS neighbouring cell.
- If the information is available, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *DPC Mode Change Support Indicator* IE for each neighbour cell in the *Neighbouring FDD Cell Information* IE.
- For the UMTS neighbouring cells which are controlled by the DRNC, the DRNC shall report in the RADIO LINK SETUP RESPONSE message the restriction state of those cells, otherwise the *Restriction State Indicator* IE may be absent. The DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Restriction State Indicator* IE for the neighbouring cells which are controlled by the DRNC in the *Neighbouring FDD Cell Information* IE, the *Neighbouring TDD Cell Information* IE and the *Neighbouring TDD Cell Information LCR* IE.

If there are GSM neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Neighbouring GSM Cell Information* IE for each of the GSM neighbouring cells. If available the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Cell Individual Offset* IE, and if the *Cell Individual Offset* IE alone cannot represent the value of the offset, the DRNC shall also include the *Extended GSM Cell Individual Offset* IE in the *Neighbouring GSM Cell Information* IE.

#### [1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the *Uplink Synchronisation Parameters LCR* IE is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

#### [1.28Mcps TDD - Uplink Timing Advance Control LCR]:

[1.28Mcps TDD - The DRNC shall include the *Uplink Timing Advance Control LCR* IE in the RADIO LINK SETUP RESPONSE message.]

#### General:

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the SSDT Cell Identity for EDSCHPC IE, the DRNS shall activate enhanced DSCH power control, if supported, using the SSDT Cell Identity for EDSCHPC IE and SSDT Cell Identity Length IE as well as Enhanced DSCH PC IE in accordance with ref. [10] subclause 5.2.2. If the RADIO LINK SETUP REQUEST message includes both SSDT Cell Identity IE and SSDT Cell Identity for EDSCHPC IE, then the DRNS shall ignore the SSDT Cell Identity for EDSCHPC IE.]

[FDD - If the *DRAC Control* IE is set to "requested" in the RADIO LINK SETUP REQUEST message for at least one DCH and if the DRNS supports the DRAC, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Secondary CCPCH Info* IE for the FACH in which the DRAC information is sent, for each Radio Link established in a cell in which DRAC is active. If the DRNS does not support DRAC, the DRNC shall not provide these IEs in the RADIO LINK SETUP RESPONSE message.]

If no *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *D-RNTI* IE, the *CN PS Domain Identifier* IE and/or the *CN CS Domain Identifier* IE for the CN domains (using LAC and RAC of the current cell) to which the DRNC is connected.

[FDD - If the *D-RNTI* IE was included the RADIO LINK SETUP REQUEST message the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Primary Scrambling Code* IE, the *UL UARFCN* IE and the *DL UARFCN*.]

[TDD – If the *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *UARFCN* IE, the *Cell Parameter ID* IE and the *SCTD Indicator* IE.]

[3.84Mcps TDD - If the *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Sync Case* IE and if the *Sync Case* IE is set to "Case 2", the DRNC shall also include the *SCH Time Slot* IE in the RADIO LINK SETUP RESPONSE message. If the included *Sync Case* IE is set to "Case1", the DRNC shall also include the *Time Slot For SCH* IE]

[3.84Mcps TDD - The DRNC shall include the Secondary CCPCH Info TDD IE in the RADIO LINK SETUP RESPONSE message if at least one DSCH Information Response IE or USCH Information Response IE is included in the message and at least one DCH is configured for the radio link. The DRNC shall also include the Secondary CCPCH Info TDD IE in the RADIO LINK SETUP RESPONSE message if at least one DSCH Information Response IE or USCH Information Response IE is included in the message and the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

[1.28 Mcps TDD - The DRNC shall include the *Secondary CCPCH Info TDD LCR* IE in the RADIO LINK SETUP RESPONSE message if at least one *DSCH Information Response LCR* IE or *USCH Information Response LCR* IE is included in the message and at least one DCH is configured for the radio link. The DRNC shall also include the *Secondary CCPCH Info TDD LCR* IE in the RADIO LINK SETUP RESPONSE message if at least one *DSCH Information Response LCR* IE or *USCH Information Response LCR* IE is included in the message and the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

For each Radio Link established in a cell in which at least one URA Identity is being broadcast, the DRNC shall include in the *URA Information* IE within the RADIO LINK SETUP RESPONSE message the URA Information for this cell including the *URA ID* IE, the *Multiple URAs Indicator* IE indicating whether or not multiple URA Identities are being broadcast in the cell, and the *RNC-ID* IEs of all other RNCs that have at least one cell within the URA identified by the *URA ID* IE.

Depending on local configuration in the DRNS, the DRNC may include in the RADIO LINK SETUP RESPONSE message the *UTRAN Access Point Position* IE and the geographical co-ordinates of the cell, represented either by the *Cell GAI* IE or by the *Cell GA Additional Shapes* IE. If the DRNC includes the *Cell GA Additional Shapes* IE in the RADIO LINK SETUP RESPONSE message, it shall also include the *Cell GAI* IE.

If the DRNS need to limit the user rate in the uplink of a DCH due to congestion caused by the UL UTRAN Dynamic Resources (see subclause 9.2.1.79) when starting to utilise a new Radio Link, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Allowed UL Rate* IE in the *DCH Information Response* IE for this Radio Link.

If the DRNS needs to limit the user rate in the downlink of a DCH due to congestion caused by the DL UTRAN Dynamic Resources (see subclause 9.2.1.79) when starting to utilise a new Radio Link, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Allowed DL Rate* IE in the *DCH Information Response* IE for this Radio Link.

If the *Permanent NAS UE Identity* IE is included in the RADIO LINK SETUP REQUEST message, the DRNS shall store the information for the considered UE Context for the life-time of the UE Context.

If the RADIO LINK SETUP REQUEST message includes the *Permanent NAS UE Identity* IE and a *C-ID* IE corresponding to a cell reserved for operator use, the DRNS shall use this information to determine whether it can set up a Radio Link on this cell or not for the considered UE Context.

The DRNS shall start receiving on the new RL(s) after the RLs are successfully established.

#### [FDD - Radio Link Set Handling]:

[FDD - The *First RLS Indicator* IE indicates if the concerned RL shall be considered part of the first RLS established towards this UE. The DRNS shall use the *First RLS Indicator* IE to determine the initial TPC pattern in the DL of the concerned RL and all RLs which are part of the same RLS, as described in [10], section 5.1.2.2.1.2.

[FDD – For each RL not having a common generation of the TPC commands in the DL with another RL, the DRNS shall assign to the RL a unique value for the *RL Set ID* IE which uniquely identifies the RL as an 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 to each RL the same value for the *RL Set ID* IE which uniquely identifies these RLs as members of the same RL Set within the UE Context.]

[FDD –The UL out-of-sync algorithm defined in ref. [10] shall, for each of the established RL Set(s), use the maximum value of the parameters N\_OUTSYNC\_IND and T\_RLFAILURE that are configured in the cells supporting the radio links of the RL Set. The UL in-sync algorithm defined in [10] shall, for each of the established RL Set(s), use the minimum value of the parameters N\_INSYNC\_IND, that are configured in the cells supporting the radio links of the RL Set.]

#### Response Message:

Upon receipt of the RADIO LINK SETUP REQUEST message, the DRNS allocates the 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, for each set of co-ordinated DCHs and for each DSCH [TDD – and USCH]. This information shall be sent to the SRNC in the RADIO LINK SETUP RESPONSE message when all the RLs have been successfully established.

After sending the RADIO LINK SETUP RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation on the Uu interface. [FDD - The DRNS shall start transmission on the DL DPDCH(s) of the new RL as specified in ref. [4].] [TDD – The DRNS shall start transmission on the new RL immediately as specified in ref. [4].]

#### 8.3.1.3 Unsuccessful Operation

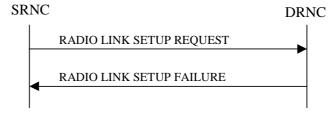


Figure 6: Radio Link Setup procedure: Unsuccessful Operation

If the establishment of at least one radio link is unsuccessful, the DRNC shall respond with a RADIO LINK SETUP FAILURE message. The DRNC shall include in the RADIO LINK SETUP FAILURE message a general *Cause* IE or a *Cause* IE for each failed radio link. The *Cause* IE indicates the reason for failure.

[FDD -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 the RL identified by the *PDSCH RL ID* IE is a radio link in the DRNS and this RL is successfully established, then the DRNC shall allocate a DSCH-RNTI to the UE Context and include the *DSCH-RNTI* IE in the RADIO LINK SETUP FAILURE message.]

If the RADIO LINK SETUP REQUEST message includes a *C-ID* IE corresponding to a cell reserved for operator use and the *Permanent NAS UE Identity* IE is not present, the DRNC shall reject the procedure and send the RADIO LINK SETUP FAILURE message.

Typical cause values are:

## **Radio Network Layer Causes:**

- [FDD UL Scrambling Code Already in Use];
- DL Radio Resources not Available;
- UL Radio Resources not Available;
- [FDD Combining Resources not available];
- Combining not Supported
- Requested Configuration not Supported;
- Cell not Available;
- [FDD Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- Number of DL codes not supported;
- Number of UL codes not supported;
- Dedicated Transport Channel Type not Supported;
- DL Shared Channel Type not Supported;
- [TDD UL Shared Channel Type not Supported];
- [FDD UL Spreading Factor not Supported];
- [FDD DL Spreading Factor not Supported];
- CM not Supported;
- [FDD DPC mode change not Supported];
- Cell reserved for operator use.

## **Transport Layer Causes:**

- Transport Resource Unavailable.

#### **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.

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Active Pattern Sequence Information* IE, but the *Transmission Gap Pattern Sequence Information* IE is not present, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD – If the RADIO LINK SETUP REQUEST message includes both the *Initial DL TX Power* IE and the *Primary CPICH Ec/No* IE or does not include either of these IEs, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected" [TDD – or no DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected"], the DRNS shall reject the Radio Link Setup procedure and shall respond with a RADIO LINK SETUP FAILURE message.

[FDD - If only the *Initial DL TX Power* IE or the *Uplink SIR Target* IE is included in the RADIO LINK SETUP REQUEST message, then DRNC shall reject the Radio Link Setup procedure and shall respond with the RADIO LINK SETUP FAILURE message.]

If the RADIO LINK SETUP REQUEST message includes a *DCH Information* IE with multiple *DCH Specific Info* IEs, and if the DCHs in the *DCH Information* IE do not have the same *Transmission Time Interval* IE in the *Semi-static Transport Format Information* IE, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.

# 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 concerned 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 subclause 3.1.

[FDD – The Radio Link Addition procedure serves to establish one or more new Radio Links which do not contain the DSCH. If the DSCH shall be moved into a new Radio Link, the Radio Link reconfiguration procedure shall be applied.]

[TDD – The Radio Link Addition procedure serves to establish a new Radio Link with the DSCH and USCH included, if they existed before.]

## 8.3.2.2 Successful Operation

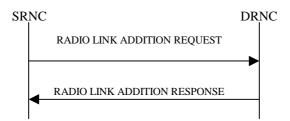


Figure 7: Radio Link Addition procedure: Successful Operation

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

Upon receipt, 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.

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

## **Transport Channel Handling:**

[TDD - The DRNC shall include the UL/DL DPCH Information IE within the UL/DL CCTrCH Information IE for each CCTrCH that requires DPCHs.]

# DSCH:

[TDD - If the radio link to be added includes a DSCH, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message a *DSCH Information Response* IE for each DSCH]

#### [TDD - USCH:]

[TDD - If the radio link to be added includes any USCHs, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message a *USCH Information Response* IE for each USCH.]

## **Physical Channels Handling:**

#### [FDD-Compressed Mode:]

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Active Pattern Sequence Information* IE, the DRNS shall use the information to activate the indicated (all ongoing) Transmission Gap Pattern Sequence(s) in the new RL. The received *CM Configuration Change CFN* IE refers to the latest passed CFN with that value. The DRNS shall treat the received *TGCFN* IEs as follows:]

- [FDD If any received *TGCFN* IE has the same value as the received *CM Configuration Change CFN* IE, the DRNS shall consider the concerned Transmission Gap Pattern Sequence as activated at that CFN.]
- [FDD If any received *TGCFN* IE does not have the same value as the received *CM Configuration Change CFN* IE but the first CFN after the CM Configuration Change CFN with a value equal to the *TGCFN* IE has already passed, the DRNS shall consider the concerned Transmission Gap Pattern Sequence as activated at that CFN.]
- [FDD For all other Transmission Gap Pattern Sequences included in the Active Pattern Sequence
   Information IE, the DRNS shall activate each Transmission Gap Pattern Sequence at the first CFN after
   the CM Configuration Change CFN with a value equal to the TGCFN IE for the Transmission Gap
   Pattern Sequence.]

[FDD - If the *Active Pattern Sequence Information* IE is not included, the DRNS shall not activate the ongoing compressed mode pattern in the new RLs, but the ongoing pattern in the existing RL shall be maintained.]

[FDD - If some Transmission Gap Pattern sequences using SF/2 method are initialised in the DRNS, the DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information IE* in the *DL Code Information* IE in the RADIO LINK ADDITION RESPONSE message to indicate the Scrambling code change method that it selects for each channelisation code.]

## [FDD-DL Code Information]:

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

# [TDD - CCTrCH Handling]:

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

[1.28Mcps TDD - If the *UL CCTrCH Information* IE includes the TDD TPC *Uplink Step Size* IE, the DRNS shall configure the uplink TPC step size according to the parameters given in the message, otherwise it shall use the step size configured in other radio link.]

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

[TDD - If the *DL CCTrCH Information* IE includes *TDD TPC Downlink Step Size* IE, the DRNS shall configure the downlink TPC step size according to the parameters given in the message, otherwise it shall use the step size configured in other radio link.]

#### General:

[FDD - The DRNS shall use the provided Uplink SIR Target value as the current target for the inner-loop power control.]

#### **Radio Link Handling:**

#### **Diversity Combination Control:**

The *Diversity Control Field* IE indicates for each RL whether the DRNS shall combine the new RL with existing RL(s) or not.

- If the *Diversity Control Field* IE is set to "May" (be combined with another RL), the DRNS shall decide for any of the alternatives.
- If the *Diversity Control Field* IE is set to "Must", the DRNS shall combine the RL with one of the other RL.
- If the *Diversity Control Field* IE is set to "Must not", the DRNS shall not combine the RL with any other existing RL.

When a new RL is to be combined, the DRNS shall choose the RL(s) with which to combine it.

In the case of not combining a RL with a RL established with a previous Radio Link Setup or Radio Link Addition Procedure or a RL previously listed in the RADIO LINK ADDITION RESPONSE message, the DRNC shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that no combining is done. In this case the DRNC shall include in the *DCH Information Response* IE 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 ADDITION RESPONSE message.

In the case of combining with a RL established with a previous Radio Link Setup or Radio Link Addition Procedure or with a RL previously listed in this RADIO LINK ADDITION RESPONSE message, the DRNC shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that the RL is combined. In this case, the RL ID IE indicates (one of) the previously established RL(s) or a RL previously listed in this RADIO LINK ADDITION RESPONSE message with which the new RL is combined.

[TDD – The DRNC shall always include in the RADIO LINK ADDITION RESPONSE message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DSCH and USCH of the RL.]

In the case of a set of co-ordinated DCHs, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Binding ID* IE and the *Transport Layer Address* IE for only one of the DCHs in the set of co-ordinated DCHs.

If the DRNS needs to limit the user rate in the uplink of a DCH due to congestion caused by the UL UTRAN Dynamic Resources (see subclause 9.2.1.79) when starting to utilise a new Radio Link, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Allowed UL Rate* IE in the *DCH Information Response* IE for this Radio Link.

If the DRNS needs to limit the user rate in the downlink of a DCH due to congestion caused by the DL UTRAN Dynamic Resources (see subclause 9.2.1.79) when starting to utilise a new Radio Link, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Allowed DL Rate* IE in the *DCH Information Response* IE for this Radio Link.

#### [FDD-Transmit Diversity]:

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

[FDD – If the cell in which the RL is being added is capable to provide Close loop Tx diversity, the DRNC shall indicate the Closed loop timing adjustment mode of the cell by including the *Closed Loop Timing Adjustment Mode* IE in the RADIO LINK ADDITION RESPONSE message.]

[FDD – When the *Transmit Diversity Indicator* IE is present the DRNS shall activate/deactivate the Transmit Diversity for each new Radio Link in accordance with the *Transmit Diversity Indicator* IE using the diversity mode of the existing Radio Link(s).]

#### **DL Power Control:**

[FDD - If the *Primary CPICH Ec/No* IE is included for an RL in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power for this RL. If the *Primary* 

*CPICH Ec/No* IE is not present, the DRNS shall set the Initial DL TX Power based on the power relative to the Primary CPICH power used by the existing RLs.]

[TDD - If the *Primary CCPCH RSCP* IE [3.84Mcps TDD - and/or the *DL Time Slot ISCP Info* IE] [1.28Mcps TDD - and/or the *DL Time Slot ISCP Info LCR* IE] are included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use them in the calculation of the Initial DL TX Power. If the *Primary CCPCH RSCP* IE [3.84Mcps TDD - and *DL Time Slot ISCP Info IE*] [1.28Mcps TDD - and *DL Time Slot ISCP Info LCR* IE] are not present, the DRNS shall set the Initial DL TX Power based on the power relative to the Primary CCPCH power used by the existing RL.]

[FDD - The Initial DL TX Power shall be applied until UL synchronisation is achieved on the Uu interface for that RLS or Power Balancing is activated. No inner loop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref. [10] subclause 5.2.1.2) and the power control procedure (see 8.3.7)].

[TDD – The Initial DL TX Power shall be applied until UL synchronisation is achieved on the Uu interface for that RL. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref. [22] subclause 4.2.3.3).].

[FDD - If the *DPC Mode* IE is present in the RADIO LINK ADDITION REQUEST message, the DRNC shall apply the DPC mode indicated in the message, and be prepared that the DPC mode may be changed during the lifetime of the RL. If the *DPC Mode* IE is not present in the RADIO LINK ADDITION REQUEST message, DPC mode 0 shall be applied (see ref. [10]).]

#### **UL Power Control:**

The DRNC shall also provide the configured UL Maximum SIR and UL Minimum SIR 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.

[FDD - The DRNS shall use the provided Uplink SIR Target value as the current target for the inner-loop power control.]

The DRNC shall provide the configured  $Maximum\ DL\ TX\ Power\ IE$  and  $Minimum\ DL\ TX\ Power\ IE$  for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. The DRNS shall not transmit with a higher power than indicated by the  $Maximum\ DL\ TX\ Power\ IE$  or lower than indicated by the  $Minimum\ DL\ TX\ Power\ IE$  or any DL DPCH of the RL [FDD – except during compressed mode, when the  $\delta P_{curr}$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.].

#### **Neighbouring Cell Handling:**

If there are UMTS neighbouring cell(s) to the cell in which a Radio Link was established then:

- The DRNC shall include in the RADIO LINK ADDITION RESPONSE message the Neighbouring FDD Cell Information IE and/or Neighbouring TDD Cell Information IE in the Neighbouring UMTS Cell Information IE for each neighbouring FDD cell and/or TDD cell respectively. In addition, if the information is available, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the Frame Offset IE, Primary CPICH Power IE, Cell Individual Offset IE, STTD Support Indicator IE, Closed Loop Model Support Indicator IE and Closed Loop Model Support Indicator IE in the Neighbouring FDD Cell Information IE, and the Frame Offset IE, Cell Individual Offset IE, DPCH Constant Value IE and the PCCPCH Power IE in the Neighbouring TDD Cell Information IE or the Neighbouring TDD Cell Information LCR IE.If the Neighbouring TDD Cell Information IE includes the Sync Case IE set to "Case1", the DRNC shall include the Time SlotFor SCH IE in the Neighbouring TDD Cell Information IE. If the Neighbouring TDD Cell Information IE includes the Sync Case IE set to "Case2", the DRNC shall include the SCH Time Slot IE in the Neighbouring TDD Cell Information IE.
- If a UMTS neighbouring cell is not controlled by the same DRNC, the DRNC shall also include in the RADIO LINK ADDITION RESPONSE message the *CN PS Domain Identifier* IE and/or *CN CS Domain Identifier* IE which are the identifiers of the CN nodes connected to the RNC controlling the UMTS neighbouring cell.

- [FDD The DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *DPC Mode Change Support Indicator* IE for each neighbour cell in the *Neighbouring FDD Cell Information* IE if this information is available.]
- For the UMTS neighbouring cells which are controlled by the DRNC, the DRNC shall report in the RADIO LINK ADDITION RESPONSE message the restriction state of those cells, otherwise *Restriction State Indicator* IE may be absent. The DRNC shall include the *Restriction State Indicator* IE for the neighbouring cells which are controlled by the DRNC in the *Neighbouring FDD Cell Information* IE, the *Neighbouring TDD Cell Information* IE and the *Neighbouring TDD Cell Information LCR* IE.

If there are GSM neighbouring cells to the cell(s) in which a radio link is established, the DRNC shall include the *Neighbouring GSM Cell Information* IE in the RADIO LINK ADDITION RESPONSE message for each of the GSM neighbouring cells. If available, the DRNC shall include the *Cell Individual Offset* IE, and if the Cell Individual Offset IE alone cannot represent the value of the offset, the DRNC shall also include the Extended GSM Cell Individual Offset IE in the *Neighbouring GSM Cell Information* IE.

### [1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the *Uplink Synchronisation Parameters LCR* IE is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

#### [1.28Mcps TDD - Uplink Timing Advance Control LCR]:

[1.28Mcps TDD - The DRNC shall include the *Uplink Timing Advance Control LCR* IE in the RADIO LINK ADDITION RESPONSE message.]

#### General:

[FDD - If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE, the DRNS shall, if supported, activate SSDT for the concerned new RL using the indicated SSDT Cell Identity.]

Depending on local configuration in the DRNS, the DRNC may include in the RADIO LINK ADDITION RESPONSE message the *UTRAN Access Point Position* IE and the geographical co-ordinates of the cell, represented either by the *Cell GAI* IE or by the *Cell GA Additional Shapes* IE. If the DRNC includes the *Cell GA Additional Shapes* IE in the RADIO LINK ADDITION RESPONSE message, it shall also include the *Cell GAI* IE.

For each Radio Link established in a cell in which at least one URA Identity is being broadcast, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message a URA Information for this cell including the *URA ID* IE, the *Multiple URAs Indicator* IE indicating whether or not multiple URA Identities are being broadcast in the cell, and the *RNC-ID* IEs of all other RNCs that have at least one cell within the URA identified by the *URA ID* IE.

[FDD - If the UE has been allocated one or several DCH controlled by DRAC and if the DRNS supports the DRAC, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Secondary CCPCH Info* IE for the FACH in which the DRAC information is sent, for each Radio Link established in a cell in which DRAC is active. If the DRNS does not support DRAC, the DRNC shall not provide these IEs in the RADIO LINK ADDITION RESPONSE message.]

[3.84 Mcps TDD - The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK ADDITION RESPONSE message if at least one *DSCH Information Response* IE or *USCH Information Response* IE is included in the message and at least one DCH is configured for the radio link. The DRNC shall also include the *Secondary CCPCH Info TDD* IE in the RADIO LINK ADDITION RESPONSE message if at least one *DSCH Information Response* IE or *USCH Information Response* IE is included in the message and the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

[1.28 Mcps TDD - The DRNC shall include the *Secondary CCPCH Info TDD LCR* IE in the RADIO LINK ADDITION RESPONSE message if at least one *DSCH Information Response LCR* IE or *USCH Information Response LCR* IE is included in the message and at least one DCH is configured for the radio link. The DRNC shall also include the *Secondary CCPCH Info TDD LCR* IE in the RADIO LINK ADDITION RESPONSE message if at least one *DSCH Information Response LCR* IE or *USCH Information Response* 

*LCR* IE is included in the message and the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

If the *Permanent NAS UE Identity* IE is present in the RADIO LINK ADDITION REQUEST message, the DRNS shall store the information for the considered UE Context for the life-time of the UE Context.

If the RADIO LINK ADDITION REQUEST message includes a *C-ID* IE corresponding to a cell reserved for operator use and the Permanent NAS UE Identity is available in the DRNC for the considered UE Context, the DRNC shall use this information to determine whether it can add the Radio Link on this cell or not.

The DRNS shall start receiving on the new RL(s) after the RLs are successfully established.

#### [FDD-Radio Link Set Handling]:

[FDD – For each RL not having a common generation of the TPC commands in the DL with another RL, the DRNS shall assign to the RL a unique value for the *RL Set ID* IE which uniquely identifies the RL as an 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 to each RL the same value for the *RL Set ID* IE which uniquely identifies these RLs as members of the same RL Set within the UE Context.]

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

## Response message:

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

After sending the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation on the Uu interface. [FDD - The DRNS shall start transmission on the DL DPDCH(s) of the new RL as specified in ref. [4].] [TDD – The DRNS shall start transmission on the new RL immediately as specified in ref. [4].]

## 8.3.2.3 Unsuccessful Operation

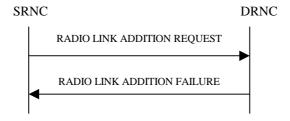


Figure 8: Radio Link Addition procedure: Unsuccessful Operation

If the establishment of at least one RL is unsuccessful, the DRNC shall respond with a RADIO LINK ADDITION FAILURE message. DRNC shall include in the RADIO LINK ADDITION FAILURE message a general *Cause* IE or a *Cause* IE for each failed radio link. The *Cause* IE indicates the reason for failure.

[FDD - 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:

- Combining Resources not Available;
- Combining not Supported
- Cell not Available;
- [FDD Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- CM not Supported;
- Reconfiguration CFN not Elapsed;
- Number of DL Codes not Supported;
- Number of UL codes not Supported;
- [FDD DPC mode change not Supported];
- Cell reserved for operator use.

#### **Transport Layer Causes:**

- Transport Resource Unavailable.

#### **Miscellaneous Causes:**

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

## 8.3.2.4 Abnormal Conditions

If the RADIO LINK ADDITION REQUEST message includes a *C-ID* IE corresponding to a cell reserved for operator use and the Permanent NAS UE Identity is not available in the DRNC for the considered UE Context, the DRNC shall reject the procedure for this particular Radio Link and send the RADIO LINK ADDITION FAILURE message.

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Transmission Gap Pattern Sequence Status* IEs in the *Active Pattern Sequence Information* IE and it does not address exactly all ongoing compressed mode patterns the DRNS shall reject the Radio Link Addition procedure and shall respond with a RADIO LINK ADDITION FAILURE message with the *Cause* IE value "Invalid CM settings".]

[FDD - If the RADIO LINK ADDITION REQUEST message is used to establish a new RL without compressed mode when compressed mode is active for the existing RL(s) (as specified in subclause 8.3.2.2), and if at least one of the new RLs is to be established in a cell that has the same UARFCN (both UL and DL) as at least one cell with an already existing RL, the DRNS shall reject the Radio Link Addition procedure and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings".]

# 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 may be initiated by the SRNC at any time after establishing a Radio Link.

# 8.3.3.2 Successful Operation

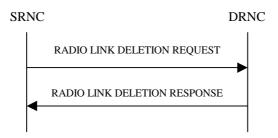


Figure 9: Radio Link Deletion procedure, Successful Operation

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

Upon receipt of this message, the DRNS shall delete the radio link(s) identified by the *RL ID* IE(s) in the message, shall release all associated resources and shall respond to the SRNC with a RADIO LINK DELETION RESPONSE message.

If the radio link(s) to be deleted represent the last radio link(s) for the UE in the DRNS and if the UE is not using any common resources in the DRNS, then the DRNC shall release the UE Context.

[FDD – After deletion of the RL(s), the UL out-of-sync algorithm defined in ref. [10] shall for each of the remaining RL Set(s) use the maximum value of the parameters N\_OUTSYNC\_IND and T\_RLFAILURE that are configured in the cells supporting the radio links of the RL Set. The UL in-sync algorithm defined in ref. [10] shall for each of the remaining RL Set(s) use the minimum value of the parameters N\_INSYNC\_IND that are configured in the cells supporting the radio links of the RL Set].

## 8.3.3.3 Unsuccessful Operation

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## 8.3.3.4 Abnormal Conditions

If the RL indicated by the *RL ID* IE does not exist, the DRNC shall respond with the RADIO LINK DELETION RESPONSE message.

# 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 Radio Link(s) 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 subclause 3.1.

## 8.3.4.2 Successful Operation

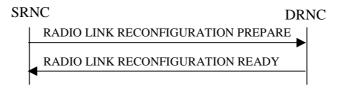


Figure 10: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

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

Upon receipt, 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 the time corresponding to the value of the *Allowed Queuing Time* IE before starting to execute the request.

The DRNS shall prioritise resource allocation for the RL(s) to be modified according to Annex A.

#### **DCH Modification:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs To Modify* IEs then the DRNS shall treat them each as follows:

- If the *DCHs To Modify* IE includes multiple *DCH Specific Info* IEs, the DRNS shall treat the DCHs in the *DCHs To Modify* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCHs To Modify* IE includes the *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs To Modify* IE includes the *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs To Modify* IE includes the *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Frame Handling Priority* IE for a DCH, 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 *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Transport Format Set* IE for the UL of a DCH, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.
- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Transport Format Set* IE for the DL of a DCH, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.
- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Allocation/Retention Priority* IE, the DRNS shall apply the new Allocation/Retention Priority to this DCH in the new configuration according to Annex A.
- [FDD If the *DCHs To Modify* IE contains a *DRAC Control* IE set to "requested" and if the DRNS supports the DRAC, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE for the FACH in which the DRAC information is sent, for each Radio Link established in a cell in which DRAC is active. If the DRNS does not support DRAC, DRNC shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]
- [TDD If the *DCHs to Modify* IE includes the *CCTrCH ID* IE for the UL, the DRNS shall map the DCH onto the referenced UL CCTrCH in the new configuration.]
- [TDD If the *DCHs to Modify* IE includes the *CCTrCH ID* IE for the DL, the DRNS shall map the DCH onto the referenced DL CCTrCH in the new configuration.]
- If the *DCHs to Modify* IE contains a *DCH Specific Info* IE which includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:
  - If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the uplink of this DCH in the new configuration. The DRNS may decide to request the

SRNC to limit the user rate in the uplink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate.

If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the downlink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate in the downlink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the downlink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate.

#### **DCH Addition:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs To Add* IE, the DRNS shall treat them each as follows:

- 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 *DCHs To Add* IE includes a *DCH Information* IE with multiple *DCH Specific Info* IEs, the DRNS shall treat the DCHs in the *DCHs To Add* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- [FDD For each DCH which does not belong to a set of co-ordinated DCHs and which includes a *QE-Selector* IE set to "selected", the DRNS shall use the Transport channel BER from that DCH for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH, the DRNS shall use the Physical channel BER for the QE, ref. [4]. If the *QE-Selector* IE is set to "non-selected", the DRNS shall use the Physical channel BER for the QE in the UL data frames, ref. [4].]
- For a set of co-ordinated DCHs, the DRNS shall use the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" for the QE in the UL data frames, ref. [4]. [FDD If no Transport channel BER is available for the selected DCH, the DRNS shall use the Physical channel BER for the QE, ref. [4]. If all DCHs have the *QE-Selector* IE set to "non-selected", the DRNS shall use the Physical channel BER for the QE, ref. [4]. [TDD If no Transport channel BER is available for the selected DCH, the DRNS shall use 0 for the QE, ref. [4].]
- 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 Uu interface in congestion situations within the DRNS once the new configuration has been activated.
- The DRNS shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The DRNS shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The DRNS shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [TDD The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if at least one DSCH or USCH exists in the new configuration.]
- [FDD If the DRAC Control IE is set to "requested" in the DCH Specific Info IE for at least one DCH and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the Secondary CCPCH Info IE for the FACH in which the DRAC information is sent, for each radio link supported by a cell in which DRAC is active. If the DRNS does not support DRAC, the DRNC shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]
- If the *DCHs to Add* IE contains a *DCH Specific Info* IE which includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:

- If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the uplink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate of the uplink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCHs to Add* IE does not include the *Guaranteed UL Rate* IE, the DRNS shall not limit the user rate of the uplink of the DCH.
- --If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the downlink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate of the downlink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the downlink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCHs to Add* IE does not include the *Guaranteed DL Rate* IE, the DRNS shall not limit the user rate of the downlink of the DCH.
- [TDD The DRNS shall apply the *CCTrCH ID* IE (for the DL) in the Downlink of this DCH in the new configuration.]
- [TDD The DRNS shall apply the *CCTrCH ID* IE (for the UL) in the Uplink of this DCH in the new configuration configuration.]

#### - DCH Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCH To Delete* IEs, the DRNS shall not include the referenced DCHs 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 an *UL DPCH Information* IE, the DRNS shall apply the parameters to the new configuration as follows:]

- [FDD If the *UL DPCH Information* IE includes the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]
- [FDD If the *UL DPCH Information* IE includes the *Min UL Channelisation Code Length* IE, the DRNS shall apply the new Min UL Channelisation Code Length in the new configuration. The DRNS shall apply the contents of the *Max Number of UL DPDCHs* IE (if it is included) in the new configuration.]
- [FDD If the *UL DPCH Information* IE includes the *TFCS* IE, the DRNS shall use the *TFCS* IE for the UL when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the uplink of the new configuration.]
- [FDD If the *UL DPCH Information* IE includes the *UL DPCCH Slot Format* IE, the DRNS shall apply the new Uplink DPCCH *Slot Format* to the new configuration.]
- [FDD If the *UL DPCH Information* IE includes the *UL SIR Target* IE, the DRNS shall use the value for the UL inner loop power control when the new configuration is being used.]
- [FDD If the *UL DPCH Information* IE includes the *Puncture Limit* IE, the DRNS shall apply the value in the uplink of the new configuration.]
- [FDD If the *UL DPCH Information* IE includes the *Diversity Mode* IE, the DRNS shall apply diversity according to the given value.]
- [FDD If the *UL DPCH Information* IE includes an *SSDT Cell Identity Length* IE and/or an *S-Field Length* IE, the DRNS shall apply the values in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes a *DL DPCH Information* IE, the DRNS shall apply the parameters to the new configuration as follows:]

- [FDD If the *DL DPCH Information* IE includes the *Number of DL Channelisation Codes* IE, the DRNS shall allocate given number of Downlink Channelisation Codes 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 in the RADIO LINK RECONFIGURATION READY message within the *DL Code Information* IE as a *FDD DL Channelisation Code Number* IE when sent to the SRNC. If some Transmission Gap Pattern sequences using 'SF/2' method are already initialised in the DRNS, DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information IE* in the RADIO LINK RECONFIGURATION READY message in case the DRNS selects to change the Scrambling code change method for one or more DL Channelisation Code.]
- [FDD When more than one DL DPDCH are assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When *p* number of DL DPDCHs are assigned to each RL, the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to "*PhCH number 1*", the second to "*PhCH number 2*", and so on until the *pth* to "*PhCH number p*".]
- [FDD If the *DL DPCH Information* IE includes the *TFCS* IE, the DRNS shall use the *TFCS* IE for the DL when reserving resources for the downlink of the new configuration. The DRNS shall apply the new TFCS in the Downlink of the new configuration.]
- [FDD If the *DL DPCH Information* IE includes the *DL DPCH Slot Format* IE, the DRNS shall apply the new slot format used in DPCH in DL.]
- [FDD If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE, the DRNS shall apply the new signalling mode of the TFCI.]
- [FDD If the *DL DPCH Information* IE includes the *Multiplexing Position* IE, the DRNS shall apply the new parameter to define whether fixed or flexible positions of transport channels shall be used in the physical channel.]
- [FDD If the *DL DPCH Information* IE includes the *Limited Power Increase* IE set to "Used", the DRNS shall, if supported, use Limited Power Increase according to ref. [10] subclause 5.2.1 for the inner loop DL power control in the new configuration.]
- [FDD If the *DL DPCH Information* IE includes the *Limited Power Increase* IE set to "Not Used", the DRNS shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern Sequence Information* IE, the DRNS shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode Configuration. This new Compressed Mode Configuration shall be valid in the DRNS until the next Compressed Mode Configuration is configured in the DRNS or until the last Radio Link is deleted.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern Sequence Information* IE and the *Downlink Compressed Mode Method* IE in one or more Transmission Gap Pattern Sequence within the *Transmission Gap Pattern Sequence Information* IE is set to 'SF/2', the DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information* IE in the RADIO LINK RECONFIGURATION READY message indicating for each Channelisation Code whether the alternative scrambling code shall be used or not].

#### [TDD - UL/DL CCTrCH Modification]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH To Modify* IEs or *DL CCTrCH To Modify* IEs, then the DRNS shall treat them each as follows:]

- [TDD If any of the *UL CCTrCH To Modify* IEs or *DL CCTrCH To Modify* IEs includes any of the *TFCS* IE, *TFCI coding* IE, *Puncture limit* IE, or *TPC CCTrCH ID* IEs, the DRNS shall apply these as the new values, otherwise the previous values specified for this CCTrCH are still applicable.]
- [TDD If any of the following listed DPCH information IEs are modified in the new prepared configuration, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the IEs indicating the new values: Repetition Period IE, Repetition Length IE, TDD DPCH Offset IE, [3.84Mcps TDD UL Timeslot Information IE,] [1.28Mcps TDD UL Timeslot Information LCR IE,] [3.84Mcps TDD DL Timeslot Information IE,] [1.28Mcps TDD DL Timeslot Information LCR IE,] was [3.84Mcps TDD Midamble Shift And Burst Type IE], [1.28Mcps TDD Midamble Shift LCR IE], TFCI Presence IE [3.84Mcps TDD , TDD

Channelisation Code IE] [1.28Mcps TDD - and/or TDD Channelisation Code LCR IE] [1.28Mcps TDD - TDD UL DPCH Time Slot Format LCR IE or TDD DL DPCH Time Slot Format LCR IE].]

- [1.28Mcps TDD If the *UL CCTrCH To Modify* IE includes the *UL SIR Target* IE, the DRNS shall use the value for the UL inner loop power control according [12] and [22] in the new configuration.]
- [TDD If any of the *DL CCTrCH To Modify* IEs includes any *TPC CCTrCH ID* IEs, the DRNS shall apply these as the new values, otherwise the previous values specified for this CCTrCH are still applicable.]
- [1.28Mcps TDD If the *UL CCTrCH to Modify* IE includes the *TDD TPC Uplink Step Size* IE, the DRNS shall apply this value to the uplink TPC step size in the new configuration.]
- [TDD If the *DL CCTrCH to Modify* IE includes the *TDD TPC Downlink Step Size* IE, the DRNS shall apply this value to the downlink TPC step size in the new configuration.]

## [TDD – UL/DL CCTrCH Addition]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH To Add* IEs or *DL CCTrCH To Add* IEs, the DRNS shall include this CCTrCH in the new configuration.]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs to Add* IEs, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the DPCH information in [3.84Mcps TDD - *UL/DL DPCH to be Added* IEs] [1.28Mcps TDD - *UL/DL DPCH to be Added LCR* IEs]. [3.84Mcps TDD - If no UL DPCH is active before a reconfiguration which adds an UL DPCH, and if a valid Rx Timing Deviation measurement is known in DRNC, then the DRNC shall include the *Rx Timing Deviation* IE in the RADIO LINK RECONFIGURATION READY message.]]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *TDD TPC Downlink Step Size* IE within a *DL CCTrCH To Add* IE, the DRNS shall set the TPC step size of that CCTrCH to that value, otherwise the DRNS shall use the same value as the lowest numbered DL CCTrCH in the current configuration.]

[1.28Mcps TDD – The DRNS shall use the *UL SIR Target* IE in the *UL CCTrCH To Add* IE as the UL SIR value for the inner loop power control for this CCTrCH according [12] and [22] in the new configuration.]

[TDD – If any of the *DL CCTrCH To Add* IEs includes any *TPC CCTrCH ID* IEs, the DRNS shall configure the identified UL CCTrCHs with TPC according to the parameters given in the message.]

[1.28Mcps TDD - If the *UL CCTrCH To Add* IE includes the *TDD TPC Uplink Step Size* IE, the DRNS shall apply the uplink TPC step size in the new configuration.]

#### [TDD – UL/DL CCTrCH Deletion]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH To Delete* IEs *or DL CCTrCH To Delete* IEs, the DRNS shall remove this CCTrCH in the new configuration, and the DRNC shall include in the RADIO LINK RECONFIGURATION READY message corresponding *UL DPCH to be Deleted* IEs and *DL DPCH to be Deleted* IEs.]

#### **SSDT Activation/Deactivation:**

- [FDD If the *RL Information* IE includes the *SSDT Indication* IE set to "SSDT Active in the UE", then in the new configuration the DRNS shall activate SSDT, if supported, using the *SSDT Cell Identity* IE in *RL Information* IE, and the *SSDT Cell Identity Length* IE in *UL DPCH Information* IE.
- [FDD If the *RL Information* IE includes the *SSDT Indication* IE set to "SSDT not Active in the UE", the DRNS shall deactivate SSDT in the new configuration.]

#### **DSCH Addition/Modification/Deletion:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Add*, *DSCH To Modify* or *DSCH To Delete* IEs, then the DRNS shall use this information to add/modify/delete the indicated DSCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Add* IE, then the DRNS shall use the *Allocation/Retention Priority* IE, *Scheduling Priority Indicator* IE and *TrCH Source Statistics Descriptor* IE to define a set of DSCH Priority classes, each of which is associated with a set of supported MAC-c/sh SDU lengths.

The DRNC shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each added DSCH.

[FDD - If the *DSCHs To Add* IE includes the *Enhanced DSCH PC* IE, the DRNS shall activate enhanced DSCH power control in accordance with ref. [10] subclause 5.2.2, if supported, using either:]

- [FDD the SSDT Cell Identity for EDSCHPC IE in the RL Information IE, if the SSDT Cell Identity IE is not included in the RL Information IE or]
- [FDD the SSDT Cell Identity IE in the RL Information IE, if both the SSDT Cell Identity IE and the SSDT Cell Identity for EDSCHPC are included in the RL Information IE,]

[FDD - together with the SSDT Cell Identity Length IE in UL DPCH Information IE, and Enhanced DSCH PC IE, in the new configuration.]

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Modify* IE, then the DRNS shall treat them each as follows:

- The DRNC shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address* IE and the *Binding ID* IE for any new transport bearer to be established for each modified DSCH.
- [FDD If the *DSCH To Modify* IE includes any *DSCH Info* IEs, then the DRNS shall treat them each as follows:]
  - [FDD If the *DSCH Info* IE includes any of the *Allocation/Retention Priority* IE, *Scheduling Priority Indicator* IE or *TrCH Source Statistics Descriptor* IE, the DRNS shall use them to update the set of DSCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.]
  - [FDD If the *DSCH Info* IE includes any of the *Transport Format Set* IE or *BLER* IE, the DRNS shall apply the parameters to the new configuration.]
- [FDD If the *DSCH To Modify* IE includes the *PDSCH RL ID* IE, then the DRNS shall use it as the new DSCH RL identifier.]
  - [FDD If the indicated PDSCH RL ID is in the DRNS and there was no DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a DSCH-RNTI to the UE Context and include the *DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.]
  - [FDD If the indicated PDSCH RL ID is in the DRNS and there was a DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a new DSCH-RNTI to the UE Context, release the old DSCH-RNTI and include the *DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.]
  - [FDD If the indicated PDSCH RL ID is not in the DRNS and there was a DSCH-RNTI allocated to the UE Context, the DRNC shall release this DSCH-RNTI.]
- [FDD If the *DSCH To Modify* IE includes the *Transport Format Combination Set* IE, then the DRNS shall use it as the new Transport Format Combination Set associated with the DSCH.]
- [TDD If the *DSCHs To Modify* IE includes the *CCTrCH ID* IE, then the DRNS shall map the DSCH onto the referenced DL CCTrCH.]
- [TDD If the *DSCHs To Modify* IE includes any of the *Allocation/Retention Priority* IE, *Scheduling Priority Indicator* IE or *TrCH Source Statistics Descriptor* IE, the DNRS shall use them to update the set of DSCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.]
- [TDD If the *DSCHs To Modify* IE includes any of the *Transport Format Set* IE or *BLER* IE, the DRNS shall apply the parameters to the new configuration.]
- [FDD If the *DSCHs To Modify* IE includes the *Enhanced DSCH PC Indicator* IE set to "Enhanced DSCH PC Active in the UE", the DRNS shall activate enhanced DSCH power control in accordance with ref. [10] subclause 5.2.2, if supported, using either:]
  - [FDD the *SSDT Cell Identity for EDSCHPC* IE in *RL Information* IE, if the *SSDT Cell Identity* IE is not included in the *RL Information* IE or]

- [FDD - the SSDT Cell Identity IE in the RL Information IE, if both the SSDT Cell Identity IE and the SSDT Cell Identity for EDSCHPC are included in the RL Information IE,]

[FDD - together with the SSDT Cell Identity Length IE in UL DPCH Information IE, and Enhanced DSCH PC IE, in the new configuration.]

- [FDD - If the *DSCHs To Modify* IE includes the *Enhanced DSCH PC Indicator* IE set to "Enhanced DSCH PC not Active in the UE", the DRNS shall deactivate enhanced DSCH power control in the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes a *DSCHs To Delete* IE requesting the deletion of all DSCH resources for the UE Context, then the DRNC shall release the DSCH-RNTI allocated to the UE Context, if there was one.]

[3.84 Mcps TDD – The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if a DSCH is added and at least one DCH exists in the new configuration. The DRNC shall also include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Enhanced DSCH PC Indicator* IE set to "Enhanced DSCH PC not Active in the UE", the DRNS shall deactivate enhanced DSCH power control 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.

### [TDD - USCH Addition/Modification/Deletion]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH to modify*, *USCH to add* or *USCH To Delete* IEs, then the DRNS shall use this information to add/modify/delete the indicated USCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH To Add* IE, then, the DRNS shall use the *Allocation/Retention Priority* IE, *Scheduling Priority Indicator* IE and *TrCH Source Statistics Descriptor* IE to define a set of USCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.]

[TDD - The DRNC shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each added USCH.]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH To Modify* IE, then the DRNS shall treat them each as follows:]

- [TDD If the *USCH To Modify* IE includes any of the *Allocation/Retention Priority* IE, *Scheduling Priority Indicator* IE or *TrCH Source Statistics Descriptor* IE, the DRNS shall use them to update the set of USCH Priority classes.]
- [TDD If the *USCH To Modify* IE includes any of the *CCTrCH ID* IE, *Transport Format Set* IE, *BLER* IE or *RB Info* IE, the DRNS shall apply the parameters to the new configuration.]
- [TDD The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if a USCH is added and at least one DCH exists in the new configuration. The DRNC shall also include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]
- [TDD The DRNC shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address* IE and the *Binding ID* IE for any new transport bearer to be established for each modified USCH.]

# [1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the *Uplink Synchronisation Parameters LCR* IE is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

#### [1.28Mcps TDD - Uplink Timing Advance Control LCR]:

[1.28Mcps TDD - The DRNC shall include the *Uplink Timing Advance Control LCR* IE in the RADIO LINK RECONFIGURATION READY message, if the Uplink Timing Advance Control parameters have been changed.]

#### [TDD] DSCH RNTI Addition/Deletion

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *PDSCH RL ID* IE, then the DRNS shall use it as the new RL identifier for PDSCH and PUSCH..]

- [TDD If the indicated PDSCH RL ID is in the DRNS and there was no DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a DSCH-RNTI to the UE Context and include the *DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.]
- [TDD If the indicated PDSCH RL ID is in the DRNS and there was a DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a new DSCH-RNTI to the UE Context, release the old DSCH-RNTI and include the *DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.]
- [TDD If the indicated PDSCH RL ID is not in the DRNS and there was a DSCH-RNTI allocated to the UE Context, the DRNC shall release this DSCH-RNTI.]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes a *DSCHs to Delete* IE and/or a *USCHs to Delete* IE which results in the deletion of all DSCH and USCH resources for the UE Context, then the DRNC shall release the DSCH-RNTI allocated to the UE Context, if there was one.]

#### General

If the requested modifications are allowed by the DRNC and the DRNC 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 exists a Prepared Reconfiguration, as defined in subclause 3.1.

The DRNC shall include the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE for any Transport Channel being added, or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE. In the case of a set of co-ordinated DCHs requiring a new transport bearer on the Iur interface, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included for only one of the DCHs in the set of co-ordinated DCHs.

In the case of a Radio Link being combined with another Radio Link within the DRNS, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included for only one of the combined Radio Links

Any allowed rate for the uplink of a modified DCH provided for the old configuration will not be valid for the new configuration. If the DRNS needs to limit the user rate in the uplink of a DCH due to congestion caused by the UL UTRAN Dynamic Resources (see subclause 9.2.1.79) in the new configuration for a Radio Link, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Allowed UL Rate* IE in the *DCH Information Response* IE for this Radio Link.

Any allowed rate for the downlink of a modified DCH provided for the old configuration will not be valid for the new configuration. If the DRNS needs to limit the user rate in the downlink of a DCH due to congestion caused by the DL UTRAN Dynamic Resources (see subclause 9.2.1.79) in the new configuration for a Radio Link, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Allowed DL Rate* IEin the *DCH Information Response* IE for this Radio Link.

The DRNS decides the maximum and minimum SIR for the uplink of the Radio Link(s), and the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Maximum Uplink SIR* IE and *Minimum Uplink SIR* IE for each Radio Link when these values are changed.

If the DL TX power upper or lower limit has been re-configured, the DRNC shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE respectively. The DRNS shall not transmit with a higher power than indicated by the *Maximum DL TX Power* IE or

lower than indicated by the *Minimum DL TX Power IE* on any DL DPCH of the RL [FDD – except during compressed mode, when the  $\delta P_{curr}$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

[TDD - If the *Primary CCPCH RSCP* IE and/or the [3.84Mcps TDD - *DL Time Slot ISCP Info* IE][1.28Mcps TDD - *DL Time Slot ISCP Info LCR* IE] are present, the DRNC should use the indicated values when deciding the Initial DL TX Power.]

## 8.3.4.3 Unsuccessful Operation

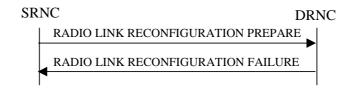


Figure 11: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation

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

If the requested Synchronised Radio Link Reconfiguration Preparation procedure fails for one or more RLs, the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure for each failed radio link in a *Cause* IE.

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;
- Number of DL Codes not Supported;
- Number of UL Codes not Supported;
- Dedicated Transport Channel Type not Supported;
- DL Shared Channel Type not Supported;
- [TDD UL Shared Channel Type not Supported];
- [FDD UL Spreading Factor not Supported];
- [FDD DL Spreading Factor not Supported];
- CM not Supported.

#### **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 reject the Synchronised Radio Link Reconfiguration Preparation procedure as having failed and shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC.

If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected" [TDD – or no DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected"] the DRNS shall reject the Synchronised Radio Link Reconfiguration Preparation procedure and the DRNC shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

[FDD - If the *RL Information* IE includes the *SSDT Indication* IE set to "SSDT Active in the UE" and SSDT is not active in the current configuration, the DRNS shall reject the Synchronised Radio Link Reconfiguration Preparation procedure if the *UL DPCH Information* IE does not include the *SSDT Cell Identity Length* IE. The DRNC shall then respond with a RADIO LINK RECONFIGURATION FAILURE message.]

[FDD - If the *DSCHs To Add* IE includes the *Enhanced DSCH PC* IE and the *DSCH To Modify* IE includes the *Enhanced DSCH PC Indicator* IE set to "Enhanced DSCH PC not Active in the UE", then the DRNS shall deactivate enhanced DSCH power control in the new configuration.]

[FDD - If both the *DSCHs To Add* IE and the *DSCH To Modify* IE include *Enhanced DSCH PC* IE, then the DRNS shall ignore the *Enhanced DSCH PC* IE in the *DSCH To Add* IE.]

If the RADIO LINK RECONFIGURATION PREPARE message includes a *DCHs To Modify* IE or *DCHs To Add* IE with multiple *DCH Specific Info* IEs, and if the DCHs in the *DCHs To Modify* IE or *DCHs To Add* IE do not have the same *Transmission Time Interval* IE in the *Semi-static Transport Format Information* IE, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

# 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 Reconfiguration Preparation procedure.

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

# 8.3.5.2 Successful Operation



Figure 12: Synchronised Radio Link Reconfiguration Commit procedure, Successful Operation

The DRNS shall switch to the new configuration previously prepared by the Synchronised Radio Link Reconfiguration Preparation procedure at the next coming CFN with a value equal to the value requested by the SRNC in the *CFN* IE when receiving the RADIO LINK RECONFIGURATION COMMIT message from the SRNC.

[FDD – If the *Active Pattern Sequence Information* IE is included in the RADIO LINK RECONFIGURATION COMMIT message, the *CM Configuration Change CFN* IE in the *Active Pattern Sequence Information* IE shall be ignored by the DRNS.]

When this procedure has been completed the Prepared Reconfiguration does not exist any more, see subclause 3.1

In the case of a transport channel modification for which a new transport bearer was requested and established, the switch to the new transport bearer shall also take place at the indicated CFN. The detailed frame protocol handling during transport bearer replacement is described in [4], subclause 5.10.1 and in [32], subclause 5.3.1..

[FDD - If the RADIO LINK RECONFIGURATION COMMIT includes the *Active Pattern Sequence Information* IE, the DRNS shall deactivate all the ongoing Transmission Gap Pattern Sequences at the *CFN* IE. From that moment on, all Transmission Gap Pattern Sequences included in *Transmission Gap Pattern Sequence Status* IE repetitions shall be started when the indicated *TGCFN* IE elapses. The *CFN* IE and *TGCFN* IE for each sequence refer to the next coming CFN with that value. If the values of the *CFN* IE and the *TGCFN* IE are equal, the concerned Transmission Gap Pattern Sequence shall be started immediately at the CFN with a value equal to the value received in the *CFN* IE.]

## 8.3.5.3 Abnormal Conditions

If a new transport bearer is required for the new configuration and it is not available at the requested CFN, the DRNS shall initiate the Radio Link Failure procedure.

# 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 Reconfiguration Preparation procedure.

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

# 8.3.6.2 Successful Operation



Figure 13: Synchronised Radio Link Reconfiguration Cancellation procedure, Successful Operation

Upon receipt of the RADIO LINK RECONFIGURATION CANCEL message from the SRNC, the DRNS shall release the new configuration ([FDD – including the new Transmission Gap Pattern Sequence parameters (if existing)]) previously prepared by the Synchronised RL Reconfiguration Preparation procedure and continue using the old configuration. When this procedure has been completed the Prepared Reconfiguration does not exist any more, see subclause 3.1.

# 8.3.6.3 Abnormal Conditions

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# 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 subclause 3.1.

# 8.3.7.2 Successful Operation

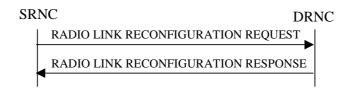


Figure 14: Unsynchronised Radio Link Reconfiguration procedure, Successful Operation

The Unsynchronised Radio Link Reconfiguration procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION REQUEST message to the DRNC.

Upon receipt, 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 the time corresponding to the value of the *Allowed Queuing Time* IE before starting to execute the request.

The DRNS shall prioritise resource allocation for the RL to be modified according to Annex A.

#### **DCH Modification:**

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCHs To Modify* IEs, then the DRNS shall treat them as follows:

- If the *DCHs To Modify* IE includes multiple *DCH Specific Info* IEs, then the DRNS shall treat the DCHs as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCHs To Modify* IE includes the *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs To Modify* IE includes the *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs To Modify* IE includes the *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes a *Transport Format Set* IE for the UL of 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 *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes a *Transport Format Set* IE for the DL of 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 *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Frame Handling Priority* IE, 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 *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Allocation/Retention Priority* IE, the DRNS shall apply the new Allocation/Retention Priority to this DCH in the new configuration according to Annex A.
- [FDD If the *DRAC Control* IE is present and set to "requested" in *DCHs to Modify* IE for at least one DCH, and if the DRNS supports the DRAC, the DRNC shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Secondary CCPCH Info* IE for the FACH in which the DRAC information is sent, for each Radio Link supported by a cell in which DRAC is active.]
- [TDD If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *CCTrCH ID* IE for the UL, the DRNS shall map the DCH onto the referenced UL CCTrCH in the new configuration.]
- [TDD If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *CCTrCH ID* IE for the DL, the DRNS shall map the DCH onto the referenced DL CCTrCH in the new configuration.]
- If the *DCHs To Modify* IE contains a *DCH Specific Info* IE which includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:
  - If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the uplink of this DCH in the new configuration. The DRNS may decide to request the

SRNC to limit the user rate in the uplink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate.

- If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the downlink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user in the downlink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the downlink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate.

#### **DCH Addition:**

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCHs To Add* IEs, then the DRNS shall treat them each as follows:

- 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 *DCHs To Add* IE includes multiple DCH Specific Info IEs then the DRNS shall treat the DCHs in the *DCHs To Add* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if all of them can be in the new configuration.
- [FDD For each DCH which does not belong to a set of co-ordinated DCHs, and which includes a *QE-Selector* IE set to "selected", the DRNS shall use the Transport channel BER from that DCH for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH, the DRNS shall use the Physical channel BER for the QE, ref. [4]. If the *QE-Selector* IE is set to "non-selected", the DRNS shall use the Physical channel BER for the QE in the UL data frames, ref. [4].]
- For a set of co-ordinated DCHs, the DRNS shall use the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" for the QE in the UL data frames, ref. [4]. [FDD If no Transport channel BER is available for the selected DCH, the DRNS shall use the Physical channel BER for the QE, ref. [4]. If all DCHs have the *QE-Selector* IE set to "non-selected", the DRNS shall use the Physical channel BER for the QE, ref. [4].] [TDD If no Transport channel BER is available for the selected DCH, the DRNS shall use 0 for the QE, ref. [4].]
- 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 U<sub>u</sub> interface in congestion situations within the DRNS once the new configuration has been activated.
- The DRNS shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The DRNS shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The DRNS shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [FDD If the *DRAC Control* IE is set to "requested" in *DCH Specific Info* IE for at least one DCH, and if the DRNS supports the DRAC, the DRNC shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Secondary CCPCH Info* IE for the FACH in which the DRAC information is sent, for each Radio Link supported by a cell in which DRAC is active. If the DRNS does not support DRAC, the DRNC shall not provide these IEs in the RADIO LINK RECONFIGURATION RESPONSE message.
- If the *DCH Specific Info* IE includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:
  - If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the uplink of this DCH in the new configuration. The DRNS may decide to request the

SRNC to limit the user rate of the uplink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the DCH Specific Info IE in the DCH Information IE does not include the Guaranteed UL Rate IE, the DRNS shall not limit the user rate of the uplink of the DCH.

- If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the downlink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate of the downlink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the downlink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCH Information* IE does not include the *Guaranteed DL Rate* IE, the DRNS shall not limit the user rate of the uplink of the DCH.

#### **DCH Deletion:**

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCHs To Delete* IEs, the DRNS shall not include the referenced DCHs in the new configuration.

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

## [FDD - Physical Channel Modification]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes an *UL DPCH Information* IE, then the DRNS shall apply the parameters to the new configuration as follows:]

- [FDD - If the *UL DPCH Information* IE includes the *TFCS* IE for the UL, the DRNS shall apply the new TFCS in the Uplink of the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes a *DL DPCH Information* IE, then the DRNS shall apply the parameters to the new configuration as follows:]

- [FDD If the *DL DPCH Information* IE includes the *TFCS* IE for the DL, the DRNS shall apply the new TFCS in the Downlink of the new configuration.]
- [FDD If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE for the DL, the DRNS shall apply the new TFCI Signalling Mode in the Downlink of the new configuration.]
- [FDD If the *DL DPCH Information* IE includes the *Limited Power Increase* IE set to "Used", the DRNS shall, if supported, use Limited Power Increase according to ref. [10] subclause 5.2.1 for the inner loop DL power control in the new configuration.]
- [FDD If the *DL DPCH Information* IE includes the *Limited Power Increase* IE set to "Not Used", the DRNS shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, the DRNS shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode configuration This new Compressed Mode Configuration shall be valid in the DRNS until the next Compressed Mode Configuration is configured in the DRNS or last Radio Link is deleted.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, and if the *Downlink Compressed Mode Method* IE in one or more Transmission Gap Pattern Sequence within the *Transmission Gap Pattern Sequence Information* IE is set to 'SF/2', the DRNC shall include the *DL Code Information* IE in the RADIO LINK RECONFIGURATION RESPONSE message, without changing any of the DL Channelisation Codes or DL Scrambling Codes, indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

## [TDD - UL/DL CCTrCH Modification]

[TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH To Modify* IE or *DL CCTrCH To Modify* IE, the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message.]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH Information to modify* IEs or *DL CCTrCH Information to modify* IEs which contain a *TFCS* IE, the DRNS shall apply the included *TFCS* IE as the new value(s) to the referenced CCTrCH. Otherwise the DRNS shall continue to apply the previous value(s) specified for this CCTrCH.]

[1.28Mcps TDD - If the *UL CCTrCH To Modify* IE includes *UL SIR Target* IE, the DRNS shall apply this value as the new configuration and use it for the UL inner loop power control according [12] and [22].]

## [TDD – UL/DL CCTrCH Deletion]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH Information To Delete* IEs or *DL CCTrCH Information To Delete* IEs, the DRNS shall not include the referenced CCTrCHs in the new configuration.]

#### [1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the *Uplink Synchronisation Parameters LCR* IE is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

#### [1.28Mcps TDD - Uplink Timing Advance Control LCR]:

[1.28Mcps TDD - The DRNC shall include the *Uplink Timing Advance Control LCR* IE in the RADIO LINK RECONFIGURATION RESPONSE message, if the Uplink Timing Advance Control parameters have been changed.]

#### General:

If the requested modifications are allowed by the DRNS, and if the DRNS has successfully allocated the required resources and changed to the new configuration, the DRNC shall respond to the SRNC with the RADIO LINK RECONFIGURATION RESPONSE message.

The DRNC shall include the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE for any Transport Channel being added, or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE. The detailed frame protocol handling during transport bearer replacement is described in [4], subclause 5.10.1.

In the case of a set of co-ordinated DCHs requiring a new transport bearer on the Iur interface, the DRNC shall include the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE only for one of the DCHs in the set of co-ordinated DCHs.

In the case of a Radio Link being combined with another Radio Link within the DRNS, the DRNC shall include the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message for only one of the combined Radio Links.

Any allowed rate for the uplink of a modified DCH provided for the old configuration will not be valid for the new configuration. If the DRNS need to limit the user rate in the uplink of a DCH due to congestion caused by the UL UTRAN Dynamic Resources (see subclause 9.2.1.79) in the new configuration for a Radio Link, the DRNC shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Allowed UL Rate* IE in the *DCH Information Response* IE for this Radio Link.

Any allowed rate for the downlink of a modified DCH provided for the old configuration will not be valid for the new configuration. If the DRNS need to limit the user rate in the downlink of a DCH due to congestion caused by the DL UTRAN Dynamic Resources (see subclause 9.2.1.79) in the new configuration for a Radio Link, the DRNC shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Allowed DL Rate* IEin the *DCH Information Response* IE for this Radio Link.

The DRNS decides the maximum and minimum SIR for the uplink of the Radio Link(s), and the DRNC shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Maximum Uplink SIR* IE and *Minimum Uplink SIR* IE for each Radio Link when these values are changed .

If the DL TX power upper or lower limit has been re-configured, the DRNC shall include the new value(s) in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK RECONFIGURATION RESPONSE message. The DRNS shall not transmit with a higher power than indicated by the *Maximum DL TX Power* IE or lower

than indicated by the *Minimum DL TX Power* IE on any DL DPCH of the RL.[FDD – except during compressed mode, when the  $\delta P_{curr}$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.].

# 8.3.7.3 Unsuccessful Operation

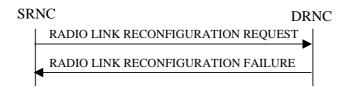


Figure 15: Unsynchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

If the DRNS cannot allocate the necessary resources for all the new DCHs in a set of coordinated DCHs requested to be added, it shall reject the Unsynchronised Radio Link Reconfiguration procedure as having failed.

If the requested Unsynchronised Radio Link Reconfiguration procedure fails for one or more Radio Link(s), the 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;
- CM not Supported.

#### **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 DRNS shall reject the Unsynchronised Radio Link Reconfiguration procedure as having failed, and the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC.

If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected" [TDD – or no DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected"], the DRNS shall reject the Unsynchronised Radio Link Reconfiguration procedure, and the DRNC shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

If the RADIO LINK RECONFIGURATION REQUEST message includes a *DCHs To Modify* IE or *DCHs To Add* IE with multiple *DCH Specific Info* IEs, and if the DCHs in the *DCHs To Modify* IE or *DCHs To Add* IE do not have the same *Transmission Time Interval* IE in the *Semi-static Transport Format Information* IE, then the DRNC shall reject the procedure using the RADIO LINK RECONFIGURATION FAILURE message.

# 8.3.8 Physical Channel Reconfiguration

## 8.3.8.1 General

The Physical Channel Reconfiguration procedure is used by the DRNS to request the SRNC to reconfigure one of the configured physical channels.

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

The DRNS shall not initiate the Physical Channel Reconfiguration procedure if a Prepared Reconfiguration exists as defined in subclause 3.1, or if a Synchronised Radio Link Reconfiguration procedure, Unsynchronised Radio Link Reconfiguration procedure or Radio Link Deletion procedure is ongoing for the relevant UE context.

# 8.3.8.2 Successful Operation

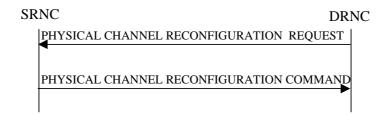


Figure 16: Physical Channel Reconfiguration procedure, Successful Operation

When the DRNC detects the need to modify one of its physical channels, it shall send a PHYSICAL CHANNEL RECONFIGURATION REQUEST to the SRNC.

The PHYSICAL CHANNEL RECONFIGURATION REQUEST message contains the new value(s) of the physical channel parameter(s) of the radio link for which the DRNC is requesting the reconfiguration.

[FDD- If compressed mode is prepared or active and at least one of the downlink compressed mode methods is "SF/2", the DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information* IE in the *DL Code Information* IE in the PHYSICAL CHANNEL RECONFIGURATION REQUEST message indicating for each DL Channelisation Code whether the alternative scrambling code will be used or not if the downlink compressed mode method "SF/2" is activated.]

[TDD – The SRNC shall apply the new values for any of [3.84Mcps TDD - *UL Code Information IE, Midamble Shift And Burst Type IE,*] [1.28Mcps TDD - *UL Code Information LCR IE, Midamble Shift LCR IE,*] TDD DPCH Offset IE, Repetition Period IE, Repetition Length IE, or TFCI presence IE included in the *UL DPCH Information IE* within the PHYSICAL CHANNEL RECONFIGURATION REQUEST message, otherwise the previous values specified for this DPCH shall still apply.]

[TDD – The SRNC shall apply the new values for any of [3.84Mcps TDD - *DL Code Information* IE, *Midamble Shift And Burst Type* IE,] [1.28Mcps TDD - *DL Code Information LCR* IE, *Midamble Shift LCR* IE,] *TDD DPCH Offset* IE, *Repetition Period* IE, *Repetition Length* IE, or *TFCI presence* IE included in the *DL DPCH Information* IE within the PHYSICAL CHANNEL RECONFIGURATION REQUEST message, otherwise the previous values specified for this DPCH shall still apply.]

Upon receipt of the PHYSICAL CHANNEL RECONFIGURATION REQUEST, the SRNC shall decide an appropriate execution time for the change. The SRNC shall respond with a PHYSICAL CHANNEL RECONFIGURATION COMMAND message to the DRNC that includes the *CFN* IE indicating the execution time.

At the CFN, the DRNS shall switch to the new configuration that has been requested, and release the resources related to the old physical channel configuration.

## 8.3.8.3 Unsuccessful Operation

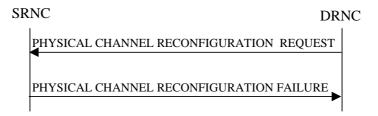


Figure 17: Physical Channel Reconfiguration procedure, Unsuccessful Operation

If the SRNC cannot accept the reconfiguration request it shall send the PHYSICAL CHANNEL RECONFIGURATION FAILURE message to the DRNC, including the reason for the failure in the *Cause* IE.

Typical cause values are:

#### **Radio Network Layer Causes:**

- Reconfiguration not Allowed.

#### 8.3.8.4 Abnormal Conditions

While waiting for the PHYSICAL CHANNEL RECONFIGURATION COMMAND message, if the DRNC receives any of the RADIO LINK RECONFIGURATION PREPARE, RADIO LINK RECONFIGURATION REQUEST, or RADIO LINK DELETION REQUEST messages, the DRNC shall abort the Physical Channel Reconfiguration procedure. These messages thus override the DRNC request for physical channel reconfiguration.

When the SRNC receives a PHYSICAL CHANNEL RECONFIGURATION REQUEST message while a Synchronised Radio Link Reconfiguration procedure, Unsynchronised Radio Link Reconfiguration procedure or Radio Link Deletion procedure is ongoing, the SRNC shall ignore the request message and assume that receipt of any of the messages RADIO LINK RECONFIGURATION PREPARE, RADIO LINK RECONFIGURATION REQUEST or RADIO LINK DELETION REQUEST by the DRNC has terminated the Physical Channel Reconfiguration procedure. In this case the SRNC shall not send a PHYSICAL CHANNEL RECONFIGURATION FAILURE message to the DRNC.

## 8.3.9 Radio Link Failure

## 8.3.9.1 General

This procedure is started by the DRNS when one or more Radio Links [FDD - or Radio Link Sets][TDD - or CCTrCHs within a Radio Link] are no longer available.

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

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

# 8.3.9.2 Successful Operation

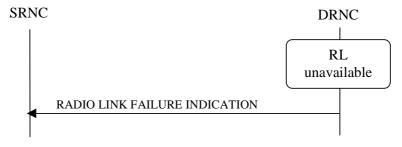


Figure 18: Radio Link Failure procedure, Successful Operation

When the DRNC detects that a one or more Radio Links [FDD - or Radio Link Sets] [TDD – or CCTrCHs within a Radio Link] are no longer available, it shall send the RADIO LINK FAILURE INDICATION message to the SRNC. The message indicates the failed Radio Links [FDD - or Radio Link Sets] [TDD - or CCTrCHs] with the most appropriate cause value defined in the *Cause* IE. If the failure concerns one or more individual Radio Links the DRNC shall include the affected Radio Link(s) using the *RL Information* IE. [FDD - If the failure concerns one or more Radio Link Sets the DRNC shall include the affected Radio Link Set(s) using the *RL Set Information* IE.] [TDD – If the failure concerns only the failure of one or more CCTrCHs within in a radio link the DRNC shall include the affected CCTrCHs using the *CCTrCH ID* IE].

When the RL Failure procedure is used to notify loss of UL synchronisation of a [FDD – Radio Link Set] [TDD – Radio Link or CCTrCHs within a Radio Link] on the Uu interface, the RADIO LINK FAILURE INDICATION message shall be sent with the *Cause* IE set to "Synchronisation Failure" when indicated by the UL synchronisation detection algorithm defined in ref. [10] subclause 4.3 and [22] subclause 4.4.2.

[FDD – When the Radio Link Failure procedure is used to indicate permanent failure in one or more Radio Links/Radio Link Sets due to the occurrence of an UL or DL frame with more than one transmission gap caused by one or more compressed mode pattern sequences, the DL transmission shall be stopped and the RADIO LINK FAILURE INDICATION message shall be sent with the *Cause Value* IE set to "Invalid CM Settings'. After sending the RADIO LINK FAILURE INDICATION message to notify the permanent failure, the DRNS shall not remove the Radio Link(s)/Radio Link Set(s) from the UE Context, or remove the UE Context itself.]

In the other cases the Radio Link Failure procedure is used to indicate that one or more Radio Links [FDD - or Radio Link Sets] are permanently unavailable and cannot be restored. After sending the RADIO LINK FAILURE INDICATION message to notify the permanent failure, the DRNS shall not remove the Radio Link from the UE Context or remove the UE Context itself. When applicable, the allocation retention priorities associated with the transport channels shall be used by the DRNS to prioritise which Radio Links to indicate as unavailable to the SRNC.

Typical cause values are:

#### **Radio Network Layer Causes:**

- Synchronisation Failure;
- Invalid CM Settings.

#### **Transport Layer Causes:**

- Transport Resources Unavailable.

#### **Miscellaneous Causes:**

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

# 8.3.9.3 Abnormal Conditions

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## 8.3.10 Radio Link Restoration

#### 8.3.10.1 General

This procedure is used to notify establishment and re-establishment of UL synchronisation of one or more [FDD –RL Set(s)] [TDD – Radio Links or CCTrCH(s) within a RadioLink] on the Uu interface.

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

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

## 8.3.10.2 Successful Operation



Figure 19: Radio Link Restoration procedure, Successful Operation

The DRNC shall send the RADIO LINK RESTORE INDICATION message to the SRNC when and as specified by the UL Uu synchronisation detection algorithm defined in ref. [10] subclause 4.3 and [22] subclause 4.4.2. [FDD – The algorithm in ref. [10] shall use the minimum value of the parameters N\_INSYNC\_IND that are configured in the cells supporting the radio links of the RL Set].

[TDD - If the re-established UL Uu synchronisation concerns one or more individual Radio Links the DRNC shall include in the RADIO LINK RESTORE INDICATION message the *RL Information* IE to indicate the affected Radio Link(s).] [TDD – If the re-established synchronisation concerns one or more individual CCTrCHs within a radio link the DRNS shall include in the RADIO LINK RESTORE INDICATION message the *RL Information* IE to indicate the affected CCTrCHs.] [FDD - If the re-established UL Uu synchronisation concerns one or more Radio Link Sets the DRNC shall include in the RADIO LINK RESTORE INDICATION message the *RL Set Information* IE to indicate the affected Radio Link Set(s).]

## 8.3.10.3 Abnormal Conditions

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# 8.3.11 Dedicated Measurement Initiation

#### 8.3.11.1 General

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

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

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

## 8.3.11.2 Successful Operation

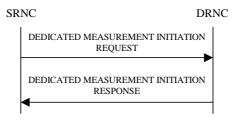


Figure 20: Dedicated Measurement Initiation procedure, Successful Operation

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

Upon receipt, the DRNC shall initiate the requested dedicated measurement according to the parameters given in the request.

If the Dedicated Measurement Object Type is indicated as being "RL" in the DEDICATED MEASUREMENT INITIATION REQUEST message, measurement results shall be reported for all the indicated Radio Links.

[FDD - If the Dedicated Measurement Object Type is indicated as being "RLS" in the DEDICATED MEASUREMENT INITIATION REQUEST message, measurement results shall be reported for all the indicated Radio Link Sets.]

[FDD - If the Dedicated Measurement Object Type is indicated as being "ALL RL" in the DEDICATED MEASUREMENT INITIATION REQUEST message, measurement results shall be reported for all current and future Radio Links within the UE Context.]

[TDD - If the Dedicated Measurement Object Type is indicated as being "ALL RL" in the DEDICATED MEASUREMENT INITIATION REQUEST message, measurement results shall be reported for one existing DPCH per CCTrCH in each used time slot of current and future Radio Links within the UE Context, provided the measurement type is applicable to the respective DPCH.]

[FDD - If the Dedicated Measurement Object Type is indicated as being "ALL RLS" in the DEDICATED MEASUREMENT INITIATION REQUEST message, measurement results shall be reported for all the existing and future Radio Link Sets within the UE Context.]

[TDD – If the *DPCH ID* IE is provided within the RL Information, the measurement request shall apply for the requested physical channel individually. If no *DPCH ID* IE is provided within the RL Information the measurement request shall apply for one existing DPCH per CCTrCH in each used time slot of the Radio Link, provided the measurement type is applicable to this DPCH.]

#### Report characteristics

The *Report Characteristics* IE indicates how the reporting of the dedicated measurement shall be performed. See also Annex B.

If the *Report Characteristics* IE is set to "On-Demand" and if the *CFN* IE is not provided, the DRNS shall report the measurement result immediately in the DEDICATED MEASUREMENT INITIATION RESPONSE message. If the *CFN* IE is provided, it indicates the frame for which the measurement value shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [26].

If the *Report Characteristics* IE is set to "Periodic" and if the *CFN* IE is not provided, the DRNS shall immediately and periodically initiate the Dedicated Measurement Reporting procedure for this measurement, with a frequency as specified by the *Report Periodicity* IE. If the *CFN* IE is provided, the DRNS shall initiate a Dedicated Measurement Reporting procedure for this measurement at the CFN indicated in the *CFN* IE, and shall repeat this initiation periodically thereafter with a frequency as specified by the *Report Periodicity* IE. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [26].

If the *Report Characteristics* IE is set to "Event A", the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises above the requested threshold, as specified by the *Measurement Threshold* IE, and then stays above the threshold for the requested hysteresis time, as specified by the *Measurement Hysteresis Time* IE. If the *Measurement Hysteresis Time* IE is not included, the DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to "Event B", the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls below the requested threshold, as specified by the *Measurement Threshold* IE, and then stays below the threshold for the requested hysteresis time, as specified by the *Measurement Hysteresis Time* IE. If the *Measurement Hysteresis Time* IE is not included, the DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to "Event C", the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises more than the requested threshold specified by the *Measurement Increase/Decrease Threshold* IE, and only when this rise occurs within the requested rising time specified by the *Measurement Change Time* IE. After reporting this type of event, the DRNS shall not initiate the next C event reporting for the same measurement during the subsequent time specified by the *Measurement Change Time* IE.

If the *Report Characteristics* IE is set to "Event D", the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls more than the requested threshold specified by the *Measurement Increase/Decrease Threshold* IE, and only when this falls occurs within the requested falling time specified by the *Measurement Change Time* IE. After reporting this type of event, the DRNS shall not initiate the next D event reporting for the same measurement during the subsequent time specified by the *Measurement Change Time* IE.

If the *Report Characteristics* IE is set to "Event E", the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises above the *Measurement Threshold 1* IE and stays above the threshold for the *Measurement Hysteresis Time* IE (Report A). When the conditions for Report A are met and if the *Report Periodicity* IE is provided, the DRNS shall initiate the Dedicated Measurement Reporting procedure periodically with the requested report frequency specified by the *Report Periodicity* IE. If the conditions for Report A have been met and the measured entity falls below the *Measurement Threshold 2* IE and stays below the threshold for the *Measurement Hysteresis Time* IE, the DRNS shall initiate the Dedicated Measurement Reporting procedure (Report B) and shall terminate any corresponding periodic reporting. If the *Measurement Threshold 2* IE is not present, the DRNS shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to "Event F", the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls below the *Measurement Threshold 1* IE and stays below the threshold for the *Measurement Hysteresis Time* IE (Report A). When the conditions for Report A are met and if the *Report Periodicity* IE is provided, the DRNS shall initiate the Dedicated Measurement Reporting procedure periodically with the requested report frequency specified by the *Report Periodicity* IE. If the conditions for Report A have been met and the measured entity rises above the *Measurement Threshold 2* IE and stays above the threshold for the *Measurement Hysteresis Time* IE, the DRNS shall initiate the Dedicated Measurement Reporting procedure (Report B) and shall terminate any corresponding periodic reporting. If the *Measurement Threshold 2* IE is not present, the DRNS shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is not set to "On Demand", the DRNS is required to perform reporting for a dedicated measurement object, in accordance with the conditions provided in the DEDICATED MEASUREMENT INITIATION REQUEST message, as long as the object exists. If no dedicated measurement object(s) for which a measurement is defined exists any more, the DRNS shall terminate the measurement locally without reporting this to the SRNC.

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 the Dedicated Measurement Reporting procedure immediately, and then continue with the measurements as specified in the DEDICATED MEASUREMENT INITIATION REQUEST message.

#### **Higher layer filtering**

The *Measurement Filter Coefficient* IE indicates how filtering of the dedicated measurement values shall be performed before measurement event evaluation and reporting.

The averaging shall be performed according to the following formula.

$$F_n = (1-a) \cdot F_{n-1} + a \cdot M_n$$

The variables in the formula are defined as follows:

 $F_n$  is the updated filtered measurement result

 $F_{n-1}$  is the old filtered measurement result

 $M_n$  is the latest received measurement result from physical layer measurements, the unit used for  $M_n$  is the same unit as the reported unit in the DEDICATED MEASUREMENT INITIATION RESPONSE, DEDICATED MEASUREMENT REPORT messages or the unit used in the event evaluation (i.e. same unit as for Fn).

 $a = 1/2^{(k/2)}$ , where k is the parameter received in the *Measurement Filter Coefficient IE*. If the *Measurement Filter Coefficient IE* is not present, a shall be set to 1 (no filtering)

In order to initialise the averaging filter,  $F_0$  is set to  $M_1$  when the first measurement result from the physical layer measurement is received.

#### Response message

If the DRNS was able to initiate the measurement requested by the SRN, it shall respond with the DEDICATED MEASUREMENT INITIATION RESPONSE message. The message shall include the same Measurement ID that was used in the DEDICATED MEASUREMENT INITIATION REQUEST message.

In the case in which the Report Characteristics IE is set to "On Demand":

- The DRNC shall include the measurement result in the *Dedicated Measurement Value* IE within the DEDICATED MEASUREMENT INITIATION RESPONSE message.
- If the *CFN Reporting Indicator* IE is set to "FN Reporting Required", the *CFN* IE shall be included in the DEDICATED MEASUREMENT INITIATION RESPONSE message. The reported CFN shall be the CFN at the time when the dedicated measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [26].
- [TDD If the measurement was made on a particular DPCH, the DEDICATED MEASUREMENT INITIATION RESPONSE message shall include the DPCH ID of that DPCH in the *DPCH ID* IE.]

# 8.3.11.3 Unsuccessful Operation

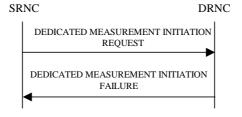


Figure 21: Dedicated Measurement Initiation procedure, Unsuccessful Operation

If the requested measurement cannot be initiated, the DRNC shall send a DEDICATED MEASUREMENT INITIATION FAILURE message. The message shall include the same *Measurement ID* IEthat was used in the DEDICATED MEASUREMENT INITIATION REQUEST message and shall include the *Cause* IE set to an appropriate value.

Typical cause values are:

## **Radio Network Layer Causes:**

- Measurement not Supported For The Object
- Measurement Temporarily not Available

## **Miscellaneous Causes:**

- Control Processing Overload
- HW Failure

## 8.3.11.4 Abnormal Conditions

The allowed combinations of the Dedicated Measurement Type and Report Characteristics Type are shown in the table below marked with "X". For not allowed combinations, the DRNS shall reject the Dedicated Measurement Initiation procedure using the DEDICATED MEASUREMENT INITIATION FAILURE message..

Table 4: Allowed Dedicated Measurement Type and Report Characteristics Type Combinations

Dedicated Measurement Type	Report Characteristics Type								
	On Demand	Periodic	Event A	Event B	Event C	Event D	Event E	Event F	On Modification
SIR	Х	Х	Х	Х	Х	Х	Х	Х	
SIR Error	Х	Х	Х	Х	Х	Х	Х	Х	
Transmitted Code Power	Х	Х	Х	Х	Х	Х	Х	Х	
RSCP	Х	Х	Х	Х	Х	Х	Х	Х	
Rx Timing Deviation	Х	Х	Х	Х			Х	Х	
Round Trip Time	Х	Х	Х	Х	Х	Х	Х	Х	

If the Dedicated Measurement Type received in the *Dedicated Measurement Type* IE is not defined in ref. [11] or [14] to be measured on the Dedicated Measurement Object Type received in the DEDICATED MEASUREMENT INITIATION REQUEST message, the DRNS shall reject the Dedicated Measurement Initiation procedure, and the DRNC shall send a DEDICATED MEASUREMENT INITIATION FAILURE message.

If the *CFN* IE is included in the DEDICATED MEASUREMENT INITIATION REQUEST message and the *Report Characteristics* IE is other than "Periodic" or "On Demand", the DRNS shall reject the Dedicated Measurement Initiation procedure, and the DRNC shall send a DEDICATED MEASUREMENT INITIATION FAILURE message.

# 8.3.12 Dedicated Measurement Reporting

## 8.3.12.1 General

This procedure is used by the DRNS to report the results of measurements requested by the SRNS with the Dedicated Measurement Initiation procedure.

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

The DRNC may initiate the Dedicated Measurement Reporting procedure at any time after establishing a Radio Link.

# 8.3.12.2 Successful Operation



Figure 22: Dedicated Measurement Reporting procedure, Successful Operation

If the requested measurement reporting criteria are met, the DRNS shall initiate the Dedicated Measurement Reporting procedure. If the measurement was initiated (by the Dedicated Measurement Initiation procedure) for multiple dedicated measurement objects, the DRNC may include dedicated measurement values in the *Dedicated Measurement Value Information* IE for multiple objects in the DEDICATED MEASUREMENT REPORT message.

The *Measurement ID* IE shall be set to the Measurement ID provided by the SRNC when initiating the measurement with the Dedicated Measurement Initiation procedure.

If the achieved measurement accuracy does not fulfil the given accuracy requirement specified in ref. [23] and [24], the "Measurement Not Available" shall be reported in the *Dedicated Measurement Value Information* IE in the DEDICATED MEASUREMENT REPORT message, otherwise the DRNC shall include the *Dedicated Measurement Value* IE within the *Dedicated Measurement Value Information* IE.

If the CFN Reporting Indicator when initiating the measurement with the Dedicated Measurement Initiation procedure was set to "FN Reporting Required", the DRNC shall include the *CFN* IE in the DEDICATED MEASUREMENT REPORT message. The reported CFN shall be the CFN at the time when the dedicated measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [26].

[TDD – If the measurement was made on a particular DPCH, the DEDICATED MEASUREMENT REPORT message shall include the DPCH ID of that DPCH in the *DPCH ID* IE.]

## 8.3.12.3 Abnormal Conditions

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## 8.3.13 Dedicated Measurement Termination

#### 8.3.13.1 General

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

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

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

# 8.3.13.2 Successful Operation



Figure 23: Dedicated Measurement Termination procedure, Successful Operation

This procedure is initiated with a DEDICATED MEASUREMENT TERMINATION REQUEST message, sent from the SRNC to the DRNC.

Upon receipt, the DRNS shall terminate reporting of dedicated measurements corresponding to the received *Measurement ID* IE.

## 8.3.13.3 Abnormal Conditions

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# 8.3.14 Dedicated Measurement Failure

## 8.3.14.1 General

This procedure is used by the DRNS to notify the SRNS that a measurement previously requested by the Dedicated Measurement Initiation procedure can no longer be reported.

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

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

# 8.3.14.2 Successful Operation



Figure 24: Dedicated Measurement Failure procedure, Successful Operation

This procedure is initiated with a DEDICATED MEASUREMENT FAILURE INDICATION message, sent from the DRNC to the SRNC, to inform the SRNC that a previously requested dedicated measurement can no longer be reported. The DRNC has locally terminated the indicated measurement. The DRNC shall include in the DEDICATED MEASUREMENT FAILURE INDICATION message the reason for the failure in the *Cause* IE.

Typical cause values are:

#### **Miscellaneous Causes:**

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

## 8.3.14.3 Abnormal Conditions

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# 8.3.15 Downlink Power Control [FDD]

## 8.3.15.1 General

The purpose of this procedure is to balance the DL transmission powers of one or more radio links for one UE.

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

The Downlink Power Control procedure may be initiated by the SRNC at any time after establishing a Radio Link. If the SRNC has initiated in this DRNS the deletion of the last Radio Link for this UE context, the Downlink Power Control procedure shall not be initiated.

# 8.3.15.2 Successful Operation



Figure 25: Downlink Power Control procedure, Successful Operation

The Downlink Power Control procedure is initiated by the SRNC sending a DL POWER CONTROL REQUEST message to the DRNC.

The Power Adjustment Type IE defines the characteristic of the power adjustment.

If the value of the *Power Adjustment Type* IE is "Common", the DRNS shall set the Power Balancing Adjustment Type of the UE Context to "Common". As long as the Power Balancing Adjustment Type of the UE Context is set to "Common", the DRNS shall perform the power adjustment (see below) for all existing and future radio links for the UE Context and use a common DL reference power level.

If the value of the *Power Adjustment Type* IE is "Individual", the DRNS shall set the Power Balancing Adjustment Type of the UE Context to "Individual". The DRNS shall perform the power adjustment (see below) for all radio links addressed in the message using the given DL Reference Power per RL. If the Power Balancing Adjustment Type of the UE Context was set to "Common" before this message was received, power balancing on all radio links not addressed by the DL POWER CONTROL REQUEST message shall remain to be executed in accordance with the existing power balancing parameters which are now considered RL individual parameters. Power balancing will not be started on future radio links without a specific request.

If the value of the *Power Adjustment Type* IE is "None", the DRNS shall set the Power Balancing Adjustment Type of the UE Context to "None", and the DRNS shall suspend on going power adjustments for all radio links for the UE Context.

If the *Inner Loop DL PC Status* IE is present and set to "Active", the DRNS shall activate inner loop DL power control for all radio links for the UE Context. If the *Inner Loop DL PC Status* IE is present and set to "Inactive", the DRNS shall deactivate inner loop DL power control for all radio links for the UE Context according to ref. [10].

## **Power Adjustment**

The power balancing adjustment shall be superimposed on the inner loop power control adjustment (see ref. [10]) if activated. The power balancing adjustment shall be such that:

$$\sum P_{bal} = (1 - r)(P_{ref} + P_{P-CPICH} - P_{init})$$
 with an accuracy of  $\pm 0.5$  dB

where the sum is performed over an adjustment period corresponding to a number of frames equal to the value of the *Adjustment Period* IE, Pref is the value of the DL Reference Power IE,  $P_{P-CPICH}$  is the power used on the primary CPICH,  $P_{init}$  is the code power of the last slot of the previous adjustment period and r is given by the Adjustment Ratio IE. If the last slot of the previous adjustment period is within a transmission gap due to compressed mode,  $P_{init}$  shall be set to the same value as the code power of the slot just before the transmission gap.

The adjustment within one adjustment period shall in any case be performed with the constraints given by the *Max Adjustment Step* IE and the DL TX power range set by the DRNC.

The power adjustments shall be started at the first slot of a frame with CFN modulo the value of *Adjustment Period* IE equal to 0 and shall be repeated for every adjustment period and shall be restarted at the first slot of a frame with CFN=0, until a new DL POWER CONTROL REQUEST message is received or the RL is deleted.

## 8.3.15.3 Abnormal Conditions

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# 8.3.16 Compressed Mode Command [FDD]

## 8.3.16.1 General

The Compressed Mode Command procedure is used to activate or deactivate 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 Command procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

## 8.3.16.2 Successful Operation



Figure 26: Compressed Mode Command procedure, Successful Operation

The procedure is initiated by the SRNC sending a COMPRESSED MODE COMMAND message to the DRNC.

Upon receipt of the COMPRESSED MODE COMMAND message from the SRNC and at the CFN indicated in the *CM Configuration Change CFN* IE, the DRNS shall deactivate all the ongoing Transmission Gap Pattern Sequences. From that moment on all Transmission Gap Pattern Sequences included in *Transmission Gap Pattern Sequence Status* IE repetitions (if present) shall be started when the indicated *TGCFN* IE elapses. The *CM Configuration Change CFN* IE in the *Active Pattern Sequence Information* IE and *TGCFN* IE for each sequence refer to the next coming CFN with that value.

If the values of the *CM Configuration Change CFN* IE and the *TGCFN* IE are equal, the concerned Transmission Gap Pattern Sequence shall be started immediately at the CFN with a value equal to the value received in the *CM Configuration Change CFN* IE.

#### 8.3.16.3 Abnormal Conditions

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# 8.3.17 Downlink Power Timeslot Control [TDD]

## 8.3.17.1 General

The purpose of this procedure is to provide the DRNS with updated DL Timeslot ISCP values to use when deciding the DL TX Power for each timeslot.

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

The Downlink Power Timeslot Control procedure can be initiated by the SRNC at any time after establishing a Radio Link. If the SRNC has initiated deletion of the last Radio Link in this DRNS, the Downlink Power Timeslot Control procedure shall not be initiated.

## 8.3.17.2 Successful Operation



Figure 26A: Downlink Power Timeslot Control procedure, Successful Operation

The Downlink Power Timeslot Control procedure is initiated by the SRNC sending a DL POWER TIMESLOT CONTROL REQUEST message to the DRNC.

Upon receipt of the DL POWER TIMESLOT CONTROL REQUEST message , the DRNS shall use the included [3.84Mcps TDD - *DL Timeslot ISCP Info* IE] [1.28Mcps TDD - *DL Timeslot ISCP Info LCR* IE] value when deciding the DL TX Power for each timeslot as specified in [22], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link in which the interference is low, and increase the DL TX power in those timeslots in which the interference is high, while keeping the total downlink power in the radio link unchanged.

#### 8.3.17.3 Abnormal Conditions

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## 8.3.18 Radio Link Pre-emption

## 8.3.18.1 General

This procedure is started by the DRNS when resources need to be freed.

This procedure shall use the signalling bearer connection for the UE Context associated with the RL to be pre-empted.

The DRNS may initiate the Radio Link Pre-emption procedure at any time after establishing a Radio Link.

## 8.3.18.2 Successful Operation

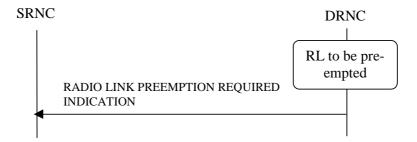


Figure 26B: Radio Link Pre-emption procedure, Successful Operation

When DRNC detects that one or more Radio Links should be pre-empted (see Annex A), it shall send the RADIO LINK PREEMPTION REQUIRED INDICATION message to the SRNC. If all Radio Links for a UE Context should be pre-empted, the *RL Information* IE shall not be included in the message. If one or several but not all Radio Links should be pre-empted for an UE Context, the Radio Links that should be pre-empted shall be indicated in the *RL Information* IE. The Radio Link(s) that should be pre-empted, should be deleted by the SRNC.

#### 8.3.18.3 Abnormal Conditions

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## 8.3.19 Radio Link Congestion

### 8.3.19.1 General

This procedure is started by the DRNS when resource congestion is detected and the rate of one or more DCHs, corresponding to one or more radio links, is preferred to be limited in the UL and/or DL. This procedure is also used by the DRNC to indicate to the SRNC any change of the UL/DL resource congestion situation, affecting these radio links.. This procedure shall use the signalling bearer connection for the relevant UE Context..

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

## 8.3.19.2 Successful Operation



Figure 26C: Radio Link Congestion procedure, Successful Operation

#### Start of an UL/DL Resource Congestion Situation

When the DRNC detects the start of a UL/DL resource congestion situation and prefers the rate of one or more DCHs for one or more radio links to be limited below the maximum rate currently configured in the UL/DL TFS, it shall send the RADIO LINK CONGESTION INDICATION message to the SRNC. The DRNC shall indicate the cause of the congestion in the *Congestion Cause* IE and shall indicate all the Radio Links for which the rate of a DCH needs to be reduced. For each DCH within the RL with UL congestion, the DRNC shall indicate the desired maximum UL data rate with the *Allowed UL Rate* IE in the *Allowed Rate Information* IE. For each DCH within the RL with DL congestion, the DRNC shall indicate the desired maximum DL data rate with the *Allowed DL Rate* IE in the *Allowed Rate Information* IE.

When receiving the RADIO LINK CONGESTION INDICATION message the SRNC should reduce the rate in accordance with the *Congestion Cause* IE and the indicated *Allowed DL Rate* IE and/or *Allowed UL Rate* IE for a DCH.

#### Change of UL/DL Resource Congestion Situation

The DRNC shall indicate any change of the UL/DL resource congestion situation by sending the RADIO LINK CONGESTION INDICATION message in which the new allowed rate(s) of the DCHs are indicated by the *Allowed Rate Information* IE. In the case that for at least one DCH the new allowed rate is lower than the previously indicated allowed rate for that DCH, the *Congestion Cause* IE, indicating the cause of the congestion, shall also be included.

When receiving a RADIO LINK CONGESTION INDICATION message indicating a further rate decrease on any DCH(s) on any RL, the SRNC should reduce the rate in accordance with the indicated congestion cause and the indicated allowed rate(s) for the DCH(s).

#### **End of UL/DL Resource Congestion Situation**

The end of an UL resource congestion situation, affecting a specific RL shall be indicated by including the TF corresponding to the highest data rate in the *Allowed UL Rate* IE in the *Allowed Rate Information* IE for the concerned RL. The end of a DL resource congestion situation affecting a specific RL shall be indicated by including the TF with the highest data rate in the *Allowed DL Rate* IE in the *Allowed Rate Information* IE for the concerned RL.

#### 8.3.19.3 Abnormal Conditions

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## 8.4 Common Transport Channel Procedures

## 8.4.1 Common Transport Channel Resources Initialisation

#### 8.4.1.1 General

The Common Transport Channel Resources Initialisation procedure is used by the SRNC for the initialisation of the Common Transport Channel user plane towards the DRNC and/or for the initialisation of the Common Transport Channel resources in the DRNC to be used by a UE.

This procedure shall use the connectionless mode of the signalling bearer.

## 8.4.1.2 Successful Operation

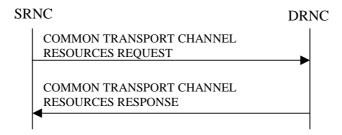


Figure 27: Common Transport Channel Resources Initialisation procedure, Successful Operation

The SRNC initiates the procedure by sending the message COMMON TRANSPORT CHANNEL RESOURCES REQUEST message to the DRNC.

If the value of the *Transport Bearer Request Indicator* IE is set to "Bearer Requested", the DRNC shall store the received *Transport Bearer ID* IE and include the *Binding ID* IE and *Transport Layer Address* IE in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message.

If the value of the *Transport Bearer Request Indicator* IE is set to" Bearer not Requested", the DRNC shall use the transport bearer indicated by the *Transport Bearer ID* IE.

If the *C-ID* IE is included in the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message, the DRNC shall allocate a C-RNTI for the indicated cell and include the *C-RNTI* IE in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message.

If the *C-ID* IE is included in the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message, the DRNC shall include the *FACH Info for UE Selected S-CCPCH* IE valid for the cell indicated by the *C-ID* IE and the corresponding *C-ID* IE in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message. If the *C-ID* IE is not included in the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message, the DRNC shall include the *FACH Info for UE Selected S-CCPCH* IE valid for the cell where the UE is located and the corresponding *C-ID* IE. The DRNC shall include the *FACH Scheduling Priority* IE and *FACH Initial Window Size* IE in the *FACH Flow Control Information* IE of the *FACH Info for UE Selected S-CCPCH* IE for each priority class that the DRNC has determined shall be used. The DRNC may include several *MAC-c/sh SDU Length* IEs for each priority class.

If the DRNS has any RACH, [FDD - CPCH,] and/or FACH resources previously allocated for the UE in another cell than the cell in which resources are currently being allocated, the DRNS shall release the previously allocated RACH, [FDD - CPCH,] and/or FACH resources.

If the DRNS has successfully reserved the required resources, the DRNC shall respond to the SRNC with the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message.

If the *Permanent NAS UE Identity* IE is present in the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message, the DRNS shall store the information for the considered UE Context for the lifetime of the UE Context.

If the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message includes a *C-ID* IE corresponding to a cell reserved for operator use and the Permanent NAS UE Identity is available in the DRNC for the considered UE

Context, the DRNC shall use this information to determine whether it can reserve resources on a common transport channel in this cell or not.

## 8.4.1.3 Unsuccessful Operation

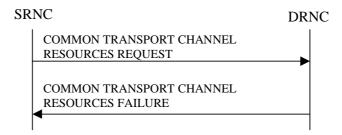


Figure 28: Common Transport Channel Resources Initialisation procedure, Unsuccessful Operation

If the *Transport Bearer Request Indicator* IE is set to "Bearer Requested" and the DRNC is not able to provide a Transport Bearer, the DRNC shall reject the procedure and respond to the SRNC with the COMMON TRANSPORT CHANNEL RESOURCES FAILURE message, including the reason for the failure in the *Cause* IE.

If the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message contains a *C-ID* IE corresponding to a cell reserved for operator use and the Permanent NAS UE Identity is not available for the considered UE Context, the DRNC shall reject the procedure and send the COMMON TRANSPORT CHANNEL RESOURCES FAILURE message, including the reason for the failure in the *Cause* IE.

Typical cause values are:

#### **Radio Network Layer Causes:**

- Common Transport Channel Type not Supported;
- Cell reserved for operator use.

#### **Transport Layer Causes:**

Transport Resource Unavailable.

## 8.4.1.4 Abnormal Conditions

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## 8.4.2 Common Transport Channel Resources Release

#### 8.4.2.1 General

This procedure is used by the SRNC to request release of Common Transport Channel Resources for a given UE in the DRNS. The SRNC uses this procedure either to release the UE Context from the DRNC (and thus both the D-RNTI and the C-RNTI) or to release only the C-RNTI.

This procedure shall use the connectionless mode of the signalling bearer.

## 8.4.2.2 Successful Operation



Figure 29: Common Transport Channel Resources Release procedure, Successful Operation

The SRNC initiates the Common Transport Channel Resources Release procedure by sending the COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST message to the DRNC. Upon receipt of the message, the DRNC shall release the UE Context identified by the D-RNTI and all its related RACH, [FDD - CPCH,] and/or FACH resources, unless the UE is using dedicated resources (DCH, [TDD - USCH,] and/or DSCH) in the DRNS in which case the DRNC shall release only the C-RNTI and all its related RACH, [FDD - CPCH,] and/or FACH resources allocated for the UE.

#### 8.4.2.3 Abnormal Conditions

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## 8.5 Global Procedures

## 8.5.1 Error Indication

#### 8.5.1.1 General

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

This procedure shall use the signalling bearer mode specified below.

## 8.5.1.2 Successful Operation

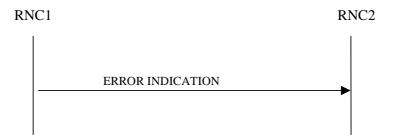


Figure 30: Error Indication procedure, Successful Operation

When the conditions defined in clause 10 are fulfilled, the Error Indication procedure is initiated by an ERROR INDICATION message sent from the receiving node. This message shall use the same mode of the signalling bearer and the same signalling bearer connection (if connection oriented) as the message that triggers the procedure.

When the ERROR INDICATION message is sent from a DRNC to an SRNC using connectionless mode of the signalling bearer, the *S-RNTI* IE shall be included in the message if the UE Context addressed by the *D-RNTI* IE which was received in the message triggering the Error Indication procedure exists. When the ERROR INDICATION message is sent from an SRNC to a DRNC using connectionless mode of the signalling bearer, the *D-RNTI* IE shall be included in the message if the UE addressed by the *S-RNTI* IE which was received in the message triggering the Error Indication procedure exists.

When a message using connectionless mode of the signalling bearer is received in the DRNC and there is no UE Context in the DRNC as indicated by the *D-RNTI* IE, the DRNC shall include the D-RNTI from the received message in the *D-RNTI* IE and set the *Cause* IE to "Unknown RNTI" in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

When a message using connectionless mode of the signalling bearer is received in the SRNC and there is no UE in the SRNC as indicated by the *S-RNTI* IE, the SRNC shall include the S-RNTI from the received message in the *S-RNTI* IE and set the *Cause* IE to "Unknown RNTI" in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

The ERROR INDICATION message shall include either the *Cause* IE, or the *Criticality Diagnostics* IE, or both the *Cause* IE and the *Criticality Diagnostics* IE to indicate the reason for the error indication.

Typical cause values for the ERROR INDICATION message are:

#### **Protocol Causes:**

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

#### 8.5.1.3 Abnormal Conditions

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## 8.5.2 Common Measurement Initiation

## 8.5.2.1 General

This procedure is used by an RNC to request the initiation of measurements of common resources to another RNC. The requesting RNC is referred to as RNC<sub>1</sub> and the RNC to which the request is sent is referred to as RNC<sub>2</sub>.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

## 8.5.2.2 Successful Operation

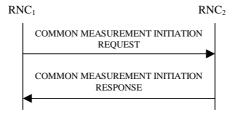


Figure 30A: Common Measurement Initiation procedure, Successful Operation

The procedure is initiated with a COMMON MEASUREMENT INITIATION REQUEST message sent from the RNC<sub>1</sub> to the RNC<sub>2</sub>.

Upon receipt, the RNC<sub>2</sub> shall initiate the requested measurement according to the parameters given in the request.

Unless specified below, the meaning of the parameters are given in other specifications.

[TDD- If the [3.84 Mcps TDD - *Time Slot* IE] [1.28 Mcps - *Time Slot LCR* IE] is present in the COMMON MEASUREMENT INITIATION REQUEST message , the measurement request shall apply to the requested time slot individually.]

#### Common measurement type

If the Common Measurement Type IE is set to "SFN-SFN Observed Time Difference", then:

- The RNC<sub>2</sub> shall initiate the SFN-SFN Observed Time Difference measurements between the reference cell identified by the *Reference Cell Identifier* IE and the neighbouring cells identified by the *UTRAN Cell Identifier* IE (*UC-ID*) in the *Neighbouring Cell Measurement Information* IE.
- [3.84 Mcps TDD The RNC<sub>2</sub> shall perform the measurement using the time slot specified in the *Time Slot* IE in the *Neigbouring TDD Cell Measurement Information* IE and using the midamble shift and burst type specified in the *Midamble Shift And Burst Type* IE in the *Neigbouring TDD Cell Measurement Information* IE, If *Time Slot* IE and *Midamble Shift And Burst Type* IE are not available in the *Neighbouring TDD Cell Measurement Information* IE, the RNC<sub>2</sub> may use any appropriate time slots, midamble shifts and burst types to make the measurement.]

If the *Common Measurement Type* IE is set to "load", the RNC<sub>2</sub> shall initiate measurements of uplink and downlink load on the measured object identified by the *Reference Cell Identifier* IE. If either uplink or downlink load satisfies the requested report characteristics, the RNC<sub>2</sub> shall report the result of both uplink and downlink measurements.

If the *Common Measurement Type* IE is set to "UTRAN GPS Timing of Cell Frames for UE Positioning", "transmitted carrier power", "received total wide band power", or "UL timeslot ISCP" the RNC<sub>2</sub> shall initiate measurements on the measured object identified by the *Reference Cell Identifier* IE.

#### Report characteristics

The Report Characteristics IE indicates how the reporting of the measurement shall be performed. See also Annex B.

If the *Report Characteristics* IE is set to "On Demand" and if the *SFN* IE is not provided, the RNC<sub>2</sub> shall report the result of the requested measurement immediately in the COMMON MEASUREMENT INITIATION RESPONSE message. If the *SFN* IE is provided, it indicates the frame for which the measurement value shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [26]. Furthermore, if the *SFN* IE is present and if the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference", then the *SFN* IE relates to the Radio Frames of the Reference Cell identified by the *Reference Cell Identifier* IE.

If the *Report Characteristics* IE is set to "Periodic" and if the *SFN* IE is not provided, the RNC<sub>2</sub> shall immediately and periodically initiate a Common Measurement Reporting procedure for this measurement, with a frequency as specified by the *Report Periodicity* IE. If the *SFN* IE is provided, the RNC<sub>2</sub> shall initiate a Common Measurement Reporting procedure for this measurement at the SFN indicated in the *SFN* IE, and shall repeat this initiation periodically thereafter with a frequency as specified by the *Report Periodicity* IE. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [26]. Furthermore, if the *SFN* IE is present and if the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference", then the *SFN* IE relates to the Radio Frames of the Reference Cell identified by the *Reference Cell Identifier* IE..

If the *Report Characteristics* IE is set to "Event A", the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure when the measured entity rises above the requested threshold, as specified by the *Measurement Threshold* IE, and then stays above the threshold for the requested hysteresis time, as specified by the *Measurement Hysteresis Time* IE. If the *Measurement Hysteresis Time* IE is not included, the RNC<sub>2</sub> shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to "Event B", the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure when the measured entity falls below the requested threshold, as specified by the *Measurement Threshold* IE, and then stays below the threshold for the requested hysteresis time, as specified by the *Measurement Hysteresis Time* IE. If the *Measurement Hysteresis Time* IE is not included, the RNC<sub>2</sub> shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to "Event C", the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure when the measured entity rises more than the requested threshold specified by the *Measurement Increase/Decrease Threshold* IE, and only when this rise occurs within the requested rising time specified by the *Measurement Change Time* IE. After reporting this type of event, the RNC<sub>2</sub> shall not initiate the next C event reporting for the same measurement during the subsequent time specified by the *Measurement Change Time* IE.

If the *Report Characteristics* IE is set to "Event D", the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure when the measured entity falls more than the requested threshold specified by the *Measurement Increase/Decrease Threshold* IE, and only when this fall occurs within the requested falling time specified by the *Measurement Change Time* IE. After reporting this type of event,, the RNC<sub>2</sub> shall not initiate the next D event reporting for the same measurement during the subsequent time specified by the *Measurement Change Time* IE.

If the *Report Characteristics* IE is set to "Event E", the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure when the measured entity rises above the *Measurement Threshold 1* IE and stays above the threshold for the *Measurement Hysteresis Time* IE (Report A). When the conditions for Report A are met and if the *Report Periodicity* IE is provided, the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure periodically with the requested report frequency specified by the *Report Periodicity* IE. If the conditions for Report A have been met and the measured entity falls below the *Measurement Threshold 2* IE and stays below the threshold for the *Measurement Hysteresis Time* IE, the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure (Report B) and shall terminate any corresponding periodic reporting. If the *Measurement Threshold 2* IE is not present, the RNC<sub>2</sub> shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, the RNC<sub>2</sub> shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to "Event F", the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure when the measured entity falls below the *Measurement Threshold 1* IE and stays below the threshold for the *Measurement Hysteresis Time* IE (Report A). When the conditions for Report A are met and if the *Report Periodicity* IE is provided, the RNC<sub>2</sub> shall initiate the Measurement Reporting procedure periodically with the requested report frequency specified by the *Report Periodicity* IE. If the conditions for Report A have been met and the measured entity rises above the *Measurement Threshold 2* IE and stays above the threshold for the *Measurement Hysteresis Time* IE, the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure (Report B) and shall terminate any corresponding periodic reporting. If the *Measurement Threshold 2* IE is not present, the RNC<sub>2</sub> shall use the value of the *Measurement Threshold 1* IE instead. If the *Measurement Hysteresis Time* IE is not included, the RNC<sub>2</sub> shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to "On Modification" and if the *SFN* IE is not provided, the RNC<sub>2</sub> shall report the result of the requested measurement immediately. If the *SFN* IE is provided, it indicates the frame for which the first measurement value shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [26]. Furthermore, if the *SFN* IE is present and if the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference", then the *SFN* IE relates to the Radio Frames of the Reference Cell identified by the *Reference Cell Identifier* IE. Following the first measurement report, the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure in accordance to the following conditions:

- 1. If the Common Measurement Type IE is set to "UTRAN GPS Timing of Cell Frames for UE Positioning":
  - If the  $T_{UTRAN-GPS}$  Change Limit IE is included in the  $T_{UTRAN-GPS}$  Measurement Threshold Information IE, the RNC<sub>2</sub> shall calculate the change of  $T_{UTRAN-GPS}$  value ( $F_n$ ) each time a new measurement result is received after point C in the measurement model [25]. The RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure and set n equal to zero when the absolute value of  $F_n$  rises above the threshold indicated by the  $T_{UTRAN-GPS}$  Change Limit IE. The change of  $T_{UTRAN-GPS}$  value ( $F_n$ ) is calculated according to the following:

$$F_n=0$$
 for  $n=0$ 

```
F_n = (M_n - M_{n-1}) \mod 37158912000000 - ((SFN_n - SFN_{n-1}) \mod 4096) *10*3.84*10^3*16 + F_{n-1} for n > 0
```

 $F_n$  is the change of the  $T_{UTRAN-GPS}$  value expressed in unit [1/16 chip] when n measurement results have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

 $M_n$  is the latest measurement result received after point C in the measurement model [25], measured at SFN<sub>n</sub>.

 $M_{n-1}$  is the previous measurement result received after point C in the measurement model [25], measured at SFN<sub>n-1</sub>.

 $M_1$  is the first measurement result received after point C in the measurement model [25], after first Common Measurement Reporting at initiation or after the last event was triggered.

 $M_0$  is equal to the value reported in the first Common Measurement Reporting at initiation or in the Common Measurement Reporting when the event was triggered.

- If the Predicted  $T_{UTRAN-GPS}$  Deviation Limit IE is included in the  $T_{UTRAN-GPS}$  Measurement Threshold Information IE, the RNC<sub>2</sub> shall update the  $P_n$  and  $F_n$  each time a new measurement result is received after

point C in the measurement model [25]. The RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure and set n equal to zero when  $F_n$  rises above the threshold indicated by the *Predicted T<sub>UTRAN-GPS</sub> Deviation Limit* IE. The  $P_n$  and  $F_n$  are calculated according to the following:

$$P_n=b$$
 for  $n=0$ 

 $P_n = ((a/16)*((SFN_n - SFN_{n-1}) \bmod 4096)/100 + ((SFN_n - SFN_{n-1}) \bmod 4096)*10*3.84*10^3*16 + P_{n-1}) \bmod 37158912000000 \ for \ n>0$ 

 $F_n = min((M_n - P_n) \mod 37158912000000, (P_n - M_n) \mod 37158912000000)$  for n > 0

 $P_n$  is the predicted  $T_{UTRAN-GPS}$  value when n measurement results have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

a is the last reported T<sub>UTRAN-GPS</sub> Drift Rate value.

b is the last reported  $T_{UTRAN-GPS}$  value.

 $F_n$  is the deviation of the last measurement result from the predicted  $T_{\text{UTRAN-GPS}}$  value  $(P_n)$  when n measurements have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

 $M_n$  is the latest measurement result received after point C in the measurement model [25, measured at SFN<sub>n</sub>.

 $M_1$  is the first measurement result received after point C in the measurement model [25], after first Common Measurement Reporting at initiation or after the last event was triggered.

The  $T_{UTRAN-GPS}$  Drift Rate is determined by the RN<sub>2</sub> in an implementation-dependent way after point B (see model of physical layer measurements in [26]).

- 2. If the Common Measurement Type IE is set to "SFN-SFN Observed Time Difference":
  - If the SFN-SFN Change Limit IE is included in the SFN-SFN Measurement Threshold Information IE, the RNC<sub>2</sub> shall calculate the change of SFN-SFN value (F<sub>n</sub>) each time a new measurement result is received after point C in the measurement model [25]. The RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure in order to report the particular SFN-SFN measurement which has triggered the event and set n equal to zero when the absolute value of F<sub>n</sub> rises above the threshold indicated by the SFN-SFN Change Limit IE. The change of the SFN-SFN value is calculated according to the following:

$$F_n=0$$
 for  $n=0$ 

[FDD - 
$$F_n = (M_n - a) \mod 614400 \text{ for } n > 0$$
]

[TDD - 
$$F_n = (M_n - a) \mod 40960$$
 for  $n > 0$ ]

 $F_n$  is the change of the SFN-SFN value expressed in unit [1/16 chip] when n measurement results have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

a is the last reported SFN-SFN.

 $M_n$  is the latest measurement result received after point C in the measurement model [25], measured at SFN<sub>n</sub>.

 $M_1$  is the first measurement result received after point C in the measurement model [25], after the first Common Measurement Reporting at initiation or after the last event was triggered.

- If the Predicted SFN-SFN Deviation Limit IE is included in the SFN-SFN Measurement Threshold Information IE, the RNC<sub>2</sub> shall each time a new measurement result is received after point C in the measurement model [25], update the P<sub>n</sub> and F<sub>n</sub>. The RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure in order to report the particular SFN-SFN measurement which has triggered the event and set n equal to zero when F<sub>n</sub> rises above the threshold indicated by the Predicted SFN-SFN Deviation Limit IE. The P<sub>n</sub> and F<sub>n</sub> are calculated according to the following:

```
P_n=b for n=0
```

[FDD - 
$$P_n = ((a/16) * ((SFN_n - SFN_{n-1}) \mod 4096)/100 + P_{n-1}) \mod 614400 \text{ for } n>0]$$

[FDD - 
$$F_n = min((M_n - P_n) \mod 614400, (P_n - M_n) \mod 614400)$$
 for  $n > 0$ ]

[TDD - 
$$P_n = ((a/16) * (15*(SFN_n - SFN_{n-1}) \mod 4096 + (TS_n - TS_{n-1}))/1500 + P_{n-1}) \mod 40960$$
 for  $n>0$ ]  
[TDD -  $F_n = \min((M_n - P_n) \mod 40960, (P_n - M_n) \mod 40960)$  for  $n>0$ ]

 $P_n$  is the predicted SFN-SFN value when n measurement results have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

a is the last reported SFN-SFN Drift Rate value.

b is the last reported SFN-SFN value.

 $F_n$  is the deviation of the last measurement result from the predicted SFN-SFN value ( $P_n$ ) when n measurements have been received after the first Common Measurement Reporting at initiation or after the last event was triggered.

 $M_n$  is the latest measurement result received after point C in the measurement model [25], measured at the [TDD – the Time Slot TS<sub>n</sub> of ] the Frame SFN<sub>n</sub>.

 $M_1$  is the first measurement result received after point C in the measurement model [25], after first Common Measurement Reporting at initiation or after the last event was triggered.

The SFN-SFN Drift Rate is determined by the RNS<sub>2</sub> in an implementation-dependent way after point B (see model of physical layer measurements in [26]).

If the *Report Characteristics* IE is not set to "On-Demand", the RNC<sub>2</sub> is required to perform reporting for a common measurement object, in accordance with the conditions provided in the COMMON MEASUREMENT INITIATION REQUEST message, as long as the object exists. If no common measurement object(s) for which a measurement is defined exists any more, the RNC<sub>2</sub> shall terminate the measurement locally without reporting this to RNC<sub>1</sub>.

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 RNC<sub>2</sub> shall initiate a Measurement Reporting procedure immediately, and then continue with the measurements as specified in the COMMON MEASUREMENT INITIATION REQUEST message.

#### Common measurement accuracy

If the *Common Measurement Type* IE is set to "UTRAN GPS Timing of Cell Frames for UE Positioning", then the RNC<sub>2</sub> shall use the *UTRAN GPS Timing Measurement Minimum Accuracy Class* IE included in the *Report Characteristics* IE according to the following:

- If the *UTRAN GPS Timing Measurement Minimum Accuracy Class* IE indicates "Class A", then the concerned RNC<sub>2</sub> shall perform the measurement with the highest supported accuracy within the accuracy classes A, B or C.
- If the UTRAN GPS Timing Measurement Minimum Accuracy Class IE indicates the "Class B", then the
  concerned RNC<sub>2</sub> shall perform the measurements with the highest supported accuracy within the accuracy
  classes B or and
- If the *UTRAN GPS Timing Measurement Minimum Accuracy Class* IE indicates "Class C", then the concerned RNC<sub>2</sub> shall perform the measurements with the highest supported accuracy according to class C.
- If the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference", then the concerned RNC<sub>2</sub> shall initiate the SFN-SFN observed Time Difference measurements between the reference cell identified by *UC-ID* IE and the neighbouring cells identified by their UC-ID. The *Report Characteristics* IE applies to each of these measurements.

#### Higher layer filtering

The *Measurement Filter Coefficient* IE indicates how filtering of the measurement values shall be performed before measurement event evaluation and reporting.

The averaging shall be performed according to the following formula.

$$F_n = (1-a) \cdot F_{n-1} + a \cdot M_n$$

The variables in the formula are defined as follows

 $F_n$  is the updated filtered measurement result

 $F_{n-1}$  is the old filtered measurement result

 $M_n$  is the latest received measurement result from physical layer measurements, the unit used for  $M_n$  is the same unit as the reported unit in the COMMON MEASUREMENT INITIATION RESPONSE, COMMON MEASUREMENT REPORT messages or the unit used in the event evaluation (i.e. same unit as for Fn).

 $a = 1/2^{(k/2)}$ -, where k is the parameter received in the *Measurement Filter Coefficient IE*. If the *Measurement Filter Coefficient IE* is not present, a shall be set to 1 (no filtering).

In order to initialise the averaging filter,  $F_0$  is set to  $M_1$  when the first measurement result from the physical layer measurement is received.

#### Response message

If the RNC<sub>2</sub> was able to initiate the measurement requested by RNC<sub>1</sub>, it shall respond with the COMMON MEASUREMENT INITIATION RESPONSE message. The message shall include the same Measurement ID that was used in the COMMON MEASUREMENT INITIATION REQUEST message.

In the case in which the Report Characteristics IE is set to "On-Demand" or "On Modification":

- The RNC<sub>2</sub> shall include the measurement result in the *Common Measurement Value* IE within the COMMON MEASUREMENT INITIATION RESPONSE message . The RNC<sub>2</sub> shall also include the *Common Measurement Achieved Accuracy* IE if the *Common Measurement Type* IE is set to "UTRAN GPS Timing of Cell Frames for UE Positioning".
- If the *Common Measurement Type* IE is not set to "SFN-SFN Observed Time Difference" and if the *SFN Reporting Indicator* IE is set to "FN Reporting Required", then the RNC<sub>2</sub> shall include the *SFN* IE in the COMMON MEASUREMENT INITIATION RESPONSE message,. The reported SFN shall be the SFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [26]. If the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference", then the *SFN Reporting Indicator* IE is ignored.
- If the Common Measurement Type IE is set to "SFN-SFN Observed Time Difference", then the RNC<sub>2</sub> shall report all the available measurements in the Successful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information IE, and the RNC<sub>2</sub> shall report the neighbouring cells with no measurement result available in the Unsuccessful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information IE. For all available measurement results, the RNC<sub>2</sub> shall include in the Successful Neighbouring Cell SFN-SFN Observed Time Difference Measurement Information IE the SFN-SFN Quality IE and the SFN-SFN Drift Rate Quality IE, if available.

If the *Common Measurement Type* IE is set to "UTRAN GPS Timing of Cell Frames for UE Positioning" and the *Report Characteristics* IE is set to "On Demand" or "On Modification", the RNC<sub>2</sub> shall include in the  $T_{UTRAN-GPS}$  *Measurement Value Information* IE the  $T_{UTRAN-GPS}$  *Quality* IE and the  $T_{UTRAN-GPS}$  *Drift Rate Quality* IE, if available.

## 8.5.2.3 Unsuccessful Operation

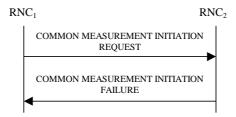


Figure 30B: Common Measurement Initiation procedure, Unsuccessful Operation

If the requested measurement cannot be initiated, the RNC<sub>2</sub> shall send a COMMON MEASUREMENT INITIATION FAILURE message. The message shall include the same *Measurement ID* IE that was used in the COMMON MEASUREMENT INITIATION REQUEST message and shall include the *Cause* IE set to an appropriate value.

Typical cause values are as follows:

#### Radio Network Layer Cause

- Measurement not supported for the object.
- Measurement Temporarily not Available

#### 8.5.2.4 Abnormal Conditions

If the COMMON MEASUREMENT INITIATION REQUEST message contains the *SFN-SFN Measurement Threshold Information* IE (in the *Measurement Threshold* IE contained in the *Report Characteristics* IE) and it does not contain at least one IE, the RNC<sub>2</sub> shall reject the procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the COMMON MEASUREMENT INITIATION REQUEST message contains the  $T_{UTRAN-GPS}$  Measurement Threshold Information IE (in the Measurement Threshold IE contained in the Report Characteristics IE) and it does not contain at least one IE, the RNC<sub>2</sub> shall reject the procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the Common Measurement Type IE is set to "UTRAN GPS Timing of Cell Frames for UE Positioning", but the  $T_{UTRAN-GPS}$  Measurement Minimum Accuracy Class IE in the Common Measurement Accuracy IE is not received in the COMMON MEASUREMENT INITIATION REQUEST message, the RNC<sub>2</sub> shall reject the Common Measurement Initiation procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the Common Measurement Type received in the *Common Measurement Type* IE is not "load", and if the Common Measurement Type received in the *Common Measurement Type* IE is not defined in ref. [11] or [15] to be measured on the Common Measurement Object Type indicated in the COMMON MEASUREMENT INITIATION REQUEST message, the RNC<sub>2</sub> shall reject the Common Measurement Initiation procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the *Common Measurement Type* IE is set to "SFN-SFN Observed Time Difference", but the *Neighbouring Cell Measurement Information* IE is not received in the COMMON MEASUREMENT INITIATION REQUEST message, the RNC<sub>2</sub> shall reject the Common Measurement Initiation procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

The allowed combinations of the Common Measurement Type and Report Characteristics Type are shown in the table below marked with "X". For not allowed combinations, the RNC<sub>2</sub> shall reject the Common Measurement Initiation procedure using the COMMON MEASUREMENT INITIATION FAILURE message..

Table X: Allowed Common Measurement Type and Report Characteristics Type Combinations

Common	Report characteristics type								
measurement type	On Demand	Periodic	Event A	Event B	Event C	Event D	Event E	Event F	On Modification
Received total wide band power	Х	Х	Х	Х	Х	Х	Х	Х	
Transmitted Carrier Power	Х	Х	Х	Х	Х	Х	Х	Х	
UL Timeslot ISCP	Х	Х	Х	Χ	Χ	Χ	Χ	Χ	
Load	Х	Х	Х	Χ	Χ	Χ	Χ	Χ	
UTRAN GPS Timing of Cell Frames for UE positioning	X	Х							Х
SFN-SFN Observed Time Difference	Х	X							X

[TDD - If the Common Measurement Type requires the Time Slot Information but the [3.84Mcps TDD - *Time Slot IE*] [1.28Mcps TDD – *Time Slot LCR* IE] is not provided in the COMMON MEASUREMENT INITIATION REQUEST message the RNS<sub>2</sub> shall reject the Common Measurement Initiation procedure using the COMMON MEASUREMENT INITIATION FAILURE message..]

If the *SFN* IE is included in the COMMON MEASUREMENT INITIATION REQUEST message and the *Report Characteristics* IE is other than "Periodic", "On Demand" or "On Modification", the RNS<sub>2</sub> shall reject the Common Measurement Initiation procedure using the COMMON MEASUREMENT INITIATION FAILURE message..

## 8.5.3 Common Measurement Reporting

#### 8.5.3.1 General

This procedure is used by an RNC to report the result of measurements requested by another RNC using the Common Measurement Initiation.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

## 8.5.3.2 Successful Operation



Figure 30C: Common Measurement Reporting procedure, Successful Operation

If the requested measurement reporting criteria are met, the RNC<sub>2</sub> shall initiate the Common Measurement Reporting procedure. Unless specified below, the meaning of the parameters are given in other specifications.

The *Measurement ID* IE shall be set to the Measurement ID provided by RNC<sub>1</sub> when initiating the measurement with the Common Measurement Initiation procedure.

If the achieved measurement accuracy does not fulfil the given accuracy requirement (see ref. [23] and [24]), the *Common Measurement Value Information* IE shall indicate Measurement not Available.

For measurements included in the *Successful Neighbouring Cell SFN-SFN Observed Time Difference Measurement Information* IE, the RNC<sub>2</sub> shall include the *SFN-SFN Quality* IE and the *SFN-SFN Drift Rate Quality* IE if available.

If the Common Measurement Type provided by RNC<sub>1</sub> when initiating the measurement with the Common Measurement Initiation procedure was "UTRAN GPS Timing of Cell Frames for UE Positioning", then the RNC<sub>2</sub> shall include in the  $T_{UTRAN-GPS}$  Measurement Value Information IE the  $T_{UTRAN-GPS}$  Quality IE and the  $T_{UTRAN-GPS}$  Drift Rate Quality IE, if available.

If the Common measurement type provided by RNC<sub>1</sub> when initiating the measurement with the Common Measurement Initiation procedure was "SFN-SFN Observed Time Difference", then RNC<sub>2</sub> shall include in the COMMON MEASUREMENT REPORT all the available measurements in the *Successful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE and shall include the neighbouring cells with no measurement result available in the *Unsuccessful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE.

If the Common measurement type provided by RNC<sub>1</sub> when initiating the measurement with the Common Measurement Initiation procedure was not set to "SFN-SFN Observed Time Difference" and the SFN Reporting Indicator when initiating the measurement was set to "FN Reporting Required", the RNC<sub>2</sub> shall include the SFN IE in the COMMON MEASUREMENT REPORT message. The reported SFN shall be the SFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [26]. If the Common Measurement Type IE is set to "SFN-SFN Observed Time Difference", then the SFN Reporting Indicator IE is ignored.

### 8.5.3.3 Abnormal Conditions

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## 8.5.4 Common Measurement Termination

#### 8.5.4.1 General

This procedure is used by an RNC to terminate a measurement previously requested by the Common Measurement Initiation procedure.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

## 8.5.4.2 Successful Operation



Figure 30D: Common Measurement Termination procedure, Successful Operation

This procedure is initiated with a COMMON MEASUREMENT TERMINATION REQUEST message.

Upon receipt, RNC<sub>2</sub> shall terminate reporting of common measurements corresponding to the received *Measurement ID* IE.

## 8.5.4.3 Abnormal Conditions

-

## 8.5.5 Common Measurement Failure

## 8.5.5.1 General

This procedure is used by an RNC to notify another RNC that a measurement previously requested by the Common Measurement Initiation procedure can no longer be reported.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

## 8.5.5.2 Successful Operation



Figure 30E: Common Measurement Failure procedure, Successful Operation

This procedure is initiated with a COMMON MEASUREMENT FAILURE INDICATION message, sent from RNC $_2$  to RNC $_1$  to inform the RNC $_1$  that a previously requested measurement can no longer be reported. RNC $_2$  has locally terminated the indicated measurement. The RNC $_2$  shall include in the DEDICATED MEASUREMENT FAILURE INDICATION message the reason for the failure in the *Cause* IE.

## 8.5.5.3 Abnormal Conditions

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## 8.5.6 Information Exchange Initiation

#### 8.5.6.1 General

This procedure is used by a RNC to request the initiation of an information exchange with another RNC.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

## 8.5.6.2 Successful Operation

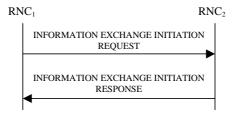


Figure 30F: Information Exchange Initiation procedure, Successful Operation

The procedure is initiated with an INFORMATION EXCHANGE INITIATION REQUEST message sent from RNC<sub>1</sub> to RNC<sub>2</sub>.

Upon receipt, the RNC<sub>2</sub> shall provide the requested information according to the parameters given in the request. Unless specified below, the meaning of the parameters are given in other specifications.

#### **Information Report Characteristics:**

The Information Report Characteristics IE indicates how the reporting of the information shall be performed.

If the *Information Report Characteristics* IE is set to "On Demand", the RNC<sub>2</sub> shall report the requested information immediately.

If the Information Report Characteristics IE is set to "Periodic", the RNC<sub>2</sub> shall report the requested information immediately and then shall periodically initiate the Information Reporting procedure for all the requested information, with the report frequency indicated by the Information Report Periodicity IE.

If the *Information Report Characteristics* IE is set to "On –Modification", the RNC<sub>2</sub> shall report the requested information immediately if available. If the requested information is not available at the moment of receiving the INFORMATION EXCHANGE INITIATION REQUEST message, but expected to become available after some acquisition time, the RNC<sub>2</sub> shall initiate the Information Reporting procedure when the requested information becomes available. The RNC2 shall then initiate the Information Reporting procedure in accordance to the following conditions:

- If the *Information Type Item* IE is set to "IPDL Parameters", the RNC<sub>2</sub> shall initiate the Information Reporting procedure when any change in the parameters occurs.
- If the *Information Type Item* IE is set to "DGPS Corrections", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific Information Type when either the PRC has drifted from the previously reported value more than the threshold indicated in the *PRC Deviation* IE or a change has occurred in the IODE.
- If the *Information Type Item* IE is set to "GPS Information" and the *GPS Information Item* IE includes "GPS Navigation Model & Recovery Assistance", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GPS Information Item when a change has occurred regarding either the IODC or the list of visible satellites, identified by the *SatID* IEs.
- If the *Information Type Item* IE is set to "GPS Information" and the *GPS Information Item* IE includes "GPS Ionospheric Model", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GPS Information Item when any change has occurred.

- If the Information Type Item IE is set to "GPS Information" and the GPS Information Item IE includes "GPS UTC Model", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GPS Information Item when a change has occurred in the t<sub>ot</sub> or WN<sub>t</sub> parameter.
- If the *Information Type Item* IE is set to "GPS Information" and the *GPS Information Item* IE includes "GPS Almanac", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GPS Information Item when a change in the t<sub>0a</sub> or WN<sub>a</sub> parameter has occurred.
- If the *Information Type Item* IE is set to "GPS Information" and the *GPS Information Item* IE includes "GPS Real-Time Integrity", the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific GPS Information Item when any change has occurred.
- If any of the above *Information Type* IEs becomes temporarily unavailable, the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific Information Item by indicating "Information Not Available" in the *Requested Data Value Information* IE. If the Information becomes available again, the RNC<sub>2</sub> shall initiate the Information Reporting procedure for this specific Information.

#### Response message:

If the RNC<sub>2</sub> is able to determine the information requested by the RNC<sub>1</sub>, it shall respond with the INFORMATION EXCHANGE INITIATION RESPONSE message. The message shall include the *Information Exchange ID* IE set to the same value that was included in the INFORMATION EXCHANGE INITIATION REQUEST message. When the *Report Characteristics* IE is set to "On Modification" or "Periodic", the INFORMATION EXCHANGE INITIATION RESPONSE message shall contain the *Requested Data Value* IE if the data are available. When the *Report Characteristics* IE is set to "On Demand", the INFORMATION EXCHANGE INITIATION RESPONSE message shall contain the *Requested Data Value* IE.

## 8.5.6.3 Unsuccessful Operation

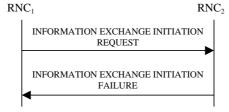


Figure 30G: Information Exchange Initiation procedure, Unsuccessful Operation

If the requested Information Type received in the *Information Type* IE indicates a type of information that RNC<sub>2</sub> cannot provide, the RNC<sub>2</sub> shall reject the Information Exchange Initiation procedure.

If the requested information provision cannot be accessed, the RNC<sub>2</sub> shall reject the procedure and shall send the INFORMATION EXCHANGE INITIATION FAILURE message.

The message shall include the *Information Exchange ID* IE set to the same value that was used in the INFORMATION EXCHANGE INITIATION REQUEST message and the *Cause* IE set to an appropriate value.

Typical cause values are as follows:

#### **Radio Network Layer Cause:**

Information temporarily not available.

Information Provision not supported for the object.

### 8.5.6.4 Abnormal Conditions

If the *Information Report Characteristics* IE is set to "On Modification", and the *Information Type Item* IE is set to "DGPS Corrections", but the *Information Threshold* IE is not received in the INFORMATION EXCHANGE

INITIATION REQUEST message, the RNC<sub>2</sub> shall reject the Information Exchange Initiation procedure and shall send the INFORMATION EXCHANGE INITIATION FAILURE message.

The allowed combinations of the Information type and Information Report Characteristics type are shown in the table below marked with "X". For not allowed combinations, the RNC<sub>2</sub> shall reject the Information Exchange Initiation procedure using the INFORMATION EXCHANGE INITIATION FAILURE message.

Table x: Allowed Information Type and Information Report Characteristics type combinations

Information Type	Information Report Characteristics Type					
	On Demand	Periodic	On Modification			
UTRAN Access Point Position with Altitude	Х					
UTRAN Access Point Position	Х					
IPDL Parameters	X	Х	Х			
GPS Information	X	X	X			
DGPS Corrections	X	Х	X			
GPS RX Pos	X					
,SFN-SFN	X					
Measurement						
Reference Point						
Position						

## 8.5.7 Information Reporting

#### 8.5.7.1 General

This procedure is used by a RNC to report the result of information requested by another RNC using the Information Exchange Initiation.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

## 8.5.7.2 Successful Operation



Figure 30H: Information Reporting procedure, Successful Operation

If the requested information reporting criteria are met, the RNC<sub>2</sub> shall initiate an Information Reporting procedure. Unless specified below, the meaning of the parameters are given in other specifications.

The *Information Exchange ID* IE shall be set to the Information Exchange ID provided by the RNC<sub>1</sub> when initiating the information exchange with the Information Exchange Initiation procedure.

The Requested Data Value IE shall include at least one IE containing the data to be reported.

### 8.5.7.3 Abnormal Conditions

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## 8.5.8 Information Exchange Termination

#### 8.5.8.1 General

This procedure is used by a RNC to terminate the information exchange requested using the Information Exchange Initiation.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

## 8.5.8.2 Successful Operation



Figure 30I: Information Exchange Termination procedure, Successful Operation

This procedure is initiated with a INFORMATION EXCHANGE TERMINATION REQUEST message.

Upon receipt, the RNC<sub>2</sub> shall terminate the information exchange corresponding to the *Information Exchange ID* IE provided by the RNC<sub>1</sub> when initiating the information exchange with the Information Exchange Initiation procedure.

#### 8.5.8.3 Abnormal Conditions

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## 8.5.9 Information Exchange Failure

### 8.5.9.1 General

This procedure is used by a RNC to notify another that the information exchange it previously requested using the Information Exchange Initiation can no longer be reported.

This procedure uses the signalling bearer connection for the relevant Distant RNC Context.

#### 8.5.9.2 Successful Operation



Figure 30J: Information Exchange Failure procedure, Successful Operation

This procedure is initiated with a INFORMATION EXCHANGE FAILURE INDICATION message, sent from the RNC<sub>2</sub> to the RNC<sub>1</sub>, to inform the RNC<sub>1</sub> that information previously requested by the Information Exchange Initiation procedure can no longer be reported. The RNC<sub>2</sub> shall include in the INFORMATION EXCHANGE FAILURE INDICATION message the *Information Exchange ID* IE set to the same value provided by the RNC<sub>1</sub> when initiating the information exchange with the Information Exchange Initiation procedure, and the RNC<sub>2</sub> shall include the *Cause* IE set to an appropriate value.

Typical cause values are as follows:

#### Radio Network Layer Cause:

Information temporarily not available.

## 9 Elements for RNSAP Communication

## 9.1 Message Functional Definition and Content

## 9.1.1 General

This subclause defines the structure of the messages required for the RNSAP protocol in tabular format. The corresponding ASN.1 definition is presented in subclause 9.3. In case there is contradiction between the tabular format in subclause 9.1 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional IEs, in which the tabular format shall take precedence.

NOTE: The messages have been defined in accordance to the guidelines specified in [28].

## 9.1.2 Message Contents

#### 9.1.2.1 Presence

An information element can be of the following types:

М	IEs marked as Mandatory (M) shall always be included in the message.
0	IEs marked as Optional (O) may or may not be included in the message.
С	IEs marked as Conditional (C) shall be included in a message only if the condition is satisfied. Otherwise the IE
	shall not be included.

In the case of an Information Element group, the group is preceded by a name for the info group (in bold). It is also indicated how many times a group may be repeated in the message and whether the group is conditional. 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 criticality information applied to it. Following cases are possible:

_	No criticality information is applied explicitly.
YES	Criticality information is applied. 'YES' is usable only for non-repeatable information elements.
GLOBAL	The information element and all its repetitions together have one common criticality information.
	'GLOBAL' is usable only for repeatable information elements.
EACH	Each repetition of the information element has its own criticality information. It is not allowed to assign
	different criticality values to the repetitions. 'EACH' is usable only for repeatable information elements.

## 9.1.2.3 Range

The Range column indicates the allowed number of copies of repetitive IEs/IE groups.

## 9.1.2.4 Assigned Criticality

This column provides the actual criticality information as defined in subclause 10.3.2, if applicable.

# 9.1.3 RADIO LINK SETUP REQUEST

## 9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE Type and	Semantics Description	Criticality	Assigned Criticality
			Reference			
Message Type	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		_	
SRNC-ID	М		RNC-ID		YES	reject
			9.2.1.50			.,
S-RNTI	М		9.2.1.53		YES	reject
D-RNTI	0		9.2.1.24		YES	reject
Allowed Queuing Time	0		9.2.1.2		YES	reject
UL DPCH Information	-	1	3.2.1.2		YES	reject
>UL Scrambling Code	M	1	9.2.2.53		-	reject
>Min UL Channelisation	M					
	IVI		9.2.2.25		_	
Code Length			0.0004			
>Max Number of UL	C -		9.2.2.24		_	
DPDCHs	CodeLen					
>Puncture Limit	M		9.2.1.46	For the UL.	_	
>TFCS	M		TFCS for		-	
			the UL		1	
			9.2.1.63			
>UL DPCCH Slot Format	М		9.2.2.52			
>Uplink SIR Target	0		Uplink SIR		_	
			9.2.1.69			
>Diversity mode	М		9.2.2.8		_	
>SSDT Cell Identity Length	0		9.2.2.41		_	
>S Field Length	0		9.2.2.36		_	
>DPC Mode	0		9.2.2.12A		YES	reject
DL DPCH Information	0	1	3.Z.Z.1ZA		YES	
>TFCS	N 4	1	TFCS for		TES	reject
>1FC5	M				_	
			the DL.			
51.55011.01.5			9.2.1.63			
>DL DPCH Slot Format	M		9.2.2.9		_	
>Number of DL	M		9.2.2.26A		_	
Channelisation Codes						
>TFCI Signalling Mode	M		9.2.2.46		_	
>TFCI Presence	C-		9.2.1.55		_	
	SlotFormat					
>Multiplexing Position	M		9.2.2.26		_	
>Power Offset Information		1			_	
>>PO1	М		Power	Power offset	_	
			Offset	for the TFCI	1	
			9.2.2.30	bits.		
>>PO2	М		Power	Power offset	_	
-			Offset	for the TPC	1	
			9.2.2.30	bits.	1	
>>PO3	M		Power	Power offset	_	
	.**		Offset	for the pilot		
			9.2.2.30	bits.		
>FDD TPC Downlink Step	M		9.2.2.16	DILO.	_	
Size	IVI		3.2.2.10		_	
	NA		0.2.2.24.4			
>Limited Power Increase	M		9.2.2.21A		_	
>Inner Loop DL PC Status	M		9.2.2.21a			
>Split Type	C-IfSplit		9.2.2.39a		YES	reject
>Length of TFCI2	C-		9.2.2.21C		YES	reject
	SplitType				ļ	
DCH Information	M		DCH FDD		YES	reject
			Information			
			9.2.2.4A			
DSCH Information	0		DSCH		YES	reject
			FDD			-
			Information			

IE/Group Name	Presence	Range	IE Type	Semantics	Criticality	Assigned
			and Reference	Description		Criticality
Di information			9.2.2.13A		FAOLI	***
RL Information		1 <maxn oofRLs&gt;</maxn 			EACH	notify
>RL ID	M		9.2.1.49		_	
>C-ID	M		9.2.1.6		_	
>First RLS Indicator	M		9.2.2.16A		-	
>Frame Offset	M		9.2.1.30		_	
>Chip Offset	M		9.2.2.1		_	
>Propagation Delay	0		9.2.2.33		_	
>Diversity Control Field	C – NotFirstRL		9.2.1.20		_	
>Initial DL TX Power	0		DL Power 9.2.1.21A		_	
>Primary CPICH Ec/No	0		9.2.2.32		_	
>SSDT Cell Identity	0		9.2.2.40		_	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.48		_	
>SSDT Cell Identity for EDSCHPC	C- EDSCHPC		9.2.2.40A		YES	ignore
Transmission Gap Pattern Sequence Information	0		9.2.2.47A		YES	reject
Active Pattern Sequence Information	0		9.2.2.A		YES	reject
Permanent NAS UE Identity	0		9.2.1.73		YES	ignore

Condition	Explanation
CodeLen	The IE shall be present if Min UL Channelisation Code length IE
	equals to 4
SlotFormat	The IE shall be present if the DL DPCH Slot Format IE is equal to
	any of the values from 12 to 16.
NotFirstRL	The IE shall be present if the RL is not the first one in the RL
	Information IE.
Diversity mode	The IE shall be present if Diversity Mode IE in UL DPCH Information
	IE is not equal to "none".
EDSCHPC	This IE shall be present if Enhanced DSCH PC IE is present in the
	DSCH Information IE.
IfSplit	The IE shall be present if the TFCI Signalling Mode IE is set to
	'Split'.
SplitType	The IE shall be present if the Split Type IE is set to 'Logical'.

Range bound	Explanation
maxnoofRLs	Maximum number of RLs for one UE.

# 9.1.3.2 TDD Message

Message Type         M         9.2.1.40         YES         reject           Transaction ID         M         9.2.1.59         —         —           SRNC-ID         M         RNC-ID         YES         reject           SRNTI         M         9.2.1.53         YES         reject           DRNTI         O         9.2.1.24         YES         reject           UL Physical Channel         1         reject         YES         reject           Information         M         9.2.3.3A         For the UL         —           Factor         Factor         For the UL         —         —           Jessel Channels per Timeslot         M         9.2.3.3A         For the UL         —           De Physical Channels per Timeslot         M         9.2.3.3A         For the DL         —           Jest of Channels per Timeslots per Frame         M         9.2.3.3A         For the DL         —           Jest of Channels per Frame         M         9.2.3.2         YES         reject           Jest of Channels per Frame         M         9.2.3.2         YES         reject           Jest of Channels per Frame         M         9.2.3.2         YES         reject	IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Transaction ID   M	Message Type	M		9.2.1.40		YES	reject
S-RNTI		M		9.2.1.59		_	
S-RNTI	SRNC-ID	М				YES	reject
D-RNT	S-RNTI	М				YES	reject
IL Physical Channel Information							
Description	UL Physical Channel		1				
SMinimum Spreading Factor   Pactor		М		9.2.3.3A	For the UL	_	
Physical Channels per Timeslots	Factor			9.2.3.4A	For the UL	1	
Information	Physical Channels per Timeslot	М		9.2.3.3B		-	
Timeslots per Frame	Information		1			YES	reject
Sector	Timeslots per Frame					ı	
Physical Channels per Frame	Factor				For the DL	_	
Description	Physical Channels per Frame					1	
SCCTrCH ID   M   9.2.3.2   -	Allowed Queuing Time	0		9.2.1.2			reject
STFCS	UL CCTrCH Information		ofCCTrCH			EACH	notify
STECS	>CCTrCH ID	M		9.2.3.2		_	
STECL Coding		М			For the UL.	_	
SPUNCTURE Limit	>TFCI Coding					_	
STDD TPC Uplink Step Size		М		9.2.1.46		_	
DL CCTrCH Information	>TDD TPC Uplink Step Size	0		9.2.3.10a	for 1.28Mcps TDD, not applicable to 3.84Mcps	YES	reject
>TFCS         M         9.2.1.63         For the DL.         —           >TFCI Coding         M         9.2.3.11         —           >Puncture Limit         M         9.2.1.46         —           >TDD TPC Downlink Step Size         M         9.2.3.10         —           >TPC CCTrCH List         O <maxno cctrchs="">         List of uplink CCTrCH Which provide TPC         —           &gt;&gt;TPC CCTrCH ID         M         CCTrCH ID 9.2.3.2         —           DCH Information         O         DCH TDD Information 9.2.3.2A         YES reject           DSCH Information         O         DSCH TDD Information 9.2.3.3a         YES reject</maxno>	DL CCTrCH Information		ofCCTrCH		For DCH	EACH	notify
>TFCS         M         9.2.1.63         For the DL.         —           >TFCI Coding         M         9.2.3.11         —           >Puncture Limit         M         9.2.1.46         —           >TDD TPC Downlink Step Size         M         9.2.3.10         —           >TPC CCTrCH List         O <maxno cctrchs="">         List of uplink CCTrCH Which provide TPC         —           &gt;&gt;TPC CCTrCH ID         M         CCTrCH ID 9.2.3.2         —           DCH Information         O         DCH TDD Information 9.2.3.2A         YES         reject           DSCH Information         O         DSCH TDD Information 9.2.3.3a         YES         reject</maxno>	>CCTrCH ID	M		9.2.3.2		_	
>Puncture Limit         M         9.2.1.46         —           >TDD TPC Downlink Step Size         M         9.2.3.10         —           >TPC CCTrCH List         0 <maxno cctrchs="">         List of uplink CCTrCH which provide TPC         —           &gt;&gt;TPC CCTrCH ID         M         CCTrCH ID 9.2.3.2         —           DCH Information         O         DCH TDD Information 9.2.3.2A         YES reject           DSCH Information         O         DSCH TDD Information 9.2.3.3a         YES reject</maxno>		M			For the DL.	_	
>Puncture Limit         M         9.2.1.46         —           >TDD TPC Downlink Step Size         M         9.2.3.10         —           >TPC CCTrCH List         0 <maxno cctrchs="">         List of uplink CCTrCH which provide TPC         —           &gt;&gt;TPC CCTrCH ID         M         CCTrCH ID 9.2.3.2         —           DCH Information         O         DCH TDD Information 9.2.3.2A         YES reject           DSCH Information         O         DSCH TDD Information 9.2.3.3a         YES reject</maxno>	>TFCI Coding	M		9.2.3.11			
>TDD TPC Downlink Step Size       M       9.2.3.10       -         >TPC CCTrCH List       0 <maxno cctrchs="">       List of uplink CCTrCH which provide TPC         &gt;&gt;TPC CCTrCH ID       M       CCTrCH ID 9.2.3.2       -         DCH Information       O       DCH TDD Information 9.2.3.2A       YES       reject         DSCH Information 9.2.3.3a       PSCH TDD Information 9.2.3.3a       YES       reject</maxno>	>Puncture Limit	M		9.2.1.46			
CCTrCHs   CCTrCH which provide TPC	Size	М		9.2.3.10		_	
DD   9.2.3.2     DCH Information   O   DCH TDD   Information   9.2.3.2A   DSCH Information   O   DSCH   TDD   Information   9.2.3.3a   YES   reject   TDD   TDD	>TPC CCTrCH List				CCTrCH which	-	
Information   9.2.3.2A	>>TPC CCTrCH ID	М		ID		_	
DSCH Information O DSCH TDD Information 9.2.3.3a		0		DCH TDD Information		YES	reject
	DSCH Information	0		DSCH TDD Information		YES	reject
	USCH Information	0		9.2.3.15		YES	reject

RL Information		1			YES	reject
>RL ID	M		9.2.1.49		_	
>C-ID	M		9.2.1.6		_	
>Frame Offset	M		9.2.1.30		-	
>Special Burst Scheduling	M		9.2.3.7D		-	
>Primary CCPCH RSCP	0		9.2.3.5		_	
>DL Time Slot ISCP Info	0		9.2.3.2D	Applicable to 3.84Mcps TDD only	-	
>DL Time Slot ISCP Info LCR	0		9.2.3.2F	Applicable to 1.28Mcps TDD only	YES	reject
>TSTD Support Indicator	0		9.2.3.13F	Applicable to 1.28Mcps TDD only	YES	ignore
>UL Synchronisation Parameters LCR		01			YES	ignore
>>Uplink Synchronisation Step Size	М		9.2.3.13J		-	
>>Uplink Synchronisation Frequency	М		9.2.3.131		-	
Permanent NAS UE Identity	0		9.2.1.73		YES	ignore
PDSCH -RL -ID	0		RL ID 9.2.1.49		YES	ignore

Range bound	Explanation		
maxnoofCCTrCHs	Maximum number 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	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		_	•
D-RNTI	0		9.2.1.24		YES	ignore
CN PS Domain Identifier	0		9.2.1.12		YES	ignore
CN CS Domain Identifier	0		9.2.1.11		YES	ignore
RL Information Response		1 <maxno ofRLs&gt;</maxno 			EACH	ignore
>RL ID	M		9.2.1.49		_	
>RL Set ID	M		9.2.2.35		_	
>URA Information	0		9.2.1.70B		_	
>SAI	M		9.2.1.52		_	
>Cell GAI	0		9.2.1.5A		_	
>UTRAN Access Point Position	0		9.2.1.70A		_	
>Received Total Wide Band Power	М		9.2.2.35A		_	
>Secondary CCPCH Info	0		9.2.2.37B		_	
>DL Code Information	M		FDD DL Code Information 9.2.2.14A		-	
>CHOICE Diversity Indication	М				_	
>>Combining					_	
>>>RL ID	М		9.2.1.49	Reference RL ID for the combining	_	
>>>DCH Information Response	0		9.2.1.16A		YES	ignore
>>Non Combining or First RL					_	
>>>DCH Information Response	М		9.2.1.16A		_	
>SSDT Support Indicator	M		9.2.2.43		_	
>Maximum Uplink SIR	М		Uplink SIR 9.2.1.69		_	
>Minimum Uplink SIR	М		Uplink SIR 9.2.1.69		_	
>Closed Loop Timing Adjustment Mode	0		9.2.2.3A		_	
>Maximum Allowed UL Tx Power	М		9.2.1.35		_	
>Maximum DL TX Power	М		DL Power 9.2.1.21A		_	
>Minimum DL TX Power	М		DL Power 9.2.1.21A		_	
>Primary Scrambling Code	0		9.2.1.45		_	
>UL UARFCN	0		UARFCN 9.2.1.66	Corresponds to Nu in ref. [6]	_	
>DL UARFCN	0		UARFCN 9.2.1.66	Corresponds to Nd in ref. [6]	-	
>Primary CPICH Power	М		9.2.1.44		_	
>DSCH Information Response	Ö		DSCH FDD Information Response 9.2.2.13B		YES	ignore

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
>Neighbouring UMTS Cell Information	0		9.2.1.41A		ı	
>Neighbouring GSM Cell Information	0		9.2.1.41C		ı	
>PC Preamble	M		9.2.2.27a		-	
>SRB Delay	M		9.2.2.39A		-	
>Cell GA Additional Shapes	0		9.2.1.5B		YES	ignore
Uplink SIR Target	0		Uplink SIR 9.2.1.69		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore
DSCH-RNTI	0		9.2.1.26Ba		YES	ignore

Range bound	Explanation			
maxnoofRLs	Maximum number of RLs for one UE.			

# 9.1.4.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		_	
D-RNTI	0		9.2.1.24		YES	ignore
CN PS Domain Identifier	0		9.2.1.12		YES	ignore
CN CS Domain Identifier	0		9.2.1.11		YES	ignore
RL Information Response		01		Mandatory for 3.84Mcps TDD, not applicable to 1.28Mcps TDD	YES	ignore
>RL ID	M		9.2.1.49		_	
>URA Information	0		9.2.1.70B		_	
>SAI	M		9.2.1.52		_	
>Cell GAI	0		9.2.1.5A		_	
>UTRAN Access Point Position	0		9.2.1.70A		_	
>UL Time Slot ISCP Info	М		9.2.3.13D		_	
>Maximum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>Minimum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>Maximum Allowed UL Tx Power	М		9.2.1.35		_	
>Maximum DL TX Power	М		DL Power 9.2.1.21A		_	
>Minimum DL TX Power	М		DL Power 9.2.1.21A		-	
>UARFCN	0		UARFCN 9.2.1.66	Corresponds to Nt in ref. [7]	_	
>Cell Parameter ID	0		9.2.1.8		_	
>Sync Case	0		9.2.1.54		_	
>SCH Time Slot	C-Case2		9.2.1.51		_	
>SCTD Indicator	0		9.2.1.78		_	
>PCCPCH Power	M		9.2.1.43		_	
>Timing Advance Applied	M		9.2.3.12A		_	
>Alpha Value	M		9.2.3.a		_	
>UL PhysCH SF Variation	M		9.2.3.13B		_	
>Synchronisation	M		9.2.3.7E		_	
Configuration >Secondary CCPCH Info TDD	0		9.2.3.7B		_	
>UL CCTrCH Information		0 <maxno ofCCTrCH s&gt;</maxno 		For DCH	GLOBAL	ignore
>>CCTrCH ID	М		9.2.3.2		_	
>>UL DPCH Information		01			YES	ignore
>>>Repetition Period	М		9.2.3.7		_	<u> </u>
>>>Repetition Length	M		9.2.3.6		_	
>>>TDD DPCH Offset	M		9.2.3.8A		_	
>>>UL Timeslot Information	M		9.2.3.13C		-	
>DL CCTrCH Information		0 <maxno ofCCTrCH s&gt;</maxno 		For DCH	GLOBAL	ignore
>>CCTrCH ID	М		9.2.3.2		_	
>>DL DPCH Information		01			YES	ignore
>>>Repetition Period	М		9.2.3.7	1	-	.g
>>>Repetition Length	M	1	9.2.3.6			
	I IVI		9.2.3.0		_	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
>>>DL Timeslot Information	М		9.2.3.2C			
>DCH Information Response	0		9.2.1.16A		YES	ignore
>DSCH Information Response		0 <maxnoof DSCHs&gt;</maxnoof 			GLOBAL	ignore
>>DSCH ID	М		9.2.1.26A		_	
>>DSCH Flow Control Information	М		9.2.1.26B		_	
>>Binding ID	0		9.2.1.3		_	
>>Transport Layer Address	0		9.2.1.62		_	
>>Transport Format Management	М		9.2.3.13		_	
>USCH Information Response		0 <maxnoof USCHs&gt;</maxnoof 			GLOBAL	ignore
>>USCH ID	M		9.2.3.14		_	
>>Binding ID	0		9.2.1.3		_	
>>Transport Layer Address	0		9.2.1.62		_	
>>Transport Format Management	M		9.2.3.13		_	
>Neighbouring UMTS Cell Information	0		9.2.1.41A		_	
>Neighbouring GSM Cell Information	0		9.2.1.41C		_	
>Cell GA Additional Shapes	0		9.2.1.5B		YES	ignore
>Time Slot for SCH	C-Case1		Time Slot 9.2.1.56		YES	ignore
Uplink SIR Target	M		Uplink SIR 9.2.1.69		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore
RL Information Response LCR		01		Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD	YES	ignore
>RL ID	М		9.2.1.49		_	
>URA Information	M		9.2.1.70B		_	
>SAI	M		9.2.1.52		_	
>Cell GAI	0		9.2.1.5A		_	
>UTRAN Access Point Position	0		9.2.1.70A		_	
>UL Time Slot ISCP Info LCR	M		9.2.3.13H		_	
>Maximum Uplink SIR	M		Uplink SIR 9.2.1.69		_	
>Minimum Uplink SIR	М		Uplink SIR 9.2.1.69		_	
>Maximum Allowed UL Tx Power	M		9.2.1.35		-	
>Maximum DL TX Power	М		DL Power 9.2.1.21A		_	
>Minimum DL TX Power	М		DL Power 9.2.1.21A		-	
>UARFCN	0		UARFCN 9.2.1.66	Corresponds to Nt in ref. [7]	_	
>Cell Parameter ID	0		9.2.1.8		_	
>SCTD Indicator	0		9.2.1.78		_	
>PCCPCH Power	M	1	9.2.1.43	1	_	
>Alpha Value	M		9.2.3.a		_	
>UL PhysCH SF Variation	М		9.2.3.13B	<u> </u>	_	<u> </u>

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
>Synchronisation Configuration	М		9.2.3.7E		-	
>Secondary CCPCH Info TDD LCR	0		9.2.3.7F		_	
>UL CCTrCH Information LCR		0 <maxno ofCCTrCH sLCR&gt;</maxno 		For DCH	GLOBAL	ignore
>>CCTrCH ID	M		9.2.3.2		_	
>>UL DPCH Information LCR		01			YES	ignore
>>>Repetition Period	M		9.2.3.7		_	
>>>Repetition Length	M		9.2.3.6		_	
>>>TDD DPCH Offset	M		9.2.3.8A		_	
>>>UL Timeslot Information LCR	М		9.2.3.13G		_	
>DL CCTrCH Information LCR		0 <maxno ofCCTrCH sLCR&gt;</maxno 		For DCH	GLOBAL	ignore
>>CCTrCH ID	M		9.2.3.2		_	
>>DL DPCH Information LCR		01			YES	ignore
>>>Repetition Period	M		9.2.3.7		_	
>>>Repetition Length	M		9.2.3.6		_	
>>>TDD DPCH Offset	M		9.2.3.8A		_	
>>>DL Timeslot Information LCR	М		9.2.3.2E			
>>>TSTD Indicator	M		9.2.3.13E		_	
>DCH Information Response	0		9.2.1.16A		YES	ignore
>DSCH Information Response LCR		0 <maxnoof DSCHsLC R&gt;</maxnoof 			GLOBAL	ignore
>>DSCH ID	M		9.2.1.26A		_	
>>DSCH Flow Control Information	М		9.2.1.26B		_	
>>Binding ID	0		9.2.1.3		_	
>>Transport Layer Address	0		9.2.1.62		_	
>>Transport Format Management	М		9.2.3.13		_	
>USCH Information Response LCR		0 <maxnoof USCHsLC R&gt;</maxnoof 			GLOBAL	ignore
>>USCH ID	М		9.2.3.14		_	
>>Binding ID	0		9.2.1.3		_	
>>Transport Layer Address	0		9.2.1.62		_	
>>Transport Format Management	М		9.2.3.13		_	
>Neighbouring UMTS Cell Information	0		9.2.1.41A		_	
>Neighbouring GSM Cell Information	0		9.2.1.41C		-	
>Cell GA Additional Shapes	0		9.2.1.5B		YES	ignore
>Uplink Timing Advance Control LCR	M		9.2.3.13K		YES	ignore
DSCH RNTI	0	1	9.2.1.26Ba		YES	ignore

Condition	Explanation					
Case2	The IE shall be present if Sync Case IE is equal to "Case2'.					
Case1	This IE shall be present if Sync Case IE is equal to "Case1".					

Range bound	Explanation
maxnoofDSCHs	Maximum number of DSCHs for one UE for 3.84Mcps TDD.
maxnoofUSCHs	Maximum number of USCHs for one UE for 3.84Mcps TDD.
maxnoofCCTrCHs	Maximum number of CCTrCH for one UE for 3.84Mcps TDD.
maxnoofDSCHsLCR	Maximum number of DSCHs for one UE for 1.28Mcps TDD.
maxnoofUSCHsLCR	Maximum number of USCHs for one UE for 1.28Mcps TDD.
maxnoofCCTrCHsLCR	Maximum number of CCTrCH for one UE for 1.28Mcps TDD.

# 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	М		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	•
D-RNTI	0		9.2.1.24		YES	ignore
CN PS Domain Identifier	0		9.2.1.12		YES	ignore
CN CS Domain Identifier	0		9.2.1.11		YES	ignore
CHOICE Cause Level	M				YES	ignore
>General					_	J
>>Cause	M		9.2.1.5		_	
>RL Specific					_	
>>Unsuccessful RL		1 <maxno< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxno<>			EACH	ignore
Information Response		ofRLs>				3
>>>RL ID	М		9.2.1.49		_	
>>>Cause	M		9.2.1.5		_	
>>Successful RL		0 <maxno< td=""><td>0.20</td><td></td><td>EACH</td><td>ignore</td></maxno<>	0.20		EACH	ignore
Information Response		ofRLs-1>				.g
>>>RL ID	М		9.2.1.49		_	
>>>RL Set ID	M		9.2.2.35		_	
>>>URA Information	O		9.2.1.70B		_	
>>>SAI	M	<del> </del>	9.2.1.705		_	
>>Cell GAI	O		9.2.1.5A		_	
>>>UTRAN Access Point	0		9.2.1.70A		_	
Position >>>Received Total Wide					_	
Band Power	М		9.2.2.35A		_	
>>>Secondary CCPCH Info	0		9.2.2.37B		_	
>>>DL Code Information	M		FDD DL Code Information 9.2.2.14A		_	
>>>CHOICE Diversity Indication	М				_	
>>>Combining					_	
>>>>RL ID	М		9.2.1.49	Reference RL ID for the combining	-	
>>>>DCH Information Response	0		9.2.1.16A		YES	ignore
>>>Non Combining or First RL					_	
>>>>DCH Information Response	М		9.2.1.16A		_	
>>>SSDT Support Indicator	М		9.2.2.43		_	
>>>Maximum Uplink SIR	М		Uplink SIR 9.2.1.69		_	
>>>Minimum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>>>Closed Loop Timing Adjustment Mode	0		9.2.2.3A		_	
>>>Maximum Allowed UL Tx Power	М		9.2.1.35		-	
>>>Maximum DL TX Power	М		DL Power 9.2.1.21A		-	
>>>Minimum DL TX Power	М		DL Power 9.2.1.21A		_	
>>>Primary CPICH Power	М		9.2.1.44		_	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
>>>Primary Scrambling Code	0		9.2.1.45		-	
>>>UL UARFCN	0		UARFCN 9.2.1.66	Corresponds to Nu in ref. [6]	_	
>>>DL UARFCN	0		UARFCN 9.2.1.66	Corresponds to Nd in ref. [6]	-	
>>>DSCH Information Response	0		DSCH FDD Information Response 9.2.2.13B		YES	ignore
>>>Neighbouring UMTS Cell Information	0		9.2.1.41A		_	
>>>Neighbouring GSM Cell Information	0		9.2.1.41C		-	
>>>PC Preamble	M		9.2.2.27a		-	
>>>SRB Delay	M		9.2.2.39A		-	
>>>Cell GA Additional Shapes	0		9.2.1.5B		YES	ignore
>>DSCH-RNTI	0		9.2.1.26Ba		YES	ignore
Uplink SIR Target	0		Uplink SIR 9.2.1.69		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

Range bound	Explanation				
maxnoofRLs	Maximum number of RLs 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		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
CHOICE Cause Level	M				YES	ignore
>General					_	
>>Cause	M		9.2.1.5		_	
>RL Specific					_	
>>Unsuccessful RL Information Response		1			YES	ignore
>>>RL ID	M		9.2.1.49		_	
>>>Cause	M		9.2.1.5		_	
Criticality Diagnostics	0		9.2.1.13		YES	ignore

# 9.1.6 RADIO LINK ADDITION REQUEST

# 9.1.6.1 FDD Message

IE/Group Name	Presence	Range	IE Type	Semantics	Criticality	Assigned
			and	Description		Criticality
Managara Type	M		Reference		YES	roject
Message Type Transaction ID	M		9.2.1.40 9.2.1.59		YES	reject
	M		Uplink SIR		YES	roiget
Uplink SIR Target	IVI		9.2.1.69		1 5	reject
RL Information		1 <maxn oofRLs- 1&gt;</maxn 			EACH	notify
>RL ID	M		9.2.1.49		_	
>C-ID	M		9.2.1.6		_	
>Frame Offset	M		9.2.1.30		_	
>Chip Offset	M		9.2.2.1		_	
>Diversity Control Field	M		9.2.1.20		_	
>Primary CPICH Ec/No	0		9.2.2.32		_	
>SSDT Cell Identity	0		9.2.2.40			
>Transmit Diversity Indicator	0		9.2.2.48		_	
Active Pattern Sequence Information	0		9.2.2A	Either all the already active Transmission Gap Sequence(s) are addressed (Transmission Gap Pattern sequence shall overlap with the existing one) or none of the transmission gap sequences is activated.	YES	reject
DPC Mode	0		9.2.2.12A	donvatou.	YES	reject
Permanent NAS UE Identity	0		9.2.1.73		YES	ignore

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	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		_	.,
RL Information		1			YES	reject
>RL ID	М		9.2.1.49		_	ĺ
>C-ID	М		9.2.1.6		_	
>Frame Offset	М		9.2.1.30		_	
>Diversity Control Field	М		9.2.1.20		_	
>Primary CCPCH RSCP	0		9.2.3.5		_	
>DL Time Slot ISCP Info	0		9.2.3.2D	Applicable to 3.84Mcps TDD only	-	
>DL Time Slot ISCP Info LCR	0		9.2.3.2F	Applicable to 1.28Mcps TDD only	YES	reject
>UL Synchronisation Parameters LCR		01		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Sstep Size	M		9.2.3.13J		-	
>>Uplink Synchronisation Frequency	M		9.2.3.131		-	
Permanent NAS UE Identity	0		9.2.1.73		YES	ignore
UL CCTrCH Information		0< maxno ofCCTr CHs >			EACH	notify
>CCTrCH ID	M		9.2.3.2		_	
>TDD TPC Uplink Step Size	0		9.2.3.10a	Applicable to 1.28Mcps TDD only	1	
DL CCTrCH Information		0< maxnoo fCCTrC Hs >			EACH	notify
>CCTrCH ID	M		9.2.3.2		_	
>TDD TPC Downlink Step Size	0		9.2.3.10		ı	

Range bound	Explanation
maxnoofCCTrCHs	Maximum number of CCTrCH 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	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		_	•
RL Information Response		1 <maxnoof RLs-1&gt;</maxnoof 			EACH	ignore
>RL ID	М		9.2.1.49		_	
>RL Set ID	М		9.2.2.35		_	
>URA Information	0		9.2.1.70B		_	
>SAI	M		9.2.1.52		_	
>Cell GAI	0		9.2.1.5A		_	
>UTRAN Access Point Position	0		9.2.1.70A		_	
>Received Total Wide Band Power	М		9.2.2.35A		_	
>Secondary CCPCH Info	0		9.2.2.37B		_	
>DL Code Information	М		FDD DL Code Information 9.2.2.14A		YES	ignore
>CHOICE Diversity Indication	М				_	
>>Combining					_	
>>>RL ID	М		9.2.1.49	Reference RL ID	_	
>>>DCH Information	0		9.2.1.16A		YES	ignore
Response						
>>Non Combining					_	
>>>DCH Information	M		9.2.1.16A		_	
Response			0.0.0.40			
>SSDT Support Indicator	M		9.2.2.43		_	
>Minimum Uplink SIR	M		Uplink SIR 9.2.1.69		_	
>Maximum Uplink SIR	М		Uplink SIR 9.2.1.69		_	
>Closed Loop Timing Adjustment Mode	0		9.2.2.3A		_	
>Maximum Allowed UL Tx Power	М		9.2.1.35		_	
>Maximum DL TX Power	М		DL Power 9.2.1.21A		_	
>Minimum DL TX Power	М		DL Power 9.2.1.21A		_	
>Neighbouring UMTS Cell Information	0		9.2.1.41A		_	
>Neighbouring GSM Cell Information	0		9.2.1.41C		-	
>PC Preamble	М		9.2.2.27a		_	
>SRB Delay	М		9.2.2.39A		_	
>Primary CPICH Power	M		9.2.1.44		_	
>Cell GA Additional Shapes	0		9.2.1.5B		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

Range bound	Explanation				
maxnoofRLs	Maximum number of radio links for one UE.				

# 9.1.7.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		-	10,000
RL Information Response		01		Mandatory for 3.84Mcps TDD, not applicable to 1.28Mcps TDD	YES	ignore
>RL ID	M		9.2.1.49		_	
>URA Information	0		9.2.1.70B		_	
>SAI	M		9.2.1.52		_	
>Cell GAI	0		9.2.1.5A		_	
>UTRAN Access Point Position	0		9.2.1.70A		_	
>UL Time Slot ISCP Info	M		9.2.3.13D		_	
>Minimum Uplink SIR	М		Uplink SIR 9.2.1.69		_	
>Maximum Uplink SIR	М		Uplink SIR		_	
·		<u> </u>	9.2.1.69		<u></u>	
>Maximum Allowed UL Tx Power	М		9.2.1.35		_	
>Maximum DL TX Power	М		DL Power		_	
			9.2.1.21A			
>Minimum DL TX Power	М		DL Power		_	
			9.2.1.21A			
>PCCPCH Power	М		9.2.1.43		_	
>Timing Advance Applied	M		9.2.3.12A		_	
>Alpha Value	М		9.2.3.a		_	
>UL PhysCH SF Variation	М		9.2.3.13B		_	
>Synchronisation Configuration	М		9.2.3.7E		_	
>Secondary CCPCH Info	0		9.2.3.7B		_	
>UL CCTrCH Information		0 <maxnoof CCTrCHs&gt;</maxnoof 		For DCH	GLOBAL	ignore
>>CCTrCH ID	М	001101101	9.2.3.2		_	
>>UL DPCH		01	0.2.0.2		YES	ignore
Information					0	19
>>>Repetition Period	М		9.2.3.7		_	
>>>Repetition Length	М		9.2.3.6		_	
>>>TDD DPCH Offset	М		9.2.3.8A		_	
>>>UL Timeslot Information	М		9.2.3.13C		_	
>DL CCTrCH Information		0 <maxnoof CCTrCHs&gt;</maxnoof 		For DCH	GLOBAL	ignore
>>CCTrCH ID	M	001101182	9.2.3.2			
>>DL DPCH	IVI	01	0.2.0.2		YES	ignore
Information >>>Repetition Period	M		0227			
	M		9.2.3.7 9.2.3.6			
>>>Repetition Length >>>TDD DPCH Offset	M		9.2.3.6 9.2.3.8A		_	
>>>DL Timeslot	M		9.2.3.2C		_	
Information						
>DCH Information		01			_	
>>CHOICE Diversity Indication	М				_	
>>>Combining					_	
>>>>RL ID	М		9.2.1.49	Reference RL	_	
>>>DCH Information	0		9.2.1.16A		YES	ignore

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Response						
>>>Non Combining					_	
>>>DCH	M		9.2.1.16A		_	
Information						
Response						
>DSCH Information		0			GLOBAL	ignore
Response		<maxnoof DSCHs&gt;</maxnoof 				
>>DSCH ID	M		9.2.1.26A		_	
>>Transport Format Management	М		9.2.3.13		-	
>>DSCH Flow Control Information	М		9.2.1.26B		_	
>>CHOICE Diversity Indication	0				-	
>>>Non Combining					_	
>>>Binding ID	0		9.2.1.3		_	
>>>>Transport Layer Address	0		9.2.1.62		_	
>USCH Information	1	0			GLOBAL	ignore
Response		<maxnoof USCHs&gt;</maxnoof 			0202/12	.9
>>USCH ID	М		9.2.3.14		_	
>>Transport Format Management	М		9.2.3.13		_	
>>CHOICE Diversity Indication	0				_	
>>>Non Combining					_	
>>>Binding ID	0		9.2.1.3		_	
>>>Transport	0		9.2.1.62		_	
Layer Address						
>Neighbouring UMTS Cell Information	0		9.2.1.41A		_	
>Neighbouring GSM Cell Information	0		9.2.1.41C		-	
>Cell GA Additional Shapes	0		9.2.1.5B		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore
RL Information Response LCR		01		Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD	YES	ignore
>RL ID	M		9.2.1.49		_	
>URA Information	M	ļ	9.2.1.70B			
>SAI	M	ļ	9.2.1.52			
>Cell GAI >UTRAN Access Point	0		9.2.1.5A 9.2.1.70A			
Position >UL Time Slot ISCP Info	M		9.2.3.13H		_	
LCR >Maximum Uplink SIR	M		Uplink SIR		_	
>Minimum Uplink SIR	M		9.2.1.69 Uplink SIR		_	
DOODS!! D			9.2.1.69			
>PCCPCH Power >Maximum Allowed UL Tx	M		9.2.1.43 9.2.1.35		<u> </u>	
Power						
>Maximum DL TX Power	М		DL Power 9.2.1.21A		_	
>Minimum DL TX Power	М		DL Power 9.2.1.21A		_	
>Alpha Value	M		9.2.3.a		_	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
>UL PhysCH SF Variation	М		9.2.3.13B		_	
>Synchronisation	M		9.2.3.7E		_	
Configuration						
>Secondary CCPCH Info TDD LCR	0		9.2.3.7F		_	
>UL CCTrCH Information		0 <maxnoof< td=""><td></td><td>For DCH</td><td>GLOBAL</td><td>ignore</td></maxnoof<>		For DCH	GLOBAL	ignore
LCR		CCTrCHsLC R>				
>>CCTrCH ID	M		9.2.3.2		_	
>>UL DPCH		01			YES	ignore
Information LCR						
>>>Repetition Period	M		9.2.3.7		_	
>>>Repetition Length	M		9.2.3.6		_	
>>>TDD DPCH Offset	M		9.2.3.8A		_	
>>>UL Timeslot Information LCR	M		9.2.3.13G		_	
>DL CCTrCH Information		0 <maxnoof< td=""><td><u> </u></td><td>For DCH</td><td>GLOBAL</td><td>ignore</td></maxnoof<>	<u> </u>	For DCH	GLOBAL	ignore
LCR		CCTrCHsLC R>				
>>CCTrCH ID	M		9.2.3.2		_	
>>DL DPCH		01			YES	ignore
Information LCR		<u>                                       </u>	<u> </u>			
>>>Repetition Period	M		9.2.3.7		_	
>>>Repetition Length	M		9.2.3.6		_	
>>>TDD DPCH Offset	M		9.2.3.8A		_	
>>>DL Timeslot	M		9.2.3.2E		_	
Information LCR						
>>>TSTD Indicator	М		9.2.3.13E		_	
>DCH Information Response	0		9.2.1.16A		YES	ignore
>DSCH Information Response LCR		0 <maxnoof DSCHsLCR</maxnoof 			GLOBAL	ignore
>>DSCH ID	M		9.2.1.26A		_	
>>DSCH Flow Control	M		9.2.1.26B		_	
Information			0.2202			
>>Binding ID	0		9.2.1.3		_	
>>Transport Layer	0		9.2.1.62		_	
Address						
>>Transport Format Management	М		9.2.3.13		-	
>USCH Information Response LCR		0 <maxnoof USCHsLCR &gt;</maxnoof 			GLOBAL	ignore
>>USCH ID	М		9.2.3.14		_	
>>Transport Format Management	M		9.2.3.13		_	
>>CHOICE Diversity Indication	0				_	
>>>Non Combining	1	1	1		_	
>>>Binding ID	0	1	9.2.1.3		_	
>>>>Transport Layer Address	0		9.2.1.62		-	
>Neighbouring UMTS Cell Information	0		9.2.1.41A		-	
>Neighbouring GSM Cell Information	0		9.2.1.41C		_	
>Cell GA Additional Shapes	0		9.2.1.5B		YES	ignore
>Uplink Timing Advance Control LCR	М		9.2.3.13K		YES	ignore

Range Bound	Explanation
maxnoofDSCHs	Maximum number of DSCHs for one UE for 3.84Mcps TDD.
maxnoofUSCHs	Maximum number of USCHs for one UE for 3.84Mcps TDD.
maxnoofCCTrCHs	Maximum number of CCTrCHs for one UE for 3.84Mcps TDD.
maxnoofDSCHsLCR	Maximum number of DSCHs for one UE for 1.28Mcps TDD.
maxnoofUSCHsLCR	Maximum number of USCHs for one UE for 1.28Mcps TDD.
maxnoofCCTrCHsLCR	Maximum number of CCTrCH for one UE for 1.28Mcps TDD.

# 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		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
CHOICE Cause Level	M				YES	ignore
>General					_	
>>Cause	M		9.2.1.5		_	
>RL Specific					_	
>>Unsuccessful RL		1 <maxnoof< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxnoof<>			EACH	ignore
Information Response		RLs-1>				
>>>RL ID	M		9.2.1.49		_	
>>>Cause	M		9.2.1.5		_	
>>Successful RL Information Response		0 <maxnoof RLs-2&gt;</maxnoof 			EACH	ignore
>>>RL ID	М	ALO E	9.2.1.49		_	
>>>RL Set ID	M		9.2.2.35		_	
>>>URA Information	0		9.2.1.70B		_	
>>>SAI	M		9.2.1.52		_	
>>>Cell GAI	0		9.2.1.5A		_	
>>>UTRAN Access	0		9.2.1.70A		_	
Point Position			0.2			
>>>Received Total Wide Band Power	M		9.2.2.35A		_	
>>>Secondary CCPCH Info	0		9.2.2.37B		_	
>>>DL Code Information	M		FDD DL Code Information 9.2.2.14A		YES	ignore
>>>CHOICE Diversity	М				-	
Indication						
>>>Combining			0.0.1.10	5.	_	
>>>>RL ID	M		9.2.1.49	Reference RL ID	_	
>>>>DCH Information Response	0		9.2.1.16A		YES	ignore
>>>Non Combining	N 4		0.04.404		_	
>>>>DCH Information Response	M		9.2.1.16A		_	
>>>SSDT Support Indicator	М		9.2.2.43		_	
>>>Minimum Uplink SIR	M		Uplink SIR 9.2.1.69		_	
>>>Maximum Uplink SIR	М		Uplink SIR 9.2.1.69		_	
>>>Closed Loop Timing Adjustment Mode	0		9.2.2.3A		_	
>>>Maximum Allowed UL Tx Power	M		9.2.1.35		_	
>>>Maximum DL TX Power	М		DL Power 9.2.1.21A		_	
>>>Minimum DL TX Power	M		DL Power 9.2.1.21A		_	
>>>Neighbouring UMTS Cell Information	0		9.2.1.41A		_	
>>>Neighbouring GSM Cell Information	0		9.2.1.41C		_	
>>>Primary CPICH	М		9.2.1.44		_	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Power						
>>>PC Preamble	M		9.2.2.27a		-	
>>>SRB Delay	M		9.2.2.39A		-	
>>>Cell GA Additional Shapes	0		9.2.1.5B		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

Range bound	Explanation		
maxnoofRLs	Maximum number of radio links for one UE.		

## 9.1.8.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		-	,
CHOICE Cause Level	М				YES	ignore
>General					_	
>>Cause	M		9.2.1.5		_	
>RL Specific					_	
>>Unsuccessful RL		1			YES	ignore
Information Response						
>>>RL ID	M		9.2.1.49		_	
>>>Cause	M		9.2.1.5		_	
Criticality Diagnostics	0		9.2.1.13		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	М		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	•
RL Information		1 <maxno ofRLs&gt;</maxno 			EACH	notify
>RL ID	М		9.2.1.49		_	

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		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
Criticality Diagnostics	0		9.2.1.13		YES	ignore

# 9.1.11 RADIO LINK RECONFIGURATION PREPARE

#### FDD Message 9.1.11.1

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	,
Allowed Queuing Time	0		9.2.1.2		YES	reject
UL DPCH Information		01			YES	reject
>UL Scrambling Code	0		9.2.2.53		ı	
>UL SIR Target	0		Uplink SIR 9.2.1.69		ı	
>Min UL Channelisation Code Length	0		9.2.2.25		_	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.24		_	
>Puncture Limit	0		9.2.1.46	For the UL.	-	
>TFCS	0		9.2.1.63	TFCS for the UL.	_	
>UL DPCCH Slot Format	0		9.2.2.52	<u> </u>	_	
>Diversity Mode	0		9.2.2.8		_	
>SSDT Cell Identity Length	0		9.2.2.41		_	
>S-Field Length	0		9.2.2.36		_	
DL DPCH Information	1	01	0.2.2.00		YES	reject
>TFCS	0		9.2.1.63	TFCS for the DL.	_	
>DL DPCH Slot Format	0		9.2.2.9	32.	_	
>Number of DL Channelisation Codes	0		9.2.2.26A		-	
>TFCI Signalling Mode	0		9.2.2.46		_	
>TFCI Presence	C- SlotFormat		9.2.1.55		_	
>Multiplexing Position	0		9.2.2.26		_	
>Limited Power Increase	0		9.2.2.21A		_	
>Split Type	C-IfSplit		9.2.2.39a		YES	reject
>Length of TFCI2	C- SplitType		9.2.2.21C		YES	reject
DCHs To Modify	0		FDD DCHs To Modify		YES	reject
			9.2.2.13C			
DCHs To Add	0		DCH FDD Information 9.2.2.4A		YES	reject
DCHs To Delete		0 <maxnoof DCHs&gt;</maxnoof 	3.2.2.0.		GLOBAL	reject
>DCH ID	М		9.2.1.16		_	
DSCHs To Modify		01			YES	reject
>DSCH Info		0 <maxnoof DSCHs&gt;</maxnoof 			-	-
>>DSCH ID	М		9.2.1.26A		-	
>>TrCH Source Statistics Descriptor	0		9.2.1.65		_	
>>Transport Format Set	0		9.2.1.64	For DSCH	_	
>>Allocation/ Retention Priority	0		9.2.1.1		_	
>>Scheduling Priority Indicator	0		9.2.1.51A		-	
>>BLÉR	0		9.2.1.4		_	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
>>Transport Bearer Request Indicator	M		9.2.1.61		_	
>PDSCH RL ID	0		RL ID 9.2.1.49		_	
>TFCS	0		9.2.1.63	For DSCH	_	
>Enhanced DSCH PC Indicator	0		9.2.2.13F		YES	ignore
>Enhanced DSCH PC	C- EDSCHPC On		9.2.2.13D		YES	ignore
DSCHs To Add	0		DSCH FDD Information 9.2.2.13A		YES	reject
DSCHs To Delete		01			YES	reject
>DSCH Info		1 <maxnoof DSCHs&gt;</maxnoof 			_	
>>DSCH ID	М		9.2.1.26A		_	
RL Information		0 <maxnoof RLs&gt;</maxnoof 			EACH	reject
>RL ID	М		9.2.1.49		_	
>SSDT Indication	0		9.2.2.42		_	
>SSDT Cell Identity	C - SSDTIndON		9.2.2.40		_	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.48		-	
>SSDT Cell Identity for EDSCHPC	C- EDSCHPC		9.2.2.40A		YES	ignore
Transmission Gap Pattern Sequence Information	0		9.2.2.47A		YES	reject

Condition	Explanation
SSDTIndON	The IE shall be present if the SSDT Indication IE is
	set to 'SSDT Active in the UE'.
CodeLen	The IE shall be present only if the Min UL
	Channelisation Code length IE equals to 4.
SlotFormat	The IE shall only be present if the DL DPCH Slot
	Format IE is equal to any of the values from 12 to 16.
Diversity mode	The IE shall be present if <i>Diversity Mode</i> IE is present
	in the UL DPCH Information IE and is not equal to
	'none'.
EDSCHPCOn	The IE shall be present if the Enhanced DSCH PC
	Indicator IE is set to "Enhanced DSCH PC Active in
	the UE".
EDSCHPC	The IE shall be present if <i>Enhanced DSCH PC</i> IE is
	present in either the DSCHs To Modify IE or the
	DSCHs To Add IE.
IfSplit	The IE shall be present if the TFCI Signalling Mode IE
	is set to 'Split'.
SplitType	The IE shall be present if the Split Type IE is set to
	'Logical'.

Range bound	Explanation
maxnoofDCHs	Maximum number of DCHs for a UE.
maxnoofDSCHs	Maximum number of DSCHs for one UE.
maxnoofRLs	Maximum number of RLs for a UE.

# 9.1.11.2 TDD Message

IE/Group Name	Presence	Range	IE Type and	Semantics Description	Criticality	Assigned Criticality
			Reference		\/=0	
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		-	
Allowed Queuing Time	0		9.2.1.2		YES	reject
UL CCTrCH To Add		0 <maxno ofCCTrCH s&gt;</maxno 		For DCH and USCH	EACH	notify
>CCTrCH ID	М		9.2.3.2		_	
>TFCS	М		9.2.1.63	For the UL.	_	
>TFCI Coding	М		9.2.3.11		_	
>Puncture Limit	М		9.2.1.46		_	
>UL SIR Target	0		Uplink SIR 9.2.1.69	Mandatory for 1.28Mcps TDD; not applicable to 3.84Mcps TDD	YES	reject
>TDD TPC Uplink Step Size	0		9.2.3.10a	Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD	YES	reject
UL CCTrCH To Modify		0 <maxno ofCCTrCH s&gt;</maxno 		100	EACH	notify
>CCTrCH ID	М	0,	9.2.3.2		_	
>TFCS	0		9.2.1.63	For the UL.	_	
>TFCI Coding	0		9.2.3.11	1 01 410 02.	_	
>Puncture Limit	Ō		9.2.1.46		_	
>UL SIR Target	0		Uplink SIR 9.2.1.69	Applicable to 1.28Mcps TDD only	YES	reject
>TDD TPC Uplink Step Size	0		9.2.3.10a	Applicable to 1.28Mcps TDD only	YES	reject
UL CCTrCH to Delete		0 <maxno ofCCTrCH s&gt;</maxno 		,	EACH	notify
>CCTrCH ID	М		9.2.3.2		_	
DL CCTrCH To Add		0 <maxno ofCCTrCH s&gt;</maxno 		For DCH and DSCH	EACH	notify
>CCTrCH ID	M		9.2.3.2		-	
>TFCS	М		9.2.1.63	For the DL.		
>TFCI Coding	M		9.2.3.11		-	
>Puncture Limit	М		9.2.1.46		-	
>TPC CCTrCH List		0 <maxno CCTrCHs&gt;</maxno 		List of uplink CCTrCH which provide TPC	-	
>>TPC CCTrCH ID	М		CCTrCH ID 9.2.3.2		_	
>TDD TPC Downlink Step Size	0		9.2.3.10		YES	reject
DL CCTrCH To Modify		0 <maxno ofCCTrCH s&gt;</maxno 			EACH	notify
>CCTrCH ID	M		9.2.3.2		_	
>TFCS	0		9.2.1.63	For the DL.	-	
>TFCI Coding	0		9.2.3.11		_	<u></u>

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
>Puncture Limit	0		9.2.1.46		_	
>TPC CCTrCH List		0 <maxno CCTrCHs&gt;</maxno 	5.2.1.40	List of uplink CCTrCH which provide TPC	-	
>>TPC CCTrCH ID	М		CCTrCH ID 9.2.3.2		-	
>TDD TPC Downlink Step Size	0		9.2.3.10		YES	reject
DL CCTrCH To Delete		0 <maxno ofCCTrCH s&gt;</maxno 			EACH	notify
>CCTrCH ID	М		9.2.3.2		_	
DCHs To Modify	0		TDD DCHs To Modify 9.2.3.8B		YES	reject
DCHs To Add	0		DCH TDD Information 9.2.3.2A		YES	reject
DCHs To Delete		0 <maxno ofDCHs&gt;</maxno 			GLOBAL	reject
>DCH ID	M		9.2.1.16		_	
DSCHs To Modify		0 <maxno ofDSCHs&gt;</maxno 			GLOBAL	reject
>DSCH ID	M		9.2.1.26A		_	
>CCTrCH ID	0		9.2.3.2	DL CCTrCH in which the DSCH is mapped.	_	
>TrCH Source Statistics Descriptor	0		9.2.1.65		_	
>Transport Format Set	0		9.2.1.64		_	
>Allocation/Retention Priority	0		9.2.1.1		_	
>Scheduling Priority Indicator	0		9.2.1.51A		_	
>BLER	0		9.2.1.4		-	
>Transport Bearer Request Indicator	M		9.2.1.61		-	
DSCHs To Add	0		DSCH TDD Information 9.2.3.3a		YES	reject
DSCHs To Delete		0 <maxno ofDSCHs&gt;</maxno 	0.2.0.00		GLOBAL	reject
>DSCH ID	M		9.2.1.26A		_	
USCHs To Modify		0 <maxno ofUSCHs&gt;</maxno 			GLOBAL	reject
>USCH ID	M		9.2.3.14		_	
>CCTrCH ID	0		9.2.3.2	UL CCTrCH in which the USCH is mapped.	-	
>TrCH Source Statistics Descriptor	0		9.2.1.65		_	
>Transport Format Set	0		9.2.1.64		_	
>Allocation/Retention Priority	0		9.2.1.1		_	
>Scheduling Priority Indicator	0		9.2.1.51A		-	
>BLER	0		9.2.1.4		_	
>Transport Bearer	M		9.2.1.61		_	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Request Indicator						
>RB Info		0 <maxno ofRB&gt;</maxno 		All Radio Bearers using this USCH	1	
>>RB Identity	M		9.2.3.5B		-	
USCHs To Add	0		USCH Information 9.2.3.15		YES	reject
USCHs To Delete		0 <maxno ofUSCHs&gt;</maxno 			GLOBAL	reject
>USCH ID	M		9.2.3.14		-	
Primary CCPCH RSCP	0		9.2.3.5		YES	ignore
DL Time Slot ISCP Info	0		9.2.3.2D	Applicable to 3.84Mcps TDD only	YES	ignore
DL Time Slot ISCP Info LCR	0		9.2.3.2F	Applicable to 1.28Mcps TDD only	YES	ignore
PDSCH -RL -ID	0		RL ID 9.2.1.49		YES	ignore
UL Synchronisation Parameters LCR		01		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>Uplink Synchronisation Step Size	М		9.2.3.13J		-	
>>Uplink Synchronisation Frequency	М		9.2.3.131		-	

Range bound	Explanation
maxnoofDCHs	Maximum number of DCHs for a UE.
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.
maxnoofDSCHs	Maximum number of DSCHs for one UE.
maxnoofUSCHs	Maximum number of USCHs for one UE.

# 9.1.12 RADIO LINK RECONFIGURATION READY

#### FDD Message 9.1.12.1

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		I	
RL Information Response		0 <maxno ofRLs&gt;</maxno 			EACH	ignore
>RL ID	M		9.2.1.49		1	
>Maximum Uplink SIR	0		Uplink SIR 9.2.1.69		_	
>Minimum Uplink SIR	0		Uplink SIR 9.2.1.69		-	
>Maximum DL TX Power	0		DL Power 9.2.1.21A		_	
>Minimum DL TX Power	0		DL Power 9.2.1.21A		_	
>Secondary CCPCH Info	0		9.2.2.37B		ı	
>DL Code Information	0		FDD DL Code Information 9.2.2.14A		YES	ignore
>DCH Information Response	0		9.2.1.16A		YES	ignore
>DSCHs to be Added or Modified	0		DSCH FDD Information Response 9.2.2.13B		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore
DSCH-RNTI	0		9.2.1.26Ba		YES	ignore

Range bound	Explanation			
maxnoofRLs	Maximum number of RLs for a UE.			

# 9.1.12.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		-	ĺ
RL Information Response		01			YES	ignore
>RL ID	M		9.2.1.49		_	
>Maximum Uplink SIR	0		Uplink SIR 9.2.1.69		_	
>Minimum Uplink SIR	0		Uplink SIR 9.2.1.69		_	
>Maximum DL TX Power	0		DL Power 9.2.1.21A		-	
>Minimum DL TX Power	0		DL Power 9.2.1.21A		_	
>Secondary CCPCH Info TDD	0		9.2.3.7B		_	
>UL CCTrCH Information		0 <maxnoof CCTrCHs&gt;</maxnoof 		For DCH	GLOBAL	ignore
>>CCTrCH ID	М	001101101	9.2.3.2		_	
>>UL DPCH to be Added		01		Applicable to 3.84Mcps TDD only	YES	ignore
>>>Repetition Period	М		9.2.3.7		-	
>>>Repetition Length	М		9.2.3.6		_	
>>>TDD DPCH Offset	М		9.2.3.8A		-	
>>> Rx Timing Deviation	0		9.2.3.7A		_	
>>>UL Timeslot Information	М		9.2.3.13C		-	
>>UL DPCH to be		01			YES	ignore
Modified						
>>>Repetition Period	0		9.2.3.7		_	
>>>Repetition Length	0		9.2.3.6		_	
>>>TDD DPCH Offset	0		9.2.3.8A		_	
>>>UL Timeslot Information		0 <maxno0 fTS&gt;</maxno0 		Applicable to 3.84Mcps TDD only	I	
>>>Time Slot	M		9.2.1.56		_	
>>>>Midamble Shift And Burst Type	0		9.2.3.4		-	
>>>TFCI Presence	0		9.2.1.55		_	
>>>UL Code Information		0 <maxno0 fDPCHs&gt;</maxno0 			-	
>>>>DPCH ID	М		9.2.3.3		-	
>>>>TDD Channelisation Code	0		9.2.3.8		-	
>>>UL Timeslot Information LCR		0 <maxno0 fTSLCR&gt;</maxno0 		Applicable to 1.28Mcps TDD only	GLOBAL	ignore
>>>Time Slot LCR	М		9.2.3.12a		_	
>>>Midamble Shift LCR	0		9.2.3.4C		-	
>>>TFCI Presence	0		9.2.1.55		_	
>>>UL Code Information LCR		0 <maxno0 fDPCHsLCR</maxno0 			GLOBAL	ignore

IE/Group Name	Presence	Range	IE Type and	Semantics Description	Criticality	Assigned Criticality
			Reference			
DDCH	N4	>	0.0.0.0			
>>>>DPCH ID	М		9.2.3.3		-	
>>>>TDD Channelisation Code LCR	0		9.2.3.8a		_	
>>>>> TDD UL DPCH Time Slot Format LCR	0		9.2.3.10C		YES	reject
>>UL DPCH to be Deleted		0 <maxnoof DPCHs&gt;</maxnoof 			GLOBAL	ignore
>>>DPCH ID	М	DI 01107	9.2.3.3		_	
>>UL DPCH to be Added LCR		01	0.2.0.0	Applicable to 1.28Mcps TDD only	YES	ignore
>>>Repetition Period	М		9.2.3.7		-	
>>>Repetition Length	M		9.2.3.6		_	
>>>TDD DPCH Offset	M		9.2.3.8A		_	
>>>UL Timeslot Information LCR	М		9.2.3.13G		_	
>DL CCTrCH Information		0 <maxnoof CCTrCHs&gt;</maxnoof 		For DCH	GLOBAL	ignore
>>CCTrCH ID	М		9.2.3.2		1	
>>DL DPCH to be Added		01		Applicable to 3.84Mcps TDD only	YES	ignore
>>>Repetition Period	М		9.2.3.7	,	1	
>>>Repetition Length	M		9.2.3.6		-	
>>>TDD DPCH Offset	М		9.2.3.8A		_	
>>>DL Timeslot Information	М		9.2.3.2C		I	
>>DL DPCH to be Modified		01			YES	ignore
>>>Repetition Period	0		9.2.3.7		1	
>>>Repetition Length	0		9.2.3.6		1	
>>>TDD DPCH Offset	0		9.2.3.8A		_	
>>>DL Timeslot Information		0 <maxno0 fTS&gt;</maxno0 		Applicable to 3.84Mcps TDD only	_	
>>>>Time Slot	М		9.2.1.56		-	
>>>>Midamble Shift And Burst Type	0		9.2.3.4		_	
>>>TFCI Presence	0		9.2.1.55			
>>>DL Code		0 <maxnoo< td=""><td></td><td></td><td>_</td><td></td></maxnoo<>			_	
Information	D.4	fDPCHs>	0.000			
>>>>DPCH ID	M		9.2.3.3		_	
>>>>TDD Channelisation Code	0		9.2.3.8		_	
>>>DL Timeslot Information LCR		0 <maxno0 fTSLCR&gt;</maxno0 		Applicable to 1.28Mcps TDD only	GLOBAL	ignore
>>>>Time Slot LCR	М		9.2.3.12a			
>>>>Midamble Shift LCR	0		9.2.3.4C		_	
>>>TFCI Presence	0		9.2.1.55		_	
>>>>DL Code Information LCR		0 <maxno0 fDPCHsLCR &gt;</maxno0 			GLOBAL	ignore
>>>>DPCH ID	М		9.2.3.3		_	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
>>>>TDD Channelisation Code LCR	0		9.2.3.8a		-	
>>>> TDD DL DPCH Time Slot Format LCR	0		9.2.3.8E		YES	reject
>>DL DPCH to be Deleted		0 <maxnoof DPCHs&gt;</maxnoof 			GLOBAL	ignore
>>>DPCH ID	М		9.2.3.3		_	
>>DL DPCH to be Added LCR		01		Applicable to 1.28Mcps TDD only	YES	ignore
>>>Repetition Period	M		9.2.3.7		_	
>>>Repetition Length	М		9.2.3.6		_	
>>>TDD DPCH Offset	М		9.2.3.8A		_	
>>>DL Timeslot Information LCR	М		9.2.3.2E		-	
>DCH Information Response	0		9.2.1.16A		YES	ignore
>DSCH to be Added or Modified		0 <maxnoof DSCHs&gt;</maxnoof 			GLOBAL	ignore
>>DSCH ID	М		9.2.1.26A		_	
>>Transport Format Management	М		9.2.3.13		_	
>>DSCH Flow Control Information	М		9.2.1.26B		1	
>>Binding ID	0		9.2.1.3		ı	
>>Transport Layer Address	0		9.2.1.62		-	
>USCH to be Added or Modified		0 <maxnoof USCHs&gt;</maxnoof 			GLOBAL	ignore
>>USCH ID	М		9.2.3.14		-	
>>Transport Format Management	М		9.2.3.13		_	
>>Binding ID	0		9.2.1.3		_	
>>Transport Layer Address	0		9.2.1.62		-	
>Uplink Timing Advance Control LCR	0		9.2.3.13K	Applicable to 1.28Mcps TDD only	YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore
DSCH-RNTI	0		9.2.1.26Ba		YES	ignore

Range bound	Explanation
maxnoofDSCHs	Maximum number of DSCHs for one UE.
maxnoofUSCHs	Maximum number of USCHs for one UE.
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.
maxnoofTS	Maximum number of Timeslots for a UE for 3.84Mcps TDD.
maxnoofDPCHs	Maximum number of DPCHs for a UE for 3.84Mcps TDD
maxnoofTSLCR	Maximum number of Timeslots for a UE for 1.28Mcps TDD
maxnoofDPCHsLCR	Maximum number of DPCHs for a UE for 1.28Mcps TDD

## 9.1.13 RADIO LINK RECONFIGURATION COMMIT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		_	
CFN	M		9.2.1.9		YES	ignore
Active Pattern Sequence Information	0		9.2.2.A	FDD only	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		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
CHOICE Cause Level	M				YES	ignore
>General					_	
>>Cause	M		9.2.1.5		_	
> RL Specific					_	
>>RLs Causing		0 <maxnoof< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxnoof<>			EACH	ignore
Reconfiguration Failure		RLs>				
>>>RL ID	M		9.2.1.49		_	
>>>Cause	M		9.2.1.5		_	
Criticality Diagnostics	0		9.2.1.13		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		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		ı	

# 9.1.16 RADIO LINK RECONFIGURATION REQUEST

# 9.1.16.1 FDD Message

IE/Group Name	Presence	Range	IE Type and	Semantics Description	Criticality	Assigned Criticality
			Reference			
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
Allowed Queuing Time	0		9.2.1.2		YES	reject
UL DPCH Information		01			YES	reject
>TFCS	0		9.2.1.63	TFCS for the UL.	-	
DL DPCH Information		01			YES	reject
>TFCS	0		9.2.1.63	TFCS for the DL.	-	
>TFCI Signalling Mode	0		9.2.2.46		_	
>Limited Power Increase	0		9.2.2.21A		_	
DCHs To Modify	0		FDD DCHs To Modify 9.2.2.13C		YES	reject
DCHs To Add	0		DCH FDD Information 9.2.2.4A		YES	reject
DCHs To Delete		0 <maxno ofDCHs&gt;</maxno 			GLOBAL	reject
>DCH ID	M		9.2.1.16		_	
Transmission Gap Pattern Sequence Information	0		9.2.2.47A		YES	reject

# 9.1.16.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
Allowed Queuing Time	0		9.2.1.2		YES	reject
UL CCTrCH Information To Modify		0 <maxnoof CCTrCHs&gt;</maxnoof 			EACH	notify
>CCTrCH ID	M		9.2.3.2		ı	
>TFCS	0		9.2.1.63		ı	
> UL SIR Target	0		Uplink SIR 9.2.1.69	Applicable to 1.28Mcps TDD only	YES	reject
UL CCTrCH Information To Delete		0 <maxnoof CCTrCHs&gt;</maxnoof 			EACH	notify
>CCTrCH ID	M		9.2.3.2		_	
DL CCTrCH Information To Modify		0 <maxnoof CCTrCHs&gt;</maxnoof 			EACH	notify
>CCTrCH ID	M		9.2.3.2		ı	
>TFCS	0		9.2.1.63		ı	
DL CCTrCH Information To Delete		0 <maxnoof CCTrCHs&gt;</maxnoof 			EACH	notify
>CCTrCH ID	M		9.2.3.2		ı	
DCHs To Modify	0		TDD DCHs To Modify 9.2.3.8B		YES	reject
DCHs To Add	0		DCH TDD Information 9.2.3.2A		YES	reject
DCHs To Delete		0 <maxnoof DCHs&gt;</maxnoof 			GLOBAL	reject
>DCH ID	M		9.2.1.16		-	
UL Synchronisation Parameters LCR		01		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>Uplink Synchronisation Step Size	М		9.2.3.13J		-	
>Uplink Synchronisation Frequency	М		9.2.3.131		-	

Range Bound	Explanation				
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.				
maxnoofDCHs	Maximum number of DCHs for one UE.				

# 9.1.17 RADIO LINK RECONFIGURATION RESPONSE

# 9.1.17.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		_	-,
RL Information Response		0 <maxno ofRLs&gt;</maxno 			EACH	ignore
>RL ID	М		9.2.1.49		_	
>Maximum Uplink SIR	0		Uplink SIR 9.2.1.69		_	
>Minimum Uplink SIR	0		Uplink SIR 9.2.1.69		_	
>Maximum DL TX Power	0		DL Power 9.2.1.21A		_	
>Minimum DL TX Power	0		DL Power 9.2.1.21A		-	
>Secondary CCPCH Info	0		9.2.2.37B		_	
>DCH Information Response	0		9.2.1.16A		YES	ignore
>DL Code Information	0		FDD DL Code Information 9.2.2.14A		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

Range Bound	Explanation			
maxnoofRLs	Maximum number of RLs for a UE.			

# 9.1.17.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		-	
RL Information Response		01			YES	ignore
>RL ID	M		9.2.1.49		ı	
>Maximum Uplink SIR	0		Uplink SIR 9.2.1.69		-	
>Minimum Uplink SIR	0		Uplink SIR 9.2.1.69		_	
>Maximum DL TX Power	0		DL Power 9.2.1.21A		_	
>Minimum DL TX Power	0		DL Power 9.2.1.21A		_	
>DCH Information Response	0		9.2.1.16A		YES	ignore
>Uplink Timing Advance Control LCR	0		9.2.3.13K	Applicable to 1.28Mcps TDD only	YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

# 9.1.18 RADIO LINK FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	М		9.2.1.59		_	J
CHOICE Reporting Object	M			Object for which the Failure shall be reported.	YES	ignore
>RL					-	
>>RL Information		1 <maxnoofrl s&gt;</maxnoofrl 			EACH	ignore
>>>RL ID	М		9.2.1.49		_	
>>>Cause	M		9.2.1.5		_	
>RLS				FDD only	_	
>>RL Set Information		1 <maxnoofrl Sets&gt;</maxnoofrl 			EACH	ignore
>>>RL Set ID	M		9.2.2.35		_	
>>>Cause	M		9.2.1.5		_	
>CCTrCH				TDD only		
>>RL ID	M		9.2.1.49	_	_	
>>CCTrCH List		1 <maxnoc CTrCHs&gt;</maxnoc 			EACH	ignore
>>>CCTrCH ID	M		9.2.3.2		_	
>>>Cause	M		9.2.1.5		_	

Range bound	Explanation
maxnoofRLs	Maximum number of RLs for one UE.
maxnoofRLSets	Maximum number of RL Sets for one UE.
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.

# 9.1.19 RADIO LINK RESTORE INDICATION

IE/Group Name	Presence	Range	IE Type	Semantics	Criticality	Assigned
			and Reference	Description		Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		_	Ö
CHOICE Reporting Object	М			Object for which the Restoration shall be reported.	YES	ignore
>RL				TDD only	_	
>>RL Information		1 <maxno ofRLs&gt;</maxno 			EACH	ignore
>>>RL ID	M		9.2.1.49		_	
>RLS				FDD only	_	
>>RL Set Information		1 <maxno ofRLSet s&gt;</maxno 			EACH	ignore
>>>RL Set ID	M		9.2.2.35		1	
>CCTrCH				TDD only		
>>RL ID	M		9.2.1.49		-	
>>CCTrCH List		1 <max noCCTr CHs&gt;</max 			EACH	ignore
>>>CCTrCH ID	M		9.2.3.2		1	

Range bound	Explanation
maxnoofRLs	Maximum number of RLs for one UE.
maxnoofRLSets	Maximum number of RL Sets for one UE.
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.

# 9.1.20 DL POWER CONTROL REQUEST [FDD]

IE/Group Name	Presence	Range	IE Type	Semantics	Criticality	Assigned
			and Reference	Description		Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		120	ignore
Power Adjustment Type	M		9.2.2.28		YES	ignore
DL Reference Power	C-		DL Power		YES	ignore
BE Reference Fower	Common		9.2.1.21A		120	ignore
Inner Loop DL PC Status	0		9.2.2.21a		YES	ignore
DL Reference Power	C-	1 <maxnoo< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxnoo<>			EACH	ignore
Information	Individual	fRLs>				
>RL ID	M		9.2.1.49		-	
>DL Reference Power	M		DL Power		_	
			9.2.1.21A			
Max Adjustment Step	C-		9.2.2.23		YES	ignore
	CommonO rIndividual					
Adjustment Period	C-		9.2.2.B		YES	ignore
,,	CommonO		0.2.2.2		0	.g
	rIndividual					
Adjustment Ratio	C-		9.2.2.C		YES	ignore
	CommonO					_
	rIndividual					

Condition	Explanation
Common	The IE shall be present if the Power Adjustment Type IE is set to
	'Common'.
Individual	The IE shall be present if the Power Adjustment Type IE is set to
	'Individual'.
CommonOrIndividual	The IE shall be present if the Power Adjustment Type IE is set to
	'Common' or 'Individual'.

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		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
RL Information		1			YES	reject
>RL ID	M		9.2.1.49		_	
>DL Code Information	М		FDD DL Code Information 9.2.2.14A		YES	notify

# 9.1.21.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		-	
RL Information		1			YES	reject
>RL ID	M		9.2.1.49		_	
>UL CCTrCH Information		0 <maxnoof CCTrCHs&gt;</maxnoof 			GLOBAL	reject
>>CCTrCH ID	M		9.2.3.2		_	
>>UL DPCH Information		1			YES	notify
>>>Repetition Period	0		9.2.3.7		_	•
>>>Repetition Length	0		9.2.3.6		_	
>>>TDD DPCH Offset	0		9.2.3.8A		_	
>>>UL Timeslot Information		0 <maxno OfTS&gt;</maxno 		Applicable to 3.84Mcps TDD only	-	
>>>>Time Slot	M		9.2.1.56		_	
>>>Midamble Shift And Burst Type	0		9.2.3.4		_	
>>>TFCI Presence	0		9.2.1.55		_	
>>>>UL Code Information	0		TDD UL Code Information 9.2.3.10A		I	
>>>UL Timeslot Information LCR		0 <maxno OfTSLCR &gt;</maxno 		Applicable to 1.28Mcps TDD only	GLOBAL	reject
>>>>Time Slot LCR	M		9.2.3.12a		-	
>>>Midamble Shift LCR	0		9.2.3.4C		-	
>>>>TFCI Presence	0		9.2.1.55		_	
>>>>UL Code Information LCR	0		TDD UL Code Information LCR 9.2.3.10B		1	
>DL CCTrCH Information		0 <maxno ofCCTrCH s&gt;</maxno 			GLOBAL	reject
>>CCTrCH ID	M		9.2.3.2		_	
>>DL DPCH Information		1			YES	notify
>>>Repetition Period	0		9.2.3.7			
>>>Repetition Length	0		9.2.3.6		_	
>>>TDD DPCH Offset	0		9.2.3.8A		_	
>>>DL Timeslot Information		0 <maxno OfTS&gt;</maxno 		Applicable to 3.84Mcps TDD only	I	
>>>>Time Slot	M		9.2.1.56			
>>>Midamble Shift And Burst Type	0		9.2.3.4		_	
>>>TFCI Presence	0		9.2.1.55		_	
>>>>DL Code Information	0		TDD DL Code Information 9.2.3.8C		-	
>>>DL Timeslot Information LCR		0 <maxno OfTSLCR &gt;</maxno 		Applicable to 1.28Mcps TDD only	GLOBAL	reject
>>>>Time Slot LCR	M		9.2.3.12a		1	
>>>Midamble Shift LCR	0		9.2.3.4C		_	
>>>TFCI Presence	0	1	9.2.1.55		_	

>>>>DL Code	0	TDD DL	_	
Information LCR		Code		
		Information		
		LCR		
		9.2.3.8D		

Range bound	Explanation			
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.			
maxnoofTS	Maximum number of Timeslots for a UE for 3.84Mcps TDD.			
maxnoofTSLCR	Maximum number of Timeslots for a UE for 1.28Mcps TDD.			

# 9.1.22 PHYSICAL CHANNEL RECONFIGURATION COMMAND

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
CFN	M		9.2.1.9		YES	ignore
Criticality Diagnostics	0		9.2.1.13		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	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		_	
Cause	М		9.2.1.5		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

# 9.1.24 UPLINK SIGNALLING TRANSFER INDICATION

### 9.1.24.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		-	
UC-ID	M		9.2.1.71		YES	ignore
SAI	M		9.2.1.52		YES	ignore
Cell GAI	0		9.2.1.5A		YES	ignore
C-RNTI	M		9.2.1.14		YES	ignore
S-RNTI	M		9.2.1.53		YES	ignore
D-RNTI	0		9.2.1.24		YES	ignore
Propagation Delay	M		9.2.2.33		YES	ignore
STTD Support Indicator	M		9.2.2.45		YES	ignore
Closed Loop Mode1 Support Indicator	M		9.2.2.2		YES	ignore
Closed Loop Mode2 Support Indicator	M		9.2.2.3		YES	ignore
L3 Information	M		9.2.1.32		YES	ignore
CN PS Domain Identifier	0		9.2.1.12		YES	ignore
CN CS Domain Identifier	0		9.2.1.11		YES	ignore
URA Information	0		9.2.1.70B		YES	ignore
Cell GA Additional Shapes	0		9.2.1.5B		YES	ignore
DPC Mode Change Support Indicator	0		9.2.2.56		YES	ignore

### 9.1.24.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		-	.g
UC-ID	М		9.2.1.71		YES	ignore
SAI	М		9.2.1.52		YES	ignore
Cell GAI	0		9.2.1.5A		YES	Ignore
C-RNTI	M		9.2.1.14		YES	ignore
S-RNTI	M		9.2.1.53		YES	ignore
D-RNTI	0		9.2.1.24		YES	ignore
Rx Timing Deviation	M		9.2.3.7A		YES	ignore
L3 Information	M		9.2.1.32		YES	ignore
CN PS Domain Identifier	0		9.2.1.12		YES	ignore
CN CS Domain Identifier	0		9.2.1.11		YES	ignore
URA Information	0		9.2.1.70B		YES	ignore
Cell GA Additional Shapes	0		9.2.1.5B		YES	ignore

### 9.1.25 DOWNLINK SIGNALLING TRANSFER REQUEST

IE/Group Name	Presence	Range	IE Type and	Semantics Description	Criticality	Assigned Criticality
			Reference			
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		-	
C-ID	M		9.2.1.6		YES	ignore
D-RNTI	M		9.2.1.24		YES	ignore
L3 Information	М		9.2.1.32		YES	ignore
D-RNTI Release Indication	М		9.2.1.25		YES	ignore

# 9.1.26 RELOCATION COMMIT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		_	
D-RNTI	0		9.2.1.24		YES	ignore
RANAP Relocation Information	0		9.2.1.47		YES	ignore

# 9.1.27 PAGING REQUEST

IE/Group Name	Presence	Range	IE Type and	Semantics Description	Criticality	Assigned Criticality
			Reference			,
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		_	
CHOICE Paging Area	M				YES	ignore
>URA					_	_
>>URA-ID	M		9.2.1.70		_	
>Cell					_	
>>C-ID	M		9.2.1.6		_	
SRNC-ID	M		RNC-ID		YES	ignore
			9.2.1.50			
S-RNTI	M		9.2.1.53		YES	ignore
IMSI	M		9.2.1.31		YES	ignore
DRX Cycle Length Coefficient	M		9.2.1.26		YES	ignore
CN Originated Page to		01			YES	ignore
Connected Mode UE						
>Paging Cause	M		9.2.1.41E		ı	
>CN Domain Type	M		9.2.1.11A		-	
>Paging Record Type	M		9.2.1.41F		ı	

# 9.1.28 DEDICATED MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		1	
Measurement ID	M		9.2.1.37		YES	reject
CHOICE Dedicated	M				YES	reject
Measurement Object Type						
>RL					1	
>>RL Information		1 <maxn oofRLs&gt;</maxn 			EACH	reject
>>>RL-ID	M		9.2.1.49		_	
>>>DPCH ID	0		9.2.3.3	TDD only	_	
>RLS				FDD only	_	
>>RL Set Information		1 <maxn oofRLSet s&gt;</maxn 			EACH	reject
>>>RL-Set-ID	M		9.2.2.35		_	
>ALL RL			NULL		_	
>ALL RLS			NULL	FDD only	_	
Dedicated Measurement Type	M		9.2.1.18		YES	reject
Measurement Filter Coefficient	0		9.2.1.36		YES	reject
Report Characteristics	M		9.2.1.48		YES	reject
CFN reporting indicator	M		FN reporting indicator 9.2.1.28A		YES	reject
CFN	0		9.2.1.9		YES	reject

Range bound	Explanation
maxnoofRLs	Maximum number of individual RLs a measurement can be started on.
maxnoofRLSets	Maximum number of individual RL Sets 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		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
Measurement ID	М		9.2.1.37		YES	ignore
CHOICE Dedicated Measurement Object Type	0			Dedicated Measurement Object Type the measurement was initiated with	YES	ignore
>RL or ALL RL					_	
>>RL Information		1 <maxno ofRLs&gt;</maxno 			EACH	ignore
>>>RL ID	M		9.2.1.49		-	
>>>DPCH ID	0		9.2.3.3	TDD only	_	
>>>Dedicated Measurement Value	M		9.2.1.19		-	
>>>CFN	0		9.2.1.9	Dedicated Measuremen t Time Reference	-	
>RLS or ALL RLS				FDD only	_	
>>RL Set Information		1 <maxno ofRLSets&gt;</maxno 			EACH	ignore
>>>RL Set ID	M		9.2.2.35		-	
>>>Dedicated Measurement Value	М		9.2.1.19		_	
>>>CFN	0		9.2.1.9	Dedicated Measuremen t Time Reference	-	
Criticality Diagnostics	0		9.2.1.13		YES	Ignore

Range bound	Explanation
maxnoofRLs	Maximum number of individual RLs the measurement can be started on.
maxnoofRLSets	Maximum number of individual RL Sets 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		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
Measurement ID	M		9.2.1.37		YES	ignore
Cause	M		9.2.1.5		YES	ignore
Criticality Diagnostics	0		9.2.1.13		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		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		-	
Measurement ID	M		9.2.1.37		YES	ignore
CHOICE Dedicated Measurement Object Type	М			Dedicated Measuremen t Object Type the measuremen t was initiated with	YES	ignore
>RL or ALL RL					-	
>>RL Information		1 <maxnoo fRLs&gt;</maxnoo 			EACH	ignore
>>>RL-ID	M		9.2.1.49		-	
>>>DPCH ID	0		9.2.3.3	TDD only	_	
>>>Dedicated Measurement Value Information	M		9.2.1.19A		-	
>RLS or ALL RLS				FDD only	_	
>>RL Set Information		1 <maxnoo fRLSets&gt;</maxnoo 			EACH	ignore
>>>RL Set ID	M		9.2.2.35		1	
>>>Dedicated Measurement Value Information	М		9.2.1.19A		_	

Range bound	Explanation
maxnoofRLs	Maximum number of individual RLs the measurement can be started
	on.
maxnoofRLSets	Maximum number of individual RL Sets 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		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		_	
Measurement ID	M		9.2.1.37		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		9.2.1.40		YES	ignore
Transaction ID	М		9.2.1.59		-	
Measurement ID	M		9.2.1.37		YES	ignore
Cause	M		9.2.1.5		YES	ignore

# 9.1.34 COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST

IE/Group Name	Presence	Range	IE Type and	Semantics Description	Criticality	Assigned Criticality
			Reference			,,
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		-	
D-RNTI	M		9.2.1.24		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	М		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
D-RNTI	M		9.2.1.24		YES	reject
C-ID	0		9.2.1.6		YES	reject
Transport Bearer Request Indicator	M		9.2.1.61	Request a new transport bearer or to use an existing bearer for the user plane.	YES	reject
Transport Bearer ID	M		9.2.1.60	Indicates the lur transport bearer to be used for the user plane.	YES	reject
Permanent NAS UE Identity	0		9.2.1.73		YES	ignore

#### 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	М		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
S-RNTI	M		9.2.1.53		YES	ignore
C-RNTI	0		9.2.1.14		YES	ignore
FACH Info for UE Selected S-CCPCH		1			YES	ignore
>FACH Flow Control Information	М		9.2.1.26C		YES	ignore
Transport Layer Address	0		9.2.1.62		YES	ignore
Binding Identity	0		9.2.1.3		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore
C-ID	М		9.2.1.6		YES	ignore

### 9.1.36.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		-	
S-RNTI	M		9.2.1.53		YES	ignore
C-RNTI	0		9.2.1.14		YES	ignore
FACH Info for UE Selected S-CCPCHs		1			YES	ignore
>FACH Flow Control Information	M		9.2.1.26C		YES	ignore
Transport Layer Address	0		9.2.1.62		YES	ignore
Binding Identity	0		9.2.1.3		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore
C-ID	M		9.2.1.6		YES	ignore

#### 9.1.37 COMMON TRANSPORT CHANNEL RESOURCES FAILURE

IE/Group Name	Presence	Range	IE Type and	Semantics Description	Criticality	Assigned Criticality
			Reference			
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
S-RNTI	M		9.2.1.53		YES	ignore
Cause	M		9.2.1.5		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

# 9.1.38 COMPRESSED MODE COMMAND [FDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		_	
Active Pattern Sequence Information	М		9.2.2.A		YES	ignore

#### 9.1.39 ERROR INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		-	
Cause	0		9.2.1.5		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore
S-RNTI	0		9.2.1.53		YES	ignore
D-RNTI	0		9.2.1.24		YES	ignore

# 9.1.40 DL POWER TIMESLOT CONTROL REQUEST [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		_	
DL Time Slot ISCP Info	0		9.2.3.2D	Mandatory for 3.84Mcps TDD, not applicable to 1.28Mcps TDD	YES	ignore
DL Time Slot ISCP Info LCR	0		9.2.3.2F	Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD	YES	ignore

## 9.1.41 RADIO LINK PREEMPTION REQUIRED INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		-	
RL Information		0 <maxno ofRLs&gt;</maxno 			EACH	ignore
>RL ID	M		9.2.1.49		_	

Range bound	Explanation
maxnoofRLs	Maximum number of radio links for one UE

### 9.1.42 RADIO LINK CONGESTION INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		_	_
Congestion Cause	0		9.2.1.79		YES	ignore
RL Information		1 <maxno ofRLs&gt;</maxno 			EACH	ignore
>RL ID	M		9.2.1.49		_	
>DCH Rate Information		1 <maxno ofDCHs&gt;</maxno 			EACH	ignore
>>DCH ID	M		9.2.1.16		_	
>>Allowed Rate Information	0		9.2.1.2A		_	

Range bound	Explanation
maxnoofRLs	Maximum number of Radio Links for one UE
maxnoofDCHs	Maximum number of DCHs for one UE.

# 9.1.43 COMMON MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type	Semantics	Criticality	Assigned
			and Reference	Description		Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
Measurement ID	M		9.2.1.37		YES	reject
CHOICE Common Measurement Object Type	М				YES	reject
>Cell					_	
>>Reference Cell Identifier	M		UTRAN Cell Identifier 9.2.1.71		-	
>>Time Slot	0		9.2.1.56	3.84Mcps TDD only	_	
>>Time Slot LCR	0		9.2.3.12a	1.28Mcps TDD only	_	
>>Neighbouring Cell Measurement Information		0 <maxno ofMeasNC ells&gt;</maxno 			-	
>>>CHOICE Neighbouring Cell Measurement Information					ı	
>>>> Neighbouring FDD Cell Measurement Information				FDD only	-	
>>>> Neighbouring FDD Cell Measurement Information	M		9.2.1.41G		-	
>>> Neighbouring TDD Cell Measurement Information				3.84Mcps TDD only	-	
>>>> Neighbouring TDD Cell Measurement Information	M		9.2.1.41H		_	
Common Measurement Type	M		9.2.1.12C		YES	reject
Measurement Filter Coefficient	0		9.2.1.36		YES	reject
Report Characteristics	М		9.2.1.48		YES	reject
SFN reporting indicator	M		FN reporting indicator 9.2.1.28A		YES	reject
SFN	0		9.2.1.52A		YES	reject
Common Measurement Accuracy	0		9.2.1.12A		YES	reject

Range bound	Explanation
maxnoofMeasNCell	Maximum number of neighbouring cells on which
	measurements can be performed.

# 9.1.44 COMMON MEASUREMENT INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		-	10,000
Measurement ID	M		9.2.1.37		YES	ignore
CHOICE Common Measurement Object Type	0			Common Measuremen t Object Type that the measuremen t was initiated with.	YES	ignore
>Cell					ı	
>>Common Measurement value	M		9.2.1.12D		-	
SFN	0		9.2.1.52A	Common Measuremen t Time Reference	YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore
Common Measurement Achieved Accuracy	0		Common Measurem ent Accuracy 9.2.1.12A		YES	reject

## 9.1.45 COMMON MEASUREMENT INITIATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
Measurement ID	M		9.2.1.37		YES	ignore
Cause	M		9.2.1.5		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

### 9.1.46 COMMON MEASUREMENT REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		1	
Measurement ID	M		9.2.1.37		YES	ignore
CHOICE Common Measurement Object Type	M			Common Measuremen t Object Type that the measuremen t was initiated with.	YES	ignore
>Cell					-	
>>Common Measurement Value Information	M		9.2.1.12E		_	
SFN	0		9.2.1.52A	Common Measuremen t Time Reference	YES	ignore

### 9.1.47 COMMON MEASUREMENT TERMINATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	ignore
Transaction ID	М		9.2.1.59		_	
Measurement ID	М		9.2.1.37		YES	ignore

### 9.1.48 COMMON MEASUREMENT FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and	Semantics Description	Criticality	Assigned Criticality
			Reference			
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		_	
Measurement ID	M		9.2.1.37		YES	ignore
Cause	M		9.2.1.5		YES	ignore

#### `9.1.49 INFORMATION EXCHANGE INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and	Semantics Description	Criticality	Assigned Criticality
			Reference			
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
Information Exchange ID	M		9.2.1.31A		YES	reject
CHOICE Information	M				YES	reject
Exchange Object Type						
>Cell					-	
>>C-ID	M		9.2.1.6		-	
Information Type	M		9.2.1.31E		YES	reject
Information Report	M		9.2.1.31C		YES	reject
Characteristics						-

## 9.1.50 INFORMATION EXCHANGE INITIATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		ı	
Information Exchange ID	M		9.2.1.31A		YES	ignore
CHOICE Information Exchange Object Type	0				YES	ignore
>Cell					-	
>>Requested Data Value	М		9.2.1.48A		-	
Criticality Diagnostics	0		9.2.1.13		YES	ignore

#### 9.1.51 INFORMATION EXCHANGE INITIATION FAILURE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		1	
Information Exchange ID	M		9.2.1.31A		YES	ignore
Cause	M		9.2.1.5		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

### 9.1.52 INFORMATION REPORT

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		-	
Information Exchange ID	M		9.2.1.31A		YES	ignore
CHOICE Information Exchange Object Type	М				YES	ignore
>Cell					-	
>>Requested Data Value Information	M		9.2.1.48B		-	

### 9.1.53 INFORMATION EXCHANGE TERMINATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		_	
Information Exchange ID	M		9.2.1.31A		YES	ignore

#### 9.1.54 INFORMATION EXCHANGE FAILURE INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		_	
Information Exchange ID	M		9.2.1.31A		YES	ignore
Cause	M		9.2.1.5		YES	ignore

#### 9.2 Information Element Functional Definition and Contents

#### 9.2.0 General

Subclause 9.2 presents the RNSAP IE definitions in tabular format. The corresponding ASN.1 definition is presented in subclause 9.3. In case there is a contradiction between the tabular format in subclause 9.2 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, in which the tabular format shall take precedence.

When specifying information elements which are to be represented by bitstrings, if not otherwise specifically stated in the semantics description of the concerned IE or elsewhere, the following principle applies with regards to the ordering of bits:

- The first bit (leftmost bit) contains the most significant bit (MSB);
- The last bit (rightmost bit) contains the least significant bit (LSB);
- When importing bitstrings from other specifications, the first bit of the bitstring contains the first bit of the concerned information;

#### 9.2.1 Common Parameters

This subclause 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 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. See Annex A.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Priority Level	M		INTEGER	This IE indicates the priority of
			(015)	the request.
				Usage <u>:</u>
				Value "0" means "Spare"; It
				shall be treated as a logical
				error if received.
				Values between 1 and 14 are
				ordered in decreasing order of
				priority, '1' being the highest
				and '14' the lowest.
				Value "15" means "No
	1		ENUMEDAT.	Priority".
Pre-emption Capability	M		ENUMERAT	
			ED(shall not	
			trigger pre-	
			emption,	
			may trigger	
			pre-emption)	
Pre-emption Vulnerability	M		ENUMERAT	
			ED(not pre-	
			emptable,	
			pre-	
			emptable)	

#### 9.2.1.2 Allowed Queuing Time

This parameter specifies the maximum queuing time that is allowed in the DRNS until the DRNS must start to execute the request.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Allowed Queuing Time			INTEGER(160)	Seconds

#### 9.2.1.2A Allowed Rate Information

The *Allowed Rate Information* IE indicates the TFI corresponding to the highest allowed bit rate for the uplink and/or the downlink of a DCH. The SRNC is allowed to use any rate being lower than or equal to the rate corresponding to the indicated TFI.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Allowed UL Rate	0		INTEGER(1. .maxTFcount	"1": TFI 0, "2": TFI 1, "3": TFI 2, 
Allowed DL Rate	0		INTEGER(1. .maxTFcount	"1": TFI 0, "2": TFI 1, "3": TFI 2, 

#### 9.2.1.2B Altitude and Direction

This IE contains a description of Altitude and Direction.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Direction of Altitude	М		ENUMERAT ED (Height, Depth)	
Altitude	M		INTEGER ( 02 <sup>15</sup> -1)	The relation between the value (N) and the altitude (a) in meters it describes is N≤ a <n+1, except="" for="" n="2&lt;sup">15-1 for which the range is extended to include all grater values of (a).</n+1,>

## 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.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Binding ID			OCTET	
			STRING	
			(14,)	

#### 9.2.1.4 BLER

This Block Error Rate defines the target radio interface Transport Block Error Rate of the transport channel . BLER is used by the DRNS to determine the needed SIR targets, for admission control and power management reasons.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
BLER			INTEGER (-	Step 0.1. (Range –6.30).
			630)	It is the Log10 of the BLER

## 9.2.1.4A Block STTD Indicator

Void.

#### 9.2.1.4B Burst Mode Parameters

The Burst Mode Parameters IE provides all the relevant information in order to able IPDL in the Burst mode.

IE/Group name	Presence	Range	IE Type and	Semantics Description
			Reference	
Burst Start	M		INTEGER(0.	See [10] and [22]
			.15)	
Burst Length	M		INTEGER(1	See [10] and [22]
			025)	
Burst freq	M		INTEGER(1.	See [10] and [22]
			.16)	_

#### 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
CHOICE Cause Group				
>Radio Network Layer				
>Radio Network Layer >>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, Measurement not Supported For The Object, Combining Resources Not Available, Combining Resources Not Available, Combining not Supported, Reconfiguration not Allowed, Requested Configuration not Supported, Synchronisation Failure, Requested Tx Diversity Mode not Supported, Measurement Temporarily not Available, Unspecified, Invalid CM Settings, Reconfiguration CFN not Elapsed, Number of DL Codes Not Supported, Dedicated Transport Channel Type not Supported, UL Shared Channel Type not Supported, UL Shared Channel Type not Supported, UL Spreading Factor not Supported, DL Spreading Factor not Supported, Transaction not Supported by Destination Node B, RL Already Activated/Allocated,, Number of UL Codes Not Supported, Cell reserved for operator use, DPC Mode Change not Supported, Information temporarily not available, Information Provision not supported for the object, dummy1, dummy2, dummy3, Unknown RNTI)	
>Transport Layer >>Transport Layer Cause	М		ENUMERATED	
, ,	101		(Transport Resource Unavailable, Unspecified, )	
>Protocol				
>>Protocol Cause	M		ENUMERATED (Transfer Syntax Error, Abstract Syntax Error (Reject), Abstract Syntax Error (Ignore and Notify), Message not Compatible with Receiver State, Semantic Error, Unspecified, Abstract Syntax Error (Falsely Constructed Message),)	
>>Miscellaneous Cause	М		ENUMERATED (Control Processing Overload, Hardware Failure, O&M Intervention, Not enough User Plane Processing Resources, Unspecified,)	

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

Radio Network Layer cause	Meaning
Cell not Available	The concerned cell is not available
Cell reserved for operator use	The concerned cell is reserved for operator use
Combining not Supported	The DRNS does not support the RL combining for the concerned cells
Combining Resources Not	The value of the received <i>Diversity Control Field</i> IE was set to 'Must',
Available	but the DRNS cannot perform the requested combining
CM not Supported	The concerned cell(s) do not support Compressed Mode
Common Transport Channel Type	The concerned cell(s) do not support the RACH and/or FACH and/or
not Supported	CPCH Common Transport Channel Type
Dedicated Transport Channel Type	The concerned cell(s) do not support the Dedicated Transport Channel
not Supported	Type
DL Radio Resources not Available	The DRNS does not have sufficient DL radio resources available
DL SF not Supported	The concerned cell(s) do not support the requested DL SF
DL Shared Channel Type not	The concerned cell(s) do not support the Downlink Shared Channel Type
Supported	
DPC Mode Change not Supported	The concerned cells do not support the DPC mode changes
Information Provision not	The RNS doesn"t support provision of the requested information for the
supported for the object	concerned object types
Information temporarily not	The RNS can temporarily not provide the requested information
available	
Invalid CM Settings	The concerned cell(s) consider the requested Compressed Mode settings invalid
Measurement not Supported For	At least one of the concerned cell(s) does not support the requested
The Object	measurement on the concerned object type
Measurement Temporarily not	The DRNS can temporarily not provide the requested measurement value
Available	The DKNS can temporarily not provide the requested measurement value
Number of DL Codes not	The concerned cell(s) do not support the requested number of DL codes
Supported Supported	The concerned cen(s) do not support the requested number of DD codes
Number of UL Codes not	The concerned cell(s) do not support the requested number of UL codes
Supported	(v) and (v) an
Power Level not Supported	A DL power level was requested which the concerned cell(s) do not
	support
Reconfiguration CFN not Elapsed	The requested action cannot be performed due to that a COMMIT
	message was received previously, but the concerned CFN has not yet
	elapsed
Reconfiguration not Allowed	The SRNC does currently not allow the requested reconfiguration
Requested Configuration not	The concerned cell(s) do not support the requested configuration i.e.
Supported	power levels, Transport Formats, physical channel parameters,
Requested Tx Diversity mode not	The concerned cell(s) do not support the requested transmit diversity
Supported	mode
RL Already Activated/ Allocated	The DRNS has already allocated an RL with the requested RL ID for this
	UE Context
Synchronisation Failure	Loss of UL Uu synchronisation
Transaction not Supported by	The requested action cannot be performed due to lack of support of the
Destination Node B	corresponding action in the destination Node B
UL Radio Resources not Available	The DRNS does not have sufficient UL radio resources available
UL Scrambling Code Already in Use	The concerned UL scrambling code is already in use for another UE
UL SF not Supported	The concerned cell(s) do not support the requested minimum UL SF
UL Shared Channel Type not	The concerned cell(s) do not support the Uplink Shared Channel Type
Supported Supported	2.1.2 Concerned century as not support the opinik bilated chainer Type
Unknown C-ID	The DRNS is not aware of a cell with the provided C-ID
Unknown RNTI	The SRNC or DRNC is not aware of a UE indicated with the provided
	RNTI.

Unspecified	Sent when none of the above cause values applies but still the cause is
	Radio Network Layer related

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

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

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

## 9.2.1.5A Cell Geographical Area Identity (Cell GAI)

The Cell Geographical Area is used to identify the geographical area of a cell. The area is represented as a polygon. See ref. [25].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Cell GAI Geographical Co-ordinates		1 <maxnoofpoints></maxnoofpoints>		
>Latitude Sign	M		ENUMERAT ED (North, South)	
>Degrees of Latitude	M		INTEGER ( 02 <sup>23</sup> -1)	The IE value (N) is derived by this formula: N≤2 <sup>23</sup> X /90 < N+1 X being the latitude in degree (0° 90°)
>Degrees of Longitude	M		INTEGER ( -2 <sup>23</sup> 2 <sup>23</sup> -1)	The IE value (N) is derived by this formula: N≤2 <sup>24</sup> X /360 < N+1 X being the longitude in degree (-180°+180°)

Range bound	Explanation
maxnoofPoints	Maximum no. of points in polygon.

## 9.2.1.5B Cell Geographical Area Additional Shapes (Cell GAI Additional Shapes)

This IE is used to provide several descriptions of the geographical area of a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Cell GAI				
Additional Shapes				
>GA Point With				
Uncertainty				
>>GA Point With	M		9.2.1.30A	Ellipsoid point with
Uncertainty				uncertainty circle
>GA Ellipsoid point				
with uncertainty Ellipse				
>>GA Ellipsoid	M		9.2.1.30B	Ellipsoid point with
point with uncertainty				uncertainty Ellipse
Ellipse				
>GA Ellipsoid point				
with altitude				
>>GA Ellipsoid	M		9.2.1.30C	Ellipsoid point with altitude
point with altitude				
>GA Ellipsoid point				
with altitude and				
uncertainty Ellipsoid				
>>GA Ellipsoid	M		9.2.1.30D	Ellipsoid point with altitude
point with altitude				and uncertainty Ellipsoid
and uncertainty				
Ellipsoid				
>GA Ellipsoid Arc	<b> </b>		22422	l en
>>GA Ellipsoid Arc	M		9.2.1.30E	Ellipsoid Arc

## 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 (065535)	

#### 9.2.1.7 Cell Individual Offset

Cell individual offset is an offset that will be applied by UE to the measurement results for a Primary-CPICH[FDD]/ Primary-CCPCH[TDD] or for GSM Carrier RSSI according to [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Cell Individual Offset			INTEGER (-20+20)	-20 -> -10dB -19 -> -9.5dB  +20 -> +10dB

#### 9.2.1.8 Cell Parameter ID

The Cell Parameter ID identifies unambiguously the [3.84 Mcps TDD - Code Groups, Scrambling Codes, Midambles and Toffset] [1.28 Mcps TDD - SYNC-DL and SYNC-UL sequences, the scrambling codes and the midamble codes] (see ref. [20]).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Cell Parameter ID			INTEGER	
			(0127,)	

#### 9.2.1.9 CFN

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CFN			INTEGER (0 255)	

#### 9.2.1.10 CFN Offset

Void

## 9.2.1.11 CN CS Domain Identifier

Identification of the CN node in the CS Domain.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PLMN Identity	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 Identity 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	М		OCTET STRING (2)	0000 and FFFE not allowed

## 9.2.1.11A CN Domain Type

Identifies the type of core network domain.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
CN Domain Type			ENUMERAT	See in [16]
			ED (CS	
			domain, PS	
			domain,	
			Don't	
			care,)	

## 9.2.1.12 CN PS Domain Identifier

Identification of the CN Node in the PS Domain.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PLMN Identity	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 Identity 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	М		OCTET STRING (2)	0000 and FFFE not allowed
RAC	М		OCTET STRING (1)	

## 9.2.1.12A Common Measurement Accuracy

The Common Measurement Accuracy IE indicates the accuracy of the common measurement.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Common Measurement Accuracy				
>T <sub>UTRAN-GPS</sub> Measurement Accuracy Class				
>>Tutran-gps Measurement Accuracy Class	М		T <sub>UTRAN-GPS</sub> Accuracy Class 9.2.1.59B	

## 9.2.1.12B Common Measurement Object Type

Void.

## 9.2.1.12C Common Measurement Type

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

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Common Measurement Type			ENUMERATED	UL timeslot ISCP shall only
			(UTRAN GPS	be used by TDD
			Timing of Cell	
			Frames for UE	
			Positioning,	
			SFN-SFN	
			Observed Time	
			Difference,	
			load,	
			transmitted	
			carrier power,	
			received total	
			wide band	
			power, UL	
			timeslot ISCP,	
			)	

#### 9.2.1.12D Common Measurement Value

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Common				
Measurement Value				
> T <sub>UTRAN-GPS</sub> Measurement Value Information				
>>T <sub>UTRAN-GPS</sub> Measurement Value Information	М		9.2.1.59D	
> SFN-SFN Measurement Value Information				
>>SFN-SFN Measurement Value Information	M		9.2.1.52C	
>Load Value				
>>Load Value	M		9.2.1.33A	
>Transmitted Carrier Power Value				
>>Transmitted Carrier Power Value	M		Transmitted Carrier Power 9.2.1.59A	
>Received Total Wide Band Power Value				
>>Received Total Wide Band Power Value	M		Received Total Wide Band Power 9.2.2.35A	
>UL Timeslot ISCP Value		· · · · · · · · · · · · · · · · · · ·		TDD Only
>>UL Timeslot ISCP Value	M		UL Timeslot ISCP 9.2.3.13A	

#### 9.2.1.12E Common Measurement Value Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Measurement	M			
Availability				
>Measurement Available				
>>Common Measurement	M		9.2.1.12D	
Value				
>Measurement not Available			NULL	

## 9.2.1.13 Criticality Diagnostics

The *Criticality Diagnostics* IE is sent by an RNC when parts of a received message have not been comprehended or were missing, or if the message contained logical errors. When applicable, it contains information about which IEs that were not comprehended or were missing.

For further details on how to use the *Criticality Diagnostics* IE, see Annex C.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Procedure ID		01	Kelefelide	Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error	-	Ornicality
>Procedure Code	М		INTEGER (0255)	caused the error	_	
>Ddmode	М		ENUMERATED (TDD, FDD, Common)	Common = common to FDD and TDD.	_	
Triggering Message	0		ENUMERATED(i nitiating message, successful outcome, unsuccessful outcome, outcome)	The Triggering Message is used only if the Criticality Diagnostics is part of Error Indication.	-	
Procedure Criticality	0		ENUMERATED(r eject, ignore, notify)	This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure).	-	
Transaction ID	0		9.2.1.59		_	
Information Element Criticality Diagnostics		0 <max noof errors&gt;</max 			_	
>IE Criticality	M		ENUMERATED(r eject, ignore, notify)	The IE Criticality is used for reporting the criticality of the triggering IE. The value 'Ignore' shall never be used.	-	
>IE ID	M		INTEGER (065535)	The IE ID of the not understood or missing IE as defined in the ASN.1 part of the specification.	-	
>Repetition Number	O		INTEGER (0255)	The Repetition Number IE gives  In case of a not understood IE: The number of occurrences of the reported IE up to and including the not understood occurrence  In case of a missing IE: The number of occurrences up to but not including the missing occurrence.  Note: All the counted	_	

			occurrences of the reported IE must have the same topdown hierarchical message structure of IEs with assigned criticality above them.		
>Message Structure	0	9.2.1.39A	The Message Structure IE describes the structure where the not understood or missing IE was detected. This IE is included if the not understood IE is not the top level of the message.	YES	ignore
>Type of Error	М	ENUMERATED( not understood, missing,)		YES	ignore

Range bound	Explanation
maxnooferrors	Maximum number of IE errors allowed to be reported with a single
	message.

#### 9.2.1.14 C-RNTI

C-RNTI (Cell RNTI) is the UE identifier allocated by the DRNS to be used over the radio interface. It is unique in the cell. One UE Context has one unique C-RNTI value allocated in the DRNS.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
C-RNTI			INTEGER(065535)	

#### 9.2.1.15 DCH Combination Indicator

Void

## 9.2.1.16 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 (0255)	

#### 9.2.1.16A DCH Information Response

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DCH Information Response		1 <maxno ofDCHs&gt;</maxno 			_	
>DCH ID	M		9.2.1.16		_	
>Binding ID	0		9.2.1.3		_	
>Transport Layer Address	0		9.2.1.62		_	
>Allowed Rate Information	0		9.2.1.2A		YES	ignore

Range bound	Explanation
maxnoofDCHs	Maximum number of DCHs for one UE.

## 9.2.1.17 Dedicated Measurement Object Type

Void.

## 9.2.1.18 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			ENUMERAT ED (SIR, SIR Error, Transmitted Code Power, RSCP, Rx Timing Deviation, Round Trip Time,, Rx Timing Deviation LCR)	RSCP is used by TDD only, Rx Timing Deviation is used by 3.84 TDD only, Rx Timing Deviation LCR is used by 1.28 TDD only, Round Trip Time, SIR Error are used by FDD only.

NOTE: For definitions of the measurement types refer to ref. [11] and [14].

#### 9.2.1.19 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	Criticality	Assigned Criticality
CHOICE Dedicated Measurement Value					_	
>SIR Value					_	
>>SIR Value	М		INTEGER( 063)	According to mapping in ref. [23] and [24]	ı	
>SIR Error Value				FDD Only	_	
>>SIR Error Value	M		INTEGER( 0125)	According to mapping in [23]	_	
>Transmitted Code Power Value					_	
>>Transmitted Code Power Value	М		INTEGER( 0127)	According to mapping in ref. [23] and [24] Values 0 to 9 and 123 to 127 shall not be used.	+	
>RSCP				TDD Only		
>>RSCP	M		INTEGER( 0127)	According to mapping in ref. [24]	_	
>Rx Timing Deviation Value				3.84Mcps TDD Only	_	
>>Rx Timing Deviation	М		INTEGER( 08191)	According to mapping in [24]	-	
>Round Trip Time				FDD Only	ı	
>>Round Trip Time	М		INTEGER( 032767)	According to mapping in [23]	_	
>Additional Dedicated Measurement Values					ı	
>> Rx Timing Deviation Value LCR				1.28Mcps TDD Only	_	
>>>Rx Timing Deviation LCR	М		INTEGER( 0511)	According to mapping in [24]	YES	reject

## 9.2.1.19A Dedicated Measurement Value Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE Measurement Availability Indicator	M				_	
>Measurement Available					_	
>>Dedicated Measurement Value	М		9.2.1.19		_	
>>CFN	0		9.2.1.9	Dedicated Measuremen t Time Reference	-	
>Measurement not Available			NULL		_	

#### 9.2.1.19B DGPS Corrections

The DGPS Corrections IE contains DGPS information used by the UE Positioning A-GPS method. For further details on the meaning of parameters, see [31].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
GPS TOW	М		INTEGER(0604799)	Time in seconds. This field indicates the baseline time for which the corrections are valid
Status/Health	M		ENUMERAT ED (UDRE scale 1.0, UDRE scale 0.75, UDRE scale 0.5, UDRE scale 0.3, UDRE scale 0.1, no data, invalid data)	This field indicates the status of the differential corrections
Satellite DGPS Corrections Information		1 <maxnosat></maxnosat>		
>SatID	М		SAT ID 9.2.1.50A	Satellite ID
>IODE	M		BIT STRING(8)	This IE is the sequence number for the ephemeris for the particular satellite. It can be used to determine if new ephemeris is used for calculating the corrections that are provided. This eightbit IE is incremented for each new set of ephemeris for the satellite and may occupy the numerical range of [0, 239] during normal operations.
>UDRE	M		ENUMERAT ED (UDRE ≤1.0m, 1.0m < UDRE ≤ 4.0m, 4.0m < UDRE ≤ 8.0m, 8.0m < UDRE,)	User Differential Range Error. This field provides an estimate of the uncertainty (1- o) in the corrections for the particular satellite. The value in this field shall be multiplied by the UDRE Scale Factor in the common Corrections Status/Health field to determine the final UDRE estimate for the particular satellite
>PRC	М		INTEGER( -20472047)	Scaling factor 0.32 meters
>Range Correction Rate	M		INTEGER(- 127 127)	Scaling factor 0.032 m/s

Range Bound	Explanation
maxNoSat	Maximum number of satellites for which information can be
	provided

## 9.2.1.20 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	Semantics Description
			Reference	
Diversity Control Field			ENUMERAT	
			ED(May,	
			Must, Must	
			not)	

## 9.2.1.21 Diversity Indication

Void.

#### 9.2.1.21A DL Power

The *DL Power* IE indicates a power level relative to the [FDD - primary CPICH power] [TDD - PCCPCH power] configured in a cell [FDD - If referred to a DPCH, it indicates the power of the transmitted DPDCH symbols]. If Transmit Diversity is applied to a downlink physical channel, the *DL Power* IE indicates the power offset between the linear sum of the power for this downlink physical channel on all branches and the [FDD - primary CPICH power] [TDD - PCCPCH power] configured in a cell.

[TDD - If referred to a DPCH, it indicates the power of a spreading factor 16 code, the power for a spreading factor 1 code would be 12 dB higher].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics description
DL Power			INTEGER (- 350150)	Value = DL Power /10 Unit dB Range –35.0 +15.0 Step 0.1dB

## 9.2.1.22 Downlink SIR Target

Void

#### 9.2.1.23 DPCH Constant Value

DPCH Constant Value is the power margin used by a UE to set the proper uplink power.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DPCH Constant Value			INTEGER (-	Unit dB
			1010)	Granularity 1 dB.

#### 9.2.1.24 D-RNTI

The D-RNTI identifies the UE Context in the DRNC.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
D-RNTI			INTEGER (02^20 -1)	

#### 9.2.1.25 D-RNTI Release Indication

The D-RNTI Release Indication indicates whether or not a DRNC shall release the D-RNTI allocated for a particular UE.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
D-RNTI Release Indication			ENUMERAT	
			ED (Release	
			D-RNTI, not	
			Release	
			D-RNTI)	

## 9.2.1.26 DRX Cycle Length Coefficient

The DRX Cycle Length Coefficient is used as input for the formula to establish the paging occasions to be used in DRX.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DRX Cycle Length Coefficient			INTEGER (39)	Refers to 'k' in the formula as specified in ref. [15],
				Discontinuous Reception.

#### 9.2.1.26A DSCH ID

The DSCH ID is the identifier of an active downlink shared channel. It is unique for each active DSCH among the active DSCHs simultaneously allocated for the same UE.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DSCH ID			INTEGER	
			(0255)	

#### 9.2.1.26B DSCH Flow Control Information

The *DSCH Flow Control Information* IE provides flow control information for each scheduling priority class for the DSCH FP over Iur.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DSCH Flow Control Information		116			_	
>DSCH Scheduling Priority	М		Scheduling Priority Indicator 9.2.1.51A		-	
>MAC-c/sh SDU Length		1 <maxnb MAC- c/shSDUL ength&gt;</maxnb 			-	
>>MAC-c/sh SDU Length	M		9.2.1.34		_	

Range bound	Explanation
maxNbMAC-c/shSDULength	Maximum number of different MAC-c/sh SDU lengths.

#### 9.2.1.26Ba DSCH-RNTI

DSCH-RNTI is the UE identifier allocated by DRNS to be used over the radio interface by UEs having one or several DSCHs [TDD – and/or USCHs]. It is unique within a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DSCH-RNTI			INTEGER(065535)	

#### 9.2.1.26Bb Extended GSM Cell Individual Offset

Extended GSM Cell individual offset is an offset that will be applied by UE to the measurement results for GSM carrier RSSI according to [16]. It shall be used when the offset exceeds the range of values that can be indicated using the *Cell Individual Offset* IE (Subclause 9.2.1.7).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Extended GSM Cell Individual			INTEGER	Unit in dB. Step size is 1 dB.
Offset			(-5011	
			1150)	

#### 9.2.1.26C FACH Flow Control Information

The FACH Flow Control Information IE provides flow control information for each scheduling priority class for the FACH FP over Iur.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
FACH Flow Control Information		116			ı	
>FACH Scheduling Priority	M		Scheduling Priority Indicator 9.2.1.51A		-	
>MAC-c/sh SDU Length		1 <maxnb MAC- c/shSDUL ength&gt;</maxnb 			_	
>>MAC-c/sh SDU Length	М		9.2.1.34		_	
>FACH Initial Window Size	М		9.2.1.27		_	

Range bound	Explanation
maxNbMAC-c/shSDULength	Maximum number of different MAC-c/sh SDU lengths.

#### 9.2.1.27 FACH Initial Window Size

Indicates the initial number of MAC-c/sh 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 (0255)	Number of frames (MAC-c/sh SDUs.) 255 = Unlimited number of FACH data frames.

## 9.2.1.28 FACH Priority Indicator

Void

### 9.2.1.28A FN Reporting Indicator

Frame Number reporting indicator.

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
FN reporting indicator			ENUMERAT ED(FN	
			reporting required, FN	
			reporting not required)	

## 9.2.1.29 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=Lowest Priority,
			(015)	
			, ,	15=Highest Priority

#### 9.2.1.30 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	Frames
			(0255)	

#### 9.2.1.30A GA Point with Uncertainty

This IE contains one of the possible descriptions of a Cell Geographical Area.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Geographical Coordinates	М		9.2.1.30F	
Uncertainty Code	М		INTEGER( 0127)	The uncertainty "r" is derived from the "uncertainty code" k by r = 10x(1.1 <sup>k</sup> -1)

## 9.2.1.30B GA Ellipsoid Point with Uncertainty Ellipse

This IE contains one of the possible descriptions of a Cell Geographical Area.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Geographical Coordinates	M		9.2.1.30F	
Uncertainty Ellipse	M		9.2.1.68A	
Confidence	M		INTEGER(	
			0127)	

## 9.2.1.30C GA Ellipsoid Point with Altitude

This IE contains one of the possible descriptions of a Cell Geographical Area.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Geographical Coordinates	M		9.2.1.30F	
Altitude and direction	M		9.2.1.2B	

## 9.2.1.30D GA Ellipsoid Point with Altitude and Uncertainty Ellipsoid

This IE contains one of the possible descriptions of a Cell Geographical Area.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Geographical Coordinates	M		9.2.1.30F	
Altitude and direction	M		9.2.1.2B	
Uncertainty Ellipse	M		9.2.1.68A	
Uncertainty Altitude	M		INTEGER(	
			0127)	
Confidence	M		INTEGER(	
			0127)	

## 9.2.1.30E GA Ellipsoid Arc

This IE contains one of the possible descriptions of a Cell Geographical Area.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Geographical Coordinates	M		9.2.1.30F	
Inner radius	M		INTEGER ( 02 <sup>16</sup> -1)	The relation between the value (N) and the radius (r) in meters it describes is 5N≤ r <5(N+1), except for N=2 <sup>16</sup> -1 for which the range is extended to include all grater values of (r).
Uncertainty radius	M		INTEGER( 0127)	The uncertainty "r" is derived from the "uncertainty code" k by r = 10x(1.1 <sup>k</sup> -1)
Offset angle	M		INTEGER( 0179)	The relation between the value (N) and the angle (a) in degrees it describes is 2N≤ a <2(N+1)
Included angle	M		INTEGER( 0179)	The relation between the value (N) and the angle (a) in degrees it describes is 2N≤ a <2(N+1)
Confidence	М		INTEGER( 0127)	

## 9.2.1.30F Geographical Coordinates

This IE contains the description of geographical coordinates.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Latitude Sign	M		ENUMERAT ED (North, South)	
Degrees Of Latitude	M		INTEGER ( 02 <sup>23</sup> -1)	The IE value (N) is derived by this formula: N≤2 <sup>23</sup> X /90 < N+1 X being the latitude in degree (0° 90°)
Degrees Of Longitude	M		INTEGER ( -2 <sup>23</sup> 2 <sup>23</sup> -1)	The IE value (N) is derived by this formula: N≤2 <sup>24</sup> X /360 < N+1 X being the longitude in degree (-180°+180°)

## 9.2.1.30G GPS Almanac

This IE provides the information regarding the GPS Almanac. For further details on the meaning of parameters, see [30].

IE/Group name	Presence	Range	IE Type and Reference	Semantics Description
WNa	М		BIT STRING(8)	
Satellite Almanac Information	М	1,, <maxno Sat&gt;</maxno 		
>DataID	М		INTEGER (03)	
>SatID	М		SAT ID 9.2.1.50A	Satellite ID
>e	М		BIT STRING(16)	
>t <sub>oa</sub>	М		BIT STRING(8)	
>δΙ	М		BIT STRING(16)	
>OMEGADOT	М		BIT STRING(16)	
>SV Health	М		BIT STRING(8)	
>A <sup>1/2</sup>	М		BIT STRING(24)	
>OMEGA <sub>0</sub>	M		BIT STRING(24)	
>M <sub>0</sub>	М		BIT STRING(24)	
>0)	М		BIT STRING(24)	
>af <sub>0</sub>	М		BIT STRING(11)	
>af <sub>1</sub>	М		BIT STRING(11)	
SV Global Health	0		BIT STRING(364)	

Range Bound	Explanation
maxNoSat	Maximum number of satellites for which information can be
	provided

## 9.2.1.30H GPS Ionospheric Model

This IE provides the information regarding the GPS Ionospheric Model. For further details on the meaning of parameters, see [30].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
α <sub>0</sub>	М		BIT	
			STRING(8)	
$\alpha_1$	M		BIT	
			STRING(8)	
$\alpha_2$	M		BIT	
			STRING(8)	
$\alpha_3$	M		BIT	
			STRING(8)	
β <sub>0</sub>	M		BIT	
•			STRING(8)	
β <sub>1</sub>	M		BIT	
, ,			STRING(8)	
$\beta_2$	M		BIT	
' <del>-</del>			STRING(8)	
$\beta_3$	M		BIT	
, -			STRING(8)	

## 9.2.1.30I GPS Navigation Model and Time Recovery

This IE contains subframes 1 to 3 of the GPS navigation message. For further details on the meaning of parameters, see [30].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Navigation Message 1to3		1 <maxnosat></maxnosat>		
>Transmission TOW	M		INTEGER(01048575)	Time of the Week when the message is broadcast.
>SatID	M		SAT ID 9.2.1.50A	Satellite ID of the satellite from which the information is obtained
>TLM Message	М		BIT STRING(14)	
>TIm Revd (C)	М		BIT STRING(2)	
>HO-Word	М		BIT STRING(22)	
>WN	М		BIT STRING(10)	
>C/A or P on L2	М		BIT STRING(2)	
>User Range Accuracy	M		BIT	
Index >SV Health	M		STRING(4) BIT	
>IODC			STRING(6)	
	M		STRING(10)	
>L2 P Data Flag	M		BIT STRING(1)	
>SF 1 Reserved	М		BIT STRING(87)	
>T <sub>GD</sub>	М		BIT STRING(8)	
>t <sub>oc</sub>	М		BIT STRING(16)	
>af <sub>2</sub>	М		BIT STRING(8)	
>af <sub>1</sub>	М		BIT STRING(16)	
>af <sub>0</sub>	М		BIT STRING(22)	
>C <sub>rs</sub>	М		BIT	
>∆n	M		STRING(16) BIT	
>M <sub>0</sub>	M		STRING(16) BIT	
>C <sub>uc</sub>	M		STRING(32) BIT	
>e	M		STRING(16) BIT	
>C <sub>us</sub>	M		STRING(32) BIT	
>(A) <sup>1/2</sup>	M		STRING(16) BIT	
>t <sub>oe</sub>	M		STRING(32) BIT	
>Fit Interval Flag	M		STRING(16) BIT	
>AODO	M		STRING(1) BIT	
>C <sub>ic</sub>	M		STRING(5) BIT	
>OMEGA <sub>0</sub>	M		STRING(16) BIT	
>C <sub>is</sub>	M		STRING(32) BIT	
			STRING(16)	
>i <sub>0</sub>	M		BIT STRING(32)	
>C <sub>rc</sub>	М		BIT	

		STRING(16)
>ω	M	BIT
		STRING(32)
>OMEGAdot	M	BIT
		STRING(24)
>ldot	M	BIT
		STRING(14)
>Spare/zero fill	M	BIT
		STRING(20)

Range Bound	Explanation
maxNoSat	Maximum number of satellites for which information can be
	provided

## 9.2.1.30J GPS Real-Time Integrity

This IE provides the information regarding the status of the GPS constellation. For further details on the meaning of parameters, see [30].

IE/Group name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Bad Satellites Presence	М			
>Bad Satellites				
>>Satellite information		1 <maxn oSat&gt;</maxn 		
>>>BadSatID	М		SAT ID 9.2.1.50A	Satellite ID
>No Bad Satellites			NULL	

Range Bound	Explanation
maxNoSat	Maximum number of satellites for which information can be
	provided

## 9.2.1.30K GPS Receiver Geographical Position (GPS RX Pos)

The GPS Receiver Geographical Position is used to identify the geographical coordinates of a GPS receiver relevant for a certain Information Exchange Object.

	IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
ſ	Geographical Coordinates	M		9.2.1.30F	
Ī	Altitude and direction	M		9.2.1.2B	

#### 9.2.1.30L GPS UTC Model

This IE provides the information regarding the GPS UTC Model. For further details on the meaning of parameters, see [30].

IE/Group name	Presence	Range	IE Type and Reference	Semantics Description
A <sub>1</sub>	М		BIT	
			STRING(24)	
A <sub>0</sub>	M		BIT	
			STRING(32)	
t <sub>ot</sub>	M		BIT	
			STRING(8)	
$\Delta t_{LS}$	M		BIT	
			STRING(8)	
WNt	M		BIT	
			STRING(8)	
WN <sub>LSF</sub>	M		BIT	
			STRING(8)	
DN	М		BIT	_
			STRING(8)	
$\Delta t_{LSF}$	M		BIT	_
			STRING(8)	

#### 9.2.1.30M Guaranteed Rate Information

The *Guaranteed Rate Information* IE indicates the TFI corresponding to the guaranteed bit rate for the uplink and/or the downlink of a DCH.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Guaranteed UL Rate	0		INTEGER(1. .maxTFcount	"1": TFI 0, "2": TFI 1, "3": TFI 2, 
Guaranteed DL Rate	0		INTEGER(1. .maxTFcount	"1": TFI 0, "2": TFI 1, "3": TFI 2, 

## 9.2.1.31 IMSI

The IMSI is the permanent UE user Identity, see ref. [1].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
IMSI			OCTET STRING (SIZE(38))	-Decimal digits coded in BCD -'1111' used as filler -bit 4 to 1 of octet n is encoding digit 2n-1 -bit 8 to 5 of octet n is encoding digit 2n

## 9.2.1.31A Information Exchange ID

The Information Exchange ID uniquely identifies any requested information per RNS.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Information Exchange ID	M		INTEGER(0	
			2^20-1)	

## 9.2.1.31B Information Exchange Object Type

Void.

## 9.2.1.31C Information Report Characteristics

The information report characteristics define how the reporting shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Information Report				
Characteristics Type				
>OnDemand			NULL	
>Periodic				
>>CHOICE Information	M			The frequency with which the
Report Periodicity Scale				Node B shall send information
				reports.
>>>minute				
>>>Report	M		INTEGER	
Periodicity Value			(160,)	
>>>hour				
>>>Report	M		INTEGER	
Periodicity Value			(124,)	
>On Modification		•		
>>Information Threshold	0		9.2.1.31D	

#### 9.2.1.31D Information Threshold

The Information Threshold indicates which kind of information shall trigger the Information Reporting procedure.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Information Type Item	М			
>DGPS Corrections				
>>PRC Deviation	M		ENUMERAT ED (1, 2, 5, 10,)	PRC deviation in meters from the previously reported value, which shall trigger a report

## 9.2.1.31E Information Type

The Information Type indicates which kind of information the RNS shall provide.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Information Type Item	M		ENUMERAT ED (UTRAN Access Point Position with Altitude, UTRAN Access Point Position, IPDL Parameters, GPS Information, DGPS Corrections, GPS RX Pos, SFN- SFN Measureme nt Reference Point Position,)	
GPS Information	C-GPS	1 <maxnoofgpstype s&gt;</maxnoofgpstype 	, ,	
>GPS Information Item			ENUMERAT ED (GPS Navigation Model and Time Recovery, GPS Ionospheric Model, GPS UTC Model, GPS Almanac, GPS Real- Time Integrity,)	

Condition	Explanation
GPS	This IE shall be present if the Information Type Item IE
	indicates "GPS Information"

Range Bound	Explanation
maxnoofGPSTypes	Maximum number of GPS Information Types supported in one
	Information Exchange.

## 9.2.1.31F IPDL Parameters

IE/Group name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE IPDL Parameters				
>IPDL FDD Parameters				
>>IPDL FDD parameters	M		9.2.2.21B	
>IPDL TDD Parameters				
>>IPDL TDD parameters	M		9.2.3.4B	

#### 9.2.1.32 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 DRNC, as defined in ref. [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
L3 Information			BIT STRING	The content is defined in ref. [16]

#### 9.2.1.33 Limited Power Increase

Void.

#### 9.2.1.33A Load Value

The Load Value IE contains the load on the measured object relative to the maximum planned load for both the uplink and downlink.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Uplink Load Value	M		INTEGER(0100)	Value 0 shall indicate the minimum load, and 100 shall indicate the maximum load. Load should be measured on a linear scale.
Downlink Load Value	M		INTEGER(0100)	Value 0 shall indicate the minimum load, and 100 shall indicate the maximum load. Load should be measured on a linear scale.

## 9.2.1.34 MAC-c/sh SDU Length

Indicates the MAC-c/sh SDU Length. Which is used for FACH, DSCH and USCH. There may be multiple MAC-c/sh SDU Lengths per priority class.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
MAC-c/sh SDU Length			INTEGER (15000)	Size of the MAC-c/sh SDU in number of bits.

#### 9.2.1.35 Maximum Allowed UL Tx Power

Maximum Allowed UL Tx Power is the maximum power that a UE in a particular cell is allowed to transmit.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum Allowed UL Tx Power			INTEGER (- 50+33)	dBm

#### 9.2.1.35A Measurement Availability Indicator

Void

#### 9.2.1.35B Measurement Change Time

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Measurement Change Time			INTEGER	Unit: ms
_			(16000,)	Range: 1060000 ms
				Step: 10 ms

#### 9.2.1.36 Measurement Filter Coefficient

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Measurement Filter			ENUMERAT	
Coefficient			ED(0, 1, 2,	
			3, 4, 5, 6, 7,	
			8, 9, 11, 13,	
			15, 17,	
			19,)	

## 9.2.1.36A Measurement Hysteresis Time

The Measurement Hysteresis Time provides the duration during which a reporting criterion has to be fulfilled for the Measurement Reporting procedure to be triggered.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Measurement Hysteresis Time			INTEGER	Unit: ms
			(16000,)	Range: 1060000 ms
				Step: 10 ms

#### 9.2.1.37 Measurement ID

The Measurement ID uniquely identifies a dedicated measurement within a UE Context or a common measurement within a Distant RNC Context.

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

#### 9.2.1.38 Measurement Increase/Decrease Threshold

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality	
CHOICE Measurement Increase/Decrease Threshold >SIR					-		
>>SIR	М		INTEGER(062)	0: 0 dB 1: 0.5 dB 2: 1 dB  62: 31dB	-		
>SIR Error				FDD Only	-		
>>SIR Error	M		INTEGER(0124 )	0: 0 dB 1: 0.5 dB 2: 1 dB  124: 62 dB	-		
>Transmitted Code Power					-		
>>Transmitted Code Power	M		INTEGER(0112 ,)	0: 0 dB 1: 0.5 dB 2: 1 dB  112: 56 dB	-		
>RSCP				TDD Only	_		
>>RSCP	M		INTEGER(0126 )	0: 0 dB 1: 0.5 dB 2: 1 dB  126: 63 dB	-		
>Round Trip Time				FDD Only	_		
>>Round Trip Time	М		INTEGER(0327 66)	0: 0 chips 1: 0.0625 chips 2: 0.1250 chips  32766: 2047.875 chips	-		
>Load					-		
>>Load	M		INTEGER(0100 )	Units are the same as for the Uplink <i>Load</i> Value IE and  Downlink Load Value IE.	YES	reject	
>Transmitted Carrier Power					-		
>>Transmitted Carrier Power	М		INTEGER(0100	According to mapping in [23] and [24].	YES	reject	
>Received Total Wide Band Power					-		
>>Received Total Wide Band Power	М		INTEGER(0620 )	0: 0dB 1: 0.1dB 2: 0.2dB  620: 62dB	YES	reject	
>UL Timeslot ISCP				TDD Only	-		
>>UL Timeslot ISCP	M		INTEGER(0126	0: 0dB 1: 0.5dB 2: 1dB  126: 63dB	YES	reject	

## 9.2.1.39 Measurement Threshold

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE Measurement Threshold					-	
>SIR					-	
>>SIR	М		INTEGER(063)	According to mapping in ref. [23] and [24].	-	
>SIR Error				FDD Only	-	
>>SIR Error	М		INTEGER(0125	According to mapping in [23]	-	
>Transmitted Carrier Power			,	[20]	-	
>>Transmitted Code Power	М		INTEGER(0127	According to mapping in ref. [23] and [24].	-	
>RSCP			,	TDD Only	-	
>>RSCP	М		INTEGER(0127	According to mapping in ref. [24]	-	
>Rx Timing Deviation			,	Applicable to 3.84Mcps TDD Only	-	
>>Rx Timing Deviation	М		INTEGER(0819 1)	According to mapping in [24]	-	
>Round Trip Time				FDD Only	-	
>>Round Trip Time	М		INTEGER(0327 67)	According to mapping in [23]	-	
> T <sub>UTRAN-GPS</sub> Measurement Threshold Information			,		-	
>>T <sub>UTRAN-GPS</sub> Measurement Threshold Information	М		9.2.1.59C		YES	reject
> SFN-SFN Measurement Threshold Information					-	
>>SFN-SFN Measurement Threshold Information	М		9.2.1.52B		YES	reject
>Load					-	
>>Load	М		INTEGER(0100 )	0 is the minimum indicated load, and 100 is the maximum indicated load.	YES	reject
>Transmitted Carrier Power					-	
>>Transmitted Carrier Power	M		INTEGER(0100 )	According to mapping in [23] and [24].	YES	reject
>Received Total Wide Band Power			INITEGED/O COA		-	
>>Received Total Wide Band Power	М		INTEGER(0621	According to mapping in [23] and [24].	YES	reject
>UL Timeslot ISCP				TDD Only	-	
>>UL Timeslot ISCP	М		INTEGER(0127	According to mapping in [24]	YES	reject
>Rx Timing Deviation LCR				Applicable to 1.28Mcps TDD Only		
>>Rx Timing Deviation LCR	М		INTEGER (0255)	According to mapping in [24]	YES	reject

## 9.2.1.39A Message Structure

The *Message Structure* IE gives information for each level with assigned criticality in an hierarchical message structure from top level down to the lowest level above the reported level for the occured error (reported in the *Information Element Criticality Diagnostics* IE).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message structure		1 <maxnoo flevels&gt;</maxnoo 		The first repetition of the Message Structure IE corresponds to the top level of the message. The last repetition of the Message Structure IE corresponds to the level above the reported level for the occured error of the message.	GLOBAL	ignore
>IE ID	М		INTEGER (065535)	The IE ID of this level"s IE containing the not understood or missing IE.	-	
>Repetition Number	0		INTEGER (1256)	The Repetition Number IE gives, if applicable, the number of occurrences of this level"s reported IE up to and including the occurrence containing the not understood or missing IE.  Note: All the counted occurrences of the reported IE must have the same topdown hierarchical message structure of IEs with assigned criticality above them.	-	

Range bound	Explanation
maxnooflevels	Maximum no. of message levels to report. The value for
	maxnooflevels is 256.

## 9.2.1.40 Message Type

The Message Type uniquely identifies the message being sent.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Procedure ID		1		
>Procedure Code	M		INTEGER (0255)	"0" = Common Transport Channel Resources Initialisation "1" = Common Transport Channel Resources Release "2" = Compressed Mode Command "3" = Downlink Power Control "4" = Downlink Power Timeslot Control "5" = Downlink Signalling Transfer "6" = Error Indication "7" = Dedicated Measurement Failure "8" = Dedicated Measurement Initiation "9" = Dedicated Measurement Reporting "10" = Dedicated Measurement Termination "11" = Paging "12" = Physical Channel Reconfiguration "14" = Radio Link Addition "15" = Radio Link Failure "17" = Radio Link Preemption "16" = Radio Link Preemption "18" = Radio Link Restoration "19" = Radio Link Restoration "19" = Radio Link Setup "20" = Relocation Commit "21" = Synchronised Radio Link Reconfiguration Cancellation "22" = Synchronised Radio Link Reconfiguration Commit "23" = Synchronised Radio Link Reconfiguration Preparation "24" = UnSynchronised Radio Link Reconfiguration Preparation "25" = Uplink Signalling Transfer  "26" = Common Measurement Failure "27" = Common MeasurementInitiation "28" = Common MeasurementTermination "30" - Information Exchange Failure
				"30" = Information Exchange Failure "31" = Information Exchange Initiation "32" = Information Reporting "33" = Information Exchange Termination "34" = Radio Link Congestion
>Ddmode	М		ENUMERATED (FDD, TDD, Common,)	Common = common to FDD and TDD.
Type of Message	М		ENUMERATED (Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome)	

# 9.2.1.41 Multiple URAs Indicator

The Multiple URAs Indicator indicates whether the accessed cell has multiple URAs.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Multiple URAs Indicator			ENUMERAT	
			ED (Multiple	
			URA s exist,	
			Single URA	
			Exists)	

## 9.2.1.41A Neighbouring UMTS Cell Information

The *Neighbouring UMTS Cell Information* IE provides information for UMTS Cells that are neighbouring cells to a cell in the DRNC. The neighbouring cell information is provided for each RNC (including the DRNC) that has cells that are neighbouring cells to the cell in the DRNC.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Neighbouring UMTS Cell Information		1 <maxnoof neighbourin gRNCs&gt;</maxnoof 			EACH	ignore
>RNC-ID	M		9.2.1.50		_	
>CN PS Domain Identifier	0		9.2.1.12		-	
>CN CS Domain Identifier	0		9.2.1.11		_	
>Neighbouring FDD Cell Information	0		9.2.1.41B		_	
>Neighbouring TDD Cell Information	0		9.2.1.41D		_	
>Neighbouring TDD Cell Information LCR	0		9.2.1.72		YES	ignore

Range bound	Explanation
maxnoofneighbouringRNCs	Maximum number of neighbouring RNCs.

## 9.2.1.41B Neighbouring FDD Cell Information

The *Neighbouring FDD Cell Information* IE provides information for FDD cells that are a neighbouring cells to a cell in the DRNC.

IE/Group Name	Presence	Range	IE Type and	Semantics	Criticality	Assigned
			Reference	Description		Criticality
Neighbouring FDD Cell		1 <max< td=""><td></td><td></td><td>_</td><td></td></max<>			_	
Information		noofFDD				
		neighbou				
		rs>				
>C-ID	M		9.2.1.6		_	
>UL UARFCN	M		UARFCN	Corresponds	_	
			9.2.1.66	to Nu in ref.		
				[6]		
>DL UARFCN	M		UARFCN	Corresponds	_	
			9.2.1.66	to Nd in ref.		
				[6]		
>Frame Offset	0		9.2.1.30		_	
>Primary Scrambling Code	M		9.2.1.45		_	
>Primary CPICH Power	0		9.2.1.44		_	
>Cell Individual Offset	0		9.2.1.7		_	
>Tx Diversity Indicator	M		9.2.2.50			
>STTD Support Indicator	0		9.2.2.45		_	
>Closed Loop Mode1	0		9.2.2.2		_	
Support Indicator						
>Closed Loop Mode2	0		9.2.2.3		_	
Support Indicator						
>Restriction State Indicator	0		9.2.1.48C		YES	ignore
>DPC Mode Change Support	0		9.2.2.56		YES	ignore
Indicator						

Range bound	Explanation
maxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell.

## 9.2.1.41C Neighbouring GSM Cell Information

The *Neighbouring GSM Cell Information* IE provides information for all GSM Cells that are a neighbouring cell to a cell in the DRNC.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Neighbouring GSM Cell Information		1 <maxno ofGSMnei ghbours&gt;</maxno 	- North Control		GLOBAL	ignore
>CGI		1		Cell Global Identity as defined in ref. [1].	_	
>>LAI		1			_	
>>>PLMN Identity	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 Identity 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	_	
>>Cl	M		OCTET STRING (2)		_	
>Cell Individual Offset	0		9.2.1.7	The Cell Individual Offset to be used for UEs using DCHs. If the Extended GSM Cell Individual Offset IE is present, the Cell Individual Offset IE shall be set to a) -10dB if the Extended GSM Cell Individual Offset IE is < 10dB and b) 10dB if the Extended GSM Cell Individual Offset IE is < 10dB and b) 10dB if the Extended GSM Cell Individual Offset IE is > 10dB.		
>BSIC		1		Base Station Identity Code as defined in ref. [1].	_	
>>NCC	М		BIT STRING(3)	Network Colour Code.	_	
>>BCC	М		BIT STRING(3)	Base Station Colour Code.	-	

>Band Indicator	M	ENUMERA TED (DCS 1800 band, PCS 1900 band,)	or not the BCCH	_	
>BCCH ARFCN	M	INTEGER (01023)	BCCH Frequency as defined in ref. [29].	_	
>Extended GSM Cell Individual Offset	0	9.2.1.26Bb	The Extended GSM Cell Individual Offset to be used for UEs using DCHs, for values that exceed the range of the Cell Individual Offset IE.	YES	ignore

Range bound	Explanation
maxnoofGSMneighbours	Maximum number of neighbouring GSM cells for one cell.

## 9.2.1.41D Neighbouring TDD Cell Information

The *Neighbouring TDD Cell Information* IE provides information for 3.84Mcps TDD cells that are a neighbouring cells to a cell in the DRNC.

IE/Group Name	Presence	Range	IE Type	Semantics	Criticality	Assigned
			and	Description		Criticality
			Reference			
Neighbouring TDD Cell Information		1 <maxnoo fTDDneighb</maxnoo 			_	
		ours>				
>C-ID	M		9.2.1.6		_	
>UARFCN	M		9.2.1.66	Corresponds to Nt in ref. [7]	_	
>Frame Offset	0		9.2.1.30		_	
>Cell Parameter ID	M		9.2.1.8		_	
>Sync Case	M		9.2.1.54		_	
>Time Slot For SCH	C-Case1		Time Slot 9.2.1.56		_	
>SCH Time Slot	C-Case2		9.2.1.51		_	
>SCTD Indicator	M		9.2.1.78		_	
>Cell Individual Offset	0		9.2.1.7		_	
>DPCH Constant Value	0		9.2.1.23		_	
>PCCPCH Power	0		9.2.1.43		_	
>Restriction State Indicator	0		9.2.1.48C		YES	ignore

Condition	Explanation
Case1	The IE shall be present if the Sync Case IE is set to 'Case1'.
Case2	The IE shall be present if the Sync Case IE is set to 'Case2'.

Range bound	Explanation
maxnoofTDDneighbours	Maximum number of neighbouring 3.84Mcps TDD cell for one cell.

## 9.2.1.41E Paging Cause

Cause for a CN originated page.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Paging Cause			ENUMERAT ED( Terminating Conversatio nal Call, Terminating Streaming Call, Terminating Interactive Call, Terminating Background Call, Terminating Low Priority Signalling,, Terminating High Priority Signalling, Terminating - cause unknown	See in [16]

## 9.2.1.41F Paging Record Type

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Paging Record Type			ENUMERAT	See ref. [16]
			ED (IMSI	
			(GSM-MAP),	
			TMSI (GSM-	
			MAP), P-	
			TMSI (GSM-	
			MAP), IMSI	
			(DS-41),	
			TMSI (DS-	
			41),)	

## 9.2.1.41G Neighbouring FDD Cell Measurement Information

This IE provides information on the FDD neighbouring cells used for the purpose of Measurements.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UTRAN Cell Identifier	M		9.2.1.71	
UARFCN	M		9.2.1.66	Corresponds to Nd [6]
Primary Scrambling Code	М		9.2.1.45	

## 9.2.1.41H Neighbouring TDD Cell Measurement Information

This IE provides information on the 3.84Mcps TDD neighbouring cells used for the purpose of Measurements. Since the measurement can be performed on every time slot and midamble shift, the *Time slot* IE and *Midamble shift and burst type* IE shall be included if available.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UTRAN Cell Identifier	M		9.2.1.71	
UARFCN	M		9.2.1.66	Corresponds to Nt [15]
Cell Parameter ID	M		9.2.1.8	
Time slot	0		9.2.1.56	
Midamble Shift And Burst Type	0		9.2.3.4	

## 9.2.1.42 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			ENUMERAT	
Indicator			ED (CRC	
			Included,	
			CRC not	
			included)	

#### 9.2.1.43 PCCPCH Power

Primary CCPCH power is the power that shall be used for reference power value in a TDD cell. The reference point is the antenna connector. If Transmit Diversity is applied to the Primary CCPCH, the PCCPCH Power is the linear sum of the power that is used for transmitting the PCCPCH on all branches.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PCCPCH Power			INTEGER (- 150400,)	Unit dBm Range –15.0 to 40.0 dBm, Step size 0.1 dB15.0 shall indicate P≤ -15dBm +40.0 shall indicate P≥ 40dBm.

## 9.2.1.44 Primary CPICH Power

Primary CPICH power is the power that is used for transmitting the Primary CPICH in a cell. The reference point is the antenna connector. If Transmit Diversity is applied to the Primary CPICH, the Primary CPICH Power is the linear sum of the power that is used for transmitting the Primary CPICH on all branches.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CPICH Power			INTEGER (- 100500)	Value = Primary CPICH Power/10 Unit dBm Range -10.0+50.0 Step 0.1 dB

#### 9.2.1.45 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)	

#### 9.2.1.46 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 (015)	0: 40% 1: 44 %  14: 96% 15: 100% (no puncturing)

#### 9.2.1.46A QE-Selector

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
QE-Selector			ENUMERAT	
			ED(selected,	
			non-	
			selected)	

#### 9.2.1.47 RANAP Relocation Information

This parameter is transparent to the RNSAP. The parameter contains information for the Relocation procedure as defined in [2].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
RANAP Relocation Information			BIT STRING	The contents is defined in ref. [2].

## 9.2.1.48 Report Characteristics

The Report Characteristics, defines how the reporting shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE Report					_	
Characteristics						
>OnDemand			NULL		_	
>Periodic					_	
>>Report Periodicity  >Event A	М		9.2.1.48a	The periodicity with which the DRNS shall send measuremen t reports.	_	
>Event A >>Measurement	M		9.2.1.39	The	_	
Threshold				threshold for which the DRNS shall trigger a measuremen t report.	_	
>>Measurement	0		9.2.1.36A		_	
Hysteresis Time						
>Event B			0.0.4.05	7.	_	
>>Measurement Threshold	М		9.2.1.39	The threshold for which the DRNS shall trigger a measuremen t report.	_	
>>Measurement Hysteresis Time >Event C	0		9.2.1.36A		_	
>>Measurement Increase/Decrease Threshold	М		9.2.1.38		_	
>>Measurement Change Time	M		9.2.1.35B	The time within which the measuremen t entity shall rise, in order to trigger a measuremen t report.	_	
>Event D				ттороти.	_	
>>Measurement Increase/Decrease Threshold	М		9.2.1.38		_	
>>Measurement Change Time	M		9.2.1.35B	The time within which the measuremen t entity shall fall, in order to trigger a measuremen t report.	1	
>Event E					_	
>>Measurement Threshold 1	М		Measureme nt Threshold 9.2.1.39		_	
>>Measurement Threshold 2	0		Measureme nt Threshold		_	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
			9.2.1.39			
>>Measurement Hysteresis Time	0		9.2.1.36A	The hysteresis time in ms	_	
>>Report Periodicity	0		9.2.1.48a	The periodicity with which the DRNS shall send measuremen t reports.	-	
>Event F					_	
>>Measurement Threshold 1	М		Measureme nt Threshold 9.2.1.39		_	
>>Measurement Threshold 2	0		Measureme nt Threshold 9.2.1.39		_	
>>Measurement Hysteresis Time	0		9.2.1.36A	The hysteresis time in ms	_	
>>Report Periodicity	0		9.2.1.48a	The periodicity with which the DRNS shall send measuremen t reports.		
>Additional Report Characteristics					_	
>> On Modification					_	
>>>On Modification		1			YES	reject
>>>>Measure ment Threshold			9.2.1.39			

## 9.2.1.48a Report Periodicity

The Report Periodicity defines the frequency at which the Node B shall send measurement reports.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Report Periodicity				
Scale				
>millisecond				
>>Report Periodicity Value	M		INTEGER	Unit: ms
			(16000,)	Range: 1060000 ms
				Step: 10 ms
>minute				
>>Report Periodicity Value	M		INTEGER (160,)	Unit: min
				Range: 160 min
				Step: 1 min

## 9.2.1.48A Requested Data Value

The Requested Data Value contains the relevant data concerned the ongoing information exchange. *Requested Data Value* IE shall include at least one of the following IE.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UTRAN Access Point Position with Altitude	0		9.2.1.75	
IPDL Parameters	0		9.2.1.31F	
DGPS Corrections	0		9.2.1.19B	
GPS Navigation Model and	0		9.2.1.301	
Time Recovery				
GPS Ionospheric Model	0		9.2.1.30H	
GPS UTC Model	0		9.2.1.30L	
GPS Almanac	0		9.2.1.30G	
GPS Real-Time Integrity	0		9.2.1.30J	
GPS RX Pos	0		9.2.1.30K	
SFN-SFN Measurement Reference Point Position	0		9.2.1.74	

#### 9.2.1.48B Requested Data Value Information

The *Requested Data Value Information* IE provides information on whether or not the Requested Data Value is available in the message and also the Requested Data Value itself if available. In case of "Periodic" and "On Modification" reporting, "Information Not Available" shall be used when at least one part of the requested information was not available at the moment of initiating the Information Reporting procedure.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE Information Availability Indicator	M				1	
>Information Available					-	
>>Requested Data Value	М		9.2.1.48A		-	
>Information not Available			NULL		_	

#### 9.2.1.48C Restriction State Indicator

The Restriction state indicator is the identifier indicates whether the cell is "Cell Reserved for Operator Use" or not. It is provided by DRNS and reported to SRNC.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Restriction state indicator			ENUMERAT ED(Cell Not Reserved for Operator Use, Cell Reserved for Operator	
			Use,)	

#### 9.2.1.49 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	
			(031)	

#### 9.2.1.50 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	
			(04095)	

#### 9.2.1.50A SAT ID

The SAT ID indicates the identity of the satellite.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SAT ID			INTEGER(063)	

## 9.2.1.51 SCH Time Slot

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SCH Time Slot			INTEGER(06)	

## 9.2.1.51A Scheduling Priority Indicator

Indicates the relative priority of the FACH, DSCH, or USCH data frame. Used by the DRNC when scheduling FACH, DSCH, or USCH traffic.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Scheduling Priority Indicator			INTEGER (015)	Relative priority of the FACH, DSCH, or USCH data frame: 0=Lowest Priority  15=Highest Priority

#### 9.2.1.52 Service Area Identifier (SAI)

This information element is used to 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. For this protocol, only a Service Area that is defined to be applicable to the PS and CS domains shall be used.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
PLMN Identity	M		Reference 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 Identity 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	М		OCTET STRING (2)	0000 and FFFE not allowed
SAC	M		OCTET STRING (2)	

#### 9.2.1.52A SFN

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SFN			INTEGER (04095)	

#### 9.2.1.52B SFN-SFN Measurement Threshold Information

The SFN-SFN Measurement Threshold Information defines the related thresholds SFN-SFN Observed Time Difference measurements which shall trigger the Event On Modification.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SFN-SFN Change Limit	0		INTEGER(1256)	Change of SFN-SFN value compared to previously reported value, which shall trigger a new report. Unit in 1/16 chip.
Predicted SFN-SFN Deviation Limit	0		INTEGER(1. .256)	Deviation the Predicted SFN- SFN from the latest measurement result, which shal trigger a new report. Unit in 1/16 chip.

#### 9.2.1.52C SFN-SFN Measurement Value Information

The SFN-SFN Measurement Value Information IE indicates the measurement result related to SFN-SFN Observed Time Difference measurements as well as other related information.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Successful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information		1 <maxnoofmeasn Cell&gt;</maxnoofmeasn 		
>UTRAN Cell Identifier	M		9.2.1.71	
>SFN-SFN Value	М		9.2.1.77	
>SFN-SFN Quality	0		INTEGER(0255)	Indicates the standard deviation (std) of the SFN-SFN otd (observed time difference) measurements in 1/16 chip. SFN-SFN Quality = $\sqrt{E[(x-\mu)^2]}$ = std of reported SFN-SFN Value, where x is the reported SFN-SFN Value and $\mu = E[x]$ is the expectation value of x.
>SFN-SFN Drift Rate	М		INTEGER(- 100100)	Indicates the SFN-SFN drift rate in 1/256 chip per second. A positive value indicates that the Reference cell clock is running at a greater frequency than the measured neighbouring cell.
>SFN-SFN Drift Rate Quality	0		INTEGER(0100)	Indicates the standard deviation (std) of the SFN-SFN drift rate measurements in 1/256 chip per second. SFN-SFN Drift Rate Quality = $\sqrt{E[(x-\mu)^2]}$ = std of reported SFN-SFN Drift Rate, where x is the reported SFN-SFN Drift Rate and $\mu$ = $E[x]$ is the expectation value of x.
>SFN-SFN Measurement Time Stamp	М		9.2.1.76	
Unsuccessful Neighbouring cell SFN- SFN Observed Time Difference Measurement Information		0 <maxnoofmeasn Cell-1&gt;</maxnoofmeasn 		
>UTRAN Cell Identifier	M		9.2.1.71	

Range bound	Explanation		
maxnoofMeasNCell	Maximum number of neighbouring cells on which		
	measurements can be performed.		

## 9.2.1.53 S-RNTI

The S-RNTI identifies the UE in the SRNC.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
S-RNTI			INTEGER(0.	
			.2^20 -1)	

#### 9.2.1.54 Sync Case

The SCH and PCCPCH in a TDD cell are mapped on one or two downlink slots per frame. There are two cases of Sync Case as follows:

- Case 1) SCH and PCCPCH allocated in a single TS#k
- Case 2) SCH allocated in two TS: TS#k and TS#k+8
  PCCPCH allocated in TS#k

[1.28Mcps TDD - There is no Sync Case indication needed for 1.28Mcps TDD. If the *Sync Case* IE must be included in a message from DRNC to SRNC used for 1.28Mcps TDD, the DRNC shall indicate Sync Case 1 and the SRNC shall ignore it.]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Sync Case			INTEGER	
			(12,)	

#### 9.2.1.55 TFCI Presence

The TFCI Presence parameter indicates whether the TFCI shall be included. [TDD - If it is present in the timeslot, it will be mapped to the channelisation code defined by [12].]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TFCI Presence			ENUMERATE	
			D (Present,	
			not present)	

#### 9.2.1.56 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 (014)	

#### 9.2.1.57 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 ToAWE gives a Timing Adjustment Control frame response.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
ToAWE			INTEGER (02559)	msec.

#### 9.2.1.58 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	msec.
			(01279)	

#### 9.2.1.59 Transaction ID

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

The Transaction ID is determined by the initiating peer of a procedure.

For procedures addressed to a specific UE Context, the Transaction ID shall uniquely identify a procedure among all ongoing parallel procedures for the same UE using the same procedure code, and initiated by the same protocol peer.

For procedures not addressed to a specific UE Context, the Transaction ID shall uniquely identify a procedure among all ongoing parallel procedures using the same procedure code, and initiated by the same protocol peer.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Transaction ID Length				The Transaction ID shall be interpreted for its integer value, not for the type of encoding ('short' or 'long').
>Short				
>>Transaction ID Value	М		INTEGER (0127)	
>Long				
>>Transaction ID Value	M		INTEGER (032767)	

#### 9.2.1.59A Transmitted Carrier Power

The Transmitted Carrier Power IE contains the Transmitted Carrier Power in a cell, as defined in [11] & [14].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmitted Carrier Power			INTEGER(0100)	According to mapping in [23] and [24].

#### 9.2.1.59B T<sub>UTRAN-GPS</sub> Accuracy Class

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Tutran-gps Accuracy Class			ENUMERAT ED(Accuracy Class A, Accuracy Class B, Accuracy Class C)	More information about Measurement Accuracy Class is included in [23].

#### 9.2.1.59C T<sub>UTRAN-GPS</sub> Measurement Threshold Information

The  $T_{UTRAN\text{-}GPS}$  Measurement Threshold Information defines the related thresholds for UTRAN GPS Timing of Cell Frames for UE Positioning measurements shall trigger the Event On Modification.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
T <sub>UTRAN-GPS</sub> Change Limit	0		INTEGER(1256)	Change of T <sub>UTRAN-GPS</sub> value compared to previously reported value, which shall trigger a new report. Unit in 1/16 chip.
Predicted T <sub>UTRAN-GPS</sub> Deviation Limit	0		INTEGER(1256)	Deviation of the Predicted T <sub>UTRAN-GPS</sub> from the latest measurement result, which shall trigger a new report. Unit in 1/16 chip.

# 9.2.1.59D T<sub>UTRAN-GPS</sub> Measurement Value Information

The  $T_{UTRAN-GPS}$  Measurement Value Information IE indicates the measurement results related to the UTRAN GPS Timing of Cell Frames for UE Positioning measurements.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
T <sub>UTRAN-GPS</sub>		1		Indicates the UTRAN GPS Timing of Cell Frames for UE Positioning. According to mapping in [23] and [24]; significant values range from 0 to 37158911999999.
>MS	M		INTEGER (016383)	Most Significant Part
>LS	M		INTEGER (04294967 295)	Least Significant Part
T <sub>UTRAN-GPS</sub> Quality	0		INTEGER(0255)	Indicates the standard deviation (std) of the $T_{UTRAN-GPS}$ measurements in 1/16 chip. $T_{UTRAN-GPS}$ Quality = $\sqrt{E[(x-\mu)^2]}$ = std of reported $T_{UTRAN-GPS}$ Value, where x is the reported $T_{UTRAN-GPS}$ Value and $\mu$ = $E[x]$ is the expectation value of x.
T <sub>UTRAN-GPS</sub> Drift Rate	M		INTEGER(- 5050)	Indicates the T <sub>UTRAN-GPS</sub> drift rate in 1/256 chip per second. A positive value indicates that the UTRAN clock is running at a lower frequency than GPS clock.
Tutran-gps Drift Rate Quality	0		INTEGER(050)	Indicates the standard deviation (std) of the $T_{UTRAN-GPS}$ drift rate measurements in 1/256 chip per second. $T_{UTRAN-GPS}$ Drift Rate Quality = $\sqrt{E[(x-\mu)^2]}$ = std of reported $T_{UTRAN-GPS}$ Drift Rate, where x is the reported $T_{UTRAN-GPS}$ Drift Rate and $\mu$ = $E[x]$ is the expectation value of x.

## 9.2.1.60 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 (04095)	

#### 9.2.1.61 Transport Bearer Request Indicator

Indicates whether a new Iur transport bearer needs to be established for carrying the corresponding data stream(s), or whether an existing transport bearer will be used.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transport Bearer Request			ENUMERAT	
Indicator			ED(Bearer	
			Requested,	
			Bearer not	
			Requested,	
			)	

#### 9.2.1.62 Transport Layer Address

Transport Layer Address defines the transport address of the DRNS. For details on the Transport Address used see [3].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transport Layer Address			BIT	
			STRING(11	
			60,)	

#### 9.2.1.63 Transport Format Combination Set (TFCS)

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 to DL Transport Channels.

[FDD - Where the UE is assigned access to one or more DSCH transport channels then the UTRAN has the choice of two methods for signalling the mapping between TFCI(field 2) values and the corresponding TFC: Method #1 - TFCI range

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

#### Method #2 - Explicit

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

IE/Group Name	Presence	Range	IE Type and	Semantics Description
CHOICE DSCH			Reference	
>No Split in the TFCI				This choice is made if:
The spin in the river				a) The TFCS refers to the uplink
				OR b) The mode is FDD and
				none of the Radio Links of the concerned UE are assigned
				any DSCH transport channels OR
TEOO				c) The mode is TDD
>>TFCS		1< maxnoofTFCs >		The first instance of the parameter corresponds to
				TFCI zero, the second to 1 and so on.
				[TDD - The first entry (for TFCI 0) should be ignored by
>>>CTFC	M		INTEGER/O	the receiver.]
			INTEGER(0. .MaxCTFC)	Integer number calculated according to ref. [16].
>>>CHOICE Gain Factors	C- PhysChan			
>>>Signalled Gain Factors				
>>>>Gain Factor β <sub>C</sub>	M		INTEGER (015)	[FDD - For UL DPCCH or control part of PRACH ref.
				[21].] [TDD - β for UL DPCH
				mapping in accordance to [13].]
>>>>Gain Factor β <sub>D</sub>	М		INTEGER (015)	[FDD - For UL DPDCH or data part of PRACH ref. [21].]
, asie, ps			( /	[TDD - Should be set to 0 by the sender, and shall be
>>>> Reference	0		INTEGER	ignored by the receiver.]  If this TFC is a reference
TFC nr			(015)	TFC, this IE indicates the reference number
>>>Computed Gain Factors				
>>>>Reference TFC nr	М		INTEGER (015)	Indicates the reference TFC to be used to calculate the gain factors for this TFC
>There is a split in the TFCI				This choice is made if: a) The TFCS refers to the
11 01				downlink AND
				b) The mode is FDD and one
				of the Radio Links of the concerned UE is assigned
				one or more DSCH transport channels
>>Transport Format Combination_DCH		1< maxTFCI_1_Com		The first instance of the Transport format
		bs >		combination_DCH IE corresponds to TFCI (field 1)
				= 0, the second to TFCI (field 1) = 1 and so on.
>>>CTFC(field1)	М		INTEGER(0. .MaxCTFC)	Integer number calculated according to [16] . The
				calculation of CTFC ignores any DSCH transport channels
>>Choice Signalling				which may be assigned
Method				
>>>TFCI Range				

>>>TFC Mapping on DSCH		1< maxNoTFClGroup s>		
>>>>Max TFCI(field2) Value	М		INTEGER(1. . <maxtfci_ 2_Combs - 1&gt;)</maxtfci_ 	This is the Maximum value in the range of TFCI(field2) values for which the specified CTFC(field2) applies
>>>>CTFC(field 2)	М		INTEGER(0. .MaxCTFC)	Integer number calculated according to [16] The calculation of CTFC ignores any DCH transport channels which may be assigned
>>>Explicit				
>>>>Transport Format Combination_DSC H		1< maxTFCI_2_Com bs >		The first instance of the Transport format combination_DSCH IE corresponds to TFCI (field2) = 0, the second to TFCI (field 2) = 1 and so on.
>>>>CTFC(field 2)	М		INTEGER(0. .MaxCTFC)	Integer number calculated according to [16] . The calculation of CTFC ignores any DCH transport channels which may be assigned

Condition	Explanation
PhysChan	The choice shall be present if the TFCS concerns a UL DPCH
	[FDD – or PRACH channel].

Explanation
The maximum number of Transport Format Combinations.
Maximum number of TFCI (field 1) combinations (given by 2 raised to the power of the length of the TFCI (field 1)).
Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI (field 2)).
Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single value of CTFC(field2) applies.
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. [16].

# 9.2.1.64 Transport Format Set

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

[TDD - The Transport Format Set for each transport channel within the same CCTrCH shall have the same value for the  $2^{nd}$  Interleaving Mode IE.]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dynamic Transport Format Information		1 <maxtfcount></maxtfcount>		The first instance of the parameter corresponds to TFI zero, the second to 1 and so on.
>Number of Transport Blocks	М		INTEGER (0512)	
>Transport Block Size	C – Blocks		INTEGER (05000)	Bits
>CHOICE Mode	M			
>>TDD				
>>>Transmission Time Interval Information	C- TTIdynamic	1 <maxttlcount></maxttlcount>		
>>>Transmission Time Interval	M		ENUMERAT ED(10, 20, 40, 80,)	msec
Semi-static Transport Format Information		1		
>Transmission Time Interval	M		ENUMERAT ED (10, 20, 40, 80, dynamic, )	msec Value 'dynamic' for TDD only
>Type of Channel Coding	М		ENUMERAT ED (No codingTDD, Convolutiona I, Turbo,)	[FDD - The value "No codingTDD" shall be treated as logical error if received]
>Coding Rate	C – Coding		ENUMERAT ED (1/2, 1/3,)	
>Rate Matching Attribute	М		INTEGER (1maxRM)	
>CRC size	М		ENUMERAT ED (0, 8, 12, 16, 24,)	
>CHOICE Mode	M			
>>TDD				
>>>2 <sup>nd</sup> Interleaving Mode	М		ENUMERAT ED(Frame related, Timeslot related,)	

Condition	Explanation
Blocks	The IE shall be present if the Number of Transport Blocks IE is set
	to a value greater than 0.
Coding	The IE shall be present if Type of Channel Coding IE is set to
	"Convolutional" or "Turbo".
TTIdynamic	The IE shall be present if the <i>Transmission Time Interval</i> IE in the
,	Semi-static Transport Format Information IE is set to 'dynamic'.

Range bound	Explanation
maxTFcount	The maximum number of different transport formats that can be
	included in the Transport format set for one transport channel.
maxRM	The maximum number that could be set as rate matching attribute
	for a transport channel.
maxTTlcount	The amount of different TTI that are possible for that transport
	format is.

## 9.2.1.65 TrCH Source Statistics Descriptor

Defines the statistics of the data transmitted in the transport channel. This information may be used in reserving resources in the DRNS.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
TrCH Source Statistics			ENUMERAT	'Speech' = Statistics of the
Descriptor			ED (Speech,	data corresponds to speech.
			RRC,	'RRC' = Statistics of the data
			Unknown,	corresponds to RRC
			)	signalling
				'Unknown' = The statistics of
				the data is unknown

#### 9.2.1.66 UARFCN

The UTRA Absolute Radio Frequency Channel Number defines the carrier.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UARFCN			INTEGER	Corresponds to: 0.0Hz
			(016383,	3276.6MHz
			)	see ref. [6] and ref. [7].

#### 9.2.1.67 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)	

#### 9.2.1.68 UL Interference Level

Void

## 9.2.1.68A Uncertainty Ellipse

This IE contains the uncertainty ellipse used to describe a possible shape of the geographical area of a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uncertainty semi-major	M		INTEGER( 0127)	The uncertainty "r" is derived from the "uncertainty code" k by r = 10x(1.1 <sup>k</sup> -1)
Uncertainty semi-minor	M		INTEGER( 0127)	The uncertainty "r" is derived from the "uncertainty code" k by r = 10x(1.1 <sup>k</sup> -1)
Orientation of major axis	M		INTEGER( 0179)	The relation between the IE value (N) and the angle (a) in degrees it describes is 2N≤ a <2(N+1). The values 90179 shall not be used.

## 9.2.1.69 Uplink SIR

The UL SIR indicates a received UL SIR.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uplink SIR			INTEGER (- 82173)	Value = Uplink SIR/10 Unit dB
				Range -8.2+17.3 Step 0.1 dB

#### 9.2.1.70 URA ID

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
URA ID			INTEGER	
			(065 535)	

#### 9.2.1.70A UTRAN Access Point Position

The UTRAN Access Point Position indicates the exact geographical position of the base station antenna.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Latitude Sign	M		ENUMERAT ED (North, South)	
Degrees of Latitude	M		INTEGER ( 02 <sup>23</sup> -1)	The IE value (N) is derived by this formula: N≤2 <sup>23</sup> X /90 < N+1 X being the latitude in degree (0° 90°)
Degrees of Longitude	M		INTEGER ( -2 <sup>23</sup> 2 <sup>23</sup> -1)	The IE value (N) is derived by this formula: N≤2 <sup>24</sup> X /360 < N+1 X being the longitude in degree (-180°+180°)

#### 9.2.1.70B URA Information

The URA Information IE contains URA Information for one cell.

IE/Group Name	Presence	Presence Range IE Type and Semantics Desc		Semantics Description
			Reference	
URA ID	M		9.2.1.70	
Multiple URAs Indicator	M		9.2.1.41	
RNCs with Cells in the		0		Other RNCs having at least
Accessed URA		<maxrncinura-< td=""><td></td><td>one cell in the URA identified</td></maxrncinura-<>		one cell in the URA identified
		1>		by the URA ID IE.
>RNC-ID	M		9.2.1.50	

Range Bound	Explanation
maxRNCinURA	Maximum number of RNC in one URA.

## 9.2.1.71 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
RNC-ID	М		9.2.1.50	
C-ID	М		9.2.1.6	

## 9.2.1.72 Neighbouring TDD Cell Information LCR

The *Neighbouring TDD Cell Information LCR* IE provides information for 1.28Mcps TDD cells that are a neighbouring cells to a cell in the DRNC.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Neighbouring TDD Cell Information LCR		1 <maxno ofLCRTDD neighbour s&gt;</maxno 			-	
>C-ID	М		9.2.1.6		_	
>UARFCN	M		9.2.1.66	Corresponds to Nt in ref. [7]	-	
>Frame Offset	0		9.2.1.30		ı	
>Cell Parameter ID	M		9.2.1.8		1	
>SCTD Indicator	M		9.2.1.78		1	
>Cell Individual Offset	0		9.2.1.7		1	
>DPCH Constant Value	0		9.2.1.23			
>PCCPCH Power	0		9.2.1.43			
>Restriction State Indicator	0		9.2.1.48C			

Range bound	Explanation
maxnoofLCRTDDneighbours	Maximum number of neighbouring 1.28Mcps TDD cell for one cell.

#### 9.2.1.73 Permanent NAS UE Identity

This element is used to identify the UE in UTRAN.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Choice Permanent NAS UE Identity				
>IMSI				
>>IMSI	М		9.2.1.31	

#### 9.2.1.74 SFN-SFN Measurement Reference Point Position

The SFN-SFN Measurement Reference Point Position indicates the exact geographical position of the SFN-SFN measurement reference point. The altitude shall be included when available.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Geographical Coordinates	M		9.2.1.30F	
Altitude and direction	0		9.2.1.2B	

#### 9.2.1.75 UTRAN Access Point Position with Altitude

The UTRAN Access Point Position with Altitude indicates the exact geographical position of the base station antenna. The altitude shall be included when available.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Geographical Coordinates	M		9.2.1.30F	
Altitude and direction	0		9.2.1.2B	

## 9.2.1.76 SFN-SFN Measurement Time Stamp

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Mode				
>FDD				
>>SFN	M		9.2.1.52A	Indicates the SFN of the reference cell at which the measurement has been performed.
>TDD				
>>SFN	M		9.2.1.52A	Indicates the SFN of the reference cell at which the measurement has been performed.
>>Time Slot	M		9.2.1.56	Indicates the Time Slot of the reference cell at which this measurement has been performed.

#### 9.2.1.77 SFN-SFN Value

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Mode				
>FDD				
>>SFN-SFN	M		INTEGER(0. . 614399)	According to mapping in [23].
>TDD				
>>SFN-SFN	M		INTEGER(0. . 40961)	According to mapping in [24].

#### 9.2.1.78 SCTD Indicator

Indicates if SCTD antenna diversity is applied or not to the PCCPCH and PICH [3.84Mcps TDD].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SCTD Indicator			ENUMERAT ED(active, inactive)	

## 9.2.1.79 Congestion Cause

The Congestion Cause IE indicates the cause of a congestion situation:

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Congestion Cause			ENUMERATED (UTRAN Dynamic Resources, UTRAN Semistatic Resources,)	

The meaning of the different congestion cause values is described in the following table:

Congestion cause	Meaning
UTRAN Dynamic Resources	UL and/or DL resource congestion situation mainly caused by the UL and/or DL UTRAN Dynamic Resources. This type of congestion situation is, e.g. related to the limitation of the DL transmitted carrier power of the cell(s), or the UL Interference situation in the concerned cell(s).
UTRAN Semistatic Resources	UL and/or DL resource congestion situation mainly related to UTRAN Semistatic Resources (e.g. channelisation codes, Node-B resources,).

# 9.2.2 FDD Specific Parameters

This subclause contains parameters that are specific to FDD.

## 9.2.2.A Active Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence activation. For details see ref. [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CM Configuration Change CFN	М		CFN 9.2.1.9	
Transmission Gap Pattern Sequence Status		0 <maxtgps></maxtgps>		If the group is not present, none of the pattern sequences are activated.
>TGPSI Identifier	M		INTEGER(1. . <maxtgps &gt;)</maxtgps 	Establish a reference to the compressed mode pattern sequence. Up to <maxtgps> simultaneous compressed mode pattern sequences can be activated.</maxtgps>
>TGPRC	M		INTEGER(0. .511)	The number of transmission gap patterns within the Transmission Gap Pattern Sequence. 0=Infinity.
>TGCFN	M		CFN 9.2.1.9	Connection Frame Number of the first frame of the first pattern 1 within the Transmission Gap Pattern Sequence.

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

## 9.2.2.B Adjustment Period

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Adjustment Period			INTEGER	Frames
			(1 256)	

## 9.2.2.C Adjustment Ratio

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

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

## 9.2.2.1 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 (038399)	Chips

## 9.2.2.2 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

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Closed Loop Mode1 Support			ENUMERAT	
Indicator			ED (Closed	
			loop mode1	
			Supported,	
			Closed loop	
			mode1 not	
			supported).	

## 9.2.2.3 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.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Closed Loop Mode2 Support			ENUMERAT	
Indicator			ED (Closed	
			loop mode2	
			Supported,	
			Closed loop	
			mode2 not	
			supported).	

## 9.2.2.3A Closed Loop Timing Adjustment Mode

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

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Closed Loop Timing Adjustment			ENUMERAT	According to [10] subclause
Mode			ED (Offset1,	7.1:
			Offset2,)	Offset1 = slot(j+1)mod15
			,	Offset2 = slot(j+2)mod15

## 9.2.2.4 Compressed Mode Method

Void

## 9.2.2.4A DCH FDD Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DCH FDD Information		1 <maxno ofDCHs&gt;</maxno 			_	
>Payload CRC Presence Indicator	М		9.2.1.42		-	
>UL FP Mode	M		9.2.1.67		_	
>ToAWS	M		9.2.1.58		_	
>ToAWE	M		9.2.1.57		_	
>DCH Specific Info		1 <maxno ofDCHs&gt;</maxno 			_	
>>DCH ID	М		9.2.1.16		_	
>>TrCH Source Statistics Descriptor	М		9.2.1.65		_	
>>Transport Format Set	М		9.2.1.64	For the UL.	_	
>>Transport Format Set	М		9.2.1.64	For the DL.	_	
>>BLER	М		9.2.1.4	For the UL.	_	
>>BLER	М		9.2.1.4	For the DL.	_	
>>Allocation/Retention Priority	М		9.2.1.1		_	
>>Frame Handling Priority	М		9.2.1.29		_	
>>QE-Selector	М		9.2.1.46A		_	
>>DRAC control	М		9.2.2.13		_	
>>Guaranteed Rate Information	0		9.2.1.30M		YES	ignore

Range bound	Explanation		
maxnoofDCHs	Maximum number of DCHs for one UE.		

9.2.2.5 D-Field Length

Void

9.2.2.6 Diversity Control Field

Void.

9.2.2.7 Diversity Indication

Void.

9.2.2.8 Diversity Mode

Define the diversity mode to be applied.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Diversity Mode			ENUMERAT	
			ED(None,	
			STTD,	
			Closed loop	
			mode 1,	
			Closed loop	
			mode2,)	

#### 9.2.2.9 DL DPCH Slot Format

Indicates the slot format used in DPCH in DL, according to ref. [8].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL DPCH Slot Format			INTEGER	
			(016,)	

#### 9.2.2.10 DL Power

Void

## 9.2.2.11 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 (015)	0= Primary scrambling code of the cell 115= Secondary scrambling code

## 9.2.2.12 Downlink Frame Type

Void

#### 9.2.2.12A DPC Mode

The DPC Mode IE indicates the DPC mode to be applied [10].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DPC Mode			ENUMERAT TED (Mode0, Mode1, )	Mode0: The DRNS shall estimate the UE transmitted TPC command and update the DL power in every slot  Mode1: The DRNS shall
				estimate the UE transmitted TPC command over three slots and shall update the DL power in every three slots

#### 9.2.2.13 DRAC Control

This IE indicates whether the DCH is control by DRAC or not.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
DRAC Control			ENUMERAT	Requested means that
			ED	DCH is controlled by DRAC
			(Requested,	-
			Not-	
			Requested)	

## 9.2.2.13A DSCH FDD Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DSCH Specific FDD Information		1 <maxno ofDSCHs&gt;</maxno 			_	
>DSCH ID	M		9.2.1.26A		-	
>TrCH Source Statistics Descriptor	М		9.2.1.65		_	
>Transport Format Set	М		9.2.1.64	For DSCH	_	
>Allocation/Retention Priority	М		9.2.1.1		-	
>Scheduling Priority Indicator	М		9.2.1.51A		_	
>BLER	М		9.2.1.4		_	
PDSCH RL ID	М		RL ID 9.2.1.49		-	
TFCS	М		9.2.1.63	For DSCH	_	
Enhanced DSCH PC	0		9.2.2.13D		YES	ignore

Range bound	Explanation
maxnoofDSCHs	Maximum number of DSCHs for one UE.

## 9.2.2.13B DSCH FDD Information Response

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DSCH Specific FDD Information Response		1 <maxno ofDSCHs&gt;</maxno 			_	
>DSCH ID	M		9.2.1.26A		_	
>DSCH Flow Control Information	M		9.2.1.26B		_	
>Binding ID	0		9.2.1.3		_	
>Transport Layer Address	0		9.2.1.62		_	
PDSCH Code Mapping	M		9.2.2.27A	PDSCH code mapping to be used	_	

Range bound	Explanation		
maxnoofDSCHs	Maximum number of DSCHs for one UE.		

#### 9.2.2.13Bb DSCH-RNTI

Void.

## 9.2.2.13C FDD DCHs To Modify

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
FDD DCHs To Modify		1 <maxno ofDCHs&gt;</maxno 			_	
>UL FP Mode	0		9.2.1.67		_	
>ToAWS	0		9.2.1.58		_	
>ToAWE	0		9.2.1.57		_	
>Transport Bearer Request Indicator	M		9.2.1.61		_	
>DCH Specific Info		1 <maxno ofDCHs&gt;</maxno 			_	
>>DCH ID	M		9.2.1.16		_	
>>Transport Format Set	0		9.2.1.64	For the UL.	_	
>>Transport Format Set	0		9.2.1.64	For the DL.	_	
>>Allocation/Retention Priority	0		9.2.1.1		_	
>>Frame Handling Priority	0		9.2.1.29		_	
>>DRAC Control	0		9.2.2.13		_	
>>Guaranteed Rate Information	0		9.2.1.30M		YES	ignore

Range bound	Explanation
maxnoofDCHs	Maximum number of DCHs for one UE.

#### 9.2.2.13D Enhanced DSCH PC

The Enhanced DSCH PC includes all the parameters which are needed for DSCH power control improvement during soft handover.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Enhanced DSCH PC Wnd	М		9.2.2.13G	
Enhanced DSCH PC Counter	М		9.2.2.13E	
Enhanced DSCH Power Offset	М		9.2.2.13H	

#### 9.2.2.13E Enhanced DSCH PC Counter

The Enhanced DSCH PC Counter parameter gives the number of correct cell ID command to receive in the averaging window, *Enhance DSCH PC Wnd* IE, see ref. [10] subclause 5.2.2.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Enhanced DSCH PC			INTEGER(1.	
Counter			.50)	

#### 9.2.2.13F Enhanced DSCH PC Indicator

The Enhanced DSCH PC Indicator indicates whether Enhanced DSCH PC is in use by the UE or not.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Enhanced DSCH PC Indicator			ENUMERAT	
			ED(Enhance	
			d DSCH PC	
			Active in the	
			UE,	
			Enhanced	
			DSCH PC	
			not Active in	
			the UE)	

#### 9.2.2.13G Enhanced DSCH PC Wnd

The Enhanced DSCH PC Wnd parameter shows the window size to decide primary or non-primary cell, see ref. [10] subclause 5.2.2.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Enhanced DSCH PC Wnd			INTEGER(1. .10)	

#### 9.2.2.13H Enhanced DSCH Power Offset

The Enhanced DSCH Power Offset parameter gives the power offset to be added on DSCH when cell is decided to be primary.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Enhanced DSCH Power			INTEGER(-	Unit dB, step 1 dB
Offset			150)	

#### 9.2.2.14 FDD DL Channelisation Code Number

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
FDD DL Channelisation Code Number			INTEGER(0. . 511)	According to the mapping in [27]. The maximum value is equal to the DL spreading factor –1

#### 9.2.2.14A FDD DL Code Information

The FDD DL Code Information IE provides FDD DL Code information for all DPCHs of one Radio Link.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
FDD DL Code Information		1 <maxnoof DLCodes</maxnoof 			_	
>DL Scrambling Code	M		9.2.2.11		_	
>FDD DL Channelisation Code Number	М		9.2.2.14		_	
>Transmission Gap Pattern Sequence Scrambling Code Information	0		9.2.2.47B		_	

Range bound	Explanation		
maxnoofDLCodes	Maximum number of DL Channelisation Codes for one UE.		

#### 9.2.2.15 FDD S-CCPCH Offset

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
FDD S-CCPCH Offset			INTEGER(0. . 149)	0: 0 chip 1: 256 chip 2: 512 chip
				 149: 38144 chip ref. [8]

## 9.2.2.16 FDD 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
FDD TPC Downlink Step Size			ENUMERAT ED (0.5, 1, 1.5, 2)	

#### 9.2.2.16A First RLS Indicator

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
First RLS Indicator			ENUMERAT	
			ED (first	
			RLS, not first	
			RLS)	

## 9.2.2.17 Gap Position Mode

Void.

9.2.2.18 Gap Period (TGP)

Void.

9.2.2.19 Gap Starting Slot Number (SN)

Void

9.2.2.20 IB\_SG\_POS

First position of an Information Block segment in the SFN cycle (IB\_SG\_POS < IB\_SG\_REP).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
IB_SG_POS			INTEGER	Only even positions allowed.
			(04094)	Reference [16]

## 9.2.2.21 IB\_SG\_REP

Repetition distance for an Information Block segment. The segment shall be transmitted when SFN mod IB\_SG\_REP = IB\_SG\_POS.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
IB_SG_REP			ENUMERAT	Repetition period for the IB
			ED (4, 8, 16,	segment in frames
			32, 64, 128,	
			256, 512,	
			1024, 2048,	
			4096)	

#### 9.2.2.21a Inner Loop DL PC Status

The *Inner Loop DL PC Status* IE indicates whether inner loop DL control shall be active or inactive for all radio links for the UE Context.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Inner Loop DL PC Status			ENUMERAT	
·			ED(Active,	
			Inactive)	

#### 9.2.2.21A Limited Power Increase

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

If the limited power increase is used, DRNS shall use the limited power increase algorithm as specified in [10], subclause 5.2.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Limited Power Increase			ENUMERAT	
			ED(Used,	
			Not used)	

#### 9.2.2.21B IPDL FDD Parameters

The IPDL FDD Parameters IE provides the information for the IPDL Configuration applied in FDD mode.

IE/Group name	Presence	Range	IE Type and Reference	Semantics Description
IP spacing FDD	М		ENUMERAT	See [10]
			ED(5,7,10,1 5,20,30,40,5	
IP length	M		0,) ENUMERAT	See [10]
IP offset	M		ED(5,10,) INTEGER(0. .9)	See [10]
Seed	M		INTEGER(063)	See [10]
Burst mode parameters	0		9.2.1.4B	

## 9.2.2.21C Length of TFCI2

This IE indicates the length measured in number of bits of TFCI(field 2). The length of TFCI (field 1) is set to the 10"s complement of the length of TFCI(field 2).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Length of TFCI2			INTEGER (110)	

#### 9.2.2.22 Max Adjustment Period

Void.

#### 9.2.2.23 Max Adjustment Step

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Max Adjustment Step			INTEGER (110)	Slots

#### 9.2.2.24 Max Number of UL DPDCHs

Maximum number of uplink DPDCHs during the connection. Needed by the rate matching algorithm.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Max Number of UL DPDCHs			INTEGER (16)	

## 9.2.2.24A Min DL Channelisation Code Length

Void

#### 9.2.2.25 Min UL Channelisation Code Length

Minimum UL channelisation code length (spreading factor) of a DPDCH during the connection. Needed by rate matching algorithm.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Min UL Channelisation Code			ENUMERAT	
Length			ED(4,8,16,	
			32,64,128,	
			256)	

## 9.2.2.26 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			ENUMERAT	
			ED(Fixed,	
			Flexible)	

#### 9.2.2.26A Number of DL Channelisation Codes

This parameter notifies DRNS of the number of DL channelisation codes required for the Radio Link(s).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Number of DL			INTEGER	
Channelisation Codes			(18)	

#### 9.2.2.27 Pattern Duration (PD)

Void

#### 9.2.2.27a PC Preamble

Indicates DPDCH power control preamble length see ref. [7].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
PCP Preamble			INTEGER(0.	In number of frames.
			.7)	

#### 9.2.2.27A PDSCH Code Mapping

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

#### Method #1 - Using code range

The mapping is described in terms of a number of groups, each group associated with a given spreading factor. Each TFCI(field2) value corresponds to a given PDSCH channelisation code or set of PDSCH codes for multi-code. The DRNS maps TFCI(field2) values to PDSCH codes in the following way:

- The PDSCH codes used for TFCI(field 2) = 0 are given by the SF of the Code Group 1 (i.e. first instance in *PDSCH code mapping*) and the code numbers between CodeNumber<sub>0</sub> (where CodeNumber<sub>0</sub> = "Start code number" of Code Group 1) and CodeNumber<sub>0</sub> + "multi-code info" - 1.

- This continues with unit increments in the value of TFCI (Field2) mapped to either unit increments in code numbers or groups of contiguous code numbers in case of multi-code, this until "Stop code number" is reached: So the PDSCH codes used for TFCI(field 2) = k (for k > 0 and k < ("Stop code number"– "Start code number"+ 1) DIV k) are given by the SF of the Code Group 1 and the code numbers between CodeNumber $_k$  = CodeNumber $_{k-1}$  + "multi-code info" and CodeNumber $_k$  + "multi-code info" 1. If "Stop code number" = "Start code number"+ "multi-code info" 1 then this is to be interpreted as defining the mapping between the channelisation code(s) and a single TFCI.
- The DRNS constructs its mapping table by repeating this process for all the Code Groups in the order they are instantiated in *PDSCH code mapping*. The first TFCI(field 2) value used in each group is the largest TFCI(field 2) value reached in the previous group incremented by one.

Note: This imposes that "Stop code number" – "Start code number" + 1 is a multiple of the value "multi-code info" for each instance of *PDSCH code mapping*. Furthermore, in the case where multi-code is not used, then "multi-code info" = 1 and the process above also applies.

#### Method #2 - Using TFCI range

The mapping is described in terms of a number of groups, each group corresponding to a given PDSCH channelisation code or set of PDSCH codes for multi-code.

- The set of PDSCH codes specified in the first instance applies for all values of TFCI(field 2) between 0 and the specified "Max TFCI(field2)".
- The process continues in the same way for the following groups with the TFCI(field 2) value starting at the largest value reached in the previous instance incremented by one.

  So the set of PDSCH codes specified in a given instance apply for all the values of TFCI(field 2) between the "Max TFCI(field2) value" specified in the previous instance incremented by one and the specified "Max TFCI(field2)" of the considered instance.

A set of PDSCH codes is composed of all the codes between "Code Number" and "Code Number" + "multicode" – 1. So if multi-code is not used, the set of PDSCH codes is reduced to one element indicated by the *Code Number* IE.

#### Method #3 - Explicit

The mapping between TFCI (field 2) value and PDSCH channelisation code (or a set of PDSCH codes for multicode) is spelt out explicitly for each value of TFCI (field2).

A set of PDSCH codes is composed of all the codes between "Code Number" and "Code Number" + "multicode" – 1. So if multi-code is not used, the set of PDSCH codes is reduced to one element indicated by the *Code Number* IE.

#### Method #4 - Replace

The "TFCI (field2)" value(s) for which the mapping to PDSCH channelisation code (or a set of PDSCH codes for multicode) is changed are explicitly signalled. Furthermore, the new mapping between TFCI(field 2) value and PDSCH channelisation code(s) is spelt out explicitly for each value of TFCI (field2).

A set of PDSCH codes is composed of all the codes between "Code Number" and "Code Number" + "multicode" - 1. So if multi-code is not used, the set of PDSCH codes is reduced to one element indicated by the *Code Number* IE.

IE/Group name	Presence	Range	IE Type and Reference	Semantics Description
DL Scrambling Code	M		INTEGER (015)	Scrambling code on which PDSCH is transmitted.  0= Primary scrambling code of the cell  115 = Secondary scrambling code

Choice Signalling Method				
>Code Range				
>>PDSCH Code Mapping		1 <maxno< td=""><td></td><td></td></maxno<>		
		CodeGrou ps>		
>>>Spreading Factor	M	707	ENUMERAT	
l g and			ED(4, 8, 16,	
			32, 64, 128,	
>>>Multi-code Info	M		256) INTEGER(1.	
>>>Wulti-code IIIIo	IVI		.16)	
>>>Start Code Number	М		INTEGER(0.	PDSCH code start, Numbering
			.maxCodeNu	as described in [16]
			mComp-1)	
>>>Stop Code Number	M		INTEGER(0maxCodeNu	PDSCH code stop, Numbering
			mComp-1)	as described in [16]
>TFCI Range			incomp i)	
>>DSCH Mapping		1 <maxno< td=""><td></td><td></td></maxno<>		
		TFCIGroup		
>>>Max TFCI(field2)	M	S>	INTEGER(1.	This is the maximum value in
Value	IVI		.1023)	the range of TFCI(field 2)
			1.020)	values for which the specified
				PDSCH code applies
>>>Spreading Factor	M		ENUMERAT	SF of PDSCH code
			ED(4, 8, 16, 32, 64, 128,	
			256)	
>>>Multi-code Info	М		INTEGER(1.	
			.16)	
>>>Code Number	M		INTEGER(0.	Code number of PDSCH code.
			.maxCodeNu mComp-1)	Numbering as described in [16]
>Explicit			moomp-1)	[10]
>>PDSCH Code		1 <maxtf< td=""><td></td><td>The first instance of the</td></maxtf<>		The first instance of the
		CI_2_Com		parameter PDSCH code
		bs>		corresponds to TFCI (field2) = 0, the second to TFCI(field 2)
				= 1 and so on.
>>>Spreading Factor	М		ENUMERAT	SF of PDSCH code
			ED(4, 8, 16,	
			32, 64, 128,	
>>>Multi-code Info	M		256) INTEGER(1.	
Walti-code IIIIO	IVI		.16)	
>>>Code Number	М		INTEGER(0.	Code number of PDSCH code.
			.maxCodeNu	Numbering as described in
>Replace			mComp-1)	[16]
>>Replaced PDSCH code		1 <maxtf< td=""><td></td><td></td></maxtf<>		
		CI_2_Com		
		bs>		
>>>TFCI (field2)	M		INTEGER	Value of TFCI(field 2) for
			(11023)	which PDSCH code mapping will be changed
>>>Spreading Factor	M		ENUMERAT	SF of PDSCH code
			ED(4, 8, 16,	
			32, 64, 128,	
Nulti and late	N/A		256)	
>>>Multi-code Info	M		INTEGER(116)	
>>>Code Number	M		INTEGER(0.	Code number of PDSCH code.
			.maxCodeNu	Numbering as described in
			mComp-1)	[16]

Range Bound	Explanation
maxCodeNumComp	Maximum number of codes at the defined spreading factor, within the complete code tree.
maxTFCI_2_Combs	Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI field 2)
maxNoTFCIGroups	Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single PDSCH code applies.
maxNoCodeGroups	Maximum number of groups, each group described in terms of a range of PDSCH channelisation code values for which a single spreading factor applies.

## 9.2.2.28 Power Adjustment Type

Defines the characteristic of the power adjustment.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Power Adjustment Type			ENUMERAT	
			ED (None,	
			Common,	
			Individual)	

## 9.2.2.29 Power Control Mode (PCM)

Void.

#### 9.2.2.30 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	Unit dB, Step 0.25 dB, range
			(024)	0-6 dB

## 9.2.2.31 Power Resume Mode (PRM)

Void.

## 9.2.2.31A Preamble Signatures

Void.

## 9.2.2.32 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 (-	Unit dB, step 1 dB
			30+30)	The value range is typically
				within the range of -24 dB to 0
				dB according to the CPICH Ec/Io UE measurement
				defined in ref. [23].

## 9.2.2.33 Propagation Delay (PD)

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Propagation Delay			INTEGER (0255)	Chips. Step size is 3 chips. 0=0 chips, 1=3 chips,

9.2.2.33A PRACH Minimum Spreading Factor

Void.

9.2.2.34 QE-Selector

Void.

9.2.2.34A RACH Sub Channel Numbers

Void.

9.2.2.35 RL Set ID

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
RL Set ID			INTEGER (031)	

#### 9.2.2.35A Received Total Wide Band Power

The parameter indicates the Received total wide band power in a cell, see ref. [11].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Received Total Wide			INTEGER(0.	According to mapping in [23].
Band Power			.621)	

#### 9.2.2.36 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			ENUMERAT	
			ED (1, 2,)	

9.2.2.37 Scrambling Code Change

Void.

9.2.2.37A Scrambling Code Number

Void.

# 9.2.2.37B Secondary CCPCH Info

The *Secondary CCPCH Info* IE provides information on scheduling of broadcast information for DRAC on a Secondary CCPCH in one cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
FDD S-CCPCH Offset	М		9.2.2.15	Corresponds to: τ <sub>S-CCPCH,k</sub> , see ref. [8]	-	
DL Scrambling Code	M		9.2.2.11		_	
FDD DL Channelisation Code Number	М		9.2.2.14		_	
TFCS	M		9.2.1.63	For the DL.	-	
Secondary CCPCH Slot Format	М		9.2.2.38		-	
TFCI Presence	C - SlotFormat		9.2.1.55		_	
Multiplexing Position	M		9.2.2.26		-	
STTD Indicator	M		9.2.2.44		-	
FACH/PCH Information		1 <maxfac Hcount+1&gt;</maxfac 			I	
>TFS			9.2.1.64	For each FACH, and the PCH when multiplexed on the same Secondary CCPCH	F	
IB Scheduling Information		1			_	
>IB_SG_REP	М		9.2.2.21			
>IB Segment Information		1 <maxibse G&gt;</maxibse 			-	
>>IB_SG_POS	М		9.2.2.20		_	

Condition	Explanation
SlotFormat	The IE shall be present if the Secondary CCPCH Slot Format IE is
	equal to any of the values from 8 to 17.

Range bound	Explanation		
maxFACHCount	Maximum number of FACHs mapped onto a Secondary CCPCH.		
maxIBSEG	Maximum number of segments for one Information Block.		

## 9.2.2.38 Secondary CCPCH Slot Format

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Secondary CCPCH Slot Format			INTEGER (017,)	See ref. [8].

## 9.2.2.39 Slot Number (SN)

Void

## 9.2.2.39a Split Type

This parameter indicates if the "Hard" or "Logical" is used for the TFCI.split mode.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Split Type			ENUMERAT ED (Hard, Logical)	'Hard': meaning that TFCI (field 1) and TFCI (field 2) are each 5 bits long and each field is block coded separately.  'Logical': meaning that on the physical layer TFCI (field 1) and TFCI (field 2) are concatenated, field 1 taking the most significant bits and field 2 taking the least significant bits). The whole is then encoded with a single block code.

## 9.2.2.39A SRB Delay

Indicates the number of frames after the PC Preamble period during which transmission of data on some RRC Signalling Bearers shall be prohibited by UE in accordance with ref. [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SRB Delay			INTEGER(07,)	In number of frames.

## 9.2.2.40 SSDT Cell Identity

The SSDT Cell Identity is a temporary ID for SSDT assigned to a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SSDT Cell Identity			ENUMERAT	
			ED (ah)	

## 9.2.2.40A SSDT Cell Identity for EDSCHPC

The SSDT Cell Identity for EDSCHPC is a temporary ID for enhanced DSCH power control assigned to a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SSDT Cell Identity for			SSDT Cell	
EDSCHPC			Identity	
			9.2.2.40	

### 9.2.2.41 SSDT Cell Identity Length

The SSDT Cell Identity Length parameter shows the length of the SSDT Cell ID.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
			Reference	
SSDT Cell Identity Length			ENUMERAT	
			ED(Short,	
			Medium,	
			Long)	

#### 9.2.2.42 SSDT Indication

The SSDT Indication indicates whether SSDT is in use by the UE or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SSDT Indication			ENUMERAT ED(SSDT	
			Active in the UE, SSDT not Active in	
			the UE)	

## 9.2.2.43 SSDT Support Indicator

The SSDT Support Indicator indicates whether a RL supports SSDT or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SSDT Support Indicator			ENUMERAT	
			ED (SSDT	
			Supported,	
			SSDT not	
			supported).	

### 9.2.2.44 STTD Indicator

Indicates if STTD is active or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
STTD Indicator			ENUMERAT ED(active, inactive)	

## 9.2.2.45 STTD Support Indicator

The STTD Support Indicator indicates whether the STTD can be applied to DL DPCH in the cell or not.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
STTD Support Indicator			ENUMERAT	
			ED (STTD	
			Supported,	
			STTD not	
			Supported).	

## 9.2.2.46 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			ENUMERAT	
			ED (Normal,	
			Split)	

## 9.2.2.47 Transmission Gap Distance (TGD)

Void.

## 9.2.2.47A Transmission Gap Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence. For details see [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmission Gap Pattern Sequence Information		1< maxTGPS >		
>TGPSI Identifier	М		INTEGER(1. . <maxtgps &gt;)</maxtgps 	Transmission Gap Pattern Sequence Identifier Establish a reference to the compressed mode pattern sequence. Up to <maxtgps> simultaneous compressed mode pattern sequences can be used.</maxtgps>
>TGSN	М		INTEGER (014)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>TGL1	М		INTEGER(114)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.
>TGL2	0		INTEGER (114)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		INTEGER (0, 15 269)	Transmission gap distance indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to 0 (0 = undefined).
>TGPL1	М		INTEGER (1144,)	The duration of transmission gap pattern 1 in frames.
>TGPL2	0		INTEGER (1144,)	The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.
>UL/DL mode	M		ENUMERAT ED (UL only, DL only, UL/DL)	Defines whether only DL, only UL, or combined UL/DL compressed mode is used.
>Downlink Compressed Mode Method	C-DL		ENUMERAT ED (puncturing, SF/2, higher layer scheduling, )	Method for generating downlink compressed mode gap None means that compressed mode pattern is stopped.
>Uplink Compressed Mode Method	C-UL		ENUMERAT ED (SF/2, higher layer scheduling, )	Method for generating uplink compressed mode gap.
>Downlink Frame Type	М		ENUMERAT ED (A, B,)	Defines if frame type 'A' or 'B' shall be used in downlink compressed mode.
>DeltaSIR1	М		INTEGER (030)	Delta in SIR target value to be set in the DRNS during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)  Step 0.1 dB, Range 0-3dB

>DeltaSIRafter1	М	INTEGER (030)	Delta in SIR target value to be set in the DRNS one frame after the frame containing the start of the first transmission gap in the transmission gap pattern,.  Step 0.1 dB, Range 0-3dB
>DeltaSIR2	0	INTEGER (030)	Delta in SIR target value to be set in the DRNS during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1.  Step 0.1 dB, Range 0-3dB
>DeltaSIRafter2	0	INTEGER (030)	Delta in SIR target value to be set in the DRNS one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1.  Step 0.1 dB, Range 0-3dB

Condition	Explanation
UL	The IE shall be present if the <i>UL/DL mode</i> IE is set to "UL only" or
	"UL/DL".
DL	The IE shall be present if the <i>UL/DL mode</i> IE is set to "DL only" or
	"UL/DL".

Range bound	Explanation
maxTGPS	Maximum number of transmission gap pattern sequences.

## 9.2.2.47B Transmission Gap Pattern Sequence Scrambling Code Information

This IE indicates whether or not the alternative scrambling code will be used in the DRNS for the Downlink compressed mode method 'SF/2' in the Transmission Gap Pattern Sequence. For details see ref. [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmission Gap Pattern Sequence Scrambling Code Information			ENUMERAT ED (code change, no code change)	Code change = alternative scrambling code will be used.

## 9.2.2.48 Transmit Diversity Indicator

The Transmit Diversity Indicator indicates whether Transmit Diversity shall be active or not.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
Transmit Diversity Indicator			ENUMERAT	
-			ED (active,	
			inactive)	

### 9.2.2.49 Transmit Gap Length (TGL)

Void

### 9.2.2.50 Tx Diversity Indicator

The Tx Diversity Indicator indicates if the following conditions are satisfied:

- Primary CPICH is broadcast from two antennas
- STTD is applied to Primary CCPCH
- TSTD is applied to Primary SCH and Secondary SCH

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Tx Diversity Indicator			ENUMERAT	
-			ED (true,	
			false)	

### 9.2.2.51 UL/DL Compressed Mode Selection

Void

#### 9.2.2.52 UL DPCCH Slot Format

Indicates the slot format used in DPCCH in UL, according to ref. [8].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UL DPCCH Slot Format			INTEGER (05,)	

### 9.2.2.53 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 Number	M		INTEGER (0 2 <sup>24</sup> -1)	
UL Scrambling Code Length	M		ENUMERAT ED(Short, Long)	

### 9.2.2.54 Uplink Delta SIR

Void

## 9.2.2.55 Uplink Delta SIR After

Void

### 9.2.2.56 DPC Mode Change Support Indicator

The DPC Mode Change Support Indicator IE indicates that the particular cell is capable to support DPC mode change.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
			Reference	
DPC Mode Change Support			ENUMERATTE	
Indicator			D (DPC Mode	
			Change	
			Supported)	

# 9.2.3 TDD Specific Parameters

This subclause contains parameters that are specific to TDD.

## 9.2.3.a Alpha Value

Used to support signalling of cell specific Alpha Value to SRNS.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Alpha Value			ENUMERAT ED(0, 1/8, 2/8, 3/8, 4/8, 5/8, 6/8, 7/8, 1)	

9.2.3.A Block STTD Indicator

Void.

9.2.3.1 Burst Type

Void.

### 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	
			(015)	

## 9.2.3.2A DCH TDD Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DCH Information		1 <maxno ofDCHs&gt;</maxno 			_	
>Payload CRC Presence Indicator	М		9.2.1.42		_	
>UL FP Mode	M		9.2.1.67		_	
>ToAWS	M		9.2.1.58		_	
>ToAWE	M		9.2.1.57		_	
>DCH Specific Info		1 <maxno ofDCHs&gt;</maxno 			_	
>>DCH ID	M		9.2.1.16		_	
>>CCTrCH ID	М		9.2.3.2	UL CCTrCH in which the DCH is mapped	_	
>>CCTrCH ID	М		9.2.3.2	DL CCTrCH in which the DCH is mapped	_	
>>TrCH Source Statistics Descriptor	М		9.2.1.65		_	
>>Transport Format Set	M		9.2.1.64	For the UL.	_	
>>Transport Format Set	M		9.2.1.64	For the DL.	_	
>>BLER	M		9.2.1.4	For the UL.	_	
>>BLER	M		9.2.1.4	For the DL.	_	
>>Allocation/Retention Priority	M		9.2.1.1		_	
>>Frame Handling Priority	М		9.2.1.29		_	
>>QE-Selector	C- CoorDCH		9.2.1.46A		_	
>>Guaranteed Rate Information	0		9.2.1.30M		YES	ignore

Condition	Explanation
CoorDCH	The IE shall be present if this DCH is part of a set of coordinated DCHs (number of instances of the <i>DCH Specific Info</i> IE is greater than 1).

Range bound	Explanation
maxnoofDCHs	Maximum number of DCHs for one UE.

## 9.2.3.2B DCH TDD Information Response

Void

## 9.2.3.2C DL Timeslot Information

The *DL Timeslot Information* IE provides information on the time slot allocation for a DL DPCH.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DL Timeslot Information		1 <maxno OfTS&gt;</maxno 			_	
>Time Slot	M		9.2.1.56		_	
>Midamble Shift And Burst Type	М		9.2.3.4		_	
>TFCI Presence	M		9.2.1.55		_	
>DL Code Information	М		TDD DL Code Information 9.2.3.8C		_	

Range bound	Explanation
maxnoofTS	Maximum number of Timeslots for a UE.

## 9.2.3.2D DL Time Slot ISCP Info

The DL Time Slot ISCP Info IE gives interference level for each DL time slot within the Radio Link.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DL Time Slot ISCP Info		1 <maxno ofDLts&gt;</maxno 			_	
>Time Slot	M		9.2.1.56		_	
>DL Timeslot ISCP	М		9.2.3.12		_	

Range bound	Explanation
maxnoofDLts	Maximum number of downlink time slots per Radio Link for
	3.84Mcps TDD.

## 9.2.3.2E DL Timeslot Information LCR

The DL Timeslot Information LCR IE provides information for DL Timeslot to be established for 1.28Mcps TDD.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DL Timeslot Information LCR		1 <maxnoof DLtsLCR&gt;</maxnoof 			-	
>Time Slot LCR	М		9.2.3.12a		_	
>Midamble Shift LCR	М		9.2.3.4C		_	
>TFCI Presence	М		9.2.1.55		_	
>DL Code Information LCR	М		TDD DL Code Information LCR 9.2.3.8D		-	

Range bound	Explanation
maxnoofDLtSLCR	Maximum number of Downlink time slots per Radio Link for
	1.28Mcps TDD.

### 9.2.3.2F DL Time Slot ISCP Info LCR

The DL *Time Slot ISCP Info LCR* IE provides information for DL Interference level for each time slot within the Radio Link for 1.28Mcps TDD.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DL Time Slot ISCP Info LCR		1 <maxnooful tsLCR&gt;</maxnooful 			_	
>Time Slot LCR	M		9.2.3.12a		-	
>DL Timeslot ISCP	M		9.2.3.12		_	

Range bound	Explanation
maxnoofULtsLCR	Maximum number of Uplink time slots per Radio Link for 1.28Mcps
	TDD

### 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 (0239)	

### 9.2.3.3a DSCH TDD Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DSCH TDD Information		1 <maxno ofDSCHs&gt;</maxno 			_	
>DSCH ID	M		9.2.1.26A		_	
>CCTrCH ID	M		9.2.3.2	DL CCTrCH in which the DSCH is mapped.	_	
>TrCH Source Statistics Descriptor	M		9.2.1.65		_	
>Transport Format Set	M		9.2.1.64		_	
>Allocation/Retention Priority	M		9.2.1.1		_	
>Scheduling Priority Indicator	М		9.2.1.51A		_	
>BLER	M		9.2.1.4		_	

Range bound	Explanation
maxnoofDSCHs	Maximum number of DSCHs for one UE.

## 9.2.3.3A Maximum Number of Timeslots per Frame

Defines the maximum number of timeslots the UE has the capability of receiving or transmitting.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum Number of			INTEGER	
Timeslots per Frame			(114)	

## 9.2.3.3B Maximum Number of UL Physical Channels per Timeslot

Defines the maximum number of physical channels per frame that the UE is capable to transmit.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum Number of UL			INTEGER	
Physical Channels per			(12)	
Timeslot				

### 9.2.3.3C Maximum Number of DL Physical Channels per Frame

Defines the maximum number of physical channels per frame that the UE is capable to receive.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Maximum Number of DL			INTEGER	
Physical Channels per			(1224)	
Frame				

## 9.2.3.4 Midamble Shift And Burst Type

This information element indicates burst type and midamble allocation.

Three different midamble allocation schemes exist:

- Default midamble: the midamble is allocated by layer 1 depending on the associated channelisation code (DL and UL):
- Common midamble: the midamble is allocated by layer 1 depending on the number of channelisation codes (possible in DL only);
- UE specific midamble: a UE specific midamble is explicitly assigned (DL and UL).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Burst Type				
>Type 1				
>> Midamble Configuration Burst Type 1 And 3	M		ENUMERATED(4, 8, 16)	As defined in [12]
>>Midamble Allocation Mode	M		ENUMERATED (Default midamble, Common midamble, UE specific midamble)	
>>Midamble Shift Long	C-UE		INTEGER(015)	
> Type 2 >> Midamble Configuration Burst Type 2	М		ENUMERATED(3,6)	As defined in [12]
>>Midamble Allocation Mode	М		ENUMERATED (Default midamble, Common midamble, UE specific midamble)	
>>Midamble Shift Short			INTEGER (05)	
>Type 3				UL only
>> Midamble Configuration Burst Type 1 And 3	M		ENUMERATED(4, 8, 16)	As defined in [12]
>>Midamble Allocation Mode	М		ENUMERATED (Default midamble, UE specific midamble)	
>>Midamble Shift Long	C-UE		INTEGER(015)	

Condition	Explanation
UE	The IE shall be present if the Midamble Allocation
	Mode IE is set to "UE-specific midamble".

## 9.2.3.4A Minimum Spreading Factor

Defines the minimum spreading factor the UE has the capability of receiving or transmitting.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Minimum Spreading			INTEGER	
Factor			(116)	

### 9.2.3.4B IPDL TDD Parameters

The IPDL TDD Parameters IE provides the information for the IPDL Configuration applied in TDD mode.

IE/Group name	Presence	Range	IE Type and Reference	Semantics Description
IP Spacing TDD	М		ENUMERAT ED(30,40,50 , 70, 100,)	See [22]
IP Start	M		INTEGER(04095)	See [22]
IP Slot	M		INTEGER(014)	See [22]
IP P-CCPCH	M		ENUMERAT ED(Switch off 1 frame, Switch off 2 frames)	See [22]
Burst mode parameters	0		9.2.1.4B	

#### 9.2.3.4C Midamble Shift LCR

This information element indicates midamble allocation in 1.28Mcps TDD.

Three different midamble allocation schemes exist:

- Default midamble: the midamble is allocated by layer 1 depending on the associated channelisation code (DL and UL);
- Common midamble: the midamble is allocated by layer 1 depending on the number of channelisation codes (possible in DL only);
- UE specific midamble: a UE specific midamble is explicitly assigned (DL and UL).

IE/Group name	Presence	Range	IE Type and Reference	Semantics Description
Midamble Allocation Mode	М		ENUMERAT ED (Default midamble, Common midamble, UE specific midamble,)	
Midamble Shift Long	C-UE		INTEGER(015)	
Midamble Configuration LCR	М		ENUMERAT ED (2, 4, 6, 8, 10, 12, 14, 16,)	As defined in [12]

Condition	Explanation		
UE	The IE shall be present if the Midamble Allocation		
	Mode IE is set to "UE-specific midamble".		

### 9.2.3.4D Neighbouring TDD Cell Information LCR

Void

## 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. [14].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CCPCH RSCP			INTEGER ( 091)	According to mapping in ref. [14].

#### 9.2.3.5A PRACH Midamble

Void.

### 9.2.3.5B RB Identity

The RB Identity is the identifier of a radio bearer. It is unique for each active Radio bearer among the active radio bearers simultaneously allocated for the same UE.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
RB Identity			INTEGER (031)	In line with [16], Ch. 10.3.4.11

#### 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 see ref. [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Repetition Length			INTEGER(163	

### 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) see ref. [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Repetition Period			ENUMERATED	
-			(1,2,4,8,16,32,6	
			4)	

### 9.2.3.7A Rx Timing Deviation

Measured Rx Timing Deviation as a basis for timing advance, either measured directly from a RACH burst, or calculated from the Rx Timing Deviation measurement on the USCH by adding the current Timing Advance value. For 1.28Mcps TDD this IE must be set to 0.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Rx Timing Deviation			INTEGER	As specified in [5], Ch.
			(0127)	6.2.7.6

### 9.2.3.7B Secondary CCPCH Info TDD

The Secondary CCPCH Info TDD IE provides information on the Secondary CCPCH that carries the logical channel SHCCH for the UE.

IE/Group Name	Presence	Range	IE Type and	Semantics Description	Criticality	Assigned Criticality
			Reference			
TFCS	M		9.2.1.63	For the DL.	_	
TFCI Coding	M		9.2.3.11		_	
Secondary CCPCH		0 <maxno ofSCCPC Hs&gt;</maxno 			_	
>Time Slot	M		9.2.1.56		_	
>Midamble Shift And Burst Type	М		9.2.3.4		_	
>TFCI Presence	M		9.2.1.55		_	
> Secondary CCPCH TDD Code Information	М		9.2.3.7C		_	
>TDD Physical Channel Offset	М		9.2.3.9			
>Repetition Length	M		9.2.3.6		_	
>Repetition Period	M		9.2.3.7		_	
FACH		0maxnoo fFACHs			_	
> TFS	M		9.2.1.64	For the DL.	_	
PCH		01			_	
> TFS	M		9.2.1.64	For the DL.	_	

Range bound	Explanation
maxnoofSCCPCHs	Maximum number of Secondary CCPCHs per CCTrCH.
maxnoofFACHs	Maximum number of FACHs mapped onto a Secondary CCPCH.

## 9.2.3.7C Secondary CCPCH TDD Code Information

The *Secondary CCPCH TDD Code Information* IE provides TDD Channelisation Code information for all SCCPCHs of one Time Slot.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Secondary CCPCH TDD		1 <maxno< td=""><td></td><td></td><td>_</td><td></td></maxno<>			_	
Code Information		OfSCCPC				
		Hs>				
>TDD Channelisation Code	М		9.2.3.8		_	

Range bound	Explanation
maxnoofSCCPCHs	Maximum number of SCCPCHs for one CCTrCH.

## 9.2.3.7D Special Burst Scheduling

The number of frames between special burst transmissions during DTX.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Special Burst Scheduling			INTEGER (1, 2,, 256)	Number of frames between special burst transmissions during DTX

## 9.2.3.7E Synchronisation Configuration

The Synchronisation Configuration parameters that are used by the DRNS in the Radio Link Failure/Restore procedure.

IE/Group Name	Presence	Range	IE Type and	Semantics Description
			Reference	
N_INSYNC_IND	M		INTEGER (1,	
			2,, 256)	
N_OUTSYNC_IND	M		INTEGER (1,	
			2,, 256)	
T_RLFAILURE	M		ENUMERAT	In seconds
			ED (0, 0.1,	
			0.2,, 25.5)	

## 9.2.3.7F Secondary CCPCH Info TDD LCR

The *Secondary CCPCH Info TDD LCR* IE provides information on the Secondary CCPCH that carries the logical channel SHCCH for the UE.

IE/Group Name	Presence	Range	IE Type	Semantics	Criticality	Assigned
			and	Description		Criticality
			Reference			
TFCS	M		9.2.1.63	For the DL.	_	
TFCI Coding	M		9.2.3.11		_	
Secondary CCPCH		0 <maxno ofSCCPC Hs&gt;</maxno 			_	
>Time Slot LCR	М		9.2.3.12a		_	
>Midamble Shift LCR	M		9.2.3.4C		_	
>TFCI Presence	M		9.2.1.55		_	
> Secondary CCPCH TDD Code Information LCR	M		9.2.3.7G		_	
>TDD Physical Channel Offset	M		9.2.3.9			
>Repetition Length	M		9.2.3.6		_	
>Repetition Period	M		9.2.3.7		_	
FACH		0 <maxno ofFACHs&gt;</maxno 			_	
> TFS	M		9.2.1.64	For the DL.	_	
PCH		01			_	
> TFS	М		9.2.1.64	For the DL.	_	

Range bound	Explanation
maxnoofSCCPCHs	Maximum number of Secondary CCPCHs per CCTrCH.
maxnoofFACHs	Maximum number of FACHs mapped onto a Secondary CCPCH.

## 9.2.3.7G Secondary CCPCH TDD Code Information LCR

The *Secondary CCPCH TDD Code Information LCR* IE provides LCR TDD Channelisation Code information for all SCCPCHs of one Time Slot.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Secondary CCPCH TDD Code Information		1 <maxno OfSCCPC Hs&gt;</maxno 			-	
>TDD Channelisation Code LCR	М		9.2.3.8a		_	
>SCCPCH Time Slot Format LCR	М		TDD DL DPCH Time Slot Format LCR 9.2.3.8E		-	

Range bound	Explanation
maxnoofSCCPCHs	Maximum number of SCCPCHs for one CCTrCH.

#### 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	Semantics Description
			Reference	
TDD Channelisation Code			ENUMERATED	
			((1/1), (2/1),	
			(2/2), (4/1),	
			(4/4), (8/1),	
			(8/8), (16/1),	
			(16/16),)	

#### 9.2.3.8a TDD Channelisation Code LCR

The Channelisation Code Number indicates which Channelisation Code is used for a given Physical Channel. In 1.28Mcps TDD the Channelisation Code is an Orthogonal Variable Spreading Factor code, that can have a spreading factor of 1, 2, 4, 8 or 16 and there is a choice between QPSK and 8PSK modulation.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TDD Channelisation Code	М		ENUMERAT ED ((1/1),	
			(2/1), (2/2),	
			(4/1),(4/4), (8/1), (8/8),	
			(16/1)	
			(16/16) , )	
Modulation	M		ENUMERAT	Modulation options for
			ED (QPSK,	1.28Mcps TDD in contrast to
			8PSK,)	3.84Mcps TDD

#### 9.2.3.8A TDD DPCH Offset

The Offset represents the phase information for the allocation of a group of dedicated physical channels. The first range is used when a starting offset is not required and the TDD Physical channel offset for each DPCH in the CCTrCH shall be directly determined from the TDD DPCH Offset. The second range is used when a starting offset is required. The TDD DPCH Offset shall map to the CFN and the TDD Physical Channel Offset for each DPCH in this CCTrCH shall calculated by TDD DPCH Offset *mod* Repetition period, see ref. [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Offset Type				
>Initial Offset				
>>TDD DPCH Offset Value	М		INTEGER (0255)	
>No Initial Offset				
>>TDD DPCH Offset Value	М		INTEGER (063)	

#### 9.2.3.8B TDD DCHs To Modify

The TDD DCHs To Modify IE provides information for DCHs to be modified.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
TDD DCHs To Modify		1 <maxno ofDCHs&gt;</maxno 			_	
>UL FP Mode	0		9.2.1.67		_	
>ToAWS	0		9.2.1.58		_	
>ToAWE	0		9.2.1.57		_	
>Transport Bearer Request Indicator	M		9.2.1.61		_	
>DCH Specific Info		1 <maxno ofDCHs&gt;</maxno 			_	
>>DCH ID	M		9.2.1.16		_	
>>CCTrCH ID	0		9.2.3.2	UL CCTrCH in which the DCH is mapped.	-	
>>CCTrCH ID	0		9.2.3.2	DL CCTrCH in which the DCH is mapped	-	
>>Transport Format Set	0		9.2.1.64	For the UL.	_	
>>Transport Format Set	0		9.2.1.64	For the DL.		
>>Allocation/Retention Priority	0		9.2.1.1		_	
>>Frame Handling Priority	0		9.2.1.29		_	
>>Guaranteed Rate Information	0		9.2.1.30M		YES	ignore

Range bound	Explanation		
maxnoofDCHs	Maximum number of DCHs for one UE.		

### 9.2.3.8C TDD DL Code Information

The TDD DL Code Information IE provides TDD DL Code information for all DPCHs of one DL Time Slot.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
TDD DL Code Information		1 <maxno OfDPCHs</maxno 			_	
		>				
>DPCH ID	M		9.2.3.3		_	
>TDD Channelisation Code	M		9.2.3.8		_	

Range bound	Explanation		
maxnoofDPCHs	Maximum number of DPCHs for one CCTrCH.		

# 9.2.3.8D TDD DL Code Information LCR

The TDD DL Code Information LCR IE provides DL Code information for the RL for 1.28Mcps TDD.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
TDD DL Code Information LCR		1 <maxnoof DPCHsLC R&gt;</maxnoof 			1	
>DPCH ID	M		9.2.3.3		_	
>TDD Channelisation Code LCR	М		9.2.3.8a		_	
> TDD DL DPCH Time Slot Format LCR	М		9.2.3.8E		_	

Range bound	Explanation			
maxnoOfDPCHsLCR	Maximum number of DPCH in one CCTrCH for 1.28Mcps TDD			

### 9.2.3.8E TDD DL DPCH Time Slot Format LCR

TDD DL DPCH Time Slot Format LCR indicates the time slot formats used in DL DPCH for 1.28Mcps TDD (see ref. [12]).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE Modulation				
> QPSK				
>>QPSK TDD DL DPCH Time Slot Format LCR	М		INTEGER (024,)	
> 8PSK				
>>8PSK TDD DL DPCH Time Slot Format LCR	M		INTEGER (024,)	

## 9.2.3.9 TDD Physical Channel Offset

The TDD Physical Channel Offset represents the phase information for the allocation of a non DPCH physical channel. (CFN mod Repetition Period = TDD Physical Channel Offset) see ref. [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TDD Physical Channel			INTEGER	
Offset			(063)	

## 9.2.3.10 TDD TPC Downlink Step Size

This parameter indicates step size for the DL power adjustment (see ref [22]).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TDD TPC Downlink Step			ENUMERAT	Unit: dB
Size			ED (1, 2,	
			3,)	

## 9.2.3.10a TDD TPC Uplink Step Size

This parameter indicates step size for the UL power adjustment (see ref [22]).

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TDD TPC Uplink Step Size			ENUMERAT	Unit: dB
			ED	
			(1, 2, 3,)	

### 9.2.3.10A TDD UL Code Information

The TDD UL Code Information IE provides TDD UL Code information for all DPCHs of one UL Time Slot.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
TDD UL Code Information		1 <maxno OfDPCHs</maxno 			_	
		>				
>DPCH ID	M		9.2.3.3		_	
>TDD Channelisation Code	M		9.2.3.8		_	

Range bound	Explanation
maxnoofDPCHs	Maximum number of DPCHs for one CCTrCH.

### 9.2.3.10B TDD UL Code Information LCR

The TDD UL Code Information LCR IE provides information for UL Code to be established for 1.28Mcps TDD.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
TDD UL Code Information LCR		1 <maxno OfDPCH sLCR&gt;</maxno 			-	
>DPCH ID	M		9.2.3.3		_	
>TDD Channelisation Code LCR	М		9.2.3.8a		_	
> TDD UL DPCH Time Slot Format LCR	M		9.2.3.10C		_	

Range bound	Explanation
maxnoOfDPCHsLCR	Maximum number of DPCHs in one CCTrCH for 1.28Mcps TDD.

### 9.2.3.10C TDD UL DPCH Time Slot Format LCR

TDD UL DPCH Time Slot Format LCR indicates the time slot formats used in UL DPCH for 1.28Mcps TDD (see ref. [12]).

IE/Group Name	Presence	Range	IE type and	Semantics description
			reference	
CHOICE Modulation				
> QPSK				
>>QPSK TDD UL DPCH	M		INTEGER	
Time Slot Format LCR			(069,)	
> 8PSK				
>>8PSK TDD UL DPCH	M		INTEGER	
Time Slot Format LCR			(024,)	

## 9.2.3.11 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			ENUMERATE	
			D (4, 8, 16,	
			32,)	

#### 9.2.3.12 DL Timeslot ISCP

DL Timeslot ISCP is the measured interference in a downlink timeslot at the UE, see ref. [14].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
DL Timeslot ISCP			INTEGER ( 091)	According to mapping in [24].

#### 9.2.3.12a Time Slot LCR

The Time Slot LCR is the number of the traffic time slot within a 5 ms subframe of LCR TDD.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Time Slot LCR			INTEGER	
			(06)	

## 9.2.3.12A Timing Advance Applied

Defines the need for Timing Advance functions such as Rx Timing Deviation measurement in a particular cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Timing Advance Applied			ENUMERAT	
			ED (Yes,	
			No)	

### 9.2.3.13 Transport Format Management

Defines whether the cell transmits the transport format information via broadcast or whether the transport format information is transmitted to the UE using dedicated RRC procedures

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transport Format			ENUMERAT	
Management			ED(Cell	
			Based, UE	
			Based)	

#### 9.2.3.13A UL Timeslot ISCP

UL Timeslot ISCP is the measured interference in a uplink timeslot at the DRNS, see ref. [14].

IE/Gro	oup Name	Presence	Range	IE Type and Reference	Semantics Description
UL Timeslot	ISCP			INTEGER (	According to mapping in [24].
				0127)	

## 9.2.3.13B UL PhysCH SF Variation

Indicates whether variation of SF in UL is supported by Radio Link or not.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UL PhysCH SF Variation			ENUMERAT	
			ED	
			(SF_Variatio	
			n_supported,	
			SF_Variation	
			_NOT_supp	
			orted)	

#### 9.2.3.13C UL Timeslot Information

The UL Timeslot Information IE provides information on the time slot allocation for a UL DPCH.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
UL Timeslot Information		1 <maxno OfTS&gt;</maxno 			_	
>Time Slot	M		9.2.1.56		_	
>Midamble Shift And Burst Type	М		9.2.3.4		_	
>TFCI Presence	M		9.2.1.55		_	
>UL Code Information	М		TDD UL Code Information 9.2.3.10A		_	

Range bound	Explanation
maxnoofTS	Maximum number of Timeslots for a UE.

### 9.2.3.13D UL Time Slot ISCP Info

The  $UL\ Time\ Slot\ ISCP\ Info\ IE\ gives\ interference\ level\ for\ each\ UL\ time\ slot\ within\ the\ Radio\ Link.$ 

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
UL Time Slot ISCP Info		1 <maxnoof ULts&gt;</maxnoof 			-	
>Time Slot	M		9.2.1.56		_	
>UL Timeslot ISCP	M		9.2.3.13A		_	

Range bound	Explanation			
maxnoofULts	Maximum number of uplink time slots per Radio Link.			

### 9.2.3.13E TSTD Indicator

Indicates if TSTD shall be active or not for the DL DPCH.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TSTD Indicator			ENUMERAT	
			ED(active,	
			inactive)	

## 9.2.3.13F TSTD Support Indicator

Indicates if UE support TSTD or not for DL DPCH.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
TSTD Support Indicator			ENUMERAT ED(TSTD supported, TSTD not supported)	

### 9.2.3.13G UL Timeslot Information LCR

The UL Timeslot Information LCR IE provides information on the timeslot allocation for an UL DPCH.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
UL Timeslot Information LCR		1 <maxn oofULts LCR&gt;</maxn 			_	
>Time Slot LCR	M		9.2.3.12a		_	
>Midamble Shift LCR	M		9.2.3.4C		_	
>TFCI Presence	M		9.2.1.57		_	
>UL Code Information LCR	M		TDD UL Code Information LCR 9.2.3.10B			

Range bound	Explanation
maxnoofULtsLCR	Maximum number of Uplink time slots per Radio Link for 1.28Mcps
	TDD.

## 9.2.3.13H UL Time Slot ISCP Info LCR

The *UL Time Slot ISCP Info LCR* IE provides information for UL Interference level for each time slot within the Radio Link for 1.28Mcps TDD.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
UL Time Slot ISCP Info		1 <maxnooful tsLCR&gt;</maxnooful 			_	
>Time Slot LCR	M		9.2.3.12a		_	
>UL Timeslot ISCP	M		9.2.3.13A		_	

Range bound	Explanation
maxnoofULtsLCR	Maximum number of Uplink time slots per Radio Link for 1.28Mcps
	TDD

## 9.2.3.13I Uplink Synchronisation Frequency

The UL Synchronisation Frequency IE specifies the frequency of the adjustment of the uplink transmission timing.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uplink synchronisation			INTEGER (18)	Unit: subframe, granularity: 1
frequency				

## 9.2.3.13J Uplink Synchronisation Step Size

The *UL Synchronisation Step Size* IE specifies the step size to be used for the adjustment of the uplink transmission timing.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uplink synchronisation step size			INTEGER (18)	Unit: 1/8 chip, step: 1.

## 9.2.3.13K Uplink Timing Advance Control LCR

The Uplink Timing Advance Control LCR indicates the parameters which are used to support Uplink Synchronisation for the UE in 1.28Mcps TDD.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
SYNC UL codes bitmap	M		BITSTRING (8)	Each bit indicates the availability of a SYNC_UL code.
FPACH info		1		
>Time Slot LCR	M		9.2.3.12a	
>TDD Channelisation Code LCR	М		9.2.3.8a	
>Midamble Shift LCR	M		9.2.3.4C	
>WT	M		INTEGER (14)	Maximum number of subframes to wait for transmission of FPACH.
PRXupPCHdes	M		INTEGER (-120 58,)	Desired UpPCH receive power level. Unit: dBm Step size: 1
SYNC UL procedure		1		
parameters				
>Maximum Sync UL transmissions	М		ENUMERATED (1,2,4,8,)	
>Power Ramp Step	M		INTEGER (03,)	
Mmax	М		INTEGER (132)	Maximum number of synchronisation attempts

## 9.2.3.14 USCH ID

The USCH ID is the identifier of an uplink shared channel. It is unique among the USCHs simultaneously allocated for the same UE.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
USCH ID			INTEGER	
			(0255)	

## 9.2.3.15 USCH Information

The  $\mathit{USCH}$   $\mathit{Information}$  IE provides information for USCHs to be established.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
USCH Information		1 <maxnoof USCHs&gt;</maxnoof 			-	
>USCH ID	M		9.2.3.14		_	
>CCTrCH ID	M		9.2.3.2	UL CCTrCH in which the USCH is mapped	_	
>TrCH Source Statistics Descriptor	M		9.2.1.65		_	
>Transport Format Set	M		9.2.1.64	For USCH	_	
>Allocation/Retention Priority	M		9.2.1.1		_	
>Scheduling Priority Indicator	М		9.2.1.51A		_	
>BLER	M		9.2.1.4			
>RB Info		1 <maxno ofRB&gt;</maxno 		All Radio Bearers using this USCH	-	
>>RB Identity	M		9.2.3.5B		_	

Range bound	Explanation
maxnoofUSCHs	Maximum number of USCHs for one UE.
maxnoofRBs	Maximum number of Radio Bearers for one UE.

# 9.3 Message and Information Element Abstract Syntax (with ASN.1)

### 9.3.0 General

Subclause 9.3 presents the Abstract Syntax of RNSAP protocol with ASN.1. In case there is contradiction between the ASN.1 definition in this subclause and the tabular format in subclauses 9.1 and 9.2, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, where the tabular format shall take precedence.

The ASN.1 definition specifies the structure and content of RNSAP messages. RNSAP messages can contain any IEs specified in the object set definitions for that message without the order or number of occurrence being restricted by ASN.1. However, for this version of the standard, a sending entity shall construct a RNSAP message according to the PDU definitions module and with the following additional rules (Note that in the following IE means an IE in the object set with an explicit id. If one IE needed to appear more than once in one object set, then the different occurrences have different IE ids):

- IEs shall be ordered (in an IE container) in the order they appear in object set definitions.
- Object set definitions specify how many times IEs may appear. An IE shall appear exactly once if the presence field in an object has value "mandatory". An IE may appear at most once if the presence field in an object has value "optional" or "conditional". If in a tabular format there is multiplicity specified for an IE (i.e. an IE list) then in the corresponding ASN.1 definition the list definition is separated into two parts. The first part defines an IE container list where the list elements reside. The second part defines list elements. The IE container list appears as an IE of its own. For this version of the standard an IE container list may contain only one kind of list elements.

If a RNSAP message that is not constructed as defined above is received, this shall be considered as Abstract Syntax Error, and the message shall be handled as defined for Abstract Syntax Error in subclause 10.3.6.

## 9.3.1 Usage of Private Message Mechanism for Non-standard Use

The private message mechanism for non-standard use may be used:

- for special operator (and/or vendor) specific features considered not to be part of the basic functionality, i.e. the functionality required for a complete and high-quality specification in order to guarantee 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 private message mechanism shall not be used for basic functionality. Such functionality shall be standardised.

# 9.3.2 Elementary Procedure Definitions

```
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-PDU-Descriptions (0) }
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN
  *****************
-- IE parameter types from other modules.
__ *********************
IMPORTS
   Criticality,
   ProcedureID,
   TransactionID
FROM RNSAP-CommonDataTypes
    CommonMeasurementFailureIndication,
    CommonMeasurementInitiationFailure,
    CommonMeasurementInitiationRequest,
    CommonMeasurementInitiationResponse,
    CommonMeasurementReport,
   CommonMeasurementTerminationRequest,
    CommonTransportChannelResourcesFailure,
   CommonTransportChannelResourcesRequest,
   CommonTransportChannelResourcesReleaseRequest,
    CommonTransportChannelResourcesResponseFDD,
    CommonTransportChannelResourcesResponseTDD,
    CompressedModeCommand,
   DedicatedMeasurementFailureIndication,
   DedicatedMeasurementInitiationFailure,
   DedicatedMeasurementInitiationRequest,
   DedicatedMeasurementInitiationResponse,
   DedicatedMeasurementReport,
   DedicatedMeasurementTerminationRequest,
   DL-PowerControlRequest,
   DL-PowerTimeslotControlRequest,
   DownlinkSignallingTransferRequest,
    ErrorIndication,
    InformationExchangeFailureIndication,
    InformationExchangeInitiationFailure,
    InformationExchangeInitiationRequest,
    InformationExchangeInitiationResponse,
    InformationExchangeTerminationRequest,
    InformationReport,
    PagingRequest,
    PhysicalChannelReconfigurationCommand,
    PhysicalChannelReconfigurationFailure,
    PhysicalChannelReconfigurationRequestFDD,
    PhysicalChannelReconfigurationRequestTDD,
   PrivateMessage,
   RadioLinkAdditionFailureFDD,
```

```
RadioLinkAdditionFailureTDD,
    RadioLinkAdditionRequestFDD.
    RadioLinkAdditionRequestTDD.
    RadioLinkAdditionResponseFDD,
    RadioLinkAdditionResponseTDD,
    RadioLinkCongestionIndication,
    RadioLinkDeletionRequest,
    RadioLinkDeletionResponse,
    RadioLinkFailureIndication,
    RadioLinkPreemptionRequiredIndication,
    RadioLinkReconfigurationCancel,
    RadioLinkReconfigurationCommit,
    RadioLinkReconfigurationFailure,
    RadioLinkReconfigurationPrepareFDD,
    RadioLinkReconfigurationPrepareTDD,
    RadioLinkReconfigurationReadyFDD,
    RadioLinkReconfigurationReadyTDD,
    RadioLinkReconfigurationRequestFDD,
    RadioLinkReconfigurationRequestTDD,
    RadioLinkReconfigurationResponseFDD,
    RadioLinkReconfigurationResponseTDD,
    RadioLinkRestoreIndication,
    RadioLinkSetupFailureFDD,
    RadioLinkSetupFailureTDD,
    RadioLinkSetupRequestFDD,
    RadioLinkSetupRequestTDD,
    RadioLinkSetupResponseFDD,
    RadioLinkSetupResponseTDD,
    RelocationCommit,
    UplinkSignallingTransferIndicationFDD,
    UplinkSignallingTransferIndicationTDD
FROM RNSAP-PDU-Contents
    id-commonMeasurementFailure,
    id-commonMeasurementInitiation,
    id-commonMeasurementReporting,
    id-commonMeasurementTermination,
    id-commonTransportChannelResourcesInitialisation,
    id-commonTransportChannelResourcesRelease,
    id-compressedModeCommand,
    id-downlinkPowerControl,
    id-downlinkSignallingTransfer,
    id-downlinkPowerTimeslotControl,
    id-errorIndication,
    id-informationExchangeFailure,
    id-informationExchangeInitiation,
    id-informationReporting,
    id-informationExchangeTermination,
    id-dedicatedMeasurementFailure,
    id-dedicatedMeasurementInitiation,
    id-dedicatedMeasurementReporting,
    id-dedicatedMeasurementTermination,
    id-paging,
    id-physicalChannelReconfiguration,
```

```
id-privateMessage,
   id-radioLinkAddition.
   id-radioLinkCongestion,
   id-radioLinkDeletion,
   id-radioLinkFailure.
   id-radioLinkPreemption,
   id-radioLinkRestoration,
   id-radioLinkSetup,
   id-relocationCommit,
   \verb|id-synchronisedRadioLinkReconfigurationCancellation|,\\
   id-synchronisedRadioLinkReconfigurationCommit,
    id-synchronisedRadioLinkReconfigurationPreparation,
   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
                          &SuccessfulOutcome1
    [UNSUCCESSFUL OUTCOME
                              &UnsuccessfulOutcome]
    OUTCOME
                      &Outcome1
   PROCEDURE ID
                          &procedureID
    [CRITICALITY
                          &criticality]
-- Interface PDU Definition
   RNSAP-PDU ::= CHOICE {
   initiatingMessage
                     InitiatingMessage,
   successfulOutcome SuccessfulOutcome,
   unsuccessfulOutcome UnsuccessfulOutcome,
   outcome
                  Outcome,
    . . .
InitiatingMessage ::= SEQUENCE {
```

```
({RNSAP-ELEMENTARY-PROCEDURES}),
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID
    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,
               RNSAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome
                                                             ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID})
    value
UnsuccessfulOutcome ::= SEOUENCE {
   procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID
                                                         ({RNSAP-ELEMENTARY-PROCEDURES}),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality
                                                         ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    transactionID TransactionID,
               RNSAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID})
    value
Outcome ::= SEQUENCE {
   procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID
                                                         ({RNSAP-ELEMENTARY-PROCEDURES}),
                                                         ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}),
   criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality
    transactionID TransactionID,
                                                     ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID})
    value
               RNSAP-ELEMENTARY-PROCEDURE. &Outcome
       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
    dedicatedMeasurementInitiation
    commonTransportChannelResourcesInitialisationFDD
```

```
commonTransportChannelResourcesInitialisationTDD
    commonMeasurementInitiation
   information Exchange Initiation
RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 RNSAP-ELEMENTARY-PROCEDURE ::= {
   uplinkSignallingTransferFDD
   uplinkSignallingTransferTDD
   downlinkSignallingTransfer
   relocationCommit
   paging
   synchronisedRadioLinkReconfigurationCommit
    synchronisedRadioLinkReconfigurationCancellation
   radioLinkFailure
   radioLinkPreemption
   radioLinkRestoration
   dedicatedMeasurementReporting
   dedicatedMeasurementTermination
   dedicatedMeasurementFailure
   downlinkPowerControlFDD
   downlinkPowerTimeslotControl
   compressedModeCommandFDD
    commonTransportChannelResourcesRelease
   errorIndication
   privateMessage
   radioLinkCongestion
    commonMeasurementFailure
    commonMeasurementReporting
    commonMeasurementTermination
    informationExchangeFailure
    informationExchangeTermination
   informationReporting
RNSAP-ELEMENTARY-PROCEDURES-CLASS-3 RNSAP-ELEMENTARY-PROCEDURE ::= {
-- Interface Elementary Procedures
__ *********************
radioLinkSetupFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
   INITIATING MESSAGE RadioLinkSetupRequestFDD
   SUCCESSFUL OUTCOME RadioLinkSetupResponseFDD
                           RadioLinkSetupFailureFDD
   UNSUCCESSFUL OUTCOME
                       { procedureCode id-radioLinkSetup, ddMode fdd }
    PROCEDURE ID
   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
                        { procedureCode id-radioLinkAddition , ddMode fdd }
    PROCEDURE ID
    CRITICALITY
                    reject
radioLinkAdditionTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkAdditionRequestTDD
    SUCCESSFUL OUTCOME RadioLinkAdditionResponseTDD
                            RadioLinkAdditionFailureTDD
    UNSUCCESSFUL OUTCOME
    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
                           RadioLinkReconfigurationFailure
    UNSUCCESSFUL OUTCOME
                        { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode fdd }
    PROCEDURE ID
    CRITICALITY
                    reject
synchronisedRadioLinkReconfigurationPreparationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkReconfigurationPrepareTDD
    SUCCESSFUL OUTCOME RadioLinkReconfigurationReadyTDD
    UNSUCCESSFUL OUTCOME
                           RadioLinkReconfigurationFailure
                        { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode tdd }
    PROCEDURE ID
    CRITICALITY
                    reject
unSynchronisedRadioLinkReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkReconfigurationRequestFDD
    SUCCESSFUL OUTCOME RadioLinkReconfigurationResponseFDD
                           RadioLinkReconfigurationFailure
    UNSUCCESSFUL OUTCOME
    PROCEDURE ID
                        { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
    CRITICALITY
                    reject
```

```
unSynchronisedRadioLinkReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkReconfigurationRequestTDD
    SUCCESSFUL OUTCOME RadioLinkReconfigurationResponseTDD
    UNSUCCESSFUL OUTCOME
                           RadioLinkReconfigurationFailure
                        { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
    PROCEDURE ID
    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
                        { procedureCode id-physicalChannelReconfiguration, ddMode tdd }
    PROCEDURE ID
    CRITICALITY
                    reject
dedicatedMeasurementInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DedicatedMeasurementInitiationRequest
    SUCCESSFUL OUTCOME DedicatedMeasurementInitiationResponse
    UNSUCCESSFUL OUTCOME
                           DedicatedMeasurementInitiationFailure
                        { procedureCode id-dedicatedMeasurementInitiation, ddMode common }
    PROCEDURE ID
    CRITICALITY
                    reject
commonTransportChannelResourcesInitialisationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE CommonTransportChannelResourcesRequest
    SUCCESSFUL OUTCOME CommonTransportChannelResourcesResponseFDD
    UNSUCCESSFUL OUTCOME
                           CommonTransportChannelResourcesFailure
                        { procedureCode id-commonTransportChannelResourcesInitialisation, ddMode fdd }
    PROCEDURE ID
    CRITICALITY
                    reject
commonTransportChannelResourcesInitialisationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE CommonTransportChannelResourcesRequest
    SUCCESSFUL OUTCOME CommonTransportChannelResourcesResponseTDD
                           CommonTransportChannelResourcesFailure
    UNSUCCESSFUL OUTCOME
    PROCEDURE ID
                        { procedureCode id-commonTransportChannelResourcesInitialisation, ddMode tdd }
    CRITICALITY
                    reject
uplinkSignallingTransferFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE UplinkSignallingTransferIndicationFDD
    PROCEDURE ID
                        { procedureCode id-uplinkSignallingTransfer, ddMode fdd }
    CRITICALITY
                    ignore
```

```
uplinkSignallingTransferTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE UplinkSignallingTransferIndicationTDD
    PROCEDURE ID
                        { procedureCode id-uplinkSignallingTransfer, ddMode tdd }
    CRITICALITY
                    ignore
downlinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DownlinkSignallingTransferRequest
    PROCEDURE ID
                        { procedureCode id-downlinkSignallingTransfer, ddMode common }
    CRITICALITY
relocationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RelocationCommit
    PROCEDURE ID
                        { procedureCode id-relocationCommit, ddMode common }
    CRITICALITY
                    ignore
paging RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE PagingRequest
    PROCEDURE ID
                        { procedureCode id-paging, 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
                        { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode common }
    PROCEDURE ID
    CRITICALITY
                    ignore
radioLinkFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkFailureIndication
    PROCEDURE ID
                        { procedureCode id-radioLinkFailure, ddMode common }
    CRITICALITY
                    ignore
radioLinkPreemption RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkPreemptionRequiredIndication
    PROCEDURE ID
                        { procedureCode id-radioLinkPreemption, ddMode common }
    CRITICALITY
                    ignore
radioLinkRestoration RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkRestoreIndication
    PROCEDURE ID
                        { procedureCode id-radioLinkRestoration, ddMode common }
    CRITICALITY
                    ignore
```

```
dedicatedMeasurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DedicatedMeasurementReport
    PROCEDURE ID
                        { procedureCode id-dedicatedMeasurementReporting, ddMode common }
    CRITICALITY
                    ignore
dedicatedMeasurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DedicatedMeasurementTerminationRequest
    PROCEDURE ID
                        { procedureCode id-dedicatedMeasurementTermination, ddMode common }
    CRITICALITY
                    ignore
dedicatedMeasurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DedicatedMeasurementFailureIndication
                        { procedureCode id-dedicatedMeasurementFailure, ddMode common }
    CRITICALITY
                    ignore
radioLinkCongestion RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkCongestionIndication
    PROCEDURE ID
                        { procedureCode id-radioLinkCongestion, ddMode common }
    CRITICALITY
                    reject
downlinkPowerControlFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DL-PowerControlRequest
    PROCEDURE ID
                        { procedureCode id-downlinkPowerControl, ddMode fdd }
    CRITICALITY
                    ignore
downlinkPowerTimeslotControl RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DL-PowerTimeslotControlRequest
                        { procedureCode id-downlinkPowerTimeslotControl, ddMode tdd }
    PROCEDURE ID
    CRITICALITY
                    ignore
compressedModeCommandFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE CompressedModeCommand
    PROCEDURE ID
                        { procedureCode id-compressedModeCommand, 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
```

```
commonMeasurementInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            CommonMeasurementInitiationRequest
    SUCCESSFUL OUTCOME
                            CommonMeasurementInitiationResponse
                            CommonMeasurementInitiationFailure
    UNSUCCESSFUL OUTCOME
                            { procedureCode id-commonMeasurementInitiation, ddMode common }
    PROCEDURE ID
    CRITICALITY
                            reject
commonMeasurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE CommonMeasurementReport
    PROCEDURE ID
                        { procedureCode id-commonMeasurementReporting, ddMode common }
    CRITICALITY
                        ignore
commonMeasurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE CommonMeasurementTerminationRequest
                        { procedureCode id-commonMeasurementTermination, ddMode common }
    PROCEDURE ID
    CRITICALITY
                    ignore
commonMeasurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE CommonMeasurementFailureIndication
    PROCEDURE ID
                        { procedureCode id-commonMeasurementFailure, ddMode common }
    CRITICALITY
                    ignore
informationExchangeInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            InformationExchangeInitiationRequest
    SUCCESSFUL OUTCOME
                            InformationExchangeInitiationResponse
    UNSUCCESSFUL OUTCOME
                            InformationExchangeInitiationFailure
                            { procedureCode id-informationExchangeInitiation, ddMode common }
    PROCEDURE ID
    CRITICALITY
                            reject
informationReporting RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            InformationReport
                            { procedureCode id-informationReporting, ddMode common }
    PROCEDURE ID
    CRITICALITY
informationExchangeTermination RNSAP-ELEMENTARY-PROCEDURE ::= {
                            InformationExchangeTerminationRequest
    INITIATING MESSAGE
                            { procedureCode id-informationExchangeTermination, ddMode common }
    PROCEDURE ID
    CRITICALITY
                            ignore
informationExchangeFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE
                            InformationExchangeFailureIndication
    PROCEDURE ID
                            { procedureCode id-informationExchangeFailure, ddMode common }
    CRITICALITY
                            ignore
privateMessage RNSAP-ELEMENTARY-PROCEDURE ::= {
```

## 9.3.3 PDU Definitions

```
******************
-- PDU definitions for RNSAP.
__ *********************
RNSAP-PDU-Contents {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-PDU-Contents (1) }
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN
    *****************
-- IE parameter types from other modules.
__ ********************
IMPORTS
   Active-Pattern-Sequence-Information,
   AllocationRetentionPriority,
   AllowedQueuingTime,
   Allowed-Rate-Information,
   AlphaValue,
   BLER,
   SCTD-Indicator,
   BindingID,
   C-ID,
   C-RNTI,
   CCTrCH-ID,
   CFN.
   ClosedLoopModel-SupportIndicator,
   ClosedLoopMode2-SupportIndicator,
   Closedlooptimingadjustmentmode,
   CN-CS-DomainIdentifier,
   CN-PS-DomainIdentifier,
   CNDomainType,
   Cause,
   CellParameterID,
   ChipOffset,
   CommonMeasurementAccuracy,
   CommonMeasurementType,
```

```
CommonMeasurementValue,
CommonMeasurementValueInformation.
CongestionCause.
CriticalityDiagnostics,
D-RNTI,
D-RNTI-ReleaseIndication,
DCH-FDD-Information,
DCH-ID,
DCH-InformationResponse,
DCH-TDD-Information,
DL-DPCH-SlotFormat,
DL-TimeslotISCP,
DL-Power.
DL-ScramblingCode,
DL-Timeslot-Information,
DL-TimeslotLCR-Information,
DL-TimeSlot-ISCP-Info,
DL-TimeSlot-ISCP-LCR-Information,
DPC-Mode,
DPC-Mode-Change-SupportIndicator,
DPCH-ID,
DRACControl,
DRXCycleLengthCoefficient,
DedicatedMeasurementType,
DedicatedMeasurementValue,
DedicatedMeasurementValueInformation.
DiversityControlField,
DiversityMode,
DSCH-FDD-Information,
DSCH-FDD-InformationResponse,
DSCH-FlowControlInformation,
DSCH-FlowControlItem,
DSCH-TDD-Information,
DSCH-ID,
DSCH-RNTI,
SchedulingPriorityIndicator,
EnhancedDSCHPC,
EnhancedDSCHPCCounter,
EnhancedDSCHPCIndicator,
EnhancedDSCHPCWnd,
EnhancedDSCHPowerOffset,
FACH-FlowControlInformation,
FDD-DCHs-to-Modify,
FDD-DL-ChannelisationCodeNumber,
FDD-DL-CodeInformation,
FDD-S-CCPCH-Offset,
FDD-TPC-DownlinkStepSize,
FirstRLS-Indicator,
FNReportingIndicator,
FrameHandlingPriority,
FrameOffset,
GA-AccessPointPosition,
GA-Cell,
GA-CellAdditionalShapes,
```

```
IMSI,
InformationExchangeID,
InformationReportCharacteristics,
InformationType,
InnerLoopDLPCStatus,
L3-Information,
SplitType,
LengthOfTFCI2,
LimitedPowerIncrease,
MaximumAllowedULTxPower,
MaxNrDLPhysicalchannels,
MaxNrOfUL-DPCHs,
MaxNrTimeslots,
MaxNrULPhysicalchannels,
MeasurementFilterCoefficient,
MeasurementID.
MidambleAllocationMode,
MidambleShiftAndBurstType,
MidambleShiftLCR,
MinimumSpreadingFactor,
MinUL-ChannelisationCodeLength,
MultiplexingPosition,
NeighbouringFDDCellMeasurementInformation,
NeighbouringTDDCellMeasurementInformation,
Neighbouring-GSM-CellInformation,
Neighbouring-UMTS-CellInformation,
NrOfDLchannelisationcodes,
PagingCause,
PagingRecordType,
PDSCHCodeMapping,
PayloadCRC-PresenceIndicator,
PCCPCH-Power,
PC-Preamble,
Permanent-NAS-UE-Identity,
PowerAdjustmentType,
PowerOffset,
PrimaryCCPCH-RSCP,
PrimaryCPICH-EcNo,
PrimaryCPICH-Power,
PrimaryScramblingCode,
PropagationDelay,
PunctureLimit,
OE-Selector,
RANAP-RelocationInformation,
RB-Info,
RL-ID,
RL-Set-ID,
RNC-ID,
RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
Received-total-wide-band-power,
RequestedDataValue,
RequestedDataValueInformation,
```

```
RxTimingDeviationForTA,
S-FieldLength,
S-RNTI.
SCH-TimeSlot,
SAI.
SFN,
Secondary-CCPCH-Info,
Secondary-CCPCH-Info-TDD,
Secondary-LCR-CCPCH-Info-TDD,
SpecialBurstScheduling,
SSDT-CellID,
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
STTD-Indicator,
STTD-SupportIndicator,
AdjustmentPeriod,
ScaledAdjustmentRatio,
MaxAdjustmentStep,
SecondaryCCPCH-SlotFormat,
SRB-Delay,
SyncCase,
SynchronisationConfiguration,
TDD-ChannelisationCode,
TDD-DCHs-to-Modify,
TDD-DL-Code-Information,
TDD-DPCHOffset,
TDD-PhysicalChannelOffset,
TDD-TPC-DownlinkStepSize,
TDD-ChannelisationCodeLCR,
TDD-DL-Code-LCR-Information,
TDD-UL-Code-Information,
TDD-UL-Code-LCR-Information,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TimeSlot,
TimeSlotLCR,
TimingAdvanceApplied,
ToAWE,
ToAWS,
TransmitDiversityIndicator,
TransportBearerID,
TransportBearerRequestIndicator,
Transmission-Gap-Pattern-Sequence-Information,
TransportFormatManagement,
TransportFormatSet,
TransportLayerAddress,
TrCH-SrcStatisticsDescr,
TSTD-Indicator,
TSTD-Support-Indicator,
UARFCN,
UC-ID,
```

```
UL-DPCCH-SlotFormat,
    UL-SIR,
    UL-FP-Mode.
    UL-PhysCH-SF-Variation,
    UL-ScramblingCode,
    UL-Timeslot-Information,
    UL-TimeslotLCR-Information,
    UL-TimeSlot-ISCP-Info,
    UL-TimeSlot-ISCP-LCR-Info,
    URA-ID,
    URA-Information,
    USCH-ID,
    USCH-Information,
    UL-Synchronisation-Parameters-LCR,
    TDD-DL-DPCH-TimeSlotFormat-LCR,
    TDD-UL-DPCH-TimeSlotFormat-LCR,
    TDD-TPC-UplinkStepSize-LCR,
    UL-TimingAdvanceCtrl-LCR
FROM RNSAP-IEs
    PrivateIE-Container{},
    ProtocolExtensionContainer{},
    ProtocolIE-ContainerList{},
    ProtocolIE-ContainerPair{},
    ProtocolIE-ContainerPairList{},
    ProtocolIE-Container{},
    ProtocolIE-Single-Container{},
    RNSAP-PRIVATE-IES,
    RNSAP-PROTOCOL-EXTENSION,
    RNSAP-PROTOCOL-IES,
    RNSAP-PROTOCOL-IES-PAIR
FROM RNSAP-Containers
    maxNoOfDSCHs,
    maxNoOfUSCHs,
    maxNrOfCCTrCHs,
    maxNrOfDCHs,
    maxNrOfTS,
    maxNrOfDPCHs,
    maxNrOfRLs,
    maxNrOfRLSets,
    maxNrOfRLs-1,
    maxNrOfRLs-2,
    maxNrOfULTs,
    maxNrOfDLTs,
    maxNoOfDSCHsLCR,
    maxNoOfUSCHsLCR,
    maxNrOfCCTrCHsLCR,
    maxNrOfTsLCR,
    maxNrOfDLTsLCR,
    maxNrOfULTsLCR,
    maxNrOfDPCHsLCR,
    maxNrOfLCRTDDNeighboursPerRNC,
    maxNrOfMeasNCell,
```

```
id-Active-Pattern-Sequence-Information,
id-AdjustmentRatio.
id-AllowedOueuingTime,
id-BindingID.
id-C-ID,
id-C-RNTI,
id-CFN,
id-CFNReportingIndicator,
id-CN-CS-DomainIdentifier,
id-CN-PS-DomainIdentifier,
id-Cause,
id-CauseLevel-RL-AdditionFailureFDD.
id-CauseLevel-RL-AdditionFailureTDD.
id-CauseLevel-RL-ReconfFailure,
id-CauseLevel-RL-SetupFailureFDD,
id-CauseLevel-RL-SetupFailureTDD,
id-CCTrCH-InformationItem-RL-FailureInd,
id-CCTrCH-InformationItem-RL-RestoreInd,
id-ClosedLoopModel-SupportIndicator,
id-ClosedLoopMode2-SupportIndicator,
id-CNOriginatedPage-PagingRqst,
id-CommonMeasurementAccuracy,
id-CommonMeasurementObjectType-CM-Rprt,
id-CommonMeasurementObjectType-CM-Rqst,
id-CommonMeasurementObjectType-CM-Rsp,
id-CommonMeasurementType,
id-CongestionCause,
id-CriticalityDiagnostics,
id-D-RNTI,
id-D-RNTI-ReleaseIndication.
id-DCHs-to-Add-FDD.
id-DCHs-to-Add-TDD,
id-DCH-DeleteList-RL-ReconfPrepFDD,
id-DCH-DeleteList-RL-ReconfPrepTDD.
id-DCH-DeleteList-RL-ReconfRqstFDD,
id-DCH-DeleteList-RL-ReconfRgstTDD,
id-DCH-FDD-Information,
id-DCH-TDD-Information,
id-FDD-DCHs-to-Modify,
id-TDD-DCHs-to-Modify,
id-DCH-InformationResponse,
id-DCH-Rate-InformationItem-RL-CongestInd,
id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD,
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationItem-RL-SetupRgstTDD,
id-DL-CCTrCH-InformationListIE-PhyChReconfRgstTDD,
id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD,
id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD,
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,
```

```
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRastTDD.
id-DL-CCTrCH-InformationModifyList-RL-ReconfRgstTDD,
id-DL-CCTrCH-InformationList-RL-SetupRgstTDD,
id-FDD-DL-CodeInformation,
id-DL-DPCH-Information-RL-ReconfPrepFDD.
id-DL-DPCH-Information-RL-SetupRgstFDD,
id-DL-DPCH-Information-RL-ReconfRqstFDD,
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD,
id-DL-DPCH-InformationItem-RL-AdditionRspTDD,
id-DL-DPCH-InformationItem-RL-SetupRspTDD,
id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD,
id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD,
id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD,
id-DL-Physical-Channel-Information-RL-SetupRgstTDD,
id-DLReferencePower,
id-DLReferencePowerList-DL-PC-Rgst,
id-DL-ReferencePowerInformation-DL-PC-Rgst,
id-DRXCycleLengthCoefficient,
id-DedicatedMeasurementObjectType-DM-Rprt,
id-DedicatedMeasurementObjectType-DM-Rqst,
id-DedicatedMeasurementObjectType-DM-Rsp,
id-DedicatedMeasurementType,
id-DPC-Mode,
id-DPC-Mode-Change-SupportIndicator,
id-DSCHs-to-Add-FDD,
id-DSCHs-to-Add-TDD,
id-DSCH-DeleteList-RL-ReconfPrepTDD,
id-DSCH-Delete-RL-ReconfPrepFDD,
id-DSCH-FDD-Information.
id-DSCH-InformationListIE-RL-AdditionRspTDD,
id-DSCH-InformationListIEs-RL-SetupRspTDD,
id-DSCH-TDD-Information,
id-DSCH-FDD-InformationResponse,
id-DSCH-ModifyList-RL-ReconfPrepTDD,
id-DSCH-Modify-RL-ReconfPrepFDD,
id-DSCH-RNTI,
id-DSCHsToBeAddedOrModified-FDD,
id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD,
id-EnhancedDSCHPC,
id-EnhancedDSCHPCIndicator,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD,
id-GA-Cell,
id-GA-CellAdditionalShapes,
id-IMSI,
id-InformationExchangeID,
id-InformationExchangeObjectType-InfEx-Rprt,
id-InformationExchangeObjectType-InfEx-Rgst,
id-InformationExchangeObjectType-InfEx-Rsp,
id-InformationReportCharacteristics,
id-InformationType,
id-InnerLoopDLPCStatus,
```

```
id-SplitType,
id-LengthOfTFCI2.
id-L3-Information.
id-AdjustmentPeriod,
id-MaxAdjustmentStep,
id-MeasurementFilterCoefficient.
id-MeasurementID,
id-PagingArea-PagingRgst,
id-Permanent-NAS-UE-Identity,
id-PDSCH-RL-ID,
id-FACH-FlowControlInformation,
id-PowerAdjustmentType,
id-PropagationDelay,
id-RANAP-RelocationInformation.
id-RL-Information-PhyChReconfRqstFDD,
id-RL-Information-PhyChReconfRgstTDD,
id-RL-Information-RL-AdditionRgstFDD,
id-RL-Information-RL-AdditionRgstTDD,
id-RL-Information-RL-DeletionRgst,
id-RL-Information-RL-FailureInd,
id-RL-Information-RL-ReconfPrepFDD,
id-RL-Information-RL-RestoreInd,
id-RL-Information-RL-SetupRqstFDD,
id-RL-Information-RL-SetupRgstTDD,
id-RL-InformationItem-RL-CongestInd,
id-RL-InformationItem-DM-Rprt.
id-RL-InformationItem-DM-Rgst,
id-RL-InformationItem-DM-Rsp,
id-RL-InformationItem-RL-PreemptRequiredInd,
id-RL-InformationItem-RL-SetupRgstFDD,
id-RL-InformationList-RL-CongestInd,
id-RL-InformationList-RL-AdditionRqstFDD,
id-RL-InformationList-RL-DeletionRgst,
id-RL-InformationList-RL-PreemptRequiredInd,
id-RL-InformationList-RL-ReconfPrepFDD,
id-RL-InformationResponse-RL-AdditionRspTDD,
id-RL-InformationResponse-RL-ReconfReadyTDD,
id-RL-InformationResponse-RL-ReconfRspTDD,
id-RL-InformationResponse-RL-SetupRspTDD,
id-RL-InformationResponseItem-RL-AdditionRspFDD,
id-RL-InformationResponseItem-RL-ReconfReadyFDD,
id-RL-InformationResponseItem-RL-ReconfRspFDD,
id-RL-InformationResponseItem-RL-SetupRspFDD,
id-RL-InformationResponseList-RL-AdditionRspFDD,
id-RL-InformationResponseList-RL-ReconfReadyFDD,
id-RL-InformationResponseList-RL-ReconfRspFDD,
id-RL-InformationResponseList-RL-SetupRspFDD,
id-RL-ReconfigurationFailure-RL-ReconfFail,
id-RL-Set-InformationItem-DM-Rprt,
id-RL-Set-InformationItem-DM-Rgst,
id-RL-Set-InformationItem-DM-Rsp,
id-RL-Set-Information-RL-FailureInd,
id-RL-Set-Information-RL-RestoreInd,
id-ReportCharacteristics,
```

```
id-Reporting-Object-RL-FailureInd,
id-Reporing-Object-RL-RestoreInd,
id-RxTimingDeviationForTA.
id-S-RNTI.
id-SAI.
id-SFN,
id-SFNReportingIndicator,
id-SRNC-ID,
id-SSDT-CellIDforEDSCHPC.
id-STTD-SupportIndicator,
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-timeSlot-ISCP.
id-TimeSlot-RL-SetupRspTDD,
id-TransportBearerID,
id-TransportBearerRequestIndicator,
id-TransportLayerAddress,
id-UC-ID,
id-Transmission-Gap-Pattern-Sequence-Information,
id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD,
id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD,
id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRgstTDD,
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationItem-RL-SetupRgstTDD,
id-UL-CCTrCH-InformationList-RL-SetupRgstTDD,
id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD,
id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD.
id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD,
id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD,
id-UL-DPCH-Information-RL-ReconfPrepFDD,
id-UL-DPCH-Information-RL-ReconfRgstFDD,
id-UL-DPCH-Information-RL-SetupRgstFDD,
id-UL-DPCH-InformationItem-PhyChReconfRgstTDD,
id-UL-DPCH-InformationItem-RL-AdditionRspTDD,
id-UL-DPCH-InformationItem-RL-SetupRspTDD,
id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD,
id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD,
id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD,
id-UL-Physical-Channel-Information-RL-SetupRgstTDD,
id-UL-SIRTarget,
id-URA-Information,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-USCHs-to-Add,
id-USCH-DeleteList-RL-ReconfPrepTDD,
id-USCH-InformationListIE-RL-AdditionRspTDD,
```

```
id-USCH-InformationListIEs-RL-SetupRspTDD,
    id-USCH-Information.
    id-USCH-ModifyList-RL-ReconfPrepTDD.
    id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD,
    id-DL-Timeslot-ISCP-LCR-Information-RL-SetupRgstTDD,
    id-RL-LCR-InformationResponse-RL-SetupRspTDD,
    id-UL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD,
    id-UL-DPCH-LCR-InformationItem-RL-SetupRspTDD.
    id-DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD,
    id-DL-DPCH-LCR-InformationItem-RL-SetupRspTDD,
    id-DSCH-LCR-InformationListIEs-RL-SetupRspTDD,
   id-USCH-LCR-InformationListIEs-RL-SetupRspTDD,
   id-DL-Timeslot-ISCP-LCR-Information-RL-AdditionRgstTDD,
    id-RL-LCR-InformationResponse-RL-AdditionRspTDD,
   id-UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD,
    id-UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD,
    id-DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD,
    id-DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD,
    id-DSCH-LCR-InformationListIEs-RL-AdditionRspTDD,
    id-USCH-LCR-InformationListIEs-RL-AdditionRspTDD,
   id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadvTDD.
   id-UL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD,
   id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD,
    id-DL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD,
    id-UL-Timeslot-LCR-InformationList-PhyChReconfRgstTDD,
    id-DL-Timeslot-LCR-InformationList-PhyChReconfRgstTDD,
   id-timeSlot-ISCP-LCR-List-DL-PC-Rgst-TDD,
   id-TSTD-Support-Indicator-RL-SetupRgstTDD,
    id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD,
    id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD,
    id-DL-Timeslot-ISCP-LCR-Information-RL-ReconfPrepTDD,
    id-UL-Synchronisation-Parameters-LCR,
    id-TDD-DL-DPCH-TimeSlotFormatModifyItem-LCR-RL-ReconfReadyTDD,
   id-TDD-UL-DPCH-TimeSlotFormatModifyItem-LCR-RL-ReconfReadyTDD,
   id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRgstTDD,
   id-UL-CCTrCH-InformationList-RL-AdditionRgstTDD,
    id-UL-CCTrCH-InformationItem-RL-AdditionRqstTDD,
    id-DL-CCTrCH-InformationList-RL-AdditionRgstTDD,
    id-DL-CCTrCH-InformationItem-RL-AdditionRgstTDD,
    id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD,
    id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD,
    id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD,
    id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD,
    id-UL-TimingAdvanceCtrl-LCR
FROM RNSAP-Constants;
__ *********************
-- RADIO LINK SETUP REQUEST FDD
       RadioLinkSetupRequestFDD ::= SEQUENCE {
```

```
{{RadioLinkSetupRequestFDD-IEs}},
    protocolIEs
                                    ProtocolIE-Container
    protocolExtensions
                                    ProtocolExtensionContainer {{RadioLinkSetupRequestFDD-Extensions}}
                                                                                                                          OPTIONAL
RadioLinkSetupRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
                                                                                        PRESENCE mandatory}
     ID id-SRNC-ID
                                    CRITICALITY reject TYPE RNC-ID
     ID id-S-RNTI
                                    CRITICALITY reject TYPE S-RNTI
                                                                                        PRESENCE mandatory }
                                                                                    PRESENCE optional } |
     ID id-D-RNTI
                                    CRITICALITY reject TYPE D-RNTI
                                        CRITICALITY reject TYPE AllowedQueuingTime
                                                                                                PRESENCE optional
     ID id-AllowedQueuingTime
     ID id-UL-DPCH-Information-RL-SetupRqstFDD CRITICALITY reject TYPE UL-DPCH-Information-RL-SetupRqstFDD
                                                                                                                 PRESENCE mandatory
                                                                                                                 PRESENCE mandatory
     ID id-DL-DPCH-Information-RL-SetupRqstFDD CRITICALITY reject TYPE DL-DPCH-Information-RL-SetupRqstFDD
                                                                                        PRESENCE mandatory }
     ID id-DCH-FDD-Information
                                    CRITICALITY reject TYPE DCH-FDD-Information
     ID id-DSCH-FDD-Information
                                    CRITICALITY reject TYPE DSCH-FDD-Information
                                                                                            PRESENCE optional
                                                                                                                 } |
     ID id-RL-Information-RL-SetupRgstFDD
                                                CRITICALITY notify TYPE RL-InformationList-RL-SetupRqstFDD
                                                                                                                 PRESENCE mandatory } |
     ID id-Transmission-Gap-Pattern-Sequence-Information
                                                                CRITICALITY reject TYPE Transmission-Gap-Pattern-Sequence-Information
                                                                                                                                          PRESENCE
    { ID id-Active-Pattern-Sequence-Information CRITICALITY reject TYPE Active-Pattern-Sequence-Information PRESENCE optional },
    . . .
UL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE
    ul-ScramblingCode
                                    UL-ScramblingCode,
    minUL-ChannelisationCodeLength
                                            MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPCHs
                                    MaxNrOfUL-DPCHs
                                                            OPTIONAL
    -- This IE shall be present if minUL-ChannelisationCodeLength equals to 4 -- ,
    ul-PunctureLimit
                                    PunctureLimit,
    ul-TFCS
                                    TFCS.
    ul-DPCCH-SlotFormat
                                    UL-DPCCH-SlotFormat,
    ul-SIRTarget
                                    UL-SIR
                                                    OPTIONAL,
    diversityMode
                                    DiversityMode,
    sSDT-CellIdLength
                                    SSDT-CellID-Length
                                                            OPTIONAL,
    s-FieldLength
                                    S-FieldLength
                                                            OPTIONAL,
                                    ProtocolExtensionContainer { {UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
UL-DPCH-Information-RL-SetupRgstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::=
    { ID id-DPC-Mode
                                    CRITICALITY reject
                                                            EXTENSION DPC-Mode PRESENCE optional },
    . . .
DL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
    dl-DPCH-SlotFormat
                                    DL-DPCH-SlotFormat,
    nrOfDLchannelisationcodes
                                    NrOfDLchannelisationcodes,
    tFCI-SignallingMode
                                    TFCI-SignallingMode,
    tFCI-Presence
                                    TFCI-Presence
                                                            OPTIONAL
    -- This IE shall be present if DL DPCH Slot Format IE is equal to any of the values from 12 to 16 --,
    multiplexingPosition
                                        MultiplexingPosition,
                                        PowerOffsetInformation-RL-SetupRgstFDD,
    powerOffsetInformation
    fdd-dl-TPC-DownlinkStepSize
                                    FDD-TPC-DownlinkStepSize,
    limitedPowerIncrease
                                    LimitedPowerIncrease,
    innerLoopDLPCStatus
                                    InnerLoopDLPCStatus,
```

```
ProtocolExtensionContainer { {DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
   iE-Extensions
DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::=
   -- This IE shall be present if the TFCI signalling mode is split --
   -- This IE shall be present if the split type is logical --
PowerOffsetInformation-RL-SetupRqstFDD ::= SEQUENCE {
      pol-ForTFCI-Bits
                                  PowerOffset.
      po2-ForTPC-Bits
                                  PowerOffset.
      po3-ForPilotBits
                                  PowerOffset.
                                  ProtocolExtensionContainer { { PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
      iE-Extensions
PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-InformationList-RL-SetupRqstFDD
                                      ::= SEOUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIEs-RL-
SetupRqstFDD} }
RL-InformationItemIEs-RL-SetupRqstFDD RNSAP-PROTOCOL-IES ::= {
   PRESENCE mandatory }
RL-InformationItem-RL-SetupRqstFDD ::= SEQUENCE {
   rL-ID
                               RL-ID,
   c-TD
                               C-ID,
   firstRLS-indicator
                               FirstRLS-Indicator,
   frameOffset
                               FrameOffset,
   chipOffset
                               ChipOffset,
                               PropagationDelay
   propagationDelay
                                                    OPTIONAL,
   diversityControlField
                               DiversityControlField
                                                       OPTIONAL
   -- This IE shall be present if the RL is not the first one in the RL-InformationList-RL-SetupRqstFDD --,
   dl-InitialTX-Power
                               DL-Power
                                                OPTIONAL,
   primaryCPICH-EcNo
                               PrimaryCPICH-EcNo
                                                       OPTIONAL.
   sSDT-CellID
                               SSDT-CellID
                                                OPTIONAL,
                               TransmitDiversityIndicator
   transmitDiversityIndicator
                                                           OPTIONAL,
   -- This IE shall be present unless Diversity Mode IE in UL DPCH Information group is "none"
                               ProtocolExtensionContainer { {RL-InformationItem-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
   iE-Extensions
   . . .
RL-InformationItem-RL-SetupRgstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-SSDT-CellIDforEDSCHPC CRITICALITY ignore EXTENSION SSDT-CellID
                                                                         PRESENCE conditional },
   -- This IE shall be present if Enhanced DSCH PC IE is present in the DSCH Information IE.
```

```
RadioLinkSetupRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-Permanent-NAS-UE-Identity
                                               CRITICALITY ignore
                                                                         EXTENSION Permanent-NAS-UE-Identity
                                                                                                            PRESENCE optional },
   -- RADIO LINK SETUP REQUEST TDD
  ******************
RadioLinkSetupRequestTDD ::= SEQUENCE {
   protocolIEs
                                 ProtocolIE-Container
                                                          {RadioLinkSetupRequestTDD-IEs}},
                                 ProtocolExtensionContainer {{RadioLinkSetupRequestTDD-Extensions}}
   protocolExtensions
                                                                                                               OPTIONAL,
RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
     ID id-SRNC-ID
                                                   CRITICALITY reject TYPE RNC-ID
                                                                                                                  PRESENCE mandatory}
     ID id-S-RNTI
                                                   CRITICALITY reject TYPE S-RNTI
                                                                                                                  PRESENCE mandatory }
     ID id-D-RNTI
                                                   CRITICALITY reject TYPE D-RNTI
                                                                                                                  PRESENCE optional }
     ID id-UL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject TYPE UL-Physical-Channel-Information-RL-SetupRqstTDD
                                                                                                                             PRESENCE
    { ID id-DL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject TYPE DL-Physical-Channel-Information-RL-SetupRqstTDD
                                                                                                                             PRESENCE
mandatory } |
     ID id-AllowedOueuingTime
                                                   CRITICALITY reject TYPE AllowedOueuingTime
                                                                                                                  PRESENCE optional }
     ID id-UL-CCTrCH-InformationList-RL-SetupRqstTDD
                                                  CRITICALITY notify TYPE UL-CCTrCH-InformationList-RL-SetupRqstTDD
                                                                                                                 PRESENCE optional
                                                                                                                 PRESENCE optional }
     ID id-DCH-TDD-Information
                                    CRITICALITY reject TYPE DCH-TDD-Information
                                                                                       PRESENCE optional
     ID id-DSCH-TDD-Information
                                    CRITICALITY reject TYPE DSCH-TDD-Information
                                                                                       PRESENCE optional
     ID id-USCH-Information
                                CRITICALITY reject TYPE USCH-Information
                                                                                PRESENCE optional }
    ID id-RL-Information-RL-SetupRqstTDD
                                                   CRITICALITY reject TYPE RL-Information-RL-SetupRqstTDD
                                                                                                                  PRESENCE mandatory },
   . . .
UL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
                                 MaxNrTimeslots,
   maxNrTimeslots-UL
                                 MinimumSpreadingFactor,
   minimumSpreadingFactor-UL
   maxNrULPhysicalchannels
                                 MaxNrULPhysicalchannels,
                                 ProtocolExtensionContainer { {UL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
   . . .
UL-Physical-Channel-InformationItem-RL-SetupRgstTDD-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {
DL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
   maxNrTimeslots-DL
                                 MaxNrTimeslots,
   minimumSpreadingFactor-DL
                                 MinimumSpreadingFactor,
   maxNrDLPhysicalchannels
                                 MaxNrDLPhysicalchannels,
   iE-Extensions
                                 ProtocolExtensionContainer { {DL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
   . . .
```

```
DL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
                                            ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
UL-CCTrCH-InformationList-RL-SetupRqstTDD
InformationItemIEs-RL-SetupRgstTDD} }
UL-CCTrCH-InformationItemIEs-RL-SetupRqstTDD RNSAP-PROTOCOL-IES ::= {
   UL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
                           CCTrCH-ID,
   cCTrCH-ID
   ul-TFCS
                           TFCS,
   tFCI-Coding
                           TFCI-Coding,
   ul-PunctureLimit
                              PunctureLimit,
                               ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-SetupRgstTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRgstTDD
                                                   CRITICALITY reject
                                                                        EXTENSION TDD-TPC-UplinkStepSize-LCR
                                                                                                             PRESENCE optional }.
   -- Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD
                                            ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
DL-CCTrCH-InformationList-RL-SetupRgstTDD
InformationItemIEs-RL-SetupRgstTDD} }
DL-CCTrCH-InformationItemIEs-RL-SetupRqstTDD RNSAP-PROTOCOL-IES ::= {
   DL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
   cCTrCH-ID
                           CCTrCH-ID,
   dl-TFCS
                           TFCS,
   tFCI-Coding
                           TFCI-Coding,
   dl-PunctureLimit
                              PunctureLimit,
                              TDD-TPC-DownlinkStepSize,
   tdd-TPC-DownlinkStepSize
   cCTrCH-TPCList
                              CCTrCH-TPCList-RL-SetupRqstTDD OPTIONAL,
                              ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
DL-CCTrCH-InformationItem-RL-SetupRgstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
CCTrCH-TPCList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCItem-RL-SetupRqstTDD
CCTrCH-TPCItem-RL-SetupRqstTDD
                           ::= SEQUENCE {
   cCTrCH-ID
                                  CCTrCH-ID,
```

```
ProtocolExtensionContainer { { CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-Information-RL-SetupRgstTDD ::= SEQUENCE {
   rL-ID
                             RL-ID,
   c-TD
                             C-ID,
   frameOffset
                             FrameOffset,
   specialBurstScheduling
                             SpecialBurstScheduling,
   primaryCCPCH-RSCP
                                 PrimaryCCPCH-RSCP
                                                        OPTIONAL.
   dL-TimeSlot-ISCP
                                 DL-TimeSlot-ISCP-Info
                                                       OPTIONAL,
   --for 3.84Mcps TDD only
                                 ProtocolExtensionContainer { {RL-Information-RL-SetupRgstTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
RL-Information-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-DL-Timeslot-ISCP-LCR-Information-RL-SetupRqstTDD
                                                                                             DL-TimeSlot-ISCP-LCR-Information PRESENCE
                                                           CRITICALITY reject
                                                                                  EXTENSION
optional }|
   { ID id-TSTD-Support-Indicator-RL-SetupRgstTDD
                                                           CRITICALITY ignore
                                                                                  EXTENSION
                                                                                             TSTD-Support-Indicator
                                                                                                                            PRESENCE
optional }|
   --for 1.28Mcps TDD only
   { ID id-UL-Synchronisation-Parameters-LCR
                                                   CRITICALITY ignore
                                                                          EXTENSION UL-Synchronisation-Parameters-LCR
                                                                                                                         PRESENCE
   optional }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
   . . .
RadioLinkSetupRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
     ID id-Permanent-NAS-UE-Identity
                                                CRITICALITY ignore
                                                                          EXTENSION Permanent-NAS-UE-Identity PRESENCE optional }
    ID id-PDSCH-RL-ID
                                                      EXTENSION RL-ID
                                                                              PRESENCE optional },
                          CRITICALITY ignore
    -- RADIO LINK SETUP RESPONSE FDD
  RadioLinkSetupResponseFDD ::= SEQUENCE {
                                                           {{RadioLinkSetupResponseFDD-IEs}},
   protocolIEs
                                 ProtocolIE-Container
                                 ProtocolExtensionContainer {{RadioLinkSetupResponseFDD-Extensions}}
   protocolExtensions
                                                                                                                 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-UL-SIRTarget
                                         CRITICALITY ignore TYPE UL-SIR
                                                                                       PRESENCE optional }
     ID id-CriticalityDiagnostics
                                         CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                             PRESENCE optional },
                                             ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-
RL-InformationResponseList-RL-SetupRspFDD
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,
   uRA-Information
                                  URA-Information
                                                     OPTIONAL,
    sAI
                                  SAI,
   qA-Cell
                                  GA-Cell
                                             OPTIONAL.
    gA-AccessPointPosition
                                  GA-AccessPointPosition
                                                             OPTIONAL.
    received-total-wide-band-power Received-total-wide-band-power,
    secondary-CCPCH-Info
                                  Secondary-CCPCH-Info
                                                             OPTIONAL,
    dl-CodeInformation
                                  FDD-DL-CodeInformation,
   diversityIndication
                                  DiversityIndication-RL-SetupRspFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator
                                  SSDT-SupportIndicator,
   maxUL-SIR
                                  UL-SIR,
   minUL-SIR
                                  UL-SIR,
    closedlooptimingadjustmentmode
                                  Closedlooptimingadjustmentmode OPTIONAL,
    maximumAllowedULTxPower
                                  MaximumAllowedULTxPower,
   maximumDLTxPower
                                  DL-Power,
   minimumDLTxPower
                                  DL-Power,
   primaryScramblingCode
                                  PrimaryScramblingCode
                                                         OPTIONAL,
   uL-UARFCN
                                  UARFCN
                                                         OPTIONAL,
    dL-UARFCN
                                  UARFCN
                                                         OPTIONAL,
    primaryCPICH-Power
                                  PrimaryCPICH-Power,
                                  DSCH-InformationResponse-RL-SetupRspFDD OPTIONAL,
   dSCHInformationResponse
    neighbouring-UMTS-CellInformation
                                     Neighbouring-UMTS-CellInformation OPTIONAL,
   neighbouring-GSM-CellInformation
                                      Neighbouring-GSM-CellInformation OPTIONAL,
   pC-Preamble
                                  PC-Preamble,
    sRB-Delay
                                  SRB-Delay,
                                  ProtocolExtensionContainer { {RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
   iE-Extensions
    . . .
RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-GA-CellAdditionalShapes
                                         CRITICALITY ignore EXTENSION GA-CellAdditionalShapes
                                                                                                  PRESENCE optional },
    . . .
DiversityIndication-RL-SetupRspFDD ::= CHOICE {
    combining
                                  Combining-RL-SetupRspFDD,
```

```
nonCombiningOrFirstRL
                                 NonCombiningOrFirstRL-RL-SetupRspFDD
Combining-RL-SetupRspFDD ::= SEQUENCE {
                             ProtocolExtensionContainer { { CombiningItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
   iE-Extensions
CombiningItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-DCH-InformationResponse
                                         CRITICALITY ignore EXTENSION DCH-InformationResponse
                                                                                                 PRESENCE optional },
   . . .
NonCombiningOrFirstRL-RL-SetupRspFDD ::= SEQUENCE {
   dCH-InformationResponse
                             DCH-InformationResponse,
                             ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
   iE-Extensions
NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DSCH-InformationResponse-RL-SetupRspFDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseIE-RL-SetupRspFDD }}
DSCH-InformationResponseIE-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    DSCH-FDD-InformationResponse PRESENCE mandatory }
RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-DSCH-RNTI
                                 CRITICALITY ignore
                                                           EXTENSION DSCH-RNTI
                                                                                  PRESENCE optional },
   . . .
-- RADIO LINK SETUP RESPONSE TDD
        RadioLinkSetupResponseTDD ::= SEQUENCE {
                                                           {{RadioLinkSetupResponseTDD-IEs}},
   protocolIEs
                                 ProtocolIE-Container
                                 ProtocolExtensionContainer {{RadioLinkSetupResponseTDD-Extensions}}
   protocolExtensions
                                                                                                                  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 optional }
   --Mandatory for 3.84Mcps TDD only
   { ID id-UL-SIRTarget
                                     CRITICALITY ignore TYPE UL-SIR
                                                                                  PRESENCE mandatory }
```

```
PRESENCE optional },
    { ID id-CriticalityDiagnostics
                                            CRITICALITY ignore TYPE CriticalityDiagnostics
RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rI.-ID
                                RL-ID.
    uRA-Information
                                URA-Information
                                                    OPTIONAL,
    sAI
                                SAI,
    qA-Cell
                                GA-Cell
                                            OPTIONAL,
    gA-AccessPointPosition
                                GA-AccessPointPosition OPTIONAL,
    ul-TimeSlot-ISCP-Info
                                UL-TimeSlot-ISCP-Info,
    maxUL-SIR
                                UL-SIR,
    minUL-SIR
                                UL-SIR.
    maximumAllowedULTxPower
                                MaximumAllowedULTxPower,
    maximumDLTxPower
                                DL-Power,
    minimumDLTxPower
                                DL-Power,
    uARFCNforNt
                                UARFCN
                                                     OPTIONAL,
    cellParameterID
                                CellParameterID
                                                    OPTIONAL,
    syncCase
                                SyncCase
                                                     OPTIONAL,
                                SCH-TimeSlot
    sCH-TimeSlot
                                                    OPTIONAL,
    -- This IE shall be present if Sync Case IE is Case2. --
                        SCTD-Indicator OPTIONAL,
    sCTD-Indicator
    pCCPCH-Power
                                PCCPCH-Power,
    timingAdvanceApplied
                                TimingAdvanceApplied,
    alphaValue
                                AlphaValue,
    ul-PhysCH-SF-Variation
                                UL-PhysCH-SF-Variation,
    synchronisationConfiguration
                                        SynchronisationConfiguration,
    secondary-CCPCH-Info-TDD
                                        Secondary-CCPCH-Info-TDD
                                                                     OPTIONAL,
    ul-CCTrCHInformation
                                        UL-CCTrCHInformationList-RL-SetupRspTDD
                                                                                     OPTIONAL,
    dl-CCTrCHInformation
                                        DL-CCTrCHInformationList-RL-SetupRspTDD
                                                                                     OPTIONAL,
    dCH-InformationResponse
                                        DCH-InformationResponseList-RL-SetupRspTDD
                                                                                    OPTIONAL,
    dsch-InformationResponse
                                        DSCH-InformationResponse-RL-SetupRspTDD OPTIONAL,
    usch-InformationResponse
                                        USCH-InformationResponse-RL-SetupRspTDD OPTIONAL,
    neighbouring-UMTS-CellInformation
                                                Neighbouring-UMTS-CellInformation OPTIONAL,
    neighbouring-GSM-CellInformation
                                                Neighbouring-GSM-CellInformation OPTIONAL,
                                    ProtocolExtensionContainer { {RL-InformationResponse-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
      ID id-GA-CellAdditionalShapes
                                                                                                         PRESENCE optional } |
                                            CRITICALITY ignore EXTENSION
                                                                            GA-CellAdditionalShapes
     ID id-TimeSlot-RL-SetupRspTDD
                                        CRITICALITY ignore EXTENSION
                                                                       TimeSlot
                                                                                     PRESENCE conditional \},
    -- This IE shall be present if Sync Case IE is Case1. --
UL-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{UL-CCTrCHInformationListIEs-RL-SetupRspTDD}}
UL-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationListIE-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 {
   cCTrCH-ID
                             CCTrCH-ID.
   ul-DPCH-Information
                                 UL-DPCH-InformationList-RL-SetupRspTDD
                                                                          OPTIONAL.
   iE-Extensions
                                 ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-DPCH-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {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
   repetitionPeriod
                                 RepetitionPeriod,
   repetitionLength
                                 RepetitionLength,
   tDD-DPCHOffset
                                 TDD-DPCHOffset,
   uL-Timeslot-Information
                                 UL-Timeslot-Information,
   iE-Extensions
                                 ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL.
UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DL-CCTrCHInformationListIEs-RL-SetupRspTDD}}
DL-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
   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
                                                                          OPTIONAL.
                                 ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-DPCH-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {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
```

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DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE
   repetitionPeriod
                                  RepetitionPeriod,
   repetitionLength
                                  RepetitionLength,
                                  TDD-DPCHOffset,
   tDD-DPCHOffset
   dL-Timeslot-Information
                                  DL-Timeslot-Information,
   iE-Extensions
                                   ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DCH-InformationResponseListIEs-RL-SetupRspTDD}}
DCH-InformationResponseListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    TYPE DCH-InformationResponse PRESENCE mandatory }
DSCH-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DSCH-InformationList-RL-SetupRspTDD}}
DSCH-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationListIEs-RL-SetupRspTDD
                                                      CRITICALITY ignore TYPE DSCH-InformationListIEs-RL-SetupRspTDD PRESENCE mandatory }
DSCH-InformationListIEs-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCHInformationItem-RL-SetupRspTDD
DSCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
   dsch-ID
                          DSCH-ID.
   dSCH-FlowControlInformation
                                  DSCH-FlowControlInformation,
   bindingID
                          BindingID OPTIONAL,
    transportLayerAddress TransportLayerAddress OPTIONAL,
    transportFormatManagement TransportFormatManagement,
   iE-Extensions
                          ProtocolExtensionContainer { {DSCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
DSCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
USCH-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{USCH-InformationList-RL-SetupRspTDD}}
USCH-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
     ID id-USCH-InformationListIEs-RL-SetupRspTDD
                                                      CRITICALITY ignore TYPE USCH-InformationListIEs-RL-SetupRspTDD PRESENCE mandatory }
USCH-InformationListIEs-RL-SetupRspTDD ::= SEOUENCE (SIZE(0..maxNoOfUSCHs)) OF USCHInformationItem-RL-SetupRspTDD
USCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
   usch-ID
                              USCH-ID,
   bindingID
                               BindingID OPTIONAL,
```

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transportLayerAddress
                                TransportLayerAddress OPTIONAL,
    transportFormatManagement
                                TransportFormatManagement,
    iE-Extensions
                                ProtocolExtensionContainer { {USCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
USCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RadioLinkSetupResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-RL-LCR-InformationResponse-RL-SetupRspTDD CRITICALITY ignore EXTENSION
                                                                                         RL-LCR-InformationResponse-RL-SetupRspTDD
                                                                                                                                       PRESENCE
optional}|
    -- Mandatory for 1.28Mcps TDD only
    { ID id-DSCH-RNTI
                                    CRITICALITY ignore
                                                                                         PRESENCE optional },
                                                                 EXTENSION DSCH-RNTI
RL-LCR-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID
                                RL-ID,
    uRA-Information
                                URA-Information,
    sAI
                                SAI,
    qA-Cell
                                GA-Cell
                                            OPTIONAL,
    qA-AccessPointPosition
                                GA-AccessPointPosition OPTIONAL,
    ul-TimeSlot-ISCP-LCR-Info
                                UL-TimeSlot-ISCP-LCR-Info,
                                UL-SIR.
    maxUL-SIR
    minUL-SIR
                                UL-SIR,
    maximumAllowedULTxPower
                                MaximumAllowedULTxPower,
    maximumDLTxPower
                                DL-Power,
    minimumDLTxPower
                                DL-Power,
    uARFCNforNt
                                UARECN
                                                         OPTIONAL,
                                                         OPTIONAL,
    cellParameterID
                                CellParameterID
    sCTD-Indicator
                        SCTD-Indicator OPTIONAL,
    pCCPCH-Power
                                PCCPCH-Power,
    alphaValue
                                AlphaValue,
    ul-PhysCH-SF-Variation
                                UL-PhysCH-SF-Variation,
    synchronisationConfiguration
                                            SynchronisationConfiguration,
    secondary-LCR-CCPCH-Info-TDD
                                            Secondary-LCR-CCPCH-Info-TDD
                                                                                             OPTIONAL,
    ul-LCR-CCTrCHInformation
                                            UL-LCR-CCTrCHInformationList-RL-SetupRspTDD
                                                                                             OPTIONAL,
    dl-LCR-CCTrCHInformation
                                            DL-LCR-CCTrCHInformationList-RL-SetupRspTDD
                                                                                             OPTIONAL,
    dCH-InformationResponse
                                            DCH-InformationResponseList-RL-SetupRspTDD
                                                                                             OPTIONAL,
    dsch-LCR-InformationResponse
                                            DSCH-LCR-InformationResponse-RL-SetupRspTDD
                                                                                             OPTIONAL,
                                            USCH-LCR-InformationResponse-RL-SetupRspTDD
    usch-LCR-InformationResponse
                                                                                             OPTIONAL,
                                            Neighbouring-UMTS-CellInformation
    neighbouring-UMTS-CellInformation
                                                                                             OPTIONAL,
    neighbouring-GSM-CellInformation
                                            Neighbouring-GSM-CellInformation
                                                                                             OPTIONAL,
    iE-Extensions
                                            ProtocolExtensionContainer { RL-LCR-InformationResponseList-RL-SetupRspTDD-ExtIEs} }
                                                                                                                                       OPTIONAL,
    . . .
RL-LCR-InformationResponseList-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
      ID id-GA-CellAdditionalShapes
                                            CRITICALITY ignore EXTENSION
                                                                            GA-CellAdditionalShapes
                                                                                                         PRESENCE optional }
     ID id-UL-TimingAdvanceCtrl-LCR
                                            CRITICALITY ignore EXTENSION
                                                                            UL-TimingAdvanceCtrl-LCR
                                                                                                         PRESENCE optional },
    --Mandatory for 1.28Mcps TDD only
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UL-LCR-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{UL-LCR-CCTrCHInformationListIEs-RL-SetupRspTDD}}
UL-LCR-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD CRITICALITY ignore TYPE UL-LCR-CCTrCHInformationListIE-RL-SetupRspTDD
                                                                                                                                    PRESENCE
mandatory }
UL-LCR-CCTrCHInformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHsLCR)) OF UL-LCR-CCTrCHInformationItem-RL-SetupRspTDD
UL-LCR-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID
                               CCTrCH-ID.
    ul-DPCH-LCR-Information UL-DPCH-LCR-InformationList-RL-SetupRspTDD
                                                                                OPTIONAL.
                               ProtocolExtensionContainer { {UL-LCR-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
UL-LCR-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-DPCH-LCR-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { (UL-DPCH-LCR-InformationListIEs-RL-SetupRspTDD) }
UL-DPCH-LCR-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
     ID id-UL-DPCH-LCR-InformationItem-RL-SetupRspTDD
                                                           CRITICALITY ignore TYPE UL-DPCH-LCR-InformationItem-RL-SetupRspTDD PRESENCE mandatory
UL-DPCH-LCR-InformationItem-RL-SetupRspTDD ::= SEQUENCE
    repetitionPeriod
                                   RepetitionPeriod,
    repetitionLength
                                   RepetitionLength,
    tDD-DPCHOffset
                                   TDD-DPCHOffset,
                                   UL-TimeslotLCR-Information,
    uL-TimeslotLCR-Information
    iE-Extensions
                                    ProtocolExtensionContainer { {UL-DPCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL.
UL-DPCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-LCR-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DL-LCR-CCTrCHInformationListIEs-RL-SetupRspTDD}}
DL-LCR-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD CRITICALITY ignore TYPE DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD PRESENCE
mandatory }
DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHsLCR)) OF DL-CCTrCH-LCR-InformationItem-RL-SetupRspTDD
DL-CCTrCH-LCR-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID
                               CCTrCH-ID,
    dl-DPCH-LCR-Information
                               DL-DPCH-LCR-InformationList-RL-SetupRspTDD
                                                                               OPTIONAL,
                               ProtocolExtensionContainer { {DL-CCTrCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
```

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DL-CCTrCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-DPCH-LCR-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {DL-DPCH-LCR-InformationListIEs-RL-SetupRspTDD} }
DL-DPCH-LCR-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
     ID id-DL-DPCH-LCR-InformationItem-RL-SetupRspTDD
                                                            CRITICALITY ignore TYPE DL-DPCH-LCR-InformationItem-RL-SetupRspTDD PRESENCE mandatory
DL-DPCH-LCR-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    repetitionPeriod
                                   RepetitionPeriod,
    repetitionLength
                                   RepetitionLength,
    tDD-DPCHOffset
                                   TDD-DPCHOffset,
    dL-Timeslot-LCR-Information
                                   DL-TimeslotLCR-Information,
    tSTD-Indicator
                                    TSTD-Indicator,
    iE-Extensions
                                    ProtocolExtensionContainer { {DL-DPCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    . . .
DL-DPCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DSCH-LCR-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DSCH-LCR-InformationList-RL-SetupRspTDD}}
DSCH-LCR-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DSCH-LCR-InformationListIEs-RL-SetupRspTDD
                                                            CRITICALITY ignore TYPE DSCH-LCR-InformationListIEs-RL-SetupRspTDD PRESENCE mandatory
DSCH-LCR-InformationListIEs-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHsLCR)) OF DSCH-LCR-InformationItem-RL-SetupRspTDD
DSCH-LCR-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dsch-ID
                           DSCH-ID,
    dSCH-FlowControlInformation
                                   DSCH-FlowControlInformation,
    bindingID
                           BindingID OPTIONAL,
    transportLayerAddress TransportLayerAddress OPTIONAL,
    transportFormatManagement TransportFormatManagement,
    iE-Extensions
                           ProtocolExtensionContainer { {DSCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    . . .
DSCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
USCH-LCR-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{USCH-LCR-InformationList-RL-SetupRspTDD}}
USCH-LCR-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
```

```
{ ID id-USCH-LCR-InformationListIEs-RL-SetupRspTDD
                                                          CRITICALITY ignore TYPE USCH-LCR-InformationListIEs-RL-SetupRspTDD PRESENCE mandatory
USCH-LCR-InformationListIEs-RL-SetupRspTDD ::= SEOUENCE (SIZE(0..maxNoOfUSCHsLCR)) OF USCH-LCR-InformationItem-RL-SetupRspTDD
USCH-LCR-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
   usch-ID
                              USCH-ID,
   bindingID
                               BindingID OPTIONAL,
                               TransportLayerAddress
    transportLayerAddress
                                                      OPTIONAL,
    transportFormatManagement TransportFormatManagement,
   iE-Extensions
                               ProtocolExtensionContainer { {USCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
USCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
-- RADIO LINK SETUP FAILURE FDD
__ *******************
RadioLinkSetupFailureFDD ::= SEOUENCE {
                                                             {{RadioLinkSetupFailureFDD-IEs}},
   protocolIEs
                                   ProtocolIE-Container
   protocolExtensions
                                  ProtocolExtensionContainer {{RadioLinkSetupFailureFDD-Extensions}}
                                                                                                                     OPTIONAL,
RadioLinkSetupFailureFDD-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 }
                                                                            TYPE CauseLevel-RL-SetupFailureFDD
                                                                                                                   PRESENCE mandatory } |
     ID id-CauseLevel-RL-SetupFailureFDD
                                                      CRITICALITY ignore
     ID id-UL-SIRTarget
                                      CRITICALITY ignore TYPE UL-SIR
                                                                                     PRESENCE optional } |
     ID id-CriticalityDiagnostics
                                          CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                              PRESENCE optional },
CauseLevel-RL-SetupFailureFDD ::= CHOICE {
                       GeneralCauseList-RL-SetupFailureFDD,
   generalCause
                       RLSpecificCauseList-RL-SetupFailureFDD,
   rLSpecificCause
    . . .
GeneralCauseList-RL-SetupFailureFDD ::= SEQUENCE
   cause
                                              ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureFDD-ExtIEs} }
   iE-Extensions
GeneralCauseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::=
```

```
RLSpecificCauseList-RL-SetupFailureFDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespList-RL-SetupFailureFDD
                                                                UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
    successful-RL-InformationRespList-RL-SetupFailureFDD
                                                                Successful RL-Information Response List-RL-Setup Failure FDD OPTIONAL,
    iE-Extensions
                                                ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DSCH-RNTI
                                CRITICALITY ignore
                                                        EXTENSION DSCH-RNTI
                                                                                                 PRESENCE optional },
    . . .
UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {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 ::= SEOUENCE {
    rL-ID
                                RL-ID,
    cause
                                Cause.
                                    ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    iE-Extensions
UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
SuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (0..maxNrOfRLs-1)) OF ProtocolIE-Single-Container { {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
   rI.-ID
                                            RL-ID,
    rL-Set-ID
                                            RL-Set-ID.
    uRA-Information
                                            URA-Information
                                                                OPTIONAL
    sAI
                                            SAI,
    qA-Cell
                                            GA-Cell
                                                        OPTIONAL,
    gA-AccessPointPosition
                                            GA-AccessPointPosition
                                                                        OPTIONAL,
    received-total-wide-band-power
                                                                    Received-total-wide-band-power,
    secondary-CCPCH-Info
                                            Secondary-CCPCH-Info
                                                                        OPTIONAL,
    dl-CodeInformation
                                            FDD-DL-CodeInformation,
    diversityIndication
                                            DiversityIndication-RL-SetupFailureFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
```

```
-- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator
                                            SSDT-SupportIndicator,
    maxUL-SIR
                                            UL-SIR,
   minUL-SIR
                                            UL-SIR,
    closedlooptimingadjustmentmode
                                            Closedlooptimingadjustmentmode OPTIONAL,
    maximumAllowedULTxPower
                                            MaximumAllowedULTxPower,
    maximumDLTxPower
                                            DL-Power,
    minimumDLTxPower
                                            DL-Power,
    primaryCPICH-Power
                                            PrimaryCPICH-Power,
    primaryScramblingCode
                                            PrimaryScramblingCode OPTIONAL,
    uL-UARFCN
                                                    UARFCN
                                                                OPTIONAL,
    dL-UARFCN
                                                    UARFCN
                                                                OPTIONAL,
    dSCH-InformationResponse-RL-SetupFailureFDD
                                                    DSCH-InformationResponseList-RL-SetupFailureFDD
                                                                                                        OPTIONAL.
    neighbouring-UMTS-CellInformation
                                            Neighbouring-UMTS-CellInformation OPTIONAL,
    neighbouring-GSM-CellInformation
                                            Neighbouring-GSM-CellInformation OPTIONAL,
    pC-Preamble
                                            PC-Preamble,
                                            SRB-Delay,
    sRB-Delay
                                            ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-GA-CellAdditionalShapes
                                                                                                        PRESENCE optional },
                                            CRITICALITY ignore EXTENSION GA-CellAdditionalShapes
    . . .
DiversityIndication-RL-SetupFailureFDD ::= CHOICE {
    combining
                                    Combining-RL-SetupFailureFDD,
    nonCombiningOrFirstRL
                                NonCombiningOrFirstRL-RL-SetupFailureFDD
Combining-RL-SetupFailureFDD ::= SEQUENCE {
                                RL-ID,
                                ProtocolExtensionContainer { { CombiningItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    iE-Extensions
CombiningItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DCH-InformationResponse
                                            CRITICALITY ignore EXTENSION DCH-InformationResponse
                                                                                                        PRESENCE optional },
    . . .
NonCombiningOrFirstRL-RL-SetupFailureFDD ::= SEQUENCE {
    dCH-InformationResponse
                                            DCH-InformationResponse,
                                            ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL.
    iE-Extensions
NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DSCH-InformationResponseList-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-SetupFailureFDD }}
```

```
DSCH-InformationResponseListIEs-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
   PRESENCE mandatory }
RadioLinkSetupFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
-- RADIO LINK SETUP FAILURE TDD
__ *********************
RadioLinkSetupFailureTDD ::= SEOUENCE {
   protocolIEs
                               ProtocolIE-Container
                                                       {{RadioLinkSetupFailureTDD-IEs}},
                               ProtocolExtensionContainer {{RadioLinkSetupFailureTDD-Extensions}}
   protocolExtensions
                                                                                                        OPTIONAL,
RadioLinkSetupFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
     PRESENCE mandatory } |
   { ID id-CriticalityDiagnostics
                                     CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                    PRESENCE optional },
   . . .
CauseLevel-RL-SetupFailureTDD ::= CHOICE {
   generalCause
                    GeneralCauseList-RL-SetupFailureTDD,
   rLSpecificCause
                    RLSpecificCauseList-RL-SetupFailureTDD,
GeneralCauseList-RL-SetupFailureTDD ::= SEQUENCE {
   iE-Extensions
                           ProtocolExtensionContainer { GeneralCauseItem-RL-SetupFailureTDD-ExtIEs} }
                                                                                                 OPTIONAL,
GeneralCauseItem-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::=
RLSpecificCauseList-RL-SetupFailureTDD ::= SEQUENCE {
   unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD Unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD,
                                                   ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureTDD-ExtIEs} }
   iE-Extensions
   OPTIONAL,
   . . .
RLSpecificCauseItem-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

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```
Unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD ::= ProtocolIE-Single-Container { {Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD}
Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD RNSAP-PROTOCOL-IES ::= {
          id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD
                                                                      CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
SetupFailureTDD
                  PRESENCE
                             mandatory
UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD ::= SEQUENCE {
   rL-ID
                             RL-ID,
   cause
                             Cause,
                                 ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
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}},
                                 ProtocolExtensionContainer {{RadioLinkAdditionRequestFDD-Extensions}}
   protocolExtensions
                                                                                                                    OPTIONAL,
   . . .
RadioLinkAdditionRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
     ID id-UL-SIRTarget
                                     CRITICALITY reject TYPE UL-SIR
                                                                                  PRESENCE mandatory }
     ID id-RL-InformationList-RL-AdditionRqstFDD CRITICALITY notify TYPE RL-InformationList-RL-AdditionRqstFDD PRESENCE mandatory
     ID id-Active-Pattern-Sequence-Information CRITICALITY reject TYPE Active-Pattern-Sequence-Information PRESENCE optional },
   . . .
RL-InformationList-RL-AdditionRqstFDD
                                          ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container { {RL-Information-RL-
AdditionRqstFDD-IEs} }
RL-Information-RL-AdditionRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-AdditionRqstFDD CRITICALITY notify TYPE RL-Information-RL-AdditionRqstFDD PRESENCE mandatory
RL-Information-RL-AdditionRgstFDD ::= 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-AdditionRgstFDD-ExtIEs} } OPTIONAL,
RL-Information-RL-AdditionRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RadioLinkAdditionRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
     ID id-DPC-Mode
                                  CRITICALITY reject
                                                         EXTENSION DPC-Mode
                                                                                    PRESENCE optional } |
    { ID id-Permanent-NAS-UE-Identity
                                                 CRITICALITY ignore
                                                                            EXTENSION Permanent-NAS-UE-Identity
                                                                                                                PRESENCE optional },
  -- RADIO LINK ADDITION REQUEST TDD
  ******************
RadioLinkAdditionRequestTDD ::= SEQUENCE {
                                  ProtocolIE-Container
                                                            {{RadioLinkAdditionRequestTDD-IEs}},
   protocolIEs
                                  ProtocolExtensionContainer {{RadioLinkAdditionRequestTDD-Extensions}}
   protocolExtensions
                                                                                                                      OPTIONAL,
RadioLinkAdditionRequestTDD-IES RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-AdditionRqstTDD CRITICALITY reject TYPE RL-Information-RL-AdditionRqstTDD
                                                                                                        PRESENCE mandatory },
   . . .
RL-Information-RL-AdditionRgstTDD ::= SEQUENCE {
                                  RL-ID,
   c-ID
                                  C-ID,
    frameOffset
                                  FrameOffset,
   diversityControlField
                                  DiversityControlField,
   primaryCCPCH-RSCP
                                  PrimaryCCPCH-RSCP
                                                         OPTIONAL,
   dL-TimeSlot-ISCP-Info
                                  DL-TimeSlot-ISCP-Info
                                                        OPTIONAL,
    -- for 3.84Mcps TDD only
                                  ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
    . . .
RL-Information-RL-AdditionRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-Timeslot-ISCP-LCR-Information-RL-AdditionRqstTDD CRITICALITY reject
                                                                                               DL-TimeSlot-ISCP-LCR-Information
                                                                                    EXTENSION
                                                                                                                                 PRESENCE
optional }|
    --for 1.28Mcps TDD only
    { ID id-UL-Synchronisation-Parameters-LCR
                                                     CRITICALITY ignore
                                                                            EXTENSION
                                                                                       UL-Synchronisation-Parameters-LCR
                                                                                                                            PRESENCE
   optional }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    . . .
```

```
RadioLinkAdditionRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ID id-Permanent-NAS-UE-Identity
                                                   CRITICALITY ignore EXTENSION Permanent-NAS-UE-Identity PRESENCE optional }
   { ID id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD
                                                  CRITICALITY notify EXTENSION UL-CCTrCH-InformationList-RL-AdditionRgstTDD PRESENCE
optional } |
   { ID id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD
                                                  CRITICALITY notify EXTENSION DL-CCTrCH-InformationList-RL-AdditionRqstTDD PRESENCE
optional }, ...
                                        ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
UL-CCTrCH-InformationList-RL-AdditionRqstTDD
InformationItemIEs-RL-AdditionRqstTDD} }
UL-CCTrCH-InformationItemIEs-RL-AdditionRgstTDD RNSAP-PROTOCOL-IES ::= {
   optional},
   . . .
UL-CCTrCH-InformationItem-RL-AdditionRgstTDD ::= SEQUENCE {
   cCTrCH-ID
                          CCTrCH-ID,
   uplinkStepSizeLCR
                           TDD-TPC-UplinkStepSize-LCR OPTIONAL,
   -- Applicable to 1.28Mcps TDD only
   iE-Extensions
                           ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-AdditionRgstTDD-ExtIEs} } OPTIONAL.
UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-CCTrCH-InformationList-RL-AdditionRqstTDD
                                           ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
InformationItemIEs-RL-AdditionRqstTDD} }
DL-CCTrCH-InformationItemIEs-RL-AdditionRgstTDD RNSAP-PROTOCOL-IES ::= {
   optional }.
   . . .
DL-CCTrCH-InformationItem-RL-AdditionRgstTDD ::= SEQUENCE {
   cCTrCH-ID
                           CCTrCH-ID.
   downlinkStepSize
                           TDD-TPC-DownlinkStepSize OPTIONAL,
                           ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
   . . .
DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs 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-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
                                                   ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container { {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 ::= SEOUENCE {
    rL-ID
                                   RL-ID,
    rL-Set-ID
                                   RL-Set-ID,
    uRA-Information
                                   URA-Information
                                                       OPTIONAL,
    sAI
                                   SAI.
    qA-Cell
                                   GA-Cell
                                               OPTIONAL,
                                   GA-AccessPointPosition OPTIONAL,
    qA-AccessPointPosition
    received-total-wide-band-power Received-total-wide-band-power,
    secondary-CCPCH-Info
                                   Secondary-CCPCH-Info
                                                               OPTIONAL,
    dl-CodeInformation
                                   DL-CodeInformationList-RL-AdditionRspFDD,
    diversityIndication
                                   DiversityIndication-RL-AdditionRspFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator
                                       SSDT-SupportIndicator,
    minUL-SIR
                                       UL-SIR,
    maxUL-SIR
                                       UL-SIR,
    closedlooptimingadjustmentmode
                                       Closedlooptimingadjustmentmode OPTIONAL,
    maximumAllowedULTxPower
                                       MaximumAllowedULTxPower,
    maximumDLTxPower
                                       DL-Power.
    minimumDLTxPower
                                       DL-Power,
    neighbouring-UMTS-CellInformation
                                       Neighbouring-UMTS-CellInformation OPTIONAL,
    neighbouring-GSM-CellInformation
                                       Neighbouring-GSM-CellInformation OPTIONAL,
    pC-Preamble
                                       PC-Preamble,
    sRB-Delav
                                       SRB-Delay,
                                       PrimaryCPICH-Power,
    primaryCPICH-Power
    iE-Extensions
                                       ProtocolExtensionContainer { {RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
    . . .
RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-GA-CellAdditionalShapes
                                                                                                      PRESENCE optional },
                                           CRITICALITY ignore EXTENSION GA-CellAdditionalShapes
```

```
DL-CodeInformationList-RL-AdditionRspFDD ::= ProtocolIE-Single-Container {{ DL-CodeInformationListIEs-RL-AdditionRspFDD }}
DL-CodeInformationListIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    PRESENCE mandatory }
DiversityIndication-RL-AdditionRspFDD ::= CHOICE
                                Combining-RL-AdditionRspFDD,
   combining
   nonCombining
                                NonCombining-RL-AdditionRspFDD
Combining-RL-AdditionRspFDD ::= SEQUENCE {
   rL-ID
                             ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
   iE-Extensions
CombiningItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-DCH-InformationResponse
                                        CRITICALITY ignore EXTENSION DCH-InformationResponse
                                                                                               PRESENCE optional },
NonCombining-RL-AdditionRspFDD ::= SEQUENCE
   dCH-InformationResponse
                                        DCH-InformationResponse,
   iE-Extensions
                                            ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
   . . .
NonCombiningItem-RL-AdditionRspFDD-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 optional }
```

```
-- Mandatory for 3.84Mcps TDD only
    { ID id-CriticalityDiagnostics
                                          CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                             PRESENCE optional },
    . . .
RL-InformationResponse-RL-AdditionRspTDD ::= SEOUENCE {
   rI-TD
                                      RL-ID,
   uRA-Information
                                      URA-Information
                                                         OPTIONAL,
   SAT
                                      SAT.
   qA-Cell
                                      GA-Cell
                                                 OPTIONAL,
   gA-AccessPointPosition
                                      GA-AccessPointPosition OPTIONAL,
    ul-TimeSlot-ISCP-Info
                                      UL-TimeSlot-ISCP-Info,
   minUL-SIR
                                      UL-SIR.
   maxUL-SIR
                                      UL-SIR.
                                      MaximumAllowedULTxPower,
   maximumAllowedULTxPower
   maximumDLTxPower
                                      DL-Power,
   minimumDLTxPower
                                      DL-Power,
   pCCPCH-Power
                                      PCCPCH-Power,
    timingAdvanceApplied
                                      TimingAdvanceApplied,
    alphaValue
                                      AlphaValue,
    ul-PhysCH-SF-Variation
                                      UL-PhysCH-SF-Variation,
    synchronisationConfiguration
                                      SynchronisationConfiguration,
    secondary-CCPCH-Info-TDD
                                      Secondary-CCPCH-Info-TDD
                                                                                    OPTIONAL,
    ul-CCTrCHInformation
                                      UL-CCTrCHInformationList-RL-AdditionRspTDD
                                                                                    OPTIONAL,
   dl-CCTrCHInformation
                                      DL-CCTrCHInformationList-RL-AdditionRspTDD
                                                                                    OPTIONAL,
    dCH-Information
                                      DCH-Information-RL-AdditionRspTDD
                                                                                    OPTIONAL,
                                      DSCH-InformationResponse-RL-AdditionRspTDD
   dSCH-InformationResponse
                                                                                    OPTIONAL,
    uSCH-InformationResponse
                                      USCH-InformationResponse-RL-AdditionRspTDD
                                                                                    OPTIONAL,
                                      Neighbouring-UMTS-CellInformation OPTIONAL,
    neighbouring-UMTS-CellInformation
                                      Neighbouring-GSM-CellInformation OPTIONAL,
   neighbouring-GSM-CellInformation
                                      ProtocolExtensionContainer { {RL-InformationResponse-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
RL-InformationResponse-RL-AdditionRspTDD-ExtlEs RNSAP-PROTOCOL-EXTENSION ::= {
                                          CRITICALITY ignore EXTENSION GA-CellAdditionalShapes
    { ID id-GA-CellAdditionalShapes
                                                                                                   PRESENCE optional },
UL-CCTrCHInformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{UL-CCTrCHInformationListIEs-RL-AdditionRspTDD}}
UL-CCTrCHInformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    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-InformationList-RL-AdditionRspTDD
   ul-DPCH-Information
                                                                                OPTIONAL,
   iE-Extensions
                                  ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
```

```
UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-DPCH-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container { {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 {
    repetitionPeriod
                                   RepetitionPeriod,
                                   RepetitionLength,
    repetitionLength
    tDD-DPCHOffset
                                   TDD-DPCHOffset,
    uL-Timeslot-Information
                                   UL-Timeslot-Information,
                                    ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {
DL-CCTrCHInformationList-RL-AdditionRspTDD ::= ProtocoliE-Single-Container {{DL-CCTrCHInformationListIEs-RL-AdditionRspTDD}}
DL-CCTrCHInformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationListIE-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 ::= SEOUENCE {
    cCTrCH-ID
                               CCTrCH-ID,
    dl-DPCH-Information
                                   DL-DPCH-InformationList-RL-AdditionRspTDD
                                                                                    OPTIONAL,
                                    ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-DPCH-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container { {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 {
    repetitionPeriod
                                   RepetitionPeriod,
```

```
repetitionLength
                                  RepetitionLength,
    t.DD-DPCHOffset.
                                  TDD-DPCHOffset.
    dL-Timeslot-Information
                                  DL-Timeslot-Information.
    iE-Extensions
                                  ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    . . .
DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {
DCH-Information-RL-AdditionRspTDD ::= SEQUENCE {
    diversityIndication
                                     DiversityIndication-RL-AdditionRspTDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    iE-Extensions
                                  ProtocolExtensionContainer { { DCH-Information-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    . . .
DCH-Information-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DiversityIndication-RL-AdditionRspTDD ::= CHOICE {
    combining
                  Combining-RL-AdditionRspTDD,
    nonCombining
                  NonCombining-RL-AdditionRspTDD
Combining-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID
    iE-Extensions
                              ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
CombiningItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DCH-InformationResponse
                                         CRITICALITY ignore EXTENSION DCH-InformationResponse
                                                                                                  PRESENCE optional },
NonCombining-RL-AdditionRspTDD ::= SEOUENCE {
    dCH-InformationResponse
                              DCH-InformationResponse,
                                  ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
NonCombiningItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DSCH-InformationResponse-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{DSCH-InformationListIEs-RL-AdditionRspTDD}}
DSCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    PRESENCE mandatory }
```

```
DSCH-InformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCHInformationItem-RL-AdditionRspTDD
DSCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
                          DSCH-ID.
   transportFormatManagement TransportFormatManagement,
   dSCH-FlowControlInformation
                                  DSCH-FlowControlInformation,
    diversityIndication
                          DiversityIndication-RL-AdditionRspTDD2 OPTIONAL.
    -- diversityIndication present, if CHOICE = nonCombining
                          ProtocolExtensionContainer { {DSCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
DSCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DiversityIndication-RL-AdditionRspTDD2 ::= SEQUENCE {
   bindingID
                          BindingID OPTIONAL,
   transportLayerAddress TransportLayerAddress OPTIONAL,
   iE-Extensions
                          ProtocolExtensionContainer { {DiversityIndication-RL-AdditionRspTDD2-ExtIEs} } OPTIONAL,
DiversityIndication-RL-AdditionRspTDD2-ExtlEs RNSAP-PROTOCOL-EXTENSION ::= {
USCH-InformationResponse-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{USCH-InformationListIEs-RL-AdditionRspTDD}}
USCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-USCH-InformationListIE-RL-AdditionRspTDD
                                                   CRITICALITY ignore TYPE USCH-InformationListIE-RL-AdditionRspTDD
                                                                                                                       PRESENCE mandatory
USCH-InformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCHInformationItem-RL-AdditionRspTDD
USCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
   uSCH-ID
                          USCH-ID,
    transportFormatManagement TransportFormatManagement,
                          DiversityIndication-RL-AdditionRspTDD2 OPTIONAL,
   diversityIndication
    -- diversityIndication present, if CHOICE = nonCombining
                          ProtocolExtensionContainer { {USCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
    . . .
USCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RadioLinkAdditionResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    EXTENSION RL-LCR-InformationResponse-RL-AdditionRspTDD
    PRESENCE optional },
   --Mandatory for 1.28Mcps TDD only
```

```
RL-LCR-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
   rL-ID
                             RL-ID.
   uRA-Information
                             URA-Information.
   sAI
                             SAI.
                             GA-Cell
                                        OPTIONAL,
   qA-Cell
                             GA-AccessPointPosition OPTIONAL,
   gA-AccessPointPosition
   ul-TimeSlot-ISCP-LCR-Info
                             UL-TimeSlot-ISCP-LCR-Info,
   maxIII.-STR
                             UL-SIR,
   minUL-SIR
                             UL-SIR,
                             PCCPCH-Power,
   pCCPCH-Power
   maximumAllowedULTxPower
                             MaximumAllowedULTxPower,
   maximumDLTxPower
                             DL-Power.
   minimumDLTxPower
                             DL-Power.
   alphaValue
                             AlphaValue,
   ul-PhysCH-SF-Variation
                             UL-PhysCH-SF-Variation,
                                    SynchronisationConfiguration,
   synchronisationConfiguration
   secondary-LCR-CCPCH-Info-TDD
                                    Secondary-LCR-CCPCH-Info-TDD
                                                                                    OPTIONAL,
   ul-CCTrCH-LCR-Information
                                    UL-CCTrCH-LCR-InformationList-RL-AdditionRspTDD
                                                                                     OPTIONAL,
   dl-CCTrCH-LCR-Information
                                    DL-CCTrCH-LCR-InformationList-RL-AdditionRspTDD
                                                                                    OPTIONAL,
   dCH-InformationResponse
                                    DCH-InformationResponseList-RL-AdditionRspTDD
                                                                                    OPTIONAL,
   dsch-LCR-InformationResponse
                                    DSCH-LCR-InformationResponse-RL-AdditionRspTDD
                                                                                    OPTIONAL,
                                        USCH-LCR-InformationResponse-RL-AdditionRspTDD
   usch-LCR-InformationResponse
                                                                                       OPTIONAL,
   neighbouring-UMTS-CellInformation
                                            Neighbouring-UMTS-CellInformation
                                                                                        OPTIONAL
   neighbouring-GSM-CellInformation
                                            Neighbouring-GSM-CellInformation
                                                                                      OPTIONAL,
   iE-Extensions
                                            OPTIONAL,
RL-LCR-InformationResponseList-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::=
     ID id-GA-CellAdditionalShapes
                                        CRITICALITY ignore EXTENSION
                                                                    GA-CellAdditionalShapes
                                                                                               PRESENCE optional } |
    ID id-UL-TimingAdvanceCtrl-LCR
                                        CRITICALITY ignore EXTENSION UL-TimingAdvanceCtrl-LCR
                                                                                               PRESENCE optional },
   -- Mandatory for 1.28Mcps TDD only
   . . .
UL-CCTrCH-LCR-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{UL-CCTrCH-LCR-InformationListIEs-RL-AdditionRspTDD }}
UL-CCTrCH-LCR-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    PRESENCE mandatory }
UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHsLCR)) OF UL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD
UL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD ::= SEOUENCE {
   CCTrCH-ID
                             CCTrCH-ID,
   ul-DPCH-LCR-Information
                                    UL-DPCH-LCR-InformationList-RL-AdditionRspTDD
                                                                                     OPTIONAL,
                                 ProtocolExtensionContainer { {UL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
UL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
UL-DPCH-LCR-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container { {UL-DPCH-LCR-InformationListIEs-RL-AdditionRspTDD} }
UL-DPCH-LCR-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
   { ID id-UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD
                                                           CRITICALITY ignore TYPE UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD PRESENCE
mandatory }
UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
   repetitionPeriod
                                 RepetitionPeriod,
   repetitionLength
                                 RepetitionLength,
   tDD-DPCHOffset
                                 TDD-DPCHOffset,
   uL-TimeslotLCR-Information
                                 UL-TimeslotLCR-Information,
   iE-Extensions
                                 ProtocolExtensionContainer { {UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
   . . .
UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-CCTrCH-LCR-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{DL-CCTrCH-LCR-InformationListIEs-RL-AdditionRspTDD}}
DL-CCTrCH-LCR-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
   PRESENCE mandatory }
DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHsLCR)) OF DL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD
DL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
                             CCTrCH-ID,
   cCTrCH-ID
   dl-DPCH-LCR-Information
                           DL-DPCH-LCR-InformationList-RL-AdditionRspTDD
                                                                              OPTIONAL,
   iE-Extensions
                             ProtocolExtensionContainer { {DL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
DL-CCTrCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-DPCH-LCR-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container { {DL-DPCH-LCR-InformationListIEs-RL-AdditionRspTDD} }
DL-DPCH-LCR-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
   { ID id-DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD
                                                           CRITICALITY ignore TYPE DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD PRESENCE
mandatory }
DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
   repetitionPeriod
                                 RepetitionPeriod,
   repetitionLength
                                 RepetitionLength,
                                 TDD-DPCHOffset,
   tDD-DPCHOffset
```

```
dL-TimeslotLCR-Information
                                   DL-TimeslotLCR-Information,
    tSTD-Indicator
                                   TSTD-Indicator.
   iE-Extensions
                                   ProtocolExtensionContainer { {DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{DCH-InformationResponseListIEs-RL-AdditionRspTDD}}
DCH-InformationResponseListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    TYPE DCH-InformationResponse PRESENCE mandatory }
DSCH-LCR-InformationResponse-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{DSCH-LCR-InformationList-RL-AdditionRspTDD}}
DSCH-LCR-InformationList-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DSCH-LCR-InformationListIEs-RL-AdditionRspTDD
                                                              CRITICALITY ignore TYPE DSCH-LCR-InformationListIEs-RL-AdditionRspTDD PRESENCE
mandatory }
DSCH-LCR-InformationListIEs-RL-AdditionRspTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHsLCR)) OF DSCH-LCR-InformationItem-RL-AdditionRspTDD
DSCH-LCR-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
   dsch-ID
                           DSCH-ID,
   dSCH-FlowControlInformation
                                   DSCH-FlowControlInformation,
   bindingID
                           BindingID OPTIONAL,
    transportLayerAddress
                          TransportLayerAddress
                                                  OPTIONAL,
    transportFormatManagement TransportFormatManagement,
                           ProtocolExtensionContainer { {DSCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
    . . .
DSCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
USCH-LCR-InformationResponse-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{USCH-LCR-InformationList-RL-AdditionRspTDD}}
USCH-LCR-InformationList-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-USCH-LCR-InformationListIEs-RL-AdditionRspTDD
                                                              CRITICALITY ignore TYPE USCH-LCR-InformationListIEs-RL-AdditionRspTDD PRESENCE
mandatory }
USCH-LCR-InformationListIEs-RL-AdditionRspTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHsLCR)) OF USCH-LCR-InformationItem-RL-AdditionRspTDD
USCH-LCR-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    usch-ID
                               USCH-ID,
    transportFormatManagement
                               TransportFormatManagement,
    diversityIndication
                               DiversityIndication-RL-AdditionRspTDD2
                                                                          OPTIONAL,
    iE-Extensions
                               ProtocolExtensionContainer { {USCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    . . .
```

```
USCH-LCR-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
-- RADIO LINK ADDITION FAILURE FDD
  *****************
RadioLinkAdditionFailureFDD ::= SEQUENCE {
    protocolIEs
                                   ProtocolIE-Container
                                                               {{RadioLinkAdditionFailureFDD-IEs}},
                                   ProtocolExtensionContainer {{RadioLinkAdditionFailureFDD-Extensions}}
   protocolExtensions
                                                                                                                          OPTIONAL,
RadioLinkAdditionFailureFDD-IES RNSAP-PROTOCOL-IES ::= {
    { ID id-CauseLevel-RL-AdditionFailureFDD
                                                               CRITICALITY
                                                                              ignore
                                                                                                TYPE CauseLevel-RL-AdditionFailureFDD
           PRESENCE
                      mandatory }|
    { ID id-CriticalityDiagnostics
                                           CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                                PRESENCE optional },
CauseLevel-RL-AdditionFailureFDD ::= CHOICE {
                       GeneralCauseList-RL-AdditionFailureFDD,
    generalCause
    rLSpecificCause
                       RLSpecificCauseList-RL-AdditionFailureFDD,
GeneralCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
    cause
                                               Cause,
                                               ProtocolExtensionContainer { GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs} }
    iE-Extensions
                                                                                                                                   OPTIONAL,
GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RLSpecificCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
                                                                   UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
    unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD
                                                                   Successful RL-Information Response List-RL-Addition Failure FDD OPTIONAL,
    successful-RL-InformationRespList-RL-AdditionFailureFDD
                                               ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs} }
    iE-Extensions
                                                                                                                                      OPTIONAL,
RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container {
{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,
                                    ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    iE-Extensions
UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::=
SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= SEOUENCE (SIZE (0..maxNrOfRLs-2)) OF ProtocolIE-Single-Container { {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.
    uRA-Information
                                        URA-Information
                                                            OPTIONAL,
    sAI
                                        SAI,
    qA-Cell
                                        GA-Cell
                                                    OPTIONAL.
                                        GA-AccessPointPosition
    gA-AccessPointPosition
                                                                    OPTIONAL,
    received-total-wide-band-power
                                        Received-total-wide-band-power,
                                        Secondary-CCPCH-Info
    secondary-CCPCH-Info
                                                                    OPTIONAL,
    dl-CodeInformation
                                        DL-CodeInformationList-RL-AdditionFailureFDD,
    diversityIndication
                                        DiversityIndication-RL-AdditionFailureFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator
                                        SSDT-SupportIndicator,
    minUL-SIR
                                        UL-SIR,
    maxUL-SIR
                                        UL-SIR,
    closedlooptimingadjustmentmode
                                        Closedlooptimingadjustmentmode OPTIONAL,
    maximumAllowedULTxPower
                                        MaximumAllowedULTxPower,
    maximumDI.TxPower
                                        DL-Power,
    minimumDLTxPower
                                        DL-Power,
    neighbouring-UMTS-CellInformation
                                        Neighbouring-UMTS-CellInformation OPTIONAL,
    neighbouring-GSM-CellInformation
                                        Neighbouring-GSM-CellInformation OPTIONAL,
    primaryCPICH-Power
                                        PrimaryCPICH-Power,
    pC-Preamble
                                        PC-Preamble,
    sRB-Delay
                                        SRB-Delay,
                                        ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    iE-Extensions
```

```
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-GA-CellAdditionalShapes
                                        CRITICALITY ignore EXTENSION GA-CellAdditionalShapes
                                                                                                PRESENCE optional },
   . . .
DL-CodeInformationList-RL-AdditionFailureFDD ::= ProtocolIE-Single-Container {{ DL-CodeInformationListIEs-RL-AdditionFailureFDD }}
DL-CodeInformationListIEs-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
    PRESENCE mandatory }
DiversityIndication-RL-AdditionFailureFDD ::= CHOICE {
   combining
                                 Combining-RL-AdditionFailureFDD,
   nonCombining
                                 NonCombining-RL-AdditionFailureFDD
Combining-RL-AdditionFailureFDD ::= SEOUENCE {
   rL-ID
                             ProtocolExtensionContainer { { CombiningItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
   iE-Extensions
CombiningItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-DCH-InformationResponse
                                        CRITICALITY ignore EXTENSION DCH-InformationResponse
                                                                                                PRESENCE optional },
NonCombining-RL-AdditionFailureFDD ::= SEQUENCE {
   dCH-InformationResponse
                             DCH-InformationResponse,
                                            ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
   iE-Extensions
   . . .
NonCombiningItem-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-CauseLevel-RL-AdditionFailureTDD
                                                CRITICALITY ignore TYPE CauseLevel-RL-AdditionFailureTDD PRESENCE mandatory }
     ID id-CriticalityDiagnostics
                                            CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                                  PRESENCE optional },
CauseLevel-RL-AdditionFailureTDD ::= CHOICE {
    generalCause
                        GeneralCauseList-RL-AdditionFailureTDD,
    rLSpecificCause
                        RLSpecificCauseList-RL-AdditionFailureTDD,
GeneralCauseList-RL-AdditionFailureTDD ::= SEQUENCE {
    iE-Extensions
                                ProtocolExtensionContainer { { GeneralCauseItem-RL-AdditionFailureTDD-ExtIEs} }
                                                                                                                    OPTIONAL.
GeneralCauseItem-RL-AdditionFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RLSpecificCauseList-RL-AdditionFailureTDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD
                                                                Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD,
    iE-Extensions
                                                                ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIEs} }
       OPTIONAL,
    . . .
RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {
Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD ::= ProtocolIE-Single-Container { {Unsuccessful-RL-InformationRespItemIE-RL-
AdditionFailureTDD } }
Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureTDD RNSAP-PROTOCOL-IES ::= {
           id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD
                                                                            CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
AdditionFailureTDD PRESENCE mandatory}
UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD ::= SEQUENCE {
    rL-ID
                                RL-ID.
    cause
    iE-Extensions
                                ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD-ExtIEs} } OPTIONAL,
    . . .
UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD-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 ::= {
   PRESENCE mandatory },
                                     ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-RL-DeletionRgst-
RL-InformationList-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
   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-AllowedOueuingTime
                                       CRITICALITY reject TYPE AllowedOueuingTime
                                                                                              PRESENCE optional } |
     ID id-UL-DPCH-Information-RL-ReconfPrepFDD
                                                          CRITICALITY reject TYPE UL-DPCH-Information-RL-ReconfPrepFDD
                                                                                                                             PRESENCE optional
     ID id-DL-DPCH-Information-RL-ReconfPrepFDD
                                                          CRITICALITY reject TYPE DL-DPCH-Information-RL-ReconfPrepFDD
                                                                                                                             PRESENCE optional }
     ID id-FDD-DCHs-to-Modify
                                   CRITICALITY reject TYPE FDD-DCHs-to-Modify
                                                                                  PRESENCE optional
     ID id-DCHs-to-Add-FDD
                               CRITICALITY reject TYPE DCH-FDD-Information
                                                                                  PRESENCE optional
     ID id-DCH-DeleteList-RL-ReconfPrepFDD
                                              CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfPrepFDD
                                                                                                           PRESENCE optional } |
     ID id-DSCH-Modify-RL-ReconfPrepFDD
                                              CRITICALITY reject TYPE DSCH-Modify-RL-ReconfPrepFDD
                                                                                                        PRESENCE optional }
     ID id-DSCHs-to-Add-FDD
                                       CRITICALITY reject TYPE DSCH-FDD-Information
                                                                                              PRESENCE optional } |
     ID id-DSCH-Delete-RL-ReconfPrepFDD
                                              CRITICALITY reject TYPE DSCH-Delete-RL-ReconfPrepFDD
                                                                                                        PRESENCE optional }
     ID id-RL-InformationList-RL-ReconfPrepFDD CRITICALITY reject TYPE RL-InformationList-RL-ReconfPrepFDD PRESENCE optional }
     ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject TYPE Transmission-Gap-Pattern-Sequence-Information PRESENCE
optional },
    . . .
UL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
   ul-ScramblingCode
                                   UL-ScramblingCode
                                                           OPTIONAL,
   ul-SIRTarget
                                   UL-SIR
                                                           OPTIONAL,
   minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength OPTIONAL,
   maxNrOfUL-DPDCHs
                                   MaxNrOfUL-DPCHs
                                                           OPTIONAL
    -- This IE shall be present if minUL-ChannelisationCodeLength equals to 4 --,
   ul-PunctureLimit
                                   PunctureLimit
                                                          OPTIONAL,
    t FCS
                                   TECS
                                          OPTIONAL,
   ul-DPCCH-SlotFormat
                                   UL-DPCCH-SlotFormat
                                                          OPTIONAL,
   diversityMode
                                   DiversityMode
                                                          OPTIONAL,
    sSDT-CellIDLength
                                   SSDT-CellID-Length
                                                          OPTIONAL,
   s-FieldLength
                                   S-FieldLength
                                                          OPTIONAL,
   iE-Extensions
                                   ProtocolExtensionContainer { {UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    . . .
UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
DL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
                                TFCS OPTIONAL,
   dl-DPCH-SlotFormat
                                DL-DPCH-SlotFormat
                                                      OPTIONAL.
   nrOfDLchannelisationcodes
                                NrOfDLchannelisationcodes OPTIONAL,
   tFCI-SignallingMode
                                TFCI-SignallingMode
                                                      OPTIONAL,
   tFCI-Presence
                                TFCI-Presence
                                                      OPTIONAL
   -- This IE shall be present if DL DPCH Slot Format IE is from 12 to 16 --,
                                MultiplexingPosition
   multiplexingPosition
                                                         OPTIONAL,
   limitedPowerIncrease
                                LimitedPowerIncrease
                                                         OPTIONAL,
   iE-Extensions
                                ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   -- This IE shall be present if the TFCI signalling mode is split --
   -- This IE shall be present if the split type is logical --
DCH-DeleteList-RL-ReconfPrepFDD
                                      ::= SEOUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepFDD
DCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
   dCH-ID
   iE-Extensions
                                ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DSCH-Modify-RL-ReconfPrepFDD ::= SEQUENCE {
   dSCH-Information
                                    DSCH-ModifyInfo-RL-ReconfPrepFDD
                                                                    OPTIONAL,
                                    RL-ID
   pdSCH-RL-ID
                                                             OPTIONAL,
                                   TFCS
                                                             OPTIONAL,
   tFCS
   iE-Extensions
                                    ProtocolExtensionContainer { {DSCH-Modify-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
DSCH-Modify-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
     ID id-EnhancedDSCHPCIndicator
                                       CRITICALITY ignore EXTENSION EnhancedDSCHPCIndicator PRESENCE optional}
   { ID id-EnhancedDSCHPC
                                       CRITICALITY ignore EXTENSION EnhancedDSCHPC
                                                                                       PRESENCE conditional \}.
   -- The IE shall be present if the Enhanced DSCH PC Indicator IE is set to "Enhanced DSCH PC Active in the UE".
DSCH-ModifyInfo-RL-ReconfPrepFDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-ModifyInformationItem-RL-ReconfPrepFDD
DSCH-ModifyInformationItem-RL-ReconfPrepFDD ::= SEQUENCE {
   dSCH-ID
                                    DSCH-ID,
```

```
trChSourceStatisticsDescriptor
                                        TrCH-SrcStatisticsDescr OPTIONAL,
    transportFormatSet
                                        Transport.Format.Set.
                                                                         OPTIONAL,
    allocationRetentionPriority
                                        AllocationRetentionPriority
                                                                         OPTIONAL.
    schedulingPriorityIndicator
                                        SchedulingPriorityIndicator
                                                                         OPTIONAL,
                                        BLER
                                                                         OPTIONAL.
                                        TransportBearerRequestIndicator,
    transportBearerRequestIndicator
    iE-Extensions
                                        ProtocolExtensionContainer { {DSCH-ModifyInformationItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
DSCH-ModifyInformationItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DSCH-Delete-RL-ReconfPrepFDD ::= SEQUENCE
    dSCH-Information
                                        DSCH-Info-Delete-RL-ReconfPrepFDD,
                                        ProtocolExtensionContainer { {DSCH-Delete-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    iE-Extensions
DSCH-Delete-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DSCH-Info-Delete-RL-ReconfPrepFDD ::= SEQUENCE (SIZE(1..maxNoOfDSCHs)) OF DSCH-DeleteInformationItem-RL-REconfPrepFDD
DSCH-DeleteInformationItem-RL-REconfPrepFDD ::= SEQUENCE {
    dSCH-ID
                                        DSCH-ID,
                                    ProtocolExtensionContainer { {DSCH-DeleteInformationItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    iE-Extensions
DSCH-DeleteInformationItem-RL-ReconfPrepFDD-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {
RL-InformationList-RL-ReconfPrepFDD
                                            ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-RL-ReconfPrepFDD-
IEs} }
RL-Information-RL-ReconfPrepFDD-IES RNSAP-PROTOCOL-IES ::= {
                                                CRITICALITY reject TYPE RL-Information-RL-ReconfPrepFDD
    { ID id-RL-Information-RL-ReconfPrepFDD
                                                                                                              PRESENCE mandatory
RL-Information-RL-ReconfPrepFDD ::= SEQUENCE {
   rL-ID
    sSDT-Indication
                                    SSDT-Indication
                                                        OPTIONAL,
    sSDT-CellIdentity
                                    SSDT-CellID
                                                    OPTIONAL
    -- The IE shall be present if the sSDT-Indication is set to 'sSDT-active-in-the-UE' --,
    transmitDiversityIndicator
                                    TransmitDiversityIndicator
                                                                    OPTIONAL,
    -- This IE shall be present if Diversity Mode IE is present in UL DPCH Information IE and is not equal to 'none'
    iE-Extensions
                                    ProtocolExtensionContainer { {RL-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    . . .
```

```
RL-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-SSDT-CellIDforEDSCHPC CRITICALITY ignore EXTENSION SSDT-CellID
                                                                         PRESENCE conditional },
   -- This IE shall be present if Enhanced DSCH PC IE is present in either the DSCHs to Modify IE or the DSCHs to Add IE.
RadioLinkReconfigurationPrepareFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
           -- RADIO LINK RECONFIGURATION PREPARE TDD
  RadioLinkReconfigurationPrepareTDD ::= SEQUENCE {
                                                       {{RadioLinkReconfigurationPrepareTDD-IEs}},
   protocolIEs
                               ProtocolIE-Container
                               ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareTDD-Extensions}}
   protocolExtensions
                                                                                                                  OPTIONAL,
RadioLinkReconfigurationPrepareTDD-IES RNSAP-PROTOCOL-IES ::= {
     ID id-AllowedOueuingTime
                                  CRITICALITY reject TYPE AllowedOueuingTime
                                                                                   PRESENCE optional } |
     ID id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-InformationAddList-RL-ReconfPrepTDDPRESENCE optional
     ID id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD
                                                       CRITICALITY notify TYPE UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD PRESENCE
optional } |
   { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD
                                                       CRITICALITY notify TYPE UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD PRESENCE
optional
     ID id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-CCTrCH-InformationAddList-RL-ReconfPrepTDDPRESENCE optional
    ID id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD
                                                       CRITICALITY notify TYPE DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD PRESENCE
optional }
   { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD
                                                       CRITICALITY notify TYPE DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD PRESENCE
optional } |
     ID id-TDD-DCHs-to-Modify
                               CRITICALITY reject TYPE TDD-DCHs-to-Modify
                                                                         PRESENCE optional
     ID id-DCHs-to-Add-TDD
                           CRITICALITY reject TYPE DCH-TDD-Information
                                                                         PRESENCE optional
     ID id-DCH-DeleteList-RL-ReconfPrepTDD
                                         CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfPrepTDD
                                                                                               PRESENCE optional }
     ID id-DSCH-ModifyList-RL-ReconfPrepTDD
                                         CRITICALITY reject TYPE DSCH-ModifyList-RL-ReconfPrepTDD
                                                                                               PRESENCE optional }
     ID id-DSCHs-to-Add-TDD
                               CRITICALITY reject TYPE DSCH-TDD-Information
                                                                                PRESENCE optional }
     ID id-DSCH-DeleteList-RL-ReconfPrepTDD
                                         CRITICALITY reject TYPE DSCH-DeleteList-RL-ReconfPrepTDD
                                                                                               PRESENCE optional
                                                                                               PRESENCE optional }
     ID id-USCH-ModifyList-RL-ReconfPrepTDD
                                         CRITICALITY reject TYPE USCH-ModifyList-RL-ReconfPrepTDD
     ID id-USCHs-to-Add
                           CRITICALITY reject TYPE USCH-Information
                                                                         PRESENCE optional } |
     PRESENCE optional \}.
UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD
                                             ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
AddInformation-RL-ReconfPrepTDD-IEs} }
UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
```

```
UL-CCTrCH-AddInformation-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID
                                CCTrCH-ID.
    t.FCS
                                TFCS,
    tFCI-Coding
                                TFCI-Coding.
    punctureLimit
                                   PunctureLimit,
                                    ProtocolExtensionContainer { {UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-SIRTarget
                                CRITICALITY reject
                                                        EXTENSION
                                                                                    PRESENCE optional } |
                                                                        UL-SIR
    -- This IE shall be mandatory for 1.28Mcps TDD, not applicable for 3.84Mcps TDD.
     ID id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD CRITICALITY reject EXTENSION TDD-TPC-UplinkStepSize-LCR PRESENCE optional
    -- Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD
UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD
                                                        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
ModifyInformation-RL-ReconfPrepTDD-IEs} }
UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD PRESENCE
mandatory }
UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID
                               CCTrCH-ID,
    t.FCS
                                TFCS
                                            OPTIONAL,
                                                        OPTIONAL,
    tFCI-Coding
                               TFCI-Coding
    punctureLimit
                                   PunctureLimit
                                                                OPTIONAL,
    iE-Extensions
                                    ProtocolExtensionContainer { {UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-SIRTarget
                                CRITICALITY reject
                                                        EXTENSION
                                                                        UL-SIR
                                                                                    PRESENCE optional } |
    -- This IE shall be applicable for 1.28Mcps TDD only.
    { ID id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD CRITICALITY reject EXTENSION TDD-TPC-UplinkStepSize-LCR PRESENCE
  optional },
    -- Applicable to 1.28Mcps TDD only
    . . .
UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD
                                                       ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
DeleteInformation-RL-ReconfPrepTDD-IEs} }
UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD PRESENCE
mandatory }
UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD ::= SEQUENCE
```

```
cCTrCH-ID
                             CCTrCH-ID,
   iE-Extensions
                                 ProtocolExtensionContainer { {UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD
                                             ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
AddInformation-RL-ReconfPrepTDD-IEs} }
DL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
   mandatory }
DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
   cCTrCH-ID
                             CCTrCH-ID,
   t.FCS
                             TFCS,
   tFCI-Coding
                             TFCI-Coding,
                            PunctureLimit,
   punctureLimit
   cCTrCH-TPCList
                                CCTrCH-TPCAddList-RL-ReconfPrepTDD OPTIONAL,
   iE-Extensions
                                 ProtocolExtensionContainer { {DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL.
DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
     ID id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD CRITICALITY reject EXTENSION TDD-TPC-DownlinkStepSize PRESENCE optional
    }, ...
CCTrCH-TPCAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCAddItem-RL-ReconfPrepTDD
CCTrCH-TPCAddItem-RL-ReconfPrepTDD ::= SEOUENCE {
   cCTrCH-ID
   iE-Extensions
                                 ProtocolExtensionContainer { { CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
                                                 ::= SEOUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD
ModifyInformation-RL-ReconfPrepTDD-IEs} }
DL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
   { ID id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD PRESENCE
mandatory }
DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
   cCTrCH-ID
                             CCTrCH-ID,
```

```
tFCS
                               TFCS
                                           OPTIONAL,
    tFCI-Coding
                               TFCI-Coding
                                                       OPTIONAL.
    punctureLimit
                               PunctureLimit
                                                               OPTIONAL.
    cCTrCH-TPCList
                                   CCTrCH-TPCModifyList-RL-ReconfPrepTDD
                                                                               OPTIONAL.
    iE-Extensions
                                   ProtocolExtensionContainer { {DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD CRITICALITY reject
                                                                                               EXTENSION TDD-TPC-DownlinkStepSize PRESENCE
  optional}, ...
CCTrCH-TPCModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCModifyItem-RL-ReconfPrepTDD
CCTrCH-TPCModifyItem-RL-ReconfPrepTDD
                                      ::= SEOUENCE {
    cCTrCH-ID
                                   CCTrCH-ID,
                                   ProtocolExtensionContainer { { CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD
                                                     ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
DeleteInformation-RL-ReconfPrepTDD-IEs} }
DL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD
                                                             CRITICALITY notify TYPE DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD PRESENCE
mandatory }
DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID
                                   ProtocolExtensionContainer { {DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {
DCH-DeleteList-RL-ReconfPrepTDD
                                           ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepTDD
DCH-DeleteItem-RL-ReconfPrepTDD ::= SEOUENCE {
    dCH-ID
                               DCH-ID,
    iE-Extensions
                               ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
DSCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-ModifyItem-RL-ReconfPrepTDD
DSCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID
                                        DSCH-ID.
    dl-ccTrCHID
                                        CCTrCH-ID
                                                                         OPTIONAL,
    trChSourceStatisticsDescriptor
                                        TrCH-SrcStatisticsDescr OPTIONAL,
    transportFormatSet
                                        TransportFormatSet
                                                                         OPTIONAL,
    allocationRetentionPriority
                                        AllocationRetentionPriority
                                                                         OPTIONAL,
    schedulingPriorityIndicator
                                        SchedulingPriorityIndicator
                                                                         OPTIONAL,
                                                                         OPTIONAL,
    transportBearerRequestIndicator
                                        TransportBearerRequestIndicator,
    iE-Extensions
                                    ProtocolExtensionContainer { {DSCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
DSCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DSCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-DeleteItem-RL-ReconfPrepTDD
DSCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dsch-id
    iE-Extensions
                                    ProtocolExtensionContainer { {DSCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    . . .
DSCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
USCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCH-ModifyItem-RL-ReconfPrepTDD
USCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID
                                        USCH-ID,
    ul-ccTrCHID
                                        CCTrCH-ID
                                                                         OPTIONAL,
    trChSourceStatisticsDescriptor
                                        TrCH-SrcStatisticsDescr OPTIONAL,
    transportFormatSet
                                        TransportFormatSet
                                                                         OPTIONAL,
    allocationRetentionPriority
                                        AllocationRetentionPriority
                                                                         OPTIONAL,
    schedulingPriorityIndicator
                                        SchedulingPriorityIndicator
                                                                         OPTIONAL,
    bler
                                        BLER
                                                                         OPTIONAL,
                                        TransportBearerRequestIndicator,
    transportBearerRequestIndicator
    rb-Info
                                        RB-Info
                                                                         OPTIONAL,
                                        ProtocolExtensionContainer { {USCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
USCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
USCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCH-DeleteItem-RL-ReconfPrepTDD
```

```
USCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
   uSCH-ID
                                 USCH-ID.
   iE-Extensions
                              ProtocolExtensionContainer { {USCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
USCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RadioLinkReconfigurationPrepareTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ID id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD CRITICALITY ignore
                                                            EXTENSION
                                                                      PrimaryCCPCH-RSCP PRESENCE optional }
    ID id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD CRITICALITY ignore
                                                                         DL-TimeSlot-ISCP-Info PRESENCE optional }
                                                               EXTENSION
    ID id-DL-Timeslot-ISCP-LCR-Information-RL-ReconfPrepTDD CRITICALITY ignore
                                                                         EXTENSION DL-TimeSlot-ISCP-LCR-Information PRESENCE
optional }|
    ID id-PDSCH-RL-ID
                             CRITICALITY ignore
                                                     EXTENSION RL-ID
                                                                      PRESENCE optional }
                                              CRITICALITY ignore
                                                                   EXTENSION UL-Synchronisation-Parameters-LCR
    ID id-UL-Synchronisation-Parameters-LCR
                                                                                                             PRESENCE
   optional }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
  -- RADIO LINK RECONFIGURATION READY FDD
     **********************
RadioLinkReconfigurationReadyFDD ::= SEQUENCE {
                                                     {{RadioLinkReconfigurationReadyFDD-IEs}},
   protocolIEs
                              ProtocolIE-Container
                              ProtocolExtensionContainer {{RadioLinkReconfigurationReadyFDD-Extensions}}
   protocolExtensions
                                                                                                            OPTIONAL,
RadioLinkReconfigurationReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
   PRESENCE
optional } |
   { ID id-CriticalityDiagnostics
                                 CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                 PRESENCE optional },
   . . .
                                           ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationResponse-
RL-InformationResponseList-RL-ReconfReadyFDD
RL-ReconfReadyFDD-IEs } }
RL-InformationResponse-RL-ReconfReadyFDD-IES RNSAP-PROTOCOL-IES ::= {
   mandatory }
RL-InformationResponseItem-RL-ReconfReadyFDD ::= SEQUENCE {
   rL-ID
                              RL-ID,
   max-UL-SIR
                              UL-SIR
                                           OPTIONAL,
   min-UL-SIR
                              UL-SIR
                                           OPTIONAL,
                                           OPTIONAL,
   maximumDLTxPower
                              DL-Power
   minimumDLTxPower
                              DL-Power
                                           OPTIONAL,
```

```
secondary-CCPCH-Info
                                 Secondary-CCPCH-Info
                                                          OPTIONAL,
   dl-CodeInformationList
                                 DL-CodeInformationList-RL-ReconfReadyFDD
                                                                         OPTIONAL,
   dCHInformationResponse
                                 DCH-InformationResponseList-RL-ReconfReadyFDD
                                                                             OPTIONAL.
   dSCHsToBeAddedOrModified
                                 DSCHsToBeAddedOrModified-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-Single-Container {{ DL-CodeInformationListIEs-RL-ReconfReadyFDD }}
DL-CodeInformationListIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
    PRESENCE mandatory }
DCH-InformationResponseList-RL-ReconfReadyFDD
                                                       ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfReadyFDD} }
DCH-InformationResponseListIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse
                                    CRITICALITY ignore TYPE DCH-InformationResponse
                                                                                        PRESENCE mandatory
DSCHsToBeAddedOrModified-RL-ReconfReadyFDD ::= ProtocolIE-Single-Container { {DSCHsToBeAddedOrModifiedIEs-RL-ReconfReadyFDD} }
DSCHsToBeAddedOrModifiedIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DSCHsToBeAddedOrModified-FDD
                                       CRITICALITY ignore TYPE DSCH-FDD-InformationResponse
                                                                                            PRESENCE mandatory }
RadioLinkReconfigurationReadyFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-DSCH-RNTI
                                CRITICALITY ignore
                                                          EXTENSION DSCH-RNTI
                                                                                 PRESENCE optional },
   . . .
    -- RADIO LINK RECONFIGURATION READY TDD
         RadioLinkReconfigurationReadyTDD ::= SEQUENCE {
                                                          {{RadioLinkReconfigurationReadyTDD-IEs}},
   protocolIEs
                                 ProtocolIE-Container
                                 ProtocolExtensionContainer {{RadioLinkReconfigurationReadyTDD-Extensions}}
   protocolExtensions
                                                                                                                      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-SIR
                                 UL-SIR
                                                OPTIONAL.
   min-UL-SIR
                                 UL-SIR
                                                OPTIONAL,
   maximumDLTxPower
                                 DL-Power
                                                OPTIONAL,
   minimumDLTxPower
                                 DL-Power
                                                OPTIONAL,
   secondary-CCPCH-Info-TDD
                                 Secondary-CCPCH-Info-TDD
                                                           OPTIONAL,
   ul-CCTrCH-Information
                                 UL-CCTrCH-InformationList-RL-ReconfReadyTDD
                                                                              OPTIONAL.
   dl-CCTrCH-Information
                                 DL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
                                 DCH-InformationResponseList-RL-ReconfReadyTDD
   dCHInformationResponse
                                                                             OPTIONAL,
   dSCHsToBeAddedOrModified
                                 DSCHToBeAddedOrModified-RL-ReconfReadyTDD OPTIONAL,
   uSCHsToBeAddedOrModified
                                 USCHToBeAddedOrModified-RL-ReconfReadyTDD
                                                                         OPTIONAL,
                                 ProtocolExtensionContainer { {RL-InformationResponse-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
RL-InformationResponse-RL-ReconfReadyTDD-ExtlEs RNSAP-PROTOCOL-EXTENSION ::=
       { ID id-UL-TimingAdvanceCtrl-LCR
                                            CRITICALITY ignore EXTENSION
                                                                         UL-TimingAdvanceCtrl-LCR
                                                                                                     PRESENCE optional },
   --For 1.28Mcps TDD only
                                                ::= ProtocolIE-Single-Container {{UL-CCTrCHInformationListIEs-RL-ReconfReadyTDD}}}
UL-CCTrCH-InformationList-RL-ReconfReadyTDD
UL-CCTrCHInformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
   PRESENCE
mandatory }
UL-CCTrCHInformationListIE-RL-ReconfReadyTDD ::= SEOUENCE (SIZE (0..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-RL-ReconfReadyTDD
UL-CCTrCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
   cCTrCH-ID
                                 CCTrCH-ID,
   ul-DPCH-AddInformation
                                 UL-DPCH-InformationAddList-RL-ReconfReadyTDD
                                                                                     OPTIONAL,
   --For 3.84Mcps TDD only
   ul-DPCH-ModifyInformation
                                 UL-DPCH-InformationModifyList-RL-ReconfReadyTDD
                                                                                         OPTIONAL.
   --For 3.84Mcps TDD only
   ul-DPCH-DeleteInformation
                                 UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD
                                                                                         OPTIONAL,
                                 ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
   . . .
UL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   UL-DPCH-LCR-InformationAddList-RL-
                                                                                 EXTENSION
ReconfReadyTDD
                  PRESENCE optional }.
   --For 1.28Mcps TDD only
   . . .
UL-DPCH-LCR-InformationAddList-RL-ReconfReadyTDD ::= SEQUENCE {
   repetitionPeriod
                                 RepetitionPeriod,
   repetitionLength
                                 RepetitionLength,
   tDD-DPCHOffset
                                 TDD-DPCHOffset,
   uL-TimeslotLCR-Info
                                 UL-TimeslotLCR-Information,
```

```
ProtocolExtensionContainer { {UL-DPCH-LCR-InformationAddItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
UL-DPCH-LCR-InformationAddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-DPCH-InformationAddList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD}}
UL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
   PRESENCE
optional }
UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD ::= SEQUENCE {
   repetitionPeriod
                              RepetitionPeriod,
   repetitionLength
                              RepetitionLength,
   tDD-DPCHOffset
                              TDD-DPCHOffset,
                                                         OPTIONAL,
   rxTimingDeviationForTA
                              RxTimingDeviationForTA
   uL-Timeslot-Information
                              UL-Timeslot-Information,
                              ProtocolExtensionContainer { {UL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
UL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-DPCH-InformationModifyList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD}}
UL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
   PRESENCE mandatory }
UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD::= SEQUENCE {
   repetitionPeriod
                              RepetitionPeriod
                                                     OPTIONAL,
   repetitionLength
                              RepetitionLength
                                                     OPTIONAL,
   tDD-DPCHOffset
                              TDD-DPCHOffset
                                                      OPTIONAL,
   uL-Timeslot-InformationModifyList-RL-ReconfReadyTDD
                                                     UL-Timeslot-InformationModifyList-RL-ReconfReadyTDD
                                                                                                      OPTIONAL,
   --For 3.84Mcps TDD only
                              ProtocolExtensionContainer { {UL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
UL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   EXTENSION UL-TimeslotLCR-InformationModifyList-RL-
ReconfReadyTDD
                PRESENCE optional },
   --For 1.28Mcps TDD only
```

```
UL-TimeslotLCR-InformationModifyList-RL-ReconfReadyTDD::= SEQUENCE ( SIZE (1..maxNrOfTsLCR)) OF UL-TimeslotLCR-InformationModifyItem-RL-
ReconfReadyTDD
UL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    timeSlotLCR
                                  TimeSlotLCR.
   midambleShiftLCR
                                  MidambleShiftLCR
                                                            OPTIONAL,
    tFCI-Presence
                                  TFCI-Presence
                                                         OPTIONAL,
    tDD-uL-Code-LCR-Information
                                      TDD-UL-Code-LCR-InformationModifyList-RL-ReconfReadyTDD
   iE-Extensions
                                  ProtocolExtensionContainer { {UL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
TDD-UL-Code-LCR-InformationModifyList-RL-ReconfReadyTDD::= SEQUENCE ( SIZE (1..maxNrOfDPCHsLCR)) OF TDD-UL-Code-LCR-InformationModifyItem-RL-
ReconfReadyTDD
TDD-UL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
                                  DPCH-ID.
    tDD-ChannelisationCodeLCR
                                      TDD-ChannelisationCodeLCR
                                                                    OPTIONAL,
   iE-Extensions
                                  ProtocolExtensionContainer { TDD-UL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
TDD-UL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    PRESENCE optional },
UL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-Timeslot-InformationModifyList-RL-ReconfReadyTDD::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF UL-Timeslot-InformationModifyList-RL-ReconfReadyTDD
UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD ::= SEOUENCE {
    timeSlot
                                  TimeSlot,
   midambleShiftAndBurstType
                                             MidambleShiftAndBurstType
                                                                                OPTIONAL,
    tFCI-Presence
                                  TFCI-Presence
                                                         OPTIONAL,
                              TDD-UL-Code-InformationModifyList-RL-ReconfReadyTDD
   uL-Code-Information
                                                                                       OPTIONAL,
   iE-Extensions
                                  ProtocolExtensionContainer { {UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
TDD-UL-Code-InformationModifyList-RL-ReconfReadyTDD::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD
TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
   dPCH-ID
                                  DPCH-ID,
    tDD-ChannelisationCode
                                  TDD-ChannelisationCode
    iE-Extensions
                                  ProtocolExtensionContainer { {TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    . . .
```

```
TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD}}
UL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
   PRESENCE mandatory
UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF UL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD
UL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD ::= SEQUENCE {
   dPCH-ID
                            DPCH-ID,
   iE-Extensions
                               ProtocolExtensionContainer { {UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
   . . .
UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-CCTrCH-InformationList-RL-ReconfReadyTDD
                                              ::= ProtocolIE-Single-Container {{DL-CCTrCHInformationListIEs-RL-ReconfReadyTDD}}}
DL-CCTrCHInformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
   PRESENCE
mandatory }
DL-CCTrCHInformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-RL-ReconfReadyTDD
DL-CCTrCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
   cCTrCH-ID
                               CCTrCH-ID,
   dl-DPCH-AddInformation
                               DL-DPCH-InformationAddList-RL-ReconfReadyTDD
                                                                                 OPTIONAL,
   --For 3.84Mcps TDD only
   dl-DPCH-ModifyInformation
                               DL-DPCH-InformationModifyList-RL-ReconfReadyTDD
                                                                                 OPTIONAL,
   --For 3.84Mcps TDD only
   dl-DPCH-DeleteInformation
                               DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD
                                                                                 OPTIONAL,
                                ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
DL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadvTDD CRITICALITY ignore
                                                                                 EXTENSION
                                                                                            DL-DPCH-LCR-InformationAddList-RL-
ReconfReadyTDD
                PRESENCE optional },
   --For 1.28Mcps TDD only
   . . .
DL-DPCH-LCR-InformationAddList-RL-ReconfReadyTDD ::= SEQUENCE {
                               RepetitionPeriod,
   repetitionPeriod
```

```
RepetitionLength,
   repetitionLength
   t.DD-DPCHOffset.
                                TDD-DPCHOffset.
   dL-TimeslotLCR-Info
                                DL-TimeslotLCR-Information.
   iE-Extensions
                                ProtocolExtensionContainer { {DL-DPCH-LCR-InformationAddItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
DL-DPCH-LCR-InformationAddItem-RL-ReconfReadyTDD-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {
DL-DPCH-InformationAddList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD}}
DL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
   { ID id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD CRITICALITY ignore TYPE DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD
                                                                                                                            PRESENCE
mandatory }
DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD ::= SEQUENCE {
   repetitionPeriod
                                RepetitionPeriod,
   repetitionLength
                                RepetitionLength,
   tDD-DPCHOffset
                                TDD-DPCHOffset,
   dL-Timeslot-Information
                                DL-Timeslot-Information,
   iE-Extensions
                                ProtocolExtensionContainer { {DL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL.
DL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-DPCH-InformationModifyList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD}}
DL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
   PRESENCE mandatory }
DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD ::= SEQUENCE
   repetitionPeriod
                                RepetitionPeriod
                                                          OPTIONAL,
   repetitionLength
                                RepetitionLength
                                                          OPTIONAL,
   tDD-DPCHOffset
                                TDD-DPCHOffset
                                                          OPTIONAL,
   {\tt dL-Timeslot-InformationModifyList-RL-ReconfReadyTDD}
                                                          DL-Timeslot-InformationModifyList-RL-ReconfReadyTDD
                                                                                                              OPTIONAL,
   --For 3.84Mcps TDD only
                                ProtocolExtensionContainer { {DL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL.
   iE-Extensions
DL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   EXTENSION DL-TimeslotLCR-InformationModifyList-RL-
                  PRESENCE optional },
ReconfReadyTDD
   --For 1.28Mcps TDD only
```

```
DL-TimeslotLCR-InformationModifyList-RL-ReconfReadyTDD::= SEQUENCE ( SIZE (1..maxNrOfTsLCR)) OF DL-TimeslotLCR-InformationModifyItem-RL-
ReconfReadyTDD
DL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    timeSlotLCR
                                    TimeSlotLCR,
    midambleShiftLCR
                                    MidambleShiftLCR
                                                                OPTIONAL.
    tFCI-Presence
                                    TFCI-Presence
                                                            OPTIONAL,
    tDD-dL-Code-LCR-Information
                                    TDD-DL-Code-LCR-InformationModifyList-RL-ReconfReadyTDD
                                                                                                  OPTIONAL,
                                    ProtocolExtensionContainer { {DL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
TDD-DL-Code-LCR-InformationModifyList-RL-ReconfReadyTDD::= SEQUENCE ( SIZE (1..maxNrOfDPCHsLCR)) OF TDD-DL-Code-LCR-InformationModifyItem-RL-
ReconfReadyTDD
TDD-DL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
                                    DPCH-ID,
    tDD-ChannelisationCodeLCR
                                    TDD-ChannelisationCodeLCR
                                    ProtocolExtensionContainer { {TDD-DL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
TDD-DL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-Timeslot-InformationModifyList-RL-ReconfReadyTDD::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD
DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    timeSlot
                                    TimeSlot,
    midambleShiftAndBurstType
                                    MidambleShiftAndBurstType
                                                                        OPTIONAL,
    tFCI-Presence
                                    TFCI-Presence
                                                            OPTIONAL,
    dL-Code-Information
                                    TDD-DL-Code-InformationModifyList-RL-ReconfReadyTDD
                                                                                                OPTIONAL,
                                    ProtocolExtensionContainer { {DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TDD-DL-Code-InformationModifyList-RL-ReconfReadyTDD::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD
TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE
    dPCH-ID
                                    DPCH-ID,
    tDD-ChannelisationCode
                                                                OPTIONAL,
                                    TDD-ChannelisationCode
    iE-Extensions
                                    ProtocolExtensionContainer { {TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
```

```
TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  PRESENCE optional },
DL-DPCH-InformationDeleteList-RL-ReconfReadvTDD ::= ProtocolIE-Single-Container {{DL-DPCH-InformationDeleteListIEs-RL-ReconfReadvTDD}}
DL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
   PRESENCE mandatory }
DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD
DL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD ::= SEQUENCE {
   dPCH-ID
                         DPCH-ID,
   iE-Extensions
                             ProtocolExtensionContainer { {DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
                                                ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfReadyTDD} }
DCH-InformationResponseList-RL-ReconfReadyTDD
DCH-InformationResponseListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
   { ID id-DCH-InformationResponse
                                CRITICALITY ignore TYPE DCH-InformationResponse
                                                                              PRESENCE mandatory }
DSCHToBeAddedOrModified-RL-ReconfReadyTDD
                                          ::= ProtocolIE-Single-Container { {DSCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD} }
DSCHTOBeAddedOrModifiedIEs-RL-ReconfReadvTDD RNSAP-PROTOCOL-IES ::= {
   mandatory }
DSCHTOBeAddedOrModifiedList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNoOfDSCHs)) OF DSCHTOBeAddedOrModifiedItem-RL-ReconfReadyTDD
DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD ::= SEQUENCE {
   dsch-ID
                      DSCH-ID,
   transportFormatManagement TransportFormatManagement,
   dSCH-FlowControlInformation DSCH-FlowControlInformation,
   bindingID
                      BindingID OPTIONAL,
   transportLayerAddress TransportLayerAddress OPTIONAL,
   iE-Extensions
                      ProtocolExtensionContainer { {DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
   . . .
DSCHTOBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
USCHToBeAddedOrModified-RL-ReconfReadyTDD
                                        ::= ProtocolIE-Single-Container { { USCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD}
}USCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
   PRESENCE
mandatory }
USCHTOBeAddedOrModifiedList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNoOfUSCHs)) OF USCHTOBeAddedOrModifiedItem-RL-ReconfReadyTDD
USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD ::= SEQUENCE {
   uSCH-ID
                       USCH-ID,
   transportFormatManagement TransportFormatManagement,
   bindingID
                       BindingID OPTIONAL,
   transportLayerAddress TransportLayerAddress OPTIONAL,
   iE-Extensions
                      ProtocolExtensionContainer { {USCHTOBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
USCHTOBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RadioLinkReconfigurationReadyTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-DSCH-RNTI
                     CRITICALITY ignore
                                                     EXTENSION DSCH-RNTI
                                                                         PRESENCE optional }.
  *************************
-- RADIO LINK RECONFIGURATION COMMIT
  *****************
RadioLinkReconfigurationCommit ::= SEQUENCE {
   protocolIEs
                             ProtocolIE-Container
                                                     {{RadioLinkReconfigurationCommit-IEs}},
                             ProtocolExtensionContainer {{RadioLinkReconfigurationCommit-Extensions}}
   protocolExtensions
                                                                                                          OPTIONAL,
RadioLinkReconfigurationCommit-IEs RNSAP-PROTOCOL-IES ::= {
    ID id-CFN
                          CRITICALITY ignore TYPE CFN
                                                                  PRESENCE mandatory }
   { ID id-Active-Pattern-Sequence-Information
                                        CRITICALITY ignore TYPE Active-Pattern-Sequence-Information
                                                                                               PRESENCE optional \, --FDD only
   . . .
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-CauseLevel-RL-ReconfFailure
                                        CRITICALITY ignore TYPE CauseLevel-RL-Reconffailure PRESENCE mandatory }
     ID id-CriticalityDiagnostics
                                        CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                         PRESENCE optional },
CauseLevel-RL-ReconfFailure ::= CHOICE {
   generalCause
                     GeneralCauseList-RL-ReconfFailure,
   rLSpecificCause
                     RLSpecificCauseList-RL-ReconfFailure,
GeneralCauseList-RL-ReconfFailure ::= SEOUENCE {
   cause
                                            Cause,
   iE-Extensions
                                            OPTIONAL,
GeneralCauseItem-RL-ReconfFailure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RLSpecificCauseList-RL-ReconfFailure ::= SEQUENCE {
   rL-ReconfigurationFailureList-RL-ReconfFailure
                                                   RL-ReconfigurationFailureList-RL-ReconfFailure
   iE-Extensions
                                                   OPTIONAL,
   . . .
RLSpecificCauseItem-RL-ReconfFailure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-ReconfigurationFailureList-RL-Reconffailure ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-ReconfigurationFailure-RL-
ReconfFailure-IEs} }
RL-ReconfigurationFailure-RL-ReconfFailure-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
                                 ProtocolExtensionContainer { {RL-ReconfigurationFailure-RL-ReconfFailure-ExtIEs} } OPTIONAL,
   iE-Extensions
   . . .
```

```
RL-ReconfigurationFailure-RL-ReconfFailure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RadioLinkReconfigurationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
        *****************
-- RADIO LINK RECONFIGURATION CANCEL
__ *********************
RadioLinkReconfigurationCancel ::= SEQUENCE {
   protocolIEs
                               ProtocolIE-Container
                                                        {{RadioLinkReconfigurationCancel-IEs}},
                               ProtocolExtensionContainer {{RadioLinkReconfigurationCancel-Extensions}}
   protocolExtensions
                                                                                                                 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 reject TYPE AllowedQueuingTime
                                                                                     PRESENCE optional } |
     ID id-UL-DPCH-Information-RL-ReconfRqstFDD
                                                    CRITICALITY reject TYPE UL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional }
     ID id-DL-DPCH-Information-RL-ReconfRqstFDD
                                                     CRITICALITY reject TYPE DL-DPCH-Information-RL-ReconfRqstFDDPRESENCE optional }
     ID id-FDD-DCHs-to-Modify CRITICALITY reject TYPE FDD-DCHs-to-Modify
                                                                          PRESENCE optional
     ID id-DCHs-to-Add-FDD
                         CRITICALITY reject TYPE DCH-FDD-Information
                                                                          PRESENCE optional
     ID id-DCH-DeleteList-RL-ReconfRastFDD
                                          CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfRqstFDD
     ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject TYPE Transmission-Gap-Pattern-Sequence-Information PRESENCE
optional },
   . . .
UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
   tFCS
                                       OPTIONAL,
```

```
ProtocolExtensionContainer { {UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
   iE-Extensions
UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
                                 TFCS OPTIONAL,
                                 TFCI-SignallingMode OPTIONAL,
   tFCI-SignallingMode
   limitedPowerIncrease
                                 LimitedPowerIncrease
                                                        OPTIONAL,
   iE-Extensions
                                 ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DCH-DeleteList-RL-ReconfRqstFDD
                                         ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstFDD
DCH-DeleteItem-RL-ReconfRqstFDD ::= SEQUENCE {
   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}},
                                 ProtocolExtensionContainer {{RadioLinkReconfigurationRequestTDD-Extensions}}
   protocolExtensions
                                                                                                                            OPTIONAL,
RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
     ID id-AllowedOueuingTime
                                     CRITICALITY reject TYPE AllowedQueuingTime
                                                                                          PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD
                                                            CRITICALITY notify TYPE UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD PRESENCE
optional } |
   { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD
                                                            CRITICALITY notify TYPE UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD PRESENCE
optional } |
```

```
{ ID id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD
                                                       CRITICALITY notify TYPE DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD PRESENCE
optional } |
   { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD
                                                       CRITICALITY notify TYPE DL-CCTrCH-InformationDeleteList-RL-ReconfRgstTDD PRESENCE
optional } |
     ID id-TDD-DCHs-to-Modify
                               CRITICALITY reject TYPE TDD-DCHs-to-Modify
                                                                         PRESENCE optional
                         CRITICALITY reject TYPE DCH-TDD-Information
     ID id-DCHs-to-Add-TDD
                                                                         PRESENCE optional
   { ID id-DCH-DeleteList-RL-ReconfRgstTDD
                                         CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfRgstTDD
                                                                                               PRESENCE optional },
                                                ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
UL-CCTrCH-InformationModifyList-RL-ReconfRgstTDD
InformationModifyList-RL-ReconfRqstTDD-IEs} }
UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IES RNSAP-PROTOCOL-IES ::= {
   mandatory }
UL-CCTrCH-InformationModifyItem-RL-ReconfRgstTDD ::= SEQUENCE {
                           CCTrCH-ID,
   cCTrCH-ID
   t FCS
                           TFCS
                                      OPTIONAL,
                               ProtocolExtensionContainer { {UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-UL-SIRTarget
                          CRITICALITY reject
                                               EXTENSION
                                                                       PRESENCE optional },
                                                             UL-SIR
   -- Applicable to 1.28Mcps TDD only
                                                ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
UL-CCTrCH-InformationDeleteList-RL-ReconfRgstTDD
InformationDeleteList-RL-ReconfRqstTDD-IEs} }
UL-CCTrCH-InformationDeleteList-RL-ReconfRgstTDD-IEs RNSAP-PROTOCOL-IES ::= {
   mandatory }
UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
   cCTrCH-ID
                               ProtocolExtensionContainer { {UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
UL-CCTrCH-InformationDeleteItem-RL-ReconfRgstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD
                                                ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
InformationModifyList-RL-ReconfRqstTDD-IEs} }
DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
```

```
{ ID id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD
                                                         CRITICALITY notify TYPE DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD PRESENCE
mandatory }
DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
                            CCTrCH-ID,
   t FCS
                            TECS
                                       OPTIONAL,
   iE-Extensions
                                ProtocolExtensionContainer { {DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtlEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-CCTrCH-InformationDeleteList-RL-ReconfRgstTDD
                                                 ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
InformationDeleteList-RL-ReconfRqstTDD-IEs} }
DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
   mandatory }
DL-CCTrCH-InformationDeleteItem-RL-ReconfRgstTDD ::= SEOUENCE {
                            CCTrCH-ID,
   cCTrCH-ID
   iE-Extensions
                                ProtocolExtensionContainer { {DL-CCTrCH-InformationDeleteItem-RL-ReconfRgstTDD-ExtIEs} } OPTIONAL,
DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
DCH-DeleteList-RL-ReconfRqstTDD
                                       ::= SEQUENCE (SIZE(0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstTDD
DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
   dCH-ID
                                ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRgstTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RadioLinkReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-UL-Synchronisation-Parameters-LCR
                                                CRITICALITY ignore
                                                                        EXTENSION UL-Synchronisation-Parameters-LCR
                                                                                                                     PRESENCE
   optional }, -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
__ ********************************
-- RADIO LINK RECONFIGURATION RESPONSE FDD
```

```
RadioLinkReconfigurationResponseFDD ::= SEQUENCE {
   protocolIEs
                                  ProtocolIE-Container
                                                             {{RadioLinkReconfigurationResponseFDD-IEs}},
                                  ProtocolExtensionContainer {{RadioLinkReconfigurationResponseFDD-Extensions}}
   protocolExtensions
                                                                                                                               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 },
                                              ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationResponse-RL-
RL-InformationResponseList-RL-ReconfRspFDD
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,
                                                  OPTIONAL,
   max-UL-SIR
                                  UL-SIR
   min-UL-SIR
                                  UL-SIR
                                                  OPTIONAL,
   maximumDLTxPower
                                  DL-Power
                                                  OPTIONAL,
   minimumDLTxPower
                                  DL-Power
                                                  OPTIONAL,
    secondary-CCPCH-Info
                                  Secondary-CCPCH-Info
                                                             OPTIONAL,
                                  DCH-InformationResponseList-RL-ReconfRspFDD OPTIONAL,
   dCHsInformationResponseList
    dL-CodeInformationList-RL-ReconfResp
                                          DL-CodeInformationList-RL-ReconfRspFDD OPTIONAL,
                                  ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfRspFDD-ExtIEs} } OPTIONAL,
   iE-Extensions
    . . .
RL-InformationResponseItem-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
                                                     ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfRspFDD} }
DCH-InformationResponseList-RL-ReconfRspFDD
DCH-InformationResponseListIEs-RL-ReconfRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse
                                      CRITICALITY ignore TYPE DCH-InformationResponse
                                                                                            PRESENCE mandatory
DL-CodeInformationList-RL-ReconfRspFDD ::= ProtocolIE-Single-Container {{ DL-CodeInformationListIEs-RL-ReconfRspFDD }}
DL-CodeInformationListIEs-RL-ReconfRspFDD RNSAP-PROTOCOL-IES ::= {
    PRESENCE optional }
RadioLinkReconfigurationResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
```

```
-- RADIO LINK RECONFIGURATION RESPONSE TDD
__ *********************
RadioLinkReconfigurationResponseTDD ::= SEQUENCE {
                               ProtocolIE-Container
                                                        {{RadioLinkReconfigurationResponseTDD-IEs}},
   protocolIEs
                               ProtocolExtensionContainer {{RadioLinkReconfigurationResponseTDD-Extensions}}
   protocolExtensions
                                                                                                                     OPTIONAL,
RadioLinkReconfigurationResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
   PRESENCE optional
   { ID id-CriticalityDiagnostics
                                      CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                       PRESENCE optional },
RL-InformationResponse-RL-ReconfRspTDD ::= SEQUENCE {
   rL-ID
                               RL-ID,
   max-UL-SIR
                               UL-SIR
                                              OPTIONAL,
   min-UL-SIR
                                              OPTIONAL,
                               UL-SIR
   maximumDLTxPower
                                              OPTIONAL,
                               DL-Power
   minimumDLTxPower
                               DL-Power
                                              OPTIONAL,
   dCHsInformationResponseList
                               DCH-InformationResponseList-RL-ReconfRspTDD OPTIONAL,
                                ProtocolExtensionContainer { {RL-InformationResponse-RL-ReconfRspTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
   . . .
RL-InformationResponse-RL-ReconfRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-UL-TimingAdvanceCtrl-LCR
                                      CRITICALITY ignore EXTENSION UL-TimingAdvanceCtrl-LCR PRESENCE optional },
   --For 1.28Mcps TDD only
DCH-InformationResponseList-RL-ReconfRspTDD
                                                 ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfRspTDD} }
DCH-InformationResponseListIEs-RL-ReconfRspTDD RNSAP-PROTOCOL-IES ::= {
   { ID id-DCH-InformationResponse CRITICALITY ignore TYPE DCH-InformationResponse
                                                                              PRESENCE optional }
RadioLinkReconfigurationResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
-- RADIO LINK FAILURE INDICATION
__ ***********************
```

```
RadioLinkFailureIndication ::= SEOUENCE {
   protocolIEs
                                  ProtocolIE-Container
                                                            {{RadioLinkFailureIndication-IEs}},
   protocolExtensions
                                  ProtocolExtensionContainer {{RadioLinkFailureIndication-Extensions}}
                                                                                                                      OPTIONAL,
RadioLinkFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Reporting-Object-RL-FailureInd CRITICALITY ignore TYPE Reporting-Object-RL-FailureInd
                                                                                                 PRESENCE mandatory },
   . . .
Reporting-Object-RL-FailureInd ::= CHOICE {
   rL
                          RL-RL-FailureInd,
                          RL-Set-RL-FailureInd, --FDD only
   rL-Set
    . . . ,
   cCTrCH
                          CCTrCH-RL-FailureInd --TDD only
RL-RL-FailureInd
                          ::= SEOUENCE {
   rL-InformationList-RL-FailureInd
                                          RL-InformationList-RL-FailureInd.
                                          ProtocolExtensionContainer { { RLItem-RL-FailureInd-ExtIEs} } OPTIONAL,
   iE-Extensions
RLItem-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-InformationList-RL-FailureInd
                                          ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {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-RL-FailureInd
                              ::= SEQUENCE {
   rL-Set-InformationList-RL-FailureInd
                                          RL-Set-InformationList-RL-FailureInd.
   iE-Extensions
                                          RL-SetItem-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
RL-Set-InformationList-RL-FailureInd
                                               ::= SEOUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {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
    iE-Extensions
                                    ProtocolExtensionContainer { {RL-Set-Information-RL-FailureInd-ExtIEs} } OPTIONAL,
RL-Set-Information-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RadioLinkFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
CCTrCH-RL-FailureInd ::= SEQUENCE {
                                               RL-ID,
    cCTrCH-InformationList-RL-FailureInd
                                               CCTrCH-InformationList-RL-FailureInd,
                                            ProtocolExtensionContainer { { CCTrCHItem-RL-FailureInd-ExtIEs } }
    iE-Extensions
                                                                                                                   OPTIONAL,
CCTrCHItem-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
CCTrCH-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ CCTrCH-InformationItemIE-RL-
FailureInd}}
CCTrCH-InformationItemIE-RL-FailureInd RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-InformationItem-RL-FailureInd
                                                           CRITICALITY
                                                                            ignore
                                                                                           TYPE CCTrCH-InformationItem-RL-FailureInd
    PRESENCE mandatory}
CCTrCH-InformationItem-RL-FailureInd ::= SEOUENCE {
    cCTrCH-ID
                                               CCTrCH-ID,
    cause
                                                Cause,
    iE-Extensions
                                                ProtocolExtensionContainer { { CCTrCH-InformationItem-RL-FailureInd-ExtIEs } }
                                                                                                                                  OPTIONAL,
CCTrCH-InformationItem-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
-- RADIO LINK PREEMPTION REQUIRED INDICATION
__ **********************
RadioLinkPreemptionRequiredIndication ::= SEQUENCE {
   protocolIEs
                               ProtocolIE-Container
                                                        {{RadioLinkPreemptionRequiredIndication-IEs}},
   protocolExtensions
                               ProtocolExtensionContainer {{RadioLinkPreemptionRequiredIndication-Extensions}}
                                                                                                                       OPTIONAL,
RadioLinkPreemptionRequiredIndication-IEs RNSAP-PROTOCOL-IES ::= {
   { ID id-RL-InformationList-RL-PreemptRequiredInd
                                                CRITICALITY ignore TYPE RL-InformationList-RL-PreemptRequiredInd PRESENCE optional },
RL-InformationList-RL-PreemptReguiredInd
                                            ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIEs-RL-
PreemptRequiredInd} }
RL-InformationItemIEs-RL-PreemptRequiredInd RNSAP-PROTOCOL-IES ::= {
   { ID id-RL-InformationItem-RL-PreemptRequiredInd
                                                     CRITICALITY ignore TYPE RL-InformationItem-RL-PreemptRequiredInd
                                                                                                                   PRESENCE
mandatory }
RL-InformationItem-RL-PreemptRequiredInd::= SEQUENCE {
   rL-ID
                            RL-ID,
   iE-Extensions
                            ProtocolExtensionContainer { {RL-Information-RL-PreemptRequiredInd-ExtIEs} } OPTIONAL,
RL-Information-RL-PreemptRequiredInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RadioLinkPreemptionRequiredIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
-- RADIO LINK RESTORE INDICATION
     RadioLinkRestoreIndication ::= SEOUENCE {
                                                        {{RadioLinkRestoreIndication-IEs}},
   protocolIEs
                               ProtocolIE-Container
   protocolExtensions
                               ProtocolExtensionContainer {{RadioLinkRestoreIndication-Extensions}}
                                                                                                             OPTIONAL.
RadioLinkRestoreIndication-IEs RNSAP-PROTOCOL-IES ::= {
   PRESENCE mandatory
```

```
Reporting-Object-RL-RestoreInd ::= CHOICE {
                           RL-RL-RestoreInd, --TDD only
                           RL-Set-RL-RestoreInd, --FDD only
   rL-Set
    . . . ,
    cCTrCH
                           CCTrCH-RL-RestoreInd --TDD only
RL-RL-RestoreInd ::= SEQUENCE {
    rL-InformationList-RL-RestoreInd
                                           RL-InformationList-RL-RestoreInd,
                                           ProtocolExtensionContainer { { RLItem-RL-RestoreInd-ExtIEs} } OPTIONAL,
   iE-Extensions
RLItem-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-InformationList-RL-RestoreInd
                                           ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {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 {
                                    ProtocolExtensionContainer { {RL-Information-RL-RestoreInd-ExtIEs} } OPTIONAL,
    iE-Extensions
RL-Information-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-Set-RL-RestoreInd ::= SEOUENCE {
   rL-Set-InformationList-RL-RestoreInd
                                           RL-Set-InformationList-RL-RestoreInd,
   iE-Extensions
                                           ProtocolExtensionContainer { { RL-SetItem-RL-RestoreInd-ExtIEs} } OPTIONAL,
RL-SetItem-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
RL-Set-InformationList-RL-RestoreInd
                                               ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {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 ::= {
CCTrCH-RL-RestoreInd ::= SEQUENCE {
                                          RL-ID.
                                          CCTrCH-InformationList-RL-RestoreInd,
   cCTrCH-InformationList-RL-RestoreInd
                                      ProtocolExtensionContainer { { CCTrCHItem-RL-RestoreInd-ExtIEs } }
   iE-Extensions
                                                                                                     OPTIONAL,
CCTrCHItem-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
CCTrCH-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ CCTrCH-InformationItemIE-RL-
RestoreInd}}
CCTrCH-InformationItemIE-RL-RestoreInd RNSAP-PROTOCOL-IES ::= {
         id-CCTrCH-InformationItem-RL-RestoreInd
                                                    CRITICALITY
                                                                   ignore
                                                                                TYPE CCTrCH-InformationItem-RL-RestoreInd
   PRESENCE mandatory
CCTrCH-InformationItem-RL-RestoreInd ::= SEQUENCE {
   cCTrCH-ID
                                              CCTrCH-ID,
                                          iE-Extensions
                                                                                                                  OPTIONAL,
CCTrCH-InformationItem-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  -- DOWNLINK POWER CONTROL REQUEST
__ ********************
DL-PowerControlRequest ::= SEQUENCE {
                                                       {{DL-PowerControlRequest-IEs}},
   protocolIEs
                               ProtocolIE-Container
   protocolExtensions
                               ProtocolExtensionContainer {{DL-PowerControlRequest-Extensions}}
                                                                                                        OPTIONAL,
```

```
DL-PowerControlRequest-IEs RNSAP-PROTOCOL-IES ::= {
     ID id-PowerAdjustmentType
                                    CRITICALITY ignore TYPE PowerAdjustmentType
                                                                                         PRESENCE mandatory
    { ID id-DLReferencePower
                                    CRITICALITY ignore TYPE DL-Power
                                                                                         PRESENCE conditional
   -- This IE shall be present if Power Adjustment Type IE equals to 'Common'
    { ID id-InnerLoopDLPCStatus
                                    CRITICALITY ignore TYPE InnerLoopDLPCStatus
                                                                                         PRESENCE optional }
   { ID id-DLReferencePowerList-DL-PC-Rqst
                                           CRITICALITY ignore TYPE DL-ReferencePowerInformationList-DL-PC-Rgst PRESENCE conditional}
   -- This IE shall be present if Power Adjustment Type IE equals to 'Individual'
   { ID id-MaxAdjustmentStep
                                    CRITICALITY ignore TYPE MaxAdjustmentStep
                                                                                    PRESENCE conditional } |
   -- This IE shall be present if Power Adjustment Type IE equals to 'Common' or 'Individual'
                                    CRITICALITY ignore TYPE AdjustmentPeriod
   { ID id-AdjustmentPeriod
                                                                                    PRESENCE conditional } |
   -- This IE shall be present if Power Adjustment Type IE equals to 'Common' or 'Individual'
   { ID id-AdjustmentRatio
                                CRITICALITY ignore TYPE ScaledAdjustmentRatio
                                                                                    PRESENCE conditional },
   -- This IE shall be present if Power Adjustment Type IE equals to 'Common' or 'Individual'
DL-ReferencePowerInformationList-DL-PC-Rgst
                                               ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {DL-
ReferencePowerInformation-DL-PC-Rgst-IEs} }
DL-ReferencePowerInformation-DL-PC-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
   { ID id-DL-ReferencePowerInformation-DL-PC-Rgst CRITICALITY ignore TYPE DL-ReferencePowerInformation-DL-PC-Rgst PRESENCE mandatory }
DL-ReferencePowerInformation-DL-PC-Rqst ::= SEQUENCE {
                             RL-ID.
   dl-Reference-Power
                                    DL-Power,
   iE-Extensions
                                ProtocolExtensionContainer { {DL-ReferencePowerInformation-DL-PC-Rgst-ExtIEs} } OPTIONAL,
DL-ReferencePowerInformation-DL-PC-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-PowerControlRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
      ******************
-- DOWNLINK POWER TIMESLOT CONTROL REQUEST TDD
   DL-PowerTimeslotControlRequest ::= SEQUENCE {
   protocolIEs
                                ProtocolIE-Container
                                                          {{DL-PowerTimeslotControlRequest-IEs}},
   protocolExtensions
                                ProtocolExtensionContainer {{DL-PowerTimeslotControlRequest-Extensions}}
                                                                                                                    OPTIONAL,
DL-PowerTimeslotControlRequest-IEs RNSAP-PROTOCOL-IES ::= {
   -- Mandatory for 3.84Mcps TDD only
```

```
DL-PowerTimeslotControlRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
   ignore EXTENSION DL-TimeSlot-ISCP-LCR-Information PRESENCE optional },
   -- Mandatory for 1.28Mcps TDD only
  -- PHYSICAL CHANNEL RECONFIGURATION REQUEST FDD
  ************************
PhysicalChannelReconfigurationRequestFDD ::= SEOUENCE {
                                                  {{PhysicalChannelReconfigurationRequestFDD-IEs}},
   protocolIEs
                            ProtocolIE-Container
                            ProtocolExtensionContainer {{PhysicalChannelReconfigurationRequestFDD-Extensions}}
   protocolExtensions
                                                                                                            OPTIONAL.
   . . .
PhysicalChannelReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
   . . .
RL-Information-PhyChReconfRqstFDD ::= SEQUENCE {
   rL-ID
                        RL-ID,
   dl-CodeInformation
                            DL-CodeInformationList-PhyChReconfRqstFDD,
                            ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstFDD-ExtIEs} } OPTIONAL,
   iE-Extensions
   . . .
RL-Information-PhyChReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
                                    ::= ProtocolIE-Single-Container { {DL-CodeInformationListIEs-PhyChReconfRqstFDD} }
DL-CodeInformationList-PhyChReconfRqstFDD
DL-CodeInformationListIEs-PhyChReconfRqstFDD RNSAP-PROTOCOL-IES ::= {
   { ID id-FDD-DL-CodeInformation CRITICALITY notify TYPE FDD-DL-CodeInformation PRESENCE mandatory }
PhysicalChannelReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ******************
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST TDD
  *****************
PhysicalChannelReconfigurationRequestTDD ::= SEQUENCE {
```

```
ProtocolIE-Container
                                                            {{PhysicalChannelReconfigurationRequestTDD-IEs}},
   protocolIEs
   protocolExtensions
                                  ProtocolExtensionContainer {{PhysicalChannelReconfigurationRequestTDD-Extensions}}
                                                                                                                                  OPTIONAL,
PhysicalChannelReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    . . .
RL-Information-PhyChReconfRqstTDD ::= SEQUENCE {
                              RL-ID,
   ul-CCTrCH-Information
                                      UL-CCTrCH-InformationList-PhyChReconfRgstTDD
                                                                                   OPTIONAL.
   dl-CCTrCH-Information
                                      DL-CCTrCH-InformationList-PhyChReconfRqstTDD
                                                                                   OPTIONAL.
                                  ProtocolExtensionContainer { {RL-Information-PhyChReconfRgstTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
RL-Information-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
                                                 ::= ProtocolIE-Single-Container { {UL-CCTrCH-InformationListIEs-PhyChReconfRqstTDD} }
UL-CCTrCH-InformationList-PhyChReconfRqstTDD
UL-CCTrCH-InformationListIEs-PhyChReconfRqstTDD 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,
                                  ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
UL-CCTrCH-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-DPCH-InformationList-PhyChReconfRqstTDD ::= ProtocolIE-Single-Container {{UL-DPCH-InformationListIEs-PhyChReconfRqstTDD}}
UL-DPCH-InformationListIEs-PhyChReconfRgstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationItem-PhyChReconfRqstTDD CRITICALITY notify TYPE UL-DPCH-InformationItem-PhyChReconfRqstTDD
                                                                                                                         PRESENCE mandatory
UL-DPCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
   repetitionPeriod
                                  RepetitionPeriod
                                                         OPTIONAL,
   repetitionLength
                                  RepetitionLength
                                                         OPTIONAL,
    tDD-DPCHOffset
                                  TDD-DPCHOffset
                                                         OPTIONAL,
   uL-Timeslot-InformationList-PhyChReconfRqstTDD
                                                         UL-Timeslot-InformationList-PhyChReconfRqstTDD
                                                                                                        OPTIONAL,
    --For 3.84Mcps TDD only
```

```
ProtocolExtensionContainer { {UL-DPCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
UL-DPCH-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::=
    { ID id-UL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD CRITICALITY reject
                                                                                   EXTENSION UL-TimeslotLCR-InformationList-
PhyChReconfRqstTDD
                      PRESENCE optional }.
    --For 1.28Mcps TDD only
UL-TimeslotLCR-InformationList-PhyChReconfRgstTDD::= SEQUENCE ( SIZE (1..maxNrOfTsLCR)) OF UL-TimeslotLCR-InformationItem-PhyChReconfRgstTDD
UL-TimeslotLCR-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    timeSlotLCR
                                 TimeSlotLCR,
   midambleShiftLCR
                                 MidambleShiftLCR
                                                        OPTIONAL,
   tFCI-Presence
                                 TFCI-Presence
                                                    OPTIONAL,
   uL-Code-LCR-Information
                                 TDD-UL-Code-LCR-Information
                                                                OPTIONAL,
   iE-Extensions
                                  ProtocolExtensionContainer { {UL-TimeslotLCR-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
UL-TimeslotLCR-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
UL-Timeslot-InformationList-PhyChReconfRqstTDD::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF UL-Timeslot-InformationItem-PhyChReconfRqstTDD
UL-Timeslot-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
   timeSlot
                                 TimeSlot,
   midambleShiftAndBurstType
                                             MidambleShiftAndBurstType
                                                                           OPTIONAL,
   tFCI-Presence
                                  TFCI-Presence
                                                    OPTIONAL,
    uL-Code-Information
                              TDD-UL-Code-Information
                                                        OPTIONAL,
                                  ProtocolExtensionContainer { {UL-Timeslot-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
    . . .
UL-Timeslot-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
                                                 ::= ProtocolIE-Single-Container { {DL-CCTrCH-InformationListIEs-PhyChReconfRqstTDD} }
DL-CCTrCH-InformationList-PhyChReconfRqstTDD
DL-CCTrCH-InformationListIEs-PhyChReconfRqstTDD RNSAP-PROTOCOL-IES ::= {
    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,
                                  ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
```

```
DL-CCTrCH-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-DPCH-InformationList-PhyChReconfRqstTDD ::= ProtocolIE-Single-Container {{DL-DPCH-InformationListIEs-PhyChReconfRqstTDD}}
DL-DPCH-InformationListIEs-PhyChReconfRqstTDD RNSAP-PROTOCOL-IES ::= {
    PRESENCE mandatory
DL-DPCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE
   repetitionPeriod
                                RepetitionPeriod
                                                       OPTIONAL,
   repetitionLength
                                RepetitionLength
                                                       OPTIONAL,
   tDD-DPCHOffset
                                TDD-DPCHOffset
                                                       OPTIONAL,
                                                       DL-Timeslot-InformationList-PhyChReconfRgstTDD
   dL-Timeslot-InformationList-PhyChReconfRgstTDD
                                                                                                    OPTIONAL,
                                ProtocolExtensionContainer { {DL-DPCH-InformationItem-PhyChReconfRgstTDD-ExtIEs} } OPTIONAL,
   iE-Extensions
DL-DPCH-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    EXTENSION DL-TimeslotLCR-InformationList-
PhyChReconfRqstTDD
                     PRESENCE optional },
   --For 1.28Mcps TDD only
   . . .
DL-TimeslotLCR-InformationList-PhyChReconfRqstTDD::= SEQUENCE ( SIZE (1..maxNrOfTsLCR)) OF DL-TimeslotLCR-InformationItem-PhyChReconfRqstTDD
DL-TimeslotLCR-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
   timeSlotLCR
                                TimeSlotLCR,
   midambleShiftLCR
                                MidambleShiftLCR
                                                       OPTIONAL,
   tFCI-Presence
                                TFCI-Presence
                                                   OPTIONAL,
   dL-Code-LCR-Information
                                TDD-DL-Code-LCR-Information
                                                              OPTIONAL,
   iE-Extensions
                                ProtocolExtensionContainer { {DL-TimeslotLCR-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
DL-TimeslotLCR-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-Timeslot-InformationList-PhyChReconfRqstTDD::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF DL-Timeslot-InformationItem-PhyChReconfRqstTDD
DL-Timeslot-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
   timeSlot
                                TimeSlot,
   midambleShiftAndBurstTvpe
                                           MidambleShiftAndBurstType
                                                                         OPTIONAL,
   tFCI-Presence
                                TFCI-Presence
                                                   OPTIONAL,
   dL-Code-Information
                             TDD-DL-Code-Information
                                                       OPTIONAL,
   iE-Extensions
                                 ProtocolExtensionContainer { {DL-Timeslot-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
```

```
DL-Timeslot-InformationItem-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
PhysicalChannelReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  -- PHYSICAL CHANNEL RECONFIGURATION COMMAND
  ****************
PhysicalChannelReconfigurationCommand ::= SEQUENCE {
                                                     {{PhysicalChannelReconfigurationCommand-IEs}},
   protocolIEs
                             ProtocolIE-Container
                             ProtocolExtensionContainer {{PhysicalChannelReconfigurationCommand-Extensions}}
   protocolExtensions
                                                                                                                OPTIONAL,
   . . .
PhysicalChannelReconfigurationCommand-IEs RNSAP-PROTOCOL-IES ::= {
    ID id-CFN
              CRITICALITY ignore TYPE CFN
                                                                  PRESENCE mandatory } |
                                                                                 PRESENCE optional },
    ID id-CriticalityDiagnostics
                              CRITICALITY ignore TYPE CriticalityDiagnostics
PhysicalChannelReconfigurationCommand-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ****************
-- PHYSICAL CHANNEL RECONFIGURATION FAILURE
  ******************
PhysicalChannelReconfigurationFailure ::= SEQUENCE
                                                     {{PhysicalChannelReconfigurationFailure-IEs}},
   protocolIEs
                             ProtocolIE-Container
   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 ::= {
__ **********************
```

```
-- RADIO LINK CONGESTION INDICATION
__ *********************
RadioLinkCongestionIndication ::= SEOUENCE {
   protocolIEs
                                 ProtocolIE-Container
                                                          {{RadioLinkCongestionIndication-IEs}},
   protocolExtensions
                                 ProtocolExtensionContainer {{RadioLinkCongestionIndication-Extensions}}
                                                                                                                    OPTIONAL.
RadioLinkCongestionIndication-IEs RNSAP-PROTOCOL-IES ::= {
     ID id-CongestionCause
                                            CRITICALITY ignore TYPE CongestionCause
                                                                                                     PRESENCE optional } |
    PRESENCE mandatory },
RL-InformationList-RL-CongestInd
                                        ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIEs-RL-
CongestInd } }
RL-InformationItemIEs-RL-CongestInd RNSAP-PROTOCOL-IES ::= {
   { ID id-RL-InformationItem-RL-CongestInd
                                               CRITICALITY ignore TYPE RL-InformationItem-RL-CongestInd PRESENCE mandatory }
RL-InformationItem-RL-CongestInd ::= SEQUENCE {
                                    RL-ID,
   dCH-Rate-Information
                             DCH-Rate-Information-RL-CongestInd,
   iE-Extensions
                             ProtocolExtensionContainer { {RL-Information-RL-CongestInd-ExtIEs} } OPTIONAL,
DCH-Rate-Information-RL-CongestInd ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF ProtocolIE-Single-Container { {DCH-Rate-InformationItemIEs-RL-
CongestInd } }
DCH-Rate-InformationItemIEs-RL-CongestInd RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-Rate-InformationItem-RL-CongestInd
                                                   CRITICALITY ignore TYPE DCH-Rate-InformationItem-RL-CongestInd
                                                                                                                   PRESENCE mandatory
DCH-Rate-InformationItem-RL-CongestInd ::= SEQUENCE {
                             DCH-ID,
   allowed-Rate-Information
                             Allowed-Rate-Information OPTIONAL,
                             ProtocolExtensionContainer { {DCH-Rate-InformationItem-RL-CongestInd-ExtIEs} } OPTIONAL,
   iE-Extensions
DCH-Rate-InformationItem-RL-CongestInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-Information-RL-CongestInd-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {
RadioLinkCongestionIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
```

```
-- UPLINK SIGNALLING TRANSFER INDICATION FDD
  *****************
UplinkSignallingTransferIndicationFDD ::= SEQUENCE {
   protocolIEs
                               ProtocolIE-Container
                                                       {{UplinkSignallingTransferIndicationFDD-IEs}},
                               ProtocolExtensionContainer {{UplinkSignallingTransferIndicationFDD-Extensions}}
   protocolExtensions
                                                                                                                      OPTIONAL,
UplinkSignallingTransferIndicationFDD-IES RNSAP-PROTOCOL-IES ::= {
     ID id-UC-ID
                               CRITICALITY ignore TYPE UC-ID
                                                                         PRESENCE mandatory }
                                                                      PRESENCE mandatory }
     ID id-SAI
                          CRITICALITY ignore TYPE SAI
                         CRITICALITY ignore TYPE GA-Cell
                                                                      PRESENCE optional } |
     ID id-GA-Cell
     ID id-C-RNTI
                                                                         PRESENCE mandatory
                           CRITICALITY ignore TYPE C-RNTI
     ID id-S-RNTI
                               CRITICALITY ignore TYPE S-RNTI
                                                                         PRESENCE mandatory
                               CRITICALITY ignore TYPE D-RNTI
                                                                         PRESENCE optional
     ID id-D-RNTI
     ID id-PropagationDelay
                               CRITICALITY ignore TYPE PropagationDelay
                                                                         PRESENCE mandatory }
     ID id-STTD-SupportIndicator
                                          CRITICALITY ignore TYPE STTD-SupportIndicator PRESENCE mandatory }
                                          CRITICALITY ignore TYPE ClosedLoopModel-SupportIndicator PRESENCE mandatory }
     ID id-ClosedLoopModel-SupportIndicator
     ID id-ClosedLoopMode2-SupportIndicator
                                          CRITICALITY ignore TYPE ClosedLoopMode2-SupportIndicator PRESENCE mandatory }
     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-Information
                                                                                        PRESENCE optional },
                                      CRITICALITY ignore TYPE URA-Information
   . . .
UplinkSignallingTransferIndicationFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
     ID id-GA-CellAdditionalShapes
                                      CRITICALITY ignore EXTENSION GA-CellAdditionalShapes
                                                                                          PRESENCE optional }
   PRESENCE optional },
                                                                         DPC-Mode-Change-SupportIndicator
-- UPLINK SIGNALLING TRANSFER INDICATION TDD
  ******************
UplinkSignallingTransferIndicationTDD ::= SEQUENCE {
   protocolIEs
                               ProtocolIE-Container
                                                       {{UplinkSignallingTransferIndicationTDD-IEs}},
   protocolExtensions
                               ProtocolExtensionContainer {{UplinkSignallingTransferIndicationTDD-Extensions}}
                                                                                                                      OPTIONAL,
UplinkSignallingTransferIndicationTDD-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-GA-Cell
                            CRITICALITY ignore TYPE GA-Cell
                                                                        PRESENCE optional } |
     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-RxTimingDeviationForTA
                                       CRITICALITY ignore TYPE RxTimingDeviationForTA PRESENCE mandatory }
     ID id-L3-Information
                                    CRITICALITY ignore TYPE L3-Information
                                                                                   PRESENCE mandatory }
                                                                                        PRESENCE optional }
     ID id-CN-PS-DomainIdentifier
                                       CRITICALITY ignore TYPE CN-PS-DomainIdentifier
     ID id-CN-CS-DomainIdentifier
                                        CRITICALITY ignore TYPE CN-CS-DomainIdentifier
                                                                                        PRESENCE optional }
   { ID id-URA-Information
                                        CRITICALITY ignore TYPE URA-Information
                                                                                           PRESENCE optional },
UplinkSignallingTransferIndicationTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-GA-CellAdditionalShapes
                                       CRITICALITY ignore EXTENSION GA-CellAdditionalShapes
                                                                                           PRESENCE optional },
    *****************
-- DOWNLINK SIGNALLING TRANSFER REQUEST
  *****************
DownlinkSignallingTransferRequest ::= SEOUENCE {
   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 }
                                                                                           PRESENCE mandatory },
    { ID id-D-RNTI-ReleaseIndication
                                       CRITICALITY ignore TYPE D-RNTI-ReleaseIndication
DownlinkSignallingTransferRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
-- RELOCATION COMMIT
__ *********************
RelocationCommit ::= SEQUENCE {
   protocolIEs
                                ProtocolIE-Container
                                                         {{RelocationCommit-IEs}},
                                ProtocolExtensionContainer {{RelocationCommit-Extensions}}
                                                                                                       OPTIONAL,
   protocolExtensions
RelocationCommit-IEs RNSAP-PROTOCOL-IES ::=
```

```
ID id-D-RNTI
                                 CRITICALITY ignore TYPE D-RNTI
                                                                              PRESENCE optional } |
   { ID id-RANAP-RelocationInformation
                                        CRITICALITY ignore TYPE RANAP-RelocationInformation
                                                                                             PRESENCE optional },
RelocationCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  -- PAGING REQUEST
  ******************
PagingRequest ::= SEQUENCE {
                                                          {{PagingRequest-IEs}},
   protocolIEs
                                 ProtocolIE-Container
                                 ProtocolExtensionContainer {{PagingRequest-Extensions}}
   protocolExtensions
                                                                                                      OPTIONAL,
   . . .
PagingRequest-IEs RNSAP-PROTOCOL-IES ::= {
     ID id-PagingArea-PagingRqst
                                        CRITICALITY ignore TYPE PagingArea-PagingRqst
                                                                                          PRESENCE mandatory } |
     ID id-SRNC-ID
                                 CRITICALITY ignore TYPE RNC-ID
                                                                             PRESENCE mandatory
                                 CRITICALITY ignore TYPE S-RNTI
     ID id-S-RNTI
                                                                             PRESENCE mandatory
     ID id-IMSI
                                 CRITICALITY ignore TYPE IMSI
                                                                             PRESENCE mandatory }
     ID id-DRXCycleLengthCoefficient
                                               CRITICALITY ignore TYPE DRXCycleLengthCoefficient
                                                                                                        PRESENCE mandatory
    { ID id-CNOriginatedPage-PagingRqst
                                               CRITICALITY ignore TYPE CNOriginatedPage-PagingRgst
                                                                                                        PRESENCE optional
   . . .
PagingArea-PagingRqst ::= CHOICE {
                         URA-PagingRqst,
   cell
                         Cell-PagingRqst,
URA-PagingRgst ::= SEQUENCE {
                             URA-ID,
   uRA-ID
   iE-Extensions
                             ProtocolExtensionContainer { { URAItem-PagingRgst-ExtIEs} } OPTIONAL,
URAItem-PagingRqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
Cell-PagingRqst ::= SEQUENCE {
   c-ID
                             C-ID,
                             ProtocolExtensionContainer { { CellItem-PagingRgst-ExtIEs} } OPTIONAL,
   iE-Extensions
CellItem-PagingRqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
CNOriginatedPage-PagingRgst::= SEOUENCE {
    pagingCause
                               PagingCause,
    cNDomainType
                               CNDomainType,
                               PagingRecordType,
    pagingRecordType
                               ProtocolExtensionContainer { { CNOriginatedPage-PagingRgst-ExtIEs} } OPTIONAL,
    iE-Extensions
CNOriginatedPage-PagingRqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
PagingRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  DEDICATED MEASUREMENT INITIATION REQUEST
DedicatedMeasurementInitiationRequest ::= SEQUENCE
   protocolIEs
                                   ProtocolIE-Container
                                                               {{DedicatedMeasurementInitiationRequest-IEs}},
                                   ProtocolExtensionContainer {{DedicatedMeasurementInitiationRequest-Extensions}}
   protocolExtensions
                                                                                                                                      OPTIONAL,
DedicatedMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
     ID id-MeasurementID
                                       CRITICALITY reject TYPE MeasurementID
                                                                                           PRESENCE mandatory }
    { ID id-DedicatedMeasurementObjectType-DM-Rqst CRITICALITY reject TYPE DedicatedMeasurementObjectType-DM-Rqst PRESENCE mandatory } |
    -- This IE represents both the Dedicated Measurement Object Type IE and the choice based on the Dedicated Measurement Object Type
    -- as described in the tabular message format in subclause 9.1.
                                               CRITICALITY reject TYPE DedicatedMeasurementType
    { ID id-DedicatedMeasurementType
                                                                                                       PRESENCE mandatory }
     ID id-MeasurementFilterCoefficient
                                               CRITICALITY reject TYPE MeasurementFilterCoefficient
                                                                                                             PRESENCE optional }
     ID id-ReportCharacteristics
                                           CRITICALITY reject TYPE ReportCharacteristics
                                                                                                 PRESENCE mandatory
     ID id-CFNReportingIndicator
                                           CRITICALITY reject TYPE FNReportingIndicator
                                                                                                  PRESENCE mandatory } |
    { ID id-CFN
                                                                                                  PRESENCE optional },
                                           CRITICALITY reject TYPE CFN
    . . .
DedicatedMeasurementObjectType-DM-Rgst ::= CHOICE {
   rL
                           RL-DM-Rast,
   rLS
                           RL-Set-DM-Rast,
   allRL
                           All-RL-DM-Rqst,
    allRLS
                           All-RL-Set-DM-Rqst,
    . . .
RL-DM-Rqst ::= SEQUENCE {
    rL-InformationList-DM-Rgst
                                    RL-InformationList-DM-Rgst,
```

```
ProtocolExtensionContainer { { RLItem-DM-Rqst-ExtIEs} } OPTIONAL,
    iE-Extensions
RLItem-DM-Rgst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-InformationList-DM-Rqst
                                            ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {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-Rgst ::= SEOUENCE {
    rL-ID
                               RL-ID,
    dPCH-ID
                               DPCH-ID
    iE-Extensions
                                    ProtocolExtensionContainer { {RL-InformationItem-DM-Rqst-ExtIEs} } OPTIONAL,
RL-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-Set-DM-Rgst ::= SEQUENCE {
    rL-Set-InformationList-DM-Rgst RL-Set-InformationList-DM-Rgst,
    iE-Extensions
                                    ProtocolExtensionContainer { { RL-SetItem-DM-Rgst-ExtIEs} } OPTIONAL,
RL-SetItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-Set-InformationList-DM-Rqst
                                              ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-Information-DM-
Rqst-IEs} }
RL-Set-Information-DM-Rgst-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-DM-Rgst
                                            CRITICALITY reject TYPE RL-Set-InformationItem-DM-Rgst
                                                                                                             PRESENCE mandatory
RL-Set-InformationItem-DM-Rqst ::= SEQUENCE {
   rL-Set-ID
                                   RL-Set-ID,
    iE-Extensions
                                    ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rgst-ExtIEs} } OPTIONAL.
RL-Set-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
All-RL-DM-Rqst ::= NULL
```

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```
All-RL-Set-DM-Rqst ::= NULL
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-CriticalityDiagnostics
                                CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                      PRESENCE optional },
DedicatedMeasurementObjectType-DM-Rsp ::= CHOICE {
   rLs
                        RL-DM-Rsp,
   rLS
                        RL-Set-DM-Rsp,
   allRL
                        RL-DM-Rsp,
   allRLS
                        RL-Set-DM-Rsp,
   . . .
RL-DM-Rsp ::= SEQUENCE {
   rL-InformationList-DM-Rsp
                               RL-InformationList-DM-Rsp.
   iE-Extensions
                               ProtocolExtensionContainer { { RLItem-DM-Rsp-ExtIEs} } OPTIONAL,
RLItem-DM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-Set-DM-Rsp ::= SEQUENCE {
                              RL-Set-InformationList-DM-Rsp.
   rL-Set-InformationList-DM-Rsp
   iE-Extensions
                               ProtocolExtensionContainer { { RL-SetItem-DM-Rsp-ExtIEs} } OPTIONAL,
   . . .
RL-SetItem-DM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-InformationList-DM-Rsp
                                      ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-DM-Rsp-IEs} }
```

```
RL-Information-DM-Rsp-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rsp
                                          CRITICALITY ignore TYPE RL-InformationItem-DM-Rsp PRESENCE mandatory
RL-InformationItem-DM-Rsp ::= SEQUENCE {
   rL-ID
                               RL-ID,
   dPCH-ID
                               DPCH-ID
                                                  OPTIONAL,
   dedicatedMeasurementValue
                                      DedicatedMeasurementValue,
                               CFN
                                                  OPTIONAL,
   iE-Extensions
                                  ProtocolExtensionContainer { {RL-InformationItem-DM-Rsp-ExtIEs} } OPTIONAL,
    . . .
RL-InformationItem-DM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-Set-InformationList-DM-Rsp
                                              ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-Information-DM-Rsp-
IEs} }
RL-Set-Information-DM-Rsp-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-DM-Rsp
                                              CRITICALITY ignore TYPE RL-Set-InformationItem-DM-Rsp
                                                                                                       PRESENCE mandatory
RL-Set-InformationItem-DM-Rsp ::= SEQUENCE {
   rL-Set-ID
                                  RL-Set-ID,
   dedicatedMeasurementValue
                                  DedicatedMeasurementValue,
   cFN
                                                              OPTIONAL,
                                   ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rspns-ExtIEs} } OPTIONAL,
   iE-Extensions
    . . .
RL-Set-InformationItem-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}}
                                                                                                                                  OPTIONAL,
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}},
                            ProtocolExtensionContainer {{DedicatedMeasurementReport-Extensions}}
   protocolExtensions
                                                                                                                  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 },
DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
   rLs
                         RL-DM-Rprt,
   rLS
                         RL-Set-DM-Rprt,
   allRL
                         RL-DM-Rprt,
   allRLS
                         RL-Set-DM-Rprt,
RL-DM-Rprt ::= SEQUENCE {
   rL-InformationList-DM-Rprt
                                 RL-InformationList-DM-Rprt,
   iE-Extensions
                                 ProtocolExtensionContainer { { RLItem-DM-Rprt-ExtIEs} } OPTIONAL,
   . . .
RLItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-Set-DM-Rprt ::= SEOUENCE {
   rL-Set-InformationList-DM-Rprt RL-Set-InformationList-DM-Rprt,
                                 ProtocolExtensionContainer { { RL-SetItem-DM-Rprt-ExtIEs} } OPTIONAL,
   . . .
RL-SetItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
```

```
RL-InformationList-DM-Rprt
                                          ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {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-TD
                               DPCH-ID
                                                  OPTIONAL,
   dedicatedMeasurementValueInformation
                                          DedicatedMeasurementValueInformation,
                                   ProtocolExtensionContainer { {RL-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
   iE-Extensions
RL-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-Set-InformationList-DM-Rprt
                                            ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-Information-DM-
Rprt-IEs} }
RL-Set-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 ::= SEOUENCE {
   dedicatedMeasurementValueInformation
                                          DedicatedMeasurementValueInformation,
   iE-Extensions
                                   ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
RL-Set-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DedicatedMeasurementReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
-- DEDICATED MEASUREMENT TERMINATION REQUEST
   *****************
DedicatedMeasurementTerminationRequest ::= SEQUENCE {
   protocolIEs
                                   ProtocolIE-Container
                                                              {{DedicatedMeasurementTerminationRequest-IEs}},
                                   ProtocolExtensionContainer {{DedicatedMeasurementTerminationRequest-Extensions}}
   protocolExtensions
                                                                                                                                    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 {
                                                     {{DedicatedMeasurementFailureIndication-IEs}},
   protocolIEs
                              ProtocolIE-Container
                              ProtocolExtensionContainer {{DedicatedMeasurementFailureIndication-Extensions}}
   protocolExtensions
                                                                                                                 OPTIONAL,
   . . .
DedicatedMeasurementFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
                                                                             PRESENCE mandatory } |
    ID id-MeasurementID
                      CRITICALITY ignore TYPE MeasurementID
    ID id-Cause
                            CRITICALITY ignore TYPE Cause
                                                                      PRESENCE mandatory },
DedicatedMeasurementFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    -- COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST
  *****************
CommonTransportChannelResourcesReleaseRequest ::= SEQUENCE {
                                                     {{CommonTransportChannelResourcesReleaseRequest-IEs}},
   protocolIEs
                              ProtocolIE-Container
   protocolExtensions
                              ProtocolExtensionContainer {{CommonTransportChannelResourcesReleaseRequest-Extensions}}
OPTIONAL,
CommonTransportChannelResourcesReleaseRequest-IEs RNSAP-PROTOCOL-IES ::= {
   { ID id-D-RNTI
                              CRITICALITY ignore TYPE D-RNTI
                                                                      PRESENCE mandatory },
   . . .
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-C-ID
                                 CRITICALITY reject TYPE C-ID
                                                                              PRESENCE optional
     ID id-TransportBearerRequestIndicator
                                            CRITICALITY reject TYPE TransportBearerRequestIndicator
                                                                                                      PRESENCE mandatory } |
     ID id-TransportBearerID
                                     CRITICALITY reject TYPE TransportBearerID
                                                                                         PRESENCE mandatory },
CommonTransportChannelResourcesRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::=
   { ID id-Permanent-NAS-UE-Identity
                                                CRITICALITY ignore
                                                                          EXTENSION Permanent-NAS-UE-Identity
                                                                                                              PRESENCE optional },
   . . .
         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-C-RNTI
                                 CRITICALITY ignore TYPE C-RNTI
                                                                              PRESENCE optional
     ID id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD CRITICALITY ignore TYPE FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD
   PRESENCE mandatory } |
     ID id-TransportLayerAddress
                                        CRITICALITY ignore TYPE TransportLayerAddress
                                                                                           PRESENCE optional } |
                                 CRITICALITY ignore TYPE BindingID
     ID id-BindingID
                                                                                 PRESENCE optional }
                                        CRITICALITY ignore TYPE CriticalityDiagnostics
    { ID id-CriticalityDiagnostics
                                                                                           PRESENCE optional },
   . . .
FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD ::= SEQUENCE
   fACH-FlowControlInformation
                                 FACH-FlowControlInformation-CTCH-ResourceRspFDD,
   iE-Extensions
                                 ProtocolExtensionContainer { {FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD-ExtIEs} } OPTIONAL,
FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {
```

```
FACH-FlowControlInformation-CTCH-ResourceRspFDD ::= ProtocolIE-Single-Container {{ FACH-FlowControlInformationIEs-CTCH-ResourceRspFDD }}
FACH-FlowControlInformationIEs-CTCH-ResourceRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-FACH-FlowControlInformation CRITICALITY ignore TYPE FACH-FlowControlInformation PRESENCE mandatory }
CommonTransportChannelResourcesResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
   { ID id-C-ID
                              CRITICALITY ignore
                                                    EXTENSION C-ID
                                                                            PRESENCE mandatory },
   . . .
  COMMON TRANSPORT CHANNEL RESOURCES RESPONSE TDD
    *****************
CommonTransportChannelResourcesResponseTDD ::= SEQUENCE {
   protocolIEs
                                                            {{CommonTransportChannelResourcesResponseTDD-IEs}},
                                  ProtocolExtensionContainer {{CommonTransportChannelResourcesResponseTDD-Extensions}}
   protocolExtensions
                                                                                                                         OPTIONAL,
    . . .
CommonTransportChannelResourcesResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
     ID id-S-RNTI
                     CRITICALITY ignore TYPE S-RNTI
                                                                              PRESENCE mandatory
     ID id-C-RNTI
                                                                              PRESENCE optional
                                  CRITICALITY ignore TYPE C-RNTI
    { ID id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD CRITICALITY ignore TYPE FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD
    PRESENCE mandatory } |
     ID id-TransportLayerAddress
                                 CRITICALITY ignore TYPE TransportLayerAddress
                                                                                             PRESENCE optional } |
     ID id-BindingID
                                  CRITICALITY ignore TYPE BindingID
                                                                                   PRESENCE optional } |
                                         CRITICALITY ignore TYPE CriticalityDiagnostics
    { ID id-CriticalityDiagnostics
                                                                                            PRESENCE optional },
    . . .
FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD ::= SEQUENCE
    fACH-FlowControlInformation FACH-FlowControlInformation-CTCH-ResourceRspTDD,
   iE-Extensions
                                  ProtocolExtensionContainer { {FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD-ExtIEs} } OPTIONAL,
FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
FACH-FlowControlInformation-CTCH-ResourceRspTDD ::= ProtocolIE-Single-Container {{ FACH-FlowControlInformationIEs-CTCH-ResourceRspTDD }}
FACH-FlowControlInformationIEs-CTCH-ResourceRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-FACH-FlowControlInformation CRITICALITY ignore TYPE FACH-FlowControlInformation PRESENCE mandatory }
CommonTransportChannelResourcesResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
```

```
{ ID id-C-ID
                           CRITICALITY ignore
                                               EXTENSION C-ID
                                                                    PRESENCE mandatory },
  *****************
-- COMMON TRANSPORT CHANNEL RESOURCES FAILURE
       ***************
CommonTransportChannelResourcesFailure ::= SEQUENCE
                                                     {{CommonTransportChannelResourcesFailure-IEs}},
   protocolIEs
                              ProtocolIE-Container
                              ProtocolExtensionContainer {{CommonTransportChannelResourcesFailure-Extensions}}
   protocolExtensions
                                                                                                         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
                                                                                  PRESENCE optional },
    ID id-CriticalityDiagnostics
                                     CRITICALITY ignore TYPE CriticalityDiagnostics
CommonTransportChannelResourcesFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
-- COMPRESSED MODE COMMAND
__ ********************
CompressedModeCommand ::= SEQUENCE {
   protocolIEs
                              ProtocolIE-Container
                                                     {{CompressedModeCommand-IEs}},
                              ProtocolExtensionContainer {{CompressedModeCommand-Extensions}}
   protocolExtensions
                                                                                                    OPTIONAL.
CompressedModeCommand-IEs RNSAP-PROTOCOL-IES ::= {
   { ID id-Active-Pattern-Sequence-Information
                                            CRITICALITY ignore TYPE Active-Pattern-Sequence-Information
                                                                                                  PRESENCE mandatory },
   . . .
CompressedModeCommand-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  -- ERROR INDICATION
  *****************
```

```
ErrorIndication ::= SEQUENCE {
   protocolIEs
                                  ProtocolIE-Container
                                                            {{ErrorIndication-IEs}},
   protocolExtensions
                                  ProtocolExtensionContainer {{ErrorIndication-Extensions}}
                                                                                                          OPTIONAL.
ErrorIndication-IEs RNSAP-PROTOCOL-IES ::= {
                                 CRITICALITY ignore TYPE Cause
     ID id-Cause
                                                                               PRESENCE optional |
    { ID id-CriticalityDiagnostics
                                         CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                            PRESENCE optional },
    . . .
ErrorIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
     ID id-S-RNTI
                                CRITICALITY ignore EXTENSION S-RNTI
                                                                                       PRESENCE optional } |
    { ID id-D-RNTI
                                CRITICALITY ignore EXTENSION D-RNTI
                                                                                       PRESENCE optional },
  *****************
-- COMMON MEASUREMENT INITIATION REQUEST
    *****************
CommonMeasurementInitiationRequest ::= SEQUENCE {
                          ProtocolIE-Container
                                                 {{CommonMeasurementInitiationRequest-IEs}},
   protocolIEs
                          ProtocolExtensionContainer {{CommonMeasurementInitiationRequest-Extensions}}
   protocolExtensions
                                                                                                        OPTIONAL,
CommonMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID
          id-MeasurementID
                                                         CRITICALITY reject
                                                                                                                           PRESENCE
                                                                                           MeasurementID
   mandatory } |
    { ID id-CommonMeasurementObjectType-CM-Rgst
                                                        CRITICALITY reject
                                                                                   TYPE
                                                                                           CommonMeasurementObjectType-CM-Rgst
                                                                                                                                 PRESENCE
   mandatory } |
    -- This IE represents both the Common Measurement Object Type IE and the choice based on the Common Measurement Object Type
    -- as described in the tabular message format in subclause 9.1.
          id-CommonMeasurementType
    { ID
                                                        CRITICALITY reject
                                                                                   TYPE
                                                                                           CommonMeasurementType
                                                                                                                           PRESENCE
   mandatory } |
           id-MeasurementFilterCoefficient
                                                        CRITICALITY reject
                                                                                   TYPE
                                                                                           MeasurementFilterCoefficient
                                                                                                                           PRESENCE optional
   { ID
          id-ReportCharacteristics
                                                        CRITICALITY reject
                                                                                   TYPE
                                                                                           ReportCharacteristics
                                                                                                                           PRESENCE
    mandatory }|
           id-SFNReportingIndicator
    { ID
                                                         CRITICALITY reject
                                                                                   TYPE
                                                                                           FNReportingIndicator
                                                                                                                           PRESENCE
   mandatory
     ID
           id-SFN
                                                         CRITICALITY reject
                                                                                   TYPE
                                                                                                                           PRESENCE optional
           id-CommonMeasurementAccuracy
                                                         CRITICALITY reject
                                                                                   TYPE
                                                                                           CommonMeasurementAccuracy
                                                                                                                           PRESENCE optional
     ID
    },
CommonMeasurementInitiationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
```

```
CommonMeasurementObjectType-CM-Rqst ::= CHOICE {
   cell
                                   Cell-CM-Rast,
    . . .
Cell-CM-Rqst ::= SEQUENCE {
   uC-ID
                                   UC-ID,
   timeSlot
                                   TimeSlot
                                                   OPTIONAL,
                                                            --3.84Mcps TDD only
   timeSlotLCR
                                   TimeSlotLCR
                                                   OPTIONAL, --1.28Mcps TDD only
   neighbouringCellMeasurementInformation
                                                   NeighbouringCellMeasurementInfo
                                                                                      OPTIONAL,
    -- UTRAN only
   iE-Extensions
                                   ProtocolExtensionContainer { { CellItem-CM-Rqst-ExtIEs} }
                                                                                               OPTIONAL,
NeighbouringCellMeasurementInfo ::= SEOUENCE (SIZE (1..maxNrOfMeasNCell)) OF
       CHOICE {
               neighbouringFDDCellMeasurementInformation
                                                              NeighbouringFDDCellMeasurementInformation,
               neighbouringTDDCellMeasurementInformation
                                                              NeighbouringTDDCellMeasurementInformation,
Cellitem-CM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  COMMON MEASUREMENT INITIATION RESPONSE
  ****************
CommonMeasurementInitiationResponse ::= SEQUENCE {
   protocolIEs
                           ProtocolIE-Container
                                                   {{CommonMeasurementInitiationResponse-IEs}},
                           ProtocolExtensionContainer {{CommonMeasurementInitiationResponse-Extensions}}
   protocolExtensions
                                                                                                           OPTIONAL,
CommonMeasurementInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
           id-MeasurementID
                                                                                  TYPE
    { ID
                                                      CRITICALITY ignore
                                                                                          MeasurementID
                                                                                                                                PRESENCE
   mandatory } |
     ID
           id-CommonMeasurementObjectType-CM-Rsp
                                                       CRITICALITY ignore
                                                                                  TYPE
                                                                                          CommonMeasurementObjectType-CM-Rsp
                                                                                                                                PRESENCE optional
     ID
           id-SFN
                                                       CRITICALITY ignore
                                                                                  TYPE
                                                                                                                                PRESENCE optional
     ID
           id-CriticalityDiagnostics
                                                       CRITICALITY ignore
                                                                                  TYPE
                                                                                          CriticalityDiagnostics
                                                                                                                                PRESENCE optional
     ID
           id-CommonMeasurementAccuracy
                                                          CRITICALITY reject
                                                                                      TYPE
                                                                                              CommonMeasurementAccuracy
                                                                                                                               PRESENCE optional
```

```
CommonMeasurementInitiationResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
CommonMeasurementObjectType-CM-Rsp ::= CHOICE {
   cell
                            Cell-CM-Rsp,
   . . .
Cell-CM-Rsp ::= SEQUENCE {
   commonMeasurementValue
                                          CommonMeasurementValue,
                                          ProtocolExtensionContainer { { CellItem-CM-Rsp-ExtIEs} }
   iE-Extensions
                                                                                                OPTIONAL,
CellItem-CM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  COMMON MEASUREMENT INITIATION FAILURE
  CommonMeasurementInitiationFailure ::= SEQUENCE {
   protocolIEs
                        ProtocolIE-Container
                                              {{CommonMeasurementInitiationFailure-IEs}},
                        ProtocolExtensionContainer {{CommonMeasurementInitiationFailure-Extensions}}
   protocolExtensions
                                                                                                OPTIONAL,
CommonMeasurementInitiationFailure-IEs RNSAP-PROTOCOL-IES ::= {
          id-MeasurementID
                                                                                                 PRESENCE mandatory
                                      CRITICALITY
                                                     ignore
                                                                   TYPE
                                                                          MeasurementID
     ID
          id-Cause
                                      CRITICALITY
                                                     ignore
                                                                   TYPE
                                                                          Cause
                                                                                                 PRESENCE mandatory
    ID
          id-CriticalityDiagnostics
                                      CRITICALITY
                                                     ignore
                                                                   TYPE
                                                                          CriticalityDiagnostics
                                                                                                PRESENCE optional },
CommonMeasurementInitiationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
-- COMMON MEASUREMENT REPORT
  ******************
CommonMeasurementReport ::= SEQUENCE {
                        ProtocolIE-Container {{CommonMeasurementReport-IEs}},
   protocolIEs
   protocolExtensions
                        ProtocolExtensionContainer {{CommonMeasurementReport-Extensions}}
                                                                                      OPTIONAL,
```

```
CommonMeasurementReport-IEs RNSAP-PROTOCOL-IES ::= {
          id-Measurement.ID
                                                     CRITICALITY ignore
                                                                               TYPE
                                                                                      Measurement.ID
                                                                                                                     PRESENCE mandatory
                                                    CRITICALITY ignore
                                                                                      CommonMeasurementObjectType-CM-Rprt PRESENCE
     ID
           id-CommonMeasurementObjectType-CM-Rprt
                                                                               TYPE
   mandatory }|
          id-SFN
   { ID
                                                     CRITICALITY ignore
                                                                               TYPE
                                                                                                                  PRESENCE optional },
CommonMeasurementReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
CommonMeasurementObjectType-CM-Rprt ::= CHOICE {
   cell
                                 Cell-CM-Rprt,
   . . .
Cell-CM-Rprt ::= SEQUENCE {
   commonMeasurementValueInformation CommonMeasurementValueInformation,
   iE-Extensions
                                 ProtocolExtensionContainer {{ CellItem-CM-Rprt-ExtIEs }}
                                                                                            OPTIONAL,
   . . .
Cellitem-CM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
      ***************
-- COMMON MEASUREMENT TERMINATION REQUEST
__ ********************
CommonMeasurementTerminationRequest ::= SEQUENCE {
   protocolIEs
                         ProtocolIE-Container
                                                 {{CommonMeasurementTerminationRequest-IEs}},
                         ProtocolExtensionContainer {{CommonMeasurementTerminationRequest-Extensions}}
   protocolExtensions
CommonMeasurementTerminationRequest-IEs RNSAP-PROTOCOL-IES ::= {
   { ID
           id-MeasurementID
                                                                       TYPE
                                                                                                 PRESENCE mandatory },
                                     CRITICALITY
                                                    ignore
                                                                               MeasurementID
CommonMeasurementTerminationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
-- COMMON MEASUREMENT FAILURE INDICATION
```

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```
CommonMeasurementFailureIndication ::= SEOUENCE {
                                                  {{CommonMeasurementFailureIndication-IEs}},
   protocolIEs
                          ProtocolIE-Container
   protocolExtensions
                               ProtocolExtensionContainer {{CommonMeasurementFailureIndication-Extensions}}
                                                                                                                   OPTIONAL.
CommonMeasurementFailureIndication-IES RNSAP-PROTOCOL-IES ::= {
                                      CRITICALITY ignore
     ID
           id-MeasurementID
                                                                  TYPE
                                                                          MeasurementID
                                                                                               PRESENCE mandatory
    { ID
           id-Cause
                                      CRITICALITY ignore
                                                                  TYPE
                                                                                               PRESENCE mandatory
                                                                          Cause
    . . .
CommonMeasurementFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
-- INFORMATION EXCHANGE INITIATION REQUEST
      InformationExchangeInitiationRequest ::= SEQUENCE {
   protocolIEs
                           ProtocolIE-Container
                                                  {{InformationExchangeInitiationRequest-IEs}},
                           ProtocolExtensionContainer {{InformationExchangeInitiationRequest-Extensions}}
   protocolExtensions
                                                                                                             OPTIONAL,
InformationExchangeInitiationRequest-IES RNSAP-PROTOCOL-IES ::= {
     ID
           id-InformationExchangeID
                                                          CRITICALITY reject
                                                                                  TYPE
                                                                                         InformationExchangeID
                                                                                                                            PRESENCE mandatory
           id-InformationExchangeObjectType-InfEx-Rgst
    { ID
                                                          CRITICALITY reject
                                                                                  TYPE
                                                                                         InformationExchangeObjectType-InfEx-Rqst
                                                                                                                                     PRESENCE
   mandatory } |
    -- This IE represents both the Information Exchange Object Type IE and the choice based on the Information Exchange Object Type
    -- as described in the tabular message format in subclause 9.1.
           id-InformationType
     ID
                                                          CRITICALITY reject
                                                                                  TYPE
                                                                                          InformationType
                                                                                                                            PRESENCE mandatory
     ID
           id-InformationReportCharacteristics
                                                          CRITICALITY reject
                                                                                  TYPE
                                                                                          InformationReportCharacteristics
                                                                                                                            PRESENCE mandatory
    . . .
InformationExchangeInitiationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
InformationExchangeObjectType-InfEx-Rqst ::= CHOICE {
   cell
                                   Cell-InfEx-Rgst,
    . . .
Cell-InfEx-Rqst ::= SEQUENCE {
```

```
c-ID
                                 C-ID,
   iE-Extensions
                                 ProtocolExtensionContainer { { CellItem-InfEx-Rqst-ExtIEs} }
                                                                                             OPTIONAL.
CellItem-InfEx-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
__ *********************
-- INFORMATION EXCHANGE INITIATION RESPONSE
        *****************
InformationExchangeInitiationResponse ::= SEQUENCE {
                                                {{InformationExchangeInitiationResponse-IEs}},
   protocolIEs
                         ProtocolIE-Container
                         ProtocolExtensionContainer {{InformationExchangeInitiationResponse-Extensions}}
   protocolExtensions
                                                                                                        OPTIONAL,
InformationExchangeInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
          id-InformationExchangeID
                                                       CRITICALITY ignore
                                                                                 TYPE
                                                                                         InformationExchangeID
                                                                                                                         PRESENCE
   mandatory } |
          id-InformationExchangeObjectType-InfEx-Rsp
                                                       CRITICALITY ignore
                                                                                 TYPE
                                                                                         InformationExchangeObjectType-InfEx-Rsp
   { ID
                                                                                                                                 PRESENCE
   optional }|
          id-CriticalityDiagnostics
                                                       CRITICALITY ignore
                                                                                         CriticalityDiagnostics
    { ID
                                                                                 TYPE
                                                                                                                         PRESENCE optional
   },
   . . .
InformationExchangeInitiationResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
InformationExchangeObjectType-InfEx-Rsp ::= CHOICE {
   cell
                             Cell-InfEx-Rsp,
   . . .
Cell-InfEx-Rsp ::= SEQUENCE {
                                 RequestedDataValue,
   requestedDataValue
   iE-Extensions
                                 ProtocolExtensionContainer { { CellItem-InfEx-Rsp-ExtIEs} }
                                                                                             OPTIONAL,
CellItem-InfEx-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
__ ********************************
```

```
-- INFORMATION EXCHANGE INITIATION FAILURE
  *****************
InformationExchangeInitiationFailure ::= SEQUENCE {
    protocolIEs
                           ProtocolIE-Container
                                                   {{InformationExchangeInitiationFailure-IEs}},
   protocolExtensions
                           ProtocolExtensionContainer {{InformationExchangeInitiationFailure-Extensions}}
                                                                                                              OPTIONAL,
InformationExchangeInitiationFailure-IES RNSAP-PROTOCOL-IES ::= {
           id-InformationExchangeID
                                                                                          InformationExchangeID
                                                   CRITICALITY
                                                                   ignore
                                                                                  TYPE
                                                                                                                          PRESENCE mandatory
     ID
           id-Cause
                                                   CRITICALITY
                                                                  ignore
                                                                                  TYPE
                                                                                          Cause
                                                                                                                          PRESENCE mandatory
     ID
           id-CriticalityDiagnostics
                                                                                          CriticalityDiagnostics
                                                                                                                          PRESENCE optional },
                                                   CRITICALITY
                                                                  ignore
                                                                                  TYPE
InformationExchangeInitiationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
-- INFORMATION REPORT
InformationReport ::= SEQUENCE {
                                                   {{InformationReport-IEs}},
    protocolIEs
                           ProtocolIE-Container
   protocolExtensions
                           ProtocolExtensionContainer {{InformationReport-Extensions}}
                                                                                              OPTIONAL,
InformationReport-IEs RNSAP-PROTOCOL-IES ::= {
    { ID
           id-InformationExchangeID
                                                           CRITICALITY ignore
                                                                                      TYPE
                                                                                              InformationExchangeID
                                                                                                                                         PRESENCE
   mandatory } |
           id-InformationExchangeObjectType-InfEx-Rprt
                                                          CRITICALITY ignore
                                                                                      TYPE
                                                                                              InformationExchangeObjectType-InfEx-Rprt
                                                                                                                                         PRESENCE
    mandatory },
    . . .
InformationReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
InformationExchangeObjectType-InfEx-Rprt ::= CHOICE {
    cell
                                   Cell-InfEx-Rprt,
    . . .
Cell-InfEx-Rprt ::= SEQUENCE {
    requestedDataValueInformation
                                   RequestedDataValueInformation,
    iE-Extensions
                                   ProtocolExtensionContainer {{ CellItem-InfEx-Rprt-ExtIEs }}
                                                                                                   OPTIONAL,
```

```
CellItem-InfEx-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  -- INFORMATION EXCHANGE TERMINATION REQUEST
  ******************
InformationExchangeTerminationRequest ::= SEQUENCE {
                                            {{InformationExchangeTerminationRequest-IEs}},
                       ProtocolIE-Container
   protocolIEs
   protocolExtensions
                       ProtocolExtensionContainer {{InformationExchangeTerminationRequest-Extensions}}
                                                                                               OPTIONAL,
   . . .
InformationExchangeTerminationRequest-IEs RNSAP-PROTOCOL-IES ::= {
         id-InformationExchangeID
                                        CRITICALITY
                                                      ignore
                                                                       TYPE
                                                                             InformationExchangeID
                                                                                                      PRESENCE mandatory },
   . . .
InformationExchangeTerminationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
     -- INFORMATION EXCHANGE FAILURE INDICATION
  *****************
InformationExchangeFailureIndication ::= SEQUENCE {
                                           {{InformationExchangeFailureIndication-IEs}},
   protocolIEs
                       ProtocolIE-Container
   protocolExtensions
                          ProtocolExtensionContainer {{InformationExchangeFailureIndication-Extensions}}
                                                                                                      OPTIONAL,
InformationExchangeFailureIndication-IES RNSAP-PROTOCOL-IES ::= {
         id-InformationExchangeID
    ID
                                        CRITICALITY ignore
                                                                TYPE
                                                                       InformationExchangeID
                                                                                               PRESENCE mandatory
   { ID
         id-Cause
                                        CRITICALITY ignore
                                                                TYPE
                                                                       Cause
                                                                                               PRESENCE mandatory
   . . .
InformationExchangeFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
__ ********************************
```

## 9.3.4 Information Element Definitions

```
****************
-- Information Element Definitions
RNSAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-IEs (2) }
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN
IMPORTS
   maxCodeNumComp-1,
   maxNrOfFACHs,
   maxFACHCountPlus1,
   maxIBSEG,
   maxNoOfDSCHs,
   maxNoOfDSCHs-1,
   maxNoOfUSCHs,
   maxNoTFCIGroups,
   maxNoCodeGroups,
   maxNrOfDCHs,
   maxNrOfDL-Codes,
   maxNrOfDLTs,
   maxNrOfDLTsLCR,
   maxNrOfDPCHs,
    maxNrOfDPCHsLCR,
    maxNrOfErrors,
    maxNrOfFDDNeighboursPerRNC,
    maxNrOfMACcshSDU-Length,
    maxNrOfNeighbouringRNCs,
    maxNrOfTDDNeighboursPerRNC,
```

```
maxNrOfLCRTDDNeighboursPerRNC,
   maxNrOfTS.
   maxNrOfULTs.
   maxNrOfULTsLCR,
   maxNrOfGSMNeighboursPerRNC,
   maxRateMatching,
   maxNrOfPoints,
   maxNoOfRB,
   maxNrOfTFCs,
   maxNrOfTFs,
   maxCTFC,
   maxRNCinURA-1,
   maxNrOfSCCPCHs.
   maxTFCI1Combs.
   maxTFCI2Combs,
    maxTFCI2Combs-1,
   maxTGPS,
    maxTTI-Count,
    maxNoGPSTypes,
    maxNoSat,
    id-Allowed-Rate-Information,
    id-DPC-Mode-Change-SupportIndicator,
    id-DSCH-Specific-FDD-Additional-List,
    id-Guaranteed-Rate-Information,
    id-Load-Value.
    id-Load-Value-IncrDecrThres,
    id-Neighbouring-GSM-CellInformation,
    id-Neighbouring-UMTS-CellInformationItem,
    id-neighbouring-LCR-TDD-CellInformation,
    id-OnModification,
    id-Received-Total-Wideband-Power-Value,
    id-Received-Total-Wideband-Power-Value-IncrDecrThres,
    id-SFNSFNMeasurementThresholdInformation,
    id-Transmitted-Carrier-Power-Value,
    id-Transmitted-Carrier-Power-Value-IncrDecrThres.
    id-TUTRANGPSMeasurementThresholdInformation,
    id-UL-Timeslot-ISCP-Value,
    id-UL-Timeslot-ISCP-Value-IncrDecrThres,
   maxNrOfLevels,
    maxNrOfMeasNCell,
   maxNrOfMeasNCell-1,
    id-MessageStructure,
    id-EnhancedDSCHPC,
    id-RestrictionStateIndicator,
    id-Rx-Timing-Deviation-Value-LCR,
    id-TypeOfError,
    id-ExtendedGSMCellIndividualOffset
FROM RNSAP-Constants
    Criticality,
    ProcedureID,
    ProtocolIE-ID,
   TransactionID,
```

```
TriggeringMessage
FROM RNSAP-CommonDataTypes
    ProtocolIE-Single-Container{},
    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-IES,
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;
-- A
Active-Pattern-Sequence-Information ::= SEQUENCE {
    cMConfigurationChangeCFN
    transmission-Gap-Pattern-Sequence-Status
                                               Transmission-Gap-Pattern-Sequence-Status-List
                                                                                                  OPTIONAL,
    iE-Extensions
                       ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
Active-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
AdjustmentPeriod
                           ::= INTEGER(1..256)
-- Unit Frame
AllocationRetentionPriority ::= SEQUENCE {
    priorityLevel
                                PriorityLevel,
    pre-emptionCapability
                               Pre-emptionCapability,
    pre-emptionVulnerability Pre-emptionVulnerability,
                           ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
AllocationRetentionPriority-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
Allowed-Rate-Information ::= SEQUENCE {
    allowed-UL-Rate
                           Allowed-Rate OPTIONAL,
    allowed-DL-Rate
                           Allowed-Rate OPTIONAL,
                           ProtocolExtensionContainer { {Allowed-Rate-Information-ExtIEs} } OPTIONAL,
    iE-Extensions
Allowed-Rate-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
Allowed-Rate
                      ::= INTEGER (1..maxNrOfTFs)
-- "1": TFI 0, "2": TFI 1, "3": TFI 2, ...
AllowedOueuingTime
                         ::= INTEGER (1..60)
-- seconds
```

```
AlphaValue
                         ::= INTEGER (0..8)
-- Actual value = Alpha / 8
-- B
BadSatellites ::= SEQUENCE {
   badSatelliteInformation
                             SEQUENCE (SIZE (1..maxNoSat)) OF
       SEOUENCE {
          badSAT-ID
                                     SAT-ID,
                                    iE-Extensions
                                                                                                     OPTIONAL,
      },
                             ProtocolExtensionContainer { { BadSatellites-ExtIEs} }
   iE-Extensions
                                                                                     OPTIONAL,
BadSatelliteInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
BadSatellites-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
Band-Indicator ::= ENUMERATED {
   dcs1800Band,
   pcs1900Band,
BCC ::= BIT STRING (SIZE (3))
BCCH-ARFCN ::= INTEGER (0..1023)
BetaCD ::= INTEGER (0..15)
BindingID
                     ::= OCTET STRING (SIZE (1..4,...))
                     ::= INTEGER (-63..0)
BLER
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER
SCTD-Indicator ::= ENUMERATED {
   active,
   inactive
BSIC ::= SEQUENCE {
   nCC
              NCC,
   bCC
              BCC
BurstModeParameters ::= SEQUENCE {
   burstStart
               INTEGER (0..15),
   burstLength
                  INTEGER (10..25),
```

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```
burstFreq
                    INTEGER (1..16),
    iE-Extensions
                                ProtocolExtensionContainer { { BurstModeParameters-ExtIEs} }
                                                                                                    OPTIONAL,
    . . .
BurstModeParameters-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
Cause ::= CHOICE {
    radioNetwork
                        CauseRadioNetwork,
    transport
                        CauseTransport,
    protocol
                        CauseProtocol,
    misc
                        CauseMisc,
    . . .
CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    . . .
CauseProtocol ::= ENUMERATED {
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    message-not-compatible-with-receiver-state,
    semantic-error,
    unspecified.
    abstract-syntax-error-falsely-constructed-message,
CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    ul-scrambling-code-already-in-use,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    measurement-not-supported-for-the-object,
    combining-resources-not-available,
    combining-not-supported,
    reconfiguration-not-allowed,
    requested-configuration-not-supported,
    synchronisation-failure,
    requested-tx-diversity-mode-not-supported,
    measurement-temporaily-not-available,
```

```
unspecified,
    invalid-CM-settings,
    reconfiguration-CFN-not-elapsed,
    number-of-DL-codes-not-supported,
    dedicated-transport-channel-type-not-supported,
    dl-shared-channel-type-not-supported,
    ul-shared-channel-type-not-supported,
    common-transport-channel-type-not-supported,
    ul-spreading-factor-not-supported,
    dl-spreading-factor-not-supported,
    cm-not-supported,
    transaction-not-supported-by-destination-node-b,
    rl-already-activated-or-alocated,
    number-of-UL-codes-not-supported,
    cell-reserved-for-operator-use,
    dpc-mode-change-not-supported,
    information-temporarily-not-available,
    information-provision-not-supported-for-the-object,
    dummy1,
    dummy2,
    dummy3,
    unknown-RNTI
CauseTransport ::= ENUMERATED {
    transport-resource-unavailable,
    unspecified,
    . . .
C-TD
                        ::= INTEGER (0..65535)
                        ::= INTEGER (0..15)
CCTrCH-ID
CellIndividualOffset
                       ::= INTEGER (-20..20)
CellParameterID
                            ::= INTEGER (0..127,...)
CFN
                    ::= INTEGER (0..255)
CGI ::= SEQUENCE {
   lai
                SEQUENCE {
       pLMN-Identity PLMN-Identity,
        lac
                        LAC,
        iE-Extensions
                                ProtocolExtensionContainer { {LAI-ExtIEs} } OPTIONAL,
        . . .
    сI
                    CI,
    iE-Extensions
                            ProtocolExtensionContainer { {CGI-ExtIEs} } OPTIONAL
LAI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
```

```
CGI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
ChannelCodingType ::= ENUMERATED {
   no-codingTDD,
    convolutional-coding,
    turbo-coding,
ChipOffset
                       ::= INTEGER (0..38399)
CI
                    ::= OCTET STRING (SIZE (2))
ClosedLoopModel-SupportIndicator
                                    ::= ENUMERATED {
    closedLoop-Model-Supported,
    closedLoop-Model-not-Supported
ClosedLoopMode2-SupportIndicator
                                    ::= ENUMERATED {
    closedLoop-Mode2-Supported,
    closedLoop-Mode2-not-Supported
Closedlooptimingadjustmentmode ::= ENUMERATED {
    adi-1-slot,
    adj-2-slot,
    . . .
CodeNumber ::= INTEGER (0..maxCodeNumComp-1)
CodingRate ::= ENUMERATED {
    half,
    third,
CommonMeasurementAccuracy ::= CHOICE {
    tUTRANGPSMeasurementAccuracyClass
                                            TUTRANGPSAccuracyClass,
CommonMeasurementType ::= ENUMERATED {
    uTRAN-GPS-timing-of-cell-frames-for-UE-Positioning,
    sFN-SFN-observerd-time-difference,
    load,
    transmitted-carrier-power,
    received-total-wide-band-power,
    uplink-timeslot-iscp,
    . . .
```

```
CommonMeasurementValue ::= CHOICE {
    tUTRANGPSMeasurementValueInformation
                                            TUTRANGPSMeasurementValueInformation,
    sFNSFNMeasurementValueInformation
                                             SFNSFNMeasurementValueInformation,
    loadValue
                                        LoadValue,
    transmittedCarrierPowerValue
                                        INTEGER(0..100),
    receivedTotalWideBandPowerValue
                                        INTEGER(0..621),
    uplinkTimeslotISCPValue
                                        UL-TimeslotISCP,
CommonMeasurementValueInformation ::= CHOICE {
    measurement.Available
                                CommonMeasurementAvailable,
    measurementnotAvailable
                                NULL
CommonMeasurementAvailable::= SEQUENCE {
    commonMeasurementValue
                                CommonMeasurementValue,
                                     ProtocolExtensionContainer { { CommonMeasurementAvailableItem-ExtIEs} }
    iE-Extensions
                                                                                                                   OPTIONAL,
    . . .
CommonMeasurementAvailableItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
CongestionCause ::= ENUMERATED
    uTRAN-dynamic-resources,
    uTRAN-semistatic-resources,
CRC-Size
                        ::= ENUMERATED {
    v0,
    v8,
    v12,
    v16,
    v24,
    . . .
CriticalityDiagnostics ::= SEQUENCE {
    procedureID
                                ProcedureID
                                                     OPTIONAL,
    triggeringMessage
                                TriggeringMessage
                                                         OPTIONAL,
    procedureCriticality
                                Criticality
                                                         OPTIONAL,
    transactionID
                                TransactionID
                                                         OPTIONAL,
    iEsCriticalityDiagnostics
                                    CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions
                                ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    . . .
CriticalityDiagnostics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
CriticalityDiagnostics-IE-List ::= SEOUENCE (SIZE (1..maxNrOfErrors)) OF
    SEQUENCE {
        iECriticality
                                Criticality,
       iE-ID
                                ProtocolIE-ID,
       repetitionNumber
                                RepetitionNumber0
                                                        OPTIONAL,
                                ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
       iE-Extensions
CriticalityDiagnostics-IE-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ID id-MessageStructure
                                CRITICALITY ignore
                                                        EXTENSION MessageStructure
                                                                                         PRESENCE optional }
   ID id-TypeOfError
                                CRITICALITY ignore
                                                        EXTENSION TypeOfError
                                                                                         PRESENCE mandatory },
    . . .
MessageStructure ::= SEOUENCE (SIZE (1..maxNrOfLevels)) OF
    SEQUENCE {
       iE-ID
                                ProtocolIE-ID,
       repetitionNumber
                                RepetitionNumber1
                                                        OPTIONAL,
                                ProtocolExtensionContainer { {MessageStructure-ExtIEs} } OPTIONAL,
       iE-Extensions
MessageStructure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
CN-CS-DomainIdentifier ::= SEQUENCE {
    pLMN-Identity
                        PLMN-Identity,
    lAC
                        ProtocolExtensionContainer { {CN-CS-DomainIdentifier-ExtIEs} } OPTIONAL
    iE-Extensions
CN-CS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
CN-PS-DomainIdentifier ::= SEQUENCE {
    pLMN-Identity
                        PLMN-Identity,
   lAC
                        LAC,
   rAC
                        RAC,
    iE-Extensions
                        ProtocolExtensionContainer { {CN-PS-DomainIdentifier-ExtIEs} } OPTIONAL
CN-PS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
CNDomainType
                ::= ENUMERATED
    cs-domain,
    ps-domain,
```

```
dont-care,
-- See in [16]
C-RNTI
                        ::= INTEGER (0..65535)
-- D
DATA-ID ::= INTEGER (0..3)
                        ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-FDD-InformationItem
DCH-FDD-Information
DCH-FDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator
                                        PayloadCRC-PresenceIndicator,
    ul-FP-Mode
                                        UL-FP-Mode,
    t.oAWS
                                        ToAWS,
                                        TOAWE,
    dCH-SpecificInformationList
                                        DCH-Specific-FDD-InformationList,
                                        ProtocolExtensionContainer { {DCH-FDD-InformationItem-ExtIEs} } OPTIONAL,
    iE-Extensions
DCH-FDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DCH-Specific-FDD-InformationList ::= SEOUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-FDD-Item
DCH-Specific-FDD-Item ::= SEQUENCE {
    dCH-ID
                                        DCH-ID,
    trCH-SrcStatisticsDescr
                                        TrCH-SrcStatisticsDescr,
    ul-transportFormatSet
                                        TransportFormatSet,
    dl-transportFormatSet
                                        TransportFormatSet,
    ul-BLER
                                        BLER,
    dl-BLER
                                        BLER,
    allocationRetentionPriority
                                        AllocationRetentionPriority,
    frameHandlingPriority
                                        FrameHandlingPriority,
    qE-Selector
                                        OE-Selector,
    dRACControl
                                        DRACControl,
    iE-Extensions
                                        ProtocolExtensionContainer { {DCH-FDD-SpecificItem-ExtIEs} } OPTIONAL,
DCH-FDD-SpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Guaranteed-Rate-Information CRITICALITY ignore EXTENSION Guaranteed-Rate-Information
                                                                                                           PRESENCE optional },
DCH-ID
                        ::= INTEGER (0..255)
DCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem
DCH-InformationResponseItem ::= SEQUENCE {
    dCH-ID
                                DCH-ID,
```

```
bindingID
                                BindingID
                                                        OPTIONAL,
    transportLayerAddress
                                TransportLayerAddress
                                                        OPTIONAL.
    iE-Extensions
                                ProtocolExtensionContainer { {DCH-InformationResponseItem-ExtIEs} } OPTIONAL,
DCH-InformationResponseItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Allowed-Rate-Information
                                            CRITICALITY ignore EXTENSION Allowed-Rate-Information
                                                                                                         PRESENCE optional },
DCH-TDD-Information
                        ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-TDD-InformationItem
DCH-TDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator
                                        PayloadCRC-PresenceIndicator,
    ul-FP-Mode
                                        UL-FP-Mode,
    toAWS
                                        ToAWS,
                                        TOAWE,
    toAWE
    dCH-SpecificInformationList
                                        DCH-Specific-TDD-InformationList,
                                        ProtocolExtensionContainer { {DCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
DCH-TDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DCH-Specific-TDD-InformationList ::= SEOUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-TDD-Item
DCH-Specific-TDD-Item ::= SEQUENCE {
    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
    trCH-SrcStatisticsDescr
                                        TrCH-SrcStatisticsDescr,
    ul-transportFormatSet
                                        TransportFormatSet,
    dl-transportFormatSet
                                        TransportFormatSet,
    ul-BLER
                                        BLER,
    dl-BLER
                                        BLER,
    allocationRetentionPriority
                                        AllocationRetentionPriority,
    frameHandlingPriority
                                        FrameHandlingPriority,
    qE-Selector
                                        OE-Selector
    -- This IE shall be present if DCH is part of set of Co-ordinated DCHs
    iE-Extensions
                                        ProtocolExtensionContainer { {DCH-Specific-TDD-Item-ExtIEs} } OPTIONAL,
DCH-Specific-TDD-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Guaranteed-Rate-Information
                                            CRITICALITY ignore EXTENSION Guaranteed-Rate-Information
                                                                                                            PRESENCE optional },
DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
```

```
transmitted-code-power,
   rSCP.
   rx-timing-deviation,
   round-trip-time,
   rx-timing-deviation-LCR
DedicatedMeasurementValue ::= CHOICE {
   sIR-Value
                     SIR-Value,
   sIR-ErrorValue
                         SIR-Error-Value,
   transmittedCodePowerValue Transmitted-Code-Power-Value,
                      RSCP-Value, -- TDD only
   rxTimingDeviationValue Rx-Timing-Deviation-Value, -- 3.84Mcps TDD only
   roundTripTime
                     Round-Trip-Time-Value, -- FDD only
   extension-DedicatedMeasurementValue
                                        Extension-DedicatedMeasurementValue
Extension-DedicatedMeasurementValue ::= ProtocolIE-Single-Container {{ Extension-DedicatedMeasurementValueIE }}
Extension-DedicatedMeasurementValueIE RNSAP-PROTOCOL-IES ::= {
   . . .
DedicatedMeasurementValueInformation ::= CHOICE {
   measurementAvailable
                             DedicatedMeasurementAvailable,
                             DedicatedMeasurementnotAvailable
   measurementnotAvailable
DedicatedMeasurementAvailable::= SEQUENCE {
   dedicatedmeasurementValue
                                 DedicatedMeasurementValue,
                                                       OPTIONAL,
                                 ProtocolExtensionContainer { { DedicatedMeasurementAvailableItem-ExtIEs} }
   ie-Extensions
                                                                                                           OPTIONAL,
DedicatedMeasurementAvailableItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DedicatedMeasurementnotAvailable ::= NULL
                     ::= INTEGER (0..30)
DeltaSIR
-- Step 0.1 dB, Range 0..3 dB.
DGPSCorrections ::= SEQUENCE {
   gPSTOW
                                        GPSTOW,
   qPS-Status-Health
                                        GPS-Status-Health,
   satellite-DGPSCorrections-Information SEQUENCE (SIZE (1..maxNoSat)) OF
       SEOUENCE {
           sAT-ID
                                            SAT-ID,
           iode-dgps
                                            BIT STRING (SIZE (8)),
```

```
uDRE
                                            UDRE,
           pRC
                                            PRC,
           range-Correction-Rate
                                            Range-Correction-Rate,
          iE-Extensions
                                            ProtocolExtensionContainer { { Satellite-DGPSCorrections-Information-ExtIEs} }
                                                                                                                         OPTIONAL,
   iE-Extensions
                                 OPTIONAL,
Satellite-DGPSCorrections-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DGPSCorrections-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DGPSThreshold ::= SEQUENCE {
   pRCDeviation
                      PRCDeviation,
   iE-Extensions
                      ProtocolExtensionContainer { { DGPSThreshold-ExtIEs} }
                                                                              OPTIONAL,
DGPSThreshold-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DiversityControlField
                             ::= ENUMERATED {
   may,
   must,
   must-not
DiversityMode
                        ::= ENUMERATED {
   none,
   sTTD,
   closedLoopMode1,
   closedLoopMode2,
DL-DPCH-SlotFormat
                        ::= INTEGER (0..16,...)
DL-Power
                     ::= INTEGER (-350..150)
-- Value = DL-Power / 10
-- Unit dB, Range -35dB .. +15dB, Step 0.1dB
D-RNTI
                     ::= INTEGER (0..1048575)
D-RNTI-ReleaseIndication ::= ENUMERATED {
```

```
release-D-RNTI,
   not-release-D-RNTI
DL-ScramblingCode
                           ::= INTEGER (0..15)
DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    . . .
DL-Timeslot-Information ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF DL-Timeslot-InformationItem
DL-Timeslot-InformationItem ::= SEQUENCE {
    timeSlot
                                    TimeSlot,
    midambleShiftAndBurstType
                                    MidambleShiftAndBurstType,
    tFCI-Presence
                                   TFCI-Presence,
    dL-Code-Information
                                    TDD-DL-Code-Information,
                                    ProtocolExtensionContainer { {DL-Timeslot-InformationItem-ExtIEs} } OPTIONAL,
    iE-Extensions
DL-Timeslot-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-TimeslotLCR-Information ::= SEQUENCE (SIZE (1.. maxNrOfDLTsLCR)) OF DL-TimeslotLCR-InformationItem
DL-TimeslotLCR-InformationItem ::= SEQUENCE {
    timeSlotLCR
                                            TimeSlotLCR,
    midambleShiftLCR
                                            MidambleShiftLCR,
    tFCI-Presence
                                            TFCI-Presence,
    dL-Code-LCR-Information
                                        TDD-DL-Code-LCR-Information,
                                            ProtocolExtensionContainer { { DL-TimeslotLCR-InformationItem-ExtIEs} } OPTIONAL.
    iE-Extensions
DL-TimeslotLCR-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfDLTs)) OF DL-TimeSlot-ISCP-InfoItem
DL-TimeSlot-ISCP-InfoItem ::= SEOUENCE {
    timeSlot
                                TimeSlot,
    dL-TimeslotISCP
                                DL-TimeslotISCP.
                                ProtocolExtensionContainer { { DL-TimeSlot-ISCP-InfoItem-ExtIEs} } OPTIONAL,
    iE-Extensions
DL-TimeSlot-ISCP-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
DL-TimeSlot-ISCP-LCR-Information ::= SEQUENCE (SIZE (1..maxNrOfDLTsLCR)) OF DL-TimeSlot-ISCP-LCR-InfoItem
DL-TimeSlot-ISCP-LCR-InfoItem ::= SEQUENCE {
    timeSlotLCR
                                  TimeSlotLCR.
    dL-TimeslotISCP
                                  DL-TimeslotISCP,
                                  iE-Extensions
                                                                                                         OPTIONAL.
DL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DL-TimeslotISCP
                       ::= INTEGER (0..91)
-- According to mapping in [24]
Downlink-Compressed-Mode-Method
                                  ::= ENUMERATED
   puncturing,
    sFdiv2,
   higher-layer-scheduling,
DPC-Mode ::= ENUMERATED {
  mode0.
  mode1,
DPC-Mode-Change-SupportIndicator ::= ENUMERATED {
  dPC-ModeChangeSupported
DPCH-ID
                       ::= INTEGER (0..239)
DPCHConstantValue ::= INTEGER (-10..10)
-- Unit dB, Step 1dB
DRACControl
               ::= ENUMERATED {
    requested,
    not-requested
DRXCvcleLengthCoefficient
                                      ::= INTEGER (3..9)
-- See in [16]
DSCH-FDD-Information::= SEQUENCE {
    dSCH-Specific-Information
                                      DSCH-Specific-FDD-Item,
-- This DSCH-Specific-FDD-Item is the first DSCH-Specific-FDD-Item in DSCH-FDD-Information. If more than one DSCH-Specific-FDD-Item;s should be
defined in a DSCH-FDD-Information, from 2<sup>nd</sup> DSCH-Specific-FDD Item, they will be included in the DSCH-Specific-FDD-Additional-List in the DSCH-FDD-
Information-ExtIEs.
   pdSCH-RL-ID
                                      RL-ID,
                                      TFCS,
    tFCS
```

```
ProtocolExtensionContainer { {DSCH-FDD-Information-ExtIEs} } OPTIONAL,
    iE-Extensions
DSCH-FDD-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
     ID id-DSCH-Specific-FDD-Additional-List
                                                    CRITICALITY reject EXTENSION DSCH-Specific-FDD-Additional-List
                                                                                                                           PRESENCE optional } |
    { ID id-EnhancedDSCHPC
                                        CRITICALITY ignore EXTENSION EnhancedDSCHPC
                                                                                                     PRESENCE optional },
    . . .
DSCH-RNTI ::= INTEGER (0..65535)
DSCH-Specific-FDD-Item ::= SEQUENCE {
    dSCH-ID
                                        DSCH-ID,
                                        TrCH-SrcStatisticsDescr,
    trChSourceStatisticsDescriptor
    transportFormatSet
                                        TransportFormatSet,
    allocationRetentionPriority
                                        AllocationRetentionPriority,
    schedulingPriorityIndicator
                                        SchedulingPriorityIndicator,
    bLER
                                        BLER,
                                        ProtocolExtensionContainer { {DSCH-Specific-FDD-Item-ExtIEs} } OPTIONAL,
    iE-Extensions
DSCH-Specific-FDD-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DSCH-Specific-FDD-Additional-List ::= SEQUENCE (SIZE(1..maxNoOfDSCHs-1)) OF DSCH-Specific-FDD-Item
DSCH-FDD-InformationResponse ::= SEQUENCE {
    dsch-Specific-InformationResponse
                                        DSCH-Specific-FDD-InformationResponse,
    pdSCHCodeMapping
                                        PDSCHCodeMapping,
    iE-Extensions
                                        ProtocolExtensionContainer { { DSCH-FDD-InformationResponse-ExtIEs} } OPTIONAL,
    . . .
DSCH-FDD-InformationResponse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DSCH-Specific-FDD-InformationResponse ::= SEQUENCE (SIZE(1..maxNoOfDSCHs)) OF DSCH-Specific-FDD-Response-Item
DSCH-Specific-FDD-Response-Item ::= SEQUENCE {
    dsch-ID
                                    DSCH-ID,
    dSCH-FlowControlInformation
                                    DSCH-FlowControlInformation.
    bindingID
                                    BindingID
                                                            OPTIONAL,
    transportLayerAddress
                                    TransportLayerAddress OPTIONAL,
    iE-Extensions
                                    ProtocolExtensionContainer { {DSCH-Specific-FDD-Response-Item-ExtIEs} } OPTIONAL,
    . . .
DSCH-Specific-FDD-Response-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
DSCH-FlowControlInformation ::= SEQUENCE (SIZE(1..16)) OF DSCH-FlowControlItem
DSCH-FlowControlItem ::= SEQUENCE {
    dSCH-SchedulingPriority
                                        SchedulingPriorityIndicator,
   mAC-c-sh-SDU-Lengths
                                        MAC-c-sh-SDU-LengthList,
                                        ProtocolExtensionContainer { {DSCH-FlowControlItem-ExtIEs} } OPTIONAL,
   iE-Extensions
DSCH-FlowControlItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DSCH-ID
                       ::= INTEGER (0..255)
DSCH-TDD-Information ::= SEQUENCE (SIZE (1..maxNoOfDSCHs)) OF DSCH-TDD-InformationItem
DSCH-TDD-InformationItem ::= SEQUENCE {
    dSCH-ID
                                        DSCH-ID,
    dl-ccTrCHID
                                        CCTrCH-ID, -- DL CCTrCH in which the DSCH is mapped
    trChSourceStatisticsDescriptor
                                        TrCH-SrcStatisticsDescr,
    transportFormatSet
                                        TransportFormatSet,
    allocationRetentionPriority
                                        AllocationRetentionPriority,
    schedulingPriorityIndicator
                                        SchedulingPriorityIndicator,
    bler
                                        BLER,
    iE-Extensions
                                        ProtocolExtensionContainer { {DSCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
DSCH-TDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
EnhancedDSCHPC ::= SEQUENCE {
    enhancedDSCHPCWnd EnhancedDSCHPCWnd,
    enhancedDSCHPCCounter EnhancedDSCHPCCounter,
    enhancedDSCHPowerOffset EnhancedDSCHPowerOffset,
EnhancedDSCHPCCounter ::= INTEGER (1..50)
EnhancedDSCHPCIndicator ::= ENUMERATED {
    enhancedDSCHPCActiveInTheUE,
    enhancedDSCHPCNotActiveInTheUE
EnhancedDSCHPCWnd ::= INTEGER (1..10)
EnhancedDSCHPowerOffset ::= INTEGER (-15..0)
```

```
EventA ::= SEQUENCE {
   measurementTreshold
                           MeasurementThreshold.
   measurementHysteresisTime MeasurementHysteresisTime
                                                               OPTIONAL,
   iE-Extensions
                           ProtocolExtensionContainer { {EventA-ExtIEs} } OPTIONAL,
EventA-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
EventB ::= SEQUENCE {
   measurementTreshold
                           MeasurementThreshold,
    measurementHysteresisTime MeasurementHysteresisTime
                                                               OPTIONAL,
                           ProtocolExtensionContainer { {EventB-ExtIEs} } OPTIONAL,
   iE-Extensions
EventB-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
EventC ::= SEOUENCE {
   measurementIncreaseDecreaseThreshold MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime
                               MeasurementChangeTime,
                           ProtocolExtensionContainer { {EventC-ExtIEs} } OPTIONAL,
    iE-Extensions
EventC-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
EventD ::= SEOUENCE {
   measurementIncreaseDecreaseThreshold MeasurementIncreaseDecreaseThreshold,
   measurementChangeTime
                               MeasurementChangeTime,
                           ProtocolExtensionContainer { {EventD-ExtIEs} } OPTIONAL,
   iE-Extensions
EventD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
EventE ::= SEQUENCE {
   measurementThreshold1
                               MeasurementThreshold,
   measurementThreshold2
                               MeasurementThreshold
                                                               OPTIONAL,
    measurementHysteresisTime MeasurementHysteresisTime
                                                               OPTIONAL,
    reportPeriodicity
                           ReportPeriodicity
                                                       OPTIONAL,
                           ProtocolExtensionContainer { {EventE-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
```

```
EventE-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
EventF ::= SEOUENCE {
   measurementThreshold1
                                MeasurementThreshold,
    measurementThreshold2
                                MeasurementThreshold
                                                                OPTIONAL,
    measurementHysteresisTime MeasurementHysteresisTime
                                                                OPTIONAL,
    reportPeriodicity
                           ReportPeriodicity
                                                       OPTIONAL,
                            ProtocolExtensionContainer { {EventF-ExtIEs} } OPTIONAL,
    iE-Extensions
EventF-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
ExtendedGSMCellIndividualOffset ::= INTEGER (-50..-11|11..50)
-- F
FACH-FlowControlInformation ::= SEQUENCE (SIZE (1..16)) OF FACH-FlowControlInformationItem
FACH-FlowControlInformationItem ::= SEOUENCE {
    fACH-SchedulingPriority
                                    SchedulingPriorityIndicator,
   mAC-c-sh-SDU-Lengths
                                    MAC-c-sh-SDU-LengthList,
    fACH-InitialWindowSize
                                    FACH-InitialWindowSize,
                                    ProtocolExtensionContainer { {FACH-FlowControlInformationItem-ExtIEs} } OPTIONAL,
    iE-Extensions
FACH-FlowControlInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
                                ::= INTEGER { unlimited(255) } (0..255)
FACH-InitialWindowSize
-- Number of frames MAC-c-sh SDUs.
-- 255 = Unlimited number of FACH data frames
FACH-InformationList ::= SEQUENCE (SIZE(0.. maxNrOfFACHs)) OF FACH-InformationItem
FACH-InformationItem ::= SEQUENCE {
    transportFormatSet
                                    TransportFormatSet,
                                    ProtocolExtensionContainer { { FACH-InformationItem-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
FACH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
FACH-PCH-InformationList ::= SEOUENCE (SIZE(1..maxFACHCountPlus1)) OF FACH-PCH-InformationItem
FACH-PCH-InformationItem ::= SEQUENCE {
```

```
transportFormatSet
                                    TransportFormatSet,
    iE-Extensions
                                    ProtocolExtensionContainer { { FACH-PCH-InformationItem-ExtIEs} } OPTIONAL,
FACH-PCH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
FDD-DCHs-to-Modify
                                ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifyItem
FDD-DCHs-to-ModifyItem ::= SEQUENCE {
    ul-FP-Mode
                                        UL-FP-Mode
                                                         OPTIONAL,
    toAWS
                                        ToAWS
                                                     OPTIONAL,
                                                     OPTIONAL,
    t.oAWE
                                        TOAWE
    transportBearerRequestIndicator
                                        TransportBearerRequestIndicator,
                                        FDD-DCHs-to-ModifySpecificInformationList,
    dCH-SpecificInformationList
                                        ProtocolExtensionContainer { {FDD-DCHs-to-ModifyItem-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
FDD-DCHs-to-ModifyItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
FDD-DCHs-to-ModifySpecificInformationList ::= SEOUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifySpecificItem
FDD-DCHs-to-ModifySpecificItem ::= SEQUENCE {
    dCH-ID
                                    DCH-ID,
                                    TransportFormatSet
    ul-TransportformatSet
                                                             OPTIONAL,
    dl-TransportformatSet
                                    TransportFormatSet
                                                             OPTIONAL,
    allocationRetentionPriority
                                    AllocationRetentionPriority
                                                                     OPTIONAL,
    frameHandlingPriority
                                    FrameHandlingPriority
                                                                 OPTIONAL,
    dRACControl
                                    DRACControl
                                                     OPTIONAL,
    iE-Extensions
                                    ProtocolExtensionContainer { {FDD-DCHs-to-ModifySpecificItem-ExtIEs} } OPTIONAL.
FDD-DCHs-to-ModifySpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Guaranteed-Rate-Information
                                            CRITICALITY ignore EXTENSION Guaranteed-Rate-Information
                                                                                                            PRESENCE optional },
    . . .
FDD-DL-ChannelisationCodeNumber
                                    ::= INTEGER (0..511)
-- According to the mapping in [27]. The maximum value is equal to the DL spreading factor -1--
FDD-DL-CodeInformation ::= SEQUENCE (SIZE (1..maxNrOfDL-Codes)) OF FDD-DL-CodeInformationItem
FDD-DL-CodeInformationItem ::= SEQUENCE {
    dl-ScramblingCode
                                                                 DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber
                                                                 FDD-DL-ChannelisationCodeNumber,
    transmission-Gap-Pattern-Sequence-ScramblingCode-Information
                                                                         Transmission-Gap-Pattern-Sequence-ScramblingCode-Information OPTIONAL,
    iE-Extensions
                                            ProtocolExtensionContainer { {FDD-DL-CodeInformationItem-ExtIEs} } OPTIONAL,
    . . .
```

```
FDD-DL-CodeInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
FDD-S-CCPCH-Offset
                            ::= INTEGER (0..149)
FDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size0-5,
    step-sizel,
    step-size1-5,
    step-size2,
                                        ::= INTEGER { lowest(0), highest(15) } (0..15)
SchedulingPriorityIndicator
FirstRLS-Indicator ::= ENUMERATED {
    first-RLS,
    not-first-RLS
FNReportingIndicator ::= ENUMERATED {
    fN-reporting-required,
    fN-reporting-not-required
FPACH-Information ::= SEQUENCE {
    timeSlotLCR
                                TimeSlotLCR,
    tDD-ChannelisationCodeLCR
                                TDD-ChannelisationCodeLCR,
    midambleShiftLCR
                                MidambleShiftLCR,
    wΤ
                                INTEGER (1..4),
    . . .
FrameHandlingPriority
                                ::= INTEGER { lowest(0), highest(15) } (0..15)
FrameOffset
                        ::= INTEGER (0..255)
-- Frames
-- G
GapLength
                       ::= INTEGER (1..14)
-- Unit Slot
GapDuration
                        ::= INTEGER (1..144,...)
-- Unit Frame
GA-Cell ::= SEQUENCE (SIZE (1..maxNrOfPoints)) OF
    SEQUENCE {
        cell-GAIgeographicalCoordinate
                                            GeographicalCoordinate,
        iE-Extensions
                                ProtocolExtensionContainer { GA-Cell-ExtIEs} } OPTIONAL,
        . . .
```

```
GA-Cell-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
GA-CellAdditionalShapes ::= CHOICE {
    pointWithUncertainty
                                                     GA-PointWithUnCertainty,
   pointWithUncertaintyEllipse
                                                     GA-PointWithUnCertaintyEllipse,
    pointWithAltitude
                                                     GA-PointWithAltitude,
    pointWithAltitudeAndUncertaintyEllipsoid
                                                     GA-PointWithAltitudeAndUncertaintyEllipsoid,
    ellipsoidArc
                                                     GA-EllipsoidArc,
    . . .
GA-AltitudeAndDirection ::= SEQUENCE {
                            ENUMERATED {height, depth},
    directionOfAltitude
                            INTEGER (0..32767),
    altitude
    . . .
GA-EllipsoidArc ::= SEQUENCE {
    geographicalCoordinates
                                GeographicalCoordinate,
    innerRadius
                                INTEGER (0..65535),
    uncertaintyRadius
                                INTEGER (0..127),
    offsetAngle
                                INTEGER (0..179),
    includedAngle
                                INTEGER (0..179),
    confidence
                                INTEGER (0..127),
                                ProtocolExtensionContainer { { GA-EllipsoidArc-ExtIEs} } OPTIONAL,
    iE-Extensions
GA-EllipsoidArc-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
GA-PointWithAltitude ::= SEQUENCE {
    geographicalCoordinates
                                GeographicalCoordinate,
    altitudeAndDirection
                                GA-AltitudeAndDirection,
    iE-Extensions
                                ProtocolExtensionContainer { { GA-PointWithAltitude-ExtIEs} } OPTIONAL,
GA-PointWithAltitude-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
GA-PointWithAltitudeAndUncertaintyEllipsoid ::= SEQUENCE {
    geographicalCoordinates
                                GeographicalCoordinate,
    altitudeAndDirection
                                GA-AltitudeAndDirection,
                                GA-UncertaintyEllipse,
    uncertaintyEllipse
    uncertaintyAltitude
                                INTEGER (0..127),
    confidence
                                INTEGER (0..127),
    iE-Extensions
                                ProtocolExtensionContainer { { GA-PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs} } OPTIONAL,
```

```
GA-PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
GA-PointWithUnCertaintyEllipse ::= SEQUENCE {
    geographicalCoordinates
                               GeographicalCoordinate,
                                GA-UncertaintyEllipse,
    uncertaintyEllipse
    confidence
                                INTEGER (0..127),
                                ProtocolExtensionContainer { GA-PointWithUnCertaintyEllipse-ExtIEs} } OPTIONAL,
    iE-Extensions
GA-PointWithUnCertaintyEllipse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
GA-UncertaintyEllipse ::= SEQUENCE {
    uncertaintySemi-major
                               INTEGER (0..127),
    uncertaintySemi-minor
                               INTEGER (0..127),
    orientationOfMajorAxis
                               INTEGER (0..179), -- The values 90..179 shall not be used.
    . . .
GA-PointWithUnCertainty ::=SEOUENCE {
    geographicalCoordinates
                               GeographicalCoordinate,
    uncertaintyCode
                           INTEGER (0..127),
                            ProtocolExtensionContainer { {GA-PointWithUnCertainty-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
GA-PointWithUnCertainty-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
GA-AccessPointPosition ::= SEQUENCE {
    geographicalCoordinate
                                GeographicalCoordinate,
                           ProtocolExtensionContainer { {GA-AccessPoint-ExtIEs} } OPTIONAL,
    iE-Extensions
GA-AccessPoint-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
GeographicalCoordinate ::= SEQUENCE {
   latitudeSign
                           ENUMERATED { north, south },
   latitude
                       INTEGER (0..8388607),
   longitude
                       INTEGER (-8388608..8388607),
   iE-Extensions
                            ProtocolExtensionContainer { GeographicalCoordinate-ExtIEs} } OPTIONAL,
```

```
GeographicalCoordinate-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
GPS-Almanac ::= SEQUENCE {
    wna-alm
                           BIT STRING (SIZE (8)),
    satellite-Almanac-Information
                                       SEQUENCE (SIZE (1..maxNoSat)) OF
       SEQUENCE {
           data-id
                               DATA-ID,
           sAT-ID
                               SAT-ID,
           gps-e-alm
                               BIT STRING (SIZE (16)),
           qps-toa-alm
                               BIT STRING (SIZE (8)),
           gps-delta-I-alm
                             BIT STRING (SIZE (16)),
           omegadot-alm
                               BIT STRING (SIZE (16)),
           svhealth-alm
                               BIT STRING (SIZE (8)),
           qps-a-sqrt-alm
                               BIT STRING (SIZE (24)),
           omegazero-alm
                               BIT STRING (SIZE (24)),
           m-zero-alm
                               BIT STRING (SIZE (24)),
           gps-omega-alm
                               BIT STRING (SIZE (24)),
           gps-af-zero-alm
                               BIT STRING (SIZE (11)),
           gps-af-one-alm
                               BIT STRING (SIZE (11)),
           iE-Extensions
                               ProtocolExtensionContainer { { Satellite-Almanac-Information-ExtIEs} }
                                                                                                          OPTIONAL,
       },
    sVGlobalHealth-alm
                           BIT STRING (SIZE (364))
                                                       OPTIONAL.
    iE-Extensions
                           ProtocolExtensionContainer { GPS-Almanac-ExtIEs} }
                                                                                       OPTIONAL,
Satellite-Almanac-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
GPS-Almanac-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
GPSInformation ::= SEQUENCE (SIZE (1..maxNoGPSTypes)) OF
    SEQUENCE {
       gPSInformationItem
                               ENUMERATED {
           gPS-NavigationModel-and-TimeRecovery,
           gPS-Ionospheric-Model,
           gPS-UTC-Model,
           gPS-Almanac,
           gPS-RealTime-Integrity,
       iE-Extensions
                               ProtocolExtensionContainer { GPSInformation-ExtIEs} }
                                                                                           OPTIONAL,
-- This IE shall be present if the Information Type IE indicates "GPS Information"
GPSInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
GPS-Ionospheric-Model ::= SEQUENCE {
    alpha-zero-ionos
                           BIT STRING (SIZE (8)),
   alpha-one-ionos
                           BIT STRING (SIZE (8)),
   alpha-two-ionos
                          BIT STRING (SIZE (8)),
    alpha-three-ionos
                          BIT STRING (SIZE (8)),
   beta-zero-ionos
                           BIT STRING (SIZE (8)),
   beta-one-ionos
                           BIT STRING (SIZE (8)),
   beta-two-ionos
                           BIT STRING (SIZE (8)),
   beta-three-ionos
                          BIT STRING (SIZE (8)),
                           iE-Extensions
                                                                                             OPTIONAL,
GPS-Ionospheric-Model-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
GPS-NavigationModel-and-TimeRecovery ::= SEQUENCE (SIZE (1..maxNoSat)) OF
   SEQUENCE {
       tx-tow-nav
                                      INTEGER (0..1048575),
       sAT-ID
                                       SAT-ID,
       tlm-message-nav
                                      BIT STRING (SIZE (14)),
       t.lm-revd-c-nav
                                      BIT STRING (SIZE (2)),
       ho-word-nav
                                      BIT STRING (SIZE (22)),
       w-n-nav
                                      BIT STRING (SIZE (10)),
       ca-or-p-on-12-nav
                                      BIT STRING (SIZE (2)),
       user-range-accuracy-index-nav
                                      BIT STRING (SIZE (4)),
       sv-health-nav
                                      BIT STRING (SIZE (6)),
       iodc-nav
                                      BIT STRING (SIZE (10)),
       12-p-dataflag-nav
                                      BIT STRING (SIZE (1)),
       sfl-reserved-nav
                                      BIT STRING (SIZE (87)),
       t-qd-nav
                                      BIT STRING (SIZE (8)),
       t-oc-nav
                                      BIT STRING (SIZE (16)),
       a-f-2-nav
                                      BIT STRING (SIZE (8)),
       a-f-1-nav
                                      BIT STRING (SIZE (16)),
       a-f-zero-nav
                                      BIT STRING (SIZE (22)),
       c-rs-nav
                                      BIT STRING (SIZE (16)),
       delta-n-nav
                                      BIT STRING (SIZE (16)),
       m-zero-nav
                                      BIT STRING (SIZE (32)),
       c-uc-nav
                                      BIT STRING (SIZE (16)),
                                      BIT STRING (SIZE (32)),
       gps-e-nav
                                      BIT STRING (SIZE (16)),
       c-us-nav
       a-sqrt-nav
                                      BIT STRING (SIZE (32)),
       t-oe-nav
                                      BIT STRING (SIZE (16)),
       fit-interval-flag-nav
                                      BIT STRING (SIZE (1)),
       aodo-nav
                                      BIT STRING (SIZE (5)),
       c-ic-nav
                                      BIT STRING (SIZE (16)),
       omega-zero-nav
                                      BIT STRING (SIZE (32)),
       c-is-nav
                                      BIT STRING (SIZE (16)),
       i-zero-nav
                                      BIT STRING (SIZE (32)),
       c-rc-nav
                                      BIT STRING (SIZE (16)),
```

```
BIT STRING (SIZE (32)),
       gps-omega-nav
       omegadot-nav
                                   BIT STRING (SIZE (24)),
       idot-nav
                                   BIT STRING (SIZE (14)),
                                   BIT STRING (SIZE (20)),
       spare-zero-fill
                                   iE-Extensions
GPS-NavigationModel-and-TimeRecoveryItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
GPS-RealTime-Integrity ::= CHOICE {
   badSatellites
                            BadSatellites,
   noBadSatellite
                            NULL
GPS-RX-POS ::= SEQUENCE {
   geographicalCoordinate
                            GeographicalCoordinate,
   altitudeAndDirection
                            GA-AltitudeAndDirection,
   iE-Extensions
                            ProtocolExtensionContainer { GPS-RX-POS-ExtIEs} } OPTIONAL,
GPS-RX-POS-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
GPS-Status-Health ::= ENUMERATED {
  udre-1-0,
  udre-0-75,
  udre-0-5,
  udre-0-3.
  udre-0-1,
  no-data,
  invalid-data
GPSTOW ::= INTEGER (0..604799)
GPS-UTC-Model ::= SEQUENCE {
   a-one-utc
                        BIT STRING (SIZE (24)),
   a-zero-utc
                        BIT STRING (SIZE (32)),
   t-ot-utc
                        BIT STRING (SIZE (8)),
   delta-t-ls-utc
                        BIT STRING (SIZE (8)),
   w-n-t-utc
                        BIT STRING (SIZE (8)),
   w-n-lsf-utc
                        BIT STRING (SIZE (8)),
                        BIT STRING (SIZE (8)),
   dn-utc
   delta-t-lsf-utc
                     BIT STRING (SIZE (8)),
                        iE-Extensions
                                                                              OPTIONAL,
GPS-UTC-Model-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
Guaranteed-Rate-Information ::= SEQUENCE {
   quaranteed-UL-Rate
                              Guaranteed-Rate OPTIONAL,
   quaranteed-DL-Rate
                              Guaranteed-Rate OPTIONAL,
   iE-Extensions
                              ProtocolExtensionContainer { {Guaranteed-Rate-Information-ExtIEs} } OPTIONAL,
Guaranteed-Rate-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
Guaranteed-Rate
                     ::= INTEGER (1..maxNrOfTFs)
-- "1": TFI 0, "2": TFI 1, "3": TFI 2, ...
-- H
-- I
IB-SchedulingInformation::= SEQUENCE {
   iB-SG-Rep
                                  IB-SG-REP,
   iB-segmentInformationList
                                  IB-SegmentInformationList,
   iE-Extensions
                                  ProtocolExtensionContainer { { IB-SchedulingInformation-ExtIEs } } OPTIONAL,
       . . .
IB-SchedulingInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
IB-SegmentInformationList ::= SEQUENCE (SIZE(1..maxIBSEG)) OF IB-SegmentInformationItem
IB-SegmentInformationItem ::= SEQUENCE {
   iB-SG-POS
   iE-Extensions
                                  IB-SegmentInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
IB-SG-POS ::= INTEGER (0..4094)
-- Only even positions allowed
IB-SG-REP ::= ENUMERATED {rep4, rep8, rep16, rep32, rep64, rep128, rep256, rep512, rep1024, rep2048, rep4096}
IMSI
           ::= OCTET STRING (SIZE(3..8))
InformationAvailable::= SEQUENCE {
   requestedDataValue
                          RequestedDataValue,
   iE-Extensions
                          ProtocolExtensionContainer { { InformationAvailable-ExtIEs} }
                                                                                          OPTIONAL,
```

```
InformationAvailable-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
InformationExchangeID ::= INTEGER (0..1048575)
InformationNotAvailable ::= NULL
InformationReportCharacteristics ::= CHOICE {
    onDemand
   periodic
                           PeriodicInformation,
                         OnModificationInformation,
    onModification
InformationReportPeriodicity ::= CHOICE {
                   INTEGER (1..60,...),
-- Unit min, Step 1min
   hour
          INTEGER (1..24,...),
-- Unit hour, Step 1hour
    . . .
InformationThreshold ::= CHOICE {
    dGPSThreshold
                       DGPSThreshold,
InformationType ::= SEQUENCE {
    informationTypeItem
                           ENUMERATED {
       gA-AccessPointPositionwithAltitude,
       gA-AccessPointPosition,
       iPDLParameters,
       gPSInformation,
       dGPSCorrections,
       qPS-RX-POS,
       sFNSFN-GA-AccessPointPosition,
    gPSInformation
                               GPSInformation
                                                       OPTIONAL,
    iE-Extensions
                               ProtocolExtensionContainer { { InformationType-ExtIEs} }
                                                                                               OPTIONAL,
-- The GPS Information IE shall be present if the Information Exchange Type IE indicates "GPS Information"
InformationType-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
                     ::= ENUMERATED {active, inactive}
InnerLoopDLPCStatus
```

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```
IPDLParameters ::= CHOICE {
    iPDL-FDD-Parameters
                                IPDL-FDD-Parameters.
    iPDL-TDD-Parameters
                                IPDL-TDD-Parameters,
IPDL-FDD-Parameters ::= SEQUENCE {
    iPSpacingFDD
                                IPSpacingFDD,
    iPLength
                                IPLength,
    iPOffset
                                IPOffset,
    seed
                                Seed,
    burstModeParameters
                                BurstModeParameters
                                                         OPTIONAL,
    iE-Extensions
                                ProtocolExtensionContainer { { IPDL-FDD-Parameters-ExtIEs} }
                                                                                                   OPTIONAL,
IPDL-FDD-Parameters-ExtlEs RNSAP-PROTOCOL-EXTENSION ::= {
IPDL-TDD-Parameters ::= SEQUENCE {
    iPSpacingTDD
                                IPSpacingTDD,
   iPStart
                                IPStart,
   iPSlot
                                IPSlot,
    iP-P-CCPCH
                                IP-P-CCPCH,
    burstModeParameters
                                BurstModeParameters
                                                         OPTIONAL,
    iE-Extensions
                                ProtocolExtensionContainer { { IPDL-TDD-Parameters-ExtIEs} }
                                                                                                   OPTIONAL,
-- The BurstModeParameters IE shall be included if the Idle Periods are arranged in Burst Mode.
IPDL-TDD-Parameters-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
IPLength ::= ENUMERATED {
    ipl5,
    ipl10,
    . . .
IPOffset ::= INTEGER (0..9)
IP-P-CCPCH ::= ENUMERATED {
    switchOff-1-Frame,
    switchOff-2-Frames
IPSlot ::= INTEGER (0..14)
IPSpacingFDD ::= ENUMERATED {
    ipsF5,
```

```
ipsF7,
    ipsF10,
    ipsF15,
    ipsF20,
    ipsF30,
    ipsF40,
    ipsF50,
    . . .
IPSpacingTDD ::= ENUMERATED {
    ipsT30,
    ipsT40,
    ipsT50,
    ipsT70,
    ipsT100,
IPStart ::= INTEGER (0..4095)
-- J
-- K
-- L
LAC
                    ::= OCTET STRING (SIZE (2)) -- (EXCEPT ('0000'H|'FFFE'H))
LengthOfTFCI2 ::= INTEGER(1..10)
LimitedPowerIncrease ::= ENUMERATED {
    used,
    not-used
L3-Information
                            ::= BIT STRING
Load-Value-IncrDecrThres ::= INTEGER(0..100)
Load-Value ::= INTEGER(0..100)
LoadValue ::= SEQUENCE {
       uplinkLoadValue
                            INTEGER(0..100),
       downlinkLoadValue
                           INTEGER(0..100)
-- M
MaxNrOfUL-DPCHs
                            ::= INTEGER (1..6)
MAC-c-sh-SDU-Length
                            ::= INTEGER (1..5000)
MAC-c-sh-SDU-LengthList ::= SEQUENCE(SIZE(1..maxNrOfMACcshSDU-Length)) OF MAC-c-sh-SDU-Length
MaximumAllowedULTxPower
                            ::= INTEGER (-50..33)
```

```
MaxNrDLPhysicalchannels
                      ::= INTEGER (1..224)
MaxNrTimeslots
                       ::= INTEGER (1..14)
MaxNrULPhysicalchannels
                       ::= INTEGER (1..2)
MaxTFCIvalue
                        ::= INTEGER (1..1023)
MeasurementFilterCoefficient ::= ENUMERATED (k0, k1, k2, k3, k4, k5, k6, k7, k8, k9, k11, k13, k15, k17, k19,...)
-- Measurement Filter Coefficient to be used for measurement
Measurement.ID
                       ::= INTEGER (0..1048575)
MinimumSpreadingFactor
                       ::= INTEGER (1..16)
Multi-code-info
                        ::= INTEGER (1..16)
MultipleURAsIndicator ::= ENUMERATED {
   multiple-URAs-exist,
   single-URA-exists
MaxAdiustmentStep
                        ::= INTEGER(1..10)
-- Unit Slot
MeasurementChangeTime
                        ::= INTEGER (1..6000,...)
-- The MeasurementChangeTime gives the MeasurementChangeTime
-- in number of 10 ms periods.
-- E.g. Value 6000 means 60000ms(1min)
-- Unit is ms, Step is 10 ms
MeasurementHysteresisTime
                           ::= INTEGER (1..6000,...)
-- The MeasurementHysteresisTime gives the
-- MeasurementHysteresisTime in number of 10 ms periods.
-- E.g. Value 6000 means 60000ms(1min)
-- Unit is ms, Step is 10ms
MeasurementIncreaseDecreaseThreshold
                                      ::= CHOICE {
   sir
                               SIR-Value-IncrDecrThres,
   sir-error
                               SIR-Error-Value-IncrDecrThres,
   transmitted-code-power
                               Transmitted-Code-Power-Value-IncrDecrThres,
                               RSCP-Value-IncrDecrThres,
   rscp
   round-trip-time
                               Round-Trip-Time-IncrDecrThres,
   extension-MeasurementIncreaseDecreaseThreshold
                                                Extension-MeasurementIncreaseDecreaseThreshold
Extension-MeasurementIncreaseDecreaseThreshold ::= ProtocolIE-Single-Container {{ Extension-MeasurementIncreaseDecreaseThresholdIE }}
Extension-MeasurementIncreaseDecreaseThresholdIE RNSAP-PROTOCOL-IES ::= {
     PRESENCE
mandatory } |
```

```
PRESENCE mandatory } |
   { ID id-UL-Timeslot-ISCP-Value-IncrDecrThres
                                          CRITICALITY reject TYPE UL-Timeslot-ISCP-Value-IncrDecrThres PRESENCE mandatory }
Measurement.Threshold
                           ::= CHOICE {
   sir
                              SIR-Value,
   sir-error
                              SIR-Error-Value,
   transmitted-code-power
                              Transmitted-Code-Power-Value,
                              RSCP-Value,
   rscp
                              Rx-Timing-Deviation-Value,
   rx-timing-deviation
   round-trip-time
                              Round-Trip-Time-Value,
   extension-MeasurementThreshold Extension-MeasurementThreshold
Extension-MeasurementThreshold ::= ProtocolIE-Single-Container {{ Extension-MeasurementThresholdIE }}
Extension-MeasurementThresholdIE RNSAP-PROTOCOL-IES ::=
     ID id-TUTRANGPSMeasurementThresholdInformation
                                              CRITICALITY reject TYPE TUTRANGPSMeasurementThresholdInformation PRESENCE mandatory }
     PRESENCE mandatory } |
     ID id-Load-Value CRITICALITY reject TYPE Load-Value
                                                     PRESENCE mandatory } |
     ID id-Transmitted-Carrier-Power-Value
                                        CRITICALITY reject TYPE Transmitted-Carrier-Power-Value
                                                                                            PRESENCE mandatory } |
                                                                                                 PRESENCE mandatory } |
     ID id-Received-Total-Wideband-Power-Value
                                           CRITICALITY reject TYPE Received-Total-Wideband-Power-Value
     ID id-UL-Timeslot-ISCP-Value
                                 CRITICALITY reject TYPE UL-Timeslot-ISCP-Value
                                                                             PRESENCE mandatory } |
     MidambleConfigurationLCR ::=
                          ENUMERATED {v2, v4, v6, v8, v10, v12, v14, v16, ...}
                                     ENUMERATED {v4, v8, v16}
MidambleConfigurationBurstType1And3 ::=
MidambleConfigurationBurstType2 ::=
                                 ENUMERATED {v3, v6}
MidambleShiftAndBurstType ::=
                              CHOICE {
                                 SEOUENCE {
      midambleConfigurationBurstType1And3
                                        MidambleConfigurationBurstType1And3,
      midambleAllocationMode
                                     CHOICE {
          defaultMidamble
                                        NULL,
          commonMidamble
                                        NULL,
          ueSpecificMidamble
                                        MidambleShiftLong,
      },
   type2
                                 SEOUENCE
      midambleConfigurationBurstType2
                                     MidambleConfigurationBurstType2,
      midambleAllocationMode
                                     CHOICE {
          defaultMidamble
                                        NULL,
          commonMidamble
                                        NULL,
                                        MidambleShiftShort,
         ueSpecificMidamble
          . . .
      },
```

```
},
    type3
                                        SEOUENCE {
        midambleConfigurationBurstTypelAnd3 MidambleConfigurationBurstTypelAnd3,
        midambleAllocationMode
                                        CHOICE {
            default.Midamble
                                                 NULL,
            ueSpecificMidamble
                                                 MidambleShiftLong,
MidambleShiftLong ::=
                                    INTEGER (0..15)
MidambleShiftShort ::=
                                    INTEGER (0..5)
MidambleShiftLCR ::= SEQUENCE {
    midambleAllocationMode
                                MidambleAllocationMode,
                                MidambleShiftLong
    midambleShift
                                                         OPTIONAL,
    -- The IE shall be present if the Midamble Allocation Mode IE is set to "UE specific midamble".
    midambleConfigurationLCR
                                    MidambleConfigurationLCR,
    iE-Extensions
                                ProtocolExtensionContainer { {MidambleShiftLCR-ExtIEs} }
                                                                                                  OPTIONAL,
    . . .
MidambleAllocationMode ::= ENUMERATED {
    defaultMidamble,
    commonMidamble,
    uESpecificMidamble,
    . . .
MidambleShiftLCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
MinUL-ChannelisationCodeLength
                                    ::= ENUMERATED
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256
Modulation ::= ENUMERATED {
    qPSK,
    eightPSK,
MultiplexingPosition ::= ENUMERATED {
```

```
fixed.
    flexible
-- N
NCC ::= BIT STRING (SIZE (3))
Neighbouring-UMTS-CellInformation ::= SEQUENCE (SIZE (1..maxNrOfNeighbouringRNCs)) OF ProtocolIE-Single-Container {{ Neighbouring-UMTS-
CellInformationItemIE }}
Neighbouring-UMTS-CellInformationItemIE RNSAP-PROTOCOL-IES ::= {
    Neighbouring-UMTS-CellInformationItem PRESENCE mandatory }
Neighbouring-UMTS-CellInformationItem ::= SEQUENCE
    rNC-ID
                                           RNC-ID,
                                           CN-PS-DomainIdentifier
    cN-PS-DomainIdentifier
                                                                      OPTIONAL,
    cN-CS-DomainIdentifier
                                           CN-CS-DomainIdentifier
                                                                      OPTIONAL,
    neighbouring-FDD-CellInformation
                                           Neighbouring-FDD-CellInformation
                                                                              OPTIONAL,
    neighbouring-TDD-CellInformation
                                           Neighbouring-TDD-CellInformation
                                                                              OPTIONAL,
    iE-Extensions
                                           ProtocolExtensionContainer { {Neighbouring-UMTS-CellInformationItem-ExtIEs} } OPTIONAL,
Neighbouring-UMTS-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-neighbouring-LCR-TDD-CellInformation
                                                          CRITICALITY ignore
                                                                                  EXTENSION
                                                                                              Neighbouring-LCR-TDD-CellInformation
                                                                                                                                        PRESENCE
optional },
    . . .
Neighbouring-FDD-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfFDDNeighboursPerRNC,...)) OF Neighbouring-FDD-CellInformationItem
Neighbouring-FDD-CellInformationItem ::= SEQUENCE {
    c-ID
                                       C-ID,
    uARFCNforNu
                                       UARFCN,
    uARFCNforNd
                                       UARFCN,
    frameOffset
                                       FrameOffset
                                                           OPTIONAL,
    primaryScramblingCode
                                       PrimaryScramblingCode,
    primaryCPICH-Power
                                       PrimaryCPICH-Power
                                                              OPTIONAL,
    cellIndividualOffset
                                       CellIndividualOffset
                                                              OPTIONAL,
    txDiversityIndicator
                                       TxDiversityIndicator,
    sTTD-SupportIndicator
                                       STTD-SupportIndicator OPTIONAL,
                                       ClosedLoopModel-SupportIndicator
    closedLoopModel-SupportIndicator
                                                                          OPTIONAL,
    closedLoopMode2-SupportIndicator
                                       ClosedLoopMode2-SupportIndicator
                                                                          OPTIONAL,
    iE-Extensions
                                       ProtocolExtensionContainer { { Neighbouring-FDD-CellInformationItem-ExtIEs} } OPTIONAL,
    . . .
Neighbouring-FDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
     ID id-RestrictionStateIndicator
                                                   CRITICALITY ignore
                                                                              EXTENSION RestrictionStateIndicator
                                                                                                                    PRESENCE optional }
     ID id-DPC-Mode-Change-SupportIndicator
                                               CRITICALITY ignore
                                                                      EXTENSION
                                                                                  DPC-Mode-Change-SupportIndicator
                                                                                                                       PRESENCE optional },
```

```
NeighbouringFDDCellMeasurementInformation ::= SEQUENCE {
    uC-ID
                                        UC-ID.
    uARFCN
                                        UARFCN.
    primaryScramblingCode
                                        PrimaryScramblingCode,
                                        ProtocolExtensionContainer { { NeighbouringFDDCellMeasurementInformationItem-ExtIEs} } OPTIONAL,
    iE-Extensions
NeighbouringFDDCellMeasurementInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
Neighbouring-GSM-CellInformation ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-CellInformationIE }}
Neighbouring-GSM-CellInformationIE RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-GSM-CellInformation
                                                CRITICALITY ignore TYPE
                                                                            Neighbouring-GSM-CellInformationIEs PRESENCE mandatory }
Neighbouring-GSM-CellInformationIEs ::= SEQUENCE ( SIZE (1..maxNrOfGSMNeighboursPerRNC,...)) OF Neighbouring-GSM-CellInformationItem
Neighbouring-GSM-CellInformationItem ::= SEQUENCE {
    cellIndividualOffset
                                        CellIndividualOffset
                                                                OPTIONAL.
    bstc
                                        BSIC,
    band-Indicator
                                        Band-Indicator,
    bcch-arfcn
                                        BCCH-ARFCN,
                                        ProtocolExtensionContainer { { Neighbouring-GSM-CellInformationItem-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
Neighbouring-GSM-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-ExtendedGSMCellIndividualOffset
                                            CRITICALITY ignore
                                                                    EXTENSION ExtendedGSMCellIndividualOffset PRESENCE optional },
    . . .
Neighbouring-TDD-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfTDDNeighboursPerRNC,...)) OF Neighbouring-TDD-CellInformationItem
Neighbouring-TDD-CellInformationItem ::= SEQUENCE {
    c-ID
                                    C-ID,
    uARFCNforNt
                                    UARFCN,
    frameOffset
                                    FrameOffset
                                                        OPTIONAL,
    cellParameterID
                                    CellParameterID,
    syncCase
                                    SyncCase,
    timeSlot
                                    TimeSlot
                                                        OPTIONAL
    -- This IE shall be present if Sync Case = Case1 -- ,
    sCH-TimeSlot
                                    SCH-TimeSlot
                                                            OPTIONAL
    -- This IE shall be present if Sync Case = Case2 -- ,
    sCTD-Indicator
                      SCTD-Indicator,
    cellIndividualOffset
                                    CellIndividualOffset
                                                            OPTIONAL,
    dPCHConstantValue
                                    DPCHConstantValue OPTIONAL,
    pCCPCH-Power
                                    PCCPCH-Power
                                                            OPTIONAL,
    iE-Extensions
                                    ProtocolExtensionContainer { { Neighbouring-TDD-CellInformationItem-ExtIEs} } OPTIONAL,
```

```
Neighbouring-TDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-RestrictionStateIndicator
                                                     CRITICALITY ignore
                                                                                 EXTENSION RestrictionStateIndicator
                                                                                                                        PRESENCE optional },
    . . .
NeighbouringTDDCellMeasurementInformation ::= SEQUENCE {
    uC-ID
                                        UC-ID,
    uARFCN
                                        UARFCN,
    cellParameterID
                                        CellParameterID,
    timeSlot
                                        TimeSlot
                                                                     OPTIONAL,
    midambleShiftAndBurstType
                                        MidambleShiftAndBurstType
                                                                     OPTIONAL,
    iE-Extensions
                                        ProtocolExtensionContainer { { NeighbouringTDDCellMeasurementInformationItem-ExtIEs} } OPTIONAL,
NeighbouringTDDCellMeasurementInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
Neighbouring-LCR-TDD-CellInformation ::= SEQUENCE (SIZE (1.. maxNrOfLCRTDDNeighboursPerRNC,...)) OF Neighbouring-LCR-TDD-CellInformationItem
Neighbouring-LCR-TDD-CellInformationItem ::= SEQUENCE {
    c-ID
                                    C-ID,
    uARFCNforNt
                                    UARFCN,
    frameOffset
                                    FrameOffset
                                                         OPTIONAL,
    cellParameterID
                                    CellParameterID,
    sCTD-Indicator
                            SCTD-Indicator,
    cellIndividualOffset
                                    CellIndividualOffset
                                                             OPTIONAL,
    dPCHConstantValue
                                    DPCHConstantValue
                                                        OPTIONAL,
    pCCPCH-Power
                                    PCCPCH-Power
                                                             OPTIONAL,
    restrictionStateIndicator
                                    RestrictionStateIndicator
                                                                     OPTIONAL,
    iE-Extensions
                                    ProtocolExtensionContainer { { Neighbouring-LCR-TDD-CellInformationItem-ExtIEs} } OPTIONAL,
Neighbouring-LCR-TDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
NrOfDLchannelisationcodes
                           ::= INTEGER (1..8)
NrOfTransportBlocks
                            ::= INTEGER (0..512)
-- 0
OnModification ::= SEQUENCE
    measurementThreshold
                            MeasurementThreshold,
                            ProtocolExtensionContainer { {OnModification-ExtIEs} } OPTIONAL,
    iE-Extensions
```

```
OnModification-ExtlEs RNSAP-PROTOCOL-EXTENSION ::= {
OnModificationInformation ::= SEQUENCE {
    informationThreshold InformationThreshold
                                                     OPTIONAL,
    iE-Extensions
                            ProtocolExtensionContainer { {OnModificationInformation-ExtIEs} } OPTIONAL,
    . . .
OnModificationInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
-- P
PagingCause ::= ENUMERATED {
    terminating-conversational-call,
    terminating-streaming-call,
    terminating-interactive-call,
    terminating-background-call,
    terminating-low-priority-signalling,
    terminating-high-priority-signalling,
    terminating-cause-unknown
-- See in [16]
PagingRecordType ::= ENUMERATED {
    imsi-gsm-map,
    tmsi-gsm-map,
    p-tmsi-gsm-map,
    imsi-ds-41,
    tmsi-ds-41,
-- See in [16]
PayloadCRC-PresenceIndicator ::= ENUMERATED {
    crc-included,
    crc-not-included
PCCPCH-Power ::= INTEGER (-150..400,...)
-- PCCPCH-power = power * 10
-- If power <= -15 PCCPCH shall be set to -150
-- If power >= 40 PCCPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step 0.1dBm
PCH-InformationList ::= SEQUENCE (SIZE(0..1)) OF PCH-InformationItem
PCH-InformationItem ::= SEQUENCE {
    transportFormatSet
                                    TransportFormatSet,
```

```
ProtocolExtensionContainer { { PCH-InformationItem-ExtIEs} } OPTIONAL,
    iE-Extensions
PCH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::=
PC-Preamble ::= INTEGER(0..7,...)
PDSCHCodeMapping ::= SEQUENCE {
    dL-ScramblingCode
                            DL-ScramblingCode,
    signallingMethod
                            PDSCHCodeMapping-SignallingMethod,
    iE-Extensions
                            ProtocolExtensionContainer { { PDSCHCodeMapping-ExtIEs} } OPTIONAL,
PDSCHCodeMapping-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
PDSCHCodeMapping-SignallingMethod ::= CHOICE {
    pDSCHCodeMapping-SignallingMethod-CodeRange
                                                    PDSCHCodeMapping-SignallingMethod-CodeRange,
    pDSCHCodeMapping-SignallingMethod-TFCIRange
                                                    PDSCHCodeMapping-SignallingMethod-TFCIRange,
    pDSCHCodeMapping-SignallingMethod-Explicit
                                                    PDSCHCodeMapping-SignallingMethod-Explicit,
    pDSCHCodeMapping-SignallingMethod-Replace
                                                    PDSCHCodeMapping-SignallingMethod-Replace
PDSCHCodeMapping-SignallingMethod-CodeRange ::= SEQUENCE (SIZE (1..maxNoCodeGroups)) OF
    SEOUENCE {
        spreadingFactor
                                SpreadingFactor,
        multi-code-info
                                Multi-code-info,
        start-CodeNumber
                                CodeNumber,
        stop-CodeNumber
                                CodeNumber,
       iE-Extensions
                                ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-CodeRange-ExtIEs} } OPTIONAL,
PDSCHCodeMapping-SignallingMethod-CodeRange-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
PDSCHCodeMapping-SignallingMethod-TFCIRange ::= SEQUENCE (SIZE (1..maxNoTFCIGroups)) OF
    SEQUENCE {
                                MaxTFCIvalue,
       maxTFCIvalue
        spreadingFactor
                                SpreadingFactor,
       multi-code-info
                                Multi-code-info,
        codeNumber
                                CodeNumber,
                                ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-TFCIRange-ExtIEs} } OPTIONAL,
        iE-Extensions
PDSCHCodeMapping-SignallingMethod-TFCIRange-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
PDSCHCodeMapping-SignallingMethod-Explicit ::= SEQUENCE (SIZE (1..maxTFCI2Combs)) OF
    SEOUENCE
        spreadingFactor
                                SpreadingFactor,
                                Multi-code-info,
       multi-code-info
       codeNumber
                                CodeNumber,
       iE-Extensions
                                ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-Explicit-ExtIEs} } OPTIONAL,
        . . .
PDSCHCodeMapping-SignallingMethod-Explicit-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
PDSCHCodeMapping-SignallingMethod-Replace ::= SEQUENCE (SIZE (1..maxTFCI2Combs)) OF
    SEOUENCE {
       tfci-Field2
                                    TFCS-MaxTFCI-field2-Value,
       spreadingFactor
                                    SpreadingFactor,
       multi-CodeInfo
                                    Multi-code-info,
       codeNumber
                                    CodeNumber,
                                    ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-Replace-ExtIEs} }
       iE-Extensions
                                                                                                                          OPTIONAL,
    . . .
PDSCHCodeMapping-SignallingMethod-Replace-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
Periodic ::= SEQUENCE {
    reportPeriodicity
                            ReportPeriodicity,
   iE-Extensions
                            ProtocolExtensionContainer { {Periodic-ExtIEs} } OPTIONAL,
Periodic-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
PeriodicInformation ::= SEQUENCE {
                                        InformationReportPeriodicity,
    informationReportPeriodicity
    iE-Extensions
                                        ProtocolExtensionContainer { {PeriodicInformation-ExtIEs} } OPTIONAL,
PeriodicInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::=
Permanent-NAS-UE-Identity ::= CHOICE {
    imsi
                IMSI,
```

```
PLMN-Identity ::= OCTET STRING (SIZE(3))
PowerAdjustmentType ::= ENUMERATED {
    none,
    common,
    individual
PowerOffset
                       ::= INTEGER (0..24)
PRC ::= INTEGER (-2047..2047)
--pseudo range correction; scaling factor 0.32 meters
PRCDeviation ::= ENUMERATED {
   prcd1,
    prcd2,
   prcd5,
    prcd10,
Pre-emptionCapability ::= ENUMERATED {
    shall-not-trigger-pre-emption,
    may-trigger-pre-emption
Pre-emptionVulnerability ::= ENUMERATED {
    not-pre-emptable,
    pre-emptable
PredictedSFNSFNDeviationLimit ::= INTEGER (1..256)
-- Unit chip, Step 1/16 chip, Range 1/16..16 chip
PredictedTUTRANGPSDeviationLimit ::= INTEGER (1..256)
-- Unit chip, Step 1/16 chip, Range 1/16..16 chip
PrimaryCPICH-Power
                          ::= INTEGER (-100..500)
-- step 0.1 (Range -10.0..50.0) Unit is dBm
PrimaryCPICH-EcNo
                           ::= INTEGER (-30..30)
PrimaryCCPCH-RSCP
                           ::= INTEGER (0..91)
-- According to maping in [14]
PrimaryScramblingCode
                                ::= INTEGER (0..511)
PriorityLevel
                            ::= INTEGER (0..15)
-- 0 = spare, 1 = highest priority, ...14 = lowest priority and 15 = no priority
PropagationDelay
                           ::= INTEGER (0..255)
PunctureLimit
                           ::= INTEGER (0..15)
```

```
-- 0: 40%; 1: 44%; ... 14: 96%; 15: 100
-- 0
OE-Selector ::= ENUMERATED {
    selected,
    non-selected
-- R
RAC
                    ::= OCTET STRING (SIZE(1))
RANAP-RelocationInformation
                                ::= BIT STRING
Range-Correction-Rate ::= INTEGER (-127..127)
-- scaling factor 0.032 m/s
RateMatchingAttribute
                               ::= INTEGER (1..maxRateMatching)
RB-Identity
                               ::= INTEGER (0..31)
RB-Info ::= SEQUENCE (SIZE(1..maxNoOfRB)) OF RB-Identity
Received-Total-Wideband-Power-Value ::= Received-total-wide-band-power
Received-Total-Wideband-Power-Value-IncrDecrThres ::= INTEGER(0..620)
-- Unit dB Step 0.1dB
-- e.g. value 100 means 10dB
RefTFCNumber ::= INTEGER (0..15)
RepetitionLength
                           ::= INTEGER (1..63)
RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    v16,
    v32,
    v64
RepetitionNumber0 ::= INTEGER (0..255)
RepetitionNumber1 ::= INTEGER (1..256)
ReportCharacteristics ::= CHOICE {
    onDemand
                       NULL,
    periodic
                        Periodic,
    eventA
                        EventA,
                        EventB,
    eventB
```

```
EventC,
    eventC
    event.D
                        EventD.
    event.E
                        EventE.
    event.F
                        EventF,
    extension-ReportCharacteristics
                                        Extension-ReportCharacteristics
Extension-ReportCharacteristics ::= ProtocolIE-Single-Container {{ Extension-ReportCharacteristicsIE }}
Extension-ReportCharacteristicsIE RNSAP-PROTOCOL-IES ::= {
    { ID id-OnModification CRITICALITY reject TYPE OnModification
                                                                         PRESENCE mandatory }
ReportPeriodicity ::= CHOICE {
   ten-msec
                            INTEGER (1..6000,...),
-- 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
                    INTEGER (1..60,...),
    min
-- Unit min, Step 1min
    . . .
RequestedDataValue ::= SEQUENCE {
    qA-AccessPointPositionwithAltitude
                                                GA-AccessPointPositionwithOptionalAltitude OPTIONAL,
    iPDLParameters
                                                IPDLParameters
                                                                                             OPTIONAL,
    dGPSCorrections
                                                DGPSCorrections
                                                                                             OPTIONAL,
    gPS-NavigationModel-and-TimeRecovery
                                                GPS-NavigationModel-and-TimeRecovery
                                                                                             OPTIONAL,
    gPS-Ionospheric-Model
                                                GPS-Ionospheric-Model
                                                                                             OPTIONAL,
    qPS-UTC-Model
                                                GPS-UTC-Model
                                                                                             OPTIONAL,
    gPS-Almanac
                                                GPS-Almanac
                                                                                             OPTIONAL,
    gPS-RealTime-Integrity
                                                GPS-RealTime-Integrity
                                                                                             OPTIONAL,
    gPS-RX-POS
                                                GPS-RX-POS
                                                                                             OPTIONAL,
                                                GA-AccessPointPositionwithOptionalAltitude OPTIONAL,
    sFNSFN-GA-AccessPointPosition
                                                ProtocolExtensionContainer { { RequestedDataValue-ExtIEs} }
    iE-Extensions
                                                                                                                  OPTIONAL,
RequestedDataValue-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RequestedDataValueInformation ::= CHOICE {
    informationAvailable
                                InformationAvailable,
    informationNotAvailable
                                InformationNotAvailable
RestrictionStateIndicator ::= ENUMERATED {
    cellNotResevedForOperatorUse,
    cellResevedForOperatorUse,
    . . .
```

```
RL-ID
                       ::= INTEGER (0..31)
RL-Set-ID
                       ::= INTEGER (0..31)
RNC-ID
                       ::= INTEGER (0..4095)
Round-Trip-Time-IncrDecrThres ::= INTEGER(0..32766)
Round-Trip-Time-Value ::= INTEGER(0..32767)
-- According to mapping in [23]
RSCP-Value ::= INTEGER (0..127)
-- According to mapping in [24]
RSCP-Value-IncrDecrThres ::= INTEGER (0..126)
Received-total-wide-band-power
                                            ::= INTEGER (0..621)
-- According to mapping in [23]
RxTimingDeviationForTA
                                    ::= INTEGER (0..127)
-- As specified in [5], ch. 6.2.7.6
-- For 1.28Mcps TDD this IE must be set to 0.
Rx-Timing-Deviation-Value ::= INTEGER (0..8191)
--According to mapping in [24][3.84Mcps TDD only]
Rx-Timing-Deviation-Value-LCR ::= INTEGER (0..511)
--According to mapping in [24][1.28Mcps TDD only]
-- S
SAC
                   ::= OCTET STRING (SIZE (2))
SAI ::= SEQUENCE {
                        PLMN-Identity,
    pLMN-Identity
    lac
                        LAC,
    sAC
                        SAC,
    iE-Extensions
                        ProtocolExtensionContainer { {SAI-ExtIEs} } OPTIONAL
SAI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
SAT-ID ::= INTEGER (0..63)
SCH-TimeSlot
                           ::= INTEGER (0..6)
ScaledAdjustmentRatio
                                ::= INTEGER(0..100)
-- AdjustmentRatio = ScaledAdjustmentRatio / 100
Secondary-CCPCH-Info::= SEQUENCE {
    fDD-S-CCPCH-Offset
                                            FDD-S-CCPCH-Offset,
    dl-ScramblingCode
                                            DL-ScramblingCode,
```

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```
fDD-DL-ChannelisationCodeNumber
                                            FDD-DL-ChannelisationCodeNumber,
    Al-TECS
                                            TFCS,
    secondaryCCPCH-SlotFormat
                                            SecondaryCCPCH-SlotFormat.
    tFCI-Presence
                                            TFCI-Presence OPTIONAL,
    -- This IE shall be present only if the Secondary CCPCH Slot Format IE is equal to any of the values from 8 to 17
    multiplexingPosition
                                            MultiplexingPosition,
    sTTD-Indicator
                                            STTD-Indicator,
    fACH-PCH-InformationList
                                            FACH-PCH-InformationList,
    iB-schedulingInformation
                                            IB-SchedulingInformation,
                                            ProtocolExtensionContainer { { Secondary-CCPCH-Info-ExtIEs} } OPTIONAL,
    iE-Extensions
Secondary-CCPCH-Info-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
Secondary-CCPCH-Info-TDD::= SEQUENCE {
    dl-TFCS
                                            TFCS,
    tFCI-Coding
                                            TFCI-Coding,
    secondary-CCPCH-TDD-InformationList
                                            Secondary-CCPCH-TDD-InformationList,
    fACH-InformationList
                                            FACH-InformationList,
    pCH-InformationList
                                            PCH-InformationList,
                                            ProtocolExtensionContainer { { Secondary-CCPCH-Info-TDD-ExtIEs} } OPTIONAL.
   iE-Extensions
Secondary-CCPCH-Info-TDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
Secondary-LCR-CCPCH-Info-TDD::= SEQUENCE {
   dl-TFCS
   tFCI-Coding
                                            TFCI-Coding,
    {\tt secondary-LCR-CCPCH-TDD-InformationList}\ Secondary-LCR-CCPCH-TDD-InformationList,
    fACH-InformationList
                                            FACH-InformationList,
    pCH-InformationList
                                            PCH-InformationList,
                                            ProtocolExtensionContainer { { Secondary-LCR-CCPCH-Info-TDD-ExtIEs} } OPTIONAL,
   iE-Extensions
Secondary-LCR-CCPCH-Info-TDD-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {
Secondary-CCPCH-TDD-InformationList ::= SEQUENCE (SIZE(0.. maxNrOfSCCPCHs)) OF Secondary-CCPCH-TDD-InformationItem
Secondary-CCPCH-TDD-InformationItem ::= SEQUENCE {
    timeSlot
                                    TimeSlot,
    midambleShiftAndBurstType
                                    MidambleShiftAndBurstType,
    tFCI-Presence
                                    TFCI-Presence,
    secondary-CCPCH-TDD-Code-Information
                                                         Secondary-CCPCH-TDD-Code-Information,
    tDD-PhysicalChannelOffset
                                    TDD-PhysicalChannelOffset,
    repetitionLength
                                    RepetitionLength,
```

```
repetitionPeriod
                                    RepetitionPeriod,
   iE-Extensions
                                    ProtocolExtensionContainer { { Secondary-CCPCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
Secondary-CCPCH-TDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
Secondary-LCR-CCPCH-TDD-InformationList ::= SEQUENCE (SIZE(0.. maxNrOfSCCPCHs)) OF Secondary-LCR-CCPCH-TDD-InformationItem
Secondary-LCR-CCPCH-TDD-InformationItem ::= SEQUENCE {
    timeSlotLCR
                                                TimeSlotLCR,
   midambleShiftLCR
                                                MidambleShiftLCR,
    tFCI-Presence
                                                TFCI-Presence,
    secondary-LCR-CCPCH-TDD-Code-Information
                                                Secondary-LCR-CCPCH-TDD-Code-Information,
    tDD-PhysicalChannelOffset
                                                TDD-PhysicalChannelOffset,
    repetitionLength
                                                RepetitionLength,
    repetitionPeriod
                                                RepetitionPeriod,
                                                ProtocolExtensionContainer { { Secondary-LCR-CCPCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
Secondary-LCR-CCPCH-TDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
Secondary-CCPCH-TDD-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfSCCPCHs)) OF Secondary-CCPCH-TDD-Code-InformationItem
Secondary-CCPCH-TDD-Code-InformationItem ::= SEQUENCE {
    tDD-ChannelisationCode
                                    TDD-ChannelisationCode,
    iE-Extensions
                                    ProtocolExtensionContainer { {Secondary-CCPCH-TDD-Code-InformationItem-ExtIEs} } OPTIONAL,
    . . .
Secondary-CCPCH-TDD-Code-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
Secondary-LCR-CCPCH-TDD-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfSCCPCHs)) OF Secondary-LCR-CCPCH-TDD-Code-InformationItem
Secondary-LCR-CCPCH-TDD-Code-InformationItem ::= SEQUENCE {
    tDD-ChannelisationCodeLCR
                                    TDD-ChannelisationCodeLCR,
    s-CCPCH-TimeSlotFormat-LCR
                                    TDD-DL-DPCH-TimeSlotFormat-LCR,
                                    ProtocolExtensionContainer { {Secondary-LCR-CCPCH-TDD-Code-InformationItem-ExtIEs} } OPTIONAL,
   iE-Extensions
Secondary-LCR-CCPCH-TDD-Code-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
SecondInterleavingMode ::= ENUMERATED {
    frame-related,
```

```
timeslot-related,
Seed ::= INTEGER (0..63)
SFN ::= INTEGER (0..4095)
SFNSFN-FDD ::= INTEGER(0..614399)
SFNSFN-TDD ::= INTEGER(0..40961)
GA-AccessPointPositionwithOptionalAltitude ::= SEQUENCE
    geographicalCoordinate
                                                GeographicalCoordinate,
    altitudeAndDirection
                                                GA-AltitudeAndDirection OPTIONAL,
    iE-Extensions
                                                ProtocolExtensionContainer { { GA-AccessPointPositionwithOptionalAltitude-ExtIEs} } OPTIONAL,
    . . .
GA-AccessPointPositionwithOptionalAltitude-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
SFNSFNChangeLimit ::= INTEGER (1..256)
-- Unit chip, Step 1/16 chip, Range 1/16..16 chip
SFNSFNDriftRate ::= INTEGER (-100..100)
-- Unit chip/s, Step 1/256 chip/s, Range -100/256..+100/256 chip/s
SFNSFNDriftRateOuality ::= INTEGER (0..100)
-- Unit chip/s, Step 1/256 chip/s, Range 0..100/256 chip/s
SFNSFNMeasurementThresholdInformation::= SEQUENCE {
    sFNSFNChangeLimit
                                        SFNSFNChangeLimit
                                                                            OPTIONAL,
   predictedSFNSFNDeviationLimit
                                        PredictedSFNSFNDeviationLimit
                                                                            OPTIONAL,
                                    ProtocolExtensionContainer { { SFNSFNMeasurementThresholdInformation-ExtIEs} }
   iE-Extensions
                                                                                                                       OPTIONAL,
SFNSFNMeasurementThresholdInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
SFNSFNMeasurementValueInformation ::= SEOUENCE {
    successfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformation
                                                                                        SEQUENCE (SIZE(1..maxNrOfMeasNCell)) OF
       SEQUENCE {
           uC-ID
                        UC-ID,
            sFNSFNValue
                                        SFNSFNValue,
           sFNSFNQuality
                                        SFNSFNQuality
                                                                    OPTIONAL,
           sFNSFNDriftRate
                                        SFNSFNDriftRate,
           sFNSFNDriftRateQuality
                                        SFNSFNDriftRateQuality
                                                                    OPTIONAL,
            sFNSFNTimeStampInformation SFNSFNTimeStampInformation,
```

```
iE-Extensions
                                      ProtocolExtensionContainer { {
SuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-ExtIEs} }
                                                                                            OPTIONAL,
       },
    unsuccessfull \verb+NeighbouringCellSFNSFNObservedTimeDifference \texttt{MeasurementInformation}
                                                                                    SEQUENCE (SIZE(0..maxNrOfMeasNCell-1)) OF
           uC-ID
                       UC-ID,
                              ProtocolExtensionContainer { { UnsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-
           iE-Extensions
ExtIEs } }
               OPTIONAL,
       },
                       iE-Extensions
                                                                                                      OPTIONAL,
SFNSFNMeasurementValueInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
SuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UnsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::=
SFNSFNQuality ::= INTEGER (0..255)
-- Unit chip, Step 1/16 chip, Range 0.. 255/16 chip
SFNSFNTimeStampInformation ::= CHOICE {
    sFNSFNTimeStamp-FDD
    sFNSFNTimeStamp-TDD
                          SFNSFNTimeStamp-TDD,
SFNSFNTimeStamp-TDD::= SEQUENCE {
                       SFN,
    timeSlot
                       TimeSlot,
                                  ProtocolExtensionContainer { { SFNSFNTimeStamp-ExtIEs}} OPTIONAL,
   iE-Extensions
SFNSFNTimeStamp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
SFNSFNValue ::= CHOICE {
```

```
sFNSFN-FDD
                    SFNSFN-FDD,
    sFNSFN-TDD
                    SFNSFN-TDD,
SIR-Error-Value
                       ::= INTEGER (0..125)
SIR-Error-Value-IncrDecrThres
                                        ::= INTEGER (0..124)
                       ::= INTEGER (0..63)
SIR-Value
-- According to mapping in 25.215/25.225
SIR-Value-IncrDecrThres ::= INTEGER (0..62)
SecondaryCCPCH-SlotFormat
                           ::= INTEGER (0..17,...)
-- refer to 25.211
S-FieldLength
                           ::= ENUMERATED {
   v1,
    v2,
SpecialBurstScheduling ::= INTEGER (1..256)
SplitType ::= ENUMERATED {
   hard,
   logical
SpreadingFactor
                       ::= INTEGER (4 | 8 | 16 | 32 | 64 | 128 | 256)
S-RNTI
                        ::= INTEGER (0..1048575)
-- From 0 to 2^20-1
SRB-Delay ::= INTEGER(0..7,...)
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
STTD-Indicator ::= ENUMERATED {
    active,
    inactive
STTD-SupportIndicator ::= ENUMERATED {
    sTTD-Supported,
    sTTD-not-Supported
SyncCase ::= INTEGER (1..2,...)
SynchronisationConfiguration ::= SEQUENCE {
    n-INSYNC-IND
                           INTEGER (1..256),
   n-OUTSYNC-IND
                            INTEGER (1..256),
                            INTEGER (0..255),
    t-RLFAILURE
-- Unit seconds, Range Os .. 25.5s, Step 0.1s
                       ProtocolExtensionContainer { { SynchronisationConfiguration-ExtIEs} }
    iE-Extensions
                                                                                                     OPTIONAL,
SynchronisationConfiguration-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
SYNC-UL-ProcParameters ::= SEQUENCE {
    maxSYNC-UL-transmissions
                                    ENUMERATED {v1, v2, v4, v8, ...},
                                    INTEGER (0..3, ...),
    powerRampStep
    . . .
TDD-ChannelisationCode
                                ::= ENUMERATED {
    chCodeldiv1,
    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-ChannelisationCodeLCR ::= SEQUENCE {
    tDD-ChannelisationCode
                                    TDD-ChannelisationCode,
    modulation
                                    Modulation, -- Modulation options for 1.28Mcps TDD in contrast to 3.84Mcps TDD
    . . .
TDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF TDD-DCHs-to-ModifyItem
TDD-DCHs-to-ModifyItem ::= SEQUENCE {
    ul-FP-Mode
                                        UL-FP-Mode OPTIONAL,
    toAWS
                                        ToAWS
                                                     OPTIONAL,
    toAWE
                                        TOAWE
                                                     OPTIONAL,
    transportBearerRequestIndicator
                                        TransportBearerRequestIndicator,
    dCH-SpecificInformationList
                                        TDD-DCHs-to-ModifySpecificInformationList,
    iE-Extensions
                                        ProtocolExtensionContainer { {TDD-DCHs-to-ModifyItem-ExtIEs} } OPTIONAL,
TDD-DCHs-to-ModifyItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TDD-DCHs-to-ModifySpecificInformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF TDD-DCHs-to-ModifySpecificItem
TDD-DCHs-to-ModifySpecificItem ::= SEOUENCE {
    dCH-ID
                                    DCH-ID,
    ul-CCTrCH-ID
                                    CCTrCH-ID
                                                     OPTIONAL,
    dl-CCTrCH-ID
                                    CCTrCH-ID
                                                     OPTIONAL,
    ul-TransportformatSet
                                    TransportFormatSet OPTIONAL,
```

```
dl-TransportformatSet
                                    TransportFormatSet OPTIONAL,
    allocationRetentionPriority
                                    AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority
                                    FrameHandlingPriority OPTIONAL,
    iE-Extensions
                                    ProtocolExtensionContainer { {TDD-DCHs-to-ModifySpecificItem-ExtIEs} } OPTIONAL,
    . . .
TDD-DCHs-to-ModifySpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Guaranteed-Rate-Information
                                            CRITICALITY ignore EXTENSION Guaranteed-Rate-Information
                                                                                                            PRESENCE optional },
    . . .
TDD-DL-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-DL-Code-InformationItem
TDD-DL-Code-InformationItem ::= SEQUENCE {
    dPCH-ID
    tDD-ChannelisationCode
                                    TDD-ChannelisationCode,
    iE-Extensions
                                    ProtocolExtensionContainer { {TDD-DL-Code-InformationItem-ExtIEs} } OPTIONAL,
    . . .
TDD-DL-Code-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TDD-DL-Code-LCR-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHsLCR)) OF TDD-DL-Code-LCR-InformationItem
TDD-DL-Code-LCR-InformationItem ::= SEQUENCE {
    dPCH-ID
                                            DPCH-ID,
    tdd-ChannelisationCodeLCR
                                            TDD-ChannelisationCodeLCR,
    tdd-DL-DPCH-TimeSlotFormat-LCR
                                            TDD-DL-DPCH-TimeSlotFormat-LCR,
                                            ProtocolExtensionContainer { { TDD-DL-Code-LCR-InformationItem-ExtIEs} }
    iE-Extensions
                                                                                                                           OPTIONAL,
    . . .
TDD-DL-Code-LCR-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TDD-DL-DPCH-TimeSlotFormat-LCR ::= CHOICE {
    qPSK
                                QPSK-DL-DPCH-TimeSlotFormatTDD-LCR,
    eightPSK
                                EightPSK-DL-DPCH-TimeSlotFormatTDD-LCR,
    . . .
QPSK-DL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0..24,...)
EightPSK-DL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0..24,...)
TDD-DPCHOffset ::= CHOICE {
    initialOffset
                        INTEGER (0..255),
    noinitialOffset
                        INTEGER (0..63)
```

```
TDD-PhysicalChannelOffset
                              ::= INTEGER (0..63)
TDD-TPC-DownlinkStepSize ::= ENUMERATED {
   step-sizel,
   step-size2,
   step-size3,
TDD-TPC-UplinkStepSize-LCR ::= ENUMERATED {
   step-sizel,
   step-size2,
   step-size3,
TDD-UL-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-UL-Code-InformationItem
TDD-UL-Code-InformationItem ::= SEQUENCE {
   dPCH-ID
   tDD-ChannelisationCode
                                  TDD-ChannelisationCode,
   iE-Extensions
                                  ProtocolExtensionContainer { {TDD-UL-Code-InformationItem-ExtIEs} } OPTIONAL,
TDD-UL-Code-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TDD-UL-Code-LCR-Information ::= SEOUENCE (SIZE (1..maxNrOfDPCHsLCR)) OF TDD-UL-Code-LCR-InformationItem
TDD-UL-Code-LCR-InformationItem ::= SEQUENCE {
   dPCH-ID
                                         DPCH-ID,
   tdd-ChannelisationCodeLCR
                                         TDD-ChannelisationCodeLCR,
   tdd-UL-DPCH-TimeSlotFormat-LCR
                                         TDD-UL-DPCH-TimeSlotFormat-LCR,
                                         iE-Extensions
                                                                                                                   OPTIONAL.
TDD-UL-Code-LCR-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TDD-UL-DPCH-TimeSlotFormat-LCR ::= CHOICE {
                              OPSK-UL-DPCH-TimeSlotFormatTDD-LCR,
   eightPSK
                              EightPSK-UL-DPCH-TimeSlotFormatTDD-LCR,
OPSK-UL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0..69,...)
EightPSK-UL-DPCH-TimeSlotFormatTDD-LCR ::= INTEGER(0...24,...)
TFCI-Coding ::= ENUMERATED {
```

```
v4,
    v8,
    v16.
    v32,
    . . .
TFCI-Presence ::= ENUMERATED {
    present,
    not-present
TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split
                    ::= INTEGER (0|15..269)
-- 0 = Undefined, only one transmission gap in the transmission gap pattern sequence
TGPRC
                    ::= INTEGER (0..511)
-- 0 = infinity
TGPSID
                    ::= INTEGER (1.. maxTGPS)
TGSN
                    ::= INTEGER (0..14)
TimeSlot
                        ::= INTEGER (0..14)
TimeSlotLCR ::= INTEGER (0..6)
TimingAdvanceApplied ::= ENUMERATED {
   yes,
    no
TOAWE
                        ::= INTEGER (0..2559)
ToAWS
                        ::= INTEGER (0..1279)
Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID
                        TGPSID,
        tGSN
                        TGSN,
        tGL1
                        GapLength,
        tGL2
                        GapLength
                                    OPTIONAL,
        tGD
                        TGD,
        tGPL1
                        GapDuration,
        tGPL2
                        GapDuration OPTIONAL,
                        UL-DL-mode,
        uL-DL-mode
        downlink-Compressed-Mode-Method
                                            Downlink-Compressed-Mode-Method
                                                                                 OPTIONAL,
            -- This IE shall be present if the value of the UL/DL mode IE is "DL only" or "UL/DL"
        uplink-Compressed-Mode-Method
                                            Uplink-Compressed-Mode-Method
                                                                                 OPTIONAL,
```

```
-- This IE shall be present if the value of the UL/DL mode IE is "UL only" or "UL/DL"
       dL-FrameType
                            DL-FrameType,
        delta-SIR1
                        DeltaSIR,
       delta-SIR-after1
                           DeltaSIR,
       delta-SIR2
                        DeltaSIR
                                    OPTIONAL,
       delta-SIR-after2
                                        OPTIONAL,
                            DeltaSIR
                                ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
       iE-Extensions
Transmission-Gap-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
Transmission-Gap-Pattern-Sequence-ScramblingCode-Information
                                                                ::= ENUMERATED{
  code-change,
   nocode-change
Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
    SEQUENCE {
       tGPSID
                        TGPSID,
       tGPRC
                        TGPRC,
        tGCFN
                            ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs } } OPTIONAL,
       iE-Extensions
        . . .
Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TransmissionTimeIntervalDynamic ::= ENUMERATED {
   msec-10,
   msec-20,
   msec-40,
   msec-80,
    . . .
TransmissionTimeIntervalSemiStatic ::= ENUMERATED {
   msec-10.
   msec-20,
   msec-40,
   msec-80,
    dynamic,
TransmitDiversityIndicator ::= ENUMERATED {
    active,
    inactive
```

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```
Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
-- according to mapping in [23] and [24]
Transmitted-Carrier-Power-Value-IncrDecrThres ::= INTEGER(0..100)
-- according to mapping in [23] and [24]
TUTRANGPS ::= SEQUENCE {
    ms-part
                INTEGER (0..16383),
    ls-part
                INTEGER (0..4294967295)
TUTRANGPSChangeLimit ::= INTEGER (1..256)
-- Unit chip, Step 1/16 chip, Range 1/16..16 chip
TUTRANGPSDriftRate ::= INTEGER (-50..50)
-- Unit chip/s, Step 1/256 chip/s, Range -50/256..+50/256 chip/s
TUTRANGPSDriftRateOuality ::= INTEGER (0..50)
-- Unit chip/s, Step 1/256 chip/s, Range 0..50/256 chip/s
TUTRANGPSAccuracyClass ::= ENUMERATED {
    accuracy-class-A,
    accuracy-class-B,
    accuracy-class-C,
TUTRANGPSMeasurementThresholdInformation ::= SEQUENCE
    tUTRANGPSChangeLimit
                                            TUTRANGPSChangeLimit
                                                                                     OPTIONAL,
    predictedTUTRANGPSDeviationLimit
                                            PredictedTUTRANGPSDeviationLimit
                                                                                     OPTIONAL,
    iE-Extensions
                                    ProtocolExtensionContainer { { TUTRANGPSMeasurementThresholdInformation-ExtIEs} }
                                                                                                                           OPTIONAL,
TUTRANGPSMeasurementThresholdInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
TUTRANGPSMeasurementValueInformation ::= SEQUENCE {
        tUTRANGPS
                                        TUTRANGPS,
        tUTRANGPSQuality
                                        TUTRANGPSQuality
                                                                             OPTIONAL,
        tUTRANGPSDriftRate
                                        TUTRANGPSDriftRate,
        tUTRANGPSDriftRateQuality
                                        TUTRANGPSDriftRateQuality
                                                                             OPTIONAL,
        iEe-Extensions
                                        ProtocolExtensionContainer { { TUTRANGPSMeasurementValueInformationItem-ExtIEs} }
                                                                                                                             OPTIONAL,
        . . .
TUTRANGPSMeasurementValueInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TUTRANGPSQuality ::= INTEGER (0..255)
```

```
-- Unit chip, Step 1/16 chip, Range 0.. 255/16 chip
TransportBearerID
                       ::= INTEGER (0..4095)
TransportBearerRequestIndicator
                                   ::= ENUMERATED
    bearer-requested,
    bearer-not-requested,
TransportBlockSize
                           ::= INTEGER (0..5000)
-- Unit is bits
TransportFormatCombination-Beta ::= CHOICE {
    signalledGainFactors SEOUENCE {
       betaC
                                BetaCD,
        betaD
                                BetaCD,
        refTFCNumber
                                RefTFCNumber
                                                OPTIONAL,
                                ProtocolExtensionContainer { { SignalledGainFactors-ExtIEs} } OPTIONAL,
        iE-Extensions
                            RefTFCNumber,
    refTFCNumber
SignalledGainFactors-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TFCS ::= SEQUENCE {
    tFCSvalues
                        CHOICE {
       no-Split-in-TFCI
                                    TFCS-TFCSList,
        split-in-TFCI
                                    SEQUENCE {
            transportFormatCombination-DCH
                                                TFCS-DCHList,
           signallingMethod
                                                CHOICE {
                tFCI-Range
                                                TFCS-MapingOnDSCHList,
                explicit
                                                    TFCS-DSCHList,
                                                ProtocolExtensionContainer { { Split-in-TFCI-ExtIEs} } OPTIONAL,
           iE-Extensions
                       ProtocolExtensionContainer { { TFCS-ExtIEs} }
                                                                            OPTIONAL,
    iE-Extensions
Split-in-TFCI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TFCS-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
```

```
TFCS-TFCSList ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {
       CTFC
                          TFCS-CTFC.
       tFC-Beta
                      TransportFormatCombination-Beta
                                                         OPTIONAL,
       -- The IE shall be present if the TFCS concerns a UL DPCH [FDD - or PRACH channel in FDD]
                          ProtocolExtensionContainer { { TFCS-TFCSList-ExtIEs} }
TFCS-TFCSList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TFCS-CTFC ::= CHOICE {
                                      INTEGER (0..3),
   ctfc2bit
   ctfc4bit
                                      INTEGER (0..15),
    ctfc6bit
                                      INTEGER (0..63),
    ctfc8bit
                                      INTEGER (0..255),
    ctfc12bit
                                      INTEGER (0..4095),
    ctfc16bit
                                      INTEGER (0..65535),
    ctfcmaxbit
                                      INTEGER (0..maxCTFC)
TFCS-DCHList ::= SEQUENCE (SIZE (1..maxTFCI1Combs)) OF
    SEQUENCE {
       cTFC
                          TFCS-CTFC,
                          ProtocolExtensionContainer { { TFCS-DCHList-ExtIEs} }
       iE-Extensions
                                                                                    OPTIONAL,
TFCS-DCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TFCS-MapingOnDSCHList ::= SEQUENCE (SIZE (1..maxNoTFCIGroups)) OF
    SEQUENCE {
       maxTFCI-field2-Value
                                  TFCS-MaxTFCI-field2-Value,
       cTFC-DSCH
                              TFCS-CTFC,
                                  iE-Extensions
                                                                                                   OPTIONAL,
TFCS-MapingOnDSCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TFCS-MaxTFCI-field2-Value ::= INTEGER (1..maxTFCI2Combs-1)
TFCS-DSCHList ::= SEQUENCE (SIZE (1..maxTFCI2Combs)) OF
    SEQUENCE {
       cTFC-DSCH
                              TFCS-CTFC,
                                  ProtocolExtensionContainer { { TFCS-DSCHList-ExtIEs} }
       iE-Extensions
                                                                                           OPTIONAL,
```

```
TFCS-DSCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TransportFormatSet ::= SEOUENCE {
    dynamicParts
                           TransportFormatSet-DynamicPartList,
    semi-staticPart
                            TransportFormatSet-Semi-staticPart,
                           ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
   iE-Extensions
    . . .
TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
    SEOUENCE {
       nrOfTransportBlocks
                                NrOfTransportBlocks,
       transportBlockSize
                                TransportBlockSize
                                                        OPTIONAL
       -- This IE shall be present if nrOfTransportBlocks is greater than 0 --,
                           TransportFormatSet-ModeDP,
       iE-Extensions
                                ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-ExtIEs} } OPTIONAL,
        . . .
TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TransportFormatSet-ModeDP ::= CHOICE {
                       TDD-TransportFormatSet-ModeDP,
   notApplicable
                       NULL,
TDD-TransportFormatSet-ModeDP ::= SEQUENCE {
    transmissionTimeIntervalInformation
                                            TransmissionTimeIntervalInformation
                                                                                     OPTIONAL,
    -- This IE shall be present if the 'Transmission Time Interval' of the 'Semi-static Transport Format Information' is 'dynamic'. Otherwise it is
absent.
    iE-Extensions
                                            ProtocolExtensionContainer { {TDD-TransportFormatSet-ModeDP-ExtIEs} } OPTIONAL,
TDD-TransportFormatSet-ModeDP-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TransmissionTimeIntervalInformation ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
    SEOUENCE {
       transmissionTimeInterval
                                    TransmissionTimeIntervalDynamic,
                                ProtocolExtensionContainer { {TransmissionTimeIntervalInformation-ExtIEs} } OPTIONAL,
       iE-Extensions
```

```
. . .
TransmissionTimeIntervalInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in 25.215/25.225
Transmitted-Code-Power-Value-IncrDecrThres ::= INTEGER (0..112,...)
TransportFormatManagement ::= ENUMERATED {
    cell-based,
    ue-based,
TransportFormatSet-Semi-staticPart ::= SEQUENCE {
    transmissionTime
                           TransmissionTimeIntervalSemiStatic,
    channelCoding
                            ChannelCodingType,
    codingRate
                        CodingRate
                                                OPTIONAL
    -- This IE shall be present if channelCoding is 'convolutional' or 'turbo' --,
                                RateMatchingAttribute,
    rateMatcingAttribute
                        CRC-Size,
    cRC-Size
    mode
                        TransportFormatSet-ModeSSP,
                            ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs} } OPTIONAL,
    iE-Extensions
TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
TransportFormatSet-ModeSSP ::= CHOICE
                    SecondInterleavingMode,
    notApplicable
                           NULL,
    . . .
TransportLayerAddress
                                ::= BIT STRING (SIZE(1..160, ...))
TrCH-SrcStatisticsDescr
                           ::= ENUMERATED {
    speech,
    rRC,
    unknown,
TSTD-Indicator ::= ENUMERATED {
    active,
    inactive
```

```
TSTD-Support-Indicator ::= ENUMERATED {
    tSTD-supported,
    tSTD-not-supported
TxDiversityIndicator
                       ::= ENUMERATED {
    true,
    false
TypeOfError ::= ENUMERATED {
    not-understood,
   missing,
                        ::= INTEGER (0..16383,...)
-- Corresponds to: 0.0Hz..3276.6Mhz. See 25.101, 25.105
UDRE ::= ENUMERATED {
   lessThan1,
    between1-and-4,
   between4-and-8,
    over8,
    . . .
UL-DL-mode ::= ENUMERATED {
    ul-only,
    dl-only,
    both-ul-and-dl
UL-Timeslot-Information::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF UL-Timeslot-InformationItem
UL-Timeslot-InformationItem ::= SEQUENCE {
    timeSlot
                                    TimeSlot,
    midambleShiftAndBurstType
                                    MidambleShiftAndBurstType,
    tFCI-Presence
                                    TFCI-Presence,
                                    TDD-UL-Code-Information,
    uL-Code-Information
    iE-Extensions
                                    ProtocolExtensionContainer { {UL-Timeslot-InformationItem-ExtIEs} } OPTIONAL,
UL-Timeslot-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-TimeslotLCR-Information ::= SEQUENCE (SIZE (1..maxNrOfULTsLCR)) OF UL-TimeslotLCR-InformationItem
UL-TimeslotLCR-InformationItem ::= SEQUENCE {
    timeSlotLCR
                                            TimeSlotLCR,
```

```
MidambleShiftLCR,
    midambleShiftLCR
    tFCI-Presence
                                            TFCI-Presence.
    uL-Code-LCR-InformationList
                                        TDD-UL-Code-LCR-Information.
    iE-Extensions
                                            ProtocolExtensionContainer { { UL-TimeslotLCR-InformationItem-ExtIEs} }
                                                                                                                      OPTIONAL,
UL-TimeslotLCR-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfULTs)) OF UL-TimeSlot-ISCP-InfoItem
UL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
    timeSlot
                                TimeSlot,
    uL-TimeslotISCP
                                UL-TimeslotISCP,
                                ProtocolExtensionContainer { { UL-TimeSlot-ISCP-InfoItem-ExtIEs} } OPTIONAL,
    iE-Extensions
UL-TimeSlot-ISCP-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-TimeSlot-ISCP-LCR-Info ::= SEQUENCE (SIZE (1..maxNrOfULTsLCR)) OF UL-TimeSlot-ISCP-LCR-InfoItem
UL-TimeSlot-ISCP-LCR-InfoItem ::= SEOUENCE {
    timeSlotLCR
                                    TimeSlotLCR,
    iSCP
                                    UL-Timeslot-ISCP-Value,
                                    ProtocolExtensionContainer { { UL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs} }
    iE-Extensions
                                                                                                             OPTIONAL,
UL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-Timeslot-ISCP-Value ::= UL-TimeslotISCP
UL-Timeslot-ISCP-Value-IncrDecrThres ::= INTEGER(0..126)
-- Unit dB. Step 0.5dB
-- e.g. Value 100 means 50dB
Uplink-Compressed-Mode-Method ::= ENUMERATED {
    sFdiv2.
   higher-layer-scheduling,
                       ::= INTEGER (-82..173)
-- The UL-SIR gives the UL-SIR in number of 0.1 dB steps.
-- E.g. Value 173 means 17.3 dB
-- Unit dB. Step 0.1 dB.
```

```
UC-ID ::= SEQUENCE {
   rNC-ID
                        RNC-ID,
    c-ID
    iE-Extensions
                            ProtocolExtensionContainer { {UC-ID-ExtIEs} } OPTIONAL,
UC-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-DPCCH-SlotFormat
                            ::= INTEGER (0..5,...)
UL-FP-Mode ::= ENUMERATED {
    normal,
    silent,
    . . .
UL-PhysCH-SF-Variation ::= ENUMERATED {
    sf-variation-supported,
    sf-variation-not-supported
UL-ScramblingCode ::= SEQUENCE {
    ul-ScramblingCodeNumber
                                UL-ScramblingCodeNumber,
    ul-ScramblingCodeLength
                                UL-ScramblingCodeLength,
                            ProtocolExtensionContainer { {UL-ScramblingCode-ExtIEs} } OPTIONAL
    iE-Extensions
UL-ScramblingCode-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
UL-ScramblingCodeNumber
                                ::= INTEGER (0..16777215)
UL-TimeslotISCP
                        ::= INTEGER (0..127)
-- According to mapping in [14]
URA-ID
                       ::= INTEGER (0..65535)
URA-Information ::= SEQUENCE {
    uRA-ID
                                        URA-ID,
    multipleURAsIndicator
                                        MultipleURAsIndicator,
    rNCsWithCellsInTheAccessedURA-List RNCsWithCellsInTheAccessedURA-List OPTIONAL,
                                        ProtocolExtensionContainer { (URA-Information-ExtIEs) } OPTIONAL,
    iE-Extensions
    . . .
```

```
URA-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RNCsWithCellsInTheAccessedURA-List ::= SEOUENCE (SIZE (1..maxRNCinURA-1)) OF RNCsWithCellsInTheAccessedURA-Item
RNCsWithCellsInTheAccessedURA-Item ::= SEQUENCE {
   rNC-ID
   iE-Extensions
                                    ProtocolExtensionContainer { {RNCsWithCellsInTheAccessedURA-Item-ExtIEs} } OPTIONAL,
    . . .
RNCsWithCellsInTheAccessedURA-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
USCH-ID
                        ::= INTEGER (0..255)
USCH-Information ::= SEQUENCE (SIZE (1..maxNoOfUSCHs)) OF USCH-InformationItem
USCH-InformationItem ::= SEQUENCE {
    uSCH-ID
                                        USCH-ID,
    ul-CCTrCH-ID
                                        CCTrCH-ID,
    trChSourceStatisticsDescriptor
                                        TrCH-SrcStatisticsDescr.
    transportFormatSet
                                        TransportFormatSet,
    allocationRetentionPriority
                                        AllocationRetentionPriority,
    schedulingPriorityIndicator
                                        SchedulingPriorityIndicator,
    rb-Info
                                        RB-Info,
                                        ProtocolExtensionContainer { {USCH-InformationItem-ExtIEs} } OPTIONAL,
    iE-Extensions
USCH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-Synchronisation-Parameters-LCR ::= SEQUENCE {
                                        UL-Synchronisation-StepSize,
    uL-Synchronisation-StepSize
                                        UL-Synchronisation-Frequency,
    uL-Synchronisation-Frequency
                                        ProtocolExtensionContainer { { UL-Synchronisation-Parameters-LCR-ExtIEs } }
   iE-Extensions
    . . .
UL-Synchronisation-Parameters-LCR-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
UL-Synchronisation-StepSize ::= INTEGER (1..8)
UL-Synchronisation-Frequency ::= INTEGER (1..8)
UL-TimingAdvanceCtrl-LCR ::= SEQUENCE {
    sync-UL-codes-bitmap
                                                BIT STRING (SIZE(8)),
    fPACH-info
                                                FPACH-Information,
```

#### 9.3.5 Common Definitions

```
-- Common definitions
__ ********************
RNSAP-CommonDataTypes {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-CommonDataTypes (3)
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN
  ******************
-- Extension constants
__ ********************
maxPrivateIEs
                                  INTEGER ::= 65535
maxProtocolExtensions
                                  INTEGER ::= 65535
maxProtocolIEs
                                  INTEGER ::= 65535
__ ********************
-- Common Data Types
__ *******************
           ::= ENUMERATED { reject, ignore, notify }
Criticality
           ::= ENUMERATED { optional, conditional, mandatory }
Presence
PrivateIE-ID
           ::= CHOICE {
  local
                 INTEGER (0.. maxPrivateIEs),
  global
                 OBJECT IDENTIFIER
```

#### 9.3.6 Constant Definitions

```
-- Constant definitions
RNSAP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-Constants (4) }
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN
IMPORTS
   ProcedureCode,
   ProtocolIE-ID
FROM RNSAP-CommonDataTypes;
     *****************
-- Elementary Procedures
__ **********************
\verb|id-commonTransportChannelResourcesInitialisation|\\
                                                      ProcedureCode ::= 0
id-commonTransportChannelResourcesRelease
                                                      ProcedureCode ::= 1
id-compressedModeCommand
                                                      ProcedureCode ::= 2
id-downlinkPowerControl
                                                      ProcedureCode ::= 3
id-downlinkPowerTimeslotControl
                                                      ProcedureCode ::= 4
id-downlinkSignallingTransfer
                                                      ProcedureCode ::= 5
```

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```
id-errorIndication
                                                         ProcedureCode ::= 6
id-dedicatedMeasurementFailure
                                                         ProcedureCode ::= 7
                                                         ProcedureCode ::= 8
id-dedicatedMeasurementInitiation
id-dedicatedMeasurementReporting
                                                         ProcedureCode ::= 9
id-dedicatedMeasurementTermination
                                                         ProcedureCode ::= 10
                                                         ProcedureCode ::= 11
id-paging
id-physicalChannelReconfiguration
                                                         ProcedureCode ::= 12
                                                         ProcedureCode ::= 13
id-privateMessage
id-radioLinkAddition
                                                         ProcedureCode ::= 14
id-radioLinkCongestion
                                                         ProcedureCode ::= 34
id-radioLinkDeletion
                                                         ProcedureCode ::= 15
                                                         ProcedureCode ::= 16
id-radioLinkFailure
                                                         ProcedureCode ::= 17
id-radioLinkPreemption
id-radioLinkRestoration
                                                         ProcedureCode ::= 18
id-radioLinkSetup
                                                         ProcedureCode ::= 19
id-relocationCommit
                                                         ProcedureCode ::= 20
id-synchronisedRadioLinkReconfigurationCancellation
                                                         ProcedureCode ::= 21
                                                         ProcedureCode ::= 22
id-synchronisedRadioLinkReconfigurationCommit
id-synchronisedRadioLinkReconfigurationPreparation
                                                         ProcedureCode ::= 23
id-unSynchronisedRadioLinkReconfiguration
                                                         ProcedureCode ::= 24
id-uplinkSignallingTransfer
                                                         ProcedureCode ::= 25
id-commonMeasurementFailure
                                                         ProcedureCode ::= 26
id-commonMeasurementInitiation
                                                         ProcedureCode ::= 27
                                                         ProcedureCode ::= 28
id-commonMeasurementReporting
                                                         ProcedureCode ::= 29
id-commonMeasurementTermination
id-informationExchangeFailure
                                                         ProcedureCode ::= 30
id-informationExchangeInitiation
                                                         ProcedureCode ::= 31
                                                         ProcedureCode ::= 32
id-informationReporting
                                                         ProcedureCode ::= 33
id-informationExchangeTermination
    -- Lists
__ **********************
maxCodeNumComp-1
                                      INTEGER ::= 255
maxRateMatching
                                      INTEGER ::= 256
maxNoCodeGroups
                                      INTEGER ::= 256
maxNoOfDSCHs
                                      INTEGER ::= 10
maxNoOfDSCHsLCR
                                      INTEGER ::= 10
maxNoOfRB
                                      INTEGER ::= 32
maxNoOfUSCHs
                                      INTEGER ::= 10
                                      INTEGER ::= 10
maxNoOfUSCHsLCR
maxNoTFCIGroups
                                      INTEGER ::= 256
maxNrOfTFCs
                                      INTEGER ::= 1024
maxNrOfTFs
                                      INTEGER ::= 32
maxNrOfCCTrCHs
                                      INTEGER ::= 16
maxNrOfCCTrCHsLCR
                                      INTEGER ::= 16
maxNrOfDCHs
                                      INTEGER ::= 128
maxNrOfDL-Codes
                                      INTEGER ::= 8
maxNrOfDPCHs
                                      INTEGER ::= 240
maxNrOfDPCHsLCR
                                      INTEGER ::= 240
                                      INTEGER ::= 256
maxNrOfErrors
```

```
maxNrOfMACcshSDU-Length
                                      INTEGER ::= 16
maxNrOfPoints
                                      INTEGER ::= 15
maxNrOfRLs
                                      INTEGER ::= 16
maxNrOfRLSets
                                      INTEGER ::= maxNrOfRLs
maxNrOfRLs-1
                                      INTEGER ::= 15 -- maxNrOfRLs - 1
                                      INTEGER ::= 14 -- maxNrOfRLs - 2
maxNrOfRLs-2
maxNrOfULTs
                                      INTEGER ::= 15
maxNrOfULTsLCR
                                      INTEGER ::= 6
maxNrOfDLTs
                                      INTEGER ::= 15
maxNrOfDLTsLCR
                                      INTEGER ::= 6
maxRNCinURA-1
                                      INTEGER ::= 15
maxTTI-Count
                                      INTEGER ::= 4
maxCTFC
                                      INTEGER ::= 16777215
maxNrOfNeighbouringRNCs
                                      INTEGER ::= 10
                                      INTEGER ::= 256
maxNrOfFDDNeighboursPerRNC
maxNrOfGSMNeighboursPerRNC
                                      INTEGER ::= 256
maxNrOfTDDNeighboursPerRNC
                                      INTEGER ::= 256
maxNrOfFACHs
                                      INTEGER ::= 8
maxNrOfLCRTDDNeighboursPerRNC
                                      INTEGER ::= 256
maxFACHCountPlus1
                                      INTEGER ::= 10
maxTBSEG
                                      INTEGER ::= 16
maxNrOfSCCPCHs
                                      INTEGER ::= 8
                                      INTEGER ::= 512
maxTFCI1Combs
maxTFCI2Combs
                                      INTEGER ::= 1024
maxTFCI2Combs-1
                                      INTEGER ::= 1023
maxTGPS
                                      INTEGER ::= 6
maxNrOfTS
                                      INTEGER ::= 15
maxNrOfLevels
                                      INTEGER ::= 256
maxNoOfDSCHs-1
                                      INTEGER ::= 9
maxNrOfTsLCR
                                      INTEGER ::= 6
maxNoSat
                                      INTEGER ::= 16
                                      INTEGER ::= 8
maxNoGPSTypes
maxNrOfMeasNCell
                                      INTEGER ::= 96
maxNrOfMeasNCell-1
                                      INTEGER ::= 95 -- maxNrOfMeasNCell - 1
__ *******************
-- IEs
__ ********************
id-AllowedOueuingTime
                                                                         ProtocolIE-ID ::= 4
id-Allowed-Rate-Information
                                                                         ProtocolIE-ID ::= 42
id-BindingID
                                                                         ProtocolIE-ID ::= 5
id-C-ID
                                                                         ProtocolIE-ID ::= 6
id-C-RNTI
                                                                         ProtocolIE-ID ::= 7
id-CFN
                                                                         ProtocolIE-ID ::= 8
id-CN-CS-DomainIdentifier
                                                                         ProtocolIE-ID ::= 9
id-CN-PS-DomainIdentifier
                                                                         ProtocolIE-ID ::= 10
id-Cause
                                                                         ProtocolIE-ID ::= 11
id-CriticalityDiagnostics
                                                                         ProtocolIE-ID ::= 20
id-D-RNTI
                                                                         ProtocolIE-ID ::= 21
id-D-RNTI-ReleaseIndication
                                                                         ProtocolIE-ID ::= 22
id-DCHs-to-Add-FDD
                                                                         ProtocolIE-ID ::= 26
```

id-DCHs-to-Add-TDD	ProtocolIE-ID ::= 27
	ProtocoliE-ID ::= 27 ProtocoliE-ID ::= 30
id-DCH-DeleteList-RL-ReconfPrepFDD	
id-DCH-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 31
id_DCH_DeleteList_RL_ReconfRqstFDD	ProtocolIE-ID ::= 32
id-DCH-DeleteList-RL-ReconfRqstTDD id-DCH-FDD-Information	ProtocolIE-ID ::= 33 ProtocolIE-ID ::= 34
id-DCH-TDD-Information	ProtocolIE-ID ::= 35
id-FDD-DCHs-to-Modify	ProtocolIE-ID ::= 39
id-TDD-DCHs-to-Modify	ProtocolIE-ID ::= 40
id-DCH-InformationResponse	ProtocolIE-ID ::= 43
id-DCH-Rate-InformationItem-RL-CongestInd	ProtocolIE-ID ::= 38
id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD	ProtocolIE-ID ::= 44
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 45
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 46
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 47
id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD	ProtocolIE-ID ::= 48
id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 49
id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD	ProtocolIE-ID ::= 50
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 51
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 52
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 53
id-FDD-DL-CodeInformation	ProtocolIE-ID ::= 54
id-DL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 59
id-DL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 60
id-DL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 61
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD	ProtocolIE-ID ::= 62
id-DL-DPCH-InformationItem-RL-AdditionRspTDD	ProtocolIE-ID ::= 63
id-DL-DPCH-InformationItem-RL-SetupRspTDD	ProtocolIE-ID ::= 64
id-DLReferencePower	ProtocolIE-ID ::= 67
id-DLReferencePowerList-DL-PC-Rqst	ProtocolIE-ID ::= 68
id-DL-ReferencePowerInformation-DL-PC-Rqst	ProtocolIE-ID ::= 69
id-DPC-Mode	ProtocolIE-ID ::= 12
id-DRXCycleLengthCoefficient	ProtocolIE-ID ::= 70
id-DedicatedMeasurementObjectType-DM-Rprt	ProtocolIE-ID ::= 71
id-DedicatedMeasurementObjectType-DM-Rqst	ProtocolIE-ID ::= 72
id-DedicatedMeasurementObjectType-DM-Rsp	ProtocolIE-ID ::= 73
id-DedicatedMeasurementType	ProtocolIE-ID ::= 74
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD	ProtocolIE-ID ::= 82
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD	ProtocolIE-ID ::= 83
id-Guaranteed-Rate-Information	ProtocolIE-ID ::= 41
id-IMSI	ProtocolIE-ID ::= 84
id-L3-Information	ProtocolIE-ID ::= 85
id-AdjustmentPeriod	ProtocolIE-ID ::= 90
id-MaxAdjustmentStep	ProtocolIE-ID ::= 91
id-MeasurementFilterCoefficient	ProtocolIE-ID ::= 92
id-MessageStructure	ProtocolIE-ID ::= 57
id-MeasurementID	ProtocolIE-ID ::= 93
id-Neighbouring-GSM-CellInformation	ProtocolIE-ID ::= 13
id-Neighbouring-UMTS-CellInformationItem	ProtocolIE-ID ::= 95
id-PagingArea-PagingRgst	ProtocoliE-ID ::= 102
id-FACH-FlowControlInformation	ProtocoliE-ID ::= 102 ProtocoliE-ID ::= 103
id-Permanent-NAS-UE-Identity	ProtocoliE-ID ::= 103 ProtocolIE-ID ::= 17
id-PowerAdjustmentType	ProtocoliE-ID ::= 17 ProtocoliE-ID ::= 107
id-PowerAd JustmentType id-RANAP-RelocationInformation	ProtocoliE-ID ::= 107 ProtocoliE-ID ::= 109
IG NAMAF RELOCATION MALTON	FIOCOGOTIE-ID ··= IOA

```
id-RL-Information-PhyChReconfRqstFDD
                                                                             ProtocolIE-ID ::= 110
id-RL-Information-PhyChReconfRgstTDD
                                                                            ProtocolIE-ID ::= 111
id-RL-Information-RL-AdditionRgstFDD
                                                                             ProtocolIE-ID ::= 112
id-RL-Information-RL-AdditionRgstTDD
                                                                            ProtocolIE-ID ::= 113
id-RL-Information-RL-DeletionRgst
                                                                             ProtocolIE-ID ::= 114
id-RL-Information-RL-FailureInd
                                                                             ProtocolIE-ID ::= 115
id-RL-Information-RL-ReconfPrepFDD
                                                                            ProtocolIE-ID ::= 116
id-RL-Information-RL-RestoreInd
                                                                            ProtocolIE-ID ::= 117
id-RL-Information-RL-SetupRgstFDD
                                                                             ProtocolIE-ID ::= 118
id-RL-Information-RL-SetupRgstTDD
                                                                             ProtocolIE-ID ::= 119
id-RL-InformationItem-RL-CongestInd
                                                                             ProtocolIE-ID ::= 55
id-RL-InformationItem-DM-Rprt
                                                                             ProtocolIE-ID ::= 120
id-RL-InformationItem-DM-Rgst
                                                                             ProtocolIE-ID ::= 121
id-RL-InformationItem-DM-Rsp
                                                                             ProtocolIE-ID ::= 122
id-RL-InformationItem-RL-PreemptRequiredInd
                                                                             ProtocolIE-ID ::= 2
id-RL-InformationItem-RL-SetupRgstFDD
                                                                             ProtocolIE-ID ::= 123
id-RL-InformationList-RL-CongestInd
                                                                             ProtocolIE-ID ::= 56
id-RL-InformationList-RL-AdditionRgstFDD
                                                                             ProtocolIE-ID ::= 124
id-RL-InformationList-RL-DeletionRgst
                                                                             ProtocolIE-ID ::= 125
id-RL-InformationList-RL-PreemptRequiredInd
                                                                             ProtocolIE-ID ::= 1
id-RL-InformationList-RL-ReconfPrepFDD
                                                                             ProtocolTE-TD ::= 126
id-RL-InformationResponse-RL-AdditionRspTDD
                                                                            ProtocolIE-ID ::= 127
id-RL-InformationResponse-RL-ReconfReadyTDD
                                                                             ProtocolIE-ID ::= 128
id-RL-InformationResponse-RL-SetupRspTDD
                                                                             ProtocolIE-ID ::= 129
id-RL-InformationResponseItem-RL-AdditionRspFDD
                                                                             ProtocolIE-ID ::= 130
id-RL-InformationResponseItem-RL-ReconfReadyFDD
                                                                             ProtocolIE-ID ::= 131
id-RL-InformationResponseItem-RL-ReconfRspFDD
                                                                             ProtocolIE-ID ::= 132
id-RL-InformationResponseItem-RL-SetupRspFDD
                                                                             ProtocolIE-ID ::= 133
id-RL-InformationResponseList-RL-AdditionRspFDD
                                                                             ProtocolIE-ID ::= 134
id-RL-InformationResponseList-RL-ReconfReadyFDD
                                                                             ProtocolIE-ID ::= 135
id-RL-InformationResponseList-RL-ReconfRspFDD
                                                                             ProtocolIE-ID ::= 136
id-RL-InformationResponse-RL-ReconfRspTDD
                                                                             ProtocolIE-ID ::= 28
id-RL-InformationResponseList-RL-SetupRspFDD
                                                                             ProtocolIE-ID ::= 137
id-RL-ReconfigurationFailure-RL-ReconfFail
                                                                             ProtocolIE-ID ::= 141
id-RL-Set-InformationItem-DM-Rprt
                                                                             ProtocolIE-ID ::= 143
id-RL-Set-InformationItem-DM-Rgst
                                                                             ProtocolIE-ID ::= 144
id-RL-Set-InformationItem-DM-Rsp
                                                                             ProtocolIE-ID ::= 145
id-RL-Set-Information-RL-FailureInd
                                                                             ProtocolIE-ID ::= 146
id-RL-Set-Information-RL-RestoreInd
                                                                             ProtocolIE-ID ::= 147
id-ReportCharacteristics
                                                                             ProtocolIE-ID ::= 152
id-Reporting-Object-RL-FailureInd
                                                                             ProtocolIE-ID ::= 153
id-Reporing-Object-RL-RestoreInd
                                                                             ProtocolIE-ID ::= 154
id-S-RNTI
                                                                             ProtocolIE-ID ::= 155
id-SAT
                                                                             ProtocolIE-ID ::= 156
id-SRNC-ID
                                                                             ProtocolIE-ID ::= 157
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
                                                                             ProtocolIE-ID ::= 159
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
                                                                             ProtocolIE-ID ::= 160
id-TransportBearerID
                                                                             ProtocolIE-ID ::= 163
id-TransportBearerRequestIndicator
                                                                             ProtocolIE-ID ::= 164
id-TransportLayerAddress
                                                                             ProtocolIE-ID ::= 165
id-TypeOfError
                                                                             ProtocolIE-ID ::= 140
id-UC-ID
                                                                             ProtocolIE-ID ::= 166
id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD
                                                                             ProtocolIE-ID ::= 167
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD
                                                                             ProtocolIE-ID ::= 169
```

11	
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 171
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 172
id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD	ProtocolIE-ID ::= 173
id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 174
id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 175
id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD	ProtocolIE-ID ::= 176
id-UL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 177
id-UL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 178
id-UL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 179
id-UL-DPCH-InformationItem-PhyChReconfRqstTDD	ProtocolIE-ID ::= 180
id-UL-DPCH-InformationItem-RL-AdditionRspTDD	ProtocolIE-ID ::= 181
id-UL-DPCH-InformationItem-RL-SetupRspTDD	ProtocolIE-ID ::= 182
id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 183
id-UL-SIRTarget	ProtocolIE-ID ::= 184
id-URA-Information	ProtocolIE-ID ::= 185
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD	ProtocolIE-ID ::= 188
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD	ProtocolIE-ID ::= 189
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD	ProtocolIE-ID ::= 190
id-Active-Pattern-Sequence-Information	ProtocolIE-ID ::= 193
id-AdjustmentRatio	ProtocolIE-ID ::= 194
id-CauseLevel-RL-AdditionFailureFDD	ProtocolIE-ID ::= 197
id-CauseLevel-RL-AdditionFailureTDD	ProtocolIE-ID ::= 198
id-CauseLevel-RL-ReconfFailure	ProtocolIE-ID ::= 199
id-CauseLevel-RL-SetupFailureFDD	ProtocolIE-ID ::= 200
id-CauseLevel-RL-SetupFailureTDD	ProtocolIE-ID ::= 201
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD	ProtocolIE-ID ::= 205
id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD	ProtocoliE-ID ::= 206
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 207
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 207
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 209
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 210
id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD	ProtocoliE-ID ::= 210
id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD	ProtocoliE-ID ::= 212
id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD	ProtocoliE-ID ::= 213 ProtocoliE-ID ::= 214
id-DSCHs-to-Add-TDD	ProtocoliE-ID ::= 214 ProtocoliE-ID ::= 215
id-DSCHs-to-Add-IDD	ProtocoliE-ID ::= 216
	ProtocoliE-ID := 216 ProtocoliE-ID ::= 217
id-DSCH-DeleteList-RL-ReconfPrepTDD	
id-DSCH-Delete-RL-ReconfPrepFDD	ProtocolIE-ID ::= 218
id-DSCH-FDD-Information	ProtocolIE-ID ::= 219
id-DSCH-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 220
id-DSCH-InformationListIEs-RL-SetupRspTDD	ProtocolIE-ID ::= 221
id-DSCH-TDD-Information	ProtocolIE-ID ::= 222
id-DSCH-FDD-InformationResponse	ProtocolIE-ID ::= 223
id-DSCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 226
id-DSCH-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 227
id-DSCH-Modify-RL-ReconfPrepFDD	ProtocolIE-ID ::= 228
id-DSCH-Specific-FDD-Additional-List	ProtocolIE-ID ::= 324
id-DSCHsToBeAddedOrModified-FDD	ProtocolIE-ID ::= 229
id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD	ProtocolIE-ID ::= 230
id-EnhancedDSCHPC	ProtocolIE-ID ::= 29
id-EnhancedDSCHPCIndicator	ProtocolIE-ID ::= 225
id-GA-Cell	ProtocolIE-ID ::= 232
id-GA-CellAdditionalShapes	ProtocolIE-ID ::= 3
id-SSDT-CellIDforEDSCHPC	ProtocolIE-ID ::= 246

```
id-Transmission-Gap-Pattern-Sequence-Information
                                                                            ProtocolIE-ID ::= 255
id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD
                                                                            ProtocolIE-ID ::= 256
id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD
                                                                            ProtocolIE-ID ::= 257
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD
                                                                            ProtocolIE-ID ::= 258
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD
                                                                            ProtocolIE-ID ::= 259
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD
                                                                            ProtocolIE-ID ::= 260
id-UL-CCTrCH-InformationModifyList-RL-ReconfRgstTDD
                                                                            ProtocolIE-ID ::= 261
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRgstTDD
                                                                            ProtocolIE-ID ::= 262
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRgstTDD
                                                                            ProtocolIE-ID ::= 263
id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD
                                                                            ProtocolIE-ID ::= 264
id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD
                                                                            ProtocolIE-ID ::= 265
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD
                                                                            ProtocolIE-ID ::= 266
id-USCHs-to-Add
                                                                            ProtocolIE-ID ::= 267
id-USCH-DeleteList-RL-ReconfPrepTDD
                                                                            ProtocolIE-ID ::= 268
id-USCH-InformationListIE-RL-AdditionRspTDD
                                                                            ProtocolIE-ID ::= 269
id-USCH-InformationListIEs-RL-SetupRspTDD
                                                                            ProtocolIE-ID ::= 270
id-USCH-Information
                                                                            ProtocolIE-ID ::= 271
id-USCH-ModifyList-RL-ReconfPrepTDD
                                                                            ProtocolIE-ID ::= 272
id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD
                                                                            ProtocolIE-ID ::= 273
id-DL-Physical-Channel-Information-RL-SetupRqstTDD
                                                                            ProtocolIE-ID ::= 274
id-UL-Physical-Channel-Information-RL-SetupRqstTDD
                                                                            ProtocolTE-TD ::= 275
id-ClosedLoopModel-SupportIndicator
                                                                            ProtocolIE-ID ::= 276
id-ClosedLoopMode2-SupportIndicator
                                                                            ProtocolIE-ID ::= 277
id-STTD-SupportIndicator
                                                                            ProtocolIE-ID ::= 279
id-CFNReportingIndicator
                                                                            ProtocolIE-ID ::= 14
id-CNOriginatedPage-PagingRgst
                                                                            ProtocolIE-ID ::= 23
id-InnerLoopDLPCStatus
                                                                            ProtocolIE-ID ::= 24
id-PropagationDelay
                                                                            ProtocolIE-ID ::= 25
id-RxTimingDeviationForTA
                                                                            ProtocolIE-ID ::= 36
id-timeSlot-ISCP
                                                                            ProtocolIE-ID ::= 37
id-CCTrCH-InformationItem-RL-FailureInd
                                                                            ProtocolIE-ID ::= 15
id-CCTrCH-InformationItem-RL-RestoreInd
                                                                            ProtocolIE-ID ::= 16
id-CommonMeasurementAccuracy
                                                                            ProtocolIE-ID ::= 280
id-CommonMeasurementObjectType-CM-Rprt
                                                                            ProtocolIE-ID ::= 281
id-CommonMeasurementObjectType-CM-Rgst
                                                                            ProtocolIE-ID ::= 282
id-CommonMeasurementObjectType-CM-Rsp
                                                                            ProtocolIE-ID ::= 283
id-CommonMeasurementType
                                                                            ProtocolIE-ID ::= 284
id-CongestionCause
                                                                            ProtocolIE-ID ::= 18
id-SFN
                                                                            ProtocolIE-ID ::= 285
id-SFNReportingIndicator
                                                                            ProtocolIE-ID ::= 286
id-InformationExchangeID
                                                                            ProtocolIE-ID ::= 287
id-InformationExchangeObjectType-InfEx-Rprt
                                                                            ProtocolIE-ID ::= 288
id-InformationExchangeObjectType-InfEx-Rqst
                                                                            ProtocolIE-ID ::= 289
id-InformationExchangeObjectType-InfEx-Rsp
                                                                            ProtocolIE-ID ::= 290
id-InformationReportCharacteristics
                                                                            ProtocolIE-ID ::= 291
id-InformationType
                                                                            ProtocolIE-ID ::= 292
id-neighbouring-LCR-TDD-CellInformation
                                                                            ProtocolIE-ID ::= 58
id-DL-Timeslot-ISCP-LCR-Information-RL-SetupRqstTDD
                                                                            ProtocolIE-ID ::= 65
id-RL-LCR-InformationResponse-RL-SetupRspTDD
                                                                            ProtocolIE-ID ::= 66
id-UL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD
                                                                            ProtocolIE-ID ::= 75
id-UL-DPCH-LCR-InformationItem-RL-SetupRspTDD
                                                                            ProtocolIE-ID ::= 76
id-DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD
                                                                            ProtocolIE-ID ::= 77
id-DL-DPCH-LCR-InformationItem-RL-SetupRspTDD
                                                                            ProtocolIE-ID ::= 78
id-DSCH-LCR-InformationListIEs-RL-SetupRspTDD
                                                                            ProtocolIE-ID ::= 79
```

id-USCH-LCR-InformationListIEs-RL-SetupRspTDD	ProtocolIE-ID ::= 80	)
id-DL-Timeslot-ISCP-LCR-Information-RL-AdditionRqstTDD	ProtocolIE-ID ::= 81	L
id-RL-LCR-InformationResponse-RL-AdditionRspTDD	ProtocolIE-ID ::= 86	5
id-UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 87	7
id-UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD	ProtocolIE-ID ::= 88	3
id-DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 89	9
id-DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD	ProtocolIE-ID ::= 94	1
id-DSCH-LCR-InformationListIEs-RL-AdditionRspTDD	ProtocolIE-ID ::= 96	5
id-USCH-LCR-InformationListIEs-RL-AdditionRspTDD	ProtocolIE-ID ::= 97	7
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 98	3
id-UL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD	ProtocolIE-ID ::= 10	0 (
id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 10	1
id-DL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD	ProtocolIE-ID ::= 10	) 4
id-UL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD	ProtocolIE-ID ::= 10	)5
id-DL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD	ProtocolIE-ID ::= 10	)6
id-timeSlot-ISCP-LCR-List-DL-PC-Rqst-TDD	ProtocolIE-ID ::= 13	88
id-TSTD-Support-Indicator-RL-SetupRqstTDD	ProtocolIE-ID ::= 13	39
id-RestrictionStateIndicator	ProtocolIE-ID ::= 14	12
id-Load-Value	ProtocolIE-ID ::= 23	33
id-Load-Value-IncrDecrThres	ProtocolIE-ID ::= 23	34
id-OnModification	ProtocolIE-ID ::= 23	35
id-Received-Total-Wideband-Power-Value	ProtocolIE-ID ::= 23	36
id-Received-Total-Wideband-Power-Value-IncrDecrThres	ProtocolIE-ID ::= 23	37
${\tt id} ext{-SFNSFNMeasurementThresholdInformation}$	ProtocolIE-ID ::= 23	88
id-Transmitted-Carrier-Power-Value	ProtocolIE-ID ::= 23	39
id-Transmitted-Carrier-Power-Value-IncrDecrThres	ProtocolIE-ID ::= 24	10
${\tt id} ext{-}{\tt TUTRANGPSMeasurementThresholdInformation}$	ProtocolIE-ID ::= 24	11
id-UL-Timeslot-ISCP-Value	ProtocolIE-ID ::= 24	12
id-UL-Timeslot-ISCP-Value-IncrDecrThres	ProtocolIE-ID ::= 24	13
id-Rx-Timing-Deviation-Value-LCR	ProtocolIE-ID ::= 29	93
id-DPC-Mode-Change-SupportIndicator	ProtocolIE-ID ::= 19	9
id-SplitType	ProtocolIE-ID ::= 24	17
id-LengthOfTFC12	ProtocolIE-ID ::= 29	
id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD	ProtocolIE-ID ::= 20	2
id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD	ProtocolIE-ID ::= 20	3
id-DL-Timeslot-ISCP-LCR-Information-RL-ReconfPrepTDD	ProtocolIE-ID ::= 20	) 4
id-DSCH-RNTI	ProtocolIE-ID ::= 24	19
id-PDSCH-RL-ID	ProtocolIE-ID ::= 32	23
id-TimeSlot-RL-SetupRspTDD	ProtocolIE-ID ::= 32	25
id-UL-Synchronisation-Parameters-LCR	ProtocolIE-ID ::= 46	54
id-TDD-DL-DPCH-TimeSlotFormatModifyItem-LCR-RL-ReconfReadyTDD	ProtocolIE-ID ::= 48	31
id-TDD-UL-DPCH-TimeSlotFormatModifyItem-LCR-RL-ReconfReadyTDD	ProtocolIE-ID ::= 48	32
id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRqstTDD	ProtocolIE-ID ::= 48	33
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD	ProtocolIE-ID ::= 48	34
id-UL-CCTrCH-InformationItem-RL-AdditionRqstTDD	ProtocolIE-ID ::= 48	
id-DL-CCTrCH-InformationList-RL-AdditionRgstTDD	ProtocolIE-ID ::= 48	
id-DL-CCTrCH-InformationItem-RL-AdditionRgstTDD	ProtocolIE-ID ::= 48	37
id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD	ProtocolIE-ID ::= 48	88
id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD	ProtocolIE-ID ::= 48	39
id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD	ProtocolIE-ID ::= 49	
id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD	ProtocolIE-ID ::= 49	
id-UL-TimingAdvanceCtrl-LCR	ProtocolIE-ID ::= 49	
id-ExtendedGSMCellIndividualOffset	ProtocolIE-ID ::= 51	

END

### 9.3.7 Container Definitions

```
-- Container definitions
RNSAP-Containers {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-Containers (5) }
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN
     ***************
-- IE parameter types from other modules.
IMPORTS
   maxPrivateIEs,
   maxProtocolExtensions,
   maxProtocolIEs,
   Criticality,
   Presence,
   PrivateIE-ID,
   ProtocolIE-ID
FROM RNSAP-CommonDataTypes;
  ****************
-- Class Definition for Protocol IEs
__ **********************
RNSAP-PROTOCOL-IES ::= CLASS {
                 ProtocolIE-ID
                                            UNIQUE,
   &criticality
                       Criticality,
   &Value,
   &presence
                    Presence
WITH SYNTAX {
                 &id
   CRITICALITY
                    &criticality
   TYPE
                    &Value
                    &presence
   PRESENCE
```

```
__ ********************
-- Class Definition for Protocol IEs
RNSAP-PROTOCOL-IES-PAIR ::= CLASS {
              ProtocolIE-ID
                                      UNIQUE,
   &firstCriticality
                    Criticality,
   &FirstValue,
   &secondCriticality
                    Criticality,
   &SecondValue,
   &presence
                 Presence
WITH SYNTAX {
   ID
              &id
   FIRST CRITICALITY
                    &firstCriticality
   FIRST TYPE
                 &FirstValue
                    &secondCriticality
   SECOND CRITICALITY
                 &SecondValue
   SECOND TYPE
   PRESENCE
                 &presence
   -- Class Definition for Protocol Extensions
  ********************
RNSAP-PROTOCOL-EXTENSION ::= CLASS {
   &id
              ProtocolIE-ID
                                   UNIQUE,
   &criticality
                    Criticality,
   &Extension,
   &presence
              Presence
WITH SYNTAX {
  ID
              &id
                 &criticality
   CRITICALITY
                 &Extension
   EXTENSION
   PRESENCE
                  &presence
   -- Class Definition for Private IEs
__ **********************************
RNSAP-PRIVATE-IES ::= CLASS {
   &id
              PrivateIE-ID,
   &criticality
                    Criticality,
   &Value,
   &presence
              Presence
```

```
WITH SYNTAX {
   ID
                &id
   CRITICALITY
                 &criticality
                &Value
   PRESENCE
                    &presence
  *****************
  Container for Protocol IEs
  ****************
ProtocolIE-Container {RNSAP-PROTOCOL-IES : IEsSetParam} ::=
   SEQUENCE (SIZE (0..maxProtocolIEs)) OF
   ProtocolIE-Field {{IEsSetParam}}
ProtocolIE-Single-Container {RNSAP-PROTOCOL-IES : IEsSetParam} ::=
   ProtocolIE-Field {{IEsSetParam}}
ProtocolIE-Field {RNSAP-PROTOCOL-IES : IESSetParam} ::= SEQUENCE {
   id RNSAP-PROTOCOL-IES.&id ({IEsSetParam}),
              RNSAP-PROTOCOL-IES.&criticality ({IEsSetParam}{@id}),
   criticality
                                                     ({IEsSetParam}{@id})
   value
                   RNSAP-PROTOCOL-IES.&Value
    ******************
-- 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 {
      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}),
                                                            ({IEsSetParam}{@id})
   secondValue RNSAP-PROTOCOL-IES-PAIR. & SecondValue
    *****************
  Container Lists for Protocol IE Containers
ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES : IEsSetParam} ::=
   SEQUENCE (SIZE (lowerBound..upperBound)) OF
   ProtocolIE-Container {{IEsSetParam}}
```

END

```
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 {
                RNSAP-PROTOCOL-EXTENSION.&id
                                                   ({ExtensionSetParam}),
                                                         ({ExtensionSetParam}{@id}),
   criticality
                   RNSAP-PROTOCOL-EXTENSION.&criticality
                                                         ({ExtensionSetParam}{@id})
   extensionValue
                       RNSAP-PROTOCOL-EXTENSION. & Extension
   -- Container for Private IEs
__ *******************
PrivateIE-Container {RNSAP-PRIVATE-IES : IEsSetParam} ::=
   SEQUENCE (SIZE (1..maxPrivateIEs)) OF
   PrivateIE-Field {{IEsSetParam}}
PrivateIE-Field {RNSAP-PRIVATE-IES : IESSetParam} ::= SEQUENCE {
                RNSAP-PRIVATE-IES.&id
                                            ({IEsSetParam}),
   criticality
                    RNSAP-PRIVATE-IES.&criticality
                                                  ({IEsSetParam}{@id}),
                RNSAP-PRIVATE-IES.&Value
                                           ({IEsSetParam}{@id})
   value
```

## 9.4 Message Transfer Syntax

RNSAP shall use the ASN.1 Basic Packed Encoding Rules (BASIC-PER) Aligned Variant as transfer syntax as specified in ref. [20].

The following encoding rules apply in addition to what has been specified in X.691 [20]:

When a bitstring value is placed in a bit-field as specified in 15.6 to 15.11 in [20], the leading bit of the bitstring value shall be placed in the leading bit of the bit-field, and the trailing bit of the bitstring value shall be placed in the trailing bit of the bit-field.

NOTE - When using the "bstring" notation, the leading bit of the bitstring value is on the left, and the trailing bit of the bitstring value is on the right. The term "leading bit" is to be interpreted as equal to the term "first bit" defined in [18].

#### 9.5 Timers

T Preempt

- Specifies the maximum time that a DRNS may wait for pre-emption of resources for establishment or reconfiguration of Radio Links.

# Handling of Unknown, Unforeseen and Erroneous Protocol Data

#### 10.1 General

Protocol Error cases can be divided into three classes:

- 1. Transfer Syntax Error;
- 2. Abstract Syntax Error;
- 3. Logical Error.

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

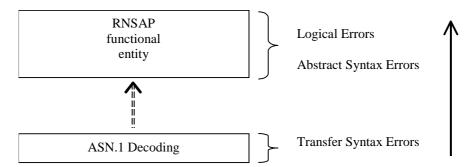


Figure 34: Protocol Errors in RNSAP

The information stated in subclauses 10.2, 10.3 and 10.4, to be included in the message used when reporting an error, is what at minimum shall be included. Other optional information elements within the message may also be included, if available. This is also valid for the case when the reporting is done with a response message. The latter is an exception to what is stated in subclause 4.1.

### 10.2 Transfer Syntax Error

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

Examples for Transfer Syntax Errors are:

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

### 10.3 Abstract Syntax Error

#### 10.3.1 General

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

- 1. Receives IEs or IE groups that cannot be understood (unknown IE id);
- 2 Receives IEs for which the logical range is violated (e.g.: ASN.1 definition: 0 to 15, the logical range is 0 to 10 (values 11 to 15 are undefined), and 12 will be received; this case will be handled as an abstract syntax error using criticality information sent by the originator of the message);
- 3 Does not receive IEs or IE groups but according to the specified presence of the concerned object, the IEs or IE groups should have been present in the received message;
- 4 Receives IEs or IE groups that are defined to be part of that message in wrong order or with too many occurrences of the same IE or IE group;
- 5 receives IEs or IE groups but according to the conditional presence of the concerned object and the specified condition, the IEs or IE groups should not have been present in the received message.

Cases 1 and 2 (not comprehended IE/IE group) are handled based on received Criticality information. Case 3 (missing IE/IE group) is handled based on Criticality information and Presence information for the missing IE/IE group specified in the version of the specification used by the receiver. Case 4 (IEs or IE groups in wrong order or with too many occurrences) and Case 5 (erroneously present conditional IEs or IE groups) result in rejecting the procedure.

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error that belong to cases 1-3 act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5. The handling of cases 4 and 5 is specified in subclause 10.3.6.

### 10.3.2 Criticality Information

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

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

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

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

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

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

Note that this restriction is not applicable to a sending entity for constructing messages.

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

#### 10.3.3 Presence Information

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

The presence field of the indicated classes supports three values:

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

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

If an IE/IE group is included in a received message and the presence of the IE/IE group is conditional and the condition is false according to the version of the specification used by the receiver, an abstract syntax error occurs due to this erroneously present conditional IE/IE group.

## 10.3.4 Not Comprehended IE/IE Group

#### 10.3.4.1 Procedure ID

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

#### Reject IE:

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

#### Ignore IE and Notify Sender:

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

#### **Ignore IE:**

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

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

### 10.3.4.1A Type of Message

When the receiving node cannot decode the *Type of Message* IE, the Error Indication procedure shall be initiated with an appropriate cause value.

### 10.3.4.2 IEs other than the Procedure ID and Type of Message

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

#### **Reject IE:**

- If a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall terminate the procedure and initiate the Error Indication procedure.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Reject IE*, that the receiving node does not comprehend, the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

#### Ignore IE and Notify Sender:

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

#### **Ignore IE:**

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

groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.

When reporting not comprehended IEs/IE groups marked with "Reject IE" or "Ignore IE and Notify Sender" using a response message defined for the procedure, the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. In the Information Element Criticality Diagnostics IE the Repetition Number IE shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the Message Structure IE shall be included.

When reporting not comprehended IEs/IE groups marked with "Reject IE" or "Ignore IE and Notify Sender" using the Error Indication procedure, the Procedure ID IE, the Triggering Message IE, Procedure Criticality IE, the Transaction ID IE, and the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. In the Information Element Criticality Diagnostics IE the Repetition Number IE shall be included and in addition, if the not comprehended IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the Message Structure IE shall be included.

## 10.3.5 Missing IE or IE Group

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

#### Reject IE:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Reject IE*"; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the missing IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a received message *initiating* a procedure that does not have a message to report unsuccessful outcome is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall terminate the procedure and initiate the Error Indication procedure.
- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Reject IE*, the receiving node shall consider the procedure as unsuccessfully terminated and initiate local error handling.

#### **Ignore IE and Notify Sender:**

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE groups were missing. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a received message *initiating* a procedure that does not have a message to report the outcome of the procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.
- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall ignore that those IEs are missing and continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.

#### **Ignore IE:**

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

- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall ignore that those IEs/IE groups are missing and continue with the procedure based on the other IEs/IE groups present in the message.

When reporting missing IEs/IE groups with specified criticality "Reject IE" or "Ignore IE and Notify Sender" using a response message defined for the procedure, the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. In the Information Element Criticality Diagnostics IE the Repetition Number IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the Message Structure IE shall be included.

When reporting missing IEs/IE groups with specified criticality "Reject IE" or "Ignore IE and Notify Sender" using the Error Indication procedure, the Procedure ID IE, the Triggering Message IE, Procedure Criticality IE, the Transaction ID IE, and the Information Element Criticality Diagnostics IE shall be included in the Criticality Diagnostics IE for each reported IE/IE group. In the Information Element Criticality Diagnostics IE the Repetition Number IE shall be included and in addition, if the missing IE/IE group is not at message hierarchy level 1 (top level; see annex C) also the Message Structure IE shall be included.

## 10.3.6 IEs or IE Groups Received In Wrong Order or With Too Many Occurrences or Erroneously Present

If a message with IEs or IE groups in wrong order or with too many occurrences is received or if IEs or IE groups with a conditional presence are present when the condition is not met (i.e. erroneously present), the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node shall terminate the procedure and initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".
- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences or erroneously present, the receiving node consider the procedure as unsuccessfully terminated and initiate local error handling.

When determining the correct order only the IEs specified in the specification version used by the receiver shall be considered.

## 10.4 Logical Error

Logical error situations occur when a message is comprehended correctly, but the information contained within the message is not valid (i.e. semantic error), or describes a procedure which is not compatible with the state of the receiver. In these conditions, the following behaviour shall be performed (unless otherwise specified) as defined by the class of the elementary procedure, irrespective of the criticality 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 message to report this unsuccessful outcome, this 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 message to report this unsuccessful outcome, the procedure shall be terminated and the Error Indication procedure shall be initiated with an appropriate cause value. The *Procedure ID* IE, the *Triggering Message* IE and the *Transaction ID* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

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

#### Class 2:

Where the logical error occurs in a message of a class 2 procedure, the procedure shall be terminated and the Error Indication procedure shall be initiated with an appropriate cause value. The *Procedure ID* IE, the *Triggering Message* IE and the *Transaction ID* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

## 10.5 Exceptions

The error handling for all the cases described hereafter shall take precedence over any other error handling described in the other subclauses of clause 10.

- If any type of error (Transfer Syntax Error, Abstract Syntax Error or Logical Error) is detected in the ERROR INDICATION message, it shall not trigger the Error Indication procedure in the receiving Node but local error handling.
- In case a response message or ERROR INDICATION message needs to be returned, but the information necessary to determine the receiver of that message is missing, the procedure shall be considered as unsuccessfully terminated and local error handling shall be initiated.
- If an error that terminates a procedure occurs, the returned cause value shall reflect the error that caused the termination of the procedure even if one or more abstract syntax errors with criticality 'ignore and notify' have earlier occurred within the same procedure.

# Annex A (normative): Allocation and Pre-emption of Radio Links in the DRNS

## A.1 Deriving Allocation Information for a Radio Link

### A.1.1 Establishment of a New Radio Link

The Allocation Information for a Radio Link in the case of establishment of a new Radio Link shall be derived as follows:

- The latest received Allocation/Retention Priority IE for each transport channel shall be used.

Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in a) the procedure that establishes the first Radio Link for the UE in the DRNS or

- b) a procedure adding or modifying the transport channel.
- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all transport channels that are intended to use the Radio Link is set to "no priority", the pre-emption capability of the Radio Link shall be set to "shall not trigger pre-emption".
- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for one or more of the transport channels that are intended to use the Radio Link is not set to "no priority", the allocation priority and the pre-emption capability of the Radio Link shall be set according to the following:
  - The transport channels that have the *Priority Level* IE in the *Allocation/Retention Priority* IE set to "no priority" shall be excluded when setting the allocation priority and pre-emption capability of a Radio Link.
  - The allocation priority for a Radio Link shall be set to highest priority level, given by the *Priority Level* IE in the *Allocation/Retention Priority* IE, for all non excluded transport channels that are intended to use the Radio Link.
  - If all non-excluded transport channels that are intended to use a Radio Link to be established have the pre-emption capability, given by the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE, set to "shall not trigger pre-emption", the pre-emption capability of the Radio Link shall be set to "shall not trigger pre-emption".

If one or more non-excluded transport channels that are intended to use the Radio Link to be established have the value of the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE set to "may trigger pre-emption", the pre-emption capability of the Radio Link shall be set to "may trigger pre-emption".

The derived allocation priority and pre-emption capability are only valid during this allocation/retention process.

## A.1.2 Modification of an Existing Radio Link

The Allocation Information for a Radio Link in the case of modification of a Radio Link (addition or modification of transport channels using the Radio Link) shall be derived as follows:

The latest received Allocation/Retention Priority IE for each transport channel shall be used.

Note: The Allocation/Retention Priority IE for a transport channel may have been received in

- a) the procedure that establishes the first Radio Link for the UE in the DRNS,
- b) a previous procedure adding or modifying the transport channel, or
- c) the current procedure adding or modifying the transport channel.
- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all transport channels to be added or modified in the Radio Link is set to "no priority", the pre-emption capability of the Radio Link to be modified shall be set to "shall not trigger pre-emption".

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for one or more of the transport channels to be added or modified in the Radio Link is not set to "no priority", the allocation priority of and the pre-emption capability of the Radio Link to be modified shall be set according to the following:
  - The transport channels to be added or modified that have the *Priority Level IE* in the *Allocation/Retention Priority* IE set to "no priority" shall be excluded when setting the allocation priority and pre-emption capability of a Radio Link to be modified.
  - The allocation priority for a Radio Link to be modified shall be set to highest priority level, given by the *Priority Level* IE in the *Allocation/Retention Priority* IE, for all the non-excluded transport channels that are to be added or modified.
  - If all non-excluded transport channels that are to be added or modified in the Radio Link have the preemption capability, given by the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE, set to "shall not trigger pre-emption", the pre-emption capability of the Radio Link to be modified shall be set to "shall not trigger pre-emption".
    - If one or more of the non-excluded transport channels to be added or modified in the Radio Link have the value of the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE set to "may trigger pre-emption", the pre-emption capability of the Radio Link to be modified shall be set to "may trigger pre-emption".

The derived allocation priority and pre-emption capability are only valid during this allocation/retention process.

## A.2 Deriving Retention Information for a Radio Link

The Retention Information for an existing Radio Link shall be derived as follows:

- The latest received Allocation/Retention Priority IE for each transport channel shall be used.

Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in a) the procedure that establishes the first Radio Link for the UE in the DRNS or b) a procedure adding or modifying the transport channel.

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for one or more transport channels using the Radio Link is set to "no priority", the pre-emption vulnerability of the Radio Link shall be set to "not pre-emptable".
- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all the transport channels using the Radio Link is not set to "no priority", the retention priority of the Radio Link and the pre-emption vulnerability of the Radio Link shall be set according to the following:
  - The retention priority for a Radio Link shall be set to highest priority level, given by the *Priority Level* IE in the *Allocation/Retention Priority* IE, for all transport channels that uses the Radio Link.
  - If all transport channels that uses the Radio Link have the pre-emption vulnerability, given by the *Pre-emption Vulnerability* IE in the *Allocation/Retention Priority* IE, set to "pre-emptable", the pre-emption vulnerability of the Radio Link shall be set to "pre-emptable".
     If one or more transport channels that uses the Radio Link have the value of the *Pre-emption Vulnerability* IE in the *Allocation/Retention Priority* IE set to "not pre-emptable", the pre-emption vulnerability of the Radio Link shall be set to "not pre-emptable".

The derived retention priority and pre-emption vulnerability are valid until they are changed, or until the Radio Link is deleted. When new transport channels are added to or deleted from the Radio Link or when existing transport channels are modified with regards to the *Allocation/Retention Priority* IE, the retention information shall be derived again according to above.

## A.3 The Allocation/Retention Process

The DRNS shall establish or modify the resources for a Radio Link according to:

- The value of the Allocation Information (allocation priority and pre-emption capability) of the Radio to be established or modified. The Allocation Information is derived according to clause A.1.
- The value of the Retention Information (retention priority and pre-emption vulnerability) of existing Radio Links. The Retention Information derived according to clause A.2.
- The resource situation in the DRNS.

Whilst the process and the extent of the pre-emption functionality is operator dependent, the pre-emption indicators (pre-emption capability and pre-emption vulnerability) shall be treated as follows:

- -. If the pre-emption capability for a Radio Link to be established or modified is set to "may trigger preemption" and the resource situation so requires, the DRNS may trigger the pre-emption process in clause A.4 to free resources for this allocation request.
- -. If the pre-emption capability for a Radio Link to be established or modified is set to "shall not trigger pre-emption", then this allocation request shall not trigger the pre-emption process in clause A.4.
- -. If the pre-emption vulnerability for an existing Radio Link is set to "pre-emptable", then this Radio Link shall be included in the pre-emption process in clause A.4.
- -. If the pre-emption vulnerability for an existing Radio Link is set to "not pre-emptable", then this Radio Link shall not be included in the pre-emption process in clause A.4.

## A.4 The Pre-emption Process

The pre-emption process shall only pre-empt Radio Links with lower retention priority than the allocation priority of the Radio Link to be established or modified. The Radio Links to be pre-empted shall be selected in ascending order of the retention priority.

When the pre-emption process detects that one or more Radio Links have to be pre-empted to free resources for a Radio Link(s) to be established or modified, the DRNS shall initiate the Radio Link Pre-emption procedure for all the UE Contexts having Radio Links selected for pre-emption and start the T<sub>Preempt</sub> timer.

When enough resources are freed to establish or modify the Radio Link(s) according to the request, the DRNS shall stop the  $T_{Preempt}$  timer and complete the procedure that triggered the pre-emption process in accordance with the "Successful Operation" subclause of the procedure.

If the  $T_{Preempt}$  timer expires, the DRNS shall reject the procedure that triggered the pre-emption process and complete the procedure in accordance with the "Unsuccessful Operation" subclause of the procedure.

# Annex B (informative): Measurement Reporting

When the *Report Characteristics* IE is set to "Event A" (figure B.1), the Measurement Reporting procedure is initiated when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the value zero shall be used for the hysteresis time.

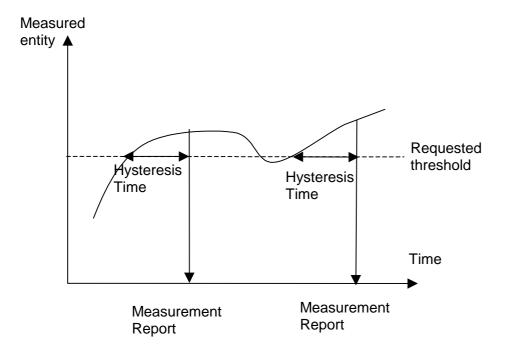


Figure B.1: Event A reporting with Hysteresis Time specified

When the *Report Characteristics* IE is set to "Event B" (figure B.2), the Measurement Reporting procedure is initiated when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the value zero shall be used for the hysteresis time.

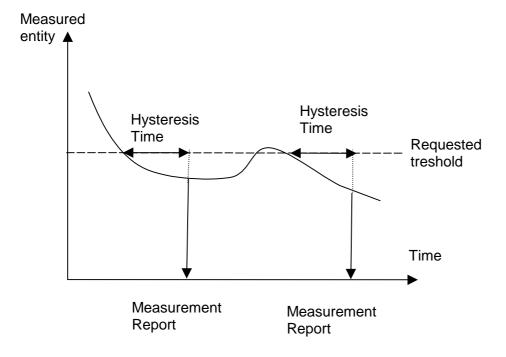


Figure B.2: Event B reporting with Hysteresis Time specified

When the *Report Characteristics* IE is set to "Event C" (figure B.3), the Measurement Reporting procedure is initiated always when the measured entity rises by an amount greater than the requested threshold within the requested time. The reporting in figure B.3 is initiated if the Rising Time T1 is less than the requested time.

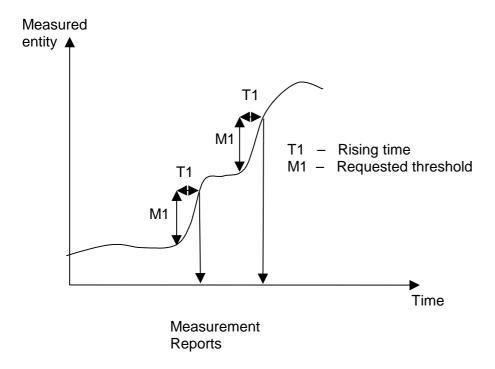
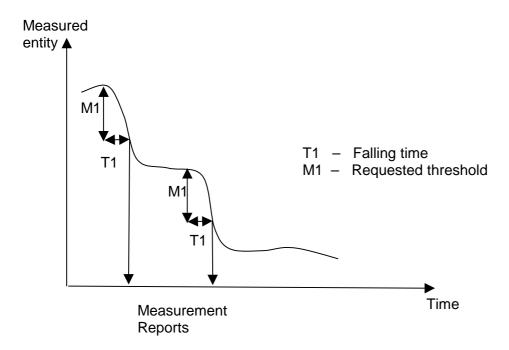


Figure B.3: Event C reporting

When the *Report Characteristics* IE is set to "Event D" (figure B.4), the Measurement Reporting procedure is initiated always when the measured entity falls by an amount greater than the requested threshold within the requested time. The reporting in figure B.4 is initiated if the Falling Time T1 is less than the requested time.



#### Figure B.4: Event D reporting

When the *Report Characteristics* IE is set to "Event E" (figure B.5), the Measurement Reporting procedure (Report A) is initiated always when the measured entity rises above the "Measurement Threshold 1" and stays there for the "Measurement Hysteresis Time" (T1 in figure B.5). If *Report Periodicity* IE is provided DRNS shall also initiate Measurement Reporting procedure periodically. The periodic reporting continues although the measured entity falls below the "Measurement Threshold 1" and is terminated by the Report B.

When the Report A conditions have been met and the measured entity falls below the "Measurement Threshold 2" and stays there for the "Measurement Hysteresis Time" (T1) the Measurement Reporting procedure (Report B) is initiated and the periodic reporting is terminated.

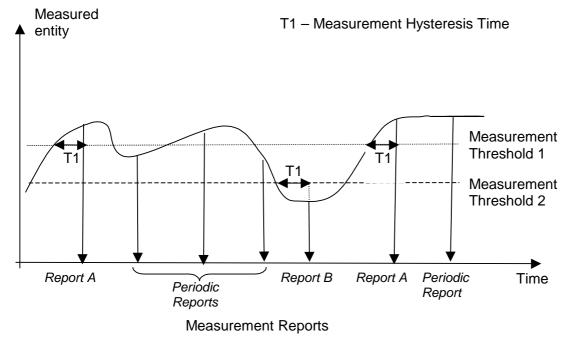


Figure B.5: Event E reporting with Hysteresis Time specified and Periodic Reporting requested

When the *Report Characteristics* IE is set to "Event F" (figure B.6), the Measurement Reporting procedure (Report A) is initiated always when the measured entity falls below the "Measurement Threshold 1" and stays there for the "Measurement Hysteresis Time" (T1 in figure B.6). If *Report Periodicity* IE is provided DRNS shall also initiate Measurement Reporting procedure periodically. The periodic reporting continues although the measured entity rises above the "Measurement Threshold 1" and is terminated by the Report B.

When the Report A conditions have been met and the measured entity rises above the "Measurement Threshold 2" and stays there for the "Measurement Hysteresis Time" (T1) Measurement Reporting procedure (Report B) is initiated and the periodic reporting is terminated.

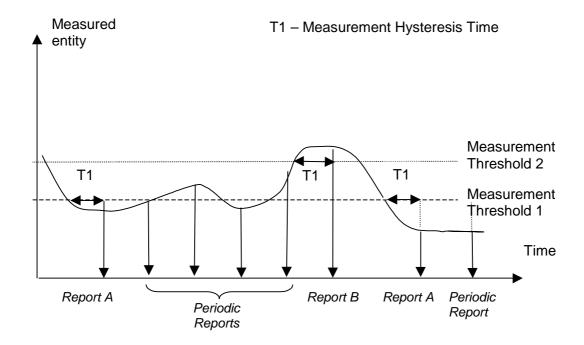


Figure B.6: Event F reporting with Hysteresis Time specified and Periodic Reporting requested

Measurement Reports

## Annex C (informative): Guidelines for Usage of the Criticality Diagnostics IE

## C.1 EXAMPLE MESSAGE Layout

Assume the following message format:

IE/Group Name	Presence	Range	IE Type and Referenc e	Semantics Description	Criticality	Assigned Criticality
Message Type	М				YES	reject
Transaction ID	М				_	,
Α	M				YES	reject
В	М				YES	reject
>E		1 <maxe></maxe>			EACH	ignore
>>F		1 <maxf></maxf>			-	
>>>G		03,			EACH	ignore
>>H		1 <maxh></maxh>			EACH	ignore
>>>G		03,			EACH	ignore and notify
>>G	M				YES	reject
>>J		1 <maxj></maxj>			-	
>>>G		03,			EACH	reject
С	М				YES	reject
>K		1 <maxk></maxk>			EACH	ignore and notify
>>L		1 <maxl></maxl>			-	
>>>M	0				-	
D	M				YES	reject

Note 1. The IEs F, J, and L do not have assigned criticality. The IEs F, J, and L are consequently realised as the ASN.1 type SEQUENCE OF of "ordinary" ASN.1 type, e.g. INTEGER. On the other hand, the repeatable IEs with assigned criticality are realised as the ASN.1 type SEQUENCE OF of an IE object, e.g. Protocol IE-Single-Container.

For the corresponding ASN.1 layout, see subclause C.4.

## C.2 Example on a Received EXAMPLE MESSAGE

Assume further more that a received message based on the above tabular format is according to the figure below.

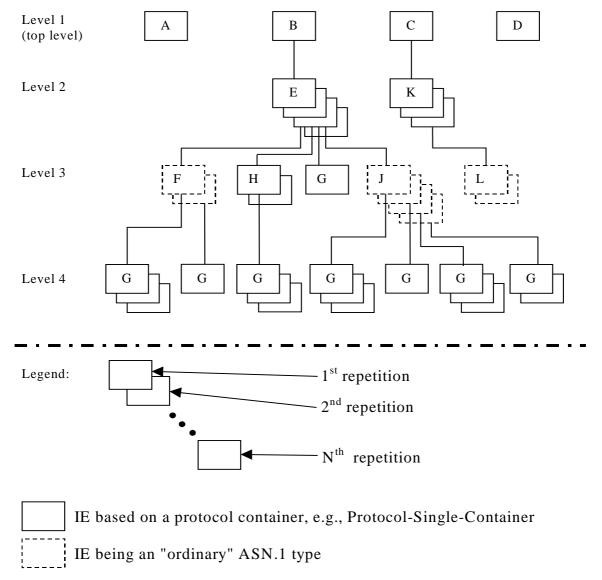
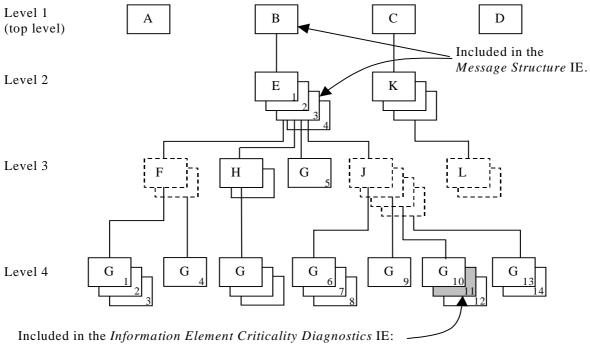


Figure C.1: Example of content of a received RNSAP message based on the EXAMPLE MESSAGE

## C.3 Content of Criticality Diagnostics

## C.3.1 Example 1



- a) IE ID IE
- b) Repetition Number IE

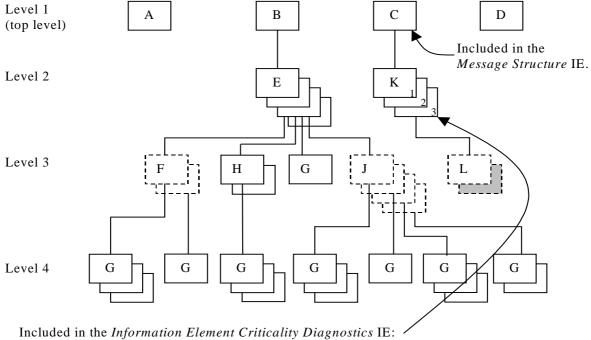
Figure C.2: Example of a received RNSAP message containing a not comprehended IE

If there is an error within the instance marked as grey in the IE G in the IE J shown in the figure C.2 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment					
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 4.					
IE ID	id-G	IE ID from the reported level, i.e. level 4.					
Repetition	11	Repetition number on the reported level, i.e. level 4.					
Number		(Since the IE E (level 2) is the lowest level included in the Message Structure IE this is					
		the eleventh occurrence of IE G within the IE E (level 2).					
Type of Error	not						
	underst						
	ood						
Message Structur	e, first repe	etition					
>IE ID	id-B	IE ID from level 1.					
Message Structur	e, second	repetition					
>IE ID	id-E	IE ID from the lowest level above the reported level, i.e. level 2.					
>Repetition	3	Repetition number from the lowest level above the reported level, i.e. level 2.					
Number							

- Note 2. The IE J on level 3 cannot be included in the *Message Structure* IE since they have no criticality of their own.
- Note 3. The repetition number of the reported IE indicates the number of repetitions of IE G received up to the detected erroneous repetition, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).

## C.3.2 Example 2



- a) IE ID IE
- b) Repetition Number IE

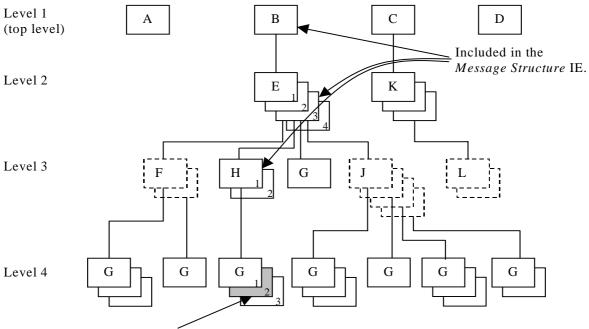
Figure C.3: Example of a received RNSAP message containing a not comprehended IE

If there is an error within the second instance (marked as grey) in the sequence (IE L in the tabular format) on level 3 below IE K in the structure shown in the figure C.3 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment			
IE Criticality	ignore	Criticality for IE on the reported level, i.e. level 2.			
	and				
	notify				
IE ID	id-K	IE ID from the reported level, i.e. level 2.			
Repetition	3	Repetition number on the reported level, i.e. level 2.			
Number					
Type of Error	not				
	underst				
	ood				
Message Structure, first repetition					
>IE ID	id-C	IE ID from the lowest level above the reported level, i.e. level 1.			

Note 4. The IE L on level 3 cannot be reported individually included in the *Message Structure* IE since it has no criticality of its own.

## C.3.3 Example 3



Included in the Information Element Criticality Diagnostics IE:

- a) IE ID IE
- b) Repetition Number IE

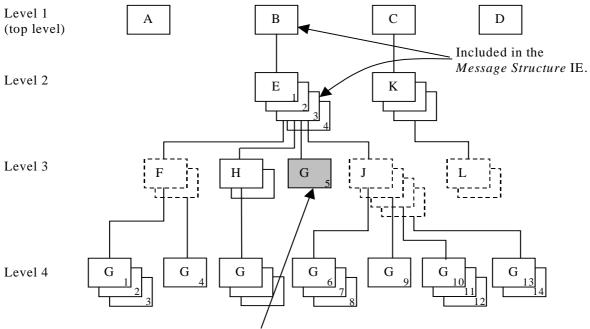
Figure C.4: Example of a received RNSAP message containing a not comprehended IE

If there is an error within the instance marked as grey in the IE G in the IE H shown in the figure C.4 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment
IE Criticality	ignore	Criticality for IE on the reported level, i.e. level 4.
	and	
	notify	
IE ID	id-G	IE ID from the reported level, i.e. level 4.
Repetition	2	Repetition number on the reported level, i.e. level 4.
Number		
Type of Error	not	
	underst	
	ood	
Message Structur	e, first repe	etition
>IE ID	id-B	IE ID from level 1.
Message Structur	e, second	repetition
>IE ID	id-E	IE ID from level 2.
>Repetition	3	Repetition number from level 2.
Number		
Message Structur	e, third rep	petition
>IE ID	id-H	IE ID from the lowest level above the reported level, i.e. level 3.
>Repetition	1	Repetition number from the lowest level above the reported level, i.e. level 3.
Number		

Note 5. The repetition number of level 4 indicates the number of repetitions of IE G received up to the detected erroneous repetition, counted below the same instance of the previous level with assigned criticality (instance 1 of IE H on level 3).

## C.3.4 Example 4



Included in the Information Element Criticality Diagnostics IE:

- a) IE ID IE
- b) Repetition Number IE

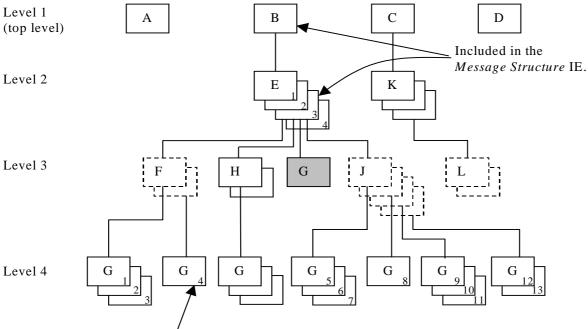
Figure C.5: Example of a received RNSAP message containing a not comprehended IE

If there is an error within the instance marked as grey in the IE G in the IE E shown in the figure C.5 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment					
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 3.					
IE ID	id-G	IE ID from the reported level, i.e. level 3.					
Repetition	5	Repetition number on the reported level, i.e. level 3.					
Number		(Since the IE E (level 2) is the lowest level included in the Message Structure IE this is					
		the fifth occurrence of IE G within the IE E (level 2).					
Type of Error	not						
	underst						
	ood						
Message Structur	e, first rep	etition					
>IE ID	id-B	IE ID from level 1.					
Message Structur	e, second	repetition					
>IE ID	id-E	IE ID from the lowest level above the reported level, i.e. level 2.					
>Repetition	3	Repetition number from the lowest level above the reported level, i.e. level 2.					
Number							

Note 6. The repetition number of the reported IE indicates the number of repetitions of IE G received up to the detected erroneous repetition, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).

#### C.3.5 Example 5



Included in the Information Element Criticality Diagnostics IE:

- a) IE ID IE
- b) Repetition Number IE

Figure C.6: Example of a received RNSAP message with a missing IE

If the instance marked as grey in the IE G in the IE E shown in the figure C.6 above, is missing this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 3.
IE ID	id-G	IE ID from the reported level, i.e. level 3.
Repetition Number	4	Repetition number up to the missing IE on the reported level, i.e. level 3.  (Since the IE E (level 2) is the lowest level included in the <i>Message Structure</i> IE there have been four occurrences of IE G within the IE E (level 2) up to the missing occurrence.
Type of Error	missing	
Message Structur	e, first repe	etition
>IE ID	id-B	IE ID from level 1.
Message Structur	e, second r	repetition
>IE ID	id-E	IE ID from the lowest level above the reported level, i.e. level 2.
>Repetition Number	3	Repetition number from the lowest level above the reported level, i.e. level 2.

Note 7. The repetition number of the reported IE indicates the number of repetitions of IE G received up to but not including the missing occurrence, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).

C.4ASN.1 of EXAMPLE MESSAGE

```
ExampleMessage ::= SEQUENCE {
  ProtocolIEs
                    ProtocolIE-Container
                                            {{ExampleMessage-IEs}},
  ProtocolExtensions ProtocolExtensionContainer{{ExampleMessage-Extensions}} OPTIONAL,
}
ExampleMessage-IEs RNSAP-PROTOCOL-IES ::= {
   { ID id-A CRITICALITY reject TYPE A PRESENCE mandatory} |
   { ID id-B CRITICALITY reject TYPE B PRESENCE mandatory} |
  { ID id-C CRITICALITY reject TYPE C PRESENCE mandatory} |
  { ID id-D CRITICALITY reject TYPE D PRESENCE mandatory},
}
B ::= SEQUENCE {
  e
              E-List.
  iE-Extensions Protocol Extension Container { {B-ExtIEs} } OPTIONAL,
}
B-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
E-List ::= SEQUENCE (SIZE (1..maxE)) OF ProtocolIE-Single-Container { {E-IEs} }
E-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-E CRITICALITY ignore TYPE E PRESENCE mandatory }
}
E ::= SEQUENCE {
  f
              F-List,
  h
              H-List.
              G-List1,
  g
```

```
j
              J-List,
  iE-Extensions Protocol Extension Container { {E-ExtIEs} } OPTIONAL,
}
E-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
F-List ::= SEQUENCE (SIZE (1..maxF)) OF F
F ::= SEQUENCE {
  g
              G-List2 OPTIONAL,
  iE-Extensions Protocol Extension Container { {F-ExtIEs} } OPTIONAL,
}
F-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
G-List2 ::= SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { {G2-IEs} }
G2-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-G CRITICALITY ignore TYPE G PRESENCE mandatory }
}
H-List ::= SEQUENCE (SIZE (1..maxH)) OF ProtocolIE-Single-Container { {H-IEs} }
H-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-H CRITICALITY ignore TYPE H PRESENCE mandatory }
}
H ::= SEQUENCE {
             G-List3 OPTIONAL,
```

```
ProtocolExtensionContainer { {H-ExtIEs} } OPTIONAL,
  iE-Extensions
}
H-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
G-List3 ::= SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { {G3-IEs} }
G3-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-G CRITICALITY notify TYPE G PRESENCE mandatory }
}
G-List1 ::= ProtocolIE-Single-Container { {G1-IEs} }
G1-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-G CRITICALITY reject TYPE G PRESENCE mandatory }
}
J-List ::= SEQUENCE (SIZE (1..maxJ)) OF J
J ::= SEQUENCE \{
               G-List4 OPTIONAL,
  iE-Extensions Protocol Extension Container { { J-ExtIEs} } OPTIONAL,
}
J-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
G-List4 ::= SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { G4-IEs} }
G4-IEs RNSAP-PROTOCOL-IES ::= {
```

```
{ ID id-G CRITICALITY reject TYPE G PRESENCE mandatory }
}
C ::= SEQUENCE {
   k
               K-List,
   iE-Extensions Protocol Extension Container { {C-ExtIEs} } OPTIONAL,
}
C-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
K-List ::= SEQUENCE (SIZE (1..maxK)) OF ProtocolIE-Single-Container { {K-IEs} }
K-IEs RNSAP-PROTOCOL-IES ::= {
   { ID id-K CRITICALITY notify TYPE K PRESENCE mandatory }
}
K ::= SEQUENCE {
              L-List,
   iE-Extensions Protocol Extension Container { {K-ExtIEs} } OPTIONAL,
}
K-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
L-List ::= SEQUENCE (SIZE (1..maxL)) OF L
L := SEQUENCE \{
               M OPTIONAL,
   iE-Extensions Protocol Extension Container { {L-ExtIEs} } OPTIONAL,
```

```
}
L-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

ExampleMessage-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

# Annex D (normative): DRNS Behaviour at SRNC or RNSAP Signalling Bearer Failure

This annex describes the DRNC actions in the event of SRNC or RNSAP Signalling Bearer failure when all or some of the UE Contexts related to the SRNC need to be removed in DRNC.

# D.1 Detection of SRNC or RNSAP Signalling Bearer/Connection Failure

Termination of all or some of the UE Contexts in DRNC which are related to an SRNC may be triggered due to failure of SRNC, RNSAP Signalling Bearer or the Iur signalling connection of an UE(s).

## D.1.1 Termination of All UE Contexts Related to a Specific SRNC

Termination of all UE Contexts in DRNC which are related to a specific SRNC is triggered if the RNSAP Signalling Bearer failure is detected by the RNSAP according to the procedure described in the sub-clause 4.5.1.5.1 of TS 25.420. By "all" UE Contexts, it means all UEs having dedicated and/or common channel resources.

## D.1.2 Termination of Specific UE Context

Termination of a specific UE Context in DRNC is triggered for an UE which has dedicated transport channel resources according to the procedure described in the sub-clause 4.5.1.5.2 of TS 25.420.

## D.2 DRNC Actions at UE Context Termination

When termination of the UE Context is required, the DRNC shall remove any common and/or dedicated radio resources related to the UE Context. The DRNC shall also initiate release of the dedicated or common user plane resources that were involved in these UE Contexts. In addition, if it is possible the DRNC shall release the RRC connection.

## Annex E (informative): Change History

				Change	history
TSG RAN#	Version	CR	Tdoc RAN	New Version	Subject/Comment
RAN_06	-	-	RP-99755	3.0.0	Approved at TSG RAN #6 and placed under Change Control
RAN_07	3.0.0	-	RP-000100	3.1.0	Approved at TSG RAN #7
RAN_07	3.0.0	-	RP-000143	3.1.0	Approved at TSG RAN #7
RAN_07	3.0.0	-	RP-000146	3.1.0	Approved at TSG RAN #7
RAN_08	3.1.0	-	RP-000241	3.2.0	Approved at TSG RAN #8
RAN_08 RAN_08	3.1.0 3.1.0	-	RP-000242 RP-000243	3.2.0 3.2.0	Approved at TSG RAN #8 Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000243	3.2.0	Approved at TSG RAN #8
RAN_09	3.2.0	145-	RP-000244	3.3.0	Approved at 13G KAN #6  Approved at TSG RAN #9
IVAIN_09	3.2.0	149, 151- 154, 156- 164, 166 167	1000379	3.3.0	Approved at 150 NAIN #5
RAN_09	3.2.0	168 169 171 173 174 176 178- 180 183- 193	RP-000380	3.3.0	Approved at TSG RAN #9
RAN_09	3.2.0	194- 200-	RP-000381	3.3.0	Approved at TSG RAN #9
RAN_10	3.3.0	202- 219, 221- 228, 230, 232- 239, 241, 243- 257, 259, 260, 263- 265, 268- 272, 274- 278, 280, 281	RP-000618 RP-000619 RP-000621 RP-000696	3.4.0	Approved at TSC DAN #11
RAN_11	3.4.0	282- 286, 288- 293, 295- 302, 304- 308, 311, 313- 319, 329, 332, 334- 335	RP-010117 RP-010118	3.5.0	Approved at TSG RAN #11

					Change history		
Date		TSG Doc.	CR	Rev	Subject/Comment	Old	New
March 01	11	RP-010167	310		Approved at TSG RAN #11 and placed under Change Control	-	4.0.0
March 01	11	RP-010164	309		Assessed at TOO DAN WAA and also advantage Object on Octob		4.0.0
March 01	11	RP-010159	327, 328,		Approved at TSG RAN #11 and placed under Change Control	-	4.0.0
			336,				
			337				
March 01	11	RP-010160	320,		Approved at TSG RAN #11 and placed under Change Control	-	4.0.0
			323,				
			339				
06/2001	12	RP-010378	341,		Approved at TSG RAN#12	4.0.0	4.1.0
			343,				
			345, 347,				
			349,				
			351,				
			353,				
			355,				
			357,				
00/0004	4.0	DD 040070	359		A TOO BANKES	400	4.4.0
06/2001	12	RP-010379	361,		Approved at TSG RAN#12	4.0.0	4.1.0
			363, 365,				
			367,				
			369,				
			378,				
			380,				
			382,				
			388, 390				
06/2001	12	RP-010380	399,		Approved at TSG RAN#12	4.0.0	4.1.0
00/2001	' _	100000	403,			7.0.0	4.1.0
			405,				
			407,				
			409,				
			411,				
06/2001	12	RP-010394	414		Approved at TCC DANI#40	4.0.0	4.1.0
00/2001	12	KF-010394	372, 373,		Approved at TSG RAN#12	4.0.0	4.1.0
			374,				
			375,				
			376,				
			379,				
			380,				
			391,				
			393, 412				
09/2001	13	RP-010583		2	Ambiguity in CM handling	4.1.0	4.2.0
09/2001	13	RP-010583	416	1	Corrections to the DSCH Code Mapping IE	4.1.0	4.2.0
09/2001	13	RP-010583	418		Transport bearer replacement clarification	4.1.0	4.2.0
09/2001	13				Correction to the Error handling of the ERROR INDICATION	4.1.0	4.2.0
00/0004	10	RP-010583	425	1	message	4.4.0	100
09/2001	13	RP-010583	432	2	Cell Reserved for operator use Clarification of Abnormal Conditions/Unsuccessful Operation	4.1.0	4.2.0
09/2001 09/2001	13 13	RP-010583 RP-010583	437 440	1	TFCS Correction for TDD	4.1.0 4.1.0	4.2.0
09/2001	13	RP-010583	442	<del>                                     </del>	Correction of a wrong implementation of CR 414	4.1.0	4.2.0
09/2001	13	RP-010583	444	1	Error handling of the Erroneously Present Conditional IEs	4.1.0	4.2.0
09/2001	13	RP-010583	446	1	Correction to Downlink Signaling Transfer	4.1.0	4.2.0
09/2001	13	RP-010584	450	t T	Bitstrings ordering	4.1.0	4.2.0
09/2001	13	RP-010584	460	1	Mapping of TFCS to TFCI	4.1.0	4.2.0
09/2001	13	RP-010584	463		TDD Channelisation code range definition	4.1.0	4.2.0
09/2001	13	RP-010584	475	2	Clarification of coordinated DCHs	4.1.0	4.2.0
09/2001	13	RP-010584	466	1	Clarification on the Time Slot LCR	4.1.0	4.2.0
09/2001	13	RP-010584	468	1	Rnsap criticality	4.1.0	4.2.0
09/2001	13	RP-010584	470	1	Clarification of chapter 10	4.1.0	4.2.0
09/2001	13	RP-010584	472	1	Clarification of use of Diversity Control Indicator	4.1.0	4.2.0
09/2001	13	DD 040500	445		Clarification on the reference of the 'Neighbouring TDD Cell	4.1.0	4.2.0
09/2001	13	RP-010596	415		Information LCR' Allowed Combinations of Dedicated Measurement Type and the	4.1.0	4.2.0
U3/2001	13	RP-010596	420	2	Reporting Characteristics Type	4.1.0	4.2.0
09/2001	13	RP-010596	423	_	Support of 8PSK modulation for LCR TDD	4.1.0	4.2.0
09/2001		5 . 5 . 5 . 5					
09/2001	13	RP-010596	430		Allowed combination of the measurement and event types	4.1.0	4.2.0

09/2001	13	RP-010596	438	1	Clarification of Abnormal Conditions/Unsuccessful Operation	4.1.0	4.2.0
09/2001	13	RP-010596	455	1	Correct ion to position reporting	4.1.0	4.2.0
09/2001	13				CR to 25.423 v4.1.0: RX timing deviation as dedicated	4.1.0	4.2.0
		RP-010596	461	1	measurement for 1.28Mcps TDD		
12/2001	14	RP-010896	478	2	CR on Priority range	4.2.0	4.3.0
12/2001	14	RP-010855	480		Bitstrings ordering	4.2.0	4.3.0
12/2001	14	RP-010855	482		Added UTRAN modes in the Semantics Description in IEs in RNSAP messages	4.2.0	4.3.0
12/2001	14	RP-010855	484		Alignment to RAN4 spec for Transmitted Code Power Measurement	4.2.0	4.3.0
12/2001	14	RP-010855	491		Transmit Diversity for TDD	4.2.0	4.3.0
12/2001	14	RP-010855	497		Clarification for the definition of the ASN.1 constants	4.2.0	4.3.0
12/2001	14	RP-010855	504	1	Terminology Corrections	4.2.0	4.3.0
12/2001	14	RP-010855	509	-	Procedure Code Criticality in Error Indication	4.2.0	4.3.0
12/2001	14				Clarification for the Power Adjustment Type IE in the DL POWER	4.2.0	4.3.0
40/0004	4.4	RP-010855	512	4	CONTROL REQUEST message	400	4 2 0
12/2001	14	RP-010855	514	1	Forward Compatibility for DL Power Balancing	4.2.0	4.3.0
12/2001	14	RP-010856	516		Reconfiguration clarification	4.2.0	4.3.0
12/2001	14	RP-010856		2	DRNC behaviour at SRNC or RNSAP Signalling Bearer failure	4.2.0	4.3.0
12/2001	14	RP-010856	520	2	Addition of amendment to clarify the PER encoding of bitstrings	4.2.0	4.3.0
12/2001	14	RP-010856	525		Clarification on Primary CPICH Ec/No IE	4.2.0	4.3.0
12/2001	14	RP-010856	527	2	Transport Bearer replacement clarification for the DSCH case	4.2.0	4.3.0
12/2001	14	RP-010856	529		Clarification of the Transaction ID	4.2.0	4.3.0
12/2001	14	RP-010856	532		Clarification of S Field Length usage	4.2.0	4.3.0
12/2001	14	RP-010856	534		Correction the Clause 10 Error Handling	4.2.0	4.3.0
12/2001	14	RP-010856	540		Correction to Primary CPICH handling in RL Setup procedure	4.2.0	4.3.0
12/2001	14	RP-010873	486	1	Correction of drift rate resolution	4.2.0	4.3.0
12/2001	14	RP-010873	487		Cell Parameter ID IE definition for 1.28Mcps TDD	4.2.0	4.3.0
12/2001	14	RP-010873	488		Introduction of Band Indicator in GSM Neighbouring Cell Information	4.2.0	4.3.0
12/2001	14	RP-010873	489		UL SIR Target in RL Setup Request TDD	4.2.0	4.3.0
12/2001	14	RP-010873	502	2	Handling of the DPC Mode IE	4.2.0	4.3.0
12/2001	14	RP-010873	505	1	Rel-4 specific terminology corrections	4.2.0	4.3.0
12/2001	14	RP-010873	521	1	Correction to the RNSAP Congestion Indication	4.2.0	4.3.0
12/2001	14	RP-010873	530	2	SFN-SFN quality indication	4.2.0	4.3.0
12/2001	14	DD 040044	405		Correction to SFN-SFN Observed Time Difference Measurement	4.2.0	4.3.0
00/0000	4.5	RP-010911	485	1	report mapping	400	4.4.0
03/2002	15	RP-020169	542	3	RNSAP signalling support for flexible split	4.3.0	4.4.0
03/2002	15	RP-020169	549	1	Setting of Initial power in a new CCTrCH in TDD	4.3.0	4.4.0
03/2002	15	RP-020169	560	_	Clarification to measurement unit at Higher Layer Filtering.	4.3.0	4.4.0
03/2002	15	RP-020169	+	2	New UE identifier for MAC-c/sh multiplexing for DSCH	4.3.0	4.4.0
03/2002	15	RP-020169	581	1	Correction to physical channels which SCTD can be applied (lur)	4.3.0	4.4.0
03/2002	15	RP-020181	545	1	Corrections to the Information Exchange Initiation procedure	4.3.0	4.4.0
03/2002	15	RP-020181	546	1	Correction to UE position measurements quality and threshold information	4.3.0	4.4.0
03/2002	15	RP-020181	547	1	Correction to UE position measurements change and deviation limit	4.3.0	4.4.0
					formulas		
03/2002	15	RP-020181	552		Re-ordering of cause values	4.3.0	4.4.0
03/2002	15	RP-020181	561		Clarification to the Allowed Rate Information in RL Setup/Addition/Reconfiguration response and RL Reconfiguration Ready messages.	4.3.0	4.4.0
03/2002	15	RP-020181	562	1	Modification of the T_utran-gps length	4.3.0	4.4.0
03/2002	15	RP-020181	567		Amendment of the COMMON MEASUREMENT INITIATION	4.3.0	4.4.0
03/2002	15	RP-020181	576	2	Load Value Extension	4.3.0	4.4.0
03/2002	15	RP-020181	588		The correction on duplicated allocatioin of protocolIE-ID	4.3.0	4.4.0
	15	RP-020181	589		Enhanced DSCH and syntax error ASN.1 correction	4.3.0	4.4.0
03/2002		RP-020181	596	1	Introduction of ellipses for IPDL parameters	4.3.0	4.4.0
03/2002	15					1	4.4.0
	15 15	RP-020231	586	2	Removing of channel coding option "no coding" for FDD	4.3.0	4.4.0
03/2002		RP-020231 RP-020406	586 591	2	Removing of channel coding option "no coding" for FDD  Criticality Information Decoding Failure Handling	4.4.0	4.4.0
03/2002	15					+	
03/2002 03/2002 06/2002 06/2002	15 16	RP-020406 RP-020406	591		Criticality Information Decoding Failure Handling Alignment of tabular and ASN.1 coding for DL power	4.4.0	4.5.0 4.5.0
03/2002 03/2002 06/2002	15 16 16	RP-020406	591 601	2	Criticality Information Decoding Failure Handling	4.4.0 4.4.0	4.5.0

06/2002	16	RP-020419	617		Clarification on the Neighboring TDD Cell Measurement information	4.4.0	4.5.0
06/2002	16				Correction to the use of the CFN IE / SFN IE in the Measurement	4.4.0	4.5.0
		RP-020406	625	1	Initiation procedures		
06/2002	16	RP-020406	631		TFCI 0 definition for TDD	4.4.0	4.5.0
06/2002	16	RP-020406	634	1	CELL_DCH to CELL_FACH TDD correction	4.4.0	4.5.0
06/2002	16	RP-020407	640	1	DSCH Information Correction	4.4.0	4.5.0
06/2002	16				Definition of quality figures for SFN-SFN and Tutran-gps	4.4.0	4.5.0
		RP-020419	647		measurement value information		
06/2002	16	RP-020419	650	1	Clarification to the RNSAP RL Congestion procedure	4.4.0	4.5.0
06/2002	16	RP-020407	655	1	Clarification for the usage of the cause value	4.4.0	4.5.0
06/2002	16	RP-020407	672		RNSAP Tabular alignment to ASN1 and other corrections	4.4.0	4.5.0
09/2002	17	RP-020607	674		Correction of Criticality of RL set information in Dedicated Measurement initiation	4.5.0	4.6.0
09/2002	17	RP-020614	676		Rx Timing Deviation (TDD) corrections	4.5.0	4.6.0
09/2002	17	RP-020616	678		Clarification on the Common Measurement Reporting procedure	4.5.0	4.6.0
09/2002	17	RP-020607	680		Clarification to DCH Rate Control for modified DCHs	4.5.0	4.6.0
09/2002	17	RP-020612	690		WG4 Reference Corrections	4.5.0	4.6.0
09/2002	17	RP-020607	693	4	RNSAP Procedures alignment to NBAP and other corrections	4.5.0	4.6.0
09/2002	17	RP-020607	695	2	Handling of Common measurement of neighbor cell information	4.5.0	4.6.0
			093	2	elements		
09/2002	17	RP-020589	699	1	Replacing all occurences of $P_{SIR}(k)$ by $\delta P_{curr}$ in 25.423	4.5.0	4.6.0
09/2002	17	RP-020603	704	2	Correction of the Error Indication	4.5.0	4.6.0
09/2002	17	RP-020613	706	2	Uplink Synchronisation in 1.28Mcps TDD	4.5.0	4.6.0
09/2002	17	RP-020607	715		Clarification of the DCH rate coding	4.5.0	4.6.0
09/2002	17	RP-020603	719	1	Correction to Compressed Mode in RL Addition Failure	4.5.0	4.6.0
09/2002	17	RP-020615	721		Quality Ies for UE positioning measurements	4.5.0	4.6.0
12/2002	18	RP-020758	723		Add UL SIR_target for Unsynchronized RL Reconfiguration in 1.28Mcps TDD	4.6.0	4.7.0
12/2002	18	RP-020757	725		Correction to RX Timing Deviation LCR value range	4.6.0	4.7.0
12/2002	18	RP-020759	727	2	Slot Format for 1.28Mcps TDD	4.6.0	4.7.0
12/2002	18	RP-020753	737	2	Final Corrections from RNSAP Procedure Review	4.6.0	4.7.0
12/2002	18	RP-020744	755		Correction for the DL DPDCH transmission	4.6.0	4.7.0
12/2002	18	RP-020743	762	1	DSCH-RNTI in RADIO LINK SETUP FAILURE	4.6.0	4.7.0
03/2003	19	RP-030068	766		Clarification to DL Power definition for TDD	4.7.0	4.8.0
03/2003	19	RP-030072	769	1	TPC Step Size for TDD	4.7.0	4.8.0
03/2003	19	RP-030069	771		Clarification to 2nd Interleaving Mode for TDD	4.7.0	4.8.0
03/2003	19	RP-030082	783	1	Corrections to Channelisation Code TFCI Mapping for TDD	4.7.0	4.8.0
03/2003	19	RP-030070	785		Correction for the Information Exchange Initiation procedure	4.7.0	4.8.0
03/2003	19	RP-030183	789	5	Support of Cell Individual Offset in RNSAP	4.7.0	4.8.0
03/2003	19	RP-030071	791		Midamble Configuration for Midamble Shift LCR	4.7.0	4.8.0
03/2003	19	RP-030067	795		Alignment of 'Uncertainty Ellipse' with RRC	4.7.0	4.8.0
03/2003	19	RP-030058	797	2	Uplink Timing Advance Control Parameters in LCR TDD	4.7.0	4.8.0
03/2003	19	RP-030066	802		Corrections to DCH Combining in RL SETUP and RL ADDITION	4.7.0	4.8.0
03/2003	19	RP-030058	808	ļ	Correction on CGA Additional Shapes	4.7.0	4.8.0
06/2003	20	RP-030324	823	1	Alignment of the Requested Data Value Information IE description	4.8.0	4.9.0
06/2003	20	RP-030325	825		GPS trigger condition	4.8.0	4.9.0
06/2003	20	RP-030326	841		Correction of Failure message used for logical errors	4.8.0	4.9.0
09/2003	21	RP-030443	851		Corrections to Tx Diversity	4.9.0	4.10.0
09/2003	21	RP-030444	855		'On Modification' and 'Periodic' reporting alignment for Information Exchange procedures	4.9.0	4.10.0
12/2003	22	RP-030683	892		Information Exchange Initiation behavior correction	4.10.0	4.11.0

## History

	Document history						
V4.0.0	March 2001	Publication					
V4.1.0	June 2001	Publication					
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V4.4.0	March 2002	Publication					
V4.5.0	June 2002	Publication					
V4.6.0	September 2002	Publication					
V4.7.0	December 2002	Publication					
V4.8.0	March 2003	Publication					
V4.9.0	June 2003	Publication					
V4.10.0	September 2003	Publication					
V4.11.0	December 2003	Publication					