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

TSGRP#7(00)0143

Title: **Agreed CRs to TS 25.423**

Source: **TSG-RAN WG3**

Agenda item: **6.4.3**

Tdoc_Num	Specification	CR_Num	Revision_Num	CR_Subject	CR_Category	WG_Status	Cur_Ver_Num	New_Ver_Num
R3-000254	25.423	004		Editorial changes to 25.423	D	agreed	3.0.0	3.1.0
R3-000026	25.423	005		Missing BLER in RL RECONFIGURATION REQUEST	F	agreed	3.0.0	3.1.0
R3-000218	25.423	006		Adding of the PCCPCH Power within Neighbouring TDD Cell Information	F	agreed	3.0.0	3.1.0
R3-000126	25.423	008		RNSAP extendibility	C	agreed	3.0.0	3.1.0
R3-000016	25.423	009		Repetition of compressed mode information elements.	F	agreed	3.0.0	3.1.0
R3-000255	25.423	010		Changing Eb/N0 to SIR	B	agreed	3.0.0	3.1.0
R3-000139	25.423	011		TPC Step Size defined for TDD	F	agreed	3.0.0	3.1.0
R3-000385	25.423	014	1	Removal of an out of date	F	agreed	3.0.0	3.1.0

				statement about a specifc order of IEs within RNSAP messages.				
R3-000083	25.423	013		Addition of DRX description in Paging procedure description text and addition of new information elements in PAGING REQUEST message.	F	agreed	3.0.0	3.1.0
R3-000299	25.423	015		Modification to RADIO LINK ADDITION procedure and related parameters	F	agreed	3.0.0	3.1.0
R3-000483	25.423	021		Clarification of UL/DL signalling transfer proc. and Uu interface	F	agreed	3.0.0	3.1.0
R3-000488	25.423	023		Clarification on measurement characteristics	C	agreed	3.0.0	3.1.0
R3-000493	25.423	024		Alignment to R3 definition of puncturing limit range and step size	F	agreed	3.0.0	3.1.0
R3-000536	25.423	035		Introduction of ‘Presence’ information	F	agreed	3.0.0	3.1.0

				element for Extension				
R3-000466	25.423	038		Clarification on the ''BLER'' parameter	F	agreed	3.0.0	3.1.0
R3-000511	25.423	027		Enhancement of the description of the message type IE	C	agreed	3.0.0	3.1.0
R3-000472	25.423	017		Primary CPICH Power	C	agreed	3.0.0	3.1.0

3GPP TSG-RAN Meeting #7
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***Document* R3-000016**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

25.423	CR	009	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG RAN #7	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

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

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

Source: TSG-RAN WG3 **Date:** 00.01.24

Subject: Repetition of compressed mode information elements.

Work item:

Category: *(only one category shall be marked with an X)*

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

Reason for change: To introduce the support of parallel compressed mode patterns we shall repeat all IEs related to a compressed mode pattern in the message COMPRESSED MODE PREPARE (FDD only). We shall also add a new parameter *CFN Offset* that specify the activation time for each pattern which prevents that all patterns are activated at the same frame.

Clauses affected: 9.1.38, 9.2.1, 9.3

Other specs affected:

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

Other comments:

help.doc

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

9.1.38 COMPRESSED MODE PREPARE [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type				
Transaction ID				
CM Pattern Information		1 to 8		Range defined in [9]
_CFN Offset	M			
_TGP1	M		Gap Period	Applies only to the first and all the subsequent odd gaps if TGP2 is present, see ref. [9].
_TGP2	O		Gap Period	
_TGL	M			
_TGD	M			
_PD	M			
_UL/DL Compressed Mode Selection	M			
_Compressed Mode Method	M			
_Gap Position Mode	M			
_SN	C-Flex			
_Downlink Frame Type	M			
_Scrambling Code Change	C-SF/2			
_Power Control Mode	M			
_Power Resume Mode	M			
_Uplink Delta Eb/No	M			
_Uplink Delta Eb/No After	M			

Condition	Explanation
Flex	This IE is present only if "Gap position Mode" equals to 'flexible'.
SF/2	This IE is present only if Compressed Mode Method equals toSF/2

9.2.1.x CFN Offset <new section>

Activation time for the compressed mode pattern.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CFN Offset			INTEGER (0… 255)	Number of frames between CFN and the compressed mode activation.

```
-- **************************************************************
--
-- COMPRESSED MODE PREPARE
--
-- **************************************************************

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

CompressedModePrepare-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CompressedModePattern-List      CRITICALITY ignore  TYPE CompressedModePattern-List   PRESENCE mandatory }
    …
}

CompressedModePattern-List ::= SEQUENCE (SIZE (1..maxNrOfCMpatterns)) OF
    ProtocolIE-Container {{CompressedModePattern-IEs}}

CompressedModePattern-IEs RNSAP-PROTOCOL-IES ::= {
    {_ID id-CFNOffset               CRITICALITY ignore  TYPE CFNOffset                  PRESENCE mandatory } |
    { ID id-TGP1                    CRITICALITY ignore  TYPE GapPeriod                  PRESENCE mandatory} |
    { ID id-TGP2                    CRITICALITY ignore  TYPE GapPeriod                  PRESENCE optional  } |
    { ID id-TGL                CRITICALITY ignore  TYPE TGL                    PRESENCE mandatory   } |
    { ID id-TGD                CRITICALITY ignore  TYPE TGD                    PRESENCE mandatory   } |
    { ID id-PD                 CRITICALITY ignore  TYPE PD                     PRESENCE mandatory   } |
    { ID id-UL-DL-CompressedModeSelection       CRITICALITY ignore  TYPE UL-DL-CompressedModeSelection    PRESENCE mandatory   } |
    { ID id-CompressedModeMethod            CRITICALITY ignore  TYPE CompressedModeMethod        PRESENCE mandatory   } |
    { ID id-GapPositionMode             CRITICALITY ignore  TYPE GapPositionMode               PRESENCE mandatory } |
    { ID id-SN                 CRITICALITY ignore  TYPE SN                     PRESENCE conditional
    -- This IE is present only if "GapPositionMode" equals to "flexible" --                                  } |
    { ID id-DL-FrameType               CRITICALITY ignore  TYPE DL-FrameType              PRESENCE mandatory   } |
    { ID id-ScramblingCodeChange           CRITICALITY ignore  TYPE ScramblingCodeChange        PRESENCE conditional
    -- This IE is present only if "CompressedModeMethod" equals to "SF/2" --                                 } |
    { ID id-PowerControlMode            CRITICALITY ignore  TYPE PowerControlMode              PRESENCE mandatory } |
    { ID id-PowerResumeMode             CRITICALITY ignore  TYPE PowerResumeMode               PRESENCE mandatory } |
    { ID id-UL-DeltaEbNo                CRITICALITY ignore  TYPE UL-EbNo                    PRESENCE mandatory   } |
    { ID id-UL-DeltaEbNoAfter           CRITICALITY ignore  TYPE UL-EbNo                    PRESENCE mandatory   },
    ...
}

CompressedModePrepare-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
-- C

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

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

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

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

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

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

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

```
CellParameterID             ::= INTEGER (0..127)

CFN                 ::= INTEGER (0..255)

CFNOffset           ::= INTEGER (0..255)

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

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

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

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

CPICH-EcIo              ::= INTEGER

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

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

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

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

```
        ...
    }

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

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

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

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

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

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

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

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

9.3.6 Constant Definitions

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

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

BEGIN

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

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

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

```
-- **************************************************************

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

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

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

maxNoOfDL-Codes                                 INTEGER ::= 10
maxNrOfCCTrCHs                                  INTEGER ::= 10
maxNrOfCMpatterns                               INTEGER ::= 8
maxNrOfDCHs                                   INTEGER ::= 10
maxNrOfDL-Codes                                 INTEGER ::= 10
maxNrOfDPCHs                                    INTEGER ::= 10
maxNrOfErrors                                   INTEGER ::= 10
maxNrOfFACH-FD-Size                             INTEGER ::= 10
maxNrOfFDD-Neighbours                               INTEGER ::= 10
maxNrOfMACcSDU-Length                               INTEGER ::= 10
maxNrOfTDD-Neighbours                               INTEGER ::= 10
maxNrOfRLs                                    INTEGER ::= 10
maxNrOfSCCPCHs                                  INTEGER ::= 10
maxRNCinURA                                   INTEGER ::= 10
maxTTI-Count                                    INTEGER ::= 10

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

id-AllowedQueuingTime                               INTEGER ::= 0
id-BindingID                                  INTEGER ::= 1
id-C-ID                                       INTEGER ::= 2
id-C-RNTI                                     INTEGER ::= 3
id-CCTrCH-ID                                    INTEGER ::= 4
id-CFN                                        INTEGER ::= 5
id-CFNOffset                            INTEGER ::= 149
id-CompressedModePattern-List           INTEGER ::= 150
id-CN-CS-DomainIdentifier                           INTEGER ::= 6
id-CN-PS-DomainIdentifier                           INTEGER ::= 7
id-Cause                                      INTEGER ::= 8
id-CompressedModeMethod                             INTEGER ::= 9
id-D-RNTI                                     INTEGER ::= 10
id-D-RNTI-ReleaseIndication                         INTEGER ::= 11
id-DCH-AddItem                                  INTEGER ::= 12
```

```
id-DCH-AddItem-RL-ReconfPrepFDD                    INTEGER ::= 13
id-DCH-AddItem-RL-ReconfPrepTDD                    INTEGER ::= 14
id-DCH-AddItem-RL-ReconfReadyFDD                   INTEGER ::= 15
id-DCH-AddItem-RL-ReconfRqstFDD                    INTEGER ::= 16
id-DCH-AddItem-RL-ReconfRqstTDD                    INTEGER ::= 17
id-DCH-AddList-RL-ReconfPrepFDD                    INTEGER ::= 18
id-DCH-AddList-RL-ReconfPrepTDD                    INTEGER ::= 19
id-DCH-AddList-RL-ReconfRqstFDD                    INTEGER ::= 20
id-DCH-AddList-RL-ReconfRqstTDD                    INTEGER ::= 21
id-DCH-DeleteItem-RL-ReconfPrepFDD                 INTEGER ::= 22
id-DCH-DeleteItem-RL-ReconfPrepTDD                 INTEGER ::= 23
id-DCH-DeleteItem-RL-ReconfRqstFDD                 INTEGER ::= 24
id-DCH-DeleteItem-RL-ReconfRqstTDD                 INTEGER ::= 25
id-DCH-DeleteList-RL-ReconfPrepFDD                 INTEGER ::= 26
id-DCH-DeleteList-RL-ReconfPrepTDD                 INTEGER ::= 27
id-DCH-DeleteList-RL-ReconfRqstFDD                 INTEGER ::= 28
id-DCH-DeleteList-RL-ReconfRqstTDD                 INTEGER ::= 29
id-DCH-Information-RL-SetupReqFDD                  INTEGER ::= 30
id-DCH-InformationItem-RL-SetupReqFDD                  INTEGER ::= 31
id-DCH-InformationItem-RL-SetupReqTDD                  INTEGER ::= 32
id-DCH-InformationList-RL-SetupReqTDD                  INTEGER ::= 33
id-DCH-ModifyItem                          INTEGER ::= 34
id-DCH-ModifyItem-RL-ReconfPrepFDD                 INTEGER ::= 35
id-DCH-ModifyItem-RL-ReconfPrepTDD                 INTEGER ::= 36
id-DCH-ModifyItem-RL-ReconfReadyFDD                INTEGER ::= 37
id-DCH-ModifyItem-RL-ReconfRqstFDD                 INTEGER ::= 38
id-DCH-ModifyItem-RL-ReconfRqstTDD                 INTEGER ::= 39
id-DCH-ModifyList-RL-ReconfPrepFDD                 INTEGER ::= 40
id-DCH-ModifyList-RL-ReconfPrepTDD                 INTEGER ::= 41
id-DCH-ModifyList-RL-ReconfRqstFDD                 INTEGER ::= 42
id-DCH-ModifyList-RL-ReconfRqstTDD                 INTEGER ::= 43
id-DL-CCTrCH-Information-RL-ReconfPrepTDD               INTEGER ::= 44
id-DL-CCTrCH-Information-RL-ReconfRqstTDD               INTEGER ::= 45
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD               INTEGER ::= 46
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD               INTEGER ::= 47
id-DL-CCTrChInformationItem-RL-SetupReqTDD              INTEGER ::= 48
id-DL-CCTrChInformationList-RL-SetupReqTDD              INTEGER ::= 49
id-DL-CodeInformation-PhyChReconfRqstFDD                INTEGER ::= 50
id-DL-DPCH-Information                         INTEGER ::= 51
id-DL-DPCH-Information-RL-SetupReqFDD                  INTEGER ::= 52
id-DL-DPCH-InformationList-PhyChReconfRqstTDD               INTEGER ::= 53
id-DL-DPCH-InformationList-RL-ReconfReadyTDD                INTEGER ::= 54
id-DL-EbNoTarget                           INTEGER ::= 55
id-DL-FrameType                            INTEGER ::= 56
id-DL-MeanBitRate                          INTEGER ::= 57
id-DL-ReferencePowerInformation-DL-PC-Rqst              INTEGER ::= 58
id-DRX-Parameter                           INTEGER ::= 59
id-DedicatedMeasurementObjectType-DM-Rprt               INTEGER ::= 60
id-DedicatedMeasurementObjectType-DM-Rqst               INTEGER ::= 61
id-DedicatedMeasurementObjectType-DM-Rspns              INTEGER ::= 62
id-FACH-InfoForOptionalGroupS-CCPCH                INTEGER ::= 63
id-FACH-InfoForOptionalS-CCPCH                     INTEGER ::= 64
id-FACH-InfoForS-CCPCH-CoupledToPRACH                  INTEGER ::= 65
```

```
id-GapPositionMode                              INTEGER ::= 66
id-L3-Information                               INTEGER ::= 67
id-MeasurementCharacteristics                           INTEGER ::= 68
id-MeasurementID                                INTEGER ::= 69
id-MultipleURAsIndicator                            INTEGER ::= 70
id-PD                                       INTEGER ::= 71
id-PagingArea-PagingRqst                            INTEGER ::= 72
id-PowerControlMode                             INTEGER ::= 73
id-PowerResumeMode                              INTEGER ::= 74
id-ProcedureScope-DL-PC-Rqst                            INTEGER ::= 75
id-RANAP-RelocationInformation                          INTEGER ::= 76
id-RL-Information-PhyChReconfRqstFDD                        INTEGER ::= 77
id-RL-Information-PhyChReconfRqstTDD                        INTEGER ::= 78
id-RL-Information-RL-AdditionRqstFDD                        INTEGER ::= 79
id-RL-Information-RL-AdditionRqstTDD                        INTEGER ::= 80
id-RL-Information-RL-DeletionRqst                       INTEGER ::= 81
id-RL-Information-RL-FailureInd                         INTEGER ::= 82
id-RL-Information-RL-ReconfPrepFDD                      INTEGER ::= 83
id-RL-Information-RL-RestoreInd                         INTEGER ::= 84
id-RL-Information-RL-SetupReqFDD                        INTEGER ::= 85
id-RL-Information-RL-SetupReqTDD                        INTEGER ::= 86
id-RL-InformationItem-DM-Rprt                           INTEGER ::= 87
id-RL-InformationItem-DM-Rqst                           INTEGER ::= 88
id-RL-InformationItem-DM-Rspns                          INTEGER ::= 89
id-RL-InformationItem-RL-SetupReqFDD                        INTEGER ::= 90
id-RL-InformationList-RL-AdditionRqstFDD                    INTEGER ::= 91
id-RL-InformationList-RL-DeletionRqst                       INTEGER ::= 92
id-RL-InformationList-RL-FailureInd                     INTEGER ::= 93
id-RL-InformationList-RL-ReconfPrepFDD                      INTEGER ::= 94
id-RL-InformationList-RL-RestoreInd                     INTEGER ::= 95
id-RL-InformationResponse-RL-AdditionRspTDD                 INTEGER ::= 96
id-RL-InformationResponse-RL-ReconfReadyTDD                 INTEGER ::= 97
id-RL-InformationResponse-RL-SetupRspTDD                    INTEGER ::= 98
id-RL-InformationResponseItem-RL-AdditionRspFDD                 INTEGER ::= 99
id-RL-InformationResponseItem-RL-ReconfReadyFDD                 INTEGER ::= 100
id-RL-InformationResponseItem-RL-SetupRspFDD                    INTEGER ::= 101
id-RL-InformationResponseList-RL-AdditionRspFDD                 INTEGER ::= 102
id-RL-InformationResponseList-RL-ReconfReadyFDD                 INTEGER ::= 103
id-RL-InformationResponseList-RL-SetupRspFDD                    INTEGER ::= 104
id-RL-ReconfigurationFailure-RL-ReconfFail                  INTEGER ::= 105
id-RL-ReconfigurationFailureList-RL-ReconfFail                  INTEGER ::= 106
id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind                 INTEGER ::= 107
id-ReportCharacteristics                            INTEGER ::= 108
id-S-RNTI                                   INTEGER ::= 109
id-SAI                                      INTEGER ::= 110
id-SN                                       INTEGER ::= 111
id-SRNC-ID                                  INTEGER ::= 112
id-ScramblingCodeChange                             INTEGER ::= 113
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD       INTEGER ::= 114
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD          INTEGER ::= 115
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD       INTEGER ::= 116
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD      INTEGER ::= 117
id-TGD                                      INTEGER ::= 118
```

```
id-TGL                                  INTEGER ::= 119
id-TGP1                                 INTEGER ::= 120
id-TGP2                                 INTEGER ::= 121
id-TransportBearerID                            INTEGER ::= 122
id-TransportBearerRequestIndicator                  INTEGER ::= 123
id-TransportLayerAddress                        INTEGER ::= 124
id-UC-ID                                INTEGER ::= 125
id-UL-CCTrCH-Information-RL-ReconfPrepTDD               INTEGER ::= 126
id-UL-CCTrCH-Information-RL-ReconfRqstTDD               INTEGER ::= 127
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD               INTEGER ::= 128
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD               INTEGER ::= 129
id-UL-CCTrChInformationItem-RL-SetupReqTDD              INTEGER ::= 130
id-UL-CCTrChInformationList-RL-SetupReqTDD              INTEGER ::= 131
id-UL-DL-CompressedModeSelection                    INTEGER ::= 132
id-UL-DPCH-Information                          INTEGER ::= 133
id-UL-DPCH-Information-RL-SetupReqFDD                   INTEGER ::= 134
id-UL-DPCH-InformationList-PhyChReconfRqstTDD               INTEGER ::= 135
id-UL-DPCH-InformationList-RL-ReconfReadyTDD                INTEGER ::= 136
id-UL-DeltaEbNo                             INTEGER ::= 137
id-UL-DeltaEbNoAfter                            INTEGER ::= 138
id-UL-EbNoTarget                            INTEGER ::= 139
id-UL-MeanBitRate                           INTEGER ::= 140
id-URA-ID                               INTEGER ::= 141
id-UnsuccessfulRL-InformationResponse                   INTEGER ::= 142
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD     INTEGER ::= 143
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD        INTEGER ::= 144
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD        INTEGER ::= 145
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD     INTEGER ::= 146
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD        INTEGER ::= 147
id-CriticalityDiagnostics                       INTEGER ::= 148

END
```

3GPP TSG-RAN Meeting #7
Madrid, Spain, 13 - 15 March 2000

***Document* R3-000026**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

25.423	CR	005	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG RAN #7	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

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

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

Source: TSG-RAN WG3 **Date:** 24-28 Jan. 2000

Subject: Missing BLER in RL RECONFIGURATION REQUEST

Work item:

Category: *(only one category shall be marked with an X)*

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

Reason for change: In the current version of RNSAP the BLER (both UL and DL) are included as mandatory parameters in the messages RL SETUP REQUEST (DCH Information group) and RL RECONFIGURATION PREPARE (DCHs to be Added group). However, the RL RECONFIGURATION REQUEST message the BLER is not included for the DCHs to be Added. This is inconsistent with the two other cases where a new DCH may be established. (When it was agreed to include the BLER it was for all these cases.)

Clauses affected: 9.1.16 and 9.3.3

Other specs affected:

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

Other comments:

9.1.16 RADIO LINK RECONFIGURATION REQUEST

9.1.16.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
Allowed Queuing Time	O			
UL DPCH Information		*0..1*		
TFCS	O			TFCS for the UL.
Mean Bit Rate	O			
DL DPCH Information		*0..1*		
TFCS	O			TFCS for the DL.
TFCI Signalling Mode	O			
Mean Bit Rate	O			
DCHs to Modify		*0..<maxnoofDCHs>*		
DCH ID	M			
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Allocation/Retention Priority	O			
Frame Handling Priority	O			
UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DCHs to add		*0..<maxnoofDCHs>*		
DCH ID	M			
DCH Combination Ind	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
BLER				For the UL.
BLER				For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP mode	M			
ToAWS	M			
ToAWE	M			
DCHs to Delete		*0..<maxnoofDCHs>*		
DCH ID	M			

Range Bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.

9.1.16.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
Allowed Queuing Time	O			
Mean Bit Rate	O			For the UL
Mean Bit Rate	O			For the DL
UL CCTrCH Information		*0..<maxnoofCCTrCHs>*		
CCTrCH ID	M			
TFCS	M			
DL CCTrCH Information		*0..<maxnoofCCTrCHs>*		
CCTrCH ID	M			
TFCS	M			
DCHs to Modify		*0..<maxnoofDCHs>*		
DCH ID	M			
CCTrCH ID	O			UL CCTrCH in which the DCH is mapped.
CCTrCH ID	O			DL CCTrCH in which the DCH is mapped
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Allocation/Retention Priority	O			
Frame Handling Priority	O			
UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DCHs to Add		*0..<maxnoofDCHs>*		
DCH ID	M			
RLC Mode	M			
CCTrCH ID	M			UL CCTrCH in which the DCH is mapped.
CCTrCH ID	M			DL CCTrCH in which the DCH is mapped
DCH Combination Ind	O			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
BLER				For the UL.
BLER				For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			
DCHs to Delete		*0..<maxnoofDCHs>*		
DCH ID	M			

Range Bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.

```
-- **************************************************************
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- **************************************************************

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

RadioLinkReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY ignore  TYPE AllowedQueuingTime             PRESENCE mandatory } |
    { ID id-UL-DPCH-Information         CRITICALITY ignore  TYPE UL-DPCH-Information-RL-ReconfRqstFDD   PRESENCE optional } |
    { ID id-DL-DPCH-Information         CRITICALITY ignore  TYPE DL-DPCH-Information-RL-ReconfRqstFDD   PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfRqstFDD     CRITICALITY ignore  TYPE DCH-ModifyList-RL-ReconfRqstFDD     PRESENCE mandatory   } |
    { ID id-DCH-AddList-RL-ReconfRqstFDD        CRITICALITY ignore  TYPE DCH-AddList-RL-ReconfRqstFDD     PRESENCE mandatory   } |
    { ID id-DCH-DeleteList-RL-ReconfRqstFDD     CRITICALITY ignore  TYPE DCH-DeleteList-RL-ReconfRqstFDD     PRESENCE mandatory   },
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    tFCS                        TransportFormatCombinationSet   OPTIONAL,
    meanBitRate                 MeanBitRate     OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    tFCS                        TransportFormatCombinationSet   OPTIONAL,
    tFCI-SignallingMode             TFCI-SignallingMode OPTIONAL,
    meanBitRate                 MeanBitRate     OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfRqstFDD             ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfRqstFDD-IEs} }

DCH-Modify-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfRqstFDD     CRITICALITY ignore  TYPE DCH-ModifyItem-RL-ReconfRqstFDD     PRESENCE mandatory   },
    ...
}
```

```
DCH-ModifyItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    ul-TransportformatSet               TransportFormatSet  OPTIONAL,
    dl-TransportformatSet               TransportFormatSet  OPTIONAL,
    allocationRetentionPriority         AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority               FrameHandlingPriority   OPTIONAL,
    ul-FP-Mode                  UL-FP-Mode      OPTIONAL,
    toAWS                       ToAWS           OPTIONAL,
    toAWE                       ToAWE           OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfRqstFDD                ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfRqstFDD-IEs} }

DCH-Add-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfRqstFDD        CRITICALITY ignore  TYPE DCH-AddItem-RL-ReconfRqstFDD     PRESENCE mandatory   },
    ...
}

DCH-AddItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    rLC-Mode                    RLC-Mode,
    dCH-CombinationInd              DCH-CombinationInd  OPTIONAL,
    ul-TransportformatSet               TransportFormatSet,
    dl-TransportformatSet               TransportFormatSet,
    ul-BLER                     BLER,
    dl-BLER                     BLER,
    allocationRetentionPriority         AllocationRetentionPriority,
    frameHandlingPriority               FrameHandlingPriority,
    payloadCRC-PresenceIndicator            PayloadCRC-PresenceIndicator,
    ul-FP-Mode                  UL-FP-Mode,
    toAWS                       ToAWS,
    toAWE                       ToAWE,
    iE-Extensions                   ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-AddItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfRqstFDD             ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfRqstFDD-IEs} }

DCH-Delete-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-DeleteItem-RL-ReconfRqstFDD     CRITICALITY ignore  TYPE DCH-DeleteItem-RL-ReconfRqstFDD     PRESENCE mandatory   },
```

```
    ...
}

DCH-DeleteItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- **************************************************************
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- **************************************************************

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

RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY ignore  TYPE AllowedQueuingTime            PRESENCE optional  } |
    { ID id-UL-MeanBitRate              CRITICALITY ignore  TYPE MeanBitRate               PRESENCE optional } |
    { ID id-DL-MeanBitRate              CRITICALITY ignore  TYPE MeanBitRate               PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD
                            CRITICALITY ignore  TYPE UL-CCTrCH-InformationList-RL-ReconfRqstTDD PRESENCE mandatory } |
    { ID id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD
                            CRITICALITY ignore  TYPE DL-CCTrCH-InformationList-RL-ReconfRqstTDD PRESENCE mandatory } |
    { ID id-DCH-ModifyList-RL-ReconfRqstTDD     CRITICALITY ignore  TYPE DCH-ModifyList-RL-ReconfRqstTDD     PRESENCE mandatory   } |
    { ID id-DCH-AddList-RL-ReconfRqstTDD        CRITICALITY ignore  TYPE DCH-AddList-RL-ReconfRqstTDD     PRESENCE mandatory   } |
    { ID id-DCH-DeleteList-RL-ReconfRqstTDD     CRITICALITY ignore  TYPE DCH-DeleteList-RL-ReconfRqstTDD     PRESENCE mandatory   },
    ...
}

UL-CCTrCH-InformationList-RL-ReconfRqstTDD      ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-Information-RL-ReconfRqstTDD-IEs} }

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

UL-CCTrCH-Information-RL-ReconfRqstTDD ::= SEQUENCE {
```

```
    cCTrCH-ID                   CCTrCH-ID,
    tFCS                        TransportFormatCombinationSet,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-ReconfRqstTDD      ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-Information-RL-ReconfRqstTDD-IEs} }

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

DL-CCTrCH-Information-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    tFCS                        TransportFormatCombinationSet,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfRqstTDD             ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfRqstTDD-IEs} }

DCH-Modify-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfRqstTDD     CRITICALITY ignore  TYPE DCH-ModifyItem-RL-ReconfRqstTDD     PRESENCE mandatory   },
    ...
}

DCH-ModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    ul-CCTrCH-ID                    CCTrCH-ID       OPTIONAL,
    dl-CCTrCH-ID                    CCTrCH-ID       OPTIONAL,
    ul-TransportformatSet               TransportFormatSet  OPTIONAL,
    dl-TransportformatSet               TransportFormatSet  OPTIONAL,
    allocationRetentionPriority         AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority               FrameHandlingPriority   OPTIONAL,
    ul-FP-Mode                  UL-FP-Mode      OPTIONAL,
    toAWS                       ToAWS           OPTIONAL,
    toAWE                       ToAWE           OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

DCH-AddList-RL-ReconfRqstTDD               ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfRqstTDD-IEs} }

DCH-Add-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfRqstTDD       CRITICALITY ignore  TYPE DCH-AddItem-RL-ReconfRqstTDD     PRESENCE mandatory   },
    ...
}

DCH-AddItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    rLC-Mode                    RLC-Mode,
    ul-CCTrCH-ID                    CCTrCH-ID,
    dl-CCTrCH-ID                    CCTrCH-ID,
    dCH-CombinationInd              DCH-CombinationInd  OPTIONAL,
    ul-TransportformatSet               TransportFormatSet,
    dl-TransportformatSet               TransportFormatSet,
    ul-BLER                     BLER,
    dl-BLER                     BLER,
    allocationRetentionPriority         AllocationRetentionPriority,
    frameHandlingPriority               FrameHandlingPriority,
    ul-FP-Mode                  UL-FP-Mode,
    toAWS                       ToAWS,
    toAWE                       ToAWE,
    iE-Extensions                   ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-AddItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfRqstTDD            ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfRqstTDD-IEs} }

DCH-Delete-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-DeleteItem-RL-ReconfRqstTDD     CRITICALITY ignore  TYPE DCH-DeleteItem-RL-ReconfRqstTDD     PRESENCE mandatory   },
    ...
}

DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

-- ************************************************************
--
-- RADIO LINK RECONFIGURATION RESPONSE FDD
--
-- ************************************************************
```

3GPP TSG-RAN Meeting #7
Madrid, Spain, 13 - 15 March 2000

Document R3-000083
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

25.423	CR	013	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG RAN #7	for approval	X	Strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

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

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

Source: TSG-RAN WG3 **Date:** Jan ,2000

Subject: Addition of DRX description in Paging procedure description text and addition of new information elements in PAGING REQUEST message.

Work item:

Category: *(only one category shall be marked with an X)*

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

Release:

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

Reason for change:

1. Purpose

To introduce the support for DRX on PICH the Iur Paging procedure must be updated.

2. Background
UEs in connected mode and in state Cell_PCH or URA_PCH may use the DRX on PICH. PICH/PCH is terminated in the CRNC. For the CRNC to be able to calculate the PI's and transmit according to correct DRX cycle, the UE identity (IMSI) and the DRX cycle length information is needed. This information is sent from SRNC in the RNSAP PAGING REQUEST message. How to calculate the Paging Occasion (the SFN no. when to transmit PI's on PICH and PCH data) and the Paging Indicator is described in TS 25.304.

Currently there exist different DRX cycles.
1. CN CS DRX cycle
2. CN PS DRX cycle
3. Cell / UTRAN specific DRX Cycle
4. UE specific DRX cycle.

Case 1 and 2 is set by the respective CN and is broadcasted in system information (SIB1) in each cell within a specified LA/RA. CN specific DRX cycles are only used by UE in Idle mode and therefore do not impact the Iur paging procedure.
Case 3 is a Cell/UTRAN specific DRX cycle that is broadcasted in system information (SIB2). If in case 3 all cells broadcast the same DRX cycle length it is called the "UTRAN DRX cycle length".
Case4 is the possibility for SRNC to set a UE specific DRX cycle for a UE in connected mode, it is controlled via RRC signalling. UEs may not be assigned a specific DRX cycle and in that case the CRNC shall page a UE according to the Cell/UTRAN specific DRX cycle broadcasted in the cell. For paging in a URA the cells within that

URA may have different DRX cycle lengths (according to UTRAN configuration)

3. Problem
In the case where the SRNC has not set a UE specific DRX cycle length the CRNC shall use the DRX cycle length as broadcasted in the cells included in the paging area. This imposes a problem for SRNC since today there is no means to inform the SRNC about the cell specific DRX cycles broadcasted by the cells under CRNC control. With the PICH/PCH frame number range (2^{12}) the time between the Iur PAGING Request and the actual transmission of Page Indicators and Paging over the air can be of considerable length. This introduces a problem for the SRNC and the retransmission timer setting for the Iur PAGING REQUEST messages.

4. Alternative solutions
Alternative solutions for how to make sure that the SRNC is made aware about the DRX cycle length used in the paging.

Alt. 1:
Introduce a RNSAP PAGING REQUEST RESPONSE message sent from CRNC to SRNC. The message includes the DRX cycle length used by the CRNC. In case of paging in a URA this would imply that the message includes a list of the DRX cycle lengths used in each cell (or possibly only the DRX cycle length with the longest cycle).

Alt. 2:
Removal of the cell (UTRAN) specific DRX cycle. This implies that the UTRAN (SRNC) is mandated to set a UE specific DRX cycle length for UEs in connected mode and Cell_PCH or URA_PCH state. RNSAP PAGING REQUEST will have a mandatory DRX Cycle length sent to CRNC that schedules the PICH/PCH transmission.

Alternative 1 increases the signalling load on Iur and it put performance requirements on the the transmission of the RESPONSE message if it shall be secured that it is received by SRNC before actual paging has taken place (the shortest DRX cycle length is of four frames). As understood from WG2 representatives the purpose of having a Cell/UTRAN DRX cycle broadcasted is that UE specific DRX cycles are not needed as long as the default value was used in every cell at every time and was known by the SRNC. The benefit can be questioned, since the Cell/UTRAN specific DRX cycle will be a service independent paging cycle that requires power on the broadcast channel.

Alternative 2 increases the signalling demand on RRC since it demands that UEs in connected mode are allocated a UE specific DRX cycle. The Cell specific DRX cycle length will be removed from the system information broadcasts (SIB2). SRNC will always include the DRX cycle length information towards CRNC in PAGING REQUEST. The SRNC is always in control of the DRX cycle and can set Paging retransmission timer accordingly.

5 Proposal

Our proposal is to use alternative 2 and implement this through this CR on RNSAP and to send a liason statement to WG2 asking for removal of Cell/UTRAN specific DRX cycle.

Clauses affected: 2, 8.2.4, 9.1.27, 9.2, 9.3.3, 9.3.4, 9.3.6

Other specs affected:			
	Other 3G core specifications		→ List of CRs:
	Other GSM core specifications		→ List of CRs:
	MS test specifications		→ List of CRs:

BSS test specifications	☐	→ List of CRs:	
O&M specifications	☐	→ List of CRs:	

Other comments:	

2 References

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

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

[1] 3G TS 23.003: "Numbering, addressing and identification"

[2] 3G TS 25.413: "UTRAN Iu Interface RANAP Signalling".

[3] 3G TS 25.426: "UTRAN Iur and Iub Interface Data Transport & Transport Layer Signalling for DCH Data Streams".

[4] 3G TS 25.427: "UTRAN Iur and Iub Interface User Plane Protocols for DCH Data Streams"..

[5] 3G TS xx.yyy: "Specification containing different Identifiers for UMTS (to be identified)".

[6] 3G TS 25.105: "UTRA (BS) TDD; Radio Transmission and Reception".

[7] 3G TS 25.211: "Physical Channels and Mapping of Transport Channels onto Physical Channels (FDD)".

[8] 3G TS 25.212: "Multiplexing and Channel Coding (FDD)

[9] UMTS 25.214, Physical Layer Procedures (FDD)".

[10] 3G TS 25.215: "Physical Layer – Measurements (FDD)".

[11] 3G TS 25.221: "Physical Channels and Mapping of Transport Channels onto Physical Channels (TDD)".

[12] 3G TS 25.223: "Spreading and Modulation (TDD)".

[13] 3G TS 25.225: "Physical Layer – Measurements (TDD)".

[14] 3G TS 25.304: "UE Procedures in Idle Mode"

[15] 3G TS 25.331: "RRC Protocol Specification".

[16] 3G TS 25.402: "Synchronisation in UTRAN, Stage 2".

[17] X.680 (12/94): "Information technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation".

[18] X.681 (12/94): "Information technology - Abstract Syntax Notation One (ASN.1): Information object specification

[19] X.691 (12/94), Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)".

[Editor's note: The dating of reference [19] needs to be verified. It has been included from the ITU-T list of recommendations in force. The dating of the reference is FFS.]

[Editor's note: The reference [5] needs to be identified. Until then the description of the parameters CN PS Domain Identifier, CN CS Domain Identifier, and CRNC ID contains more information than otherwise may be needed.]

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 41: 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.

The CRNC shall calculate the Paging Occasions from the *IMSI* IE and the *DRX Cycle Length Coefficient* IE according to specification in ref. 14 and apply transmission on PICH and PCH accordingly.

~~[Editor's note: If the *DRX parameter* IE is required, and any explanation is required for how to react to it, then this should be included here.]~~

8.2.4.3 Abnormal Conditions

-

9.1.27 PAGING REQUEST

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
CHOICE *paging area*				
"URA"				
URA-Id	M			
"Cell"				
C-Id	M			
SRNC-Id	M		RNC-Id	
S-RNTI	M			
IMSI	M			
DRX Cycle Length Coefficient~~Parameter~~	M			

9.2.1.21 DRX ~~Parameter~~ 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.

~~[Editor's note: This parameter needs to be defined. Contributions are invited.]~~

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DRX Cycle Length Coefficient~~Parameter~~			Integer (2, .., 12) ~~TBD~~	Refers to 'k' in the formula as specified in ref. 14, Discontinous Reception.

9.2.1.x 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(3..8))	-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

9.3.3 PDU Definitions

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

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

BEGIN

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

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

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

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

```
-- **************************************************************
--
-- PAGING REQUEST
--
-- **************************************************************

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

PagingRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-PagingArea-PagingRqst           CRITICALITY ignore  TYPE PagingArea-PagingRqst       PRESENCE mandatory   } |
    { ID id-SRNC-ID                 CRITICALITY ignore  TYPE SRNC-ID                    PRESENCE mandatory } |
    { ID id-S-RNTI                  CRITICALITY ignore  TYPE S-RNTI                 PRESENCE mandatory  } |
    { ID id-IMSI                    CRITICALITY ignore  TYPE IMSI                   PRESENCE mandatory } |
    { ID id-DRXCycleLengthCoefficient-Parameter             CRITICALITY ignore  TYPE DRX-DRXCycleLengthCoefficientParameter          PRESENCE mandatory
    },
    ...
}

PagingArea-PagingRqst ::= CHOICE {
    uRA                     URA-ID,
    cell                        C-ID,
    ...
}

PagingRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

9.3.4 Information Element Definitions

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


-- D

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

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

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

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

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

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

DedicatedMeasurementValue ::= SEQUENCE {
    sIR-Value           ScaledSIR-Value         OPTIONAL,
```

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

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

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

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

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

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

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

DL-EbNo                 ::= ScaledUL-EbNo

DL-EbNoTarget               ::= ScaledUL-EbNo

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

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

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

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

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

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

-- **TODO**
DRX-Parameter                ::= TBD
DRXCycleLengthCoefficient    ::= INTEGER (2..12)

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

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

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

-- I

IMSI                        ::= TBCD-STRING (SIZE (3..8))
-- **TODO**
InitialDL-TX-Power          ::= INTEGER
```

9.3.6 Constant Definitions

```
-- **************************************************************
--
-- IEs
--
-- **************************************************************

id-AllowedQueuingTime                              INTEGER ::= 0
id-BindingID                                   INTEGER ::= 1
id-C-ID                                    INTEGER ::= 2
id-C-RNTI                                  INTEGER ::= 3
id-CCTrCH-ID                                   INTEGER ::= 4
id-CFN                                     INTEGER ::= 5
id-CN-CS-DomainIdentifier                          INTEGER ::= 6
id-CN-PS-DomainIdentifier                          INTEGER ::= 7
id-Cause                                   INTEGER ::= 8
id-CompressedModeMethod                            INTEGER ::= 9
id-D-RNTI                                  INTEGER ::= 10
id-D-RNTI-ReleaseIndication                        INTEGER ::= 11
id-DCH-AddItem                                 INTEGER ::= 12
id-DCH-AddItem-RL-ReconfPrepFDD                        INTEGER ::= 13
id-DCH-AddItem-RL-ReconfPrepTDD                        INTEGER ::= 14
id-DCH-AddItem-RL-ReconfReadyFDD                       INTEGER ::= 15
id-DCH-AddItem-RL-ReconfRqstFDD                        INTEGER ::= 16
id-DCH-AddItem-RL-ReconfRqstTDD                        INTEGER ::= 17
id-DCH-AddList-RL-ReconfPrepFDD                        INTEGER ::= 18
id-DCH-AddList-RL-ReconfPrepTDD                        INTEGER ::= 19
id-DCH-AddList-RL-ReconfRqstFDD                        INTEGER ::= 20
id-DCH-AddList-RL-ReconfRqstTDD                        INTEGER ::= 21
id-DCH-DeleteItem-RL-ReconfPrepFDD                     INTEGER ::= 22
id-DCH-DeleteItem-RL-ReconfPrepTDD                     INTEGER ::= 23
id-DCH-DeleteItem-RL-ReconfRqstFDD                     INTEGER ::= 24
id-DCH-DeleteItem-RL-ReconfRqstTDD                     INTEGER ::= 25
id-DCH-DeleteList-RL-ReconfPrepFDD                     INTEGER ::= 26
id-DCH-DeleteList-RL-ReconfPrepTDD                     INTEGER ::= 27
id-DCH-DeleteList-RL-ReconfRqstFDD                     INTEGER ::= 28
id-DCH-DeleteList-RL-ReconfRqstTDD                     INTEGER ::= 29
id-DCH-Information-RL-SetupReqFDD                      INTEGER ::= 30
id-DCH-InformationItem-RL-SetupReqFDD                      INTEGER ::= 31
id-DCH-InformationItem-RL-SetupReqTDD                      INTEGER ::= 32
id-DCH-InformationList-RL-SetupReqTDD                      INTEGER ::= 33
id-DCH-ModifyItem                                  INTEGER ::= 34
id-DCH-ModifyItem-RL-ReconfPrepFDD                     INTEGER ::= 35
id-DCH-ModifyItem-RL-ReconfPrepTDD                     INTEGER ::= 36
id-DCH-ModifyItem-RL-ReconfReadyFDD                    INTEGER ::= 37
id-DCH-ModifyItem-RL-ReconfRqstFDD                     INTEGER ::= 38
id-DCH-ModifyItem-RL-ReconfRqstTDD                     INTEGER ::= 39
id-DCH-ModifyList-RL-ReconfPrepFDD                     INTEGER ::= 40
id-DCH-ModifyList-RL-ReconfPrepTDD                     INTEGER ::= 41
id-DCH-ModifyList-RL-ReconfRqstFDD                     INTEGER ::= 42
id-DCH-ModifyList-RL-ReconfRqstTDD                     INTEGER ::= 43
id-DL-CCTrCH-Information-RL-ReconfPrepTDD               INTEGER ::= 44
id-DL-CCTrCH-Information-RL-ReconfRqstTDD               INTEGER ::= 45
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD               INTEGER ::= 46
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD               INTEGER ::= 47
id-DL-CCTrChInformationItem-RL-SetupReqTDD              INTEGER ::= 48
id-DL-CCTrChInformationList-RL-SetupReqTDD              INTEGER ::= 49
id-DL-CodeInformation-PhyChReconfRqstFDD                INTEGER ::= 50
id-DL-DPCH-Information                             INTEGER ::= 51
id-DL-DPCH-Information-RL-SetupReqFDD                  INTEGER ::= 52
id-DL-DPCH-InformationList-PhyChReconfRqstTDD              INTEGER ::= 53
id-DL-DPCH-InformationList-RL-ReconfReadyTDD               INTEGER ::= 54
id-DL-EbNoTarget                               INTEGER ::= 55
id-DL-FrameType                                INTEGER ::= 56
id-DL-MeanBitRate                              INTEGER ::= 57
id-DL-ReferencePowerInformation-DL-PC-Rqst             INTEGER ::= 58
id-DRX-Parameter                               INTEGER ::= 59
id-DRXCycleLengthCoefficient                   INTEGER ::= 59
id-DedicatedMeasurementObjectType-DM-Rprt              INTEGER ::= 60
id-DedicatedMeasurementObjectType-DM-Rqst              INTEGER ::= 61
id-DedicatedMeasurementObjectType-DM-Rspns             INTEGER ::= 62
id-FACH-InfoForOptionalGroupS-CCPCH                INTEGER ::= 63
id-FACH-InfoForOptionalS-CCPCH                     INTEGER ::= 64
id-FACH-InfoForS-CCPCH-CoupledToPRACH                  INTEGER ::= 65
```

```
id-GapPositionMode                                  INTEGER ::= 66
id-IMSI                                             INTEGER ::= 67
id-L3-Information                                   INTEGER ::= 687
id-MeasurementCharacteristics                               INTEGER ::= 698
id-MeasurementID                                    INTEGER ::= 7969
id-MultipleURAsIndicator                                INTEGER ::= 710
id-PD                                           INTEGER ::= 721
id-PagingArea-PagingRqst                                INTEGER ::= 732
id-PowerControlMode                                 INTEGER ::= 743
id-PowerResumeMode                                  INTEGER ::= 754
id-ProcedureScope-DL-PC-Rqst                                INTEGER ::= 765
id-RANAP-RelocationInformation                              INTEGER ::= 776
id-RL-Information-PhyChReconfRqstFDD                            INTEGER ::= 787
id-RL-Information-PhyChReconfRqstTDD                            INTEGER ::= 798
id-RL-Information-RL-AdditionRqstFDD                            INTEGER ::= 8079
id-RL-Information-RL-AdditionRqstTDD                            INTEGER ::= 810
id-RL-Information-RL-DeletionRqst                           INTEGER ::= 821
id-RL-Information-RL-FailureInd                             INTEGER ::= 832
id-RL-Information-RL-ReconfPrepFDD                          INTEGER ::= 843
id-RL-Information-RL-RestoreInd                             INTEGER ::= 854
id-RL-Information-RL-SetupReqFDD                            INTEGER ::= 865
id-RL-Information-RL-SetupReqTDD                            INTEGER ::= 876
id-RL-InformationItem-DM-Rprt                               INTEGER ::= 887
id-RL-InformationItem-DM-Rqst                               INTEGER ::= 898
id-RL-InformationItem-DM-Rspns                              INTEGER ::= 9089
id-RL-InformationItem-RL-SetupReqFDD                            INTEGER ::= 910
id-RL-InformationList-RL-AdditionRqstFDD                        INTEGER ::= 921
id-RL-InformationList-RL-DeletionRqst                           INTEGER ::= 932
id-RL-InformationList-RL-FailureInd                         INTEGER ::= 943
id-RL-InformationList-RL-ReconfPrepFDD                          INTEGER ::= 954
id-RL-InformationList-RL-RestoreInd                         INTEGER ::= 965
id-RL-InformationResponse-RL-AdditionRspTDD                     INTEGER ::= 976
id-RL-InformationResponse-RL-ReconfReadyTDD                     INTEGER ::= 987
id-RL-InformationResponse-RL-SetupRspTDD                        INTEGER ::= 998
id-RL-InformationResponseItem-RL-AdditionRspFDD                     INTEGER ::= 10099
id-RL-InformationResponseItem-RL-ReconfReadyFDD                     INTEGER ::= 1010
id-RL-InformationResponseItem-RL-SetupRspFDD                        INTEGER ::= 1021
id-RL-InformationResponseList-RL-AdditionRspFDD                     INTEGER ::= 1032
id-RL-InformationResponseList-RL-ReconfReadyFDD                     INTEGER ::= 1043
id-RL-InformationResponseList-RL-SetupRspFDD                        INTEGER ::= 1054
id-RL-ReconfigurationFailure-RL-ReconfFail                  INTEGER ::= 1065
id-RL-ReconfigurationFailureList-RL-ReconfFail                      INTEGER ::= 1076
id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind                     INTEGER ::= 1087
id-ReportCharacteristics                                INTEGER ::= 1098
id-S-RNTI                                       INTEGER ::= 11009
id-SAI                                          INTEGER ::= 1110
id-SN                                           INTEGER ::= 1121
id-SRNC-ID                                      INTEGER ::= 1132
id-ScramblingCodeChange                                 INTEGER ::= 1143
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD       INTEGER ::= 1154
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD          INTEGER ::= 1165
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD       INTEGER ::= 1176
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD      INTEGER ::= 1187
id-TGD                                          INTEGER ::= 1198
id-TGL                                          INTEGER ::= 12019
id-TGP1                                         INTEGER ::= 1210
id-TGP2                                         INTEGER ::= 1221
id-TransportBearerID                                    INTEGER ::= 1232
id-TransportBearerRequestIndicator                          INTEGER ::= 1243
id-TransportLayerAddress                                INTEGER ::= 1254
id-UC-ID                                        INTEGER ::= 1265
id-UL-CCTrCH-Information-RL-ReconfPrepTDD                       INTEGER ::= 1276
id-UL-CCTrCH-Information-RL-ReconfRqstTDD                       INTEGER ::= 1287
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD                       INTEGER ::= 1298
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD                       INTEGER ::= 13029
id-UL-CCTrChInformationItem-RL-SetupReqTDD                      INTEGER ::= 1310
id-UL-CCTrChInformationList-RL-SetupReqTDD                      INTEGER ::= 1321
id-UL-DL-CompressedModeSelection                            INTEGER ::= 1332
id-UL-DPCH-Information                                  INTEGER ::= 1343
id-UL-DPCH-Information-RL-SetupReqFDD                       INTEGER ::= 1354
id-UL-DPCH-InformationList-PhyChReconfRqstTDD                       INTEGER ::= 1365
id-UL-DPCH-InformationList-RL-ReconfReadyTDD                        INTEGER ::= 1376
id-UL-DeltaEbNo                                 INTEGER ::= 1387
id-UL-DeltaEbNoAfter                                    INTEGER ::= 1398
id-UL-EbNoTarget                                INTEGER ::= 14039
id-UL-MeanBitRate                                   INTEGER ::= 1410
id-URA-ID                                       INTEGER ::= 1421
id-UnsuccessfulRL-InformationResponse                       INTEGER ::= 1432
```

```
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD     INTEGER ::= 1443
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD        INTEGER ::= 1454
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD        INTEGER ::= 1465
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD     INTEGER ::= 1476
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD        INTEGER ::= 1487
id-CriticalityDiagnostics                       INTEGER ::= 1498

END
```

3GPP TSG-RAN Meeting #7
Madrid, Spain, 13 - 15 March 2000

Document R3-000126
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

25.423	CR	008	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG RAN#7	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

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

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

Source: TSG-RAN WG3 **Date:** 18 Jan 2000

Subject: RNSAP extendibility

Work item:

Category: *(only one category shall be marked with an X)*

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

Reason for change: Possibility to add new values in future releases.

Clauses affected:
9.2.1.5 Cause
9.2.1.38 Report Characteristics
9.3.4 Information Element Definitions

Other specs affected:

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

Other comments: The Cause IE is already extendible in the ASN.1 code but not in the Tabular Format.


help.doc

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

9.2.1.5 Cause

The purpose of the cause information element is to indicate the reason for a particular event for the whole protocol.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
~~Cause Group~~	~~M~~		~~ENUMERATED (Radio Network Layer, Transport Layer, Protocol, Misc)~~	
CHOICE *cause group*				
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, UL Radio Resources not Available, Measurement not Supported For The Object, Macrodiversity Combining Not Possible, Reconfiguration not Allowed, Requested Configuration not Supported Synchronisation Failure, Unspecified,...)	
Transport Layer				
Transport Layer Cause	M		ENUMERATED (Transport link failure, Transmission port not available, Unspecified,...)	
Protocol				
Protocol Cause			ENUMERATED (Transaction not Allowed, Transfer Syntax Error, Abstract Syntax Error (Reject), Abstract Syntax Error (Ignore and Notify), Message not Compatible with Receiver State, Semantic Error, Unspecified,...)	
Misc				
Miscellaneous Cause	M		ENUMERATED (Control Processing Overload Hardware Failure, O&M Intervention, Not enough User Plane Processing Resources, Unspecified,...)	

9.2.1.38 Report Characteristics

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

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

	E			
Measurement Threshold 1	M		TBD	
Measurement Threshold 2	O		TBD	
Measurement Hysteresis Time	O		ENUMERATED (10ms…1min) step 10ms,…	The hysteresis time in ms
Report Periodicity	O		ENUMERATED (10ms…1min) step 10ms, (1min…1hr) step 1min	The frequency with which the Node B shall send measurement reports.
Event F	C – Event F			
Measurement Threshold 1	M		TBD	
Measurement Threshold 2	O		TBD	
Measurement Hysteresis Time	O		ENUMERATED (10ms…1min) step 10ms,…	The hysteresis time in ms
Report Periodicity	O		ENUMERATED (10ms…1min) step 10ms, (1min…1hr) step 1min	The frequency with which the Node B shall send measurement reports.

Editors note: Encoding of threshold TBD.

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

9.3.4 Information Element Definitions

-
-
-

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

```
    ...
}
```

3GPP TSG-RAN Meeting #7
Madrid, Spain, 13 - 15 March 2000

***Document* R3-000139**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

25.423	CR	011	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG RAN #7	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

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

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

Source: TSG-RAN WG3 **Date:** January 2000

Subject: TPC Step Size defined for TDD

Work item:

Category: *(only one category shall be marked with an X)*

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

Reason for change: Definition of TPC Step size for TDD messages as per the WG1 specifications

Clauses affected:

Other specs affected:

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

Other comments:

9.1.3 RADIO LINK SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
S-RNTI	M			
D-RNTI	O			
Allowed Queuing time	O			
UL DPCH Information		*1*		
UL Scrambling Code	M			
Min UL Channelisation Code Length	M			
Max Number of UL DPDCHs	C – CodeLen			
Puncture Limit	M			For the UL.
UL Transport Format Combination Set	M			
UL DPCCH Slot Format	M			
UL Eb/No Target	O			
Diversity mode	M			
D Field Length	C-FB			
SSDT Cell ID Length	O			
S Field Length	O			
Mean Bit Rate	O			For the UL.
DL DPCH Information		*1*		
Transport Format Combination Set	M			
DL DPCH Slot Format	M			
TFCI Signalling Mode	M			
TFCI Presence	C-SlotFormat			
Multiplexing Position	M			
Power Offset Information		*1*		
PO1	M		Power Offset	Power offset for the TFCI bits.
PO2	M		Power Offset	Power offset for the TPC bits.
PO3	M		Power Offset	Power offset for the pilot bits.
FDD TPC Downlink Step Size	M			
Mean Bit Rate	O			For the DL.
DCH Information		*1..<maxnoofDCHs>*		
DCH ID	M			
DCH Combination Ind	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
BLER	M			For the UL.
BLER	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			

RL Information		*1…<maxnoofRLs>*		
RL ID	M			
C-ID	M			
Frame Offset	M			
Chip Offset	M			
Propagation Delay	O			
Diversity Control Field	C – NotFirstRL			
Initial DL TX Power	O		DL Power	
Primary CPICH Ec/Io	O			
SSDT Cell ID	O			

Condition	Explanation
CodeLen	This IE is present only "f "Min UL Channelisation Code len"th" equals to 4
FB	This IE is present only if Feed Back mode diversity is activated.
SlotFormat	This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16.
NotFirstRL	This IE is present only if the RL is not the first one in the **RL Information**.

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

9.1.3.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
S-RNTI	M			
D-RNTI	O			
Allowed Queuing time	O			
Mean Bit Rate	O			For the UL.
Mean Bit Rate	O			For the DL.
UL CCTrCH Information		*1..<maxnoofCCTrCHs>*		
CCTrCH ID	M			
TFCS	M			For the UL.
TFCI Coding	M			
Puncture Limit	M			
DL CCTrCH Information		*1..<maxnoofCCTrCHs>*		
CCTrCH ID	M			
TFCS	M			For the DL.
TFCI Coding	M			
Puncture Limit	M			
TDD TPC Downlink Step Size	M			
DCH Information		*1..<maxnoofDCHs>*		
DCH ID	M			
CCTrCH ID	M			UL CCTrCH in which the DCH is mapped
CCTrCH ID	M			DL CCTrCH in which the DCH is mapped
DCH Combination Ind	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
BLER	M			For the UL.
BLER	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			
RL Information		*1*		
RL ID	M			
C-ID	M			
Frame Offset	M			
Primary CCPCH RSCP	O			

Range bound	Explanation
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofCCTrCHs	Maximum no. of CCTrCH for one UE.

9.2.2.10 FDD DL Channelisation Code Number

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FDD DL Channelisation Code Number	M		INTEGER(0. . 255)	The maximum value is equal to the DL spreading factor –1

9.2.2.11 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			ENUMERATED (0.5, 1)	

9.2.2.12~~9.2.2.11~~ Gap Position Mode

The gap position can be fixed or adjustable, as defined in ref. [**Error! Reference source not found.**].

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

9.2.2.13~~9.2.2.12~~ Gap Period (TGP)

Gap Period is the period of repetition of a set of consecutive frames containing up to 2 transmission gaps.

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

9.2.2.14~~9.2.2.13~~ Gap Starting Slot Number (SN)

It defines the slot number when the transmission gap starts.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SN			Time Slot	

9.2.2.15~~9.2.2.14~~ Max Number of UL DPDCHs

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

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

9.2.2.16~~9.2.2.15~~ Min UL Channelisation Code Length

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

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

9.2.2.17~~9.2.2.16~~ Multiplexing Position

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

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

9.2.2.18~~9.2.2.17~~ Pattern Duration (PD)

Pattern duration is the total time of then compressed mode pattern (all consecutive TGPs) expressed in number of frames.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PD			INTEGER(0. .2047, …)	Frames

9.2.2.19~~9.2.2.18~~ Power Control Mode (PCM)

Power Control Mode specifies the uplink power mode applied during recovery period after each transmission gap in compressed mode. PCM can take 2 values (0 or 1). The different power control modes are described in ref. [**Error! Reference source not found.**].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Control Mode			ENUMERATED (0, 1,..)	

9.2.2.20~~9.2.2.19~~ Power Offset

This IE defines a power offset respect the Downlink transmission power of a DPCH.

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

9.2.2.21~~9.2.2.20~~ Power Resume Mode (PRM)

Power Resume Mode selects the uplink power control method to calculate the initial transmit power after the gap. PRM can take two values (0 or 1) and is described in ref. [**Error! Reference source not found.**].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Power Resume Mode			ENUMERATED (0, 1,..)	Described in ref. [**Error! Reference source not found.**].

9.2.2.229.2.2.21 Primary CPICH Ec/No

Energy per chip divided by the power density per band measured on the Primary CPICH by the terminal.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Primary CPICH Ec/No			INTEGER (-30…+30)	dB, step 1 dB

9.2.2.239.2.2.22 Propagation Delay (PD)

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Propagation Delay			INTEGER (0..255)	Chips. Step size is 3 chips. 0=0 chips, 1=3 chips, …

9.2.2.249.2.2.23 S-Field Length

The UE uses the S Field of the UL DPCCH slot to send the SSDT Cell ID to the network.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
S Field Length			ENUMERATED (1, 2)	

9.2.2.259.2.2.24 Scrambling Code Change

This parameter indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Scrambling Code Change			ENUMERATED (Change, No change)	

9.2.2.269.2.2.25 Slot Number (SN)

It defines the slot number when the transmission gap starts.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SN			Time Slot	

9.2.2.279.2.2.26 SSDT Cell Identity

The SSDT Cell ID is a temporary ID for SSDT assigned to a cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SSDT Cell Identity			ENUMERATED (a, b.., h)	

9.2.2.28~~9.2.2.27~~ SSDT Cell Identity Length

The SSDT Cell ID Length parameter shows the length of the SSDT Cell ID.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell ID Length			ENUMERATED(Short, Medium, Long)	

9.2.2.29~~9.2.2.28~~ SSDT Indication

The SSDT Indication indicates whether SSDT is in use by the UE or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SSDT Indication			ENUMERATED(SSDT Active in the UE, SSDT not Active in the UE)	

9.2.2.30~~9.2.2.29~~ SSDT Support Indicator

The SSDT Support Indicator indicates whether a RL supports SSDT or not.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SSDT Support Indicator			ENUMERATED (SSDT Supported, SSDT not supported).	

9.2.2.31~~9.2.2.30~~ TFCI Signalling Mode

This parameter indicates if the normal or split mode is used for the TFCI.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI Signalling Mode			ENUMERATED (Normal, Split)	

~~9.2.2.31 TPC Downlink Step Size~~

~~This parameter indicates step size for the DL power adjustment.~~

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

9.2.3.9 TDD Physical Channel Offset

The TDD Physical Channel Offset represents the phase information for the allocation of a physical channel. (SFN mod Repetition Period = TDD Physical Channel Offset).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TDD Physical Channel Offset			INTEGER (0..63)	

9.2.3.10 TDD 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
TDD TPC Downlink step size			ENUMERATED (1, 2, 3)	

9.2.3.119.2.3.10 TFCI Coding

The TFCI Coding describes how the TFCI bits are coded. By default 1 TFCI bit is coded with 4 bits, 2 TFCI bits are coded with 8 bits, 3-5 TFCI bits are coded with 16 bits and 6-10 TFCI bits are coded with 32 bits.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
TFCI Coding	M		Enumerated (4, 8, 16, 32)	

9.3.3 PDU Definitions

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

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

BEGIN

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

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

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

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

```
-- **************************************************************
--
-- RADIO LINK SETUP REQUEST FDD
--
-- **************************************************************

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

RadioLinkSetupRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI                  CRITICALITY ignore  TYPE S-RNTI                    PRESENCE mandatory } |
    { ID id-D-RNTI                  CRITICALITY ignore  TYPE D-RNTI                 PRESENCE optional  } |
    { ID id-AllowedQueuingTime          CRITICALITY ignore  TYPE AllowedQueuingTime             PRESENCE optional  } |
    { ID id-UL-DPCH-Information-RL-SetupReqFDD  CRITICALITY ignore  TYPE UL-DPCH-Information-RL-SetupReqFDD     PRESENCE mandatory   } |
    { ID id-DL-DPCH-Information-RL-SetupReqFDD  CRITICALITY ignore  TYPE DL-DPCH-Information-RL-SetupReqFDD     PRESENCE mandatory   } |
    { ID id-DCH-Information-RL-SetupReqFDD      CRITICALITY ignore  TYPE DCH-InformationList-RL-SetupReqFDD     PRESENCE mandatory   } |
    { ID id-RL-Information-RL-SetupReqFDD       CRITICALITY ignore  TYPE RL-InformationList-RL-SetupReqFDD   PRESENCE mandatory   },
    ...
}

UL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    ul-ScramblingCode               UL-ScramblingCode,
    minUL-ChannelisationCodeLength          MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPCHs                 MaxNrOfUL-DPCHs         OPTIONAL
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 -- ,
    ul-PunctureLimit                PunctureLimit,
    ul-TransportFormatCombinationSet        TransportFormatCombinationSet,
    ul-DPCCH-SlotFormat             UL-DPCCH-SlotFormat,
    ul-EbNoTarget                   UL-EbNoTarget           OPTIONAL,
    diversityMode                   DiversityMode,
    d-FieldLength                   D-FieldLength           OPTIONAL
    -- This IE is present only if Feed Back mode diversity is activated -- ,
    sSDT-CellIdLength               SSDT-CellID-Length      OPTIONAL,
    s-FieldLength                   S-FieldLength           OPTIONAL,
    ul-meanBitRate                  MeanBitRate         OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {UL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    transportFormatCombinationSet           TransportFormatCombinationSet,
    dl-DPCH-SlotNumber              DL-DPCH-SlotNumber,
    tFCI-SignallingMode             TFCI-SignallingMode,
```

```
    tFCI-Presence                   TFCI-Presence           OPTIONAL
    -- This IE is present if Slot Format is from 12 to 16 --,
    multiplexingPosition                MultiplexingPosition,
    powerOffsetInformation              SEQUENCE {
        po1-ForTFCI-Bits                PowerOffset,
        po2-ForTPC-Bits                 PowerOffset,
        po3-ForPilotBits                PowerOffset,
        ...
    },
    FDD-dl-TPC-StepSize                 FDD-TPC-StepSize,
    meanBitRate                 MeanBitRate         OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationList-RL-SetupReqFDD          ::= DCH-IE-ContainerList { {DCH-InformationItemIEs-RL-SetupReqFDD} }

DCH-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationItem-RL-SetupReqFDD  CRITICALITY ignore  TYPE DCH-InformationItem-RL-SetupReqFDD   PRESENCE mandatory   },
    ...
}

DCH-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    dCH-CombinationInd              DCH-CombinationInd      OPTIONAL,
    rLC-Mode                    RLC-Mode,
    ul-transportFormatSet               TransportFormatSet,
    dl-transportFormatSet               TransportFormatSet,
    ul-BLER                     BLER,
    dl-BLER                     BLER,
    allocationRetentionPriority         AllocationRetentionPriority,
    frameHandlingPriority               FrameHandlingPriority,
    payloadCRC-PresenceIndicator            PayloadCRC-PresenceIndicator,
    ul-FP-Mode                  UL-FP-Mode,
    toAWS                       ToAWS,
    toAWE                       ToAWE,
    iE-Extensions                   ProtocolExtensionContainer { {DCH-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-SetupReqFDD           ::= RL-IE-ContainerList { {RL-InformationItemIEs-RL-SetupReqFDD} }

RL-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
```

```
    { ID id-RL-InformationItem-RL-SetupReqFDD   CRITICALITY ignore  TYPE RL-InformationItem-RL-SetupReqFDD      PRESENCE mandatory   },
    ...
}

RL-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    uC-ID                       C-ID,
    frameOffset                 FrameOffset,
    chipOffset                  ChipOffset,
    propagationDelay                PropagationDelay        OPTIONAL,
    diversityControlField               DiversityControlField       OPTIONAL
    -- This IE is present only if the RL is not the first one in the RL-InformationList-RL-SetupReqFDD --,
    dl-InitialTX-Power              DL-Power            OPTIONAL
    -- Initial DL transmission power -- ,
    cPICH-EcIo                  CPICH-EcIo          OPTIONAL,
    sSDT-CellID                 SSDT-CellID         OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {RL-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI                  CRITICALITY ignore  TYPE S-RNTI                     PRESENCE mandatory } |
    { ID id-D-RNTI                  CRITICALITY ignore  TYPE D-RNTI                 PRESENCE optional   } |
    { ID id-AllowedQueuingTime          CRITICALITY ignore  TYPE AllowedQueuingTime             PRESENCE optional  } |
    { ID id-UL-MeanBitRate              CRITICALITY ignore  TYPE MeanBitRate                PRESENCE optional } |
    { ID id-DL-MeanBitRate              CRITICALITY ignore  TYPE MeanBitRate                PRESENCE optional } |
    { ID id-UL-CCTrChInformationList-RL-SetupReqTDD CRITICALITY ignore  TYPE UL-CCTrChInformationList-RL-SetupReqTDD  PRESENCE mandatory   } |
    { ID id-DL-CCTrChInformationList-RL-SetupReqTDD CRITICALITY ignore  TYPE DL-CCTrChInformationList-RL-SetupReqTDD  PRESENCE mandatory   } |
    { ID id-DCH-InformationList-RL-SetupReqTDD  CRITICALITY ignore  TYPE DCH-InformationList-RL-SetupReqTDD   PRESENCE mandatory   } |
    { ID id-RL-Information-RL-SetupReqTDD       CRITICALITY ignore  TYPE RL-Information-RL-SetupReqTDD     PRESENCE mandatory   },
    ...
```

```
}

UL-CCTrChInformationList-RL-SetupReqTDD        ::= CCTrCH-IE-ContainerList { {UL-CCTrChInformationItemIEs-RL-SetupReqTDD} }

UL-CCTrChInformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrChInformationItem-RL-SetupReqTDD CRITICALITY ignore  TYPE UL-CCTrChInformationItem-RL-SetupReqTDD  PRESENCE mandatory   },
    ...
}

UL-CCTrChInformationItem-RL-SetupReqTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    ul-TFCS                     TransportFormatCombinationSet,
    tFCI-Coding                 TFCI-Coding,
    ul-PunctureLimit                PunctureLimit,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrChInformationList-RL-SetupReqTDD        ::= CCTrCH-IE-ContainerList { {DL-CCTrChInformationItemIEs-RL-SetupReqTDD} }

DL-CCTrChInformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrChInformationItem-RL-SetupReqTDD CRITICALITY ignore  TYPE DL-CCTrChInformationItem-RL-SetupReqTDD  PRESENCE mandatory    },
    ...
}

DL-CCTrChInformationItem-RL-SetupReqTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    dl-TFCS                     TransportFormatCombinationSet,
    tFCI-Coding                 TFCI-Coding,
    dl-PunctureLimit                PunctureLimit,
    TDD-dl-TPC-StepSize             TDD-TPC-StepSize,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationList-RL-SetupReqTDD          ::= DCH-IE-ContainerList { {DCH-InformationItemIEs-RL-SetupReqTDD} }

DCH-InformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationItem-RL-SetupReqTDD  CRITICALITY ignore  TYPE DCH-InformationItem-RL-SetupReqTDD     PRESENCE mandatory    },
    ...
}

DCH-InformationItem-RL-SetupReqTDD ::= SEQUENCE {
```

```
    dCH-ID                      DCH-ID,
    ul-cCTrCH-ID                    CCTrCH-ID, -- UL CCTrCH in which the DCH is mapped
    dl-cCTrCH-ID                    CCTrCH-ID, -- DL CCTrCH in which the DCH is mapped
    dCH-CombinationInd              DCH-CombinationInd      OPTIONAL,
    rLC-Mode                    RLC-Mode,
    ul-transportFormatSet               TransportFormatSet,
    dl-transportFormatSet               TransportFormatSet,
    ul-BLER                     BLER,
    dl-BLER                     BLER,
    allocationRetentionPriority         AllocationRetentionPriority,
    frameHandlingPriority               FrameHandlingPriority,
    payloadCRC-PresenceIndicator            PayloadCRC-PresenceIndicator,
    ul-FP-Mode                  UL-FP-Mode,
    toAWS                       ToAWS,
    toAWE                       ToAWE,
    iE-Extensions                   ProtocolExtensionContainer { {DCH-InformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-SetupReqTDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    c-ID                        C-ID,
    frameOffset                 FrameOffset,
    primaryCCPCH-RSCP               PrimaryCCPCH-RSCP       OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {RL-Information-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}

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

RadioLinkSetupRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

9.3.4 Information Element Definitions

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

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

BEGIN

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

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

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

-- A

AllocationRetentionPriority     ::= FrameHandlingPriority

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

-- B

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

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

BurstType ::= ENUMERATED {
    type1 (1),
```

```
    type2 (2)
}

-- C

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

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

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

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

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

```
}

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

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

CellParameterID             ::= INTEGER (0..127)

CFN                 ::= INTEGER (0..255)

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

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

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

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

CPICH-EcIo              ::= INTEGER

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

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

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

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

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

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

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

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

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

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

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

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

-- D

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

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

DedicatedMeasurementObjectType ::= ENUMERATED {
    rl,
    all-rl,
```

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

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

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

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

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

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

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

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

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

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

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

DL-EbNo                 ::= ScaledUL-EbNo

DL-EbNoTarget               ::= ScaledUL-EbNo

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

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

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

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

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

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

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

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

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

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

-- E

EventA ::= SEQUENCE {
    measurementTreshold     MeasurementThreshold,
```

```
    measurementHysteresisTime   ScaledMeasurementHysteresisTime     OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { {EventA-ExtIEs} } OPTIONAL,
    ...
}

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

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

EventC ::= SEQUENCE {
    measurementIncreaseThreshold    MeasurementIncreaseThreshold,
    measurementChangeTime       ScaledMeasurementChangeTime,
    ...
}

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

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

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

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

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

EventF ::= SEQUENCE {
```

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

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

-- F

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

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

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

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

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

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

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

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


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

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

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

-- G
```

```
GapPositionMode ::= ENUMERATED {
    fixed,
    flexible
}

GapPeriod               ::= INTEGER (0..255)

-- H
-- I

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

-- J
-- K
-- L

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

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

-- M

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

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

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

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

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

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

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

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

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

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

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

-- ** TODO **
MeasurementDecreaseThreshold        ::= INTEGER

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

-- ** TODO **
MeasurementIncreaseThreshold        ::= INTEGER

-- ** TODO **
MeasurementThreshold            ::= INTEGER

MidambleShift               ::= INTEGER (0..15)

MinUL-ChannelisationCodeLength      ::= INTEGER

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- N

NrOfTransportBlocks         ::= INTEGER (0..4095)

-- O

Offset                  ::= INTEGER (0..63)

-- P
```

```
PD                  ::= INTEGER (0..2047, ...)

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

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

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

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

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

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

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

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

PowerOffset             ::= INTEGER (0..24)

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

-- ** TODO **
```

```
PrimaryCPICH-Power          ::= INTEGER

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

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

PrimaryScramblingCode           ::= ScramblingCode

PropagationDelay            ::= INTEGER (0..255)

SyncCase ::= ENUMERATED {
    case1,
    case2,
    case3--,
--  ...
}

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

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

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

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

-- Q
-- R

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

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

RateMatchingAttribute           ::= INTEGER (1..maxRateMatching)

RepetitionLength            ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    v16,
    v32,
```

```
    v64--,
--  ...
}

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

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

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

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

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

-- S

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

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

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

-- ** TODO **
```

```
ScramblingCode              ::= INTEGER

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

ScaledSIR-ErrorValue            ::= INTEGER (-100..100)
-- ScaledSIR-ErrorValue = SIR-ErrorValue * 10
-- If SIR-ErrorValue <= -10 ScaledSIR-ErrorValue shall be set to -100
-- If SIR-ErrorValue >=  10 ScaledSIR-ErrorValue shall be set to  100
-- SIR-ErrorValue step 0.1 dB

ScaledSIR-Value             ::= INTEGER (-100..200)
-- ScaledSIR-Value = SIR-Value * 10
-- SIR-Value step 0.1 dB

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

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

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

SN                  ::= TimeSlot

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

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

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

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

SSDT-CellID ::= ENUMERATED {
```

```
    a,
    b,
    c,
    d,
    e,
    f,
    g,
    h
}

SSDT-CellID-Length ::= ENUMERATED {
    short,
    medium,
    long
}

SSDT-Indication ::= ENUMERATED {
    sSDT-active-in-the-UE,
    sSDT-not-active-in-the-UE
}

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

-- T

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

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

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

TDD-TPC-StepSize ::= ENUMERATED {
    One
    Two
    Three
}

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

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

```
    present
}

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

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

TimeSlot                ::= INTEGER (0..14)

ToAWE                   ::= INTEGER (0..2559)

ToAWS                   ::= INTEGER (0..1279)

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

3GPP TSG-RAN Meeting #7
Madrid, Spain, 13 - 15 March 2000

Document R3-000218
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

25.423	CR	006	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

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

for approval [X] for information [ ]

strategic [ ] non-strategic [ ] *(for SMG use only)*

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

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

Source: TSG-RAN WG3 **Date:** 25.01.00

Subject: Adding of the PCCPCH Power within Neighbouring TDD Cell Information

Work item:

Category: *(only one category shall be marked with an X)*

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

Release:

Phase 2	[ ]
Release 96	[ ]
Release 97	[ ]
Release 98	[ ]
Release 99	[X]
Release 00	[ ]

Reason for change: Whenever the Neighbouring TDD Cell information is transmitted from the DRNC to the SRNC, the reference power value of the neighbouring cell shall be included in order to know the reference power value.

Clauses affected: 8.3.1.2, 8.3.2.2, 9.1.4.1, 9.1.4.2, 9.1.5.1, 9.1.7.1, 9.1.7.2, 9.1.8.1, 9.2.1.x, 9.3.2, 9.3.3, 9.3.4

Other specs affected:

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

Other comments:


help.doc

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

< The proposed changes according to this CR are highlighted by revision marks. >

8.3 DCH procedures

8.3.1 Radio Link Setup

8.3.1.1 General

8.3.1.2 Successful Operation

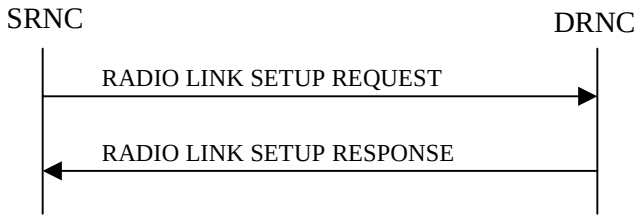

Figure 1: Radio Link Setup procedure: Successful Operation

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

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

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

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

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

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

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

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

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

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

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

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

At the reception of the RADIO LINK SETUP REQUEST message, DRNS allocates requested type of channelisation

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

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

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

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

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

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

The DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id), the Frequency Number, the [FDD-Primary Scrambling Code], the [TDD-Cell Parameter ID, the Sync Case, the PSCH Time Slot information] ~~and information~~ of the neighbouring cells to the cell(s) where the radio link(s) are added. In addition, if the information is available, the DRNC shall also provide the [FDD-CPICH Power level]/[TDD-PCCPCH Power level] and Frame Offset of the neighbouring cell.

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

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

8.3.2 Radio Link Addition

8.3.2.2 Successful Operation

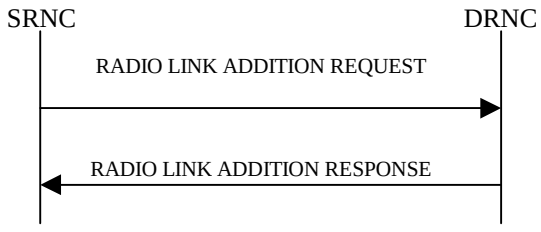

Figure 2: Radio Link Addition procedure: Successful Operation

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

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

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

If the *Primary CCPCH Ec/Io* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] measured by the UE is included in the

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

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

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

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

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

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

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

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

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

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

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

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

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

9.1.4 RADIO LINK SETUP RESPONSE

9.1.4.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
RL Information Response		*1..<maxnoofRLs>*		
RL ID	M			
SAI	M			
UL Interference Level	M			
DL Code Information		*1..*		

		<maxnoofDLCodes		
DL Scrambling Code	M			
FDD DL Channelisation Code Number	M			
Diversity Indication	C-NotFirstRL			
CHOICE *diversity Indication*				
Combining				
RL ID	M			Reference RL ID for the combining
Non Combining or IE not present				"IE not present" is equivalent to "First RL".
DCH Information Response		*0..<maxnoofDCHs>*		Only one DCH per set of co-ordinated DCHs shall be included
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		*0..<maxnoofFDDneighbours>*		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information	O	*0..<maxnoofTDDneighbours>*		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
PCCPCH Power	O			
Uplink Eb/No Target	O		Uplink Eb/No	
Downlink Eb/No Target	O			
Criticality Diagnostics	O			

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

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

9.1.4.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
RL Information Response		*1*		
RL ID	M			
SAI	M			
UL Interference Level	M			
Maximum Uplink Eb/No	M		Uplink Eb/No	
Minimum Uplink Eb/No	M		Uplink Eb/No	
Uplink Eb/No Target	O		Uplink Eb/No	
Downlink Eb/No Target	O			
UL CCTrCH Information		*1..<maxnoofCCTrCHs>*		
CCTrCH ID	M			
UL DPCH Information		*1..<MaxnoofDPCHs>*		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DL CCTrCH Information		*1..<maxnoofCCTrCHs>*		
CCTrCH ID	M			
DL DPCH Information		*1..<MaxnoofDPCHs>*		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DCH Information Response		*1..<maxnoofDCHs>*		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Neighbouring FDD Cell Information	O	*0..<maxnoofFDDneighbours>*		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information	O	*0..<maxnoofTDDneighbours>*		

UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
PCCPCH Power	O			
Criticality Diagnostics	O			

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

Range bound	Explanation
MaxnoofDPCHs	Maximum no. Of DPCHs for one CCTrCH.
MaxnoofDCHs	Maximum no. Of DCHs for one UE.
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell
MaxnoofCCTrCHs	Maximum no. Of CCTrCH for one UE.

9.1.5 RADIO LINK SETUP FAILURE

9.1.5.1 FDD Message

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

Downlink Eb/No Target	O			
Criticality Diagnostics	O			

9.1.7 RADIO LINK ADDITION RESPONSE

9.1.7.1 FDD Message

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

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

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

9.1.7.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
RL Information Response		*1*		
RL ID	M			
SAI	M			
UL Interference Level	M			
UL CCTrCH Information		*1..<maxnoof CCTrCHs>*		
CCTrCH ID	M			
UL DPCH Information		*1..<maxnoOfDPCHs>*		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DL CCTrCH Information		*1..<maxnoof CCTrCHs>*		
CCTrCH ID	M			
DL DPCH information		*1..<maxnoOfDPCHs>*		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
Diversity Indication	M			
CHOICE *diversity indication*				
Combining				
RL ID	M			Reference RL
Non combining				
DCH Information Response		*1..<maxnoofDCHs>*		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			

Transport Layer Address	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		*0..<maxnoofFDD Neighbours>*		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information		*0..<maxnoofTDD Neighbours>*		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
PCCPCH Power	O			
Criticality Diagnostics	O			

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

Range Bound	Explanation
MaxnoofDCHs	Maximum number of dedicated channels on one RL
MaxnoofFDDNeighbours	Maximum number of neighbouring FDD cells for one cell
MaxnoofTDDNeighbours	Maximum number of neighbouring TDD cells for one cell
MaxnoofDLCodes	Maximum number of DL code information
MaxnoOfDPCHs	Maximum number of DPCH in one CCTrCH
MaxnoofCCTrCHs	no. Of CCTrCH for one UE.

9.1.8 RADIO LINK ADDITION FAILURE

9.1.8.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Unsuccessful RL Information Response		*1..<maxnoofRLs-1>*		
RL ID	M			
Cause	M			
Succesfull RL Information Response		*1..<maxnoofRLs-2>*		
RL ID	M			
SAI	M			
UL Interference Level	M			

DL Code Information		*1..<maxnoofDLCodes>*		
DL scrambling code	M			
DL channelisation code	M			
Diversity Indication	M			
CHOICE *diversity indication*				
Combining				
RL ID	M			Reference RL-Id
Non combining				
DCH Information Response		*1..<maxnoofDCHs>*		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
SSDT Support Indicator	M			
Minimum Uplink Eb/No	M		Uplink Eb/No	
Maximum Uplink Eb/No	M		Uplink Eb/No	
Neighbouring FDD Cell Information		*0..<maxnoofFDD Neighbours>*		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information		*0..<maxnoofTDD Neighbours>*		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
PCCPCH Power	O			
Criticality Diagnostics	O			

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

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

9.2.1.x PCCPCH Power

Primary CCPCH power is the power that shall be used for reference power value in a TDD cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PCCPCH power			INTEGER(-15..40)	Unit dBm Granularity 0.1 dB.

9.3.2 Elementary Procedure Definitions

```
-- **************************************************************
--
-- Elementary Procedure definitions
--
-- **************************************************************

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

BEGIN

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

IMPORTS
    Criticality,
   .
   .
   .
    PD,
    PSCH-PCCPCH-TimeSlot,
    PCCPCH-Power,
    PSCH-TimeSlot,
    PayloadCRC-PresenceIndicator,
   .
   .
   .
FROM RNSAP-IEs
   .
   .
   .
```

9.3.3 NBAP PDU Content Definitions

```
   .
   .
   .

-- **************************************************************
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- **************************************************************
```

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

RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                  CRITICALITY ignore  TYPE D-RNTI                     PRESENCE optional } |
    { ID id-CN-PS-DomainIdentifier          CRITICALITY ignore  TYPE CN-PS-DomainIdentifier      PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier          CRITICALITY ignore  TYPE CN-CS-DomainIdentifier      PRESENCE optional } |
    { ID id-RL-InformationResponseList-RL-SetupRspFDD
                            CRITICALITY ignore  TYPE RL-InformationResponseList-RL-SetupRspFDD
                                                    PRESENCE mandatory  } |
    { ID id-UL-EbNoTarget               CRITICALITY ignore  TYPE UL-EbNoTarget              PRESENCE optional} |
    { ID id-DL-EbNoTarget               CRITICALITY ignore  TYPE DL-EbNoTarget              PRESENCE optional} |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics      PRESENCE optional },
    ...
}

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

RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-SetupRspFDD
                            CRITICALITY ignore  TYPE RL-InformationResponseItem-RL-SetupRspFDD  PRESENCE mandatory },
    ...
}

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

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

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

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

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

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

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

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

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

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

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

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

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

NeighbouringTDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    c-ID                        C-ID,
    cN-PS-DomainIdentifier              CN-PS-DomainIdentifier      OPTIONAL,
```

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

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

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

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

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

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

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    sAI                     SAI,
    ul-InterferenceLevel                ScaledUL-InterferenceLevel,
    maxUL-EbNo                  UL-EbNo,
    minUL-EbNo                  UL-EbNo,
    ul-EbNoTarget                   UL-EbNo                     OPTIONAL,
    dl-EbNoTarget                   DL-EbNo                     OPTIONAL,
    ul-CCTrCHInformation                UL-CCTrCHInformationList-RL-SetupRspTDD,
    dl-CCTrCHInformation                DL-CCTrCHInformationList-RL-SetupRspTDD,
```

```
    dCH-InformationResponse             DCH-InformationResponseList-RL-SetupRspTDD,
    neighbouringFDD-CellInformation         NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation         NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {RL-InformationResponse-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

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

-- ** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-SetupRspTDD

UL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    ul-DPCH-Information              UL-DPCH-InformationList-RL-SetupRspTDD,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

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

-- ** NOTE: Shall this be made as an IE container? **
UL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationItem-RL-SetupRspTDD

-- **NOTE: UL-DPCH-InformationItem-RL-SetupRspTDD and DL-DPCH-InformationItem-RL-SetupRspTDD
--         are currently similar. Combine them? **
UL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dPCH-ID                     DPCH-ID,
    tDD-ChannelisationCode              TDD-ChannelisationCode,
    burstType                   BurstType,
    midambleShift                   MidambleShift,
    timeSlot                    TimeSlot,
    tDD-PhysicalChannelOffset           TDD-PhysicalChannelOffset,
    repetitionPeriod                RepetitionPeriod,
    repetitionLength                RepetitionLength,
    tFCI-Presence                   TFCI-Presence,
    iE-Extensions                   ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-SetupRspTDD

DL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    dl-DPCH-Information              DL-DPCH-InformationList-RL-SetupRspTDD,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
```

```
    ...
}

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

-- ** NOTE: Shall this be made as an IE container? **
DL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationItem-RL-SetupRspTDD

DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dPCH-ID                     DPCH-ID,
    tDD-ChannelisationCode              TDD-ChannelisationCode,
    burstType                   BurstType,
    midambleShift                   MidambleShift,
    timeSlot                    TimeSlot,
    tDD-PhysicalChannelOffset           TDD-PhysicalChannelOffset,
    repetitionPeriod                RepetitionPeriod,
    repetitionLength                RepetitionLength,
    tFCI-Presence                   TFCI-Presence,
    iE-Extensions                   ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspTDD

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

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

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

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

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

```
    ...
}

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

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

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

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

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

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

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

SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    sAI                     SAI,
    ul-InterferenceLevel                ScaledUL-InterferenceLevel,
    dl-CodeInformation              DL-CodeInformationList-RL-SetupFailureFDD,
    sSDT-SupportIndicator               SSDT-SupportIndicator,
    neighbouringFDD-CellInformation         NeighbouringFDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    neighbouringTDD-CellInformation         NeighbouringTDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    ul-EbNoTarget                   UL-EbNo,
```

```
    maxUL-EbNo                  UL-EbNo,
    minUL-EbNo                  UL-EbNo,
    dl-EbNoTarget                   DL-EbNo,
    iE-Extensions                   ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}
-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-SetupFailureFDD

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

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

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

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

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

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

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

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

```
    cN-CS-DomainIdentifier              CN-CS-DomainIdentifier      OPTIONAL,
    uARFCN                      UARFCN,
    frameOffset                 FrameOffset         OPTIONAL,
    primaryScramblingCode               PrimaryScramblingCode,
    primaryCPICH-Power              PrimaryCPICH-Power      OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

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

   .
   .
   .

-- **************************************************************
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- **************************************************************

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

```
}

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

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

RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-AdditionRspFDD
                            CRITICALITY ignore  TYPE RL-InformationResponseItem-RL-AdditionRspFDD   PRESENCE mandatory   },
    ...
}

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

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

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

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

```
}

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

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

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

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

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

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

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

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

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

```
    pCCPCH-Power                PCCPCH-Power,
    iE-Extensions               ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

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

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

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

-- ** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-AdditionRspTDD

UL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    ul-DPCH-Information              UL-DPCH-InformationList-RL-AdditionRspTDD,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

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

-- ** NOTE: Shall this be made as an IE container? **
UL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationItem-RL-AdditionRspTDD

UL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                     DPCH-ID,
    tDD-ChannelisationCode              TDD-ChannelisationCode,
    burstType                   BurstType,
    midambleShift                   MidambleShift,
    timeSlot                    TimeSlot,
    offset                      Offset,
    tDD-PhysicalChannelOffset           TDD-PhysicalChannelOffset,
    repetitionPeriod                RepetitionPeriod,
    repetitionLength                RepetitionLength,
    tFCI-Presence                   TFCI-Presence,
    iE-Extensions                   ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-AdditionRspTDD

DL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    dl-DPCH-Information              DL-DPCH-InformationList-RL-AdditionRspTDD,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

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

-- ** NOTE: Shall this be made as an IE container? **
```

```
DL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationItem-RL-AdditionRspTDD

DL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                     DPCH-ID,
    tDD-ChannelisationCode              TDD-ChannelisationCode,
    burstType                   BurstType,
    midambleShift                   MidambleShift,
    timeSlot                    TimeSlot,
    tDD-PhysicalChannelOffset           TDD-PhysicalChannelOffset,
    repetitionPeriod                RepetitionPeriod,
    repetitionLength                RepetitionLength,
    tFCI-Presence                   TFCI-Presence,
    iE-Extensions                   ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

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

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

```
}

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

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

-- **************************************************************
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- **************************************************************

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

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

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

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

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

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

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

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

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

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

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

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

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

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

DCH-InformationResponseItem-RL-AdditionFailureFDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    bindingID                   BindingID,
    transportLayerAddress               TransportLayerAddress,
```

```
    iE-Extensions                   ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

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

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

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

RadioLinkAdditionFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

.
.
.

9.3.4 Information Element Definitions

```
-- **************************************************************
--
-- Information Element Definitions
--
-- **************************************************************
   .
   .
   .

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

-- PCCPCH Power unit dBm
-- PCCPCH Power step 0.1dBm
PCCPCH-power ::= INTEGER (-150..400)

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

   .
   .
   .
```

3GPP TSG-RAN Meeting #7
Madrid, Spain, 13 - 15 March 2000

***Document* R3-000254**
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

25.423	**CR**	**004**	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

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

for approval [X]
for information [ ]

strategic [ ]
non-strategic [ ]
(for SMG use only)

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

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

Source: TSG-RAN WG3 **Date:** Jan 18, 2000

Subject: Editorial changes to 25.423

Work item:

Category: *(only one category shall be marked with an X)*

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

Release:

Phase 2	[ ]
Release 96	[ ]
Release 97	[ ]
Release 98	[ ]
Release 99	[X]
Release 00	[ ]

Reason for change: This CR proposes some editorial changes to 25.423

Clauses affected: 8.3.1.2, 8.3.1.3, 8.3.4.2, 9.1.5.1

Other specs affected:

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

Other comments:


help.doc

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

8.3.1.2 Successful Operation

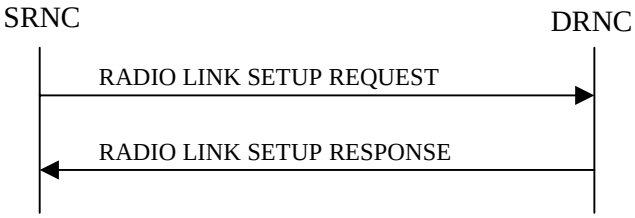

Figure 1: Radio Link Setup procedure: Successful Operation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[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 of the RL.]

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

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

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

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

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

8.3.1.3 Unsuccessful Operation

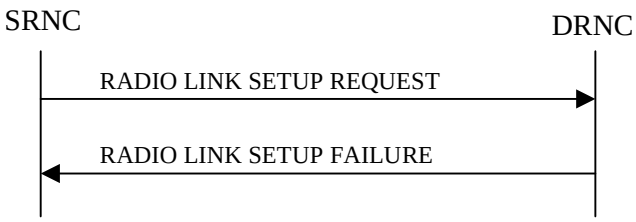

Figure 2: Radio Link Setup procedure: Unsuccessful Operation

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

Typical cause values are:

Radio Network Layer Causes:

- [FDD - UL Scrambling Code Already in Use]
- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- [FDD - Macrodiversity Combining not Possible]
- Requested Configuration not Supported

- Cell not Available
- Power Level not Supported

Transport Layer Causes:

- Transport Link Failure

Protocol Causes:

- Transaction not Allowed

Miscellaneous Causes:

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

8.3.4.2 Successful Operation

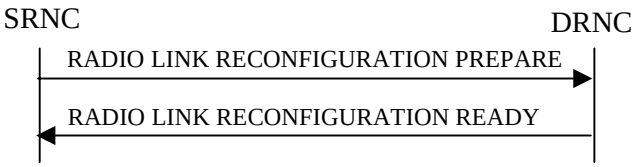

Figure 3: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

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

Upon reception, the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

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

DCH Modification :

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

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

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Frame Handling Priority* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

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

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

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

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

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

DCH Addition:

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

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

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

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

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

The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

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

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

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

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

DCH Deletion:

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

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

Physical Channel Modification:

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

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

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

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

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

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

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

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

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

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

SSDT Activation/Deactivation:

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

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

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

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

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

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

~~a) DL DPCH Group~~

~~b) UL DPCH Group~~

~~c) TDD Physical Channel Offset, *Repetition* Length, and TFCI Presence IEs as part of the DL DPCH Group~~

~~d) TDD Physical Channel Offset, *Repetition* Length, and TFCI Presence IEs as part of the UL DPCH Group.]~~

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

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

9.1.5.1 FDD Message

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

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

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Madrid, Spain, 13 - 15 March 2000

Document R3-000255
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

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

25.423	CR	010	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG RAN #7	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

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

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

Source: TSG-RAN WG3 **Date:** 00.01.24

Subject: Changing Eb/N0 to SIR. This an update of contribution (00)0011, now extended with TDD changes.

Work item:

Category: *(only one category shall be marked with an X)*

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

Release:

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

Reason for change: To align with the TSG RAN WG1 specifications, see also R3-000009.

Clauses affected: 8.3.1; 8.3.2; 8.3.4; 8.3.7; 9.1.3; 9.1.4; 9.1.5; 9.1.6; 9.1.7;9.1.11; 9.1.12; 9.1.17; 9.1.38; 9.2.1.18; 9.2.1.57; 9.2.2.37; 9.2.2.38

Other specs affected:

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

Other comments:


help.doc

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

8.3.1 Radio Link Setup

8.3.1.1 General

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

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

8.3.1.2 Successful Operation

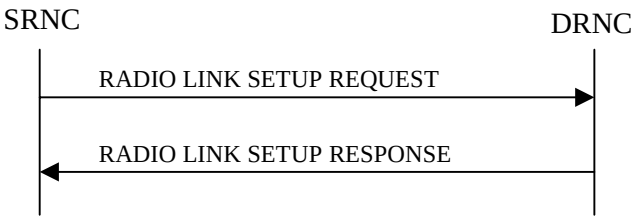

Figure 1: Radio Link Setup procedure: Successful Operation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

8.3.2 Radio Link Addition

8.3.2.1 General

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

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

8.3.2.2 Successful Operation

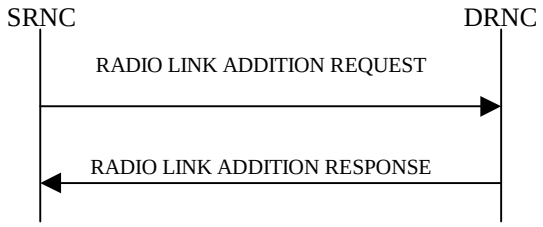

Figure 2: Radio Link Addition procedure: Successful Operation

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

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

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

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

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

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

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

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

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

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

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

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

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

The DRNC shall also provide the configured uplink Maximum ~~Eb/No~~ SIR and UL Minimum ~~Eb/No~~ 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.

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

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

8.3.4 Synchronised Radio Link Reconfiguration Preparation

8.3.4.1 General

The Synchronised Radio Link Reconfiguration Preparation procedure is used to prepare a new configuration of all Radio Links related to one UE-UTRAN connection within a DRNS.

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

8.3.4.2 Successful Operation

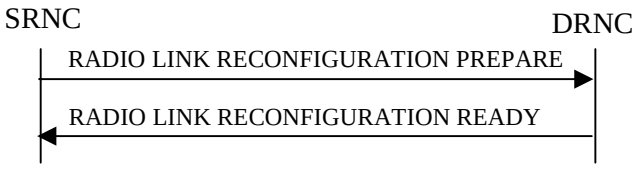

Figure 3: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

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

Upon reception, the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

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

DCH Modification :

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

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

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Frame Handling Priority* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

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

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

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

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

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

DCH Addition:

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

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

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

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

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

The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

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

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

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

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

DCH Deletion:

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

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

Physical Channel Modification:

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

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

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

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

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

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

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

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

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

FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *UL SIR Target* IE, the DRNS shall set the UL inner loop power control to the UL SIR target when the new configuration is being used.]

SSDT Activation/Deactivation:

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

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

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

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

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

[Editor's note: Which information in the RL RECONFIGURATION PREPARE message triggers the DRNC to include any of the following *Optional* TDD information?:
a) DL DPCH Group
b) UL DPCH Group
c) TDD Physical Channel Offset, *Repetition* Length, and TFCI Presence IEs as part of the DL DPCH Group
d) TDD Physical Channel Offset, *Repetition* Length, and TFCI Presence IEs as part of the UL DPCH Group.]

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

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

8.3.7 Unsynchronised Radio Link Reconfiguration

8.3.7.1 General

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

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

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

8.3.7.2 Successful Operation

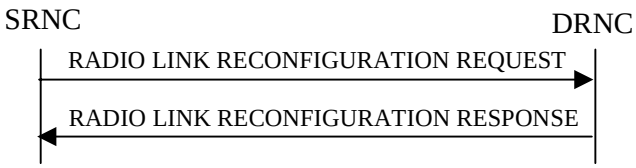

Figure 4: Unsynchronised Radio Link Reconfiguration procedure, Successful Operation

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

Upon reception, the DRNS shall modify the configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

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

DCH Modification:

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

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

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Frame Handling Priority* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

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

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

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

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

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

DCH Addition:

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

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

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

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

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

The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *RLC Mode* IE, the DRNS may use this information to optimise the power control.

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

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

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

DCH Deletion:

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

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

Physical Channel Modification:

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (UL)* IE, the DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (DL)* IE, the DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

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

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

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

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

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

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

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

9.1.3 RADIO LINK SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
S-RNTI	M			
D-RNTI	O			
Allowed Queuing time	O			
UL DPCH Information		*1*		
UL Scrambling Code	M			
Min UL Channelisation Code Length	M			
Max Number of UL DPDCHs	C – CodeLen			
Puncture Limit	M			For the UL.
UL Transport Format Combination Set	M			
UL DPCCH Slot Format	M			
UL ~~Eb/No~~ SIR Target	O			
Diversity mode	M			
D Field Length	C-FB			
SSDT Cell ID Length	O			
S Field Length	O			
Mean Bit Rate	O			For the UL.
DL DPCH Information		*1*		
Transport Format Combination Set	M			
DL DPCH Slot Format	M			
TFCI Signalling Mode	M			
TFCI Presence	C-SlotFormat			
Multiplexing Position	M			
Power Offset Information		*1*		
PO1	M		Power Offset	Power offset for the TFCI bits.
PO2	M		Power Offset	Power offset for the TPC bits.
PO3	M		Power Offset	Power offset for the pilot bits.
TPC Downlink Step Size	M			
Mean Bit Rate	O			For the DL.
DCH Information		*1..<maxnoofDCHs>*		
DCH ID	M			
DCH Combination Ind	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
BLER	M			For the UL.
BLER	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			

RL Information		*1…<maxnoofRLs>*		
RL ID	M			
C-ID	M			
Frame Offset	M			
Chip Offset	M			
Propagation Delay	O			
Diversity Control Field	C – NotFirstRL			
Initial DL TX Power	O		DL Power	
Primary CPICH Ec/Io	O			
SSDT Cell ID	O			

Condition	Explanation
CodeLen	This IE is present only "f "Min UL Channelisation Code len"th" equals to 4
FB	This IE is present only if Feed Back mode diversity is activated.
SlotFormat	This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16.
NotFirstRL	This IE is present only if the RL is not the first one in the **RL Information**.

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

9.1.4 RADIO LINK SETUP RESPONSE

9.1.4.1 FDD Message

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

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

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

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

9.1.4.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
D-RNTI	O			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
RL Information Response		*1*		
RL ID	M			
SAI	M			
UL Interference Level	M			
Maximum Uplink ~~Eb/No~~SIR	M		Uplink ~~Eb/No~~SIR	
Minimum Uplink ~~Eb/No~~SIR	M		Uplink ~~Eb/No~~SIR	
Uplink ~~Eb/No~~ SIR Target	O		Uplink ~~Eb/No~~SIR	
Downlink ~~Eb/No~~ SIR Target	O			
UL CCTrCH Information		*1..<maxnoofCCTrCHs>*		
CCTrCH ID	M			
UL DPCH Information		*1..<MaxnoofDPCHs>*		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			

Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DL CCTrCH Information		*1..<maxnoofCCTrCHs>*		
CCTrCH ID	M			
DL DPCH Information		*1..<MaxnoofDPCHs>*		
DPCH ID	M			
TDD Channelisation Code	M			
Burst Type	M			
Midamble Shift	M			
Time Slot	M			
TDD Physical Channel Offset	M			
Repetition Period	M			
Repetition Length	M			
TFCI Presence	M			
DCH Information Response		*1..<maxnoofDCHs>*		Only one DCH per set of co-ordinated DCHs shall be included.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Neighbouring FDD Cell Information	O	*0..<maxnoofFDDneighbours>*		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Primary Scrambling Code	M			
Primary CPICH Power	O			
Neighbouring TDD Cell Information	O	*0..<maxnoofTDDneighbours>*		
UC-Id	M			
CN PS Domain Identifier	O			
CN CS Domain Identifier	O			
UARFCN	M			
Frame Offset	O			
Cell Parameter ID	M			
Sync Case	M			
Time Slot	C-Case1			
PSCH Time Slot	C-Case2&3			
Criticality Diagnostics	O			

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

Range bound	Explanation
MaxnoofDPCHs	Maximum no. of DPCHs for one CCTrCH.
MaxnoofDCHs	Maximum no. of DCHs for one UE.
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell
MaxnoofCCTrCHs	Maximum no. of CCTrCH for one UE.

9.1.5 RADIO LINK SETUP FAILURE

9.1.5.1 FDD Message

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

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

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

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

9.1.6 RADIO LINK ADDITION REQUEST

9.1.6.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Transaction ID	M			
Uplink ~~Eb/No~~SIR Target	M		Uplink ~~Eb/No~~SIR	
RL Information		*1..<maxnoofRLs-1>*		
RL ID	M			
C-Id	M			
Frame Offset	M			
Chip Offset	M			
Diversity Control Field	M			
Primary CPICH Ec/Io	O			
SSDT Cell Identity	O			

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

9.1.7 RADIO LINK ADDITION RESPONSE

9.1.7.1 FDD Message

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

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

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

9.1.8 RADIO LINK ADDITION FAILURE

9.1.8.1 FDD Message

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

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

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

9.1.11 RADIO LINK RECONFIGURATION PREPARE

9.1.11.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
Allowed Queuing Time	O			
UL DPCH Information		*0..1*		
UL Scrambling code	O			
UL SIR Target	O		Uplink SIR	
Min UL Channelisation Code Length	O			
Max Number of UL DPDCHs	C – CodeLen			
Puncture Limit	O			For the UL.
TFCS	O			TFCS for the UL.
UL DPCCH Slot Format	O			
SSDT Cell Identity Length	O			
S-Field Length	O			
Mean Bit Rate	O			For the UL.
DL DPCH Information		*0..1*		
TFCS	O			TFCS for the DL.
DL DPCH Slot Format	O			
TFCI Signalling Mode	O			
TFCI Presence	C-SlotFormat			
MultiplexingPosition	O			
Mean Bit Rate	O			For the DL.
DCHs to Modify		*0..<maxnoofDCHs>*		
DCH ID	M			
Transport Format Set	O			For the UL.
Transport Format Set	O			For the DL.
Allocation/Retention Priority	O			
Frame Handling Priority	O			
UL FP Mode	O			
ToAWS	O			
ToAWE	O			
DCHs to Add		*0..<maxnoofDCHs>*		
DCH ID	M			
DCH Combination Indicator	O			
RLC Mode	M			
Transport Format Set	M			For the UL.
Transport Format Set	M			For the DL.
BLER	M			For the UL.
BLER	M			For the DL.
Allocation/Retention Priority	M			
Frame Handling Priority	M			
Payload CRC Presence Indicator	M			
UL FP Mode	M			
ToAWS	M			
ToAWE	M			
DCHs to Delete		*0..<maxnoofDCHs>*		
DCH ID	M			

RL Information		*0..<maxnoofRLs>*		
RL ID	M			
SSDT Indication	O			
SSDT Cell Identity	C - SSDTIndON			

Condition	Explanation
SSDTIndON	The IE may be present if the SSDT Indication is set to 'SSDT Active in the UE'.
CodeLen	This IE is present only if "Min UL Channelisation Code length" equals to 4.
SlotFormat	This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16.

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofRLs	Maximum number of RLs for a UE.

9.1.12 RADIO LINK RECONFIGURATION READY

9.1.12.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
RL Information Response		*0..<maxnoofRLs>*		
RL ID	M			
Maximum Uplink ~~Eb/No~~SIR	O		Uplink ~~Eb/No~~SIR	
Minimum Uplink ~~Eb/No~~SIR	O		Uplink ~~Eb/No~~SIR	
Downlink Code Information		*0..<maxnoofDLCodes>*		
DL Scrambling Code	M			
DL Channelisation Code	M			
DCH to be Added		*0..<maxnoofDCHs>*		Only one DCH per set of co-ordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DCH to be Modified		*0..<maxnoofDCHs>*		Only one DCH per set of co-ordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Criticality Diagnostics	O			

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs.
MaxnoofRLs	Maximum number of RLs for a UE.
MaxnoofDLCodes	Maximum number of Downlink Channelisation Codes.

9.1.17 RADIO LINK RECONFIGURATION RESPONSE

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction ID	M			
RL Information Response		*0..<maxnoofRLs>*		
RL ID	M			
Maximum Uplink ~~Eb/No~~SIR	O		Uplink ~~Eb/No~~SIR	
Minimum Uplink ~~Eb/No~~SIR	O		Uplink ~~Eb/No~~SIR	
DCH to be Added		*0..<maxnoofDCHs>*		Only one DCH per set of co-ordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
DCH to be Modified		*0..<maxnoofDCHs>*		Only one DCH per set of co-ordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs.
DCH ID	M			
Binding ID	M			
Transport Layer Address	M			
Criticality Diagnostics	O			

Range Bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofRLs	Maximum number of RLs for a UE.

9.1.38 COMPRESSED MODE PREPARE [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type				
Transaction ID				
TGP1	M		Gap Period	Applies only to the first and all the subsequent odd gaps if TGP2 is present, see ref. [**Error! Bookmark not defined.**].
TGP2	O		Gap Period	
TGL	M			
TGD	M			
PD	M			
UL/DL Compressed Mode Selection	M			
Compressed Mode Method	M			
Gap Position Mode	M			
SN	C-Flex			
Downlink Frame Type	M			
Scrambling Code Change	C-SF/2			
Power Control Mode	M			
Power Resume Mode	M			
Uplink Delta ~~Eb/No~~SIR	M			
Uplink Delta ~~Eb/No~~SIR After	M			

Condition	Explanation
Flex	This IE is present only if "Gap position Mode" equals to 'flexible'.
SF/2	This IE is present only if Compressed Mode Method equals toSF/2

9.2.1.18 Downlink ~~Eb/No~~SIR Target

It is the Target Downlink ~~Eb/No~~SIR that shall be used as initial value by the UE.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Downlink ~~Eb/No~~SIR Target			Uplink ~~Eb/No~~SIR	

9.2.1.57 Uplink ~~Eb/No~~SIR

The UL ~~Eb/No~~SIR indicates a received UL ~~Eb/No~~SIR.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Uplink ~~Eb/No~~SIR			~~INTEGER (0..255)~~ENUMERATED (-8.2 .. 17.3)	~~Resolution is~~ Step 0.1 dB~~, range 0-25.5 dB.~~

9.2.2.37 Uplink Delta ~~Eb/No~~SIR

The delta in uplink ~~Eb/No~~SIR that shall be added to the ~~Eb/No~~SIR target used during compressed mode frames.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Uplink Delta ~~Eb/No~~SIR			Enumerated (-6..+10dB)	Step 0.1 dB.

9.2.2.38 Uplink Delta ~~Eb/No~~SIR After

The delta in uplink ~~Eb/No~~SIR target that shall be added to the ~~Eb/No~~SIR target used one frame after the compressed mode frames.

Information Element/Group Name	Presence	Range	IE type and reference	Semantics description
Uplink Delta ~~Eb/No~~SIR after			Enumerated (-6..+10dB)	Step 0.1 dB.

9.3.3 PDU Definitions

```
*****   CR Editors Note: Text have been removed.

BEGIN

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

IMPORTS
    AllocationRetentionPriority,
    AllowedQueuingTime,
    BLER,
    BindingID,
    BurstType,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CPICH-EcIo,
    CPICH-Power,
    Cause,
    CellParameterID,
    ChipOffset,
    CompressedModeMethod,
    CriticalityDiagnostics,
    D-FieldLength,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-CombinationInd,
    DCH-ID,
    DL-ChannelisationCode,
    DL-DPCCH-SlotFormat,
    DL-DPCH-SlotNumber,
    DL-EbNoSIR,
    DL-EbNoSIRTarget,
    DL-FrameType,
    DL-Power,
    DL-ScramblingCode,
    DPCH-ID,
    DRX-Parameter,
    DedicatedMeasurementValue,
    DiversityControlField,
    DiversityMode,
```

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

```
    SecondaryCCPCH-SlotFormat,
    SyncCase,
    TDD-ChannelisationCode,
    TDD-PhysicalChannelOffset,
    TFCI-Coding,
    TFCI-Presence,
    TFCI-SignallingMode,
    TGD,
    TGL,
    TPC-StepSize,
    TimeSlot,
    ToAWE,
    ToAWS,
    TransportBearerID,
    TransportBearerRequestIndicator,
    TransportFormatCombinationSet,
    TransportFormatSet,
    TransportLayerAddress,
    UARFCN,
    UC-ID,
    UL-DL-CompressedModeSelection,
    UL-DPCCH-SlotFormat,
    UL-EbNoSIR,
    UL-EbNoSIRTarget,
    UL-FP-Mode,
    UL-ScramblingCode,
    URA-ID
FROM RNSAP-IEs

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

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

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

```
    id-DL-DPCH-Information,
    id-DL-DPCH-Information-RL-SetupReqFDD,
    id-DL-DPCH-InformationList-PhyChReconfRqstTDD,
    id-DL-DPCH-InformationList-RL-ReconfReadyTDD,
    id-DL-~~EbNo~~SIRTarget,
    id-DL-FrameType,
    id-DL-MeanBitRate,
    id-DL-ReferencePowerInformation-DL-PC-Rqst,
    id-DRX-Parameter,
    id-DedicatedMeasurementObjectType-DM-Rprt,
    id-DedicatedMeasurementObjectType-DM-Rqst,
    id-DedicatedMeasurementObjectType-DM-Rspns,
    id-FACH-InfoForOptionalGroupS-CCPCH,
    id-FACH-InfoForOptionalS-CCPCH,
    id-FACH-InfoForS-CCPCH-CoupledToPRACH,
    id-GapPositionMode,
    id-L3-Information,
    id-MeasurementCharacteristics,
    id-MeasurementID,
    id-MultipleURAsIndicator,
    id-PD,
    id-PagingArea-PagingRqst,
    id-PowerControlMode,
    id-PowerResumeMode,
    id-ProcedureScope-DL-PC-Rqst,
    id-RANAP-RelocationInformation,
    id-RL-Information-PhyChReconfRqstFDD,
    id-RL-Information-PhyChReconfRqstTDD,
    id-RL-Information-RL-AdditionRqstFDD,
    id-RL-Information-RL-AdditionRqstTDD,
    id-RL-Information-RL-DeletionRqst,
    id-RL-Information-RL-FailureInd,
    id-RL-Information-RL-ReconfPrepFDD,
    id-RL-Information-RL-RestoreInd,
    id-RL-Information-RL-SetupReqFDD,
    id-RL-Information-RL-SetupReqTDD,
    id-RL-InformationItem-DM-Rprt,
    id-RL-InformationItem-DM-Rqst,
    id-RL-InformationItem-DM-Rspns,
    id-RL-InformationItem-RL-SetupReqFDD,
    id-RL-InformationList-RL-AdditionRqstFDD,
    id-RL-InformationList-RL-DeletionRqst,
    id-RL-InformationList-RL-FailureInd,
    id-RL-InformationList-RL-ReconfPrepFDD,
    id-RL-InformationList-RL-RestoreInd,
    id-RL-InformationResponse-RL-AdditionRspTDD,
    id-RL-InformationResponse-RL-ReconfReadyTDD,
    id-RL-InformationResponse-RL-SetupRspTDD,
    id-RL-InformationResponseItem-RL-AdditionRspFDD,
    id-RL-InformationResponseItem-RL-ReconfReadyFDD,
    id-RL-InformationResponseItem-RL-SetupRspFDD,
    id-RL-InformationResponseList-RL-AdditionRspFDD,
    id-RL-InformationResponseList-RL-ReconfReadyFDD,
```

```
    id-RL-InformationResponseList-RL-SetupRspFDD,
    id-RL-ReconfigurationFailure-RL-ReconfFail,
    id-RL-ReconfigurationFailureList-RL-ReconfFail,
    id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind,
    id-ReportCharacteristics,
    id-S-RNTI,
    id-SAI,
    id-SN,
    id-SRNC-ID,
    id-ScramblingCodeChange,
    id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
    id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,
    id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
    id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
    id-TGD,
    id-TGL,
    id-TGP1,
    id-TGP2,
    id-TransportBearerID,
    id-TransportBearerRequestIndicator,
    id-TransportLayerAddress,
    id-UC-ID,
    id-UL-CCTrCH-Information-RL-ReconfPrepTDD,
    id-UL-CCTrCH-Information-RL-ReconfRqstTDD,
    id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,
    id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD,
    id-UL-CCTrChInformationItem-RL-SetupReqTDD,
    id-UL-CCTrChInformationList-RL-SetupReqTDD,
    id-UL-DL-CompressedModeSelection,
    id-UL-DPCH-Information,
    id-UL-DPCH-Information-RL-SetupReqFDD,
    id-UL-DPCH-InformationList-PhyChReconfRqstTDD,
    id-UL-DPCH-InformationList-RL-ReconfReadyTDD,
    id-UL-Delta~~EbNo~~SIR,
    id-UL-Delta~~EbNo~~SIRAfter,
    id-UL-~~EbNo~~SIRTarget,
    id-UL-MeanBitRate,
    id-URA-ID,
    id-UnsuccessfulRL-InformationResponse,
    id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
    id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
    id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
    id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
    id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
FROM RNSAP-Constants;


*****  CR Editors Note: Text have been removed.

-- **************************************************************
--
-- RADIO LINK SETUP REQUEST FDD
--
```

```
-- **************************************************************

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

RadioLinkSetupRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI                  CRITICALITY ignore  TYPE S-RNTI                    PRESENCE mandatory } |
    { ID id-D-RNTI                  CRITICALITY ignore  TYPE D-RNTI                PRESENCE optional   } |
    { ID id-AllowedQueuingTime          CRITICALITY ignore  TYPE AllowedQueuingTime             PRESENCE optional  } |
    { ID id-UL-DPCH-Information-RL-SetupReqFDD  CRITICALITY ignore  TYPE UL-DPCH-Information-RL-SetupReqFDD     PRESENCE mandatory   } |
    { ID id-DL-DPCH-Information-RL-SetupReqFDD  CRITICALITY ignore  TYPE DL-DPCH-Information-RL-SetupReqFDD     PRESENCE mandatory   } |
    { ID id-DCH-Information-RL-SetupReqFDD      CRITICALITY ignore  TYPE DCH-InformationList-RL-SetupReqFDD     PRESENCE mandatory   } |
    { ID id-RL-Information-RL-SetupReqFDD       CRITICALITY ignore  TYPE RL-InformationList-RL-SetupReqFDD   PRESENCE mandatory   },
    ...
}

UL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    ul-ScramblingCode               UL-ScramblingCode,
    minUL-ChannelisationCodeLength          MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPCHs                 MaxNrOfUL-DPCHs         OPTIONAL
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 -- ,
    ul-PunctureLimit                PunctureLimit,
    ul-TransportFormatCombinationSet        TransportFormatCombinationSet,
    ul-DPCCH-SlotFormat             UL-DPCCH-SlotFormat,
    ul-~~EbNo~~SIRTarget                    UL-~~EbNo~~SIRTarget            OPTIONAL,
    diversityMode                   DiversityMode,
    d-FieldLength                   D-FieldLength           OPTIONAL
    -- This IE is present only if Feed Back mode diversity is activated -- ,
    sSDT-CellIdLength               SSDT-CellID-Length      OPTIONAL,
    s-FieldLength                   S-FieldLength           OPTIONAL,
    ul-meanBitRate                  MeanBitRate         OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {UL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    transportFormatCombinationSet           TransportFormatCombinationSet,
    dl-DPCH-SlotNumber              DL-DPCH-SlotNumber,
    tFCI-SignallingMode             TFCI-SignallingMode,
    tFCI-Presence                   TFCI-Presence           OPTIONAL
    -- This IE is present if Slot Format is from 12 to 16 --,
    multiplexingPosition                MultiplexingPosition,
    powerOffsetInformation              SEQUENCE {
        po1-ForTFCI-Bits                PowerOffset,
        po2-ForTPC-Bits                 PowerOffset,
        po3-ForPilotBits                PowerOffset,
```

```
        ...
    },
    dl-TPC-StepSize                 TPC-StepSize,
    meanBitRate                 MeanBitRate         OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationList-RL-SetupReqFDD          ::= DCH-IE-ContainerList { {DCH-InformationItemIEs-RL-SetupReqFDD} }

DCH-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationItem-RL-SetupReqFDD  CRITICALITY ignore  TYPE DCH-InformationItem-RL-SetupReqFDD   PRESENCE mandatory   },
    ...
}

DCH-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    dCH-CombinationInd              DCH-CombinationInd      OPTIONAL,
    rLC-Mode                    RLC-Mode,
    ul-transportFormatSet               TransportFormatSet,
    dl-transportFormatSet               TransportFormatSet,
    ul-BLER                     BLER,
    dl-BLER                     BLER,
    allocationRetentionPriority         AllocationRetentionPriority,
    frameHandlingPriority               FrameHandlingPriority,
    payloadCRC-PresenceIndicator            PayloadCRC-PresenceIndicator,
    ul-FP-Mode                  UL-FP-Mode,
    toAWS                       ToAWS,
    toAWE                       ToAWE,
    iE-Extensions                   ProtocolExtensionContainer { {DCH-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-SetupReqFDD           ::= RL-IE-ContainerList { {RL-InformationItemIEs-RL-SetupReqFDD} }

RL-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-SetupReqFDD   CRITICALITY ignore  TYPE RL-InformationItem-RL-SetupReqFDD      PRESENCE mandatory   },
    ...
}

RL-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    uC-ID                       C-ID,
    frameOffset                 FrameOffset,
    chipOffset                  ChipOffset,
```

```
    propagationDelay                PropagationDelay        OPTIONAL,
    diversityControlField               DiversityControlField       OPTIONAL
    -- This IE is present only if the RL is not the first one in the RL-InformationList-RL-SetupReqFDD --,
    dl-InitialTX-Power              DL-Power            OPTIONAL
    -- Initial DL transmission power -- ,
    cPICH-EcIo                  CPICH-EcIo          OPTIONAL,
    sSDT-CellID                 SSDT-CellID         OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {RL-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

*****  CR Editors Note: Text have been removed.

-- **************************************************************
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- **************************************************************

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

RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                  CRITICALITY ignore  TYPE D-RNTI                     PRESENCE optional  } |
    { ID id-CN-PS-DomainIdentifier          CRITICALITY ignore  TYPE CN-PS-DomainIdentifier      PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier          CRITICALITY ignore  TYPE CN-CS-DomainIdentifier      PRESENCE optional } |
    { ID id-RL-InformationResponseList-RL-SetupRspFDD
                            CRITICALITY ignore  TYPE RL-InformationResponseList-RL-SetupRspFDD
                                                    PRESENCE mandatory  } |
    { ID id-UL-EbNoSIRTarget                CRITICALITY ignore  TYPE UL-EbNoSIRTarget            PRESENCE optional } |
    { ID id-DL-EbNoSIRTarget                CRITICALITY ignore  TYPE DL-EbNoSIRTarget            PRESENCE optional } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics      PRESENCE optional },
    ...
}

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

RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-SetupRspFDD
                            CRITICALITY ignore  TYPE RL-InformationResponseItem-RL-SetupRspFDD  PRESENCE mandatory },
    ...
}
```

```
RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    sAI                     SAI,
    ul-InterferenceLevel                ScaledUL-InterferenceLevel,
    dl-CodeInformation              DL-CodeInformationList-RL-SetupRspFDD,
    sSDT-SupportIndicator               SSDT-SupportIndicator,
    maxUL-EbNoSIR                   UL-EbNoSIR,
    minUL-EbNoSIR                   UL-EbNoSIR,
    neighbouringFDD-CellInformation         NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation         NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

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

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

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

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

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

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

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

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

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

RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

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

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

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

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

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

-- ** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-SetupRspTDD

UL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    ul-DPCH-Information             UL-DPCH-InformationList-RL-SetupRspTDD,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationItem-RL-SetupRspTDD

-- **NOTE: UL-DPCH-InformationItem-RL-SetupRspTDD and DL-DPCH-InformationItem-RL-SetupRspTDD
--         are currently similar. Combine them? **
UL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dPCH-ID                     DPCH-ID,
    tDD-ChannelisationCode              TDD-ChannelisationCode,
    burstType                   BurstType,
    midambleShift                   MidambleShift,
    timeSlot                    TimeSlot,
    tDD-PhysicalChannelOffset           TDD-PhysicalChannelOffset,
    repetitionPeriod                RepetitionPeriod,
    repetitionLength                RepetitionLength,
    tFCI-Presence                   TFCI-Presence,
    iE-Extensions                   ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-SetupRspTDD

DL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    dl-DPCH-Information              DL-DPCH-InformationList-RL-SetupRspTDD,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

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

-- ** NOTE: Shall this be made as an IE container? **
DL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationItem-RL-SetupRspTDD

DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dPCH-ID                     DPCH-ID,
    tDD-ChannelisationCode              TDD-ChannelisationCode,
    burstType                   BurstType,
    midambleShift                   MidambleShift,
    timeSlot                    TimeSlot,
    tDD-PhysicalChannelOffset           TDD-PhysicalChannelOffset,
    repetitionPeriod                RepetitionPeriod,
    repetitionLength                RepetitionLength,
    tFCI-Presence                   TFCI-Presence,
```

```
    iE-Extensions                   ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspTDD

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

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

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


*****  CR Editors Note: Text have been removed.

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

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

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

```
}

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

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

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

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

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

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

SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    sAI                     SAI,
    ul-InterferenceLevel                ScaledUL-InterferenceLevel,
    dl-CodeInformation              DL-CodeInformationList-RL-SetupFailureFDD,
    sSDT-SupportIndicator               SSDT-SupportIndicator,
    neighbouringFDD-CellInformation         NeighbouringFDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    neighbouringTDD-CellInformation         NeighbouringTDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    ul-EbNoSIRTarget                    UL-EbNoSIR,
    maxUL-EbNoSIR                   UL-EbNoSIR,
    minUL-EbNoSIR                   UL-EbNoSIR,
    dl-EbNoSIRTarget                    DL-EbNoSIR,
    iE-Extensions                   ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}
-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-SetupFailureFDD

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

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

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

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

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

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

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

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

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

```
}

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

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

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

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

***** CR Editors Note: Text have been removed.

-- **********************************************************
--
-- RADIO LINK ADDITION REQUEST FDD
--
-- **********************************************************

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

RadioLinkAdditionRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-~~EbNo~~SIRTarget               CRITICALITY ignore  TYPE UL-~~EbNo~~SIR                 PRESENCE mandatory } |
    { ID id-RL-InformationList-RL-AdditionRqstFDD   CRITICALITY ignore  TYPE RL-InformationList-RL-AdditionRqstFDD  PRESENCE mandatory   },
    ...
}

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

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

```
}

RL-Information-RL-AdditionRqstFDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    c-ID                        C-ID,
    frameOffset                 FrameOffset,
    chipOffset                  ChipOffset,
    diversityControlField               DiversityControlField,
    primaryCPICH-EcNo               PrimaryCPICH-EcNo       OPTIONAL,
    sSDT-CellID                 SSDT-CellID         OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

*****  CR Editors Note: Text have been removed.


-- **************************************************************
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- **************************************************************

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

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

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

RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-AdditionRspFDD
                            CRITICALITY ignore  TYPE RL-InformationResponseItem-RL-AdditionRspFDD    PRESENCE mandatory   },
    ...
}
```

```
RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    sAI                     SAI,
    ul-InterferenceLevel                ScaledUL-InterferenceLevel,
    dl-CodeInformation              DL-CodeInformationList-RL-AdditionRspFDD,
    sSDT-SupportIndicator               SSDT-SupportIndicator,
    maxUL-EbNoSIR                   UL-EbNoSIR,
    minUL-EbNoSIR                   UL-EbNoSIR,
    neighbouringFDD-CellInformation         NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation         NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

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

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

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

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

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

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

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

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

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

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

***** CR Editors Note: Text have been removed.

```
-- **************************************************************
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- **************************************************************

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

```
    ...
}

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

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

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

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

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

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

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

*****  CR Editors Note: Text have been removed.


-- **************************************************************
--
```

```
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- **************************************************************

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

RadioLinkReconfigurationPrepareFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY ignore  TYPE AllowedQueuingTime             PRESENCE mandatory  } |
    { ID id-UL-DPCH-Information         CRITICALITY ignore  TYPE UL-DPCH-Information            PRESENCE optional   } |
    { ID id-DL-DPCH-Information         CRITICALITY ignore  TYPE DL-DPCH-Information            PRESENCE optional   } |
    { ID id-DCH-ModifyList-RL-ReconfPrepFDD     CRITICALITY ignore  TYPE DCH-ModifyList-RL-ReconfPrepFDD     PRESENCE optional } |
    { ID id-DCH-AddList-RL-ReconfPrepFDD        CRITICALITY ignore  TYPE DCH-AddList-RL-ReconfPrepFDD     PRESENCE optional } |
    { ID id-DCH-DeleteList-RL-ReconfPrepFDD     CRITICALITY ignore  TYPE DCH-DeleteList-RL-ReconfPrepFDD     PRESENCE optional } |
    { ID id-RL-InformationList-RL-ReconfPrepFDD CRITICALITY ignore  TYPE RL-InformationList-RL-ReconfPrepFDD  PRESENCE mandatory   },
    ...
}

UL-DPCH-Information ::= SEQUENCE {
    ul-ScramblingCode               UL-ScramblingCode       OPTIONAL,
    ul-SIRTarget                    UL-SIR      OPTIONAL,
    minUL-ChannelisationCodeLength          MinUL-ChannelisationCodeLength  OPTIONAL,
    maxNrOfUL-DPDCHs                MaxNrOfUL-DPCHs         OPTIONAL
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 --,
    ul-PunctureLimit                PunctureLimit           OPTIONAL,
    tFCS                        TransportFormatCombinationSet   OPTIONAL,
    ul-DPCCH-SlotFormat             UL-DPCCH-SlotFormat     OPTIONAL,
    sSDT-CellIDLength               SSDT-CellID-Length      OPTIONAL,
    s-FieldLength                   S-FieldLength           OPTIONAL,
    meanBitRate                 MeanBitRate         OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {UL-DPCH-Information-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information ::= SEQUENCE {
    tFCS                        TransportFormatCombinationSet   OPTIONAL,
    dl-DPCCH-SlotFormat             DL-DPCCH-SlotFormat     OPTIONAL,
    tFCI-SignallingMode             TFCI-SignallingMode     OPTIONAL,
    tFCI-Presence                   TFCI-Presence           OPTIONAL
    -- This IE is present if Slot Format is from 12 to 16 --,
    multiplexingPosition                MultiplexingPosition        OPTIONAL,
    meanBitRate                 MeanBitRate         OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DL-DPCH-Information-ExtIEs} } OPTIONAL,
    ...
}
```

```
DL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfPrepFDD             ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfPrepFDD-IEs} }

DCH-Modify-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfPrepFDD     CRITICALITY ignore  TYPE DCH-ModifyItem-RL-ReconfPrepFDD     PRESENCE mandatory   },
    ...
}

DCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    ul-TransportformatSet               TransportFormatSet      OPTIONAL,
    dl-TransportformatSet               TransportFormatSet      OPTIONAL,
    allocationRetentionPriority         AllocationRetentionPriority     OPTIONAL,
    frameHandlingPriority               FrameHandlingPriority       OPTIONAL,
    ul-FP-Mode                  UL-FP-Mode          OPTIONAL,
    toAWS                       ToAWS               OPTIONAL,
    toAWE                       ToAWE               OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfPrepFDD                ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfPrepFDD-IEs} }

DCH-Add-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfPrepFDD        CRITICALITY ignore  TYPE DCH-AddItem-RL-ReconfPrepFDD     PRESENCE mandatory   },
    ...
}

DCH-AddItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    rLC-Mode                    RLC-Mode,
    dCH-CombinationInd              DCH-CombinationInd      OPTIONAL,
    ul-TransportformatSet               TransportFormatSet,
    dl-TransportformatSet               TransportFormatSet,
    ul-BLER                     BLER,
    dl-BLER                     BLER,
    allocationRetentionPriority         AllocationRetentionPriority,
    frameHandlingPriority               FrameHandlingPriority,
    payloadCRC-PresenceIndicator            PayloadCRC-PresenceIndicator,
    ul-FP-Mode                  UL-FP-Mode,
    toAWS                       ToAWS,
    toAWE                       ToAWE,
    iE-Extensions                   ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
DCH-AddItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepFDD             ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfPrepFDD-IEs} }

DCH-Delete-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-DeleteItem-RL-ReconfPrepFDD     CRITICALITY ignore  TYPE DCH-DeleteItem-RL-ReconfPrepFDD     PRESENCE mandatory   },
    ...
}

DCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

RL-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    sSDT-Indication                 SSDT-Indication     OPTIONAL,
    sSDT-CellIdentity               SSDT-CellID     OPTIONAL
    -- The IE may be present if the sSDT-Indication is set to 'sSDT-active-in-the-UE' --,
    iE-Extensions                   ProtocolExtensionContainer { {RL-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

*****  CR Editors Note: Text have been removed.


-- **************************************************************
--
-- RADIO LINK RECONFIGURATION READY FDD
--
-- **************************************************************
```

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

RadioLinkReconfigurationReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseList-RL-ReconfReadyFDD
                           CRITICALITY ignore  TYPE RL-InformationResponseList-RL-ReconfReadyFDD
                                                    PRESENCE optional   } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics      PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-ReconfReadyFDD        ::= RL-IE-ContainerList { {RL-InformationResponse-RL-ReconfReadyFDD-IEs} }

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

RL-InformationResponseItem-RL-ReconfReadyFDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    max-UL-~~EbNo~~SIR              UL-~~EbNo~~SIR,
    min-UL-~~EbNo~~SIR              UL-~~EbNo~~SIR,
    dCHsToBeAdded               DCH-AddList-RL-ReconfReadyFDD          OPTIONAL,
    dCHsToBeModified            DCH-ModifyList-RL-ReconfReadyFDD       OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
    ...
}

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

DCH-AddList-RL-ReconfReadyFDD               ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfReadyFDD-IEs} }

DCH-Add-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfReadyFDD       CRITICALITY ignore  TYPE DCH-AddItem-RL-ReconfReadyFDD    PRESENCE mandatory   },
    ...
}

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

```
DCH-AddItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfReadyFDD           ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfReadyFDD-IEs} }

DCH-Modify-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfReadyFDD    CRITICALITY ignore  TYPE DCH-ModifyItem-RL-ReconfReadyFDD    PRESENCE mandatory   },
    ...
}

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

DCH-ModifyItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

*****  CR Editors Note: Text have been removed.

-- **************************************************************
--
-- COMPRESSED MODE PREPARE
--
-- **************************************************************

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

CompressedModePrepare-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-TGP1                    CRITICALITY ignore  TYPE GapPeriod                PRESENCE mandatory } |
    { ID id-TGP2                    CRITICALITY ignore  TYPE GapPeriod                PRESENCE optional  } |
    { ID id-TGL                 CRITICALITY ignore  TYPE TGL                    PRESENCE mandatory   } |
    { ID id-TGD                 CRITICALITY ignore  TYPE TGD                    PRESENCE mandatory   } |
    { ID id-PD                  CRITICALITY ignore  TYPE PD                     PRESENCE mandatory   } |
    { ID id-UL-DL-CompressedModeSelection       CRITICALITY ignore  TYPE UL-DL-CompressedModeSelection    PRESENCE mandatory   } |
    { ID id-CompressedModeMethod            CRITICALITY ignore  TYPE CompressedModeMethod        PRESENCE mandatory   } |
    { ID id-GapPositionMode             CRITICALITY ignore  TYPE GapPositionMode              PRESENCE mandatory } |
    { ID id-SN                  CRITICALITY ignore  TYPE SN                     PRESENCE conditional
    -- This IE is present only if "GapPositionMode" equals to "flexible" --                                  } |
    { ID id-DL-FrameType                CRITICALITY ignore  TYPE DL-FrameType               PRESENCE mandatory   } |
```

```
    { ID id-ScramblingCodeChange           CRITICALITY ignore  TYPE ScramblingCodeChange        PRESENCE conditional
    -- This IE is present only if "CompressedModeMethod" equals to "SF/2" --                              } |
    { ID id-PowerControlMode            CRITICALITY ignore  TYPE PowerControlMode              PRESENCE mandatory } |
    { ID id-PowerResumeMode             CRITICALITY ignore  TYPE PowerResumeMode               PRESENCE mandatory } |
    { ID id-UL-Delta~~EbNo~~SIR             CRITICALITY ignore  TYPE UL-~~EbNo~~SIR                PRESENCE mandatory  } |
    { ID id-UL-Delta~~EbNo~~SIRAfter            CRITICALITY ignore  TYPE UL-~~EbNo~~SIR                PRESENCE mandatory },
    ...
}

CompressedModePrepare-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

9.3.4 Information Element Definitions

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

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

BEGIN

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

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

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

-- A

AllocationRetentionPriority     ::= FrameHandlingPriority

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

-- B

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

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

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

```
-- C

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

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

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

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

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

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

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

CellParameterID             ::= INTEGER (0..127)

CFN                 ::= INTEGER (0..255)

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

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

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

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

CPICH-EcIo              ::= INTEGER

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

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

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

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

```
    }

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

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

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

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

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

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

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

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

-- D

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

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

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

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

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

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

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

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

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

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

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

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

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

DL-EbNoSIR                  ::= ScaledUL-EbNoSIR

DL-EbNoSIRTarget                ::= ScaledUL-EbNoSIR
```

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

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

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

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

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

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

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

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

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

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

-- E

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

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

EventB ::= SEQUENCE {
    measurementTreshold     MeasurementThreshold,
    measurementHysteresisTime   ScaledMeasurementHysteresisTime     OPTIONAL,
```

```
    iE-Extensions           ProtocolExtensionContainer { {EventB-ExtIEs} } OPTIONAL,
    ...
}

EventC ::= SEQUENCE {
    measurementIncreaseThreshold    MeasurementIncreaseThreshold,
    measurementChangeTime       ScaledMeasurementChangeTime,
    ...
}

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

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

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

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

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

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

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

-- F
```

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

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

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

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

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

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

-- ** TODO **
FDD-S-CCPCH-Offset          ::= INTEGER

FACH-PriorityIndicator          ::= INTEGER { lowest(0), highest(15) } (0..15)

FrameHandlingPriority           ::= INTEGER { lowest(0), highest(15) } (0..15)

FrameOffset             ::= INTEGER (0..255)
-- Frames

-- G

GapPositionMode ::= ENUMERATED {
    fixed,
    flexible
}

GapPeriod               ::= INTEGER (0..255)

-- H
-- I

-- **TODO**
InitialDL-TX-Power          ::= INTEGER

-- J
-- K
-- L

LAC                 ::= OCTET STRING (SIZE (2)) --(EXCEPT ('0000'H|'FFFF'H))

-- ** TODO **
L3-Information              ::= INTEGER
```

```
-- M

-- ** TODO **
MaxNrOfUL-DPCHs             ::= INTEGER

MAC-c-SDU-Length            ::= INTEGER (1..5000)

-- **TODO**
MACd-MACsh-TransportFormatSet       ::= INTEGER

-- **NOTE: extensibility**
MeasurementCharacteristics ::= SEQUENCE {
    measuremtFrequence      TBD,
    averagingDuration       TBD,
    iE-Extensions           ProtocolExtensionContainer { {MeasurementCharacteristics-ExtIEs} } OPTIONAL,
    ...
}

MeasurementCharacteristics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
MeanBitRate             ::= INTEGER

MeasurementID               ::= INTEGER (0..1048576)
-- **OR:
-- MeasurementID            ::= BIT STRING (SIZE (20))
-- **

MultipleURAsIndicator ::= ENUMERATED {
    single-URA-exists,
    multiple-URAs-exist
}

-- ** TODO **
MCC-Digit               ::= OCTET STRING (SIZE (3))
-- FFS
-- Reference: 24.008

-- ** TODO **
MNC-Digit               ::= OCTET STRING (SIZE (3))
-- FFS
-- Reference: 24.008

ScaledMeasurementChangeTime     ::= INTEGER (1..1000)
-- MeasurementChangeTime = ScaledMeasurementChangeTime * 10
-- Unis is ms

-- ** TODO **
MeasurementDecreaseThreshold        ::= INTEGER

ScaledMeasurementHysteresisTime     ::= INTEGER (1..1000)
```

```
-- MeasurementHysteresisTime = ScaledMeasurementHysteresisTime * 10
-- Unit is ms

-- ** TODO **
MeasurementIncreaseThreshold        ::= INTEGER

-- ** TODO **
MeasurementThreshold            ::= INTEGER

MidambleShift               ::= INTEGER (0..15)

MinUL-ChannelisationCodeLength      ::= INTEGER

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- N

NrOfTransportBlocks         ::= INTEGER (0..4095)

-- O

Offset                  ::= INTEGER (0..63)

-- P

PD                  ::= INTEGER (0..2047, ...)

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    crc-not-included,
    crc-included--,
--  ...
}

PSCH-TimeSlot               ::= INTEGER (0..6)

Periodic ::= SEQUENCE {
    reportPeriodicity       ReportPeriodicity,
    iE-Extensions           ProtocolExtensionContainer { {Periodic-ExtIEs} } OPTIONAL,
    ...
}

Periodic-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
PilotBitsUsedIndicator          ::= INTEGER

-- ** TODO **
PLMN-ID ::= SEQUENCE {
```

```
    mCC-digit           MCC-Digit,
    iE-Extensions           ProtocolExtensionContainer { {PLMN-ID-ExtIEs} } OPTIONAL,
    mNC-digit           MNC-Digit
}
-- FFS

PLMN-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PowerControlMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

PowerOffset             ::= INTEGER (0..24)

PowerResumeMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

-- ** TODO **
PrimaryCPICH-Power          ::= INTEGER

PrimaryCPICH-EcNo           ::= INTEGER (-30..30)

-- ** TODO **
PrimaryCCPCH-RSCP           ::= INTEGER

PrimaryScramblingCode           ::= ScramblingCode

PropagationDelay            ::= INTEGER (0..255)

SyncCase ::= ENUMERATED {
    case1,
    case2,
    case3--,
--  ...
}

-- ** TODO **
PSCH-CCPCH-TimeSlot         ::= TimeSlot

-- ** TODO **
PSCH-PCCPCH-TimeSlot            ::= TimeSlot

-- ** TODO **
P-CPICH-Power               ::= INTEGER

PunctureLimit               ::= INTEGER (0..100)
```

```
-- Unit is %

-- Q
-- R

-- ** TODO **
RAC                 ::= INTEGER

-- ** TODO **
-- OCTET STRING?
RANAP-RelocationInformation     ::= BIT STRING

RateMatchingAttribute           ::= INTEGER (1..maxRateMatching)

RepetitionLength            ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    v16,
    v32,
    v64--,
--  ...
}

-- This is changed from the tabular format because it seems that
-- this is what is wanted.
ReportCharacteristics ::= CHOICE {
    onDemand            NULL,
    periodic            Periodic,
    eventA              EventA,
    eventB              EventB,
    eventC              EventC,
    eventD              EventD,
    eventE              EventE,
    eventF              EventF--,
--  ...
}

-- Changed
ReportPeriodicity ::= CHOICE {
    msec                INTEGER (1..1000),
    min             INTEGER (1..60)
}

RLC-Mode ::= ENUMERATED {
    acknowledged-mode,
    unacknowledged-mode,
    transparent-mode
}
```

```
RL-ID                   ::= INTEGER (0..31)

RNC-ID                  ::= INTEGER (0..4095)

-- S

-- Changed BIT STRING -> OCTET STRING
SAC                 ::= OCTET STRING (SIZE (2))

SAI ::= SEQUENCE {
    pLMN-ID             PLMN-ID,
    lAC             LAC,
    sAC             SAC,
    iE-Extensions           ProtocolExtensionContainer { {SAI-ExtIEs} } OPTIONAL
}

SAI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
ScramblingCode              ::= INTEGER

ScramblingCodeChange ::= ENUMERATED {
    no-code-change,
    code-change
}

ScaledSIR-ErrorValue            ::= INTEGER (-100..100)
-- ScaledSIR-ErrorValue = SIR-ErrorValue * 10
-- If SIR-ErrorValue <= -10 ScaledSIR-ErrorValue shall be set to -100
-- If SIR-ErrorValue >=  10 ScaledSIR-ErrorValue shall be set to  100
-- SIR-ErrorValue step 0.1 dB

ScaledSIR-Value             ::= INTEGER (-100..200)
-- ScaledSIR-Value = SIR-Value * 10
-- SIR-Value step 0.1 dB

ScaledTransmittedCodePowerValue     ::= INTEGER (-350..150)
-- ScaledTransmittedCodePowerValue = TransmittedCodePowerValue * 10
-- TransmittedCodePowerValue step 0.1 dB

-- ** TODO **
SharedChannelType           ::= INTEGER

-- ** TODO **
SecondaryCCPCH-SlotFormat       ::= INTEGER

SN                  ::= TimeSlot

SpreadingFactorOfChannelisationCode ::= ENUMERATED {
    v256,
    v128,
```

```
    v64,
    v32,
    v16,
    v8,
    v4,
    v2,
    v1
}

-- Changed
S-FieldLength               ::= INTEGER (1..2)

S-RNTI                  ::= INTEGER (0..1048575)
-- From 0 to 2^20-1

-- ** TODO **
SRNC-ID                 ::= INTEGER

SSDT-CellID ::= ENUMERATED {
    a,
    b,
    c,
    d,
    e,
    f,
    g,
    h
}

SSDT-CellID-Length ::= ENUMERATED {
    short,
    medium,
    long
}

SSDT-Indication ::= ENUMERATED {
    sSDT-active-in-the-UE,
    sSDT-not-active-in-the-UE
}

SSDT-SupportIndicator ::= ENUMERATED {
    sSDT-not-supported,
    sSDT-supported
}

-- T

-- ** TODO **
TBD                 ::= NULL
-- Remove this type

TDD-ChannelisationCode          ::= INTEGER (1..31)
```

```
TDD-PhysicalChannelOffset       ::= INTEGER (0..63)

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32
}

TFCI-Presence ::= ENUMERATED {
    not-present,
    present
}

TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split
}

-- ** TODO **
TimeReference               ::= INTEGER
-- TimeReference                ::= INTEGER (0..255)

TimeSlot                ::= INTEGER (0..14)

ToAWE                   ::= INTEGER (0..2559)

ToAWS                   ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,
    one
}

TGD                 ::= INTEGER (0..255)

TGL                 ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--,
--  ...
}

TransportBearerID       ::= INTEGER (0..4095)

-- Compare title and IE name in table TransportBearerRequestIndicator vs.
-- FACH-PriorityIndicator
TransportBearerRequestIndicator     ::= INTEGER { lowest (0), highest (15) } (0..15)

TransportBlockSize          ::= INTEGER (1..5000)
```

```
-- Unit is bits

TransportFormatCombinationSet ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {
        cTFC                CTFC,
        iE-Extensions           ProtocolExtensionContainer { {TransportFormatCombinationSet-ExtIEs} } OPTIONAL,
        ...
    }

TransportFormatCombinationSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet ::= SEQUENCE {
    dynamicParts            TransportFormatSet-DynamicPartList,
    semi-staticPart         TransportFormatSet-Semi-staticPart,
    iE-Extensions           ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
    SEQUENCE {
        nrOfTransportBlocks     NrOfTransportBlocks,
        transportBlockSize      TransportBlockSize      OPTIONAL
        -- This IE is only present if nrOfTransportBlocks is greater than 0 --,
        mode                TransportFormatSet-ModeDP,
        iE-Extensions           ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-ExtIEs} } OPTIONAL,
        ...
    }

TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeDP ::= CHOICE {
    tdd                 TransmissionTimeIntervalList,
    -- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
    ...
}

TransmissionTimeIntervalList ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
    SEQUENCE {
        transmissionTimeInterval    TransmissionTimeInterval,
        iE-Extensions           ProtocolExtensionContainer { {TransmissionTimeIntervalList-ExtIEs} } OPTIONAL,
        ...
    }

TransmissionTimeIntervalList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
    transmissionTime        TransmissionTimeInterval,
    channelCoding           ChannelCodingType,
    codingRate          CodingRate              OPTIONAL
    -- This IE is only present if channelCoding is 'convolutional' or 'turbo' --,
    rateMatcingAttribute        RateMatchingAttribute,
    cRC-Size            CRC-Size,
    mode                TransportFormatSet-ModeSSP      OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
    tdd             SecondInterleavingMode,
    ...
}

SecondInterleavingMode ::= ENUMERATED {
    frame-related,
    timeslot-related,
    ...
}

-- TransportLayerAddress            ::= BIT STRING (1..160, ...)
TransportLayerAddress           ::= OCTET STRING (SIZE (1..20, ...))

-- U

UARFCN                  ::= INTEGER (0..698, ...)

UL-DL-CompressedModeSelection ::= ENUMERATED {
    ul-only,
    dl-only,
    both
}

UL-Delta~~EbNo~~SIR             ::= INTEGER (-60..100)

UL-Delta~~EbNo~~SIRAfter            ::= INTEGER (-60..100)

~~-- ** TODO **~~
-- According to mapping in 25.427
UL-~~EbNo~~SIR                  ::= INTEGER (0..255)

~~-- ** TODO **~~
-- According to mapping in 25.427
UL-~~EbNo~~SIRTarget                ::= INTEGER (0..255)
```

```
UC-ID ::= SEQUENCE {
    rNC-ID              RNC-ID,
    c-ID                C-ID,
    iE-Extensions           ProtocolExtensionContainer { {UC-ID-ExtIEs} } OPTIONAL,
    ...
}

UC-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCCH-SlotFormat         ::= INTEGER (0..5)

ScaledUL-EbNo               ::= INTEGER (0..255)
-- Ul-EbNo = ScaledUL-EbNo / 10

UL-FP-Mode ::= ENUMERATED {
    normal,
    silent--,
--  ...
}

ScaledUL-InterferenceLevel      ::= INTEGER (-1280..-600)
-- UL-InterferenceLevel = UL-InterferenceLevel / 10

-- Relation to the ScramblingCode??
UL-ScramblingCode ::= SEQUENCE {
    ul-ScramblingCodeNumber     UL-ScramblingCodeNumber,
    ul-ScramblingCodeLength     UL-ScramblingCodeLength,
    iE-Extensions           ProtocolExtensionContainer { {UL-ScramblingCode-ExtIEs} } OPTIONAL
}

UL-ScramblingCode-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}

UL-ScramblingCodeNumber         ::= INTEGER (0..16777215)

URA-ID                  ::= INTEGER (0..65535)

-- V
-- W
-- X
-- Y
-- Z

END
```

9.3.6 Constant Definitions

```
-- **************************************************************
--
-- Constant definitions
--
-- **************************************************************

RNSAP-Constants -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- **************************************************************
--
-- Elementary Procedures
--
-- **************************************************************

id-commonTransportChannelResourcesInitiationFDD             INTEGER ::= 0
id-commonTransportChannelResourcesInitiationTDD             INTEGER ::= 1
id-commonTransportChannelResourcesRelease               INTEGER ::= 2
id-compressedModeCancellationFDD                    INTEGER ::= 3
id-compressedModeCommitFDD                      INTEGER ::= 4
id-compressedModePrepareFDD                     INTEGER ::= 5
id-downlinkPowerControl                         INTEGER ::= 6
id-downlinkSignallingTransfer                       INTEGER ::= 7
id-errorIndication                          INTEGER ::= 8
id-measurementFailure                           INTEGER ::= 9
id-measurementInitiation                        INTEGER ::= 10
id-measurementReporting                         INTEGER ::= 11
id-measurementTermination                       INTEGER ::= 12
id-pagingRequest                            INTEGER ::= 13
id-physicalChannelReconfiguration                   INTEGER ::= 14
id-privateMessage                           INTEGER ::= 15
id-radioLinkAddition                            INTEGER ::= 16
id-radioLinkDeletion                            INTEGER ::= 17
id-radioLinkFailure                         INTEGER ::= 18
id-radioLinkRestoration                         INTEGER ::= 19
id-radioLinkSetup                           INTEGER ::= 20
id-srnsRelocationCommit                         INTEGER ::= 21
id-synchronisedRadioLinkReconfigurationCancellation         INTEGER ::= 22
id-synchronisedRadioLinkReconfigurationCommit               INTEGER ::= 23
id-synchronisedRadioLinkReconfigurationPrepare              INTEGER ::= 24
id-unSynchronisedRadioLinkReconfiguration               INTEGER ::= 25
id-uplinkSignallingTransfer                     INTEGER ::= 26

-- **************************************************************
--
-- Extension constants
--
```

```
-- **************************************************************

maxPrivateExtensions                            INTEGER ::= 65535
maxProtocolExtensions                           INTEGER ::= 65535
maxProtocolIEs                                INTEGER ::= 65535

-- **************************************************************
--
-- Lists
--
-- **************************************************************

maxRateMatching                                 INTEGER ::= 10
maxNrOfTFCs                                   INTEGER ::= 10
maxNrOfTFs                                    INTEGER ::= 10

maxNoOfDL-Codes                                 INTEGER ::= 10
maxNrOfCCTrCHs                                  INTEGER ::= 10
maxNrOfDCHs                                   INTEGER ::= 10
maxNrOfDL-Codes                                 INTEGER ::= 10
maxNrOfDPCHs                                    INTEGER ::= 10
maxNrOfErrors                                   INTEGER ::= 10
maxNrOfFACH-FD-Size                             INTEGER ::= 10
maxNrOfFDD-Neighbours                               INTEGER ::= 10
maxNrOfMACcSDU-Length                               INTEGER ::= 10
maxNrOfTDD-Neighbours                               INTEGER ::= 10
maxNrOfRLs                                    INTEGER ::= 10
maxNrOfSCCPCHs                                  INTEGER ::= 10
maxRNCinURA                                   INTEGER ::= 10
maxTTI-Count                                    INTEGER ::= 10

-- **************************************************************
--
-- IEs
--
-- **************************************************************

id-AllowedQueuingTime                               INTEGER ::= 0
id-BindingID                                    INTEGER ::= 1
id-C-ID                                       INTEGER ::= 2
id-C-RNTI                                     INTEGER ::= 3
id-CCTrCH-ID                                        INTEGER ::= 4
id-CFN                                        INTEGER ::= 5
id-CN-CS-DomainIdentifier                           INTEGER ::= 6
id-CN-PS-DomainIdentifier                           INTEGER ::= 7
id-Cause                                      INTEGER ::= 8
id-CompressedModeMethod                             INTEGER ::= 9
id-D-RNTI                                     INTEGER ::= 10
id-D-RNTI-ReleaseIndication                         INTEGER ::= 11
id-DCH-AddItem                                  INTEGER ::= 12
id-DCH-AddItem-RL-ReconfPrepFDD                         INTEGER ::= 13
id-DCH-AddItem-RL-ReconfPrepTDD                         INTEGER ::= 14
id-DCH-AddItem-RL-ReconfReadyFDD                        INTEGER ::= 15
```

```
id-DCH-AddItem-RL-ReconfRqstFDD                    INTEGER ::= 16
id-DCH-AddItem-RL-ReconfRqstTDD                    INTEGER ::= 17
id-DCH-AddList-RL-ReconfPrepFDD                    INTEGER ::= 18
id-DCH-AddList-RL-ReconfPrepTDD                    INTEGER ::= 19
id-DCH-AddList-RL-ReconfRqstFDD                    INTEGER ::= 20
id-DCH-AddList-RL-ReconfRqstTDD                    INTEGER ::= 21
id-DCH-DeleteItem-RL-ReconfPrepFDD                 INTEGER ::= 22
id-DCH-DeleteItem-RL-ReconfPrepTDD                 INTEGER ::= 23
id-DCH-DeleteItem-RL-ReconfRqstFDD                 INTEGER ::= 24
id-DCH-DeleteItem-RL-ReconfRqstTDD                 INTEGER ::= 25
id-DCH-DeleteList-RL-ReconfPrepFDD                 INTEGER ::= 26
id-DCH-DeleteList-RL-ReconfPrepTDD                 INTEGER ::= 27
id-DCH-DeleteList-RL-ReconfRqstFDD                 INTEGER ::= 28
id-DCH-DeleteList-RL-ReconfRqstTDD                 INTEGER ::= 29
id-DCH-Information-RL-SetupReqFDD                  INTEGER ::= 30
id-DCH-InformationItem-RL-SetupReqFDD                  INTEGER ::= 31
id-DCH-InformationItem-RL-SetupReqTDD                  INTEGER ::= 32
id-DCH-InformationList-RL-SetupReqTDD                  INTEGER ::= 33
id-DCH-ModifyItem                              INTEGER ::= 34
id-DCH-ModifyItem-RL-ReconfPrepFDD                 INTEGER ::= 35
id-DCH-ModifyItem-RL-ReconfPrepTDD                 INTEGER ::= 36
id-DCH-ModifyItem-RL-ReconfReadyFDD                INTEGER ::= 37
id-DCH-ModifyItem-RL-ReconfRqstFDD                 INTEGER ::= 38
id-DCH-ModifyItem-RL-ReconfRqstTDD                 INTEGER ::= 39
id-DCH-ModifyList-RL-ReconfPrepFDD                 INTEGER ::= 40
id-DCH-ModifyList-RL-ReconfPrepTDD                 INTEGER ::= 41
id-DCH-ModifyList-RL-ReconfRqstFDD                 INTEGER ::= 42
id-DCH-ModifyList-RL-ReconfRqstTDD                 INTEGER ::= 43
id-DL-CCTrCH-Information-RL-ReconfPrepTDD               INTEGER ::= 44
id-DL-CCTrCH-Information-RL-ReconfRqstTDD               INTEGER ::= 45
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD               INTEGER ::= 46
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD               INTEGER ::= 47
id-DL-CCTrChInformationItem-RL-SetupReqTDD              INTEGER ::= 48
id-DL-CCTrChInformationList-RL-SetupReqTDD              INTEGER ::= 49
id-DL-CodeInformation-PhyChReconfRqstFDD                INTEGER ::= 50
id-DL-DPCH-Information                         INTEGER ::= 51
id-DL-DPCH-Information-RL-SetupReqFDD                  INTEGER ::= 52
id-DL-DPCH-InformationList-PhyChReconfRqstTDD               INTEGER ::= 53
id-DL-DPCH-InformationList-RL-ReconfReadyTDD                INTEGER ::= 54
id-DL-EbNoSIRTarget                            INTEGER ::= 55
id-DL-FrameType                                INTEGER ::= 56
id-DL-MeanBitRate                              INTEGER ::= 57
id-DL-ReferencePowerInformation-DL-PC-Rqst              INTEGER ::= 58
id-DRX-Parameter                               INTEGER ::= 59
id-DedicatedMeasurementObjectType-DM-Rprt               INTEGER ::= 60
id-DedicatedMeasurementObjectType-DM-Rqst               INTEGER ::= 61
id-DedicatedMeasurementObjectType-DM-Rspns              INTEGER ::= 62
id-FACH-InfoForOptionalGroupS-CCPCH                INTEGER ::= 63
id-FACH-InfoForOptionalS-CCPCH                     INTEGER ::= 64
id-FACH-InfoForS-CCPCH-CoupledToPRACH                  INTEGER ::= 65
id-GapPositionMode                             INTEGER ::= 66
id-L3-Information                              INTEGER ::= 67
id-MeasurementCharacteristics                      INTEGER ::= 68
```

```
id-MeasurementID                                INTEGER ::= 69
id-MultipleURAsIndicator                            INTEGER ::= 70
id-PD                                       INTEGER ::= 71
id-PagingArea-PagingRqst                            INTEGER ::= 72
id-PowerControlMode                             INTEGER ::= 73
id-PowerResumeMode                              INTEGER ::= 74
id-ProcedureScope-DL-PC-Rqst                                INTEGER ::= 75
id-RANAP-RelocationInformation                              INTEGER ::= 76
id-RL-Information-PhyChReconfRqstFDD                            INTEGER ::= 77
id-RL-Information-PhyChReconfRqstTDD                            INTEGER ::= 78
id-RL-Information-RL-AdditionRqstFDD                            INTEGER ::= 79
id-RL-Information-RL-AdditionRqstTDD                            INTEGER ::= 80
id-RL-Information-RL-DeletionRqst                           INTEGER ::= 81
id-RL-Information-RL-FailureInd                             INTEGER ::= 82
id-RL-Information-RL-ReconfPrepFDD                          INTEGER ::= 83
id-RL-Information-RL-RestoreInd                             INTEGER ::= 84
id-RL-Information-RL-SetupReqFDD                            INTEGER ::= 85
id-RL-Information-RL-SetupReqTDD                            INTEGER ::= 86
id-RL-InformationItem-DM-Rprt                               INTEGER ::= 87
id-RL-InformationItem-DM-Rqst                               INTEGER ::= 88
id-RL-InformationItem-DM-Rspns                              INTEGER ::= 89
id-RL-InformationItem-RL-SetupReqFDD                            INTEGER ::= 90
id-RL-InformationList-RL-AdditionRqstFDD                        INTEGER ::= 91
id-RL-InformationList-RL-DeletionRqst                           INTEGER ::= 92
id-RL-InformationList-RL-FailureInd                         INTEGER ::= 93
id-RL-InformationList-RL-ReconfPrepFDD                          INTEGER ::= 94
id-RL-InformationList-RL-RestoreInd                         INTEGER ::= 95
id-RL-InformationResponse-RL-AdditionRspTDD                     INTEGER ::= 96
id-RL-InformationResponse-RL-ReconfReadyTDD                     INTEGER ::= 97
id-RL-InformationResponse-RL-SetupRspTDD                        INTEGER ::= 98
id-RL-InformationResponseItem-RL-AdditionRspFDD                     INTEGER ::= 99
id-RL-InformationResponseItem-RL-ReconfReadyFDD                     INTEGER ::= 100
id-RL-InformationResponseItem-RL-SetupRspFDD                        INTEGER ::= 101
id-RL-InformationResponseList-RL-AdditionRspFDD                     INTEGER ::= 102
id-RL-InformationResponseList-RL-ReconfReadyFDD                     INTEGER ::= 103
id-RL-InformationResponseList-RL-SetupRspFDD                        INTEGER ::= 104
id-RL-ReconfigurationFailure-RL-ReconfFail                  INTEGER ::= 105
id-RL-ReconfigurationFailureList-RL-ReconfFail                  INTEGER ::= 106
id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind                 INTEGER ::= 107
id-ReportCharacteristics                            INTEGER ::= 108
id-S-RNTI                                   INTEGER ::= 109
id-SAI                                      INTEGER ::= 110
id-SN                                       INTEGER ::= 111
id-SRNC-ID                                  INTEGER ::= 112
id-ScramblingCodeChange                             INTEGER ::= 113
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD       INTEGER ::= 114
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD          INTEGER ::= 115
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD       INTEGER ::= 116
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD      INTEGER ::= 117
id-TGD                                      INTEGER ::= 118
id-TGL                                      INTEGER ::= 119
id-TGP1                                     INTEGER ::= 120
id-TGP2                                     INTEGER ::= 121
```

```
id-TransportBearerID                              INTEGER ::= 122
id-TransportBearerRequestIndicator                    INTEGER ::= 123
id-TransportLayerAddress                          INTEGER ::= 124
id-UC-ID                                  INTEGER ::= 125
id-UL-CCTrCH-Information-RL-ReconfPrepTDD                 INTEGER ::= 126
id-UL-CCTrCH-Information-RL-ReconfRqstTDD                 INTEGER ::= 127
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD                 INTEGER ::= 128
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD                 INTEGER ::= 129
id-UL-CCTrChInformationItem-RL-SetupReqTDD                INTEGER ::= 130
id-UL-CCTrChInformationList-RL-SetupReqTDD                INTEGER ::= 131
id-UL-DL-CompressedModeSelection                      INTEGER ::= 132
id-UL-DPCH-Information                            INTEGER ::= 133
id-UL-DPCH-Information-RL-SetupReqFDD                 INTEGER ::= 134
id-UL-DPCH-InformationList-PhyChReconfRqstTDD                 INTEGER ::= 135
id-UL-DPCH-InformationList-RL-ReconfReadyTDD                  INTEGER ::= 136
id-UL-Delta~~EbNo~~SIR                                INTEGER ::= 137
id-UL-Delta~~EbNo~~SIRAfter                           INTEGER ::= 138
id-UL-~~EbNo~~SIRTarget                           INTEGER ::= 139
id-UL-MeanBitRate                             INTEGER ::= 140
id-URA-ID                                 INTEGER ::= 141
id-UnsuccessfulRL-InformationResponse                 INTEGER ::= 142
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD     INTEGER ::= 143
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD        INTEGER ::= 144
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD        INTEGER ::= 145
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD     INTEGER ::= 146
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD        INTEGER ::= 147
id-CriticalityDiagnostics                         INTEGER ::= 148

END
```

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Document R3-000299
e.g. for 3GPP use the format TP-99xxx
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CHANGE REQUEST

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25.423	CR	015	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG RAN #7	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [ ]

Source: TSG-RAN WG3 **Date:** Jan 18, 2000

Subject: Modification to RADIO LINK ADDITION procedure and related parameters

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change: The functionality of a RNC to combine several RLs has been generalised in order to include also the functionality of a RNC supporting the TDD mode to select one of the different RLs.
Consequently in the description of the RADIO LINK ADDITION procedure the distinctions between FDD and TDD have been removed.

Clauses affected: 8.3.2.2, 9.2.2.4, 9.2.2.5

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
Other GSM core specifications	[ ]	→ List of CRs:
MS test specifications	[ ]	→ List of CRs:
BSS test specifications	[ ]	→ List of CRs:
O&M specifications	[ ]	→ List of CRs:

Other comments:


help.doc

<--------- double-click here for help and instructions on how to create a CR.

8.3.2.2 Successful Operation

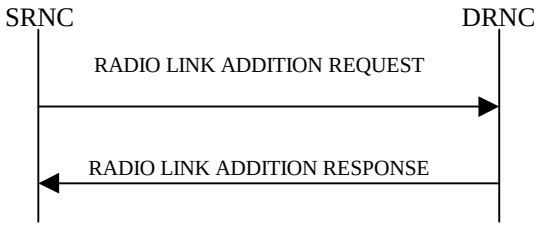

Figure 1: Radio Link Addition procedure: Successful Operation

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the SRNC to the DRNC.

Upon reception, the DRNS shall reserve the necessary resources and configure the new RL(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

[FDD - The Diversity Control Field indicates for each RL whether the DRNS shall combine the new RL with existing RL(s) or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When a new RL is to be combined the DRNS shall choose which RL(s) to combine it with.

If the *Primary CCPCH Ec/Io* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] measured by the UE is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power. If the *Primary CCPCH Ec/Io* IE is not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.

[FDD - The DRNS shall use the provided UL Eb/No Target value as the current target for the inner-loop power control.]

[FDD - If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE, SSDT may be activated for the concerned new RL, with the indicated SSDT Cell Identity used for that RL.]

The DRNS shall activate any feedback mode diversity according to the received settings.

If all requested RLs are successfully added, the DRNC shall respond with a RADIO LINK ADDITION RESPONSE message.

In the case of combining an RL with existing RL(s) the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that the RL is combined. In this case the Reference RL ID shall be included to indicate one of the existing RLs that the new RL is combined with.

In the case of not combining an RL with existing RL(s), the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the Transport Layer Address and the binding ID for the transport bearer to be established for each DCH of the RL in the RADIO LINK ADDITION RESPONSE message.

In case of co-ordinated DCH, the binding ID and the transport address shall be included for only one of the co-ordinated DCHs.

[FDD - Irrespective of SSDT activation, the DRNS shall include in the RADIO LINK ADDITION RESPONSE message an indication concerning the capability to support SSDT on this RL. Only if the RADIO LINK ADDITION REQUEST message requested SSDT activation and the RADIO LINK ADDITION RESPONSE message indicates that the SSDT capability is supported for this RL, SSDT is activated in the DRNS.]

For any cell neighbouring of a cell in which a RL was added, the DRNC shall provide in the RADIO LINK ADDITION RESPONSE message the UTRAN Cell Identifier (UC-Id), the Frequency Number, the Primary Scrambling Code and the node identification of CN nodes connected to the RNC controlling the neighbouring cell if the neighbouring cell is not controlled by the DRNC. In addition, if the information is available, the DRNC shall also provide the CPICH Power level and Frame Offset of the neighbouring cell.

The DRNC shall also provide the configured uplink Maximum Eb/No and UL Minimum Eb/No for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. These values are taken into consideration by DRNS admission control and shall be used by the SRNC as limits for the UL inner-loop power control target.

The DRNC shall also provide the selected scrambling- and channelisation codes of the new RLs in order to enable the SRNC to inform the UE about the selected codes.

After sending of the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the Iur user plane as specified in ref. [**Error! Reference source not found.**].

9.2.~~2.4~~1.x Diversity Control Field

The Diversity Control Field indicates if the current RL may, must or must not be combined with the already existing RLs.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Diversity Control Field			ENUMERATED(May, Must, Must not)	

9.2.~~2.5~~1.y Diversity Indication

The Diversity Indication indicates if the RL has been or has not been combined with another RL.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Diversity Indication			ENUMERATED (Combined, Not Combined)	

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Document R3-000385
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CHANGE REQUEST

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25.423	CR	014r1	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG RAN#7	for approval	X	strategic		(for SMG use only)
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Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)*

(U)SIM		ME		UTRAN / Radio	X	Core Network	

Source: TSG-RAN WG3 **Date:** 2000-02-01

Subject: Removal of an out of date statement about a specifc order of IEs within RNSAP messages.

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change:

chapter 9.1

The sentence after the NOTE should be deleted, as the receiving entity, following the ASN.1 definition, should be able to receive IEs at the highest level in any order.

revision info:
r0: R3-000278 first version
r1: R3-000385 remove tick in “Core Network” box

Clauses affected: 9.1

Other specs affected:

Other 3G core specifications		→ List of CRs:	
Other GSM core specifications		→ List of CRs:	
MS test specifications		→ List of CRs:	
BSS test specifications		→ List of CRs:	
O&M specifications		→ List of CRs:	

Other comments: This should be aligned with RANAP and NBAP.

help.doc

<--------- double-click here for help and instructions on how to create a CR.

************ **NEXT MODIFIED SECTION** ************

9 Elements for RNSAP Communication

9.1 Message Functional Definition and Content

9.1.1 General

This chapter defines the structure of the messages required for the RNSAP protocols.

~~For each message there is, a table listing the signalling elements in their order of appearance in the transmitted message.~~

All the RNSAP messages are listed in the following table:

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Sophia Antipolis, 28 Feb – 3 Mar 2000

Document R3-000466
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or for SMG, use the format P-99-xxx

CHANGE REQUEST

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25.423	CR	038	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	RAN#7	for approval	X	strategic		(for SMG use only)
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Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [ ]
(at least one should be marked with an X)

Source: R-WG3 **Date:**

Subject: Clarification on the BLER parameter

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	[ ]	**Release:**	Phase 2	[ ]
A	Corresponds to a correction in an earlier release	[ ]		Release 96	[ ]
B	Addition of feature	[ ]		Release 97	[ ]
C	Functional modification of feature	[ ]		Release 98	[ ]
D	Editorial modification	[X]		Release 99	[X]
				Release 00	[ ]

Reason for change: The BLER parameter (Transport Block Error Rate for one Transport channel) has been introduced in WG3#8 (Ref. Tdoc R3-99F21). In WG3#9 it has been noted that the definition and use of the BLER parameter was not clear in the RNSAP specification, and this CR proposed the necessary additions, i.e. stating that the BLER is the BLER that shall be used (together with other parameters like the cell interference/power, the TBS parameters, etc) for admission control and power management in the DRNS.

Clauses affected: 9.2.1.4

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
Other GSM core specifications	[ ]	→ List of CRs:
MS test specifications	[ ]	→ List of CRs:
BSS test specifications	[ ]	→ List of CRs:
O&M specifications	[ ]	→ List of CRs:

Other comments:

9.2.1.4 BLER

This Block Error Rate defines the target radio interface Transport Block Error Rate of the transport channel ~~that shall be guaranteed to the DCH by the SRNC.~~ 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 (-63..0)	Step 0.1. (Range –6.3…0). It is the Log10 of the BLER

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Document R3-000472
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CHANGE REQUEST

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25.423	CR	017	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to: TSG RAN #7 *list expected approval meeting # here ↑*

For approval [X] for information [ ]

Strategic [ ] non-strategic [ ] *(for SMG use only)*

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [ ]

Source: RAN-WG3 **Date:** Feb 22, 2000

Subject: Modification of the dynamic range of primary CPICH power.

Work item: 16.3.L

Category: *(only one category shall be marked with an X)*

F	Correction	[X]
A	Corresponds to a correction in an earlier release	[ ]
B	Addition of feature	[ ]
C	Functional modification of feature	[ ]
D	Editorial modification	[ ]

Release:

Phase 2	[ ]
Release 96	[ ]
Release 97	[ ]
Release 98	[ ]
Release 99	[X]
Release 00	[ ]

Reason for change: The dynamic range of the primary CPICH power needs to be changed to –10..50 dBm in order to be aligned with the Maximum DL Power Capability (0..50 dBm) in 25.433.

Clauses affected: 9.2.1.33, 9.3.4.

Other specs affected:

Other 3G core specifications	[X]	→ List of CRs:	25.331:CRxxx
Other GSM core specifications	[ ]	→ List of CRs:	
MS test specifications	[ ]	→ List of CRs:	
BSS test specifications	[ ]	→ List of CRs:	
O&M specifications	[ ]	→ List of CRs:	

Other comments:

.

9.2.1.33 Primary CPICH Power

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Primary CPICH power			ENUMERATED (-105..450)	Unit dBm Granularity 0.1 dB.

9.3.4 Information Element Definitions

```
-- **************************************************************
--
-- Information Element Definitions
--
-- **************************************************************

RNSAP-IEs -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxNrOfErrors,
    maxRateMatching,
    maxNrOfTFCs,
    maxNrOfTFs,
    maxTTI-Count
FROM RNSAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM RNSAP-CommonDataTypes

    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;
```

•
•
•

Several IEs Skipped

•
•
•

```
-- P

PD                  ::= INTEGER (0..2047, ...)

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    crc-not-included,
    crc-included--,
--  ...
}

PSCH-TimeSlot               ::= INTEGER (0..6)
```

```
Periodic ::= SEQUENCE {
    reportPeriodicity       ReportPeriodicity,
    iE-Extensions           ProtocolExtensionContainer { {Periodic-ExtIEs} } OPTIONAL,
    ...
}

Periodic-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
PilotBitsUsedIndicator          ::= INTEGER

-- ** TODO **
PLMN-ID ::= SEQUENCE {
    mCC-digit           MCC-Digit,
    iE-Extensions           ProtocolExtensionContainer { {PLMN-ID-ExtIEs} } OPTIONAL,
    mNC-digit           MNC-Digit
}
-- FFS

PLMN-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PowerControlMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

PowerOffset             ::= INTEGER (0..24)

PowerResumeMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

-- ** TODO **
PrimaryCPICH-Power          ::= INTEGER (-100..500)
-- step 0.1 (Range –10.0..50.0) Unit is dBm

PrimaryCPICH-EcNo           ::= INTEGER (-30..30)

-- ** TODO **
PrimaryCCPCH-RSCP           ::= INTEGER

PrimaryScramblingCode           ::= ScramblingCode

PropagationDelay            ::= INTEGER (0..255)
```

```
SyncCase ::= ENUMERATED {
    case1,
    case2,
    case3--,
--  ...
}

-- ** TODO **
PSCH-CCPCH-TimeSlot         ::= TimeSlot

-- ** TODO **
PSCH-PCCPCH-TimeSlot            ::= TimeSlot

-- ** TODO **
P-CPICH-Power               ::= INTEGER

PunctureLimit               ::= INTEGER (0..100)
-- Unit is %

-- Q
```

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Sophia Antipolis, France, 28th February – 3rd March 2000

Document R3-000483
e.g. for 3GPP use the format TP-99xxx
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CHANGE REQUEST

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25.423	CR	021	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG RAN #7	for approval	X	Strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)*	(U)SIM		ME		UTRAN / Radio	X	Core Network	

Source:	RAN-WG3	**Date:**	28th Feb. – 3rd March 2000

Subject:	Clarification of the relation between the UL and DL Signalling Transfer procedures an the Uu Interface

Work item:	

Category: *(only one category shall be marked with an X)*

F	Correction		**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification	X		Release 99	X
				Release 00	

Reason for change:	The current UL and DL Signalling Transfer procedures do not clearly indicated the relation between the procedures and the Uu interface. It is not clear that the procedures only relate to the CCCH. Further more, it is not clear that the SRNC-ID is derived from the U-RNTI- (Any transfer on the DCCH in a cell controlled by a DRNC shall use the Iur User Plane.)

Clauses affected:	8.2.1, 8.2.2

Other specs affected:

Other 3G core specifications		→ List of CRs:	
Other GSM core specifications		→ List of CRs:	
MS test specifications		→ List of CRs:	
BSS test specifications		→ List of CRs:	
O&M specifications		→ List of CRs:	

Other comments:	

8.2.1 Uplink SignallingTransfer

8.2.1.1 General

The procedure is used by the ~~SRNC~~ DRNC to forward a Uu message received on the CCCH ~~request~~ to the ~~DRNC~~ SRNC ~~the transfer of a Uu message. 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.

8.2.1.2 Successful Operation

When the CRNC receives an Uu message on the CCCH where the UE addressing information is U-RNTI, i.e. S-RNTI and SRNC-ID, and the SRNC ID identifies another RNC than the CRNC, the CRNC shall send the UPLINK SIGNALLING TRANSFER message to the SRNC identified by the SRNC-ID received from the UE.

The CRNC shall include in the message the URA Identity of the URA where the Uu message was received, an indication on whether or not the accessed cell belongs to multiple URAs, and the RNC Identity of all other RNCs that are having at least one cell within the URA where the Uu message was received.

If the message received from the UE was the first message from that UE in the CRNC, the CRNC shall include the D-RNTI and the identifiers for the CN CS Domain and CN PS Domain that the CRNC 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.

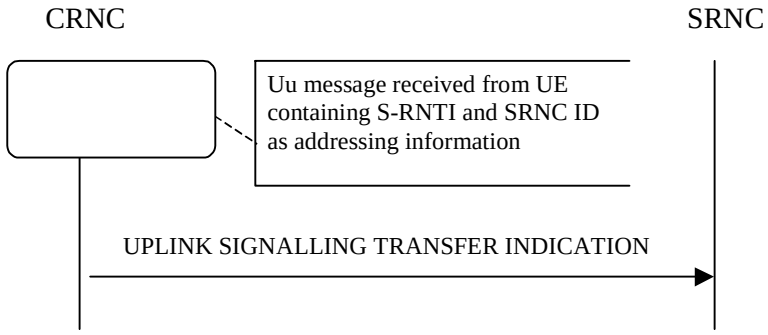

Figure 1: Uplink Signalling Transfer procedure, Successful Operation.

8.2.1.3 Abnormal Conditions

-

8.2.2 Downlink SignallingTransfer

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

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 message and the D-RNTI.

At the reception 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.

If the D-RNTI release indication parameters indicates 'release D-RNTI', the D-RNTI and thus the UE Context and any DRNS resource allocated to the UE Context shall be released at the reception of the message.

Figure 2: Downlink Signalling Transfer procedure, Successful Operation

8.2.2.3 Abnormal Conditions

If the user identified by the D-RNTI is not camping in the cell identified by the C-Id in the RNSAP message, the message shall be ignored.

If the D-RNTI is allocated to one UE context whose status does not allow the sending of the L3 information from the DRNC, then the message shall be ignored.

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***Document* R3-000488**
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CHANGE REQUEST

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25.423	CR	23	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG RAN#7	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [ ]

Source: RAN-WG3 **Date:** 00.02.28

Subject: Clarification of measurement characteristics

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change:

There is a need for the SRNC to be able to control the amount of filtering performed on physical layer measurements prior to reporting (and event evaluation).

By controlling the measurement filtering with a standardised algorithm the network is able to fine-tune the compromise between amount of reported events (Iub/Iur load) and response time. It is also possible to fine tune the compromise between amount of hysteresis used and amount of averaging filtering performed. The proposed standardised algorithm will also enable the SRNC to get a more consistent event reporting behaviour from Node B's with different physical layer measurement implementation working in different radio propagation conditions.
In 25.133 v2.3.0 the measurement performance requirement stated is valid when a specific measurement period for the physical layer measurement is used. The measurement period is assumed to be defined short enough to allow the measurement period also to be used as defining the period time of the physical layer measurements.

By specifying a very simple averaging algorithm the SRNC will be given the option to control the filtering and reporting.
This proposed CR include the changes needed to support a SRNC controlled filtering for the Node B.

Clauses affected: 8.3.11, 9.1.28, 9.2.1.X (new), 9.3.3

Other specs affected:

Other 3G core specifications	X	→ List of CRs:	25.331 CR 146r1, 25.423 CR 35 (R3-000487)
Other GSM core specifications		→ List of CRs:	
MS test specifications		→ List of CRs:	
BSS test specifications		→ List of CRs:	
O&M specifications		→ List of CRs:	

Other comments:

<--------- double-click here for help and instructions on how to create a CR.

8.3.11 Measurement Initiation

[Editor's note: According to TSGR#5 (99)564, the following measurements shall also be considered:
* Time of Arrival
* Frequency Offset
* Round Trip Time
* RX Timing Deviation

Whether these measurements shall be dedicated or common measurements have so far not been considered by TSG RAN WG3 and are thus not incorporated.]

8.3.11.1 General

This procedure is used by an SRNS to request the initiation of measurements in a DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

8.3.11.2 Successful Operation

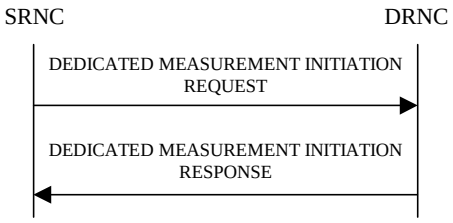

Figure 1: Measurement Initiation procedure, Successful Operation

The procedure is initiated with a DEDICATED MEASUREMENT INITIATION REQUEST message sent from the SRNC to the DRNC.

Upon reception, the DRNC shall initiate the requested measurement according to the parameters given in the request. Unless specified below, the meaning of the parameters are given in other specifications.

If no RL Information is provided in the *Dedicated Measurement Object* IE, the measurement reports shall give the aggregated result for all radio links within the requested UE Context. If RL Information is provided in the request, the measurement request shall apply for the requested radio links individually.

The *Report Characteristics* IE indicates how the reporting of the measurement shall be performed.

If the *Report Characteristics* IE indicates 'On-Demand', the DRNS shall report the measurement result immediately.

If the *Report Characteristics* IE indicates 'Periodic', the DRNS shall periodically initiate a Measurement Report procedure for this measurement, with the requested report frequency.

If the *Report Characteristics* IE indicates 'Event A', the DRNS shall initiate a Measurement Reporting procedure when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE indicates 'Event B', the DRNS shall initiate a Measurement Reporting procedure when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE indicates 'Event C', the DRNS shall initiate a Measurement Reporting procedure when the measured entity rises more than the requested threshold within the requested time.

If the *Report Characteristics* IE indicates 'Event D', the DRNS shall initiate a Measurement Reporting procedure when the measured entity falls more than the requested threshold within the requested time.

If the *Report Characteristics* IE indicates 'Event E', the DRNS shall initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The DRNS shall also initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Frequency* IE is provided, the DRNS shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. If 'Measurement Threshold 2' is not present, the DRNS shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE indicates 'Event F', the DRNS shall initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The DRNS shall also initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Frequency* IE is provided, the DRNS shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. If 'Measurement Threshold 2' is not present, the DRNS shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

If at the start of the measurement, the reporting criteria are fulfilled for any of Event A, Event B, Event E or Event F, the DRNS shall initiate a Measurement Reporting procedure immediately, and then continue with the measurements as in normal operation.

The *Measurement Filter Coefficient* IE indicates how filtering of the measurement values shall be performed before measurement event evaluation and reporting.

The averaging shall be performed according to the following formula.

$$F_n = (1-a) \cdot F_{n-1} + a \cdot M_n$$

The variables in the formula are defined as follows

F_n is the updated filtered measurement result

F_{n-1} is the old filtered measurement result

M_n is the latest received measurement result from physical layer measurements

a = one divided by 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 initialize the averaging filter, F_0 is set to M_1 when the first measurement result from the physical layer measurement is received.

If the DRNS was able to initiate the measurement requested by the SRNS it shall respond with the DEDICATED MEASUREMENT INITIATION RESPONSE message using the connection-oriented service of the signalling bearer. The message shall include the same Measurement Id that was used in the measurement request.

Only in the case the *Report Characteristics* IE indicated "On-Demand", the DEDICATED MEASUREMENT INITIATION RESPONSE message shall contain the measurement result. In this case also the *Dedicated Measurement Object* IE shall be included if it was included in the request message.

NEXT SECTION WITH CHANGES

9.1.28 DEDICATED MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Message Type	M			
Transaction Id	M			
Measurement Id	M			
Dedicated Measurement Object Type	M			
CHOICE *Dedicated Measurement Object Type*				
"RL"				
RL Information		*1..<maxnoofRLs>*		
RL-id	M			
DPCH Id	O			
Dedicated Measurement Type	M			
Measurement ~~Characteristics~~Filter Coefficient	~~M~~O			
Report Characteristics	M			

Range bound	Explanation
MaxnoofRLs	Maximum number of individual RLs a measurement can be started on.

NEXT SECTION WITH CHANGES

9.2.1.X Measurement Filter Coefficient

The Measurement Filter Coefficient determines the amount of filtering to be applied for measurements.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Measurement Filter Coefficient	M		INTEGER (1..256)	

~~9.2.1.28 Measurement Characteristics~~

~~The Measurement Characteristics indicates how the measurement shall be performed.~~

~~IE/Group Name~~	~~Presence~~	~~Range~~	~~IE Type and Reference~~	~~Semantics Description~~
~~Measurement Characteristics~~				
~~Measurement Frequency~~	~~M~~		~~TBD~~	
~~Averaging Duration~~	~~M~~		~~TBD~~	

~~Editors Note: The exact definition and structure is this information element awaits decisions in TSG RAN WG2.~~

NEXT SECTION WITH CHANGES

9.3.3 PDU Definitions

```
-- **************************************************************
--
-- PDU definitions for RNSAP.
--
-- **************************************************************

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- **************************************************************
--
-- IE parameter types from other modules.
--
-- **************************************************************

IMPORTS
    AllocationRetentionPriority,
    AllowedQueuingTime,
    BLER,
    BindingID,
    BurstType,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CPICH-EcIo,
    CPICH-Power,
    Cause,
    CellParameterID,
    ChipOffset,
    CompressedModeMethod,
    CriticalityDiagnostics,
    D-FieldLength,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-CombinationInd,
    DCH-ID,
    DL-ChannelisationCode,
    DL-DPCCH-SlotFormat,
    DL-DPCH-SlotNumber,
    DL-EbNo,
    DL-EbNoTarget,
    DL-FrameType,
    DL-Power,
    DL-ScramblingCode,
    DPCH-ID,
    DRX-Parameter,
    DedicatedMeasurementValue,
    DiversityControlField,
    DiversityMode,
    FACH-DataFrameSize,
    FACH-InitialWindowSize,
    FACH-PriorityIndicator,
    FDD-DL-ChannelisationCodeNumber,
    FDD-S-CCPCH-Offset,
    FrameHandlingPriority,
    FrameOffset,
    GapPeriod,
    GapPositionMode,
    L3-Information,
    MAC-c-SDU-Length,
    MaxNrOfUL-DPCHs,
    MeanBitRate,
    Measurement~~Characteristics~~FilterCoefficient,
    MeasurementID,
    MidambleShift,
    MinUL-ChannelisationCodeLength,
    MultipleURAsIndicator,
```

```
    MultiplexingPosition,
    Offset,
    PD,
    PSCH-PCCPCH-TimeSlot,
    PSCH-TimeSlot,
    PayloadCRC-PresenceIndicator,
    PilotBitsUsedIndicator,
    PowerControlMode,
    PowerOffset,
    PowerResumeMode,
    PrimaryCCPCH-RSCP,
    PrimaryCPICH-EcNo,
    PrimaryCPICH-Power,
    PrimaryScramblingCode,
    PropagationDelay,
    PunctureLimit,
    RANAP-RelocationInformation,
    RL-ID,
    RLC-Mode,
    RNC-ID,
    RepetitionLength,
    RepetitionPeriod,
    ReportCharacteristics,
    S-FieldLength,
    S-RNTI,
    SAI,
    SN,
    SRNC-ID,
    SSDT-CellID,
    SSDT-CellID-Length,
    SSDT-Indication,
    SSDT-SupportIndicator,
    ScaledUL-InterferenceLevel,
    ScramblingCode,
    ScramblingCodeChange,
    SecondaryCCPCH-SlotFormat,
    SyncCase,
    TDD-ChannelisationCode,
    TDD-PhysicalChannelOffset,
    TFCI-Coding,
    TFCI-Presence,
    TFCI-SignallingMode,
    TGD,
    TGL,
    TPC-StepSize,
    TimeSlot,
    ToAWE,
    ToAWS,
    TransportBearerID,
    TransportBearerRequestIndicator,
    TransportFormatCombinationSet,
    TransportFormatSet,
    TransportLayerAddress,
    UARFCN,
    UC-ID,
    UL-DL-CompressedModeSelection,
    UL-DPCCH-SlotFormat,
    UL-EbNo,
    UL-EbNoTarget,
    UL-FP-Mode,
    UL-ScramblingCode,
    URA-ID
FROM RNSAP-IEs

    PrivateExtensionContainer{},
    ProtocolExtensionContainer{},
    ProtocolIE-ContainerList{},
    ProtocolIE-ContainerPair{},
    ProtocolIE-ContainerPairList{},
    ProtocolIE-Container{},
    RNSAP-PRIVATE-EXTENSION,
    RNSAP-PROTOCOL-EXTENSION,
    RNSAP-PROTOCOL-IES,
    RNSAP-PROTOCOL-IES-PAIR
FROM RNSAP-Containers

    maxNoOfDL-Codes,
    maxNrOfCCTrCHs,
    maxNrOfDCHs,
    maxNrOfDL-Codes,
```

```
    maxNrOfDPCHs,
    maxNrOfFACH-FD-Size,
    maxNrOfFDD-Neighbours,
    maxNrOfMACcSDU-Length,
    maxNrOfTDD-Neighbours,
    maxNrOfRLs,
    maxNrOfSCCPCHs,
    maxRNCinURA,

    id-AllowedQueuingTime,
    id-BindingID,
    id-C-ID,
    id-C-RNTI,
    id-CCTrCH-ID,
    id-CFN,
    id-CN-CS-DomainIdentifier,
    id-CN-PS-DomainIdentifier,
    id-Cause,
    id-CompressedModeMethod,
    id-CriticalityDiagnostics,
    id-D-RNTI,
    id-D-RNTI-ReleaseIndication,
    id-DCH-AddItem,
    id-DCH-AddItem-RL-ReconfPrepFDD,
    id-DCH-AddItem-RL-ReconfPrepTDD,
    id-DCH-AddItem-RL-ReconfReadyFDD,
    id-DCH-AddItem-RL-ReconfRqstFDD,
    id-DCH-AddItem-RL-ReconfRqstTDD,
    id-DCH-AddList-RL-ReconfPrepFDD,
    id-DCH-AddList-RL-ReconfPrepTDD,
    id-DCH-AddList-RL-ReconfRqstFDD,
    id-DCH-AddList-RL-ReconfRqstTDD,
    id-DCH-DeleteItem-RL-ReconfPrepFDD,
    id-DCH-DeleteItem-RL-ReconfPrepTDD,
    id-DCH-DeleteItem-RL-ReconfRqstFDD,
    id-DCH-DeleteItem-RL-ReconfRqstTDD,
    id-DCH-DeleteList-RL-ReconfPrepFDD,
    id-DCH-DeleteList-RL-ReconfPrepTDD,
    id-DCH-DeleteList-RL-ReconfRqstFDD,
    id-DCH-DeleteList-RL-ReconfRqstTDD,
    id-DCH-Information-RL-SetupReqFDD,
    id-DCH-InformationItem-RL-SetupReqFDD,
    id-DCH-InformationItem-RL-SetupReqTDD,
    id-DCH-InformationList-RL-SetupReqTDD,
    id-DCH-ModifyItem,
    id-DCH-ModifyItem-RL-ReconfPrepFDD,
    id-DCH-ModifyItem-RL-ReconfPrepTDD,
    id-DCH-ModifyItem-RL-ReconfReadyFDD,
    id-DCH-ModifyItem-RL-ReconfRqstFDD,
    id-DCH-ModifyItem-RL-ReconfRqstTDD,
    id-DCH-ModifyList-RL-ReconfPrepFDD,
    id-DCH-ModifyList-RL-ReconfPrepTDD,
    id-DCH-ModifyList-RL-ReconfRqstFDD,
    id-DCH-ModifyList-RL-ReconfRqstTDD,
    id-DL-CCTrCH-Information-RL-ReconfPrepTDD,
    id-DL-CCTrCH-Information-RL-ReconfRqstTDD,
    id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD,
    id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD,
    id-DL-CCTrChInformationItem-RL-SetupReqTDD,
    id-DL-CCTrChInformationList-RL-SetupReqTDD,
    id-DL-CodeInformation-PhyChReconfRqstFDD,
    id-DL-DPCH-Information,
    id-DL-DPCH-Information-RL-SetupReqFDD,
    id-DL-DPCH-InformationList-PhyChReconfRqstTDD,
    id-DL-DPCH-InformationList-RL-ReconfReadyTDD,
    id-DL-EbNoTarget,
    id-DL-FrameType,
    id-DL-MeanBitRate,
    id-DL-ReferencePowerInformation-DL-PC-Rqst,
    id-DRX-Parameter,
    id-DedicatedMeasurementObjectType-DM-Rprt,
    id-DedicatedMeasurementObjectType-DM-Rqst,
    id-DedicatedMeasurementObjectType-DM-Rspns,
    id-FACH-InfoForOptionalGroupS-CCPCH,
    id-FACH-InfoForOptionalS-CCPCH,
    id-FACH-InfoForS-CCPCH-CoupledToPRACH,
    id-GapPositionMode,
    id-L3-Information,
    id-MeasurementCharacteristicsFilterCoefficient,
    id-MeasurementID,
```

```
    id-MultipleURAsIndicator,
    id-PD,
    id-PagingArea-PagingRqst,
    id-PowerControlMode,
    id-PowerResumeMode,
    id-ProcedureScope-DL-PC-Rqst,
    id-RANAP-RelocationInformation,
    id-RL-Information-PhyChReconfRqstFDD,
    id-RL-Information-PhyChReconfRqstTDD,
    id-RL-Information-RL-AdditionRqstFDD,
    id-RL-Information-RL-AdditionRqstTDD,
    id-RL-Information-RL-DeletionRqst,
    id-RL-Information-RL-FailureInd,
    id-RL-Information-RL-ReconfPrepFDD,
    id-RL-Information-RL-RestoreInd,
    id-RL-Information-RL-SetupReqFDD,
    id-RL-Information-RL-SetupReqTDD,
    id-RL-InformationItem-DM-Rprt,
    id-RL-InformationItem-DM-Rqst,
    id-RL-InformationItem-DM-Rspns,
    id-RL-InformationItem-RL-SetupReqFDD,
    id-RL-InformationList-RL-AdditionRqstFDD,
    id-RL-InformationList-RL-DeletionRqst,
    id-RL-InformationList-RL-FailureInd,
    id-RL-InformationList-RL-ReconfPrepFDD,
    id-RL-InformationList-RL-RestoreInd,
    id-RL-InformationResponse-RL-AdditionRspTDD,
    id-RL-InformationResponse-RL-ReconfReadyTDD,
    id-RL-InformationResponse-RL-SetupRspTDD,
    id-RL-InformationResponseItem-RL-AdditionRspFDD,
    id-RL-InformationResponseItem-RL-ReconfReadyFDD,
    id-RL-InformationResponseItem-RL-SetupRspFDD,
    id-RL-InformationResponseList-RL-AdditionRspFDD,
    id-RL-InformationResponseList-RL-ReconfReadyFDD,
    id-RL-InformationResponseList-RL-SetupRspFDD,
    id-RL-ReconfigurationFailure-RL-ReconfFail,
    id-RL-ReconfigurationFailureList-RL-ReconfFail,
    id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind,
    id-ReportCharacteristics,
    id-S-RNTI,
    id-SAI,
    id-SN,
    id-SRNC-ID,
    id-ScramblingCodeChange,
    id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
    id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,
    id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
    id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
    id-TGD,
    id-TGL,
    id-TGP1,
    id-TGP2,
    id-TransportBearerID,
    id-TransportBearerRequestIndicator,
    id-TransportLayerAddress,
    id-UC-ID,
    id-UL-CCTrCH-Information-RL-ReconfPrepTDD,
    id-UL-CCTrCH-Information-RL-ReconfRqstTDD,
    id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,
    id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD,
    id-UL-CCTrChInformationItem-RL-SetupReqTDD,
    id-UL-CCTrChInformationList-RL-SetupReqTDD,
    id-UL-DL-CompressedModeSelection,
    id-UL-DPCH-Information,
    id-UL-DPCH-Information-RL-SetupReqFDD,
    id-UL-DPCH-InformationList-PhyChReconfRqstTDD,
    id-UL-DPCH-InformationList-RL-ReconfReadyTDD,
    id-UL-DeltaEbNo,
    id-UL-DeltaEbNoAfter,
    id-UL-EbNoTarget,
    id-UL-MeanBitRate,
    id-URA-ID,
    id-UnsuccessfulRL-InformationResponse,
    id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
    id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
    id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
    id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
    id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
FROM RNSAP-Constants;
```

NEXT SECTION WITH CHANGES

```
-- **************************************************************
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- **************************************************************

DedicatedMeasurementInitiationRequest ::= SEQUENCE {
    protocolIEs                     ProtocolIE-Container
{{DedicatedMeasurementInitiationRequest-IEs}},
    protocolExtensions              ProtocolExtensionContainer
{{DedicatedMeasurementInitiationRequest-Extensions}}                    OPTIONAL,
    ...
}

DedicatedMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID               CRITICALITY ignore  TYPE MeasurementID
    PRESENCE mandatory  } |
    { ID id-DedicatedMeasurementObjectType-DM-Rqst  CRITICALITY ignore  TYPE
DedicatedMeasurementObjectType-DM-Rqst  PRESENCE mandatory  } |
    { ID id-Measurement~~Characteristics~~FilterCoefficient     CRITICALITY ignore  TYPE
Measurement~~Characteristics~~FilterCoefficient         PRESENCE ~~mandatory~~optional  } |
    { ID id-ReportCharacteristics           CRITICALITY ignore  TYPE ReportCharacteristics
    PRESENCE mandatory  },
    ...
}
```

NEXT SECTION WITH CHANGES

```
-- M

-- ** TODO **
MaxNrOfUL-DPCHs             ::= INTEGER

MAC-c-SDU-Length            ::= INTEGER (1..5000)

-- **TODO**
MACd-MACsh-TransportFormatSet       ::= INTEGER

~~-- **NOTE: extensibility**~~
~~MeasurementCharacteristics ::= SEQUENCE {~~
~~    measuremtFrequence        TBD,~~
~~    averagingDuration         TBD,~~
~~    iE-Extensions             ProtocolExtensionContainer { {MeasurementCharacteristics-ExtIEs} }~~
~~OPTIONAL,~~
~~    ...~~
~~}~~

~~MeasurementCharacteristics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {~~
~~    ...~~
~~}~~

MeasurementFilterCoefficient    ::= INTEGER(1..256)
```

NEXT SECTION WITH CHANGES

```
-- **************************************************************
--
-- IEs
--
-- **************************************************************

id-AllowedQueuingTime                           INTEGER ::= 0
id-BindingID                                INTEGER ::= 1
id-C-ID                                 INTEGER ::= 2
id-C-RNTI                               INTEGER ::= 3
id-CCTrCH-ID                                INTEGER ::= 4
id-CFN                                  INTEGER ::= 5
id-CN-CS-DomainIdentifier                       INTEGER ::= 6
id-CN-PS-DomainIdentifier                       INTEGER ::= 7
id-Cause                                INTEGER ::= 8
```

```
id-CompressedModeMethod                                INTEGER ::= 9
id-D-RNTI                                      INTEGER ::= 10
id-D-RNTI-ReleaseIndication                            INTEGER ::= 11
id-DCH-AddItem                                 INTEGER ::= 12
id-DCH-AddItem-RL-ReconfPrepFDD                        INTEGER ::= 13
id-DCH-AddItem-RL-ReconfPrepTDD                        INTEGER ::= 14
id-DCH-AddItem-RL-ReconfReadyFDD                       INTEGER ::= 15
id-DCH-AddItem-RL-ReconfRqstFDD                        INTEGER ::= 16
id-DCH-AddItem-RL-ReconfRqstTDD                        INTEGER ::= 17
id-DCH-AddList-RL-ReconfPrepFDD                        INTEGER ::= 18
id-DCH-AddList-RL-ReconfPrepTDD                        INTEGER ::= 19
id-DCH-AddList-RL-ReconfRqstFDD                        INTEGER ::= 20
id-DCH-AddList-RL-ReconfRqstTDD                        INTEGER ::= 21
id-DCH-DeleteItem-RL-ReconfPrepFDD                     INTEGER ::= 22
id-DCH-DeleteItem-RL-ReconfPrepTDD                     INTEGER ::= 23
id-DCH-DeleteItem-RL-ReconfRqstFDD                     INTEGER ::= 24
id-DCH-DeleteItem-RL-ReconfRqstTDD                     INTEGER ::= 25
id-DCH-DeleteList-RL-ReconfPrepFDD                     INTEGER ::= 26
id-DCH-DeleteList-RL-ReconfPrepTDD                     INTEGER ::= 27
id-DCH-DeleteList-RL-ReconfRqstFDD                     INTEGER ::= 28
id-DCH-DeleteList-RL-ReconfRqstTDD                     INTEGER ::= 29
id-DCH-Information-RL-SetupReqFDD                      INTEGER ::= 30
id-DCH-InformationItem-RL-SetupReqFDD                      INTEGER ::= 31
id-DCH-InformationItem-RL-SetupReqTDD                      INTEGER ::= 32
id-DCH-InformationList-RL-SetupReqTDD                      INTEGER ::= 33
id-DCH-ModifyItem                              INTEGER ::= 34
id-DCH-ModifyItem-RL-ReconfPrepFDD                     INTEGER ::= 35
id-DCH-ModifyItem-RL-ReconfPrepTDD                     INTEGER ::= 36
id-DCH-ModifyItem-RL-ReconfReadyFDD                    INTEGER ::= 37
id-DCH-ModifyItem-RL-ReconfRqstFDD                     INTEGER ::= 38
id-DCH-ModifyItem-RL-ReconfRqstTDD                     INTEGER ::= 39
id-DCH-ModifyList-RL-ReconfPrepFDD                     INTEGER ::= 40
id-DCH-ModifyList-RL-ReconfPrepTDD                     INTEGER ::= 41
id-DCH-ModifyList-RL-ReconfRqstFDD                     INTEGER ::= 42
id-DCH-ModifyList-RL-ReconfRqstTDD                     INTEGER ::= 43
id-DL-CCTrCH-Information-RL-ReconfPrepTDD                  INTEGER ::= 44
id-DL-CCTrCH-Information-RL-ReconfRqstTDD                  INTEGER ::= 45
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD                  INTEGER ::= 46
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD                  INTEGER ::= 47
id-DL-CCTrChInformationItem-RL-SetupReqTDD                 INTEGER ::= 48
id-DL-CCTrChInformationList-RL-SetupReqTDD                 INTEGER ::= 49
id-DL-CodeInformation-PhyChReconfRqstFDD                   INTEGER ::= 50
id-DL-DPCH-Information                             INTEGER ::= 51
id-DL-DPCH-Information-RL-SetupReqFDD                      INTEGER ::= 52
id-DL-DPCH-InformationList-PhyChReconfRqstTDD                  INTEGER ::= 53
id-DL-DPCH-InformationList-RL-ReconfReadyTDD                   INTEGER ::= 54
id-DL-EbNoTarget                               INTEGER ::= 55
id-DL-FrameType                                INTEGER ::= 56
id-DL-MeanBitRate                              INTEGER ::= 57
id-DL-ReferencePowerInformation-DL-PC-Rqst                 INTEGER ::= 58
id-DRX-Parameter                               INTEGER ::= 59
id-DedicatedMeasurementObjectType-DM-Rprt                  INTEGER ::= 60
id-DedicatedMeasurementObjectType-DM-Rqst                  INTEGER ::= 61
id-DedicatedMeasurementObjectType-DM-Rspns                 INTEGER ::= 62
id-FACH-InfoForOptionalGroupS-CCPCH                    INTEGER ::= 63
id-FACH-InfoForOptionalS-CCPCH                         INTEGER ::= 64
id-FACH-InfoForS-CCPCH-CoupledToPRACH                      INTEGER ::= 65
id-GapPositionMode                             INTEGER ::= 66
id-L3-Information                              INTEGER ::= 67
id-MeasurementCharacteristicsMeasurementFilterCoefficient                          INTEGER ::= 68
id-MeasurementID                               INTEGER ::= 69
id-MultipleURAsIndicator                           INTEGER ::= 70
id-PD                                          INTEGER ::= 71
id-PagingArea-PagingRqst                               INTEGER ::= 72
id-PowerControlMode                            INTEGER ::= 73
id-PowerResumeMode                             INTEGER ::= 74
id-ProcedureScope-DL-PC-Rqst                           INTEGER ::= 75
id-RANAP-RelocationInformation                         INTEGER ::= 76
id-RL-Information-PhyChReconfRqstFDD                       INTEGER ::= 77
id-RL-Information-PhyChReconfRqstTDD                       INTEGER ::= 78
id-RL-Information-RL-AdditionRqstFDD                       INTEGER ::= 79
id-RL-Information-RL-AdditionRqstTDD                       INTEGER ::= 80
id-RL-Information-RL-DeletionRqst                      INTEGER ::= 81
id-RL-Information-RL-FailureInd                        INTEGER ::= 82
id-RL-Information-RL-ReconfPrepFDD                     INTEGER ::= 83
id-RL-Information-RL-RestoreInd                        INTEGER ::= 84
id-RL-Information-RL-SetupReqFDD                       INTEGER ::= 85
id-RL-Information-RL-SetupReqTDD                       INTEGER ::= 86
id-RL-InformationItem-DM-Rprt                          INTEGER ::= 87
id-RL-InformationItem-DM-Rqst                          INTEGER ::= 88
```

```
id-RL-InformationItem-DM-Rspns                          INTEGER ::= 89
id-RL-InformationItem-RL-SetupReqFDD                        INTEGER ::= 90
id-RL-InformationList-RL-AdditionRqstFDD                    INTEGER ::= 91
id-RL-InformationList-RL-DeletionRqst                       INTEGER ::= 92
id-RL-InformationList-RL-FailureInd                     INTEGER ::= 93
id-RL-InformationList-RL-ReconfPrepFDD                      INTEGER ::= 94
id-RL-InformationList-RL-RestoreInd                     INTEGER ::= 95
id-RL-InformationResponse-RL-AdditionRspTDD                 INTEGER ::= 96
id-RL-InformationResponse-RL-ReconfReadyTDD                 INTEGER ::= 97
id-RL-InformationResponse-RL-SetupRspTDD                    INTEGER ::= 98
id-RL-InformationResponseItem-RL-AdditionRspFDD                 INTEGER ::= 99
id-RL-InformationResponseItem-RL-ReconfReadyFDD                 INTEGER ::= 100
id-RL-InformationResponseItem-RL-SetupRspFDD                    INTEGER ::= 101
id-RL-InformationResponseList-RL-AdditionRspFDD                 INTEGER ::= 102
id-RL-InformationResponseList-RL-ReconfReadyFDD                 INTEGER ::= 103
id-RL-InformationResponseList-RL-SetupRspFDD                    INTEGER ::= 104
id-RL-ReconfigurationFailure-RL-ReconfFail                  INTEGER ::= 105
id-RL-ReconfigurationFailureList-RL-ReconfFail                  INTEGER ::= 106
id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind                 INTEGER ::= 107
id-ReportCharacteristics                            INTEGER ::= 108
id-S-RNTI                               INTEGER ::= 109
id-SAI                                  INTEGER ::= 110
id-SN                                   INTEGER ::= 111
id-SRNC-ID                              INTEGER ::= 112
id-ScramblingCodeChange                             INTEGER ::= 113
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD       INTEGER ::= 114
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD          INTEGER ::= 115
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD       INTEGER ::= 116
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD      INTEGER ::= 117
id-TGD                                  INTEGER ::= 118
id-TGL                                  INTEGER ::= 119
id-TGP1                                 INTEGER ::= 120
id-TGP2                                 INTEGER ::= 121
id-TransportBearerID                                INTEGER ::= 122
id-TransportBearerRequestIndicator                      INTEGER ::= 123
id-TransportLayerAddress                            INTEGER ::= 124
id-UC-ID                                INTEGER ::= 125
id-UL-CCTrCH-Information-RL-ReconfPrepTDD                   INTEGER ::= 126
id-UL-CCTrCH-Information-RL-ReconfRqstTDD                   INTEGER ::= 127
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD                   INTEGER ::= 128
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD                   INTEGER ::= 129
id-UL-CCTrChInformationItem-RL-SetupReqTDD                  INTEGER ::= 130
id-UL-CCTrChInformationList-RL-SetupReqTDD                  INTEGER ::= 131
id-UL-DL-CompressedModeSelection                        INTEGER ::= 132
id-UL-DPCH-Information                              INTEGER ::= 133
id-UL-DPCH-Information-RL-SetupReqFDD                       INTEGER ::= 134
id-UL-DPCH-InformationList-PhyChReconfRqstTDD                   INTEGER ::= 135
id-UL-DPCH-InformationList-RL-ReconfReadyTDD                    INTEGER ::= 136
id-UL-DeltaEbNo                                 INTEGER ::= 137
id-UL-DeltaEbNoAfter                                INTEGER ::= 138
id-UL-EbNoTarget                                INTEGER ::= 139
id-UL-MeanBitRate                               INTEGER ::= 140
id-URA-ID                               INTEGER ::= 141
id-UnsuccessfulRL-InformationResponse                       INTEGER ::= 142
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD     INTEGER ::= 143
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD        INTEGER ::= 144
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD        INTEGER ::= 145
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD     INTEGER ::= 146
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD        INTEGER ::= 147
id-CriticalityDiagnostics                           INTEGER ::= 148

END
```

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Document R3-000493
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CHANGE REQUEST

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25.423	CR	24	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG RAN #7	for approval	X	Strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [ ]

Source: RAN-WG3 **Date:** Feb , 2000

Subject: Alignment to R2 definition of puncture limit range and stepsize

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change: Currently the R2 and R3 definitions for the puncture limit are different. After long discussions between R1 and R2, it has been decided that only a limited step size and range are sufficient for the puncture limit. In order to avoid inconsistencies, it is proposed to align the R3 definition to the R2 definition.

Clauses affected: 9.2.1.36, 9.3.4.

Other specs Affected:

Other 3G core specifications	[ ]	→ List of CRs:	
Other GSM core specifications	[ ]	→ List of CRs:	
MS test specifications	[ ]	→ List of CRs:	
BSS test specifications	[ ]	→ List of CRs:	
O&M specifications	[ ]	→ List of CRs:	

Other comments:

- Another "inconsistency" in the handling of the puncture limit between R2 and R3 is the fact that since in RRC, the change of puncture limit is performed with the physical channel reconfiguration it can also be changed unsynchronised, whereas this is currently not possible on NBAP/RNSAP (puncture limit not included in RL_RECONF_REQ). However, this asynchronous capability seems more caused by the RRC procedure structure than a functional requirement. Therefore this issue not aligned.

9.2.1.36 Puncture Limit

The maximum amount of puncturing for a transport channel in rate matching.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Puncture Limit			INTEGER (0..~~100~~15)	0: 40% 1: 44 % … 14: 96% 15: 100%

9.3.4 Information Elements Definitions

```
-- P

PD                  ::= INTEGER (0..2047, ...)

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    crc-not-included,
    crc-included--,
--  ...
}

PSCH-TimeSlot               ::= INTEGER (0..6)

Periodic ::= SEQUENCE {
    reportPeriodicity       ReportPeriodicity,
    iE-Extensions           ProtocolExtensionContainer { {Periodic-ExtIEs} } OPTIONAL,
    ...
}

Periodic-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
PilotBitsUsedIndicator          ::= INTEGER

-- ** TODO **
PLMN-ID ::= SEQUENCE {
    mCC-digit           MCC-Digit,
    iE-Extensions           ProtocolExtensionContainer { {PLMN-ID-ExtIEs} } OPTIONAL,
    mNC-digit           MNC-Digit
}
-- FFS

PLMN-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PowerControlMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

PowerOffset             ::= INTEGER (0..24)

PowerResumeMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

-- ** TODO **
PrimaryCPICH-Power          ::= INTEGER

PrimaryCPICH-EcNo           ::= INTEGER (-30..30)

-- ** TODO **
PrimaryCCPCH-RSCP           ::= INTEGER

PrimaryScramblingCode           ::= ScramblingCode

PropagationDelay            ::= INTEGER (0..255)

SyncCase ::= ENUMERATED {
    case1,
    case2,
    case3--,
--  ...
}

-- ** TODO **
PSCH-CCPCH-TimeSlot         ::= TimeSlot

-- ** TODO **
PSCH-PCCPCH-TimeSlot            ::= TimeSlot
```

```
-- ** TODO **
P-CPICH-Power                ::= INTEGER

-- 0: 40%; 1: 44%; …; 14: 96%; 15: 100%
PunctureLimit                ::= INTEGER (0..1500)
-- Unit is %
```

TSG-RAN Working Group 3 Meeting #11
Sophia Antipolis, France, 28th February – 3rd March 2000

Document R3-000511
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CHANGE REQUEST

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25.423	CR	027	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG RAN #7	for approval	X	Strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [ ]

Source: RAN-WG3 **Date:** 28th Feb. – 3rd March 2000

Subject: Enhancement of the description of the Message Type IE

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change:

In the current ASN.1 part of the specification a message is identified by its Procedure Code in combination with the "type of message" (Initiating, Successful Outcome, Unsuccessful Outcome, Outcome) and the mode (FDD or TDD). In the Tabular Format a message is identified by its *Message Type* IE. However, there is no clear connection between the two different types of identification. Further more, chapter 10 (Handling of Unknown, Unforeseen and Erroneous Protocol Data) is based on the usage of the Procedure Code and the "type of message".

In this CR the Message Type IE is modified to achieve a better alignment between the different parts of the specification and thus ease the understanding of the specification. The modification is to describe the Message Type IE in a way that connects the ASN.1 and chapter 10 with the Tabular Format.

Clauses affected: 9.2.1.30

Other specs affected:				
	Other 3G core specifications	X	→ List of CRs:	25.413 v3.0.0 CR-026, 25.433 v3.0.0 CR-042
	Other GSM core specifications		→ List of CRs:	
	MS test specifications		→ List of CRs:	
	BSS test specifications		→ List of CRs:	
	O&M specifications		→ List of CRs:	

Other comments:

9.2.1.30 Message Type

The Message Type uniquely identifies the message being sent.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type				
Procedure ID		1		
Procedure Code~~Message Type~~	M		ENUMERATED (RL Setup~~ Request~~, ~~RL Setup Response,~~ ~~RL Setup Failure,~~ RL Addition~~ Request~~, ~~RL Addition Response,~~ ~~RL Addition Failure,~~ RL Deletion~~ Request~~, ~~RL Deletion Response,~~ Synchronised RL Reconfiguration Preparation~~e~~, ~~RL Reconfiguration Ready,~~ Synchronised RL Reconfiguration Commit, ~~RL Reconfiguration Failure,~~ Synchronised RL Reconfiguration Cancel, Unsynchronised RL Reconfiguration Request, ~~RL Reconfiguration Response,~~ RL Failure~~ Indication~~, RL Restoration~~e Indication~~, DL Power Control~~ Request~~, Physical Channel Reconfiguration~~ Request~~, ~~Physical Channel Reconfiguration Command,~~ ~~Physical Channel Reconfiguration Failure,~~ UL Signalling Transfer~~ Indication~~, DL Signalling Transfer~~ Request~~, Relocation Commit, Paging~~ Request~~, ~~Dedicated~~ Measurement Initiation~~ Request~~, ~~Dedicated Measurement Initiation Response,~~ ~~Dedicated Measurement Initiation Failure,~~ ~~Dedicated~~ Measurement Reporting, ~~Dedicated~~ Measurement Termination~~ Request~~, ~~Dedicated~~ Measurement Failure~~ Indication~~, Common Transport Channel Resources Initiation~~Release Request~~, Common Transport Channel Resources Release~~Request~~, ~~Common Transport Channel Resources Response,~~ ~~Common Transport Channel Resources Failure,~~ Compressed Mode Preparation~~e~~, ~~Compressed Mode Ready,~~ ~~Compressed Mode Failure,~~ Compressed Mode Commit, Compressed Mode Cancellation, Error Indication, …)	~~Future extensions shall be possible~~
Ddmode	M		ENUMERATED (FDD, TDD, Common)	Common = common to FDD and TDD.
Type of Message	M		ENUMERATED (Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome)	

3GPP TSG-RA WG3 Meeting #11
Sophia Antipolis, France, 28 Feb – 3 Mar 2000

***Document* R3-000536**
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CHANGE REQUEST

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25.423	CR	035	Current Version:	3.0.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	RAN#7	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from:* ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [ ] UTRAN / Radio [X] Core Network [ ]

Source: RAN-WG3 **Date:** 22 Feb 2000

Subject: Introduction of 'Presence' Information Element for Extension Containers (ASN.1)

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change: Even if the 'Presence' IE has only documentary character for the ASN.1 code it should be in the Extension Container (it is already in the Standard Protocol Container).

Clauses affected: 9.3.7 Container Definitions

Other specs affected:

Other 3G core specifications	[ ]	→ List of CRs:
Other GSM core specifications	[ ]	→ List of CRs:
MS test specifications	[ ]	→ List of CRs:
BSS test specifications	[ ]	→ List of CRs:
O&M specifications	[ ]	→ List of CRs:

Other comments:


help.doc

<--------- double-click here for help and instructions on how to create a CR.

9.3.7 Container Definitions

```
   .
   .
   .
-- **************************************************************
--
-- Class Definition for Protocol Extensions
--
-- **************************************************************

RNSAP-PROTOCOL-EXTENSION ::= CLASS {
    &id             ProtocolExtensionID                UNIQUE,
    &criticality            Criticality,
    &Extension
    &presence       Presence
}
WITH SYNTAX {
    ID              &id
    CRITICALITY         &criticality
    EXTENSION           &Extension
    PRESENCE            &presence
}

-- **************************************************************
--
-- Class Definition for Private Extensions
--
-- **************************************************************

RNSAP-PRIVATE-EXTENSION ::= CLASS {
    &id             PrivateExtensionID,
    &criticality            Criticality,
    &Extension
    &presence       Presence
}
WITH SYNTAX {
    ID              &id
    CRITICALITY         &criticality
    EXTENSION           &Extension
    PRESENCE            &presence
}
```