## RP-010118

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

Title: Agreed CRs to TS 25.423

Source: TSG-RAN WG3

Agenda item: 5.3.3

Tdoc_Num	Specification	CR_Num	Revision_Num	CR_Subject	CR_Category	WG_Status	Cur_Ver_Num	New_Ver_Num
R3-010676	25.423	305		Time measurement granularity	F	agreed	3.4.0	3.5.0
R3-011021	25.423	306	2	Measurement range modification	F	agreed	3.4.0	3.5.0
R3-010917	25.423	307	1	SCH Timeslot IE definition	F	agreed	3.4.0	3.5.0
R3-010919	25.423	308	1	DL Timeslot ISCP report correction	F	agreed	3.4.0	3.5.0
R3-010927	25.423	311	1	Paging Cause	F	agreed	3.4.0	3.5.0
R3-010760	25.423	313		Handling of the Procedures Triggering an Error Indication Procedure	F	agreed	3.4.0	3.5.0
R3-010764	25.423	314		Mapping of TFS and TFI	F	agreed	3.4.0	3.5.0
R3-010767	25.423	315		Release of Common Transport Channel Resources in the DRNS	F	agreed	3.4.0	3.5.0
R3-011064	25.423	316	1	Miscellaneous Corrections	F	agreed	3.4.0	3.5.0
R3-010769	25.423	317		Removal of IE Group Name for Groups with only one Repetition	F	agreed	3.4.0	3.5.0
R3-011025	25.423	318	2	Forward Compatibility of RNSAP with regards to Dedicated Measurements	F	agreed	3.4.0	3.5.0
R3-011008	25.423	319	1	Remaining Errors after CR Implementation	F	agreed	3.4.0	3.5.0

R3-011085	25.423	329	2	Erroneous Criticality Diagnostics IE	F	agreed	3.4.0	3.5.0
R3-010784	25.423	332		Handling of Not Comprehended and Missing IEs Leading to Incapability to Compile a Response Message	F	agreed	3.4.0	3.5.0
R3-011024	25.423	334	1	Merged Clarifications to the Measurement Procedures	F	agreed	3.4.0	3.5.0
R3-011032	25.423	335	1	Introduction of the PC Preamble and SRB Delay IEs.	F	agreed	3.4.0	3.5.0

ж	25.423 CR 305 # re - # Current version: 3.4.0 #								
For <u>HELP</u> on u	For <b>HELP</b> on using this form, see bottom of this page or look at the pop-up text over the <b>#</b> symbols.								
Proposed change a	fects: 第 (U)SIM ME/UE Radio Access Network X Core Network								
Title: ೫	Time measurement granularity								
Source: ೫	R-WG3								
Work item code: %	Date: ₩ February 2001								
Category: अ	F Release: # R99								
	Jse one of the following categories:Use one of the following releases:F (essential correction)2A (corresponds to a correction in an earlier release)R96B (Addition of feature),R97C (Functional modification of feature)R98D (Editorial modification)R99D (Editorial modifications of the above categories canREL-4Release 4)REL-5Release 5)								
Reason for change	As for the RTT measurement for FDD, RAN WG4 changed the granularity of the Rx Timing Deviation for TDD. This CR reflects the changes made in 25.123 and incorporates this new definition in 25.423.	)							
Summary of chang	: # Modification of dated reference of WG4 spec 25.123 to V3.5 Modification of dedicated measurement value and measurement threshold								
Consequences if	# Inconsistency between WG3 and WG4 specs.								
not approved.	Backward compatibility: Although not Backward compatible it is necessary for consistency								
Clauses affected:	<b>97</b> 2 0 2 1 10 0 2 1 30 0 3 <i>1</i>								
Other specs	<b>X</b> Other core specifications <b>X</b> 25.123 , R4-010363 25.433 CR351, <b>X</b> Test specifications <b>X</b>								
	O&M Specifications								
Other comments:	ж								

#### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G\_Specs/CRs.htm</u>. Below is a brief summary:

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

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

# 2 References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- [1] 3GPP TS 23.003: "Numbering, addressing and identification".
- [2] 3GPP TS 25.413: "UTRAN Iu Interface RANAP Signalling".
- [3] 3GPP TS 25.426: "UTRAN Iur and Iub Interface Data Transport & Transport Layer Signalling for DCH Data Streams".
- [4] 3GPP TS 25.427: "UTRAN Iur and Iub Interface User Plane Protocols for DCH Data Streams".
- [5] 3GPP TS 25.435: "UTRAN Iub interface User Plane Protocols for Common Transport Channel Data Streams".
- [6] 3GPP TS 25.104: "UTRA (BS) FDD; Radio transmission and Reception"
- [7] 3GPP TS 25.105: "UTRA (BS) TDD; Radio Transmission and Reception".
- [8] 3GPP TS 25.211: "Physical Channels and Mapping of Transport Channels onto Physical Channels (FDD)".
- [9] 3GPP TS 25.212: "Multiplexing and Channel Coding (FDD)
- [10] 3GPP TS 25.214: "Physical Layer Procedures (FDD)".
- [11] 3GPP TS 25.215: "Physical Layer Measurements (FDD)".
- [12] 3GPP TS 25.221: "Physical Channels and Mapping of Transport Channels onto Physical Channels (TDD)".
- [13] 3GPP TS 25.223: "Spreading and Modulation (TDD)".
- [14] 3GPP TS 25.225: "Physical Layer Measurements (TDD)".
- [15] 3GPP TS 25.304: "UE Procedures in Idle Mode"
- [16] 3GPP TS 25.331: "RRC Protocol Specification".
- [17] 3GPP TS 25.402: "Synchronisation in UTRAN, Stage 2".
- [18] ITU-T Recommendation X.680 (12/94): "Information technology Abstract Syntax Notation One (ASN.1): Specification of basic notation".
- [19] ITU-T Recommendation X.681 (12/97): "Information technology Abstract Syntax Notation One (ASN.1): Information object specification".
- [20] ITU-T Recommendation X.691 (12/97): "Information technology ASN.1 encoding rules -Specification of Packed Encoding Rules (PER)".
- [21] 3GPP TS 25.213: "Spreading and modulation (FDD)"
- [22] 3GPP TS 25.224: "Physical Layer Procedures (TDD)"
- [23] 3GPP TS 25.133 (V3.3): "Requirements for support of Radio Resource management (FDD)".

- [24] 3GPP TS 25.123 (V3.35): "Requirements for support of Radio Resource management (TDD)".
- [25] 3GPP TS 23.003: "Universal Graphical Area Description (GAD)".
- [26] 3GPP TS 25.302: "Services Provided by the Physical Layer".
- [27] 3GPP TS 25.213: "Spreading and modulation (FDD)".
- [28] 3GPP TR 25.921: "Guidelines and Principles for Protocol Description and Error Handling".
- [29] GSM TS 05.05: "Digital cellular telecommunications system (Phase 2+); Radio transmission and reception"

## 9.2.1.19 Dedicated Measurement Value

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated measurement Value				
>SIR Value	C MeasValue		INTEGER(0. .63)	According to mapping in ref. [23] and [24]
>SIR Error Value	C MeasValue		INTEGER(0. .125)	According to mapping in [23], (FDD only)
>Transmitted Code	C MoasValuo		INTEGER(0.	According to mapping in ref.
>RSCP	C MeasValue		INTEGER(0. .81)	According to mapping in ref. [24] (TDD only)
>Rx Timing Deviation	C MeasValue		INTEGER(0. . <del>2047<u>8191</u>)</del>	According to mapping in [24] [TDD only]
>Round Trip Time	C MeasValue		INTEGER(0. .32767)	According to mapping in [23] [FDD only]

Condition	Explanation
MeasValue	Only one measurement value can be present at the same time.

#### 9.2.1.39 Measurement Threshold

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

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
SIR	C – Threshold		INTEGER(0. .63)	According to mapping in ref. [23] and [24].
SIR Error	C – Threshold		INTEGER(0. .125)	According to mapping in [23], (FDD only)
Transmitted Code Power	C – Threshold		INTEGER(0. .127)	According to mapping in ref. [23] and [24].
RSCP	C – Threshold		INTEGER(0. .81)	According to mapping in ref. [24] (TDD only)
Rx Timing Deviation	C - Threshold		INTEGER(0. . <del>2047<u>8191</u>)</del>	According to mapping in [24] (TDD only)
Round Trip Time	C – Threshold		INTEGER(0. .32767)	According to mapping in [23] (FDD only)

Condition	Explanation
Threshold	Only one measurement threshold can be present at the same time.

```
Information Element Definitions
9.3.4
-- Information Element Definitions
_ -
-- R
RAC
                 ::= OCTET STRING (SIZE(1))
RANAP-RelocationInformation
                           ::= BIT STRING
RateMatchingAttribute
                           ::= INTEGER (1..maxRateMatching)
RB-Identity
                            ::= INTEGER (0..31)
RB-Info ::= SEQUENCE (SIZE(1..maxNoOfRB)) OF RB-Identity
RefTFCNumber ::= INTEGER (0..15)
RepetitionLength
                        ::= INTEGER (1..63)
RepetitionPeriod ::= ENUMERATED {
   v1,
   v2,
   v4,
   v8.
   v16.
   v32,
   v64
}
RepetitionNumber ::= INTEGER (1..256)
ReportCharacteristics ::= CHOICE {
   onDemand
                    NULL,
   periodic
                    Periodic,
   eventA
                     EventA,
   eventB
                     EventB,
   eventC
                     EventC,
                     EventD,
   eventD
   eventE
                     EventE,
   eventF
                     EventF,
   . . .
}
ReportPeriodicity ::= CHOICE \{
   ten-msec
                        INTEGER (1..6000,...),
-- The Report Periodicity gives the reporting periodicity in number of 10 ms periods.
-- E.g. value 6000 means 60000ms (i.e. 1min)
-- Unit ms, Step 10ms
                 INTEGER (1..60,...),
   min
-- Unit min, Step 1min
   . . .
}
                     ::= INTEGER (0..31)
RL-ID
                     ::= INTEGER (0..31)
RL-Set-ID
                     ::= INTEGER (0..4095)
RNC-ID
Round-Trip-Time-IncrDecrThres ::= INTEGER(0..32766)
Round-Trip-Time-Value ::= INTEGER(0..32767)
-- According to mapping in [23]
RSCP-Value ::= INTEGER (0..81)
-- According to mapping in [24]
RSCP-Value-IncrDecrThres ::= INTEGER (0..80)
Received-total-wide-band-power
                                       ::= INTEGER (0..621)
```

-- According to mapping in [23]

RxTimingDeviationForTA ::= INTEGER (0..127) -- As specified in [5], ch. 6.2.7.6

Rx-Timing-Deviation-Value ::= INTEGER (0...20478191)

			С	HAN	IGE	RI	EQ	UE	ST				CR-Form-v3
ж	25	<mark>.423</mark>	CR <mark>:</mark>	306		ж	re	2	ж	Current vers	sion:	3.4.0	Ħ
For <b><u>HELP</u></b> on using this form, see bottom of this page or look at the pop-up text over the $#$ symbols.													
Proposed change	e affec	ts: ¥	(U)S	IM	ME/	ŰΕ		Radi	io Ac	cess Networ	k X	Core Ne	etwork
Title:	ස <mark>Me</mark>	asuren	nent rar	nge moo	dificatio	ons							
Source:	<mark>⊮ R-\</mark>	NG3											
Work item code:	f									Date: ೫	Fel	bruary 20	01
Category:	f F									Release: #	R9	9	
	Use Deta be fo	one of t <b>F</b> (ess <b>A</b> (corr <b>B</b> (Add <b>C</b> (Fur <b>D</b> (Edi ailed exp bund in 3	the follow ential co responds dition of f dictional r torial mo blanation 3GPP TI	wing cate rrection) s to a co feature), modification odification s of the R 21.900	egories rrectior tion of f n) above ).	: in in a cateç	n ear re) gories	<i>lier re</i> s can	elease	Use <u>one</u> of 2 R96 R97 R98 R99 REL-4 REL-5	the fo (GSN (Rele (Rele (Rele (Rele (Rele	bllowing rel A Phase 2) ease 1996) ease 1997) ease 1998) ease 1999) ease 4) ease 5)	eases:
Reason for chang	<b>уе:</b> Ж	RAN V This C in 25.4	VG4 ch R reflec 123.	anged t cts the o	the ran change	iges es m	of U ade	L Tim in 25	nesic .123	ot ISCP and F and incorpor	RSCP rates	measure this new o	ments. definition
Summary of char	nge: ¥	Reference Report are ex Rev 1 Chang Rev 2 Correc	ence to ting ran tended. ge of ran ction of	WG4 do oge and nges ac	ocume thresh cordin	ent 2 holds g las reas	5.123 s of U st W( e Thi	3 upd IL Tir 34 de resho	latec mest efinition	to V3.5 ot ISCP and ions ange	RSCF	<sup>o</sup> measure	ement
Consequences if not approved:	¥	Incons Backy Althou	vard cor Igh not	r betwee mpatibil Backwa	en WG <u>ity:</u> ard con	i3 ar npat	nd W ible i	G4 sj t is n	pecs eces	sary for cons	sisten	су	
Clauses affected:	• ¥	2, 9.2	2.1.19. 9	9.2.1.38	3 <mark>, 9.2.1</mark>	.39.	9.2.3	3.13/	۹, 9.3	3.4			
Other specs affected:	ж	X Ot	her cor	e specif	fication	าร	ж	25. 25.	.123 .433	<u>R4-010273R</u> CR352	4-010	<u>)452</u>	
Other comments:	ж	08	&M Spe	cificatio	ons								

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- [19] ITU-T Recommendation X.681 (12/97): "Information technology Abstract Syntax Notation One (ASN.1): Information object specification".
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## 9.2.1.19 Dedicated Measurement Value

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated measurement Value				
>SIR Value	C MeasValue		INTEGER(0. .63)	According to mapping in ref. [23] and [24]
>SIR Error Value	C MeasValue		INTEGER(0. .125)	According to mapping in [23], (FDD only)
>Transmitted Code Power Value	C MeasValue		INTEGER(0. .127)	According to mapping in ref. [23] and [24]
>RSCP	C MeasValue		INTEGER(0. . <mark>81<u>127</u>)</mark>	According to mapping in ref. [24] (TDD only)
>Rx Timing Deviation	C MeasValue		INTEGER(0. .2047)	According to mapping in [24] [TDD only]
>Round Trip Time	C MeasValue		INTEGER(0. .32767)	According to mapping in [23] [FDD only]

Condition	Explanation
MeasValue	Only one measurement value can be present at the same time.

#### 9.2.1.38 Measurement Increase/Decrease Threshold

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

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
SIR	C – Threshold		INTEGER(0. .62)	0: 0 dB 1: 0.5 dB 2: 1 dB  62: 31dB
SIR Error	C – Threshold		INTEGER(0. .124)	0: 0 dB 1: 0.5 dB 2: 1 dB  124: 62 dB (FDD only)
Transmitted Code Power	C – Threshold		INTEGER(0. .112,)	0: 0 dB 1: 0.5 dB 2: 1 dB  112: 56 dB
RSCP	C – Threshold		INTEGER(0. . <del>80<u>126</u>)</del>	0: 0 dB 1: 0.5 dB 2: 1 dB  <del>80: 40<u>126: 63</u>dB (TDD only)</del>
Round Trip Time	C – Threshold		INTEGER(0. .32766)	0: 0 chips 1: 0.0625 chips 2: 0.1250 chips  32766: 2047.875 chips (FDD only)

Condition	Explanation
Threshold	Only one measurement threshold can be present at the same time.

#### 9.2.1.39 Measurement Threshold

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

Information Element / Group	Presence	Range	IE Type and	Semantics Description
Name			Reference	
SIR	C –		INTEGER(0.	According to mapping in ref. [23]
	Threshold		.63)	and [24].
SIR Error	C –		INTEGER(0.	According to mapping in [23],
	Threshold		.125)	(FDD only)
Transmitted Code Power	C –		INTEGER(0.	According to mapping in ref. [23]
	Threshold		.127)	and [24].
RSCP	C –		INTEGER(0.	According to mapping in ref. [24]
	Threshold		. <del>81<u>127</u>)</del>	(TDD only)
Rx Timing Deviation	C -		INTEGER(0.	According to mapping in [24]
	Threshold		.2047)	(TDD only)
Round Trip Time	C –		INTEGER(0.	According to mapping in [23]
	Threshold		.32767)	(FDD only)

Condition	Explanation

Threshold	Only one measurement threshold can be present at the same time.

### 9.2.3.13A UL Timeslot ISCP

UL Timeslot ISCP is the measured interference in a uplink timeslot at the DRNS, see ref. [14].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL Timeslot ISCP			INTEGER ( 0 <del>81<u>127</u>)</del>	According to mapping in [24].

```
Information Element Definitions
 9.3.4
  -- Information Element Definitions
 _ _
  -- R
 RAC
                   ::= OCTET STRING (SIZE(1))
 RANAP-RelocationInformation
                              ::= BIT STRING
 RateMatchingAttribute
                              ::= INTEGER (1..maxRateMatching)
 RB-Identity
                             ::= INTEGER (0..31)
 RB-Info ::= SEQUENCE (SIZE(1..maxNoOfRB)) OF RB-Identity
 RefTFCNumber ::= INTEGER (0..15)
 RepetitionLength
                          ::= INTEGER (1..63)
 RepetitionPeriod ::= ENUMERATED {
     v1,
     v2,
     v4.
     v8.
     v16,
     v32,
     v64
 }
 RepetitionNumber ::= INTEGER (1..256)
 ReportCharacteristics ::= CHOICE {
              NULL,
    onDemand
     periodic
                       Periodic,
     eventA
                      EventA,
                      EventB,
EventC,
    eventB
     eventC
     eventD
                      EventD,
     eventE
                       EventE,
                       EventF,
     eventF
     . . .
 }
 ReportPeriodicity ::= CHOICE {
                       INTEGER (1..6000,...),
     ten-msec
 -- The Report Periodicity gives the reporting periodicity in number of 10 ms periods.
 -- E.g. value 6000 means 60000ms (i.e. 1min)
 -- Unit ms, Step 10ms
    min
                   INTEGER (1..60,...),
 -- Unit min, Step 1min
     . . .
 }
 RL-ID
                       ::= INTEGER (0..31)
 RL-Set-ID
                       ::= INTEGER (0..31)
 RNC-ID
                       ::= INTEGER (0..4095)
 Round-Trip-Time-IncrDecrThres ::= INTEGER(0..32766)
 Round-Trip-Time-Value ::= INTEGER(0...32767)
 -- According to mapping in [23]
 RSCP-Value ::= INTEGER (0...81127)
  -- According to mapping in [24]
RSCP-Value-IncrDecrThres ::= INTEGER (0...80126)
```

#### 3GPP TS 25.423 V3.4.0 (2000-12)

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254
```

```
Received-total-wide-band-power
                                            ::= INTEGER (0..621)
-- According to mapping in [23]
RxTimingDeviationForTA
                                    ::= INTEGER (0..127)
-- As specified in [5], ch. 6.2.7.6
Rx-Timing-Deviation-Value ::= INTEGER (0..2047)
-- U
UARFCN := INTEGER (0..16383,...)
-- Corresponds to: 0.0Hz..3276.6Mhz. See 25.101, 25.105
UARFCN
UL-DL-mode ::= ENUMERATED {
   ul-only,
    dl-only,
   both-ul-and-dl
}
UL-Timeslot-Information::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF UL-Timeslot-InformationItem
UL-Timeslot-InformationItem ::= SEQUENCE {
    timeSlot
                                     TimeSlot,
    midambleShiftAndBurstType
                                    MidambleShiftAndBurstType,
    tFCI-Presence
                                    TFCI-Presence,
    uL-Code-Information
                                    TDD-UL-Code-Information,
    iE-Extensions
                                    ProtocolExtensionContainer { { UL-Timeslot-InformationItem-
ExtIEs } } OPTIONAL,
    . . .
}
UL-Timeslot-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
UL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfULTs)) OF UL-TimeSlot-ISCP-InfoItem
UL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
   timeSlot
                                TimeSlot,
    uL-TimeslotISCP
                                UL-TimeslotISCP,
                                ProtocolExtensionContainer { { UL-TimeSlot-ISCP-InfoItem-ExtIEs} }
    iE-Extensions
OPTIONAL,
    . . .
}
UL-TimeSlot-ISCP-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Uplink-Compressed-Mode-Method ::= ENUMERATED {
   sFdiv2,
   higher-layer-scheduling,
   . . .
}
UL-SIR
                        ::= INTEGER (-82..173)
-- The UL-SIR gives the UL-SIR in number of 0.1 dB steps.
-- E.g. Value 173 means 17.3 dB
-- Unit dB. Step 0.1 dB.
UC-ID ::= SEQUENCE {
   rNC-ID
                       RNC-ID,
    c-ID
                        C-ID,
                            ProtocolExtensionContainer { {UC-ID-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
}
UC-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
}
                           ::= INTEGER (0..5,...)
UL-DPCCH-SlotFormat
UL-FP-Mode ::= ENUMERATED {
   normal,
    silent,
    . . .
```

```
}
UL-PhysCH-SF-Variation ::= ENUMERATED {
    sf-variation-supported,
    sf-variation-not-supported
}
UL-ScramblingCode ::= SEQUENCE {
    UL-ScramblingCodeLength UL-ScramblingCodeLength,
                   ProtocolExtensionContainer { {UL-ScramblingCode-ExtIEs} } OPTIONAL
    iE-Extensions
}
UL-ScramblingCode-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}
UL-ScramblingCodeNumber
                           ::= INTEGER (0..16777215)
UL-TimeslotISCP
                      ::= INTEGER (0...<del>81</del>127)
-- According to mapping in [14]
                        ::= INTEGER (0..65535)
URA-ID
URA-Information ::= SEQUENCE {
   uRA-ID
                                        URA-ID,
    multipleURAsIndicator
                                        MultipleURAsIndicator,
    {\tt rNCsWithCellsInTheAccessedURA-List \ RNCsWithCellsInTheAccessedURA-List \ OPTIONAL, }
    iE-Extensions
                                         ProtocolExtensionContainer { {URA-Information-ExtIEs} }
OPTIONAL,
    . . .
}
URA-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
RNCsWithCellsInTheAccessedURA-List ::= SEQUENCE (SIZE (1..maxRNCinURA-1)) OF
RNCsWithCellsInTheAccessedURA-Item
RNCsWithCellsInTheAccessedURA-Item ::= SEQUENCE {
   rNC-ID
                                    RNC-ID.
                                    ProtocolExtensionContainer { {RNCsWithCellsInTheAccessedURA-
    iE-Extensions
Item-ExtIEs } } OPTIONAL,
    . . .
}
RNCsWithCellsInTheAccessedURA-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
USCH-ID
                        ::= INTEGER (0..255)
USCH-Information ::= SEQUENCE (SIZE (1..maxNoOfUSCHs)) OF USCH-InformationItem
USCH-InformationItem ::= SEQUENCE {
    uSCH-ID
                                         USCH-ID,
    ul-CCTrCH-ID
                                        CCTrCH-ID,
    trChSourceStatisticsDescriptor
                                        TrCH-SrcStatisticsDescr,
    transportFormatSet
                                        TransportFormatSet,
    allocationRetentionPriority
                                        AllocationRetentionPriority,
    schedulingPriorityIndicator
                                        SchedulingPriorityIndicator,
                                        RB-Info,
    rb-Info
                                        ProtocolExtensionContainer { {USCH-InformationItem-ExtIEs} }
    iE-Extensions
OPTIONAL,
    . . .
}
USCH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
```

#### 3GPP TSG-RAN3 Meeting #19 Cardiff, UK, 26 February - 2 March, 2001

# Tdoc R3-010917

			CH	ANGE	RE	Ql	JES	т			CR-Form-v3
ж	25.	<mark>423</mark>	CR <mark>307</mark>	7	ж	re	<mark>1</mark> <sup>⊮</sup>	Current	versio	<sup>n:</sup> 3.4.0	Ħ
For <u>HELP</u> on u	sing ti	his for	m, see bott	tom of this	s page	e or lo	ook at t	the pop-up	text ov	/er the X sy	mbols.
Proposed change a	affect	s: #	(U)SIM	ME	UE		Radio A	Access Net	work	X Core N	letwork
Title: ¥	SCH	H Time	eslot IE defi	inition							
Source: ೫	R-W	/G3									
Work item code: %								Date	e: ೫ I	February 20	01
Category: Ж	F							Release	e: X I	Release 99	
Reason for change	Use <u>c</u> I Detail be fou	ne of t F (esse A (corr B (Ado C (Fun D (Edit led exp und in ( At RN	he following ential correc responds to lition of featu ictional modific lanations of 3GPP TR 21	categories tion) a correctio ure), ification of cation) the above .900.	s: on in an feature catege	o earli e) ories <mark>8 me</mark>	er relea can eting, i	Use <u>or</u> 2 se) R96 R97 R98 R99 REL REL	ne of the (G (R (R (R -4 (R -5 (R -5 (R	e following re SSM Phase 2 Release 1996 Release 1997 Release 1998 Release 1999 Release 4) Release 5)	leases: ) ) ) ) CH Time
Summary of chang	је: Ж	slot IE therefo Impro	ovement of	should be so the IE ( SCH time	definit definit	ion. IE de	(currer	ntly not a de	escripti	ion). This C	R
Consequences if not approved:	æ	SCH T <u>Backw</u> This C	ime slot IE <u>/ard compa</u> R is backw	definition <u>itibility:</u> vard comp	n is fur patible	rther with	unclea the pro	r. evious vers	sion of	RNSAP	
Clauses affected:	ж	9.2.1	.51								
Other specs affected:	ж	X Ot Te O	her core sp est specifica &M Specific	pecificatio ations cations	ns	Ħ	25.43	3 CR355			
Other comments:	ж										

#### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G\_Specs/CRs.htm</u>. Below is a brief summary:

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

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

#### 9.2.1.51 SCH Time Slot

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

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

	CHANGE REQUEST
¥	<b>25.423</b> CR <b>308 *</b> re <b>1 *</b> Current version: <b>3.4.0 *</b>
For <u>HELP</u> on	sing this form, see bottom of this page or look at the pop-up text over the X symbols.
Proposed change	affects: # (U)SIM ME/UE Radio Access Network X Core Network
Title: ¥	DL Timeslot ISCP report correction
Source: ¥	R-WG3
Work item code:₩	Date: # February 2001
Category: #	F Release 99
	Use one of the following categories:Use one of the following releases:F (essential correction)2A (corresponds to a correction in an earlier release)R96B (Addition of feature),R97C (Functional modification of feature)R98D (Editorial modification)R99Detailed explanations of the above categories canREL-4be found in 3GPP TR 21.900.REL-5
Reason for chang	• * As within NBAP, this CR removes the RL-ID from the DL Timeslot ISCP
	Information since not necessary.
Summary of chang	<b>re: #</b> Remove RL-ID from DL Timeslot ISCP Information Refere to <i>DL Time slot ISCP info</i> IE for IE alignment Rev 1: Criticality added in tabular format Timeslot ISCPInfo for DL Power Timeslot Control Request in ASN.1 indicated with global significance
Consequences if not approved:	# If this CR is not approved an unnecessary IE will be defined. In addition this CR alignes the usage of IEs in different messages. Not doing this will increase the ris of an inconsistent specification also in future releases.
	Backward compatibility: Not Backward compatible due to different transfer syntax, although functionaly no change
Clauses affected:	<b>₩</b> 9.1.40, 9.3.3, 9.3.6
Other specs affected:	<b>X</b> Other core specifications <b>X</b> 25.433 CR356r1         Test specifications <b>O</b> &M Specifications
Other comments.	92

#### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G\_Specs/CRs.htm</u>. Below is a brief summary:

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

# 9.1.40 DL POWER TIMESLOT CONTROL REQUEST [TDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	Μ		9.2.1.40		YES	ignore
Transaction ID	Μ		9.2.1.59		-	
DL Time Slot ISCP Info	M		<u>9.2.3.2D</u>		<u>YES</u>	<u>ignore</u>
DL Timeslot ISCP		1 <maxnoof< td=""><td></td><td></td><td>GLOBAL</td><td>ignore</td></maxnoof<>			GLOBAL	ignore
Information		<del>DLts&gt;</del>				
>RL ID	M		<del>9.2.1.49</del>		_	
<del>≻Time slot</del>	H		<del>9.2.1.56</del>		-	
→DL Timeslot ISCP	M		<del>9.2.3.12</del>			

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

## 9.3.3 PDU Definitions

```
__ ********
                           ******
-- PDU definitions for RNSAP.
_ _
RNSAP-PDU-Contents {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-PDU-Contents (1) }
DEFINITIONS AUTOMATIC TAGS ::=
-- IE parameter types from other modules.
IMPORTS
   Active-Pattern-Sequence-Information,
   AllocationRetentionPriority,
   AllowedQueuingTime,
   AlphaValue,
   BLER,
   Block-STTD-Indicator,
   BindingID,
   C-ID,
   C-RNTI,
   CCTrCH-ID.
   CFN.
   ClosedLoopModel-SupportIndicator,
   ClosedLoopMode2-SupportIndicator,
   Closedlooptimingadjustmentmode,
   CN-CS-DomainIdentifier,
   CN-PS-DomainIdentifier,
   CNDomainType,
   Cause,
   CellParameterID,
   ChipOffset,
   CriticalityDiagnostics,
   D-RNTI,
   D-RNTI-ReleaseIndication,
   DCH-FDD-Information,
   DCH-ID,
   DCH-InformationResponse,
   DCH-TDD-Information,
   DL-DPCH-SlotFormat.
   DL-TimeslotISCP
   DL-Power,
   DL-ScramblingCode,
   DL-Timeslot-Information.
   DL-TimeSlot-ISCP-Info,
   DPCH-ID,
   DRACControl,
   DRXCycleLengthCoefficient,
   DedicatedMeasurementType,
   DedicatedMeasurementValue,
   DedicatedMeasurementValueInformation,
   DiversityControlField,
   DiversityMode,
   DSCH-FDD-Information,
   DSCH-FDD-InformationResponse,
   DSCH-FlowControlInformation,
   DSCH-FlowControlItem,
   DSCH-TDD-Information,
   DSCH-ID,
   SchedulingPriorityIndicator,
   FACH-FlowControlInformation,
   FDD-DCHs-to-Modify,
   FDD-DL-ChannelisationCodeNumber,
   FDD-DL-CodeInformation,
   FDD-S-CCPCH-Offset,
   FDD-TPC-DownlinkStepSize,
   FirstRLS-Indicator,
   FNReportingIndicator,
```

FrameHandlingPriority, FrameOffset, GA-AccessPointPosition, GA-Cell, IMSI, InnerLoopDLPCStatus, L3-Information, LimitedPowerIncrease, MaximumAllowedULTxPower, MaxNrDLPhysicalchannels, MaxNrOfUL-DPCHs, MaxNrTimeslots, MaxNrULPhysicalchannels, MeasurementFilterCoefficient, MeasurementID, MidambleShiftAndBurstType, MinimumSpreadingFactor, MinUL-ChannelisationCodeLength, MultiplexingPosition, Neighbouring-GSM-CellInformation, Neighbouring-UMTS-CellInformation, NrOfDLchannelisationcodes, PagingCause, PagingRecordType, PDSCHCodeMapping, PayloadCRC-PresenceIndicator, PowerAdjustmentType, PowerOffset, PrimaryCCPCH-RSCP, PrimaryCPICH-EcNo, PrimaryCPICH-Power, PrimaryScramblingCode, PropagationDelay, PunctureLimit, QE-Selector, RANAP-RelocationInformation, RB-Info, RL-ID, RL-Set-ID, RNC-ID, RepetitionLength, RepetitionPeriod, ReportCharacteristics, Received-total-wide-band-power, RxTimingDeviationForTA, S-FieldLength, S-RNTI. SCH-TimeSlot, SAI, SN, Secondary-CCPCH-Info, SSDT-CellID, SSDT-CellID-Length, SSDT-Indication, SSDT-SupportIndicator, STTD-Indicator, STTD-SupportIndicator, AdjustmentPeriod, ScaledAdjustmentRatio, MaxAdjustmentStep, SecondaryCCPCH-SlotFormat, SyncCase, TDD-ChannelisationCode, TDD-DCHs-to-Modify, TDD-DL-Code-Information, TDD-DPCHOffset, TDD-PhysicalChannelOffset, TDD-TPC-DownlinkStepSize, TDD-UL-Code-Information, TFCI-Coding, TFCI-Presence, TFCI-SignallingMode, TimeSlot, TimingAdvanceApplied, TOAWE, TOAWS, TransmitDiversityIndicator, TransportBearerID,

```
TransportBearerRequestIndicator,
    TFCS,
    Transmission-Gap-Pattern-Sequence-Information,
    {\tt Transmission-Gap-Pattern-Sequence-ScramblingCode-Information}\,,
    TransportFormatManagement,
    TransportFormatSet,
    TransportLayerAddress,
    TrCH-SrcStatisticsDescr,
    UARFCN,
    UC-ID,
    UL-DPCCH-SlotFormat,
    UL-SIR.
    UL-FP-Mode,
    UL-PhysCH-SF-Variation,
    UL-ScramblingCode,
    UL-Timeslot-Information,
    UL-TimeSlot-ISCP-Info,
    URA-TD.
    URA-Information,
    USCH-ID,
    USCH-Information
FROM RNSAP-IEs
    PrivateIE-Container{},
    ProtocolExtensionContainer{},
    ProtocolIE-ContainerList{},
    ProtocolIE-ContainerPair { },
    ProtocolIE-ContainerPairList{},
    ProtocollE-Container{},
    ProtocolIE-Single-Container{},
    RNSAP-PRIVATE-IES,
    RNSAP-PROTOCOL-EXTENSION,
    RNSAP-PROTOCOL-IES,
    RNSAP-PROTOCOL-IES-PAIR
FROM RNSAP-Containers
    maxNoOfDSCHs,
    maxNoOfUSCHs,
    maxNrOfCCTrCHs,
    maxNrOfDCHs,
    maxNrOfTS,
   maxNrOfDPCHs
   maxNrOfRLs,
    maxNrOfRLSets,
    maxNrOfRLs-1,
    maxNrOfRLs-2,
    maxNrOfULTs.
    maxNrOfDLTs.
    id-Active-Pattern-Sequence-Information,
    id-AdjustmentRatio,
    id-AllowedOueuingTime,
    id-BindingID,
    id-C-ID,
    id-C-RNTI,
    id-CFN.
    id-CFNReportingIndicator,
    id-CN-CS-DomainIdentifier,
    id-CN-PS-DomainIdentifier,
    id-Cause,
    id-CauseLevel-RL-AdditionFailureFDD,
    id-CauseLevel-RL-AdditionFailureTDD,
    id-CauseLevel-RL-ReconfFailure,
    id-CauseLevel-RL-SetupFailureFDD,
    id-CauseLevel-RL-SetupFailureTDD,
    id-ClosedLoopModel-SupportIndicator,
    id-ClosedLoopMode2-SupportIndicator,
    id-CNOriginatedPage-PagingRqst,
    id-CriticalityDiagnostics,
    id-D-RNTI,
    id-D-RNTI-ReleaseIndication,
    id-DCHs-to-Add-FDD,
    id-DCHs-to-Add-TDD,
    id-DCH-DeleteList-RL-ReconfPrepFDD,
    id-DCH-DeleteList-RL-ReconfPrepTDD,
    id-DCH-DeleteList-RL-ReconfRqstFDD,
    id-DCH-DeleteList-RL-ReconfRqstTDD,
    id-DCH-FDD-Information,
```

id-DCH-TDD-Information, id-FDD-DCHs-to-Modify, id-TDD-DCHs-to-Modify, id-DCH-InformationResponse, id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationListIE-RL-ReconfReadvTDD,  $id\-DL-CCTrCH-Information\-Modify\-Item\-RL-ReconfRqstTDD\,,$ id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD, id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD, id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD, id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD, id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD, id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD, id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD, id-DL-CCTrCH-InformationList-RL-SetupRqstTDD, id-FDD-DL-CodeInformation, id-DL-DPCH-Information-RL-ReconfPrepFDD, id-DL-DPCH-Information-RL-SetupRqstFDD, id-DL-DPCH-Information-RL-ReconfRqstFDD, id-DL-DPCH-InformationItem-PhyChReconfRgstTDD, id-DL-DPCH-InformationItem-RL-AdditionRspTDD, id-DL-DPCH-InformationItem-RL-SetupRspTDD, id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD, id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD, id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD, id-DL-Physical-Channel-Information-RL-SetupRqstTDD, id-DLReferencePower, id-DLReferencePowerList-DL-PC-Rqst, id-DL-ReferencePowerInformation-DL-PC-Rqst, id-DRXCycleLengthCoefficient, id-DedicatedMeasurementObjectType-DM-Rprt, id-DedicatedMeasurementObjectType-DM-Rqst, id-DedicatedMeasurementObjectType-DM-Rsp, id-DedicatedMeasurementType, id-DSCHs-to-Add-FDD, id-DSCHs-to-Add-TDD, id-DSCH-DeleteList-RL-ReconfPrepTDD, id-DSCH-Delete-RL-ReconfPrepFDD, id-DSCH-FDD-Information, id-DSCH-InformationListIE-RL-AdditionRspTDD, id-DSCH-InformationListIEs-RL-SetupRspTDD, id-DSCH-TDD-Information, id-DSCH-FDD-InformationResponse, id-DSCH-ModifyList-RL-ReconfPrepTDD, id-DSCH-Modify-RL-ReconfPrepFDD, id-DSCHsToBeAddedOrModified-FDD,  ${\tt id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD}\,,$ id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD, id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD, id-GA-AccessPointPosition, id-GA-Cell. id-IMSI, id-InnerLoopDLPCStatus, id-L3-Information, id-AdjustmentPeriod. id-MaxAdjustmentStep, id-MeasurementFilterCoefficient, id-MeasurementID, id-Neighbouring-GSM-CellInformation, id-PagingArea-PagingRqst, id-FACH-FlowControlInformation, id-PowerAdjustmentType, id-ProcedureScope-DL-PC-Rqst, id-PropagationDelay, id-RANAP-RelocationInformation, id-RL-Information-PhyChReconfRqstFDD, id-RL-Information-PhyChReconfRqstTDD, id-RL-Information-RL-AdditionRgstFDD, 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-SetupRqstFDD, id-RL-Information-RL-SetupRqstTDD, id-RL-InformationItem-DM-Rprt, id-RL-InformationItem-DM-Rqst, id-RL-InformationItem-DM-Rsp, id-RL-InformationItem-RL-PreemptRequiredInd, id-RL-InformationItem-RL-SetupRqstFDD, id-RL-InformationList-RL-AdditionRgstFDD, id-RL-InformationList-RL-DeletionRqst, id-RL-InformationList-RL-PreemptRequiredInd, id-RL-InformationList-RL-ReconfPrepFDD, id-RL-InformationResponse-RL-AdditionRspTDD, id-RL-InformationResponse-RL-ReconfReadyTDD, id-RL-InformationResponse-RL-ReconfRspTDD, id-RL-InformationResponse-RL-SetupRspTDD, id-RL-InformationResponseItem-RL-AdditionRspFDD, id-RL-InformationResponseItem-RL-ReconfReadyFDD, id-RL-InformationResponseItem-RL-ReconfRspFDD, id-RL-InformationResponseItem-RL-SetupRspFDD, id-RL-InformationResponseList-RL-AdditionRspFDD,  ${\tt id-RL-Information Response List-RL-Reconf Ready FDD}\,,$ id-RL-InformationResponseList-RL-ReconfRspFDD, id-RL-InformationResponseList-RL-SetupRspFDD, id-RL-ReconfigurationFailure-RL-ReconfFail, id-RL-Set-InformationItem-DM-Rprt. id-RL-Set-InformationItem-DM-Rqst, id-RL-Set-InformationItem-DM-Rsp, id-RL-Set-Information-RL-FailureInd, id-RL-Set-Information-RL-RestoreInd, id-ReportCharacteristics, id-Reporting-Object-RL-FailureInd, id-Reporing-Object-RL-RestoreInd, id-RxTimingDeviationForTA, id-S-RNTI. id-SAI. id-SRNC-ID, id-STTD-SupportIndicator, id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD, id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD, id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD, id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD, id-timeSlot-ISCPList-DL--Rast-TDD. id-TransportBearerID, id-TransportBearerRequestIndicator, id-TransportLayerAddress, id-UC-ID, id-Transmission-Gap-Pattern-Sequence-Information, id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD, id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD, id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD, id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRgstTDD, id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD, id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD, id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD, id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD, id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD, id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD, id-UL-CCTrCH-InformationList-RL-SetupRqstTDD, id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD, id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD, id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD, id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD, id-UL-DPCH-Information-RL-ReconfPrepFDD, id-UL-DPCH-Information-RL-ReconfRgstFDD, id-UL-DPCH-Information-RL-SetupRqstFDD, id-UL-DPCH-InformationItem-PhyChReconfRqstTDD, id-UL-DPCH-InformationItem-RL-AdditionRspTDD, id-UL-DPCH-InformationItem-RL-SetupRspTDD, id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD, id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD, id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD, id-UL-Physical-Channel-Information-RL-SetupRqstTDD, id-UL-SIRTarget, id-URA-Information, id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD, id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD,

 $id\-\+Unsuccessful RL-\+Information Response-\+RL-\+Setup Failure\+FDD\,,$ 

id-UnsuccessfulRL-Information id-UnsuccessfulRL-Information	Response-RL-SetupFailureTDD, ResponseList-RL-AdditionFailur	ceFDD,
id-UnsuccessfulRL-Information	ResponseList-RL-SetupFailureFI	, do
id-USCHS-to-Add, id-USCH-DeleteList-RL-ReconfP	repTDD,	
id-USCH-InformationListIE-RL-	AdditionRspTDD,	
id-USCH-InformationListIEs-RL	-SetupRspTDD,	
id-USCH-ModifyList-RL-ReconfP	repTDD,	
id-USCHToBeAddedOrModifiedLis	t-RL-ReconfReadyTDD	
rion hubar constants,		
************* <b>*****</b>	****	
********	*****	* * *
DOWNLINK POWER TIMESLOT CONTRO	L REQUEST TDD	
*******************************	*********	***
<pre>DL-PowerTimeslotControlRequest ::     protocolIEs</pre>	= SEQUENCE { ProtocolIE-Container	{{DL-PowerTimeslotControlRequest-
<pre>IEs}},</pre>		
Extensions} OP	TIONAL,	{{DL-PowerTimesIotControlRequest-
}		
DL-PowerTimeslotControlRequest-IE	s RNSAP-PROTOCOL-IES ::= {	
{ ID id-timeSlot-ISCP	PC Rest TDD CRITICALITY igr	nore TYPE <u>DL-TimeSlot-ISCP-</u>
	The PRESENCE mandacory;	
}		
TimeSlot-ISCPList-DL-PC-Rqst-TDD Rqst-TDD	<pre>::= SEQUENCE (SIZE (0maxNrOf</pre>	EDLTs)) OF Timeslot-ISCPItem-DL-PC
Timeslot ISCPItem DL PC Rqst TDD:	÷= SEQUENCE {	
	L-ID,	
	imeSlot, L-TimeslotISCP,	
	rotocolExtensionContainer { {	Timeslot ISCPItem DL PC Rqst TDD
ExtIEs} } OPTIONAL,		
+		
Timeglot ISCPItem DI. PC Rast TDD	ExtIES RNSAP PROTOCOL EXTENSI	<del>)N ::= {</del>
	EXCLUSION INCIDENT EXTENSIO	
+		
DL-PowerTimeslotControlRequest-Ex	tensions RNSAP-PROTOCOL-EXTENS	SION ::= {
9.3.6 Constant Definiti	ons	
******************************	* * * * * * * * * * * * * * * * * * * *	* * *
 Constant definitions		
**********************	****	***
<pre>RNSAP-Constants {   itu-t (0) identified-organization   umts-Access (20) modules (3) rnsa</pre>	(4) etsi (0) mobileDomain (0) p (1) versionl (1) rnsap-Const	) cants (4) }
DEFINITIONS AUTOMATIC TAGS ::=		
BEGIN		
IMPORTS		
ProcedureCode,		
FROM RNSAP-CommonDataTypes;		

Elementary Procedures		
 ********************************	*****	
id-commonTransportChannelResourcesInitia	lisation ProcedureC	ode ::= 0
${\tt id-commonTransportChannelResourcesReleas}$	e ProcedureC	ode ::= 1
id-compressedModeCommand	ProcedureC	ode ::= 2
id-downlinkPowerControl	ProcedureC	ode ::= 3
id-downlinkPowerTimesIotControl	ProcedureC	ode ::= 4
id-downlinkSignallingTransfer	ProcedureC	ode ::= 5
id-measurementFailure	Procedured	ode ::= 7
id-measurementInitiation	Procedured	ode $::= 8$
id-measurementReporting	ProcedureC	ode ::= 9
id-measurementTermination	ProcedureC	ode ::= 10
id-paging	ProcedureC	ode ::= 11
id-physicalChannelReconfiguration	ProcedureC	ode ::= 12
id-privateMessage	ProcedureC	ode ::= 13
id-radioLinkAddition	ProcedureC	ode ::= 14
id-radioLinkDeletion	ProcedureC	ode ::= 15
id-radioLinkFallure	Procedurec	ode $\cdots = 16$
id-radioLinkRestoration	Procedured	ode ::= 18
id-radioLinkSetup	Procedured	ode ::= 19
id-relocationCommit	ProcedureC	ode ::= 20
id-synchronisedRadioLinkReconfigurationC	ancellation ProcedureC	ode ::= 21
${\tt id-synchronisedRadioLinkReconfigurationOptimizedRadioLinkReconfiguratioNeticAcinadioLinkReconfiguratioNeticAcinadioLinkReconfiguratioNeticAcinadioLinkReconfiguratioNeticAcinadioRadioLinkReconfiguratioNeticAcinadioLinkReconfigu$	commit ProcedureC	ode ::= 22
id-synchronisedRadioLinkReconfigurationE	Preparation ProcedureC	ode ::= 23
id-unSynchronisedRadioLinkReconfiguratio	n ProcedureC	ode ::= 24
id-uplinkSignallingTransfer	ProcedureC	ode ::= 25
************************************	*****	
 Lista		
LISUS		
************************************	*****	
maxCodeNumComp-1	INTEGER ::= 255	
maxRateMatching	INTEGER ::= 256	
maxNoCodeGroups	INTEGER ::= 256	
maxNoOfRB	INTEGER := 32	
maxNoOfUSCHs	INTEGER ::= 10	
maxNoTFCIGroups	INTEGER ::= 256	
maxNrOfTFCs	INTEGER ::= 1024	
maxNrOfTFs	INTEGER ::= 32	
maxNrOfCCTrCHs	INTEGER ::= 16	
maxNrOfDCHs	INTEGER := 128	
maxNrOiDL-Codes	INTEGER ::= 8	
maxNrOIDPCHS	INIEGER ··= 240	
maxNrOfMACcshSDU-Length	INTEGER ::= 16	
maxNrOfPoints	INTEGER := 15	
maxNrOfRLs	INTEGER ::= 16	
maxNrOfRLSets	INTEGER ::= maxNrOfRLs	
maxNrOfRLs-1	INTEGER ::= 15 maxNrOfRLs	- 1
maxNrOfRLs-2	INTEGER := 14 maxNrOfRLs	- 2
maxNrUIULI'S	INTEGER ::= 15	
maxPNCipUDA_1	INTEGER ··= 15	
maxmcillorA-i maxTTI-Count	INTEGER := 4	
maxCTFC	INTEGER ::= 16777215	
maxNrOfNeighbouringRNCs	INTEGER ::= 10	
maxNrOfFDDNeighboursPerRNC	INTEGER ::= 256	
maxNrOfGSMNeighboursPerRNC	INTEGER ::= 256	
maxNrOfTDDNeighboursPerRNC	INTEGER ::= 256	
maxFACHCountPlus1	INTEGER ::= 10	
Maxibold maxTECI1Comba	INILGER ::= 10 INTECED :- 512	
maxTFCI2Combs	INTEGER ::= 1024	
maxTFCI2Combs-1	INTEGER ::= 1023	
maxTGPS	INTEGER ::= 6	
maxNrOfTS	INTEGER ::= 15	
*********	*****	

---- IEs

id-AllowedQueuingTime
id-BindingID
id-C-ID
id-C-RNTI
id-CFN
id-CN-CS-DomainIdentifier
id-CN-PS-DomainIdentifier
id-Cause
id-CriticalityDiagnostics
id-D-RNTI
id-D-RNTI-ReleaseIndication
id-DCHs-to-Add-FDD
id-DCHs-to-Add-TDD
id-DCH-DeleteList-RL-ReconfPrepFDD
id-DCH-DeleteList-RL-ReconfPrepTDD
id-DCH-DeleteList-RL-ReconfRqstFDD
id-DCH-DeleteList-RL-ReconfRqstTDD
id-DCH-FDD-Information
id-DCH-TDD-Information
id-FDD-DCHs-to-Modify
id-TDD-DCHs-to-Modify
id-DCH-InformationResponse
id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD
id-DL-CCTrCH-InformationListIE-PhyChReconfRgstTDD
id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD
id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRgstTDD
id-DL-CCTrCH-InformationList-RL-SetupRgstTDD
id-FDD-DL-CodeInformation
id-DL-DPCH-Information-RL-ReconfPrepFDD
id-DL-DPCH-Information-RL-SetupRgstFDD
id-DL-DPCH-Information-RL-ReconfRastFDD
id-DL-DPCH-InformationItem-PhyChReconfRastTDD
id-DL-DPCH-InformationItem-RL-AdditionRspTDD
id-DL-DPCH-InformationItem-RL-SetupRspTDD
id-DLReferencePower
id-DLReferencePowerList-DL-PC-Rast
id-DL-ReferencePowerInformation-DL-PC-Rast
id-DRXCvcleLengthCoefficient
id-DedicatedMeasurementObjectType-DM-Rprt
id-DedicatedMeasurementObjectType-DM-Rast
id-DedicatedMeasurementObjectType_DM_Rqst
id-DedicatedMeasurementType
id_EACH_InfoForUFSelectedS_CCDCH_CTCH_PerourcePerFDD
id-FACH-INFOFOFOESelectedS-CCPCH-CICH-ResourceRsprDD
id-IMCI
id-I2-Information
id Adjustment Deried
id-MayldiugtmontSton
id MaagumementEilterCoofficient
id Measurement ID
id Neighbouring CCM CollInformation
id Neighbouring UNTE Collinformation tem
id Designation Designation
id PagingArea-PagingRqst
id PauerAdiustmentThee
id Prograduus Grans DL DG Dust
id PNNP PeleretierInformation
id RANAP-Relocationiniormation
id RL Information PhychiceconicqstFDD
id_RL_Information_PhyChReconfrqstTDD
id DL Information DL AdditionRqstFDD
id PL Information PL PalationRqstTDD
id DL Information DL DeiluseInd
IN-RE-INFORMATION-RE-FAILUREING
IG-KL-INFORMATION-KL-RECONFPREPEDD
IC-KL-INFORMATION-KL-RESTOREING
IQ-KL-INFORMATION-KL-SETUPKGSTFDD
id PL Information-RL-SetupRqstTDD
IG-KP-INTOLWACIONICGW-DM-KDLL
id DI InformationIter DM Deat
id-RL-InformationItem-DM-Rqst

Dweberelth TD		4
ProtocollE-ID	••=	4
ProtocollE-ID	::=	5
ProtocolIE-ID	::=	6
ProtocolIE-ID	::=	7
ProtocolIE-ID	::=	8
ProtocolIE-ID	::=	9
Protocol TE-TD	::=	10
ProtocolIE-ID	· · _	11
ProtocoliE-ID		20
PIOLOCOIIE-ID	••=	20
ProtocolIE-ID	::=	21
ProtocolIE-ID	::=	22
ProtocolIE-ID	::=	26
ProtocolIE-ID	::=	27
ProtocolIE-ID	::=	30
Protocol TE-TD	::=	31
ProtocolIE ID	••-	32
ProtocoliE-ID		22
PIOCOCOIIE-ID	••-	22
ProtocollE-ID	::=	34
ProtocolIE-ID	::=	35
ProtocolIE-ID	::=	39
ProtocolIE-ID	::=	40
ProtocolIE-ID	::=	43
Protocol TE-TD	::=	44
ProtocolIE ID	••-	45
ProtocoliE-ID		45
ProtocollE-ID	••=	40
ProtocolIE-ID	::=	47
ProtocolIE-ID	::=	48
ProtocolIE-ID	::=	49
ProtocolIE-ID	::=	50
ProtocolIE-ID	::=	51
Protocol IE-ID	::=	52
ProtocolIE ID	••-	52
ProtocoliE-ID		55
ProtocollE-ID	••=	54
ProtocollE-ID	::=	59
ProtocolIE-ID	::=	60
ProtocolIE-ID	::=	61
ProtocolIE-ID	::=	62
ProtocolIE-ID	::=	63
Protocol IE-ID	::=	64
ProtocolIE-ID	::=	67
ProtocoliE-ID		c 0
ProtocollE-ID	::=	68
ProtocollE-ID	::=	69
ProtocolIE-ID	::=	70
ProtocolIE-ID	::=	71
ProtocolIE-ID	::=	72
ProtocolIE-ID	::=	73
ProtocolIE-ID	::=	74
Protocol TE-TD	::=	82
ProtocolIE ID	••-	83
ProtocoliE-ID		0.1
ProtocollE-ID	••=	84
ProtocollE-ID	::=	85
ProtocolIE-ID	::=	90
ProtocolIE-ID	::=	91
ProtocolIE-ID	::=	92
ProtocolIE-ID	::=	93
ProtocolIE-ID	::=	13
Protocol TE-TD	::=	95
DrotocolIE ID	· · _	102
ProtocoliE-ID		102
ProtocollE-ID	::=	103
ProtocolIE-ID	::=	T0./
ProtocolIE-ID	::=	108
ProtocolIE-ID	::=	109
ProtocolIE-ID	::=	110
ProtocolIE-ID	::=	111
ProtocolIE-ID	::=	112
ProtocolTE-TD	::=	112
ProtocolTE-TD	::-	114
Drotocolite-ID		115
FICCOCOTIE-ID	••=	110
ProtocollE-ID	• • =	110
ProtocolIE-ID	::=	117
ProtocolIE-ID	::=	118
ProtocolIE-ID	::=	119
ProtocolIE-ID	::=	120
ProtocolIE-ID	::=	121
ProtocolIE-ID	::=	122

id-RL-InformationItem-RL-PreemptRequiredInd id-RL-InformationItem-RL-SetupRqstFDD id-RL-InformationList-RL-AdditionRgstFDD id-RL-InformationList-RL-DeletionRqst id-RL-InformationList-RL-PreemptRequiredInd id-RL-InformationList-RL-ReconfPrepFDD 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-ReconfRspFDD id-RL-InformationResponseItem-RL-SetupRspFDD id-RL-InformationResponseList-RL-AdditionRspFDD id-RL-InformationResponseList-RL-ReconfReadyFDD id-RL-InformationResponseList-RL-ReconfRspFDD id-RL-InformationResponse-RL-ReconfRspTDD id-RL-InformationResponseList-RL-SetupRspFDD id-RL-ReconfigurationFailure-RL-ReconfFail id-RL-Set-InformationItem-DM-Rprt id-RL-Set-InformationItem-DM-Rgst id-RL-Set-InformationItem-DM-Rsp id-RL-Set-Information-RL-FailureInd id-RL-Set-Information-RL-RestoreInd id-ReportCharacteristics id-Reporting-Object-RL-FailureInd id-Reporing-Object-RL-RestoreInd id-S-RNTI id-SAT id-SRNC-TD id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD id-TransportBearerID id-TransportBearerRequestIndicator id-TransportLayerAddress id-UC-ID id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD id-UL-CCTrCH-InformationAddItem-RL-ReconfRqstTDD id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD id-UL-CCTrCH-InformationAddList-RL-ReconfRqstTDD id-UL-CCTrCH-InformationItem-RL-SetupRgstTDD id-UL-CCTrCH-InformationList-RL-SetupRqstTDD id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD id-UL-CCTrCH-InformationListIE-RL-ReconfReadvTDD id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD id-UL-DPCH-Information-RL-ReconfPrepFDD id-UL-DPCH-Information-RL-ReconfRqstFDD id-UL-DPCH-Information-RL-SetupRgstFDD  ${\tt id-UL-DPCH-InformationItem-PhyChReconfRqstTDD}$ id-UL-DPCH-InformationItem-RL-AdditionRspTDD id-UL-DPCH-InformationItem-RL-SetupRspTDD id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD id-UL-SIRTarget id-URA-Information 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 id-Active-Pattern-Sequence-Information id-AdjustmentRatio id-CauseLevel-RL-AdditionFailureFDD id-CauseLevel-RL-AdditionFailureTDD id-CauseLevel-RL-ReconfFailure id-CauseLevel-RL-SetupFailureFDD id-CauseLevel-RL-SetupFailureTDD id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD

ProtocolIE-ID ::= 2 ProtocolIE-ID ::= 123 ProtocolIE-ID ::= 124 ProtocolTE-TD := 125ProtocolIE-ID ::= 1 ProtocolIE-ID ::= 126 ProtocolIE-ID ::= 127 ProtocolIE-ID ::= 128 ProtocolIE-ID ::= 129 ProtocolIE-ID ::= 130 ProtocolIE-ID ::= 131 ProtocolIE-ID ::= 132 ProtocollE-ID := 133ProtocolIE-ID ::= 134 ProtocolIE-ID ::= 135 ProtocolIE-ID ::= 136 ProtocolTE-TD := 28ProtocolIE-ID ::= 137 ProtocolIE-ID ::= 141 ProtocolIE-ID ::= 143 ProtocolIE-ID ::= 144 ProtocolIE-ID ::= 145 ProtocolIE-ID ::= 146 ProtocolIE-ID ::= 147 ProtocolIE-ID ::= 152 ProtocolIE-ID ::= 153 ProtocolIE-ID ::= 154 ProtocolIE-ID ::= 155 ProtocolIE-ID ::= 156 ProtocolIE-ID ::= 157 ProtocolIE-ID ::= 159 ProtocolIE-ID ::= 160 ProtocolIE-ID ::= 161 ProtocolIE-ID ::= 162 ProtocolIE-ID ::= 163 ProtocolIE-ID ::= 164 ProtocolIE-ID ::= 165 ProtocolIE-ID ::= 166 ProtocolTE-TD := 167ProtocolIE-ID ::= 168 ProtocolIE-ID ::= 169 ProtocolIE-ID ::= 170 ProtocolIE-ID ::= 171 ProtocolIE-ID ::= 172 ProtocolIE-ID ::= 173 ProtocolIE-ID ::= 174 ProtocolIE-ID ::= 175 ProtocolIE-ID ::= 176 ProtocolIE-ID ::= 177 ProtocolIE-ID ::= 178 ProtocolIE-ID ::= 179 ProtocolTE-TD ::= 180ProtocolIE-ID ::= 181 ProtocolIE-ID ::= 182 ProtocolIE-ID ::= 183 ProtocolIE-ID ::= 184 ProtocolIE-ID ::= 185 ProtocolIE-ID ::= 188 ProtocolIE-ID ::= 189 ProtocolIE-ID ::= 190 ProtocolIE-ID ::= 191 ProtocolIE-ID ::= 192 ProtocolIE-ID ::= 193 ProtocolIE-ID ::= 194 ProtocolIE-ID ::= 197 ProtocolIE-ID ::= 198 ProtocolIE-ID ::= 199 ProtocolIE-ID ::= 200 ProtocolIE-ID ::= 201 ProtocolIE-ID ::= 205 ProtocolIE-ID ::= 206 ProtocolIE-ID ::= 207 ProtocolIE-ID ::= 208 ProtocolTE-TD := 209ProtocolIE-ID ::= 210 ProtocolIE-ID ::= 212 ProtocolIE-ID ::= 213 ProtocolIE-ID ::= 214
id-DSCHs-to-Add-TDD id-DSCHs-to-Add-FDD id-DSCH-DeleteList-RL-ReconfPrepTDD id-DSCH-Delete-RL-ReconfPrepFDD id-DSCH-FDD-Information id-DSCH-InformationListIE-RL-AdditionRspTDD id-DSCH-InformationListIEs-RL-SetupRspTDD id-DSCH-TDD-Information id-DSCH-FDD-InformationResponse id-DSCH-Information-RL-SetupRqstFDD id-DSCH-ModifyList-RL-ReconfPrepTDD id-DSCH-Modify-RL-ReconfPrepFDD id-DSCHsToBeAddedOrModified-FDD id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD id-GA-AccessPointPosition id-GA-Cell id-Transmission-Gap-Pattern-Sequence-Information id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD id-UL-CCTrCH-InformationDeleteList-RL-ReconfRastTDD id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD id-USCHs-to-Add id-USCH-DeleteList-RL-ReconfPrepTDD id-USCH-InformationListIE-RL-AdditionRspTDD id-USCH-InformationListIEs-RL-SetupRspTDD id-USCH-Information id-USCH-ModifyList-RL-ReconfPrepTDD id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD id-DL-Physical-Channel-Information-RL-SetupRqstTDD id-UL-Physical-Channel-Information-RL-SetupRqstTDD id-ClosedLoopModel-SupportIndicator id-ClosedLoopMode2-SupportIndicator id-STTD-SupportIndicator id-CFNReportingIndicator id-CNOriginatedPage-PagingRqst id-InnerLoopDLPCStatus id-PropagationDelay id-RxTimingDeviationForTA

ProtocolIE-ID ::= 215 ProtocolIE-ID ::= 216 ProtocolIE-ID ::= 217 ProtocolIE-ID ::= 218 ProtocolIE-ID ::= 219 ProtocolIE-ID ::= 220 ProtocolIE-ID ::= 221 ProtocolIE-ID ::= 222 ProtocolIE-ID ::= 223 ProtocolIE-ID ::= 226 ProtocolIE-ID ::= 227 ProtocolIE-ID ::= 228 ProtocolTE-TD := 229ProtocolIE-ID ::= 230 ProtocolIE-ID ::= 231 ProtocolIE-ID ::= 232 ProtocolIE-ID ::= 255 ProtocolTE-TD ::= 256 ProtocolIE-ID ::= 257 ProtocolIE-ID ::= 258 ProtocolIE-ID ::= 259 ProtocolIE-ID ::= 260 ProtocolIE-ID ::= 261 ProtocolIE-ID ::= 262 ProtocolIE-ID ::= 263 ProtocolIE-ID ::= 264 ProtocolIE-ID ::= 265 ProtocolIE-ID ::= 266 ProtocolIE-ID ::= 267 ProtocolTE-TD := 268ProtocolIE-ID ::= 269 ProtocolIE-ID ::= 270 ProtocolIE-ID ::= 271 ProtocolIE-ID ::= 272 ProtocolIE-ID ::= 273 ProtocolIE-ID ::= 274 ProtocolIE-ID ::= 275 ProtocolIE-ID ::= 276 ProtocolTE-TD := 277ProtocolIE-ID ::= 279 ProtocolIE-ID ::= 14 ProtocolIE-ID ::= 23 ProtocolIE-ID ::= 24 ProtocolIE-ID ::= 25 ProtocolIE-ID ::= 36 ProtocolIE-ID ::= 37

END

id-timeSlot-ISCP<mark>List DL PC Rqst TDD</mark>

# 3GPP TSG-RAN3 Meeting #19 Cardiff, UK, 26/Feb - 2/Mar 2001

	CR-Form-v3				
	<b>25.423</b> CR <b>311</b> Iev <b>1</b> Current Version. <b>3.4.0</b>				
Proposed chan	e affects: (U)SIM ME/UE Radio Access Network X Core Network				
Title:	Paging Cause				
Source:	R-WG3				
Work item code	Date: Feb 2001				
Category:	F Release: R99				
	Use one of the following categories:Use one of the following releases:F (essential correction)2A (corresponds to a correction in an earlier release)R96B (Addition of feature),R97C (Functional modification of feature)R98D (Editorial modification)R99D tetailed explanations of the above categories canREL-4be found in 3GPP TR 21.900.REL-5				
Reason for cha	During RAN2 #19 meeting, more value of Paging Cause in RRC was added(R2-				
	010380 CR659) and this is in line with RANAP too. This contribution proposes to modify Paging Cause in RNSAP to align, with RRC change.				
Summary of ch	nge: New values were added in <i>Paging Cause</i> IE.				
Consequences not approved:	f There are inconsistency between RNSAP and RRC/RANAP.				
	Backward compatibility : This CR is backward compatible.				
Clauses affecte	<i>I:</i> 9.2.1.41E, 9.3.4				
Other specs affected:	XOther core specificationsTS25.331 CR659, TS25.413 CR240Test specificationsO&M Specifications				
Other commen	S:				

### 9.2.1.41E Paging Cause

Cause for a CN originated page.

IE/Group Name	Presence	Range	IE type and	Semantics description
			reference	
Paging Cause			ENUMERAT	See in [16]
			ED(	
			Terminating	
			Conversatio	
			nal Call,	
			Terminating	
			Streaming	
			Call,	
			Terminating	
			Interactive	
			Call,	
			Terminating	
			Background	
			Call, <del>SMS</del>	
			Terminating	
			Low Priority	
			Signalling,	
			<u>, Terminating</u>	
			High Priority	
			Signalling,	
			Terminating	
			<u>– cause</u>	
			unknown	

```
Information Element Definitions
9.3.4
    ___
____
-- Information Element Definitions
____
  ___
٠
.
<Parts of the ASN.1 module is omitted>
.
.
-- P
PagingCause ::= ENUMERATED {
   terminating-conversational-call,
   terminating-streaming-call,
   terminating-interactive-call,
   terminating-background-call,
   smsterminating-low-priority-signalling,
   · · · <u>,</u>
   terminating-high-priority-signalling,
   terminating-cause-unknown
-- See in [16]
PagingRecordType ::= ENUMERATED {
   imsi-gsm-map,
   tmsi-gsm-map,
   p-tmsi-gsm-map,
   imsi-ds-41,
   tmsi-ds-41,
   . . .
}
-- See in [16]
PayloadCRC-PresenceIndicator ::= ENUMERATED {
   crc-included,
   crc-not-included
}
PCCPCH-Power ::= INTEGER (-150..400,...)
-- PCCPCH-power = power * 10
```

```
-- If power <= -15 PCCPCH shall be set to -150
-- If power >= 40 PCCPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dBm
PDSCHCodeMapping ::= SEQUENCE {
    dL-ScramblingCode
                            DL-ScramblingCode,
    signallingMethod
                            PDSCHCodeMapping-SignallingMethod,
    iE-Extensions
                            ProtocolExtensionContainer { { PDSCHCodeMapping-ExtIEs } } OPTIONAL,
    . . .
PDSCHCodeMapping-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
PDSCHCodeMapping-SignallingMethod ::= CHOICE {
    pDSCHCodeMapping-SignallingMethod-CodeRange
                                                     PDSCHCodeMapping-SignallingMethod-CodeRange,
    pDSCHCodeMapping-SignallingMethod-TFCIRange
                                                     PDSCHCodeMapping-SignallingMethod-TFCIRange,
    pDSCHCodeMapping-SignallingMethod-Explicit
                                                     PDSCHCodeMapping-SignallingMethod-Explicit,
    . . .
PDSCHCodeMapping-SignallingMethod-CodeRange ::= SEQUENCE (SIZE (1..maxNoCodeGroups)) OF
    SEQUENCE {
        spreadingFactor
                                SpreadingFactor,
        multi-code-info
                                Multi-code-info,
                                CodeNumber,
        start-CodeNumber
        stop-CodeNumber
                                CodeNumber,
                                ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-CodeRange-ExtIEs } } OPTIONAL,
        iE-Extensions
        . . .
PDSCHCodeMapping-SignallingMethod-CodeRange-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
PDSCHCodeMapping-SignallingMethod-TFCIRange ::= SEQUENCE (SIZE (1..maxNoTFCIGroups)) OF
    SEOUENCE {
        maxTFCIvalue
                                MaxTFCIvalue,
        spreadingFactor
                                SpreadingFactor,
                                Multi-code-info,
        multi-code-info
        codeNumber
                                CodeNumber,
                                ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-TFCIRange-ExtIEs } } OPTIONAL,
        iE-Extensions
        . . .
PDSCHCodeMapping-SignallingMethod-TFCIRange-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
```

```
PDSCHCodeMapping-SignallingMethod-Explicit ::= SEQUENCE (SIZE (1..maxTFCI2Combs)) OF
```

```
SEOUENCE
        spreadingFactor
                                SpreadingFactor,
        multi-code-info
                                Multi-code-info,
        codeNumber
                                CodeNumber,
        iE-Extensions
                                ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-Explicit-ExtIEs } } OPTIONAL,
        . . .
PDSCHCodeMapping-SignallingMethod-Explicit-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Periodic ::= SEQUENCE {
    reportPeriodicity
                            ReportPeriodicity,
    iE-Extensions
                            ProtocolExtensionContainer { {Periodic-ExtIEs} } OPTIONAL,
    . . .
}
Periodic-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
PLMN-ID ::= OCTET STRING (SIZE(3))
PowerAdjustmentType ::= ENUMERATED {
    none,
    common,
    individual
}
PowerOffset
                        ::= INTEGER (0..24)
Pre-emptionCapability ::= ENUMERATED {
    shall-not-trigger-pre-emption,
    may-trigger-pre-emption
}
Pre-emptionVulnerability ::= ENUMERATED {
    not-pre-emptable,
    pre-emptable
}
PrimaryCPICH-Power
                            ::= INTEGER (-100..500)
-- step 0.1 (Range -10.0..50.0) Unit is dBm
PrimaryCPICH-EcNo
                            ::= INTEGER (-30..30)
PrimaryCCPCH-RSCP
                            ::= INTEGER (0..91)
-- According to maping in [14]
PrimaryScramblingCode
                                ::= INTEGER (0..511)
```

PriorityLevel ::= INTEGER (0..15) -- 0 = spare, 1 = highest priority, ...14 = lowest priority and 15 = no priority

PropagationDelay ::= INTEGER (0..255)

PunctureLimit ::= INTEGER (0..15) -- 0: 40%; 1: 44%; ... 14: 96%; 15: 100

•

<Parts of the ASN.1 module is omitted>

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- :

### 3GPP TSG-RAN WG3 Meeting #19 Cardiff, South Wales, UK, 26<sup>th</sup> February –2<sup>nd</sup> March 2001

R3-010760

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#### How to create CRs using this form:

Other comments: #

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G\_Specs/CRs.htm</u>. Below is a brief summary:

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

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

# 10 Handling of Unknown, Unforeseen and Erroneous Protocol Data

### 10.1 General

Protocol Error cases can be divided into three classes:

- 1. Transfer Syntax Error;
- 2. Abstract Syntax Error;
- 3. Logical Error.

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



Figure 34: Protocol Errors in RNSAP

# 10.2 Transfer Syntax Error

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

Examples for Transfer Syntax Errors are:

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

# 10.3 Abstract Syntax Error

### 10.3.1 General

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

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

4

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

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

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error that belong to cases 1-3 act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5. The handling of case 4 is specified in subclause 10.3.7.

# 10.3.2 Criticality Information

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

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

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

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

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

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

Note that this restriction is not applicable to a sending entity for constructing messages.

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

### 10.3.3 Presence Information

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

The presence field of the indicated classes supports three values:

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

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

# 10.3.4 Not Comprehended IE/IE group

### 10.3.4.1 Procedure ID

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

#### **Reject IE:**

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

#### Ignore IE and Notify Sender:

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

#### **Ignore IE:**

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

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

#### 10.3.4.2 IEs other than the Procedure ID

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

#### **Reject IE:**

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

#### Ignore IE and Notify Sender:

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

**Ignore IE:** 

6

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

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

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

## 10.3.5 Missing IE or IE group

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

#### **Reject IE:**

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

#### Ignore IE and Notify Sender:

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

#### **Ignore IE:**

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

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

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

7

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

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

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

## 10.4 Logical Error

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

#### Class 1:

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

#### **Protocol Causes:**

- 1. Semantic Error;
- 2. Message not Compatible with Receiver State.

Where the logical error is contained in a request message of a class 1 procedure, and the procedure does not have a failure message, the <u>procedure shall be terminated and the</u> Error Indication procedure shall be initiated with an appropriate cause value.

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

#### Class 2:

Where the logical error occurs in a message of a class 2 procedure, the <u>procedure shall be terminated and the</u> Error Indication procedure shall be initiated with an appropriate cause value.

### 3GPP TSG-RAN WG3 Meeting #19 Cardiff, UK, February 26<sup>th</sup> – March 2<sup>nd</sup>, 2001

R3-010764

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#### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G\_Specs/CRs.htm</u>. Below is a brief summary:

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

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

### 9.2.1.64 Transport Format Set

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transport Format Set				
>Dynamic Transport Format Information		1 <maxtfcount></maxtfcount>		The first instance of the parameter corresponds to TFI zero, the second to 1 and so on.
>>Number of Transport blocks	М		INTEGER (0512)	
>>Transport Block Size	C – Blocks		INTEGER (05000)	Bits
>>CHOICE Mode	Μ			
>>>TDD				
>>>>Transmission Time Interval Information	C- TTIdynamic	1 <maxtticount></maxtticount>		
>>>>Transmissio n Time Interval	M		ENUMERAT ED(10, 20, 40, 80,)	msec
>Semi-static Transport Format Information		1		
>>Transmission Time Interval	М		ENUMERAT ED (10, 20, 40, 80, dynamic, )	msec Value "dynamic" for TDD only
>>Type of Channel Coding	М		ENUMERAT ED (No coding, Convolutiona I, Turbo,)	
>>Coding Rate	C – Coding		ENUMERAT ED (1/2, 1/3,)	
>>Rate Matching Attribute	М		INTEGER (1maxRM)	
>>CRC size	М		ENUMERAT ED (0, 8, 12, 16, 24,)	
>>CHOICE Mode	Μ			
>>>TDD				
>>>2 <sup>nd</sup> Interleaving Mode	М		ENUMERAT ED(Frame related, Timeslot related)	

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

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

# 3GPP TSG-RAN WG3 Meeting #19 Cardiff, South Wales, UK, 26<sup>th</sup> February –2<sup>nd</sup> March 2001

R3-010767

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- 1) Fill out the above form. The symbols above marked **#** contain pop-up help information about the field that they are closest to.
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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

#### 8.4.1.2 Successful Operation

SR	NC	DRNC
	COMMON TRANSPORT CHANNEL RESOURCES REQUEST	
	COMMON TRANSPORT CHANNEL RESOURCES RESPONSE	

3

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

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

Upon reception of the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message, the DRNC shall respond by sending a COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message to the SRNC.

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

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

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

The DRNC shall include the FACH Scheduling Priority IE and FACH Initial Window Size IE in the FACH Flow Control Information IE of the FACH Info for UE Selected S-CCPCH IE for each priority class that the DRNC has determined shall be used. The DRNC may include several MAC-c/sh SDU Length IEs for each priority class.

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

# 3GPP TSG-RAN WG3 Meeting #19 Cardiff, South Wales, UK, 26<sup>th</sup> February –2<sup>nd</sup> March 2001

R3-011064

	CHANGE REQUEST	CR-Form-v3			
¥	25.423 CR 316 <sup># rev</sup> 1 <sup>#</sup>	Current version: <b>3.4.0</b> <sup>#</sup>			
For <u>HELP</u> or	n using this form, see bottom of this page or look at th	e pop-up text over the X symbols.			
Proposed chang	re affects: ೫ (U)SIM ME/UE Radio Ac	ccess Network X Core Network			
Title:	# Miscellaneous Corrections				
Source:	<mark>೫ R-WG3</mark>				
Work item code:	¥	Date:			
Category:	<mark>អ F</mark>	Release: # R99			
	<ul> <li>F (essential correction)</li> <li>A (corresponds to a correction in an earlier release</li> <li>B (Addition of feature),</li> <li>C (Functional modification of feature)</li> <li>D (Editorial modification)</li> <li>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</li> </ul>	2 (GSM Phase 2) e) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)			
Reason for chan	<b>Reason for change: #</b> AT RAN WG3 #18 there was a review of the RNSAP specification. This resulted i a number of comments on the RNSAP specification. Comments have also been received from other sources, e.g. the review of the NBAP specification at the same meeting.				
Summary of cha	<ul> <li>nge: \$\$ The following comments have been taken into acceparenthesis.</li> <li>1. From the RNSAP review at RAN WG3 #18:</li> <li>Include control plane somewhere in the scope</li> <li>UE Context definition: clarify that the DL-Sigindicator set can also release the context (3.1)</li> <li>SDU should stand for Service Data Unit (3.3)</li> <li>First paragraph, should be clarified that this out is camping in another cell (8.2.2.3)</li> <li>General: should describe that the procedure is</li> <li>Should DRAC S-CCPCH Info be included in RL's or only for RL's established in cells what active in individual cells? (8.3.1.2./General)</li> <li>DRAC paragraph: reformulate: if the IE to be CCPCH information indicating the FACH on the UE. (8.3.1.2./General)</li> <li>Frame handling priority is not applicable to D Second paragraph shall be Rephrased to only Response message (8.4.1.2)</li> <li>Add cause value: Transport layer resources not (8.4.1.3)</li> <li>M presence for RL Information should be rem</li> </ul>	e definition (1) gnalling-Transfer with DRNTI-release only as far as the DRNC is aware that the s initiated by the source RNC (8.2.3.1) the RL-SETUP-RESPONSE for all ere DRAC is activated? Can DRAC be e received on the FACH or is the S- which the DRAC information is sent to OSCH (8.3.1.2) in successful case respond with ot available as typical cause value. noved (9.1.18) 2.1.43)			

• Presence should be removed (9.2.1.36, 9.2.2.14, 9.2.3.11)

Comments from the RNSAP review, not included in this CR, reason in block parenthesis:

- Handling of neighbouring cell information should be clarified (8.3.1/8.3.2) [Not considered a Rapporteur's task]
- Should talk about "Dedicated measurements" (8.3.11/12/13/14, tabular + ASN.1) [included in CR318]
- Can remove the statement that in case of overlap, a RL\_Failure should be initiated. This is already described in RL\_Failure proc (8.3.16.2 + several other cases) [included in CR288]
- Scope for uniqueness of measurement id: uniquely identifies a measurement within a UE context (9.2.1.37) [included in CR318]

2. The following comments from the NBAP review at RAN WG3 #18 were considered relevant also for RNSAP:

- Should be period after all references (2)
- Class 1 EP: successful case: successfully completed should be replace by "has been successfully completed" (3.1)
- Class 1 EP unsuccessful case: remove second bullet (3.1)
- Missing are: ISCP, STTD, TSTD, PCH, P-CCPCH, S-CCPCH, ... (3.3)
- Change definition if UTRAN to Universal..... (3.3)
- "explicitely" should be "explicitly" (two times) (4.1)
- Remove first sentence (hanging sentence) (5)
- Rephrase to: "one protocol peer shall have a maximum of one ongoing ....." (5.1)
- First sentence: "The NBAP protocol provides the following functions" (7)
- Timer column should be removed (8.1)
- First paragraph: remove last line "Unless specified....." (8.3.12.2)
- Paragraphs on UL FP mode, TOAWS and TOAWE should not talk about a new value or a new configuration. (8.3.1.2)
- In those procedures where we talk about obtaining synchronisation in relation to the radio interface, we should explicitly refer to the Uu interface e.g. "obtaining Uu synchronisation" (General)
- UARCFN should be replaced by UARFCN (General)
- Replace "an appropriate failure message" by "an appropriate response message" (8.5.1.1)
- Replace RRC connection by UE-UTRAN connection (8.3.1.2)
- In semantics behind 100%: add no puncturing (9.2.1.46)
- PCCPCH power definition: in comments, Step should be "0.1dB" (9.3.4)
- Remove last sentence of the definition (The length of this parameter is variable) since already clear from definition (9.2.1.3)

3. The following "other" comments have also been taken into account in this CR (highlighted in blue):

- Setup of RLs should be establishment of RLs (General)
- The reference to "set of co-ordinated DCHs" is sometimes not fully correct, e.g. when referring to the set as a whole or when referring to DCHs within a set of co-ordinated DCHs. (General)
- The specification reference of the GAD specification is incorrect (2)
- The name of the module is Basic <u>Mobility</u> Procedures module. (5.1)
- Tagging of CPCH is missing. (8.2.1.2)
- The name of the *Transmit Diversity Indicator* IE is incorrect (8.3.1.2)
- Make sure that when referring to the start of transmission it is the DL (of the Uu). (8.3.1.2 and 8.3.2.2)
- The paragraph on the *Diversity Mode* IE is superfluous (wrong since the IE does not exist in the RL ADDITION REQUEST message) (8.3.2.2)

	•	• The description of the handling of the <i>Transmit Diversity Indicator</i> IE is not clear. (8.3.2.2)
		<ul> <li>The order of the paragraphs is not logical under DCH Modification (the paragraph about how to detect that the received DCH Information relate to a set of co-ordinated DCHs should be first) (8.3.4.2)</li> </ul>
	•	<ul> <li>The paragraphs (under the sub-heading "Physical Channel Modification) relating to the <i>Transmission Gap Pattern Sequence Information</i> IE are using paragraph style "B1" when they should be using the style "Normal" (since they do not relate to contents of the <i>DL DPCH Information</i> IE). (8.3.4.2)</li> </ul>
	•	• The paragraphs (under the sub-heading "DSCH Addition/Modification/Deletion) relating to the <i>DSCH Info</i> IE are using paragraph style "B1" when they should be using the style "B2" (since they are related to contents of the <i>DSCH to Modify</i> IE ). (8.3.4.2)
	•	• Remove the text "and the <i>Reference to System Information blocks</i> IE" since no such IE exist. (8.3.7.2)
	•	<ul> <li>Change "report detected errors in an incoming message" to "report detected errors in one incoming a received message" (since normally we mention sending or receiving messages). (8.5.1.1)</li> </ul>
	•	• The conditions for IEs shall be expressed as requirements (shall be) not descriptions (is), (9.1 and 9.2)
	•	• The chapter reference for the <i>Limited Power Increase</i> IE is incorrect (should be 9.2.2.21A). (9.1.3.1, 9.1.11.1, and 9.1.16.1)
	•	• The chapter reference for the <i>Diversity Control Field</i> IE is incorrect (should be 9.2.1.20). (9.1.3.1 and 9.1.6)
	•	• The chapter reference for the <i>Transmit Diversity Indicator</i> IE is incorrect (should be 9.2.2.48). (9.1.3.1 and 9.1.6.1)
	•	• The chapter reference for the <i>Diversity Indication</i> IE is incorrect (should be 9.2.1.21). (9.1.4.1, 9.1.5.1, 9.1.7, and 9.1.8.1)
	•	• The chapter reference for the <i>DCHs to Modify</i> IE is incorrect (should be 9.2.2.13C). (9.1.11.1 and 9.1.16.1)
	•	• The chapter reference for the <i>SSDT Indication</i> IE is incorrect (should be 9.2.2.42). (9.1.11.1)
	•	• The chapter reference for the <i>Adjustment Period</i> IE is incorrect (should be 9.2.2.B). (9.1.20)
	•	• Remove the table for range bounds. (9.1.36)
		• The chapter "Measurement Availability Indicator" should be "void" (not used any more) and remove the corresponding IE in the ASN.1. (9.2.1.35 + the corresponding IE in 9.3.4)
	•	• The value "RL Pre-emption" is missing. (9.2.1.40)
		<ul> <li>The definition of the Scheduling Priority Indicator does not mention FACH, even though FACH also uses this IE (9.2.1.51A).</li> </ul>
	•	• The DCH TDD Information Response IE is defined but never used (9.2.3.2B).
	٩	• The chapter reference is incorrect (should be 10.3.6) (9.3.0) The ASN 1 IEs "successful Outcome" and "unsuccessful Outcome" are missed in a
		(9.3.2)
	•	• The value "unsuccessfull-outcome" of ASN.1 IEs "TriggeringMessage" is misspelled.
	·	<ul> <li>The IE "Transmission-Gap-Pattern-Sequence-ScramblingCode-Information" is imported even though not used. (9.3.3)</li> </ul>
Consequences if not approved:	ж	If this CR is not approved the ambiguities/errors/problems/ commented above will remain in the specification.
		Backward compatibility: This CR is backward compatible with the previous version of RNSAP.
Clauses affected:	ж	1, 2, 3, 4.1, 5, 7, 8.1, 8.2.1.2, 8.2.2.3, 8.2.3.1, 8.3.1, 8.3.2, 8.3.3.2, 8.3.4.2, 8.3.5.3, 8.3.7.2, 8.3, 9.2, 8.3, 10, 8.3, 12, 2, 8, 4, 1, 8, 5, 1, 1, 9, 1, 3, 1, 9, 1, 4, 1, 9, 1, 5, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
		9.1.6, 9.1.7, 9.1.8.1, 9.1.11, 9.1.16.1, 9.1.18, 9.1.20, 9.1.36, 9.2.1.3, 9.2.1.7,
		9.2.1.35A, 9.2.1.36, 9.2.1.40, 9.2.1.41D, 9.2.1.43, 9.2.1.44, 9.2.1.46, 9.2.1.51A,

	9.2.2.14, 9.2.2.37BV, 9.2.2.50, 9.2.3.2A, 9.2.3.2B, 9.2.3.11, 9.3.0, 9.3.2, 9.3.3, 9.3.4, and 9.3.5.
Other specs affected:	%       Other core specifications       %         Test specifications       0&M Specifications
Other comments:	X

#### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G\_Specs/CRs.htm</u>. Below is a brief summary:

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

# 1 Scope

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

5

# 2 References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- [1] 3GPP TS 23.003: "Numbering, addressing and identification".
- [2] 3GPP TS 25.413: "UTRAN Iu Interface RANAP Signalling".
- [3] 3GPP TS 25.426: "UTRAN Iur and Iub Interface Data Transport & Transport Layer Signalling for DCH Data Streams".
- [4] 3GPP TS 25.427: "UTRAN Iur and Iub Interface User Plane Protocols for DCH Data Streams".
- [5] 3GPP TS 25.435: "UTRAN Iub interface User Plane Protocols for Common Transport Channel Data Streams".
- [6] 3GPP TS 25.104: "UTRA (BS) FDD; Radio transmission and Reception"
- [7] 3GPP TS 25.105: "UTRA (BS) TDD; Radio Transmission and Reception".
- [8] 3GPP TS 25.211: "Physical Channels and Mapping of Transport Channels onto Physical Channels (FDD)".
- [9] 3GPP TS 25.212: "Multiplexing and Channel Coding (FDD)
- [10] 3GPP TS 25.214: "Physical Layer Procedures (FDD)".
- [11] 3GPP TS 25.215: "Physical Layer Measurements (FDD)".
- [12] 3GPP TS 25.221: "Physical Channels and Mapping of Transport Channels onto Physical Channels (TDD)".
- [13] 3GPP TS 25.223: "Spreading and Modulation (TDD)".
- [14] 3GPP TS 25.225: "Physical Layer Measurements (TDD)".
- [15] 3GPP TS 25.304: "UE Procedures in Idle Mode"
- [16] 3GPP TS 25.331: "RRC Protocol Specification".
- [17] 3GPP TS 25.402: "Synchronisation in UTRAN, Stage 2".
- [18] ITU-T Recommendation X.680 (12/94): "Information technology Abstract Syntax Notation One (ASN.1): Specification of basic notation".
- [19] ITU-T Recommendation X.681 (12/97): "Information technology Abstract Syntax Notation One (ASN.1): Information object specification".
- [20] ITU-T Recommendation X.691 (12/97): "Information technology ASN.1 encoding rules -Specification of Packed Encoding Rules (PER)".
- [21] 3GPP TS 25.213: "Spreading and modulation (FDD)"
- [22] 3GPP TS 25.224: "Physical Layer Procedures (TDD)"
- [23] 3GPP TS 25.133 (V3.3): "Requirements for support of Radio Resource management (FDD)".

- [24] 3GPP TS 25.123 (V3.3): "Requirements for support of Radio Resource management (TDD)".
- [25] 3GPP TS 23.0032: "Universal Graphical Area Description (GAD)".
- [26] 3GPP TS 25.302: "Services Provided by the Physical Layer".
- [27] 3GPP TS 25.213: "Spreading and modulation (FDD)".
- [28] 3GPP TR 25.921: "Guidelines and Principles for Protocol Description and Error Handling".
- [29] GSM TS 05.05: "Digital cellular telecommunications system (Phase 2+); Radio transmission and reception"

# 3 Definitions, symbols and abbreviations

# 3.1 Definitions

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

**Elementary Procedure:** RNSAP protocol consists of Elementary Procedures (EPs). An Elementary Procedure is a unit of interaction between two RNCs. An EP consists of an initiating message and possibly a response message. Two kinds of EPs are used:

- Class 1: Elementary Procedures with response (success or failure);
- Class 2: Elementary Procedures without response.

For Class 1 EPs, the types of responses can be as follows:

Successful

- A signalling message explicitly indicates that the elementary procedure <u>has been</u> successfully completed with the receipt of the response.

Unsuccessful

- A signalling message explicitly indicates that the EP failed.
- On time supervision expiry (i.e. absence of expected response). Whether or not any Class 1 procedure will have a timer on RNSAP is FFS. To de sorted out when discussing the details of the error cases.

Class 2 EPs are considered always successful.

**Prepared Reconfiguration:** A Prepared Reconfiguration exists when the Synchronised Radio Link Reconfiguration Preparation procedure has been completed successfully. The Prepared Reconfiguration does not exist any more after either of the procedures Synchronised Radio Link Reconfiguration Commit or Synchronised Radio Link Reconfiguration has been completed.

**UE Context:** The UE Context contains the necessary information for the DRNC for communication with a specific UE. The UE Context is created by the Radio Link Setup procedure or by the Uplink Signalling Transfer procedure when the UE makes its first access in a cell controlled by the DRNS. The UE Context is deleted by the Radio Link Deletion procedure, or by the Common Transport Channel Resources Release procedure, or by the Downlink Signalling Transfer procedure when neither any Radio Links nor any common transport channels are established towards the concerning UE. The UE Context is identified by the SCCP Connection for messages using connection oriented mode of the signalling bearer and the D-RNTI for messages using connectionless mode of the signalling bearer, unless specified otherwise in the procedure text.

## 3.2 Symbols

Void.

# 3.3 Abbreviations

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

ASN.1	Abstract Syntax Notation One
BLER	Block Error Rate
CCCH	Common Control Channel
CCPCH	Common Control Physical Channel
CCTrCH	Coded Composite Transport Channel
CFN	Connection Frame Number
СМ	Compressed Mode

8

CN	Core Network	
CPCH	Common Packet Channel	
CPICH	Common Pilot Channel	
CRNC	Controlling RNC	
DCH	Dedicated Channel	
DL	Downlink	
DPCCH	Dedicated Physical Control Channel	
DPCH	Dedicated Physical Channel	
DRNC	Drift RNC	
DRNS	Drift RNS	
DRX	Discontinuous Reception	
DSCH	Downlink Shared Channel	
EP	Elementary Procedure	
FACH	Forward Access Channel	
FDD	Frequency Division Duplex	
FP	Frame Protocol	
IE	Information Element	
ISCP	Interference Signal Code Power	
MAC	Medium Access Control	
O&M	Operation and Maintenance	
P-CCPCH	Primary CCPCH	
PCH	Paging Channel	
P-CIPCH	Primary CIPCH	
PCPCH	Physical Common Packet Channel	
PDU	Protocol Data Unit	
PICH	Paging Indication Channel	
PRACH	Physical Random Access Channel	
RAR	Radio Access Bearer	
RACH	Random Access Channel	
RI	Radio Link	
RLC	Radio Link Control	
RLC	Radio Link Set	
RUS	Radio Network Subsystem	
RNSAP	Radio Network Subsystem Application Part	
DNTI	Radio Network Temporary Identifier	
	Padio Pasourco Control	
RSCP	Radio Resource Control Received Signal Code Power	
R CCPCH	Secondary CCDCH	
SCH	Symphronisation Channel	
SCH	Signalling Service Data Unit	
SEN	System Frame Number	
SEIN	System Flame Number	
SPNC	Sorving PNC	
SKINC	Serving DNS	
SKINS	Site Selection Diversity Transmissiont	
SSDI	She Selection Diversity Transmission	
	Time Division Dupley	
TECI	Time Division Duplex Transport Format Combination Indicator	
TECS	Transport Format Combination Indicator	
TES	Transport Format Sat	
	Transport Format Set	
	Transmit Power Control	
<u>ISID</u>	UTDA Absolute Dadie Enguanay Channel Number	
UAKFUN	UTKA Absolute kadio Frequency Channel Number	
	User Equipment	
UKA	UIKAN Kegistration Area	
USCH	Uplink Shared Channel	
UTRA	Universal Terrestrial Radio Access	
UTRAN	UMIS-Universal Terrestrial Radio Access Network	

# 4.1 Procedure Specification Principles

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

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

- The procedure text discriminates between:

1) Functionality which "shall" be executed

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

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

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

- Any required inclusion of an optional IE in a response message is <u>explicitelyexplicitly</u> indicated in the procedure text. If the procedure text does not <u>explicitelyexplicitly</u> indicate that an optional IE shall be included in a response message, the optional IE shall not be included.

# 5 RNSAP Services

The RNSAP offers the following services.

# 5.1 RNSAP Procedure Modules

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

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

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

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

The Common Transport Channel Procedures module contains procedures that are used to control common transport channel data streams over Iur interface.

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

# 5.2 Parallel Transactions

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

# 7 Functions of RNSAP

The RNSAP protocol provides has the following functions:

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

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

Function	Elementary Procedure(s)		
Radio Link Management	a) Radio Link Setup		
	b) Radio Link Addition		
	c) Radio Link Deletion		
	d) Unsynchronised Radio Link Reconfiguration		
	e) Synchronised Radio Link Reconfiguration		
	Preparation		
	f) Synchronised Radio Link Reconfiguration		
	Commit		
	g) Synchronised Radio Link Reconfiguration		
	Cancellation		
	h) Radio Link Pre-emption		
Physical Channel Reconfiguration	Physical Channel Reconfiguration		
Radio Link Supervision	a) Radio Link Failure		
	b) Radio Link Restoration		
Compressed Mode Control [FDD]	a) Radio Link Setup		
	b) Radio Link Addition		
	c) Compressed Mode Command		
	d) Unsynchronised Radio Link Reconfiguration		
	e) Synchronised Radio Link Reconfiguration		
	Preparation		
	f) Synchronised Radio Link Reconfiguration		
	g) Synchronised Radio Link Reconfiguration		
	Cancellation		
Measurements on Dedicated Resources	a) Measurement Initiation		
	b) Measurement Reporting		
	c) Measurement Termination		
	d) Measurement Failure		
DL Power Drifting Correction [FDD]	Downlink Power Control		
CCCH Signalling Transfer	a) Uplink Signalling Transfer		
	b) Downlink Signalling Transfer		
Paging	Paging		
Common Transport Channel Resources	a) Common Transport Channel Resources		
Management			
	b) Common Transport Channel Resources		
	Kelease		
Relocation Execution	Relocation Commit		
Reporting of General Error Situations	Error Indication		
DL Power Timeslot Correction [TDD]	Downlink Power Timeslot Control		

### Table 1: Mapping between functions and RNSAP elementary procedures

# 8.1 Elementary Procedures

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

Elementary	Initiating Message	Successful Outcome	Unsuccessful Outc	ome
Procedure		Response message	Response message	Timer
Radio Link Setup	RADIO LINK SETUP	RADIO LINK SETUP	RADIO LINK SETUP	
	REQUEST	RESPONSE	FAILURE	
Radio Link	RADIO LINK	RADIO LINK	RADIO LINK	
Addition	ADDITION REQUEST	ADDITION	ADDITION FAILURE	
		RESPONSE		
Radio Link	RADIO LINK	RADIO LINK		
Deletion	DELETION REQUEST	DELETION		
		RESPONSE		
Synchronised	RADIO LINK	RADIO LINK	RADIO LINK	
Radio Link	RECONFIGURATION	RECONFIGURATION	RECONFIGURATION	
Reconfiguration	PREPARE	READY	FAILURE	
Preparation				
Unsynchronised	RADIO LINK	RADIO LINK	RADIO LINK	
Radio Link	RECONFIGURATION	RECONFIGURATION	RECONFIGURATION	
Reconfiguration	REQUEST	RESPONSE	FAILURE	
Physical Channel	PHYSICAL CHANNEL	PHYSICAL CHANNEL	PHYSICAL CHANNEL	
Reconfiguration	RECONFIGURATION	RECONFIGURATION	RECONFIGURATION	
	REQUEST	COMMAND	FAILURE	
Measurement	DEDICATED	DEDICATED	DEDICATED	
Initiation	MEASUREMENT	MEASUREMENT	MEASUREMENT	
	INITIATION REQUEST	INITIATION	INITIATION FAILURE	
		RESPONSE		
_				
Common	COMMON	COMMON	COMMON	
Iransport	IRANSPORT	IRANSPORT	IRANSPORT	
Channel	CHANNEL	CHANNEL	CHANNEL	
Resources	RESOURCES	RESOURCES	RESOURCES	
Initialisation		I RESPONSE	I FAILURE	

The need for Timers will be defined on a per procedure basis. The content of this column is thus FFS.

13

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

#### Table 3: Class 2

14

### 8.2.1.2 Successful Operation



#### Figure 1: Uplink Signalling Transfer procedure, Successful Operation

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

The DRNC shall include the URA Identity of the cell where the Uu message was received (the accessed cell), 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 in the URA Information IE in the UPLINK SIGNALLING TRANSFER INDICATION message.

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

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

If the message received from the UE was the first message from that UE in the DRNC, the DRNC shall create a UE Context for this UE, allocate a D-RNTI for the UE Context, and include the *D-RNTI* IE and the identifiers for the CN CS Domain and CN PS Domain that the DRNC is connected to in the UPLINK SIGNALLING TRANSFER INDICATION message. These CN Domain Identifiers shall be based on the LAC and RAC respectively of the cell where the message was received from the UE.

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell where the Uu message was received in the UPLINK SIGNALLING TRANSFER INDICATION message.
## 8.2.2.3 Abnormal Conditions

If the user identified by the *D-RNTI* IE has already accessed another cell controlled by the DRNC than is not camping in the cell identified by the *C-Id* IE in the DOWNLINK SIGNALLING TRANSFER REQUEST message, the message shall be ignored.

16

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 DOWNLINK SIGNALLING TRANSFER REQUEST message shall be ignored.

## 8.2.3.1 General

The Relocation Commit procedure is used by <u>target\_source</u> RNC to execute the Relocation. This procedure supports the Relocation procedures described in [2].

17

This procedure shall use the signalling bearer mode specified below.

## 8.3.1 Radio Link Setup

#### 8.3.1.1 General

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

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

## 8.3.1.2 Successful Operation



Figure 5: Radio Link Setup procedure: Successful Operation

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

If no *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message, the DRNC shall assign a new D-RNTI for this UE.

[FDD - The *First RLS Indicator* IE indicates if the concerning RL shall be considered part of the first RLS established towards this UE. If the *First RLS indicator* IE is set to "first RLS", the DRNS shall use a TPC pattern of n\*"01" + "1" in the DL of the concerning RL and all RLs which are part of the same RLS, until UL synchronisation is achieved on the Uu. The TPC pattern shall continuously be repeated but shall be restarted at the beginning of every frame with CFNmod4=0. For all other RLs, the DRNS shall use a TPC pattern of all "1"'s in the DL until UL synchronisation is achieved on the Uu.]

[FDD - The *Diversity Control Field* IE indicates for each RL except 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. If the *Diversity Control Field* IE is set to "Must", the DRNS shall combine the RL with one of the other RL. When an RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

[FDD - If the *Propagation Delay* IE is included, the DRNS may use this information to speed up the detection of <u>L1-UL</u> synchronisation<u>on the Uu interface</u>.]

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request the time corresponding to the value of the *Allowed Queuing Time* IE before starting to execute the request.

[FDD - If the *Initial DL TX Power* IE and *Uplink SIR Target* IE are present in the message, the DRNS shall use the indicated DL TX Power and Uplink SIR Target as initial value. If the value of the *Initial DL TX Power* IE is outside the configured DL TX power range, the DRNS shall apply these constrains when setting the initial DL TX power. The DRNS shall also include the configured DL TX power range defined by *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK SETUP RESPONSE message.]

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

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

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

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

[FDD – The DRNS shall start the DL transmission using the indicated DL TX power level (if received) or the decided DL TX power level on each DL channelisation code of a RL until UL synchronisation is achieved <u>on the Uu interface</u> for the concerning RLS or a DL POWER CONTROL REQUEST message is received. No innerloop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10] subclause 5.2.1.2) with DPC\_MODE=0 and the power control procedure (see 8.3.7).]

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

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

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

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

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

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

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<u>s</u>-and DSCH (if any).

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

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

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

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

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE, the DRNS shall immediately activate the indicated Transmisson Gap Pattern Sequences: for each sequence the *TGCFN* refers to latest passed CFN with that value. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the DRNS shall behave as specified in subclause 8.3.9.]

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

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 and for each DSCH [TDD – and USCH]. This information shall be sent to the SRNC in the message RADIO LINK SETUP RESPONSE when all the RLs have been successfully setupestablished.

If the *DSCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNC shall establish the requested DSCH's [FDD - on the RL indicated by the PDSCH RL ID IE]. In addition, the DRNC shall send a valid set of *DSCH Scheduling Priority* IE and *MAC-c/sh SDU Length* IE parameters to the SRNC in the message RADIO LINK SETUP RESPONSE message.

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

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

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

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

[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* IE that the RL is combined with another RL. In this case the Reference *RL ID* IE shall be included to indicate with which RL the combination is performed. The Reference *RL ID* IE 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* IE that no combining is performed. 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 and DSCH 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, DSCH and USCH of the RL.]

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

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

For any cell neighbouring a cell in which a RL was established, 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 SCH Time Slot information, the Block STTD Indicator]and the node identification of the CN nodes connected to the RNC controling the neighbouring cell if the UMTS 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, cell individual offset]/[TDD - PCCPCH Power level, DPCH Constant Value] and Frame Offset of the UMTS neighbouring cell.

If a UMTS neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC and CN domain nodes) of the RNC controlling the UMTS neighbouring cell. [FDD – If the information is available, the DRNC shall include the *Tx Diversity Indicator* IE and Tx diversity capability (i.e. *STTD Support Indicator* IE, *Closed Loop Mode1 Support Indicator* IE, and *Closed Loop Mode2 Support Indicator* IE) in the *Neighbouring FDD Cell Information* IE].

If there are GSM neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include the *Neighbouring GSM Cell Information* IE in the RADIO LINK SETUP RESPONSE message for each of the GSM neighbouring cells. If available the DRNC shall include the *GSM Output Power* IE in the *Neighbouring GSM Cell Information* IE.

If no *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message, 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* IE in the RADIO LINK SETUP RESPONSE message.

21

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

[FDD - If the *DRAC Control* IE is set to "requested" in the RADIO LINK SETUP REQUEST message for at least one DCH and if the DRN<del>CS</del> supports the DRAC, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message the *Secondary CCPCH Info IE* for the to be received on FACH where the DRAC information is sent, for each added Radio Link established in a cell where DRAC is active. If the DRN<del>CS</del> does not support DRAC, it the DRNC shall not provide these IEs in the RADIO LINK SETUP RESPONSE message.]

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell and the UTRAN access point position for each of the established RLs in the RADIO LINK SETUP RESPONSE message.

After sending of the RADIO LINK SETUP RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation <u>on the Uu interface</u> and start reception on the new RL. The DRNS shall start <u>DL</u> transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [3].

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

[FDD- If the *Downlink compressed mode method* in one or more Transmission Gap Pattern Sequence is set to 'SF/2' in the RADIO LINK SETUP REQUEST message, the DRNS shall include the *Transmission Gap Pattern Sequence Scrambling Code Information* IE in the RADIO LINK SETUP RESPONSE message indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

[FDD –The UL out of syncUu synchronisation detection algorithm defined in ref. [10] subclause 4.3 shall for each of the established RL Set(s) use the maximum value of the parameters N\_OUTSYNC\_IND and T\_RLFAILURE, and the minimum value of the parameters N\_INSYNC\_IND, that are configured in the cells supporting the radio links of the RL Set].

For each Radio Link the DRNC shall include the *URA ID* IE of the cell, the *Multiple URAs Indicator* IE indicating whether or not the cell belongs to multiple URAs, and the RNC Identity of all other RNCs that are having at least one cell within the URA in the cell in the *URA Information* IE in the RADIO LINK SETUP RESPONSE message.

## 8.3.1.3 Unsuccessful Operation



#### Figure 6: Radio Link Setup procedure: Unsuccessful Operation

In unsuccessful case (i.e. one or more RLs can not be setupestablished) 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.

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

Typical cause values are:

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

- RL Already Activated/Allocated
- [FDD UL Scrambling Code Already in Use];
- DL Radio Resources not Available;
- UL Radio Resources not Available;
- Unknown C-ID;
- [FDD Combining Resources not available];
- Combining not Supported
- Requested Configuration not Supported;
- Cell not Available;
- [FDD Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- Invalid CM Settings;
- Number of DL codes not supported;
- Dedicated Transport Channel Type not Supported;
- DL Shared Channel Type not Supported;
- [TDD UL Shared Channel Type not Supported];
- [FDD UL Spreading Factor not Supported];
- [FDD DL Spreading Factor not Supported];
- CM not Supported.

### **Transport Layer Causes:**

- Transport Resource Unavailable

#### **Miscellaneous Causes:**

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

## 8.3.1.4 Abnormal Conditions

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

## 8.3.2 Radio Link Addition

## 8.3.2.1 General

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

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

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

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

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

## 8.3.2.2 Successful Operation



#### Figure 7: Radio Link Addition procedure: Successful Operation

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

Upon 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.

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

The *Diversity Control Field* IE 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. If the *Diversity Control Field* IE is set to "Must", the DRNS shall combine the RL with one of the other RL. When a new RL is to be combined the DRNS shall choose which RL(s) to combine it with.

[FDD - If the *Primary CPICH Ec/No* IE 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 CPICH Ec/No* IE is not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.]

[TDD - If the *Primary CCPCH RSCP* IE and/or the *DL Time Slot ISCP Info* IE are included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use them in the calculation of the Initial DL TX Power. If the *Primary CCPCH RSCP* IE and *DL Time Slot ISCP Info* IE are not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.]

[FDD - The Initial DL TX Power shall be applied until UL synchronisation is achieved <u>on the Uu interface</u> for that RLS or a DL POWER CONTROL REQUEST message is received. No innerloop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10] subclause 5.2.1.2) with DPC\_MODE=0 and the power control procedure (see 8.3.7)].

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

#### Release 1999

[FDD - The DRNS shall use the provided Uplink 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 shall, if supported, 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.

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Active Pattern Sequence Information* IE, the DRNS shall use the information to immediately activate all ongoing Transmission Gap Pattern Sequence(s) also in the new RL. For each sequence the *TGCFN* refers to latest passed CFN with that value. If *Active Pattern Sequence Information* IE is not included, the DRNS shall not activate the on going CM pattern in the new RLs, but the on going pattern in the existing RL are maintained.]

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

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

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

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

In the case of combining an RL with existing RL(s) the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the *Diversity Indication* IE 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* IE 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, [TDD – and DSCH, USCH] of the RL in the RADIO LINK ADDITION RESPONSE message.

In case of <u>a set of co-ordinated DCHs</u>, the *Binding ID* IE and the *Transport Layer Address* IE shall be included for only one of the <u>DCHs in the set of</u> co-ordinated DCHs.

[TDD - If the radio link to be added includes a DSCH, the DRNC shall send a set of valid *DSCH Scheduling Priority* IE and *MAC-c/sh SDU Length* IE parameters to the SRNC in the message RADIO LINK ADDITION RESPONSE message.]

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

For any cell UMTS neighbouring 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 [FDD - Primary Scrambling Code], the [TDD – Cell Parameter Id, the Sync Case, the SCH Time slot information, the Block STTD Indicator] and the node identification of CN nodes connected to the RNC controlling the UMTS neighbouring cell if the UMTS neighbouring cell is not controlled by the DRNC. In addition, if the information is available, the DRNC shall also provide the [FDD- *Primary CPICH Power* IE, *Cell Individual Offset* IE]/[TDD - *PCCPCH Power* IE, *DPCH Constant Value* IE], *Frame Offset* IE, [FDD – *Tx Diversity Indicator* IE, and Tx diversity capability, i.e. *STTD Support Indicator* IE, *Closed Loop Model Support Indicator* IE, and *Closed Loop Mode2 Support Indicator* IE] of the UMTS neighbouring cell.

If there are GSM neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include the *Neighbouring GSM Cell Information* IE in the RADIO LINK ADDITION RESPONSE message for each of the GSM neighbouring cells. If available the DRNC shall include the *GSM Output Power* IE in the *Neighbouring GSM Cell Information* IE.

The DRNC shall also provide the configured uplink Maximum SIR and UL Minimum SIR for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. These values are taken into consideration by DRNS admission control and shall be used by the SRNC as limits for the UL inner-loop power control target.

The DRNC shall provide the configured *Maximum DL TX Power* IE and *Minimum DL TX Power* IE for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message.

The 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.

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

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell and the UTRAN access point position for each of the added RLs in the RADIO LINK ADDITION RESPONSE message.

After sending of the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation <u>on the Uu interface</u> and start reception on the new RL. The DRNS shall start <u>DL</u> transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [4].

[FDD - If the UE has been allocated one or several DCH controlled by DRAC (*DRAC Control* IE was set to "requested" in the RADIO LINK ADDITION REQUEST message for at least one DCH) and if the DRNCS supports the DRAC, the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message the *Secondary CCPCH Info* IE to be received onfor the FACH where the DRAC information is sent, for each added Radio Link established in a cell where DRAC is active. If the DRNCS does not support DRAC, the DRNC shall not provide these IEs in the RADIO LINK ADDITION RESPONSE message.]

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

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

[FDD – After addition of the new RL(s), the UL <u>Uu synchronisation detection out of sync</u> algorithm defined in <u>ref.</u>[10] <u>subclause 4.3</u> shall for each of the previously existing and newly established RL Set(s) use the maximum value of the parameters N\_OUTSYNC\_IND and T\_RLFAILURE, and the minimum value of the parameters N\_INSYNC\_IND, that are configured in the cells supporting the radio links of the RL Set].

For each Radio Link the DRNC shall include the *URA ID* IE of the cell, the *Multiple URAs Indicator* IE indicating whether or not the cell belongs to multiple URAs, and the RNC Identity of all other RNCs that are having at least one cell within the URA in the cell in the *URA Information* IE in the RADIO LINK ADDITION RESPONSE message.

## 8.3.2.3 Unsuccessful Operation



Figure 8: Radio Link Addition procedure: Unsuccessful Operation

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

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

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Active Pattern Sequence Information* IE and the DRNS cannot provide the requested CM measurements, or if the *Transmission Gap Pattern Sequence Status* IE repetitions in the *Active Pattern Sequence Information* IE do not address exactly all ongoing compressed mode patterns the DRNS shall regard the Radio Link Addition procedure as failed and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings". ]

[FDD - If the RADIO LINK ADDITION REQUEST is used to terminate the on going compressed mode measurement in the new RLs (as specified above), but at least one new RL is to be established in one cell that has the same UARCFCN as at least one cell with an already existing RL, the DRNS shall regard the Radio Link Addition procedure as failed and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings".]

Typical cause values are:

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

- RL Already Activated/Allocated
- DL Radio Resources not Available;
- UL Radio Resources not Available;
- Unknown C-ID;
- Combining Resources not Available;
- Combining not Supported
- Cell not Available;
- [FDD Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- Invalid CM Settings;
- CM not Supported;
- Reconfiguration CFN not Elapsed;
- Number of DL Codes not Supported.

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

- Transport Resource Unavailable.

#### **Miscellaneous Causes:**

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

## 8.3.2.4 Abnormal Conditions

## 8.3.3.2 Successful Operation



Figure 9: Radio Link Deletion procedure, Successful Operation

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

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

If the radio link(s) to be deleted represent the last radio link(s) for the UE in the DRNS then the DRNC shall also release the UE context, unless the UE is using common resources in the DRNS.

[FDD – After deletion of the RL(s), the UL <u>Uu synchronisation detection out of syne</u> algorithm defined in <u>ref.</u>[10] <u>subclause 4.3</u> shall for each of the remaining RL Set(s) use the maximum value of the parameters N\_OUTSYNC\_IND and T\_RLFAILURE, and the minimum value of the parameters N\_INSYNC\_IND, that are configured in the cells supporting the radio links of the RL Set].

## 8.3.4.2 Successful Operation



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

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

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

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

#### **DCH Modification:**

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

- If the DCHs to Modify IE includes multiple DCH Specific Info IEs then the DRNS shall treat the DCHs in the DCHs to Modify IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCHs to Modify IE* includes the *UL FP Mode* IE for a DCH or a DCH which belongs to a set of coordinated DCHs to be modified, the DRNS shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify IE* includes the *ToAWS* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify IE* includes the *ToAWE* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify IE* includes multiple *DCH Specific Info* IEs then the DRNS shall treat the DCHs in the *DCHs to Modify* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCH Specific Info* IE 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 *DCH Specific Info* IE includes the *Transport Format Set* IE for the UL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.
- If the *DCH Specific Info* IE includes the *Transport Format Set* IE for the DL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.
- [FDD If, in the *DCH Specific Info* IE, the *DRAC Control* IE is present and set to "requested" for at least one DCH and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE to be received on for the FACH where the DRAC information is sent, for each Radio Link established in a cell where DRAC is active. If the DRNS

- does not support DRAC, <u>it the DRNC</u> shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]
- [TDD If the *DCH Specific Info* IE includes the *CCTrCH ID* IE for the UL, the DRNS shall map the DCH onto the referenced UL CCTrCH.]
- [TDD If the *DCH Specific Info* IE includes the *CCTrCH ID* IE for the DL, the DRNS shall map the DCH onto the referenced DL CCTrCH.]

#### DCH Addition:

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

- The DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.
- If the *DCHs to Add* IE includes a *DCHs to Add* IE with multiple *DCH Specific Info* IEs then the DRNS shall treat the DCHs in the *DCHs to Add* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- [FDD For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to "selected ", the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [4]. If the QE-Selector is set to "non-selected ", the Physical channel BER shall be used for the QE in the UL data frames, ref. [4].]
- [FDD For a set of co-ordinated DCHs the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" shall be used for the QE in the UL data frames, ref. [4]. [FDD If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [4]. If all DCHs have *QE-Selector* IE set to "non-selected" the Physical channel BER shall be used for the QE, ref. [4].]
- The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.
- The DRNS shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The DRNS shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The DRNS shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [FDD If the DRAC Control IE is set to "requested" in the DCH Specific Info IE for at least one DCH and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the Secondary CCPCH Info IE to be received onfor the FACH where the DRAC information is sent, for each Radio Link supported by a cell where DRAC is active. If the DRNS does not support DRAC, it the DRNC shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

#### **DCH Deletion:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCH to Delete*, the DRNS shall not include the referenced DCHs in the new configuration.

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

#### **Physical Channel Modification:**

#### Release 1999

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

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

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

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

[FDD: If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern* Sequence Information IE, the DRNS shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode Configuration.

31

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

- [FDD: If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern* Sequence Information IE, the DRNS shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode Configuration.
- [FDD: If the RADIO LINK RECONFIGURATION PREPARE message includes the Transmission Gap Pattern Sequence Information IE and the Downlink compressed mode method in one or more Transmission Gap Pattern Sequence within the Transmission Gap Pattern Sequence Information IE is set to 'SF/2', the DRNC shall include the Transmission Gap Pattern Sequence Scrambling Code Information IE to the RADIO LINK RECONFIGURATION READY message indicating for each Channelisation Code whether the alternative scrambling code shall be used or not].

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

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

[TDD - If any of the *UL CCTrCH to Modify* IEs or *DL CCTrCH to Modify* IEs includes any of *TFCS* IE, *TFCI coding* IE, *Puncture limit* IE, or *TPC CCTrCH ID* IEs the DRNS shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]

[TDD – The DRNC shall include in the RADIO LINK RECONFIGURATION READY message DPCH information to be modified and the IEs modified if any of *Repetition Period* IE, *Repetition Length* IE, *TDD DPCH Offset* IE or timeslot information was modified. The DRNC shall include timeslot information and the IEs modified if any of *Midamble Shift and Burst Type* IE, *Time Slot* IE, *TFCI Presence* IE or Code information was modified. The DRNC shall include to code information if *TDD Channelisation Code* IE was modified.]

#### [TDD – UL/DL CCTrCH Addition]

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

[TDD – If the DRNS has reserved the required resources for any requested DPCHs, the DRNC shall include the DPCH information within DPCH to be added in the RADIO LINK RECONFIGURATION READY message. If no DPCH was active before the reconfiguration, and if a valid Rx Timing Deviation measurement is known in DRNC, then the DRNC shall include the *Rx Timing Deviation* IE in the RADIO LINK RECONFIGURATION READY message.]

#### [TDD – UL/DL CCTrCH Deletion]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH to Delete* IEs *or DL CCTrCH to Delete* IEs, the DRNS shall remove this CCTrCH in the new configuration.]

#### SSDT Activation/Deactivation:

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

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

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

32

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

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

- [FDD: If the DSCH to Modify IE includes any DSCH Info IEs, then the DRNS shall treat them each as follows:]
- [FDD: If the DSCH Info IE includes any of the Allocation/Retention Priority IE, Scheduling Priority Indicator IE or TrCH Source Statistics Descriptor IE, the DNRS shall use them to update the set of DSCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.]
- [FDD: If the *DSCH Info* IE includes any of the *Transport Format Set* IE or *BLER* IE, the DRNS shall apply the parameters to the new configuration.]
- [FDD: If the *DSCH to Modify* IE includes the *PDSCH RL ID* IE, then the DRNS shall use it as the new DSCH RL identifier.]
- [FDD: If the *DSCH to Modify* IE includes the *Transport Format Combination Set* IE, then the DRNS shall use it as the new Transport Format Combination Set associated with the DSCH.]
- [TDD: If the *DSCHs to Modify* IE includes the *CCTrCH Id* IE, then the DRNS shall map the DSCH onto the referenced DL CCTrCH.]
- [TDD: If the *DSCHs to Modify* IE includes any of the *Allocation/Retention Priority* IE, *Scheduling Priority Indicator* IE or *TrCH Source Statistics Descriptor* IE, the DNRS shall use them to update the set of DSCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.]
- [TDD: If the *DSCHs to Modify* IE includes any of the *Transport Format Set* IE or *BLER* IE, the DRNS shall apply the parameters to the new configuration.]

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

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

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

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

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

- If the USCH to Modify IE includes any of the Allocation/Retention Priority IE, Scheduling Priority Indicator IE or TrCH Source Statistics Descriptor IE, the DNRS shall use them to update the set of USCH Priority classes.
- If the USCH to Modify IE includes any of the CCTrCH Id IE, Transport Format Set IE, BLER IE or RB Info IE, the DRNS shall apply the parameters to the new configuration.

If the requested modifications are allowed by the DRNC and the DRNC has successfully reserved the required resources for the new configuration of the Radio Link(s), it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message.

General

#### Release 1999

The DRNS shall include in the RADIO LINK RECONFIGURATION READY message the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE for any Transport Channel being added, or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE. In case of a set of co\_ordinated DCHs requiring a new transport bearer on Iur, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE 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 *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included only for one of the combined Radio Links.

If the requested modifications are allowed by the DRNS, and the DRNS has successfully reserved the required resources for the new configuration of the Radio Link(s) it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message. When this procedure has been completed successfully there exist a Prepared Reconfiguration, as defined in subclause 3.1.

The DRNS decides the maximum and minimum SIR for the uplink of the Radio Link(s) and shall return this in the *Maximum Uplink SIR* IE and *Minimum Uplink SIR* IE for each Radio Link in the RADIO LINK RECONFIGURATION READY message.

If the DL TX power upper or lower limit has been re-configured the DRNC shall return this in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE respectively in the RADIO LINK RECONFIGURATION RESPONSE message.

## 8.3.5.3 Abnormal Conditions

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

## 8.3.7.2 Successful Operation



### Figure 14: Unsynchronised Radio Link Reconfiguration procedure, Successful Operation

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

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

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

#### **DCH Modification:**

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

- If the *DCHs to Modify* IE includes multiple *DCH Specific Info* IEs, then the DRNS shall treat the DCHs as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCHs to Modify* IE includes the *UL FP Mode* IE for a DCH or a DCH which belongs to a set of coordinated DCHs to be modified, the DRNS shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify* IE includes the *ToAWS* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify* IE includes the *ToAWE* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCH Specific Info* IE includes on the *Transport Format Set* IE for the UL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.
- If the *DCH Specific Info* IE includes on the *Transport Format Set* IE for the DL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.
- If the *DCH Specific Info* IE includes the *Frame Handling Priority* IE, the DRNS should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.
- [FDD If the *DRAC Control* IE is present and set to "requested" in *DCH Specific Info* IE for at least one DCH, and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION RESPONSE message the *Secondary CCPCH Info* IE <u>to be received onfor the FACH where the DRAC</u> information is sent, for each Radio Link supported by a cell where DRAC is active. If the DRNS does not support DRAC, <u>the DRNC</u> shall not provide these IEs in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [TDD If the *DCH Specific Info* IE includes the *CCTrCH ID* IE for the UL, the DRNS shall map the DCH onto the referenced UL CCTrCH.]

#### Release 1999

- [TDD - If the *DCH Specific Info* IE includes the *CCTrCH ID* IE for the DL, the DRNS shall map the DCH onto the referenced DL CCTrCH.]

#### DCH Addition:

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

- The DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.
- If the *DCHs to Add* IE includes multiple DCH Specific Info IEs then the DRNS shall treat the DCHs in the *DCHs to Add* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can all of them in the new configuration
- [FDD For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to "selected ", the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [4]. If the QE-Selector is set to "non-selected ", the Physical channel BER shall be used for the QE in the UL data frames, ref. [4].]
- For a set of co-ordinated DCHs the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected " shall be used for the QE in the UL data frames, ref. [4]. [FDD If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [4]. If all DCHs have *QE-Selector* IE set to "non-selected " the Physical channel BER shall be used for the QE, ref. [4].]
- The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.
- The DRNS shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The DRNS shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The DRNS shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [FDD If the DRAC Control IE is set to "requested" in DCH Specific Info IE for at least one DCH, and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION RESPONSE message the Secondary CCPCH Info IE and the Reference to System Information blocks IE to be received onfor the FACH where the DRAC information is sent, for each Radio Link supported by a cell where DRAC is active. If the DRNS does not support DRAC, the DRNC shall not provide these IEs in the RADIO LINK RECONFIGURATION RESPONSE message.

## **DCH Deletion:**

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCH to delete* IE, the DRNS shall not include the referenced DCHs in the new configuration.

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

#### **Physical Channel Modification:**

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

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

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

37

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

#### **Compressed Mode Preparation:**

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

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

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

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH Information to modify* IEs or */DL CCTrCH Information to modify* IEs and it includes *TFCS* IE, the DRNS shall apply the included *TFCS* IE as the new value to the referenced CCTrCH.]

## [TDD – UL/DL CCTrCH Deletion]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH Information to delete* IEs or *DL CCTrCH Information to delete* IEs, the DRNS shall remove the referenced CCTrCH in the new configuration.]

## General:

The DRNS shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE for any Transport Channel being added, or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE. In case of a set of co\_ordinated DCHs requiring a new transport bearer on Iur, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE 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 DRNC shall return the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message only for one of the combined Radio Links.

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

The DRNS decides the maximum and minimum SIR for the uplink of the Radio Link(s), and the DRNC shall return this in the IEs *Maximum Uplink SIR* and *Minimum Uplink SIR* for each Radio Link in the RADIO LINK RECONFIGURATION RESPONSE message.

If the DL TX power upper or lower limit has been re-configured, the DRNC shall return this in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE respectively in the RADIO LINK RECONFIGURATION RESPONSE message.

## 8.3.9.2 Successful Operation



Figure 18: RL Failure procedure, Successful Operation

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

When the RL Failure procedure is used to notify loss of UL synchronisation <u>on the Uu interface</u>, the message shall be sent when indicated by the UL synchronisation detection algorithm defined in ref. [10] <u>subclause 4.3</u> and [22] <u>subclause 4.4.2</u>, and with the cause value 'Synchronisation Failure'.

[FDD – When Radio Link Failure procedure is used to indicate permanent failure in one or more Radio Links/Radio Link Sets due the overlapping of two or more pattern sequences during the compressed mode measurement, DL transmission shall be stopped and the RADIO LINK FAILURE INDICATION message shall be sent with the cause value 'Invalid CM Settings'. After sending the RADIO LINK FAILURE INDICATION message to notify the permanent failure, the DRNS shall not remove the Radio Link/Radio Link Set from the UE context, or the UE context itself.]

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

Typical cause values are:

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

- Synchronisation Failure;
- Invalid CM Settings.

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

- Transport Resources Unavailable.

#### **Miscellaneous Causes:**

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

## 8.3.10 Radio Link Restoration

## 8.3.10.1 General

This procedure is used to notify establishment and re-establishment of UL synchronisation on the Uu interface.

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

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

## 8.3.10.2 Successful Operation



Figure 19: RL Restoration procedure, Successful Operation

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

[TDD - If the re-established <u>UL Uu</u> synchronisation concerns one or more individual Radio Links the DRNC shall indicate the affected Radio Link(s) using the *RL Information* IE.] [FDD - If the re-established <u>UL Uu</u> synchronisation concerns one or more Radio Link Sets the DRNC shall indicate the affected Radio Link Set(s) using the *RL Set Information* IE.]

## 8.3.10.3 Abnormal Conditions

## 8.3.12.2 Successful Operation



### Figure 22: Measurement Reporting procedure, Successful Operation

If the requested measurement reporting criteria are met, the DRNS shall initiate a Measurement Reporting procedure. If the measurement was initiated (by the Measurement Initiation procedure) for multiple dedicated measurement objects, the DRNC may include measurement values for multiple objects in the DEDICATED MEASUREMENT REPORT message. Unless specified below, the meaning of the parameters are given in other specifications.

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

If the achieved measurement accuracy does not fulfil the given accuracy requirement, the Measurement not available shall be reported.

# 8.4.1 Common Transport Channel Resources Initialisation

## 8.4.1.1 General

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

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

## 8.4.1.2 Successful Operation



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

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

Upon reception of the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message, the DRNC shall respond by sending a COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message to the SRNC.

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

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

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

The DRNC shall include the FACH Scheduling Priority IE and FACH Initial Window Size IE in the FACH Flow Control Information IE of the FACH Info for UE Selected S-CCPCH IE for each priority class that the DRNC has determined shall be used. The DRNC may include several MAC-c/sh SDU Length IEs for each priority class.

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

## 8.4.1.3 Unsuccessful Operation

SRNC	DRNC
COMMON TRANSPORT CHANNEL RESOURCES REQUEST	
COMMON TRANSPORT CHANNEL RESOURCES FAILURE	
•	

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

If the *Transport Bearer Request Indicator* IE is set to "Bearer Requested" and the DRNC is not able to provide a Transport Bearer, the DRNC shall respond to the SRNC with the COMMON TRANSPORT CHANNEL RESOURCES FAILURE message, indicating the cause of the failure.

3GPP

Typical cause values are:

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

- Common Transport Channel Type not Supported.

### **Transport Layer Causes:**

- Transport Resource Unavailable.

## 8.4.1.4 Abnormal Conditions

## 8.5.1.1 General

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

This procedure shall use the signalling bearer mode specified below.

# 9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type	Semantics	Criticality	Assigned
-		_	and	description	-	Criticality
			reference			
Message Type	Μ		9.2.1.40		YES	reject
Transaction ID	Μ		9.2.1.59		-	
SRNC-Id	М		RNC-Id		YES	reject
			9.2.1.50			
S-RNTI	М		9.2.1.53		YES	reject
D-RNTI	0		9.2.1.24		YES	reject
Allowed Queuing Time	0		9.2.1.2		YES	reject
UL DPCH Information		1			YES	reject
>UL Scrambling Code	М		9.2.2.53		_	
>Min UL Channelisation	М		9.2.2.25		_	
Code Length						
>Max Number of UL	C –		9.2.2.24		_	
DPDCHs	CodeLen					
>Puncture Limit	М		9.2.1.46	For the UL.	_	
>TFCS	М		TFCS for		-	
			the UL			
			9.2.1.63			
>UL DPCCH Slot Format	М		9.2.2.52		_	
>Uplink SIR Target	0		Uplink SIR		_	
	-		9.2.1.69			
>Diversity mode	М		9228		_	
SSDT Cell Identity Length	0		92241			
>S Field Length	0		92236		_	
DI DPCH Information	0	1	0.2.2.00		VES	reject
	М	1	TECS for		-	Tejeci
211.03	IVI		the DI		_	
			92163			
DL DDCH Slot Format	M		0.2.1.00			
>DL DFCH Slot Format	M		9.2.2.9		_	
Channelisation Codes	IVI		9.2.2.20A		_	
TECL Signalling Mode	M		02246			
			9.2.2.40			
>TFCT Presence	C- SlotEarmat		9.2.1.55		—	
Multipleving Desition	SiotFormat		0.0.0.00			
>Nulliplexing Position	IVI	1	9.2.2.20			
>Power Onset Information	N.4	1	Daviar	Devuereffect		
>>POT	IVI		Power	for the TECL	—	
			Offset			
	N.4		9.2.2.30	Dits.		
>>PO2	IVI		Power	for the TDC	_	
			Olisel	hite		
			9.2.2.30	DIIS.		
>>PO3	IVI		Power	Power onset	_	
				for the pilot		
EDD TDC Downlink Stop	M		9.2.2.30	DIIS.		
SFDD TPC Downlink Step	IVI		9.2.2.16		_	
SIZE	M		0.0.4.000.0			
>Limited Power increase	IVI		<del>9.2.1.00</del> 2.210		—	
	N.4		. <u>2.21A</u>			
>Inner Loop DL PC Status			9.2.2.218			reie et
DCH Information	M		DCH FDD		YES	reject
			iniormation			
			9.2.2.4A		VEO	
DSCH Information	0		DSCH		YES	reject
			FDD			
			information			
DL Information		1	9.2.2.13A		FAOL	n ett.
		i <maxn< td=""><td></td><td></td><td>EACH</td><td>notity</td></maxn<>			EACH	notity
	NA	UUIRLS>	0.0.1.40			
			9.2.1.49		—	
	IVI		9.2.1.0		—	
>First RLS Indicator	IVI		9.2.2.16A		-	

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
>Frame Offset	М		9.2.1.30		_	
>Chip Offset	М		9.2.2.1		_	
>Propagation Delay	0		9.2.2.33		_	
>Diversity Control Field	C – NotFirstRL		<del>9.2.2.6<u>9.2.</u> 1.20</del>		-	
>Initial DL TX Power	C_ifAlone		DL Power 9.2.2.10		-	
>Primary CPICH Ec/No	C_ifAlone		9.2.2.32		-	
>SSDT Cell Identity	0		9.2.2.40		-	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2. <del>50</del> 48		_	
Transmission Gap Pattern Sequence Information	0		9.2.2.47A		YES	reject
Active Pattern Sequence Information	0		9.2.2.A		YES	reject

Condition	Explanation
CodeLen	This IE is shall be present only if Min UL Channelisation Code
	length IE equals to 4
SlotFormat	This IE shall is only be present if the DL DPCH Slot Format IE is
	equal to any of the values 12 to 16.
NotFirstRL	This IE shall be is present only if the RL is not the first one in the RL
	Information IE.
Diversity mode	This IE shall be is present unless <i>Diversity Mode</i> IE in UL DPCH
	Information IE is "none"
C_lfalone	Either Initial DL TX Power IE or Primary CPICH Ec/No IE shall be
	present.

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

# 9.1.4.1 FDD Message

IE/Group Name	Presence	Range	IE type	Semantics	Criticality	Assigned
			and	description		Criticality
			reference			
Message Type	М		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
D-RNTI	0		9.2.1.24		YES	ignore
CN PS Domain Identifier	0		9.2.1.12		YES	ignore
CN CS Domain Identifier	0		9.2.1.11		YES	ignore
RL Information Response		1 <maxno< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxno<>			EACH	ignore
		ofRLs>	0.0.4.40			
>RL ID	M		9.2.1.49		_	
>RL Set ID	M		9.2.2.35		_	
>URA Information	M		9.2.1.70B		_	
>SAI	M		9.2.1.52		_	
	0		9.2.1.5A		_	
>UTRAN Access Point Position	0		9.2.1.70A		_	
>Received total wide band	М		9.2.2.35A		-	
>Secondary CCPCH Info	0		9.2.2.37B		_	
>DL Code Information	M		FDD DL		_	
			Code			
			Information			
			9.2.2.14A			
>Diversity Indication	C- NotFirstRL		<del>9.2.2.7</del> <u>9.2.</u> 1.21		_	
>CHOICE Diversity	M				_	
Indication						
>>Combining					_	
>>>RL ID	М		9.2.1.49	Reference	-	
				RL ID for the combining		
>>Non Combining or First RL					-	
>>>DCH Information Response	М		9.2.1.16A		_	
>SSDT Support Indicator	М		9.2.2.43		_	
>Maximum Uplink SIR	М		Uplink SIR		-	
>Minimum Uplink SIR	М		Uplink SIR		_	
>Closed Loop Timing	0		9.2.1.09 9.2.2.3A		-	
Adjustment Mode						
>Maximum Allowed UL Tx Power	М		9.2.1.35		-	
>Maximum DL TX Power	М		DL Power 9.2.2.10		_	
>Minimum DL TX Power	М		DL Power		-	
>Primary Scrambling Code	0		92145		_	
	0		UARECN	Corresponds	_	
	0		9.2.1.66	to Nu in ref.		
>DL UARFCN	0		UARFCN 9.2.1.66	Corresponds to Nd in ref. [6]	_	
>Primary CPICH Power	0	I	9.2.1.44	1	-	
>DSCH Information Response	0		DSCH FDD Information Response		YES	ignore
	0		9.2.2.138			
Information	0		9.2.1.41A		_	

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
>Neighbouring GSM Cell Information	0		9.2.1.41C		YES	ignore
Uplink SIR Target	0		Uplink SIR 9.2.1.69		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

Condition	Explanation
NotFirstRL	The IE shall be is present only if the RL is not the first RL in the RL
	Information

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

# 9.1.5 RADIO LINK SETUP FAILURE

## 9.1.5.1 FDD Message

Message Type       M         Transaction ID       M         D-RNTI       O         CN PS Domain Identifier       O         CN CS Domain Identifier       O         CHOICE Cause Level       M         >General       M	1636IICE	Range	IE type	Semantics	Criticality	Assigned
Message Type       M         Transaction ID       M         D-RNTI       O         CN PS Domain Identifier       O         CN CS Domain Identifier       O         CHOICE Cause Level       M         >General       M			and	description		Criticality
Message Type     M       Transaction ID     M       D-RNTI     O       CN PS Domain Identifier     O       CN CS Domain Identifier     O       CHOICE Cause Level     M       >General					VES	raiaat
D-RNTI     O       CN PS Domain Identifier     O       CN CS Domain Identifier     O       CHOICE Cause Level     M       >General			9.2.1.40		TES	reject
CN PS Domain Identifier     O       CN CS Domain Identifier     O       CHOICE Cause Level     M       >General     Image: Constraint of the second s			9.2.1.39			ignoro
CN CS Domain Identifier O CN CS Domain Identifier O CHOICE Cause Level M >General	,		9.2.1.24		TES VES	ignore
CHOICE Cause Level M >General	)		9.2.1.12		VES	ignore
>General	, 1		9.2.1.11		VES	ignore
20enerai	1				125	Ignore
	1		9215			
>PL Specific			3.2.1.5			
		1 <mayn< td=""><td></td><td></td><td>FACH</td><td>lanore</td></mayn<>			FACH	lanore
Information Response		oofRI s>			L/(011	ignore
>>>RLID M	1		92149		_	
>>>Cause M	1		9.2.1.5		_	
>>Successful RL		0 <maxno< td=""><td>0.21110</td><td></td><td>EACH</td><td>ianore</td></maxno<>	0.21110		EACH	ianore
Information Response		ofRLs-1>			_	5
>>>RL ID M	1		9.2.1.49		_	
>>>RL Set ID M	1		9.2.2.35		_	
>>>URA Information M	1		9.2.1.70B		_	
>>>SAI M	1		9.2.1.52		_	
>>>Cell GAI O	)		9.2.1.5A		_	
>>>UTRAN Access Point O Position	)		9.2.1.70A		-	
>>>Received total wide M	1		9.2.2.35A		-	
>>>Secondary CCPCH O	)		9.2.2.37B		-	
>>>DL Code Information M	1				VES	ignore
			Code Information 9.2.2.14A		120	ignore
>>>Diversity Indication M	1		<del>9.2.2.7<u>9.2.</u> 1.21</del>		-	
>>>CHOICE Diversity M Indication	1				_	
>>>Combining					_	
>>>>RL ID M	1		9.2.1.49	Reference RL ID for the combining	-	
>>>Non Combining or First RL					-	
>>>>DCH M Information Response	1		9.2.1.16A		-	
>>>SSDT Support M Indicator	1		9.2.2.43		-	
>>>Maximum Uplink SIR M	1		Uplink SIR 9.2.1.69		-	
>>>Minimum Uplink SIR M	1		Uplink SIR 9.2.1.69		-	
>>>Closed Loop Timing O Adjustment Mode	)		9.2.2.3A		-	
>>>Maximum Allowed M UL Tx Power	1		9.2.1.35		-	
>>>Maximum DL TX M Power	1		DL Power 9.2.2.10		-	
>>>Minimum DL TX M Power	1		DL Power 9.2.2.10		-	
>>>DSCH Information O Response	)		DSCH FDD		YES	ignore

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
			Information Response 9.2.2.13B			
>>Neighbouring UMTS Cell Information	0		9.2.1.41A		-	
>>>Neighbouring GSM Cell Information	0		9.2.1.41C		YES	ignore
Uplink SIR Target	0		Uplink SIR 9.2.1.69		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

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

# 9.1.6 RADIO LINK ADDITION REQUEST

## 9.1.6.1 FDD Message

IE/Group Name	Presence	Range	IE type	Semantics	Criticality	Assigned
			and	description		Criticality
Message Type	М		92140		YES	reject
Transaction ID	M		9.2.1.59		-	10]001
Uplink SIR Target	M		Uplink SIR 9.2.1.69		YES	reject
RL Information		1 <maxn oofRLs- 1&gt;</maxn 			EACH	notify
>RL ID	Μ		9.2.1.49		-	
>C-ld	Μ		9.2.1.6		-	
>Frame Offset	Μ		9.2.1.30		_	
>Chip Offset	Μ		9.2.2.1		_	
>Diversity Control Field	М		<del>9.2.2.6<u>9.2.</u> 1.20</del>		-	
>Primary CPICH Ec/No	0		9.2.2.32		_	
>SSDT Cell Identity	0		9.2.2.40			
>Transmit Diversity Indicator	0		9.2.2. <del>50<u>48</u></del>		Ι	
Active Pattern Sequence Information	0		9.2.2A	Either all the already active Transmissio n Gap Sequence(s) are addressed (Transmissio n Gap Pattern sequence shall overlap with the existing one) or none of the transmission gap sequences is activated.	YES	reject

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

51
# 9.1.6.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	Μ		9.2.1.40		YES	reject
Transaction ID	Μ		9.2.1.59		-	
RL Information		1			YES	reject
>RL ID	Μ		9.2.1.49		-	
>C-Id	Μ		9.2.1.6		-	
>Frame Offset	Μ		9.2.1.30		-	
>Diversity Control Field	М		<del>9.2.2.6<u>9.2.</u> 1.20</del>		-	
>Primary CCPCH RSCP	0		9.2.3.5		_	
>DL Time Slot ISCP Info	0		9.2.3.2D		_	

## 9.1.7 RADIO LINK ADDITION RESPONSE

## 9.1.7.1 FDD Message

IE/Group Name	Presence	Range	IE type	Semantics	Criticality	Assigned
			and	description		Criticality
			reference			
Message Type	Μ		9.2.1.40		YES	reject
Transaction ID	Μ		9.2.1.59		_	
RL Information Response		1 <maxnoof RLs-1&gt;</maxnoof 			EACH	ignore
>RL ID	М		9.2.1.49		_	
>RL Set ID	М		9.2.2.35		_	
>URA Information	М		9.2.1.70B		_	
>SAI	М		9.2.1.52		_	
>Cell GAI	0		9.2.1.5A		_	
>UTRAN Access Point Position	0		9.2.1.70A		_	
>Received total wide band power	М		9.2.2.35A		_	
>Secondary CCPCH Info	0		9.2.2.37B		—	
>DL Code Information	M		FDD DL Code Information 9.2.2.14A		YES	ignore
>Diversity Indication	М		<del>9.2.2.7<u>9.2.</u> 1.21</del>		-	
>CHOICE Diversity Indication	Μ				-	
>>Combining					_	
>>>RL ID	М		9.2.1.49	Reference RL ID	-	
>>Non Combining						
>>>DCH Information Response	М		9.2.1.16A		_	
>SSDT Support Indicator	Μ		9.2.2.43		-	
>Minimum Uplink SIR	Μ		Uplink SIR 9.2.1.69		-	
>Maximum Uplink SIR	Μ		Uplink SIR 9.2.1.69		-	
>Closed Loop Timing Adjustment Mode	0		9.2.2.3A		-	
>Maximum Allowed UL Tx Power	Μ		9.2.1.35		-	
>Maximum DL TX Power	Μ		DL Power 9.2.2.10		-	
>Minimum DL TX Power	M		DL Power 9.2.2.10		_	
>Neighbouring UMTS Cell Information	0		9.2.1.41A		_	
>Neighbouring GSM Cell Information	0		9.2.1.41C		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

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

# 9.1.7.2 TDD Message

IE/Group Name	Presence	Range	IE type	Semantics	Criticality	Assigned
			and	description		Criticality
			reference			
Message Type	M		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		_	
RL Information Response		1			YES	ignore
>RL ID	M		9.2.1.49		_	
>URA Information	M		9.2.1.70B		—	
>SAI	M		9.2.1.52		_	
	0		9.2.1.5A		_	
Position	0		9.2.1.70A		_	
>UL Time Slot ISCP Info	Μ		9.2.3.13D		-	
>Minimum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>Maximum Uplink SIR	М		Uplink SIR 9 2 1 69		-	
>Maximum Allowed UL Tx	М		9.2.1.35		_	
>Maximum DL TX Power	М		DL Power		_	
	NA		9.2.2.10			
			9.2.2.10		-	
>Timing Advance Applied	М		9.2.3.12A		_	
>Alpha Value	Μ		9.2.3.a		_	
>UL PhysCH SF Variation	Μ		9.2.3.13B		_	
>UL CCTrCH Information		0 <maxnoof CCTrCHs&gt;</maxnoof 		For DCH	GLOBAL	ignore
>>CCTrCH ID	Μ		9.2.3.2		_	
>>UL DPCH		01			YES	ignore
>>>Repetition Period	М		9.2.3.7		_	
>>>Repetition Length	M		9236		_	
>>>TDD DPCH Offset	M		9.2.3.8A		_	
>>>UL Timeslot	M		9.2.3.13C		_	
		0 < max no of		For DCH	CL OBAL	ignore
		CCTrCHs>		TOPDOIT	GLODAL	ignore
>>CCTrCH ID	Μ		9.2.3.2		_	
>>DL DPCH Information		01			YES	ignore
>>>Repetition Period	М		9.2.3.7		_	
>>>Repetition Length	М		9.2.3.6		_	
>>>TDD DPCH Offset	М		9.2.3.8A		_	
>>>DL Timeslot	М		9.2.3.2C		-	
Information						
>DCH Information		01			-	
>>Diversity Indication	М		<del>9.2.2.7</del> <u>9.2.</u> 1.21		_	
>>CHOICE Diversity	М				-	
>>Combining					_	
>>>RL ID	М		9.2.1.49	Reference	-	
>>>Non Combining						
>>>DCH	М		92116A		_	
Information			3.2.1.10A			
>DSCH Information		0			GLOBAI	ignore
Response		<maxnoof DSCHs&gt;</maxnoof 			OLODAL	ignore
>>DSCH ID	м	200.10	9.2.1.26A	1	_	
>>Transport Format	м		9.2.3.13	1	_	
Management						

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
>>DSCH Flow Control Information	M		9.2.1.26B		_	
>>CHOICE Diversity Indication	0				—	
>>>Non Combining					_	
>>>>Binding ID	0		9.2.1.3		_	
>>>>Transport Layer Address	0		9.2.1.62		-	
>USCH Information Response		0 <maxnoof USCHs&gt;</maxnoof 			GLOBAL	ignore
>>USCH ID	М		9.2.3.14		_	
>>Transport Format Management	М		9.2.3.13		-	
>>CHOICE Diversity Indication	0				-	
>>>Non Combining					_	
>>>>BindingID	0		9.2.1.3		_	
>>>>Transport Layer Address	0		9.2.1.62		-	
>Neighbouring UMTS Cell Information	0		9.2.1.41A		_	
>Neighbouring GSM Cell Information	0		9.2.1.41C		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

Range Bound	Explanation
MaxnoofDSCHs	Maximum number of DSCHs for one UE.
MaxnoofUSCHs	Maximum number of USCHs for one UE.
MaxnoofCCTrCHs	Maximum number of CCTrCHs for one UE.

## 9.1.8 RADIO LINK ADDITION FAILURE

## 9.1.8.1 FDD Message

IE/Group Name	Presence	Range	IE type	Semantics	Criticality	Assigned
			and	description		Criticality
Maaaaga Turpa	N4				VES	roioat
Transaction ID	IVI M		9.2.1.40		165	reject
	M		9.2.1.09		VES	ignore
>General	101				-	ignore
>>Cause	М		9.2.1.5		_	
>RL Specific			0.21110		_	
>>Unsuccessful RL		1 <maxnoof< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxnoof<>			EACH	ignore
Information Response		RLs-1>				Ũ
>>>RL ID	М		9.2.1.49		-	
>>>Cause	М		9.2.1.5		-	
>>Successful RL		0 <maxnoof< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxnoof<>			EACH	ignore
Information Response		RLs-2>				
>>>RL ID	M		9.2.1.49		_	
>>>RL Set ID	M		9.2.2.35		_	
>>>URA Information	M		9.2.1.70B		_	
>>>SAI	M		9.2.1.52		_	
	0		9.2.1.5A		_	
>>>UTRAN ACCESS Point Position	0		9.2.1.70A		_	
>>>Received total wide	М		92235A		_	
band power			0.2.2.00/			
>>>Secondary CCPCH	0		9.2.2.37B		_	
Info						
>>>DL Code	М		FDD DL		YES	ignore
Information			Code			-
			Information			
			9.2.2.14A			
>>>Diversity Indication	М		<del>9.2.2.7</del> 9.2. <u>1.21</u>		—	
>>>CHOICE Diversity	М				-	
Indication						
>>>Combining					_	
>>>>RL ID	М		9.2.1.49	Reference RL ID	-	
>>>>Non Combining					_	
>>>>DCH	М		9.2.1.16A		-	
Information						
Response	N.4		0.0.0.40			
Indicator	IVI		9.2.2.43		_	
>>>Minimum Uplink	М		Uplink SIR		-	
>>>Maximum Uplink	М		Uplink SIR		_	
SIR			9.2.1.69			
>>>Closed Loop	0		9.2.2.3A		_	
Timing Adjustment						
Mode						
>>>Maximum Allowed	М		9.2.1.35		-	
	N4		DI Daviar			
>>>iviaximum DL TX Power	IVI		92210		_	
>>>Minimum DI TX	М		DL Power		_	
Power			9.2.2.10			
>>>Neighbouring	0		9.2.1.41A		_	
UMTS Cell Information						
>>>Neighbouring GSM	0		9.2.1.41C		YES	ignore
Cell Information						
Criticality Diagnostics	0		9.2.1.13		YES	ignore

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

## 9.1.11 RADIO LINK RECONFIGURATION PREPARE

## 9.1.11.1 FDD Message

IE/Group Name	Presence	Range	ІЕ Туре	Semantics	Criticality	Assigned
			and	Description		Criticality
			Reference			
Message Type	Μ		9.2.1.40		YES	reject
Transaction ID	Μ		9.2.1.59		_	
Allowed Queuing Time	0		9.2.1.2		YES	reject
UL DPCH Information		01			YES	reject
>UL Scrambling Code	0		9.22.53		-	
>UL SIR Target	0		Uplink SIR 9 2 1 69		-	
>Min UL Channelisation Code Length	0		9.2.2.25		_	
>Max Number of UL	C –		9.2.2.24		_	
DEDCHS	CodeLen		0.2.1.46	For the LII		
	0		9.2.1.40	TECS for the	_	
>1FC5	0		9.2.1.63	UL.	_	
>UL DPCCH Slot Format	0		9.2.2.52		_	
>Diversity mode	0		9.2.2.8		_	
>SSDT Cell Identity Length	0		9.2.2.41		-	
>S-Field Length	0		9.2.2.36		_	
DL DPCH Information		01			YES	reject
>TFCS	0		9.2.1.63	TFCS for the	-	
>DL DPCH Slot Format	0		9229	DL.	_	
>Number of DI	0		9.2.2.26A		_	
Channelisation Codes	Ŭ		0121212071			
>TFCI Signalling Mode	0		9.2.2.46		-	
>TFCI Presence	C- SlotFormat		9.2.1.55		-	
Multiplexing Position			92226			
> imited Power Increase	0		0.2.1.330.2		_	
	0		<u>.2.21A</u>		_	
DCHs to Modify	0		FDD DCHs to Modify 9.2.2. <del>14C1</del> <u>3C</u>		YES	reject
DCHs to Add	0		DCH FDD Information 9.2.2.4A		YES	reject
DCHs to Delete		0 <maxnoof DCHs&gt;</maxnoof 			GLOBAL	reject
>DCH ID	М		9.2.1.16		_	
DSCHs to Modify		01			YES	reject
>DSCH Info		0 <maxnoof DSCHs&gt;</maxnoof 			-	
>>DSCH ID	М		9.2.1.26A		_	
>>TrCh Source	0		9.2.1.65		-	
>>Transport	0		9.2.1.64	For DSCH	_	
Format Set						
>>Allocation/ Retention Priority	0		9.2.1.1		-	
>>Scheduling	0		9.2.1.51A		_	
	0		0214		_	
	M		J.Z.1.4		_	
Request Indicator			3.2.1.01		_	
>PDSCH RL ID	0		RL ID		_	

IE/Group Name	Presence	Range	IE Type and	Semantics Description	Criticality	Assigned Criticality
			Reference			
			9.2.1.49			
>TFCS	0		9.2.1.63	For DSCH	-	
DSCHs to Add	0		DSCH FDD		YES	reject
			Information 9.2.2.13A			
DSCHs to Delete		01			YES	reject
>DSCH Info		1 <maxnoof DSCHs&gt;</maxnoof 			-	
>>DSCH ID	М		9.2.1.26A		-	
RL Information		0 <maxnoof RLs&gt;</maxnoof 			EACH	reject
>RL ID	М		9.2.1.49		_	
>SSDT Indication	0		9.2.2.41 <u>42</u>		-	
>SSDT Cell Identity	C - SSDTIndON		9.2.2.40		_	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2. <del>50<u>48</u></del>		-	
Transmission Gap Pattern Sequence Information	0		9.2.2.47A		YES	reject

Condition	Explanation
SSDTIndON	The IE may be present if the SSDT Indication IE is set
	to 'SSDT Active in the UE'.
CodeLen	This IE shall be is present only if the Min UL
	Channelisation Code length IE equals to 4.
SlotFormat	This IE shall is only be present if the DL DPCH Slot
	Format IE is equal to any of the values 12 to 16.
Diversity mode	This IE shall be is present if Diversity Mode IE is
	present in the UL DPCH Information IE and is not
	equal to "none".

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofDSCHs	Maximum number of DSCHs for one UE.
MaxnoofRLs	Maximum number of RLs for a UE.

# 9.1.11.2 TDD Message

IE/Group Name	Presence	Range	IE Type	Semantics	Criticality	Assigned
			and	Description		Criticality
			Reference			
Message Type	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		—	
Allowed Queuing Time	0		9.2.1.2		YES	reject
UL CCTrCH to Add		0 <maxno< td=""><td></td><td>For DCH and</td><td>EACH</td><td>notify</td></maxno<>		For DCH and	EACH	notify
		ofCCTrCH		USCH		
		S>				
>CCTrCHID	M		9.2.3.2		—	
>TFCS	M		9.2.1.63	For the UL.	—	
>TFCI Coding	M		9.2.3.11		—	
>Puncture Limit	М		9.2.1.40		_	
UL CCTrCH to Modify		0 <maxno ofCCTrCH</maxno 			EACH	notify
		S>				
>CCTrCH ID	М		9.2.3.2		_	
>TFCS	0		9.2.1.63	For the UL.	_	
>TFCI Coding	0		9.2.3.11		_	
>Puncture Limit	0		9.2.1.46		_	
UL CCTrCH toDdelete		0 <maxno< td=""><td></td><td></td><td>EACH</td><td>notify</td></maxno<>			EACH	notify
		ofCCTrCH				
	М	02	9232		_	
DL CCTrCH to Add		0 <maxno< td=""><td>0.2.0.2</td><td>For DCH and</td><td>EACH</td><td>notify</td></maxno<>	0.2.0.2	For DCH and	EACH	notify
		ofCCTrCH		DSCH	_/	nomy
		s>				
>CCTrCH ID	М		9.2.3.2		_	
>TFCS	М		9.2.1.63	For the DL.	_	
>TFCI Coding	М		9.2.3.11		_	
>Puncture Limit	M		9.2.1.46		_	
>TPC CCTrCH List		0 to	0.2	List of uplink	_	
		<maxnoc< td=""><td></td><td>CCTrCH</td><td></td><td></td></maxnoc<>		CCTrCH		
		CTrCH>		which		
				provide TPC		
>>TPC CCTrCH ID	М		CCTrCH		-	
			ID			
			9.2.3.2			
DL CCTrCH to Modify		0 <maxno< td=""><td></td><td></td><td>EACH</td><td>notify</td></maxno<>			EACH	notify
		ofCCTrCH				
		S>				
>CCTrCH ID	М		9.2.3.2		_	
>TFCS	0		9.2.1.63	For the DL.	_	
>TFCI Coding	0		9.2.3.11		-	
>Puncture Limit	0		9.2.1.46		_	
>TPC CCTrCH List		0 to		List of uplink	-	
		<maxnoc< td=""><td></td><td>CCTrCH</td><td></td><td></td></maxnoc<>		CCTrCH		
		CTrCH>		which		
			007-011	provide TPC		
>>TPC CCTICH ID	IVI				_	
DL CCTrCH to Delete		0 < maxna	9.2.0.0		EACH	potify/
		ofCCTrCH			EACH	notity
		s>				
>CCTrCH ID	М		9.2.3.2		_	
DCHs to Modify	0	1	TDD DCHs		YES	reject
			to Modify			
			9.2.3.8B			
DCHs to Add	0		DCH TDD		YES	reject
			Information			-
			9.2.3.2A			
DCHs to Delete		0 <maxno< td=""><td></td><td></td><td>GLOBAL</td><td>reject</td></maxno<>			GLOBAL	reject
		ofDCHs>				

l

IE/Group Name	Presence	Range	IE Type	Semantics	Criticality	Assigned
			and Reference	Description		Criticality
>DCH ID	М		9.2.1.16		—	
DSCHs to Modify		0 <maxno ofDSCHs&gt;</maxno 			GLOBAL	reject
>DSCH ID	М		9.2.1.26A		_	
>CCTrCH Id	0		9.2.3.2	DL CCTrCH in which the DSCH is mapped.	_	
>TrCh Source Statistics Descriptor	0		9.2.1.65		-	
>Transport Format Set	0		9.2.1.64		—	
>Allocation/Retention Priority	0		9.2.1.1		-	
>Scheduling Priority Indicator	0		9.2.1.51A		-	
>BLER	0		9.2.1.4		—	
>Transport Bearer Request Indicator	М		9.2.1.61		-	
DSCHs to Add	0		DSCH TDD Information 9.2.3.3a		YES	reject
DSCHs to Delete		0 <maxno ofDSCHs&gt;</maxno 			GLOBAL	reject
>DSCH ID	М		9.2.1.26A		_	
USCHs to Modify		0 <maxno ofUSCHs&gt;</maxno 			GLOBAL	reject
>USCH ID	М		9.2.3.14		-	
>CCTrCH ld	0		9.2.3.2	<u>UL</u> CCTrCH in which the USCH is mapped.	_	
>TrCh Source Statistics Descriptor	0		9.2.1.65		-	
>Transport Format Set	0		9.2.1.64		—	
>Allocation/Retention Priority	0		9.2.1.1		-	
>Scheduling Priority Indicator	0		9.2.1.51A		-	
>BLER	0		9.2.1.4		_	
>Transport Bearer Request Indicator	Μ		9.2.1.61		_	
>RB Info		0 to <maxnoof RB&gt;</maxnoof 		All Radio Bearers using this USCH	-	
>>RB Identity	M		9.2.3.5B		_	
USCHs to Add	0		USCH Information 9.2.3.14A		YES	reject
USCHs to Delete		0 <maxno ofUSCHs&gt;</maxno 			GLOBAL	reject
>USCH ID	М		9.2.3.14		_	

61

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

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.
MaxnoofDSCHs	Maximum number of DSCHs for one UE.
MaxnoofUSCHs	Maximum number of USCHs for one UE.

## 9.1.16.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		-	· · ·
Allowed Queuing Time	0		9.2.1.2		YES	reject
UL DPCH Information		01			YES	reject
>TFCS	0		9.2.1.63	TFCS for the UL.	_	
DL DPCH Information		01			YES	reject
>TFCS	0		9.2.1.63	TFCS for the DL.	-	
>TFCI Signalling Mode	0		9.2.2.46		_	
>Limited Power Increase	0		<del>9.2.1.33<u>9.2</u> .2.21A</del>		-	
DCHs to Modify	0		FDD DCHs to Modify 9.2.2.14 <u>C1</u> <u>3C</u>		YES	reject
DCHs to Add	0		DCH FDD Information 9.2.2.4A		YES	reject
DCHs to Delete		0 <maxno ofDCHs&gt;</maxno 			GLOBAL	reject
>DCH ID	Μ		9.2.1.16		_	
Transmission Gap Pattern Sequence Information	0		9.2.2.47A		YES	reject

# 9.1.18 RADIO LINK FAILURE INDICATION

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	ignore
Transaction ID	М		9.2.1.59		-	
CHOICE Reporting Object	M			Object for which the Failure shall be reported.	YES	ignore
>RL					-	
>>RL Information	M	1 <maxnoofrl s&gt;</maxnoofrl 			EACH	ignore
>>>RL ID	М		9.2.1.49		-	
>>>Cause	М		9.2.1.5		_	
>RLS					_	
>>RL Set Information		1 <maxnoofrl Sets&gt;</maxnoofrl 			EACH	Ignore
>>>RL Set ID	Μ		9.2.2.35		_	
>>>Cause	Μ		9.2.1.5		_	

Range bound	Explanation
MaxnoofRLs	Maximum number of RLs for one UE.
MaxnoofRLSets	Maximum number of RL Sets for one UE.

# 9.1.20 DL POWER CONTROL REQUEST [FDD]

IE/Group Name	Presence	Range	IE type and	Semantics description	Criticality	Assigned Criticality
			reference			
Message Type	М		9.2.1.40		YES	ignore
Transaction ID	М		9.2.1.59		_	
Power Adjustment Type	М		9.2.2.28		YES	ignore
DL Reference Power	C- Common		DL Power 9.2.2.10		YES	ignore
Inner Loop DL PC Status	0		9.2.2.21a		YES	ignore
DL Reference Power Information	C- Individual	1 <maxnoo fRLs&gt;</maxnoo 			GLOBAL	ignore
>RL ID	М		9.2.1.49		_	
>DL Reference Power	М		DL Power 9.2.2.10		-	
Max Adjustment Step	C- CommonO rIndividual		9.2.2.23		YES	ignore
Adjustment Period	C- CommonO rIndividual		<u>9.2.2.229.2</u> . <u>2.B</u>		YES	ignore
Adjustment Ratio	C- CommonO rIndividual		9.2.2.C		YES	ignore

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

Range Bound	Explanation
MaxnoofRLs	Maximum number of RLs for one UE.

## 9.1.36 COMMON TRANSPORT CHANNEL RESOURCES RESPONSE

## 9.1.36.1 FDD Message

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

Range Bound	Explanation
MaxnoofMACcshSDUlengthsperPriority	Maximum number of different MAC-c/sh SDU
	Lengths.

#### 9.1.36.2 TDD Message

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

Range Bound	Explanation
MaxnoofMSCcshSDUlengthsperPriority	Maximum number of different MAC-c/sh SDU
	Lengths.

#### 9.2.1.3 Binding ID

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Binding ID			OCTET STRING	
			(14,)	

#### 9.2.1.7 Cell Individual Offset

Cell individual offset is an offset that will be applied by UE to the measurement results for a P<u>rimary</u>-CPICH[FDD]/ P<u>rimary</u>-CCPCH[TDD], before the measurement takes place. This allows operators to easily monitor specific cell, as well as other uses. The offset can be positive or negative, so the measured results can be reported as better than, or worse than what it really is.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Cell Individual Offset			INTEGER (-20,,+20)	-20 -> -10dB -19 -> -9.5dB  +20 -> +10dB

## 9.2.1.35A Measurement Availability Indicator

#### Indicates if measurement is available or not.

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

#### 9.2.1.36 Measurement Filter Coefficient

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

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

## 9.2.1.40 Message Type

The Message Type uniquely identifies the message being sent.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type				•
>Procedure ID		1		
>>Procedure ID >>Procedure Code	M		ENUMERATED (RL Setup, RL Addition, RL Deletion, Synchronised RL Reconfiguration Preparation, Synchronised RL Reconfiguration Commit, Synchronised RL Reconfiguration Cancel, Unsynchronised RL Reconfiguration Request, RL Failure, RL Pre-emption, RL Restoration, DL Power Control, DL Power Control, DL Power Timeslot Control, Physical Channel Reconfiguration, UL Signalling Transfer, DL Signalling Transfer, Relocation Commit, Paging, Measurement Initiation, Measurement Reporting, Measurement Failure, Common Transport Channel Resources Initiation, Common Transport Channel Resources Release, Compressed Mode Command,	
>>Ddmode	М		ENUMERATED (FDD, TDD, Common,)	Common = common to FDD and TDD
>Type of Message	М		ENUMERATED (Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome)	

#### 9.2.1.41D Neighbouring TDD Cell Information

The *Neighbouring TDD Cell Information* IE provides information for TDD cells that are a neighbouring cells to a cell in the DRNC.

72

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Neighbouring TDD Cell Information		1 <maxno ofTDDneig hbours&gt;</maxno 			_	
>C-Id	М		9.2.1.6		-	
>UARFCN	М		9.2.1.66	Corresponds to Nt in ref. [7]	-	
>Frame Offset	0		9.2.1.30		—	
>Cell Parameter ID	М		9.2.1.8		-	
>Sync Case	М		9.2.1.54		-	
>Time Slot	C-Case1		9.2.1.56		-	
>SCH Time Slot	C-Case2		9.2.1.51		-	
>Block STTD Indicator	М		9.2.1.4A		-	
>Cell Individual Offset	0		9.2.1.7		_	
>DPCH Constant Value	0		9.2.1.23		_	
>PCCPCH Power	0		9.2.1.43		_	

Condition	Explanation
Case1	This IE shall be is present only if Sync Case = Case1.
Case2	This IE <u>shall be <del>is</del> present only if Sync Case = Case2</u> .

Range bound	Explanation
MaxnoofTDDneighbours	Maximum number of neighbouring TDD cell for one cell.

#### 9.2.1.43 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			<b>ENUMERAT</b>	Unit dBm
			EDINTEGER	Granularity 0.1 dB.
			(-1540,)	-

#### 9.2.1.44 Primary CPICH Power

Primary CPICH power is the power that is used for transmitting the P<u>rimary</u>\_CPICH in a cell. The reference point is the antenna connector.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Primary CPICH Power			ENUMERAT ED (-1050)	Unit dBm Granularity 0.1 dB.

I

#### 9.2.1.46 Puncture Limit

The maximum amount of puncturing for a transport channel in rate matching.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Puncture Limit			INTEGER (015)	0: 40% 1: 44 %
				… 14: 96% 15: 100%_(no puncturing)

#### 9.2.1.51A Scheduling Priority Indicator

Indicates the relative priority of the <u>FACH</u>, DSCH, or USCH data frame. Used by the DRNC when scheduling <u>FACH</u>, DSCH, or USCH traffic.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Scheduling Priority Indicator			INTEGER (015)	Relative priority of the <u>FACH</u> , DSCH, or USCH data frame: 0=Lowest Priority  15=Highest Priority

76

#### 9.2.2.14 FDD DL Channelisation Code Number

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FDD DL Channelisation Code Number	M		INTEGER(0. . 511)	According to the mapping in [27]. The maximum value is equal to the DL spreading factor –1

## 9.2.2.37B Secondary CCPCH Info

The Secondary CCPCH Info IE provides information on scheduling of broadcast information for DRAC on a Secondary CCPCH in one cell.

IE/Group Name	Presence	Range	IE type and	Semantics description	Criticality	Assigned Criticality
			reference			
Secondary CCPCH Info		1			_	
>FDD S-CCPCH Offset	М		9.2.2.15	Corresponds	-	
				to: τ <sub>S-CCPCH,k</sub> , see ref. [8]		
>DL Scrambling Code	М		9.2.2.8		-	
>FDD DL Channelisation	М		9.2.2.14		-	
Code						
Number						
>TFCS	Μ		9.2.1.63	For the DL.	-	
>Secondary CCPCH Slot	Μ		9.2.2.38		-	
Format						
>TFCI Presence	C -		9.2.1.55		-	
	SlotFormat					
>Multiplexing Position	Μ		9.2.2.26		_	
>STTD Indicator	Μ		9.2.2.44		-	
>FACH/PCH Information		1			-	
		<maxfac< td=""><td></td><td></td><td></td><td></td></maxfac<>				
		Hcount+1>				
>>TFS			9.2.1.64	For each FACH, and the PCH when multiplexed on the same Secondary CCPCH	_	
>IB Scheduling		1			_	
Information						
>>IB_SG_REP	М		9.2.2.4		-	
>>IB Segment		1			-	
Information		<maxibse< td=""><td></td><td></td><td></td><td></td></maxibse<>				
		G>				
>>>IB_SG_POS	М		9.2.2.20		_	

Condition	Explanation
SlotFormat	This IE shall be is present only if the Secondary CCPCH Slot Format
	IE is equal to any of the value 8 to 17.

Range bound	Explanation
MaxFACHCount	Maximum number of FACHs mapped onto a Secondary CCPCH.
MaxIBSEG	Maximum number of segments for one Information Block.

#### 9.2.2.50 Tx Diversity Indicator

The Tx Diversity Indicator indicates if the following conditions are satisfied:

- Primary CPICH is broadcast from two antennas
- STTD is applied to Primary\_-CCPCH
- TSTD is applied to P<u>rimary</u>-SCH and S<u>econdary</u>-SCH

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Tx Diversity Indicator			ENUMERAT	
-			ED (true,	
			false).	

#### 9.2.3.2A DCH TDD Information

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

IE/Group Name	Presence	Range	IE type and	Semantics description	Criticality	Assigned Criticality
			reference			
DCH Information		1 <maxno ofDCHs&gt;</maxno 			-	
>Payload CRC Presence Indicator	М		9.2.1.42		_	
>UL FP Mode	М		9.2.1.67		_	
>ToAWS	М		9.2.1.58		_	
>ToAWE	М		9.2.1.57		_	
>DCH Specific Info		1 <maxno ofDCHs&gt;</maxno 			-	
>>DCH ID	М		9.2.1.16		_	
>>CCTrCH ID	М		9.2.3.2	UL CCTrCH in which the DCH is mapped	-	
>>CCTrCH ID	M		9.2.3.2	DL CCTrCH in which the DCH is mapped	_	
>>TrCh Source Statistics Descriptor	М		9.2.1.65		_	
>>Transport Format Set	Μ		9.2.1.64	For the UL.	_	
>>Transport Format Set	М		9.2.1.64	For the DL.	_	
>>BLER	М		9.2.1.4	For the UL.	_	
>>BLER	Μ		9.2.1.4	For the DL.	_	
>>Allocation/Retention Priority	М		9.2.1.1		-	
>>Frame Handling Priority	Μ		9.2.1.29		_	
>>QE-Selector	C- CoorDCH		9.2.1.46A		_	

Condition	Explanation
CoorDCH	This IE shall be is present only this DCH is part of a set of co- ordinated DCHs (number of instances of the <i>DCH Specific Info</i> IE is greater than 1).

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for one UE.

#### 9.2.3.2B DCH TDD Information Response

#### Void.

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

IE/Group Name	Presence	Range	l <del>E type</del> and reference	Semantics description	Criticality	Assigned Criticality
DCH TDD Information Response		<del>1<maxno< del=""> <del>ofDCHs&gt;</del></maxno<></del>			-	
<mark>&gt;DCH ID</mark>	M		<del>9.2.1.16</del>		_	
<mark>&gt;Binding ID</mark>	Ð		<del>9.2.1.3</del>		_	
Transport Layer Address	Ð		<del>9.2.1.62</del>		_	

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for one UE.

81

#### 9.2.3.11 TFCI Coding

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

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

# 9.3 Message and Information element abstract syntax (with ASN.1)

## 9.3.0 General

Section 9.3 presents the Abstract Syntax of RNSAP protocol with ASN.1. In case there is contradiction between the ASN.1 definition in this section and the tabular format in sections 9.1 and 9.2, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, where the tabular format shall take precedence.

The ASN.1 definition specifies the structure and content of RNSAP messages. RNSAP messages can contain any IEs specified in the object set definitions for that message without the order or number of occurrence being restricted by ASN.1. However, for this version of the standard, a sending entity shall construct a RNSAP message according to the PDU definitions module and with the following additional rules (Note that in the following IE means an IE in the object set with an explicit id. If one IE needed to appear more than once in one object set, then the different occurrences have different IE ids):

- IEs shall be ordered (in an IE container) in the order they appear in object set definitions.
- Object set definitions specify how many times IEs may appear. An IE shall appear exactly once if the presence field in an object has value "mandatory". An IE may appear at most once if the presence field in an object has value "optional" or "conditional". If in a tabular format there is multiplicity specified for an IE (i.e. an IE list) then in the corresponding ASN.1 definition the list definition is separated into two parts. The first part defines an IE container list where the list elements reside. The second part defines list elements. The IE container list appears as an IE of its own. For this version of the standard an IE container list may contain only one kind of list elements.

If a RNSAP message that is not constructed as defined above is received, this shall be considered as Abstract Syntax Error, and the message shall be handled as defined for Abstract Syntax Error in section 10.3.76.

#### 9.3.2 Elementary Procedure Definitions

-- Elementary Procedure definitions

RNSAP-PDU-Descriptions {
 itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
 umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-PDU-Descriptions (0) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

\_ \_

#### <Editor's note: Parts of the module is skipped.> -- Interface PDU Definition RNSAP-PDU ::= CHOICE { initiatingMessage InitiatingMessage, successfulOutcome SuccessfulOutcome, unsuccessfulOutcome UnsuccessfulOutcome, outcome Outcome, . . . InitiatingMessage ::= SEQUENCE { procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID ({RNSAP-ELEMENTARY-PROCEDURES}), criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}), transactionID TransactionID, value RNSAP-ELEMENTARY-PROCEDURE.&InitiatingMessage ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}) } SuccessfulOutcome ::= SEQUENCE { procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID ({RNSAP-ELEMENTARY-PROCEDURES}), criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}), transactionID TransactionID, ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}) value RNSAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome } UnsuccessfulOutcome ::= SEQUENCE { procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID ({RNSAP-ELEMENTARY-PROCEDURES}),

#### Release 1999

```
({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality
    transactionID TransactionID,
               RNSAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID})
    value
}
Outcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID
                                                            ({RNSAP-ELEMENTARY-PROCEDURES}),
                                                            ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID}),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality
    transactionID TransactionID,
                                                        ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID})
               RNSAP-ELEMENTARY-PROCEDURE.&Outcome
    value
}
```

<Editor's note: The rest of the module is skipped.>

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#### 9.3.3 **PDU Definitions** -- PDU definitions for RNSAP. RNSAP-PDU-Contents { itu-t (0) identified-organization (4) etsi (0) mobileDomain (0) umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-PDU-Contents (1) } DEFINITIONS AUTOMATIC TAGS ::= BEGIN -- IE parameter types from other modules. IMPORTS Active-Pattern-Sequence-Information, AllocationRetentionPriority, AllowedQueuingTime, AlphaValue, BLER, Block-STTD-Indicator, BindingID, C-ID, C-RNTI, CCTrCH-ID, CFN, ClosedLoopModel-SupportIndicator, ClosedLoopMode2-SupportIndicator, Closedlooptimingadjustmentmode, CN-CS-DomainIdentifier, CN-PS-DomainIdentifier, CNDomainType, Cause, CellParameterID, ChipOffset, CriticalityDiagnostics, D-RNTI, D-RNTI-ReleaseIndication, DCH-FDD-Information, DCH-ID, DCH-InformationResponse, DCH-TDD-Information,

#### Release 1999

DL-DPCH-SlotFormat, DL-TimeslotISCP. DL-Power. DL-ScramblingCode, DL-Timeslot-Information, DL-TimeSlot-ISCP-Info, DPCH-ID, DRACControl, DRXCycleLengthCoefficient, DedicatedMeasurementType, DedicatedMeasurementValue, DedicatedMeasurementValueInformation, DiversityControlField, DiversityMode, DSCH-FDD-Information, DSCH-FDD-InformationResponse, DSCH-FlowControlInformation, DSCH-FlowControlItem, DSCH-TDD-Information, DSCH-ID, SchedulingPriorityIndicator, FACH-FlowControlInformation, FDD-DCHs-to-Modify, FDD-DL-ChannelisationCodeNumber, FDD-DL-CodeInformation, FDD-S-CCPCH-Offset, FDD-TPC-DownlinkStepSize, FirstRLS-Indicator, FNReportingIndicator, FrameHandlingPriority, FrameOffset, GA-AccessPointPosition, GA-Cell, IMSI, InnerLoopDLPCStatus, L3-Information, LimitedPowerIncrease, MaximumAllowedULTxPower, MaxNrDLPhysicalchannels, MaxNrOfUL-DPCHs, MaxNrTimeslots, MaxNrULPhysicalchannels, MeasurementFilterCoefficient, MeasurementID, MidambleShiftAndBurstType, MinimumSpreadingFactor, MinUL-ChannelisationCodeLength, MultiplexingPosition, Neighbouring-GSM-CellInformation, Neighbouring-UMTS-CellInformation, NrOfDLchannelisationcodes,

87
PagingCause, PagingRecordType, PDSCHCodeMapping, PayloadCRC-PresenceIndicator, PowerAdjustmentType, PowerOffset, PrimaryCCPCH-RSCP, PrimaryCPICH-EcNo, PrimaryCPICH-Power, PrimaryScramblingCode, PropagationDelay, PunctureLimit, OE-Selector, RANAP-RelocationInformation. RB-Info, RL-ID, RL-Set-ID, RNC-ID, RepetitionLength, RepetitionPeriod, ReportCharacteristics, Received-total-wide-band-power, RxTimingDeviationForTA, S-FieldLength, S-RNTI, SCH-TimeSlot, SAI, SN, Secondary-CCPCH-Info, SSDT-CellID, SSDT-CellID-Length, SSDT-Indication, SSDT-SupportIndicator, STTD-Indicator, STTD-SupportIndicator, AdjustmentPeriod, ScaledAdjustmentRatio, MaxAdjustmentStep, SecondaryCCPCH-SlotFormat, SyncCase, TDD-ChannelisationCode, TDD-DCHs-to-Modify, TDD-DL-Code-Information, TDD-DPCHOffset, TDD-PhysicalChannelOffset, TDD-TPC-DownlinkStepSize, TDD-UL-Code-Information, TFCI-Coding, TFCI-Presence, TFCI-SignallingMode, TimeSlot,

88

TimingAdvanceApplied, TOAWE, TOAWS. TransmitDiversityIndicator, TransportBearerID, TransportBearerRequestIndicator, TFCS, Transmission-Gap-Pattern-Sequence-Information, Transmission Gap Pattern Sequence ScramblingCode Information, TransportFormatManagement, TransportFormatSet, TransportLayerAddress, TrCH-SrcStatisticsDescr, UARFCN. UC-ID, UL-DPCCH-SlotFormat, UL-SIR, UL-FP-Mode, UL-PhysCH-SF-Variation, UL-ScramblingCode, UL-Timeslot-Information, UL-TimeSlot-ISCP-Info, URA-ID, URA-Information, USCH-ID, USCH-Information FROM RNSAP-IEs PrivateIE-Container{}, ProtocolExtensionContainer{}, ProtocolIE-ContainerList{}, ProtocolIE-ContainerPair{}, ProtocolIE-ContainerPairList{}, ProtocollE-Container{}, ProtocolIE-Single-Container{}, RNSAP-PRIVATE-IES, RNSAP-PROTOCOL-EXTENSION, RNSAP-PROTOCOL-IES, RNSAP-PROTOCOL-IES-PAIR FROM RNSAP-Containers

### <Editor's note: Parts of the module is skipped.>

89

90

3GPP TS 25.423 V3.4.0 (2000-12)

```
ProtocolExtensionContainer {{RadioLinkSetupRequestFDD-Extensions}}
    protocolExtensions
                                                                                                                          OPTIONAL,
}
RadioLinkSetupRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
      ID id-SRNC-ID
                                    CRITICALITY reject TYPE RNC-ID
                                                                                         PRESENCE mandatory}
      ID id-S-RNTI
                                    CRITICALITY reject TYPE S-RNTI
                                                                                        PRESENCE mandatory }
      ID id-D-RNTI
                                    CRITICALITY reject TYPE D-RNTI
                                                                                     PRESENCE optional }
      ID id-AllowedQueuingTime
                                        CRITICALITY reject TYPE AllowedQueuingTime
                                                                                                PRESENCE optional
      ID id-UL-DPCH-Information-RL-SetupRqstFDD CRITICALITY reject TYPE UL-DPCH-Information-RL-SetupRqstFDD
                                                                                                                 PRESENCE mandatory
      ID id-DL-DPCH-Information-RL-SetupRqstFDD CRITICALITY reject TYPE DL-DPCH-Information-RL-SetupRqstFDD
                                                                                                                 PRESENCE mandatory
      ID id-DCH-FDD-Information
                                    CRITICALITY reject TYPE DCH-FDD-Information
                                                                                        PRESENCE mandatory }
      ID id-DSCH-FDD-Information
                                    CRITICALITY reject TYPE DSCH-FDD-Information
                                                                                             PRESENCE optional
                                                                                                                 } |
      ID id-RL-Information-RL-SetupRgstFDD
                                                CRITICALITY notify TYPE RL-InformationList-RL-SetupRqstFDD
                                                                                                                 PRESENCE mandatory }
     ID id-Transmission-Gap-Pattern-Sequence-Information
                                                                CRITICALITY reject TYPE Transmission-Gap-Pattern-Sequence-Information
                                                                                                                                          PRESENCE
    optional }
    { ID id-Active-Pattern-Sequence-Information CRITICALITY reject TYPE Active-Pattern-Sequence-Information PRESENCE optional },
    . . .
UL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE
    ul-ScramblingCode
                                    UL-ScramblingCode,
    minUL-ChannelisationCodeLength
                                            MinUL-ChannelisationCodeLength,
   maxNrOfUL-DPCHs
                                    MaxNrOfUL-DPCHs
                                                            OPTIONAL
    -- This IE shall be is present only if minUL-ChannelisationCodeLength equals to 4 -- ,
    ul-PunctureLimit
                                    PunctureLimit,
    ul-TFCS
                                    TFCS,
    ul-DPCCH-SlotFormat
                                    UL-DPCCH-SlotFormat,
    ul-SIRTarget
                                    UL-SIR
                                                    OPTIONAL,
    diversityMode
                                    DiversityMode,
    sSDT-CellIdLength
                                    SSDT-CellID-Length
                                                            OPTIONAL,
                                                            OPTIONAL,
    s-FieldLength
                                    S-FieldLength
    iE-Extensions
                                    ProtocolExtensionContainer { {UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    . . .
UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
    tFCS
                                    TFCS.
    dl-DPCH-SlotFormat
                                    DL-DPCH-SlotFormat,
    nrOfDLchannelisationcodes
                                    NrOfDLchannelisationcodes,
    tFCI-SignallingMode
                                    TFCI-SignallingMode,
    tFCI-Presence
                                    TFCI-Presence
                                                            OPTIONAL
    -- This IE shall be is present if Slot Format is from 12 to 16 --,
    multiplexingPosition
                                        MultiplexingPosition,
    powerOffsetInformation
                                        PowerOffsetInformation-RL-SetupRqstFDD,
    fdd-dl-TPC-DownlinkStepSize
                                    FDD-TPC-DownlinkStepSize,
    limitedPowerIncrease
                                    LimitedPowerIncrease,
```

91

```
innerLoopDLPCStatus
                                    InnerLoopDLPCStatus,
   iE-Extensions
                                    ProtocolExtensionContainer { {DL-DPCH-Information-RL-SetupRgstFDD-ExtIEs} } OPTIONAL,
    . . .
DL-DPCH-Information-RL-SetupRgstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
PowerOffsetInformation-RL-SetupRqstFDD ::= SEOUENCE
       pol-ForTFCI-Bits
                                        PowerOffset,
       po2-ForTPC-Bits
                                        PowerOffset,
       po3-ForPilotBits
                                        PowerOffset.
       iE-Extensions
                                        ProtocolExtensionContainer { { PowerOffsetInformation-RL-SetupRgstFDD-ExtIEs } } OPTIONAL,
        . . .
}
PowerOffsetInformation-RL-SetupRgstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
RL-InformationList-RL-SetupRqstFDD
                                            ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF Protocolle-Single-Container { {RL-InformationItemIEs-RL-
SetupRqstFDD} }
RL-InformationItemIEs-RL-SetupRqstFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-SetupRqstFDD CRITICALITY notify TYPE RL-InformationItem-RL-SetupRqstFDD
                                                                                                                  PRESENCE mandatory
}
RL-InformationItem-RL-SetupRgstFDD ::= SEQUENCE {
    rL-ID
                                    RL-ID,
    C-TD
                                    C-ID,
    firstRLS-indicator
                                    FirstRLS-Indicator,
    frameOffset
                                    FrameOffset,
    chipOffset
                                    ChipOffset,
    propagationDelay
                                    PropagationDelay
                                                             OPTIONAL,
    diversityControlField
                                    DiversityControlField
                                                                 OPTIONAL
    -- This IE shall be is present only if the RL is not the first one in the RL-InformationList-RL-SetupRqstFDD --,
    dl-InitialTX-Power
                                    DL-Power
                                                        OPTIONAL,
    primaryCPICH-EcNo
                                    PrimaryCPICH-EcNo
                                                                 OPTIONAL,
    -- Either Initial DL TX Power IE or Primary CPICH Ec/No IE shall be present.
                                     SSDT-CellID
    sSDT-CellID
                                                         OPTIONAL,
    transmitDiversityIndicator
                                    TransmitDiversityIndicator
                                                                     OPTIONAL,
    -- This IE shall be is present unless Diversity Mode IE in UL DPCH Information group is "none"
                                    ProtocolExtensionContainer { {RL-InformationItem-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
RL-InformationItem-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
```

92

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

<Editor's note: Parts of the module is skipped.> \*\*\*\*\*\*\* RADIO LINK RECONFIGURATION PREPARE FDD \_\_\_\_ RadioLinkReconfigurationPrepareFDD ::= SEQUENCE { protocolIEs ProtocolIE-Container {{RadioLinkReconfigurationPrepareFDD-IEs}}, protocolExtensions ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareFDD-Extensions}} OPTIONAL. . . . RadioLinkReconfigurationPrepareFDD-IEs RNSAP-PROTOCOL-IES ::= { ID id-AllowedOueuingTime CRITICALITY reject TYPE AllowedOueuingTime PRESENCE optional } ID id-UL-DPCH-Information-RL-ReconfPrepFDD CRITICALITY reject TYPE UL-DPCH-Information-RL-ReconfPrepFDD PRESENCE optional ID id-DL-DPCH-Information-RL-ReconfPrepFDD CRITICALITY reject TYPE DL-DPCH-Information-RL-ReconfPrepFDD PRESENCE optional } ID id-FDD-DCHs-to-Modify CRITICALITY reject TYPE FDD-DCHs-to-Modify PRESENCE optional ID id-DCHs-to-Add-FDD CRITICALITY reject TYPE DCH-FDD-Information PRESENCE optional ID id-DCH-DeleteList-RL-ReconfPrepFDD CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfPrepFDD PRESENCE optional } ID id-DSCH-Modify-RL-ReconfPrepFDD CRITICALITY reject TYPE DSCH-Modify-RL-ReconfPrepFDD PRESENCE optional } ID id-DSCHs-to-Add-FDD CRITICALITY reject TYPE DSCH-FDD-Information PRESENCE optional } ID id-DSCH-Delete-RL-ReconfPrepFDD CRITICALITY reject TYPE DSCH-Delete-RL-ReconfPrepFDD PRESENCE optional } ID id-RL-InformationList-RL-ReconfPrepFDD CRITICALITY reject TYPE RL-InformationList-RL-ReconfPrepFDD PRESENCE optional } ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject TYPE Transmission-Gap-Pattern-Sequence-Information PRESENCE optional }, . . . UL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE { ul-ScramblingCode UL-ScramblingCode OPTIONAL, ul-SIRTarget UL-SIR OPTIONAL, minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength OPTIONAL, maxNrOfUL-DPDCHs MaxNrOfUL-DPCHs OPTIONAL -- This IE shall be is present only if minUL-ChannelisationCodeLength equals to 4 --, ul-PunctureLimit PunctureLimit OPTIONAL, + FCS TECS OPTIONAL, ul-DPCCH-SlotFormat UL-DPCCH-SlotFormat OPTIONAL, diversitvMode DiversityMode OPTIONAL, SSDT-CellID-Length sSDT-CellIDLength OPTIONAL, s-FieldLength S-FieldLength OPTIONAL, iE-Extensions ProtocolExtensionContainer { { UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL, . . . UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= . . .

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3GPP TS 25.423 V3.4.0 (2000-12)
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```
Release 1999
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}

```
93
```

```
DL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    tFCS
                                    TFCS
                                            OPTIONAL,
    dl-DPCH-SlotFormat
                                    DL-DPCH-SlotFormat
                                                             OPTIONAL,
    nrOfDLchannelisationcodes
                                    NrOfDLchannelisationcodes OPTIONAL,
    tFCI-SignallingMode
                                    TFCI-SignallingMode
                                                            OPTIONAL,
    tFCI-Presence
                                    TFCI-Presence
                                                             OPTIONAL
    -- This IE shall be is present if Slot Format is from 12 to 16 --,
    multiplexingPosition
                                    MultiplexingPosition
                                                                 OPTIONAL,
   limitedPowerIncrease
                                    LimitedPowerIncrease
                                                                 OPTIONAL,
    iE-Extensions
                                    ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
    . . .
DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DCH-DeleteList-RL-ReconfPrepFDD
                                            ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepFDD
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 ::= {
    . . .
}
DSCH-Modify-RL-ReconfPrepFDD ::= SEQUENCE
    dSCH-Information
                                        DSCH-ModifyInfo-RL-ReconfPrepFDD
                                                                             OPTIONAL,
    pdSCH-RL-ID
                                        RL-ID
                                                                     OPTIONAL,
    tFCS
                                        TFCS
                                                                     OPTIONAL,
                                        ProtocolExtensionContainer { {DSCH-Modify-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
DSCH-Modify-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DSCH-ModifyInfo-RL-ReconfPrepFDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-ModifyInformationItem-RL-ReconfPrepFDD
DSCH-ModifyInformationItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dSCH-ID
                                        DSCH-ID,
    trChSourceStatisticsDescriptor
                                        TrCH-SrcStatisticsDescr OPTIONAL,
    transportFormatSet
                                        TransportFormatSet
                                                                         OPTIONAL,
    allocationRetentionPriority
                                        AllocationRetentionPriority
                                                                         OPTIONAL,
    schedulingPriorityIndicator
                                        SchedulingPriorityIndicator
                                                                         OPTIONAL,
```

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Release 1999
                                                                            94
                                                                                                                             3GPP TS 25.423 V3.4.0 (2000-12)
    bLER
                                        BLER
                                                                         OPTIONAL,
    transportBearerRequestIndicator
                                        TransportBearerRequestIndicator,
                                        ProtocolExtensionContainer { {DSCH-ModifyInformationItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
DSCH-ModifyInformationItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DSCH-Delete-RL-ReconfPrepFDD ::= SEQUENCE
    dSCH-Information
                                        DSCH-Info-Delete-RL-ReconfPrepFDD,
    iE-Extensions
                                        ProtocolExtensionContainer { {DSCH-Delete-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    . . .
}
DSCH-Delete-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::=
}
DSCH-Info-Delete-RL-ReconfPrepFDD ::= SEQUENCE (SIZE(1..maxNoOfDSCHs)) OF DSCH-DeleteInformationItem-RL-REconfPrepFDD
DSCH-DeleteInformationItem-RL-REconfPrepFDD ::= SEQUENCE {
    dSCH-ID
                                        DSCH-ID,
    iE-Extensions
                                    ProtocolExtensionContainer { {DSCH-DeleteInformationItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    . . .
}
DSCH-DeleteInformationItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RL-InformationList-RL-ReconfPrepFDD
                                            ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocollE-Single-Container { {RL-Information-RL-ReconfPrepFDD-IEs}
}
RL-Information-RL-ReconfPrepFDD-IES RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-ReconfPrepFDD
                                                CRITICALITY reject TYPE RL-Information-RL-ReconfPrepFDD
                                                                                                               PRESENCE mandatory
RL-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    rL-TD
                                RL-ID,
    sSDT-Indication
                                    SSDT-Indication
                                                         OPTIONAL.
                                    SSDT-CellID
    sSDT-CellIdentity
                                                    OPTIONAL
    -- The IE may be present if the sSDT-Indication is set to 'sSDT-active-in-the-UE' --,
    transmitDiversitvIndicator
                                    TransmitDiversitvIndicator
                                                                     OPTIONAL,
    -- This IE shall be is present if Diversity Mode IE in UL DPCH Information group is present, unless it is equal to "none"
    iE-Extensions
                                    ProtocolExtensionContainer { {RL-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    . . .
```

```
RL-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

RadioLinkReconfigurationPrepareFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= { <Editor's note: Parts of the module is skipped.> \_ -- DOWNLINK POWER CONTROL REQUEST DL-PowerControlRequest ::= SEQUENCE { ProtocolIE-Container {{DL-PowerControlRequest-IEs}}, protocolIEs protocolExtensions ProtocolExtensionContainer {{DL-PowerControlRequest-Extensions}} OPTIONAL, . . . } DL-PowerControlRequest-IEs RNSAP-PROTOCOL-IES ::= { ID id-PowerAdjustmentType CRITICALITY ignore TYPE PowerAdjustmentType PRESENCE mandatory } { ID id-DLReferencePower CRITICALITY ignore TYPE DL-Power PRESENCE conditional } -- This IE shall be is present only 'Adjustment Type' equals to 'Common' { ID id-InnerLoopDLPCStatus CRITICALITY ignore TYPE InnerLoopDLPCStatus PRESENCE optional } | { ID id-DLReferencePowerList-DL-PC-Rqst CRITICALITY ignore TYPE DL-ReferencePowerInformationList-DL-PC-Rgst PRESENCE conditional } -- This IE shall be is present only 'Adjustment Type' equals to 'Individual' { ID id-MaxAdjustmentStep CRITICALITY ignore TYPE MaxAdjustmentStep PRESENCE conditional } -- This IE shall be is present only ''Adjustment Type " equals to 'Common' or 'Individual' { ID id-AdjustmentPeriod CRITICALITY ignore TYPE AdjustmentPeriod PRESENCE conditional } -- This IE shall be is present only ''Adjustment Type " equals to 'Common' or 'Individual' { ID id-AdjustmentRatio CRITICALITY ignore TYPE ScaledAdjustmentRatio PRESENCE conditional }, -- This IE shall be is present only ''Adjustment Type " equals to 'Common' or 'Individual' . . . DL-ReferencePowerInformationList-DL-PC-Rgst := SEOUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {DL-ReferencePowerInformation-DL-PC-Rqst-IEs } } DL-ReferencePowerInformation-DL-PC-Rgst-IEs RNSAP-PROTOCOL-IES ::= {

3GPP TS 25.423 V3.4.0 (2000-12)

}

rL-TD

. . .

dl-Reference-Power

iE-Extensions

RL-ID,

DL-ReferencePowerInformation-DL-PC-Rost ::= SEOUENCE { DL-Power, ProtocolExtensionContainer { {DL-ReferencePowerInformation-DL-PC-Rgst-ExtIEs} } OPTIONAL, 3GPP

{ ID id-DL-ReferencePowerInformation-DL-PC-Rqst CRITICALITY ignore TYPE DL-ReferencePowerInformation-DL-PC-Rqst PRESENCE mandatory }

. . .

. . .

}

}

DL-ReferencePowerInformation-DL-PC-Rqst-Extles RNSAP-PROTOCOL-EXTENSION ::= {

DL-PowerControlRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {

<Editor's note: The rest of the module is skipped.>

# 9.3.4 Information Element Definitions

-- Information Element Definitions

RNSAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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#### <Editor's note: Parts of the module is skipped.>

-- D

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

DCH-FDD-InformationItem ::= SEQUENCE {

```
payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
ul-FP-Mode UL-FP-Mode,
toAWS TOAWS,
toAWE TOAWE,
dCH-SpecificInformationList DCH-Specific-FDD-InformationList,
iE-Extensions ProtocolExtensionContainer { {DCH-FDD-InformationItem-ExtIEs } OPTIONAL,
...
```

DCH-FDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

}

. . .

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

DCH-Specific-FDD-Item ::= SEQUENCE {	
dCH-ID	DCH-ID,
trCH-SrcStatisticsDescr	TrCH-SrcStatisticsDescr,
ul-transportFormatSet	TransportFormatSet,
dl-transportFormatSet	TransportFormatSet,
ul-BLER	BLER,
dl-BLER	BLER,
allocationRetentionPriority	AllocationRetentionPriority,
frameHandlingPriority	FrameHandlingPriority,
qE-Selector	QE-Selector,
dRACControl	DRACControl,
iE-Extensions	ProtocolExtensionContainer { {DCH-FDD-SpecificItem-ExtIEs} } OPTIONAL,

allocationRetentionPriority

```
. . .
}
DCH-FDD-SpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DCH-ID
                        ::= INTEGER (0..255)
DCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem
DCH-InformationResponseItem ::= SEQUENCE {
    dCH-ID
                                DCH-ID,
    bindingID
                                BindingID
                                                         OPTIONAL.
    transportLayerAddress
                                TransportLayerAddress OPTIONAL,
    iE-Extensions
                                ProtocolExtensionContainer { {DCH-InformationResponseItem-ExtIEs } } OPTIONAL,
    . . .
DCH-InformationResponseItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DCH-TDD-Information
                        ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-TDD-InformationItem
DCH-TDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator
                                        PayloadCRC-PresenceIndicator,
    ul-FP-Mode
                                        UL-FP-Mode,
    toAWS
                                        TOAWS,
    toAWE
                                        TOAWE,
    dCH-SpecificInformationList
                                        DCH-Specific-TDD-InformationList,
    iE-Extensions
                                        ProtocolExtensionContainer { {DCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
    . . .
}
DCH-TDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DCH-Specific-TDD-InformationList ::= SEOUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-TDD-Item
DCH-Specific-TDD-Item ::= 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
    trCH-SrcStatisticsDescr
                                        TrCH-SrcStatisticsDescr,
    ul-transportFormatSet
                                        TransportFormatSet,
    dl-transportFormatSet
                                        TransportFormatSet,
    ul-BLER
                                        BLER,
    dl-BLER
                                        BLER,
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AllocationRetentionPriority,

98

```
99
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frameHandlingPriority
                                        FrameHandlingPriority,
    qE-Selector
                                        OE-Selector
                                                             OPTIONAL,
    -- This IE shall be is present only if DCH is part of set of Coordinated DCHs
                                        ProtocolExtensionContainer { {DCH-Specific-TDD-Item-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
l
DCH-Specific-TDD-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DedicatedMeasurementType ::= ENUMERATED {
    sir.
    sir-error.
    transmitted-code-power,
    rSCP,
    rx-timing-deviation,
    round-trip-time,
    . . .
}
DedicatedMeasurementValue ::= CHOICE {
    sIR-Value
                        SIR-Value,
    sIR-ErrorValue
                            SIR-Error-Value,
    transmittedCodePowerValue Transmitted-Code-Power-Value,
    rSCP
                        RSCP-Value, -- TDD only
    rxTimingDeviationValue Rx-Timing-Deviation-Value, -- TDD only
    roundTripTime
                        Round-Trip-Time-Value, -- FDD only
    . . .
ļ
DedicatedMeasurementValueInformation ::= CHOICE {
    measurementAvailable
                                DedicatedMeasurementAvailable,
    measurementnotAvailable
                                DedicatedMeasurementnotAvailable
}
DedicatedMeasurementAvailable::= SEQUENCE {
    dedicatedmeasurementValue
                                    DedicatedMeasurementValue,
    cFN
                                    CFN
                                                             OPTIONAL,
    ie-Extensions
                                     ProtocolExtensionContainer { { DedicatedMeasurementAvailableItem-ExtIEs } }
                                                                                                                      OPTIONAL,
    . . .
DedicatedMeasurementAvailableItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DedicatedMeasurementnotAvailable ::= NULL
DeltaSIR
                        ::= INTEGER (0..30)
-- Step 0.1 dB, Range 0..3 dB.
```

```
DiversityControlField
                                 ::= ENUMERATED {
     may,
    must,
     must-not
}
DiversityMode
                            ::= ENUMERATED {
     none,
     sTTD,
     closedLoopModel,
     closedLoopMode2,
     . . .
DL-DPCH-SlotFormat
                             ::= INTEGER (0..16,...)
DL-Power
                         ::= INTEGER (-350..150)
-- Value = DL-Power / 10
-- Unit dB, Range -35dB .. +15dB, Step +0.1dB
D-RNTI
                         ::= INTEGER (0..1048575)
D-RNTI-ReleaseIndication ::= ENUMERATED {
     release-D-RNTI,
     not-release-D-RNTI
}
DL-ScramblingCode
                             ::= INTEGER (0..15)
DL-FrameType ::= ENUMERATED {
     typeA,
     typeB,
     . . .
 }
DL-Timeslot-Information ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF DL-Timeslot-InformationItem
DL-Timeslot-InformationItem ::= SEQUENCE {
     timeSlot
                                     TimeSlot,
     midambleShiftAndBurstType
                                     MidambleShiftAndBurstType,
     tFCI-Presence
                                     TFCI-Presence,
     dL-Code-Information
                                     TDD-DL-Code-Information,
     iE-Extensions
                                     ProtocolExtensionContainer { {DL-Timeslot-InformationItem-ExtIEs} } OPTIONAL,
     . . .
 }
DL-Timeslot-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
     . . .
```

101

DL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfDLTs)) OF DL-TimeSlot-ISCP-InfoItem

```
DL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
    timeSlot
                                 TimeSlot,
    dL-TimeslotISCP
                                 DL-TimeslotISCP,
    iE-Extensions
                                 ProtocolExtensionContainer { { DL-TimeSlot-ISCP-InfoItem-ExtIEs } } OPTIONAL,
    . . .
}
DL-TimeSlot-ISCP-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DL-TimeslotISCP
                        ::= INTEGER (0..91)
-- According to mapping in [24]
Downlink-Compressed-Mode-Method
                                     ::= ENUMERATED {
    puncturing,
    sFdiv2,
    higher-layer-scheduling,
    . . .
}
DPCH-ID
                        ::= INTEGER (0..239)
DPCHConstantValue ::= INTEGER (-10..10)
-- Unit dB, Step 1dB
                ::= ENUMERATED {
DRACControl
    requested,
    not-requested
}
DRXCycleLengthCoefficient
                                         ::= INTEGER (3..9)
-- See in [16]
DSCH-FDD-Information::= SEQUENCE {
    dSCH-Specific-Information
                                         DSCH-Specific-FDD-Item,
    pdSCH-RL-ID
                                         RL-ID,
    tFCS
                                         TFCS,
                                         ProtocolExtensionContainer { {DSCH-FDD-Information-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
}
DSCH-FDD-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DSCH-Specific-FDD-Item ::= SEQUENCE {
    dSCH-ID
                                         DSCH-ID,
    trChSourceStatisticsDescriptor
                                         TrCH-SrcStatisticsDescr,
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```
Release 1999
```

```
102
```

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transportFormatSet
                                        TransportFormatSet,
    allocationRetentionPriority
                                        AllocationRetentionPriority,
    schedulingPriorityIndicator
                                        SchedulingPriorityIndicator,
    bLER
                                        BLER,
    iE-Extensions
                                        ProtocolExtensionContainer { {DSCH-Specific-FDD-Item-ExtIEs} } OPTIONAL,
    . . .
DSCH-Specific-FDD-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DSCH-FDD-InformationResponse ::= SEQUENCE
    dsch-Specific-InformationResponse
                                        DSCH-Specific-FDD-InformationResponse,
    pdSCHCodeMapping
                                         PDSCHCodeMapping,
    iE-Extensions
                                        ProtocolExtensionContainer { { DSCH-FDD-InformationResponse-ExtIEs } } OPTIONAL,
    . . .
DSCH-FDD-InformationResponse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DSCH-Specific-FDD-InformationResponse ::= SEQUENCE (SIZE(1..maxNoOfDSCHs)) OF DSCH-Specific-FDD-Response-Item
DSCH-Specific-FDD-Response-Item ::= SEQUENCE {
    dsch-ID
                                     DSCH-ID,
    dSCH-FlowControlInformation
                                    DSCH-FlowControlInformation,
                                                             OPTIONAL,
    bindingID
                                    BindingID
    transportLayerAddress
                                    TransportLayerAddress OPTIONAL,
    iE-Extensions
                                     ProtocolExtensionContainer { {DSCH-Specific-FDD-Response-Item-ExtIEs } } OPTIONAL,
    . . .
DSCH-Specific-FDD-Response-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DSCH-FlowControlInformation ::= SEQUENCE (SIZE(1..16)) OF DSCH-FlowControlItem
DSCH-FlowControlItem ::= SEQUENCE {
    dSCH-SchedulingPriority
                                        SchedulingPriorityIndicator,
    mAC-c-sh-SDU-Lengths
                                        MAC-c-sh-SDU-LengthList,
                                        ProtocolExtensionContainer { {DSCH-FlowControlItem-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
}
DSCH-FlowControlItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
```

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

DSCH-TDD-Information ::= SEQUENCE (SIZE (1..maxNoOfDSCHs)) OF DSCH-TDD-InformationItem

#### DSCH-TDD-InformationItem ::= SEQUENCE {

dSCH-ID	DSCH-ID,
dl-ccTrCHID	CCTrCH-ID, DL CCTrCH in which the DSCH is mapped
trChSourceStatisticsDescriptor	TrCH-SrcStatisticsDescr,
transportFormatSet	TransportFormatSet,
allocationRetentionPriority	AllocationRetentionPriority,
schedulingPriorityIndicator	SchedulingPriorityIndicator,
bler	BLER,
iE-Extensions	ProtocolExtensionContainer { {DSCH-TDD-InformationItem-ExtIEs} } OPTIONAL,

DSCH-TDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

}

-- E

}

### <Editor's note: Parts of the module is skipped.>

-- M

MaxNrOfUL-DPCHs	::= INTEGER (16)
MAC-c-sh-SDU-Length	::= INTEGER (15000)
MAC-c-sh-SDU-LengthList ::=	SEQUENCE(SIZE(1maxNrOfMACcshSDU-Length)) OF MAC-c-sh-SDU-Length
MaximumAllowedULTxPower	::= INTEGER (-5033)
MaxNrDLPhysicalchannels	::= INTEGER (1224)
MaxNrTimeslots	::= INTEGER (114)
MaxNrULPhysicalchannels	::= INTEGER (12)
MaxTFCIvalue	::= INTEGER (11023)
MeasurementAvailabilityIndic measurementAvailable, measurementnotAvailable	ator ::= ENUMERATED {

1

MeasurementFilterCoefficient ::= ENUMERATED{k0, k1, k2, k3, k4, k5, k6, k7, k8, k9, k11, k13, k15, k17, k19,...}
-- Measurement Filter Coefficient to be used for measurement

MeasurementID ::= INTEGER (0..1048575)

```
MinimumSpreadingFactor
                            ::= INTEGER (1..16)
Multi-code-info
                            ::= INTEGER (1..16)
MultipleURAsIndicator ::= ENUMERATED {
    multiple-URAs-exist,
    single-URA-exists
}
MaxAdjustmentStep
                            ::= INTEGER(1..10)
-- Unit Slot
MeasurementChangeTime
                            ::= INTEGER (1..6000,...)
-- The MeasurementChangeTime gives the MeasurementChangeTime
-- in number of 10 ms periods.
-- E.g. Value 6000 means 60000ms(1min)
-- Unit is ms, Step is 10 ms
MeasurementHysteresisTime
                                ::= INTEGER (1..6000,...)
-- The MeasurementHysteresisTime gives the
-- MeasurementHysteresisTime in number of 10 ms periods.
-- E.g. Value 6000 means 60000ms(1min)
-- Unit is ms, Step is 10ms
MeasurementIncreaseDecreaseThreshold
                                             ::= CHOICE {
    sir
                                     SIR-Value-IncrDecrThres,
    sir-error
                                     SIR-Error-Value-IncrDecrThres,
    transmitted-code-power
                                    Transmitted-Code-Power-Value-IncrDecrThres,
                                     RSCP-Value-IncrDecrThres,
    rscp
    round-trip-time
                                     Round-Trip-Time-IncrDecrThres,
    . . .
MeasurementThreshold
                                ::= CHOICE {
    sir
                                     SIR-Value,
    sir-error
                                     SIR-Error-Value,
    transmitted-code-power
                                    Transmitted-Code-Power-Value,
                                    RSCP-Value,
    rscp
    rx-timing-deviation
                                     Rx-Timing-Deviation-Value,
    round-trip-time
                                     Round-Trip-Time-Value,
    . . .
}
MidambleShiftAndBurstType ::=
                                    CHOICE {
    type1
                                        CHOICE {
        defaultMidamble
                                             NULL,
        commonMidamble
                                             NULL,
        ueSpecificMidamble
                                             MidambleShiftLong,
        . . .
    },
```

iE-Extensions

```
CHOICE {
    type2
        defaultMidamble
                                             NULL,
        commonMidamble
                                             NULL,
        ueSpecificMidamble
                                             MidambleShiftShort,
        . . .
    },
                                         CHOICE {
    type3
        defaultMidamble
                                             NULL,
        ueSpecificMidamble
                                             MidambleShiftLong,
        . . .
    },
    . . .
}
MidambleShiftLong ::=
                                     INTEGER (0..15)
MidambleShiftShort ::=
                                     INTEGER (0..5)
MinUL-ChannelisationCodeLength
                                     ::= ENUMERATED
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256
}
MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
-- N
NCC ::= BIT STRING (SIZE (3))
Neighbouring-UMTS-CellInformation ::= SEQUENCE (SIZE (1..maxNrOfNeighbouringRNCs)) OF ProtocolIE-Single-Container {{ Neighbouring-UMTS-
CellInformationItemIE } }
Neighbouring-UMTS-CellInformationItemIE RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-UMTS-CellInformationItem CRITICALITY ignore TYPE
                                                                                  Neighbouring-UMTS-CellInformationItem PRESENCE mandatory }
}
Neighbouring-UMTS-CellInformationItem ::= SEQUENCE {
    rNC-ID
                                             RNC-ID,
    cN-PS-DomainIdentifier
                                             CN-PS-DomainIdentifier
                                                                          OPTIONAL,
    cN-CS-DomainIdentifier
                                             CN-CS-DomainIdentifier
                                                                          OPTIONAL,
    neighbouring-FDD-CellInformation
                                             Neighbouring-FDD-CellInformation
                                                                                  OPTIONAL,
    neighbouring-TDD-CellInformation
                                             Neighbouring-TDD-CellInformation
                                                                                  OPTIONAL,
```

105

ProtocolExtensionContainer { {Neighbouring-UMTS-CellInformationItem-ExtIEs} } OPTIONAL,

```
. . .
}
Neighbouring-UMTS-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Neighbouring-FDD-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfFDDNeighboursPerRNC,...)) OF Neighbouring-FDD-CellInformationItem
Neighbouring-FDD-CellInformationItem ::= SEQUENCE {
    c-ID
                                        C-ID,
    uARFCNforNu
                                        UARFCN,
    uARFCNforNd
                                        UARFCN,
    frameOffset.
                                        FrameOffset
                                                             OPTIONAL.
    primaryScramblingCode
                                        PrimaryScramblingCode,
    primaryCPICH-Power
                                        PrimaryCPICH-Power
                                                                 OPTIONAL
                                        CellIndividualOffset
    cellIndividualOffset
                                                                 OPTIONAL,
    txDiversityIndicator
                                        TxDiversityIndicator,
    sTTD-SupportIndicator
                                        STTD-SupportIndicator
                                                                 OPTIONAL,
    closedLoopModel-SupportIndicator
                                        ClosedLoopModel-SupportIndicator
                                                                             OPTIONAL,
    closedLoopMode2-SupportIndicator
                                        ClosedLoopMode2-SupportIndicator
                                                                             OPTIONAL,
                                         ProtocolExtensionContainer { { Neighbouring-FDD-CellInformationItem-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
Neighbouring-FDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
Neighbouring-GSM-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfGSMNeighboursPerRNC,...)) OF Neighbouring-GSM-CellInformationItem
Neighbouring-GSM-CellInformationItem ::= SEQUENCE {
    cGI
                                         CGI,
    q-Offset-Serving-to-Neighbour
                                        Q-Offset-Serving-to-Neighbour,
    g-RxlevMin
                                        O-RxlevMin,
    maximumAllowedULTxPower
                                        MaximumAllowedULTxPower,
    bSIC
                                        BSIC,
    bCCH-ARFCN
                                        BCCH-ARFCN,
    qSM-Output-Power
                                        GSM-Output-Power OPTIONAL,
    iE-Extensions
                                        ProtocolExtensionContainer { { Neighbouring-GSM-CellInformationItem-ExtIEs } } OPTIONAL,
    . . .
Neighbouring-GSM-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Neighbouring-TDD-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfTDDNeighboursPerRNC,...)) OF Neighbouring-TDD-CellInformationItem
Neighbouring-TDD-CellInformationItem ::= SEQUENCE {
    c-ID
                                    C-ID,
```

3GPP TS 25.423 V3.4.0 (2000-12)

```
107
```

```
uARFCNforNt
                                     UARFCN,
    frameOffset.
                                     FrameOffset
                                                          OPTIONAL,
    cellParameterID
                                     CellParameterID.
    syncCase
                                     SyncCase,
    timeSlot
                                     TimeSlot
                                                         OPTIONAL
    -- This IE shall be is present only if Sync Case = Case1 -- ,
    sCH-TimeSlot
                                     SCH-TimeSlot
                                                             OPTIONAL
    -- This IE shall be is present only if Sync Case = Case2 -- ,
    block-STTD-Indicator
                                     Block-STTD-Indicator,
    cellIndividualOffset
                                     CellIndividualOffset
                                                             OPTIONAL,
    dPCHConstantValue
                                     DPCHConstantValue OPTIONAL,
    pCCPCH-Power
                                     PCCPCH-Power
                                                              OPTIONAL,
                                     ProtocolExtensionContainer { { Neighbouring-TDD-CellInformationItem-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
}
Neighbouring-TDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
NrOfDLchannelisationcodes
                           ::= INTEGER (1..8)
NrOfTransportBlocks
                            ::= INTEGER (0..512)
-- 0
-- P
PagingCause ::= ENUMERATED {
    terminating-conversational-call,
    terminating-streaming-call,
    terminating-interactive-call,
    terminating-background-call,
    sms,
    . . .
}
-- See in [16]
PagingRecordType ::= ENUMERATED {
    imsi-qsm-map,
    tmsi-gsm-map,
    p-tmsi-gsm-map,
    imsi-ds-41,
    tmsi-ds-41,
    . . .
-- See in [16]
PayloadCRC-PresenceIndicator ::= ENUMERATED {
    crc-included,
    crc-not-included
```

3GPP TS 25.423 V3.4.0 (2000-12)

Release 1999

```
}
 PCCPCH-Power ::= INTEGER (-150..400,...)
 -- PCCPCH-power = power * 10
 -- If power <= -15 PCCPCH shall be set to -150
 -- If power >= 40 PCCPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dBm
 PDSCHCodeMapping ::= SEQUENCE {
     dL-ScramblingCode
                              DL-ScramblingCode,
     signallingMethod
                              PDSCHCodeMapping-SignallingMethod,
     iE-Extensions
                              ProtocolExtensionContainer { { PDSCHCodeMapping-ExtIEs } } OPTIONAL,
     . . .
 PDSCHCodeMapping-Extles RNSAP-PROTOCOL-EXTENSION ::= {
     . . .
 }
 PDSCHCodeMapping-SignallingMethod ::= CHOICE {
     pDSCHCodeMapping-SignallingMethod-CodeRange
                                                      PDSCHCodeMapping-SignallingMethod-CodeRange,
     pDSCHCodeMapping-SignallingMethod-TFCIRange
                                                      PDSCHCodeMapping-SignallingMethod-TFCIRange,
     pDSCHCodeMapping-SignallingMethod-Explicit
                                                      PDSCHCodeMapping-SignallingMethod-Explicit,
     . . .
  }
 PDSCHCodeMapping-SignallingMethod-CodeRange ::= SEQUENCE (SIZE (1..maxNoCodeGroups)) OF
     SEQUENCE {
         spreadingFactor
                                  SpreadingFactor,
                                  Multi-code-info,
         multi-code-info
         start-CodeNumber
                                  CodeNumber,
                                  CodeNumber,
         stop-CodeNumber
         iE-Extensions
                                  ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-CodeRange-ExtlEs } } OPTIONAL,
         . . .
 PDSCHCodeMapping-SignallingMethod-CodeRange-Extles RNSAP-PROTOCOL-EXTENSION ::= {
     . . .
 }
 PDSCHCodeMapping-SignallingMethod-TFCIRange ::= SEQUENCE (SIZE (1..maxNoTFCIGroups)) OF
     SEQUENCE {
                                  MaxTFCIvalue,
         maxTFCIvalue
         spreadingFactor
                                  SpreadingFactor,
                                  Multi-code-info.
         multi-code-info
         codeNumber
                                  CodeNumber,
         iE-Extensions
                                  ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-TFCIRange-ExtIEs } } OPTIONAL,
         . . .
```

PDSCHCodeMapping-SignallingMethod-TFCIRange-Extles RNSAP-PROTOCOL-EXTENSION ::= {

```
. . .
}
PDSCHCodeMapping-SignallingMethod-Explicit ::= SEQUENCE (SIZE (1..maxTFCI2Combs)) OF
    SEQUENCE {
                                SpreadingFactor,
        spreadingFactor
       multi-code-info
                                Multi-code-info,
       codeNumber
                                CodeNumber,
       iE-Extensions
                                ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-Explicit-ExtIEs } } OPTIONAL,
        . . .
    }
PDSCHCodeMapping-SignallingMethod-Explicit-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Periodic ::= SEQUENCE {
    reportPeriodicity
                            ReportPeriodicity,
    iE-Extensions
                            ProtocolExtensionContainer { {Periodic-ExtIEs} } OPTIONAL,
    . . .
}
Periodic-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
PLMN-ID ::= OCTET STRING (SIZE(3))
PowerAdjustmentType ::= ENUMERATED {
    none,
    common,
    individual
}
PowerOffset
                       ::= INTEGER (0..24)
Pre-emptionCapability ::= ENUMERATED {
    shall-not-trigger-pre-emption,
    may-trigger-pre-emption
}
Pre-emptionVulnerability ::= ENUMERATED {
    not-pre-emptable,
    pre-emptable
}
PrimaryCPICH-Power
                         ::= INTEGER (-100..500)
-- step 0.1 (Range -10.0..50.0) Unit is dBm
PrimaryCPICH-EcNo
                         ::= INTEGER (-30..30)
```

#### 3GPP TS 25.423 V3.4.0 (2000-12)

Release 1999

```
PrimaryCCPCH-RSCP ::= INTEGER (0..91)
-- According to maping in [14]
```

PrimaryScramblingCode ::= INTEGER (0..511)

PriorityLevel ::= INTEGER (0..15) -- 0 = spare, 1 = highest priority, ...14 = lowest priority and 15 = no priority

PropagationDelay ::= INTEGER (0..255)

PunctureLimit ::= INTEGER (0..15) -- 0: 40%; 1: 44%; ... 14: 96%; 15: 100

```
-- O
<Editor's note: Parts of the module is skipped.>
-- S
SAC
                   ::= OCTET STRING (SIZE (2))
SAI ::= SEQUENCE {
   ul-NMJa
                       PLMN-ID,
   1AC
                       LAC.
    sAC
                       SAC,
    iE-Extensions
                       ProtocolExtensionContainer { {SAI-ExtIEs} } OPTIONAL
}
SAI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
SCH-TimeSlot
                          ::= INTEGER (0..6)
ScaledAdjustmentRatio
                               ::= INTEGER(0..100)
-- AdjustmentRatio = ScaledAdjustmentRatio / 100
Secondary-CCPCH-Info::= SEQUENCE {
    fDD-S-CCPCH-Offset
                                           FDD-S-CCPCH-Offset,
    dl-ScramblingCode
                                           DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber
                                           FDD-DL-ChannelisationCodeNumber,
    dl-TFCS
                                           TFCS,
    secondaryCCPCH-SlotFormat
                                           SecondaryCCPCH-SlotFormat,
    tFCI-Presence
                                           TFCI-Presence OPTIONAL,
    -- This IE shall be is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17
    multiplexingPosition
                                           MultiplexingPosition,
    sTTD-Indicator
                                           STTD-Indicator,
    fACH-PCH-InformationList
                                           FACH-PCH-InformationList,
    iB-schedulingInformation
                                           IB-SchedulingInformation,
                                           ProtocolExtensionContainer { { Secondary-CCPCH-Info-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
```

3GPP

```
}
Secondary-CCPCH-Info-Extles RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
}
SecondInterleavingMode ::= ENUMERATED {
   frame-related,
   timeslot-related,
   . . .
}
SIR-Error-Value ::= INTEGER (0..125)
SIR-Error-Value-IncrDecrThres ::= INTEGER (0..124)
SIR-Value
             ::= INTEGER (0..63)
-- According to mapping in 25.215/25.225
SIR-Value-IncrDecrThres ::= INTEGER (0..62)
SecondaryCCPCH-SlotFormat ::= INTEGER (0..17,...)
-- refer to 25.211
    ::= TimeSlot
SN
                ::= ENUMERATED {
S-FieldLength
   v1,
   v2,
   . . .
}
SpreadingFactor ::= INTEGER (4| 8| 16| 32| 64| 128| 256)
S-RNTI
                    ::= INTEGER (0..1048575)
-- From 0 to 2^20-1
SSDT-CellID ::= ENUMERATED {
   a,
   b,
   c,
   d,
   e,
   f,
   g,
   h
}
SSDT-CellID-Length ::= ENUMERATED {
   short,
   medium,
```

```
long
}
SSDT-Indication ::= ENUMERATED {
    sSDT-active-in-the-UE,
    sSDT-not-active-in-the-UE
}
SSDT-SupportIndicator ::= ENUMERATED {
    sSDT-supported,
    sSDT-not-supported
}
STTD-Indicator ::= ENUMERATED {
   active,
    inactive
}
STTD-SupportIndicator ::= ENUMERATED {
    sTTD-Supported,
    sTTD-not-Supported
}
SyncCase ::= INTEGER (1..2,...)
```

-- T

<Editor's note: The rest of the module is skipped.>

9.3.5	Common Definitions							
******	* * * * * * * * * * * * * * * * * * * *							
Common	 Common definitions							
******	***************************************							
RNSAP-Comm itu-t (0) umts-Acces	onDataTypes { identified-organization (4) etsi (0) mobileDomain (0) s (20) modules (3) rnsap (1) versionl (1) rnsap-CommonDataTypes (3) }							
DEFINITION	S AUTOMATIC TAGS ::=							
BEGIN								
*******  Extensi	**************************************							
******	***************************************							
maxPrivateIEsINTEGER ::= 65535maxProtocolExtensionsINTEGER ::= 65535maxProtocolIEsINTEGER ::= 65535								
******	***************************************							
 Common	Data Types							
 ******	**********							
Criticalit	y ::= ENUMERATED { reject, ignore, notify }							
Presence	::= ENUMERATED { optional, conditional, mandatory }							
<pre>PrivateIE-ID ::= CHOICE {     local INTEGER (0 maxPrivateIEs),     global OBJECT IDENTIFIER }</pre>								
ProcedureC	ode ::= INTEGER (0255)							
<pre>ProcedureID ::= SEQUENCE {     procedureCode ProcedureCode,     ddMode ENUMERATED { tdd, fdd, common, } }</pre>								
ProtocolEx	tensionID ::= INTEGER (0maxProtocolExtensions)							

ProtocolIE-ID ::= INTEGER (0..maxProtocolIEs)
TransactionID ::= CHOICE {
 shortTransActionId INTEGER (0..127),
 longTransActionId INTEGER (0..32767)
}

TriggeringMessage ::= ENUMERATED { initiating-message, successful-outcome, unsuccessful-outcome, outcome }

END

# 3GPP TSG-RAN WG3 Meeting #19 Cardiff, South Wales, UK, 26<sup>th</sup> February –2<sup>nd</sup> March 2001

R3-010769

CHANGE REQUEST						
ж	25	.423 CR 317	ж rev	<b>-</b> *	Current vers	ion: <b>3.4.0</b> <sup>#</sup>
For <u>HELP</u> on ι	using t	this form, see bottom	of this page of	r look at th	e pop-up text	over the X symbols.
Proposed change	affec	: <b>ts:</b> ೫ (U)SIM	ME/UE	Radio Ac	cess Network	Core Network
Title: ೫	Rei	moval of IE Group Na	ame for Groups	with only	one Repetitio	n
Source: भ	R-V	NG3				
Work item code: भ्र	3				Date:	February, 2001
Category: अ	F				Release: ೫	R99
	Use Deta be fo	one of the following cate <b>F</b> (essential correction) <b>A</b> (corresponds to a co <b>B</b> (Addition of feature), <b>C</b> (Functional modification) <b>i</b> led explanations of the bund in 3GPP TR 21.900	egories: ) prrection in an ea tion of feature) n) above categorie 0.	arlier release es can	Use <u>one</u> of 2 2 e) R96 R97 R98 R99 REL-4 REL-5	the following releases: (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5)
Reason for change	e: %	In the current RNS/	AP specificatio	n some IEs	s have an "inte	ernal" structure. For
some such IEs the structure does not have any repetition, i.e. the range is 1, e.g. the Secondary CCPCH Info IE. When moving the definition of some IEs with an "internal" structure from the messages to the tabular format (CR253) the first IE in chapter 9.2 with criticality assignment appeared, i.e. the Neighbouring UMTS Cell Information IE. This made it clear that group names seem to indicate a place for assignment of criticality, not only in chapter 9.1 (messages) but also in chapter 9.2 (IEs).						i.e. the range is 1, e.g. n of some IEs with an at (CR253) the first IE <i>Neighbouring UMTS</i> eem to indicate a place ages) but also in
Summary of chang	<b>ge:</b>	This CR removes the removing the group Consequently the in reduced by one leve	ne virtual place name from IE ndentation of a el (">").	for critical s in chapte Il the IEs b	ity assignmer or 9.2 that hav below the grou	nt from chapter 9.2 by e the range 1. p name have been
		Further more, the C ASN.1 by placing th hierarchical level as <i>Criticality</i> IE, and Th indentation of the In	Criticality Diagran The Information Information ID I The Procedur The	ostics IE h Element C e ID IE, Tri E. The alig ment Critic	ave also beer criticality Diagr iggering Mess nment is don ality Diagnost	n aligned with the nostics IE on the same age IE, <i>Procedure</i> e by not changing the <i>ics</i> IE.
Consequences if not approved:	ж	If this CR is not app specification.	proved the abo	ve describ	ed ambiguity	will remain in the
		Backward compatib This CR is backwar	pility: d compatible v	vith the pre	evious version	of RNSAP.
Clauses affected:	ж	9.2.1.1, 9.2.1.5A, 9 9.2.1.48, 9.2.1.52, 9 and 9.2.2.53.	.2.1.11, 9.2.1.1 9.2.1.64, 9.2.1.	2, 9.2.1.13 70, 9.2.1.7	3, 9.2.1.19, 9.7 71, 9.2.2.13A,	2.1.19A, 9.2.1.40, 9.2.2.13B, 9.2.2.37B,
Other specs	ж	Other core speci	fications 8	f		

affected:	Test specifications     O&M Specifications
Other comments:	Please note that at CR implementation, each removed indentation ">" shall also be accompanied by a reduction of the number of indentation steps on the ruler. In the end there shall be one step on the ruler per indentation ">".

#### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G\_Specs/CRs.htm</u>. Below is a brief summary:

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

### 9.2.1.1 Allocation/Retention Priority

This parameter indicates the priority level in the allocation and retention of transport channel resources in DRNS. DRNS may use the Allocation/Retention priority information of the transport channels composing the RL to prioritise requests for RL Setup/addition and reconfiguration. In similar way, DRNS may use the allocation/Retention priority information of the transport channels composing the RL to prioritise which RL shall be set to failure, in case prioritisation is possible. See Annex A.

	IE/Group Name	Presence	Range	IE type and reference	Semantics description
	Allocation/Retention Priority				
	→Priority Level	М		INTEGER (015)	This IE indicates the priority of the request. 0 = spare. 1 = highest priority.
	→Pre-emption Capability	М		ENUMERAT ED(shall not trigger pre- emption, may trigger pre-emption)	
	→Pre-emption Vulnerability	М		ENUMERAT ED(not pre- emptable, pre- emptable)	

3

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

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

IE/Group Name	Presence	Range	IE type and	Semantics description
			reference	
Cell GAI				
→Geographical		1		
Coordinates		<maxnoofpoints></maxnoofpoints>		
>→Latitude Sign	М		ENUMERAT	
			ED (North,	
			South)	
>>Degrees of Latitude	М		INTEGER (	The IE value (N) is derived by
			02 <sup>23</sup> -1)	this formula:
				N≤2 <sup>23</sup> X /90 < N+1
				X being the latitude in degree
				(0° 90°)
>>Degrees of Longitude	М		INTEGER (	The IE value (N) is derived by
			$-2^{23}2^{23}-1)$	this formula:
				N≤2 <sup>24</sup> X /360 < N+1
				X being the longitude in
				degree (-180°+180°)

Range bound	Explanation
maxnoofPoints	Maximum no. of points in polygon.

### 9.2.1.11 CN CS Domain Identifier

Identification of the CN node in the CS Domain.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CN CS Domain Identifier				
►PLMN Id	M		OCTET STRING (3)	<ul> <li>digits 0 to 9, two digits per octet,</li> <li>each digit encoded 0000 to 1001,</li> <li>1111 used as filler</li> <li>bit 4 to 1 of octet n encoding digit 2n-1</li> <li>bit 8 to 5 of octet n encoding digit 2n</li> <li>The PLMN-ID consists of 3 digits from MCC followed by either</li> <li>a filler plus 2 digits from MNC (in case of 2 digit MNC) or</li> <li>3 digits from MNC (in case of a digit MNC).</li> </ul>
→LAC	М		OCTET STRING (2)	0000 and FFFE not allowed

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# 9.2.1.12 CN PS Domain Identifier

Identification of the CN Node in the PS Domain.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CN CS Domain Identifier				
►PLMN Id	M		OCTET STRING (3)	<ul> <li>digits 0 to 9, two digits per octet,</li> <li>each digit encoded 0000 to 1001,</li> <li>1111 used as filler</li> <li>bit 4 to 1 of octet n encoding digit 2n-1</li> <li>bit 8 to 5 of octet n encoding digit 2n</li> <li>The PLMN-ID consists of 3 digits from MCC followed by either</li> <li>a filler plus 2 digits from MNC (in case of 2 digit MNC) or</li> <li>3 digits from MNC (in case 1000 mm)</li> </ul>
→LAC	М		OCTET STRING (2)	0000 and FFFE not allowed
►RAC	М		OCTET STRING (1)	

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# 9.2.1.13 Criticality Diagnostics

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Criticality Diagnostics				
>Procedure ID		01		Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error
>→Procedure Code	М		INTEGER (0255)	
>>Ddmode	М		ENUMERAT ED (FDD, TDD, Common)	Common = common to FDD and TDD.
➤Triggering Message	0		ENUMERAT ED(initiating message, successful outcome, unsuccessful outcome, outcome)	The Triggering Message is used only if the Criticality Diagnostics is part of Error Indication.
→Procedure Criticality	0		ENUMERAT ED(reject, ignore, notify)	This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure). The value 'ignore' shall never be used.
Transaction ID	0		Transaction ID	
Information Element Criticality Diagnostics		0 <maxnoof errors&gt;</maxnoof 		
>IE Criticality	М		ENUMERAT ED(reject, ignore, notify)	The IE Criticality is used for reporting the criticality of the triggering IE. The value 'Ignore" shall never be used.
>IE Id	M		INTEGER (065535)	The IE Id of the not understood or missing IE as defined in the ASN.1 part of the specification.
>Repetition Number	0		INTEGER (1256)	The repetition number of the not understood IE if applicable

Range bound	Explanation			
Maxnooferrors	Maximum number of IE errors allowed to be reported with a single			
	message.			

### 9.2.1.19 Dedicated Measurement Value

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Dedicated measurement Value				
SIR Value	C MeasValue		INTEGER(0. .63)	According to mapping in ref. [23] and [24]
SIR Error Value	C MeasValue		INTEGER(0. .125)	According to mapping in [23], (FDD only)
→Transmitted Code Power Value	C MeasValue		INTEGER(0. .127)	According to mapping in ref. [23] and [24]
→RSCP	C MeasValue		INTEGER(0. .81)	According to mapping in ref. [24] (TDD only)
Rx Timing Deviation	C MeasValue		INTEGER(0. .2047)	According to mapping in [24] [TDD only]
→Round Trip Time	C MeasValue		INTEGER(0. .32767)	According to mapping in [23] [FDD only]

Condition	Explanation
MeasValue	Only one measurement value can be present at the same time.

### 9.2.1.19A Dedicated Measurement Value Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Dedicated Measurement		4			_	
Value Information						
CHOICE Measurement	М				-	
Availability Indicator						
>>Measurement Available					-	
>>>Dedicated	Μ		9.2.1.19		-	
Measurement Value						
>> <del>&gt;</del> CFN	0		9.2.1.9	Dedicated	_	
				Measuremen		
				t Time		
				Reference		
>>Measurement not			NULL		_	
Available						
I

## 9.2.1.40 Message Type

The Message Type uniquely identifies the message being sent.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type				
>Procedure ID		1		
>>Procedure Code	M		<ul> <li>ENUMERATED (RL Setup, RL Addition, RL Deletion, Synchronised RL Reconfiguration Preparation, Synchronised RL Reconfiguration Commit, Synchronised RL Reconfiguration Cancel, Unsynchronised RL Reconfiguration Request, RL Failure, RL Restoration, DL Power Control, DL Power Control, DL Power Timeslot Control, Physical Channel Reconfiguration, UL Signalling Transfer, DL Signalling Transfer, Relocation Commit, Paging, Measurement Initiation, Measurement Reporting, Measurement Failure, Common Transport Channel Resources Initiation, Common Transport Channel Resources Release,</li> <li>Compressed Mode Command,</li> </ul>	
			Error Indication,)	
> <mark>&gt;</mark> Ddmode	М		ENUMERATED (FDD, TDD, Common,)	Common = common to FDD and TDD.
➤Type of Message	M		ENUMERATED (Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome)	

## 9.2.1.48 Report Characteristics

The Report Characteristics, defines how the reporting shall be performed.

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IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Report Characteristics				
→Report Characteristics Type			ENUMERAT ED(On Demand, Periodic, Event A, Event B, Event B, Event C, Event D, Event E, Event F, )	
Periodic Report Information	C – Periodic		,	
>>Report Periodicity	М		ENUMERAT ED (10ms1min, ) step 10ms, (1min1hr, ) step 1min	The periodicity with which the DRNS shall send measurement reports.
►Event A	C – Event			
➤Measurement Threshold	M		Measurement Threshold	The threshold for which the DRNS shall trigger a measurement report.
> <del>&gt;</del> Measurement Hysteresis Time	0		ENUMERAT ED (10ms1min, ) step 10ms	
→Event B	C – Event B			
➤Measurement Threshold	M		Measurement Threshold	The threshold for which the DRNS shall trigger a measurement report.
> <del>&gt;</del> Measurement Hysteresis Time	0		ENUMERAT ED (10ms1min, ) step 10ms	
→Event C	C – Event		10110,	
>>-Measurement Increase/Decrease Threshold	M		Measurement Increase/Decr ease Threshold	
> <del>&gt;</del> Measurement Change Time	Μ		ENUMERAT ED (10ms1min, ) step 10ms	The time within which the measurement entity shall rise, in order to trigger a measurement report.
►Event D	C – Event D			
>>-Measurement Increase/Decrease Threshold	М		Measurement Increase/Decr ease Threshold	
>>Measurement Change Time	M		ENUMERAT ED (10ms1min, ) step_10ms,	The time within which the measurement entity shall fall, in order to trigger a measurement report.
≻Event E	C – Event E			
>>Measurement	М		Measurement	

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IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Threshold 1			Threshold	
>>Measurement	0		Measurement	
Threshold 2			Threshold	
>>Measurement	0		ENUMERAT	The hysteresis time in ms
Hysteresis Time			ED	
			(10ms1min,	
			)	
			step 10ms,	
Report Periodicity	0		ENUMERAT	The periodicity with which
			ED	the DRNS shall send
			(10ms1min,	measurement reports.
			) step	
			10ms,	
			(1min1hr,	
			) step 1min,	
►vent F	C – Event F			
>>Measurement	M		Measurement	
Threshold 1			Threshold	
>>Measurement	0		Measurement	
Threshold 2			Threshold	
>>Measurement	0		ENUMERAT	The hysteresis time in ms
Hysteresis Time			ED	
			(10ms1min,	
			)	
			step 10ms,	
Report Periodicity	0		ENUMERAT	The periodicity with which
			ED	the DRNS shall send
			(10ms1min,	measurement reports.
			) step	
			10ms,	
			(1min1hr,	
			) step 1min,	

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"		

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### 9.2.1.52 Service Area Identifier (SAI)

This information element is used to identify an area consisting of one or more cells belonging to the same Location Area. Such an area is called a Service Area and can be used for indicating the location of a UE to the CN. For this protocol, only a Service Area that is defined to be applicable to the PS and CS domains shall be used.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SAI				
►PLMN Id	M		OCTET STRING (3)	<ul> <li>digits 0 to 9, two digits per octet,</li> <li>each digit encoded 0000 to 1001,</li> <li>1111 used as filler</li> <li>bit 4 to 1 of octet n encoding digit 2n-1</li> <li>bit 8 to 5 of octet n encoding digit 2n</li> <li>The PLMN-ID consists of 3 digits from MCC followed by either</li> <li>a filler plus 2 digits from MNC (in case of 2 digit MNC) or</li> <li>3 digits from MNC (in case</li> </ul>
→LAC	М		OCTET STRING (2)	0000 and FFFE not allowed
►SAC	М		OCTET STRING (2)	

## 9.2.1.64 Transport Format Set

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description	
Transport Format Set					
Dynamic Transport Format Information		1 <maxtfcount></maxtfcount>			
>Number of Transport blocks	М		INTEGER (0512)		
>>Transport Block Size	C – Blocks		INTEGER (05000)	Bits	
>>CHOICE Mode	М				
>>>TDD					
>>> <del>&gt;</del> Transmission Time Interval Information	C- TTIdynamic	1 <maxtticount></maxtticount>			
>>> <mark>&gt;</mark> Transmission Time Interval	M		ENUMERAT ED(10, 20, 40, 80,)	msec	
Semi-static Transport Format Information		1			
>>Transmission Time Interval	М		ENUMER ATED (10, 20, 40, 80, dynamic,	msec Value "dynamic" for TDD only	
>>Type of Channel Coding	М		ENUMER ATED (No coding, Convoluti onal, Turbo)		
>>Coding Rate	C – Coding		ENUMER ATED (1/2, 1/3)		
>→Rate Matching Attribute	М		INTEGER (1maxR M)		
>>CRC size	M		ENUMER ATED (0, 8, 12, 16, 24,)		
>>CHOICE Mode	Μ				
>>>TDD					
>>>>2 <sup>nd</sup> Interleaving Mode	M		ENUMERAT ED(Frame related, Timeslot related,)		

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

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

### 9.2.1.70A UTRAN Access Point Position

The UTRAN Access Point Position indicates the exact geographical position of the base station antenna.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UTRAN Access Point Position				
►Latitude Sign	М		ENUMERAT ED (North, South)	
→Degrees of Latitude	М		INTEGER ( 02 <sup>23</sup> -1)	The IE value (N) is derived by this formula: $N \le 2^{23} X / 90 < N+1$ X being the latitude in degree (0° 90°)
Degrees of Longitude	M		INTEGER ( -2 <sup>23</sup> 2 <sup>23</sup> -1)	The IE value (N) is derived by this formula: $N \le 2^{24} X / 360 < N+1$ X being the longitude in degree (-180°+180°)

# 9.2.1.71 UTRAN Cell Identifier (UC-Id)

The UC-Id (UTRAN Cell identifier) is the identifier of a cell in one UTRAN.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UC-ID		4		
►RNC-Id	Μ		9.2.1.50	
<mark>&gt;</mark> C-ld	Μ		9.2.1.6	

## 9.2.2.13A DSCH FDD Information

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
DSCH FDD Information		4			_	
►DSCH Specific FDD		1 <maxno< td=""><td></td><td></td><td>_</td><td></td></maxno<>			_	
Information		ofDSCHs>				
>>DSCH ID	М		9.2.1.26A		—	
>>TrCh Source Statistics Descriptor	М		9.2.1.65		-	
>>Transport Format Set	М		9.2.1.64	For DSCH	-	
>Allocation/Retention Priority	М		9.2.1.1		-	
Scheduling Priority Indicator	М		9.2.1.51A		-	
>>BLER	М		9.2.1.4		-	
→PDSCH RL ID	М		RL ID 9.2.1.49		_	
►TFCS	Μ		9.2.1.63	For DSCH	_	

Range bound	Explanation
MaxnoofDSCHs	Maximum number of DSCHs for one UE.

### 9.2.2.13B DSCH FDD Information Response

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
DSCH FDD Information Response		-1			-	
DSCH Specific FDD Information Response		1 <maxno ofDSCHs&gt;</maxno 			-	
>>DSCH ID	М		9.2.1.26A		-	
>>DSCH Flow Control Information	М		9.2.1.26B		-	
>>Binding ID	0		9.2.1.3		-	
>>Transport Layer Address	0		9.2.1.62		-	
>PDSCH Code Mapping	М		9.2.2.27A	PDSCH code mapping to be used	_	

Range bound	Explanation
MaxnoofDSCHs	Maximum number of DSCHs for one UE.

### 9.2.2.37B Secondary CCPCH Info

The Secondary CCPCH Info IE provides information on scheduling of broadcast information for DRAC on a Secondary CCPCH in one cell.

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Secondary CCPCH Info		4			_	
►FDD S-CCPCH Offset	М		9.2.2.15	Corresponds	-	
				to: τ <sub>S-CCPCH,k</sub> , see ref. [8]		
►DL Scrambling Code	М		9.2.2.8		-	
→FDD DL Channelisation Code Number	М		9.2.2.14		-	
►TFCS	М		9.2.1.63	For the DL.	-	
Secondary CCPCH Slot Format	М		9.2.2.38		-	
►TFCI Presence	C - SlotFormat		9.2.1.55		-	
Multiplexing Position	М		9.2.2.26		-	
STTD Indicator	М		9.2.2.44		_	
►FACH/PCH Information		1 <maxfac Hcount+1&gt;</maxfac 			_	
>>TFS			9.2.1.64	For each FACH, and the PCH when multiplexed on the same Secondary CCPCH	_	
IB Scheduling Information		1			-	
>>IB_SG_REP	М		9.2.2.4		_	
IB Segment Information		1 <maxibse G&gt;</maxibse 			_	
>> <mark>&gt;</mark> IB_SG_POS	М		9.2.2.20		_	

Condition	Explanation
SlotFormat	This IE is present only if the Secondary CCPCH Slot Format IE is
	equal to any of the value 8 to 17.

Range bound	Explanation
MaxFACHCount	Maximum number of FACHs mapped onto a Secondary CCPCH.
MaxIBSEG	Maximum number of segments for one Information Block.

## 9.2.2.53 UL Scrambling Code

The UL Scrambling Code is the scrambling code used by UE. Every UE has its specific UL Scrambling Code.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
UL Scrambling Code				
UL Scrambling Code Number	M		INTEGER (0 2 <sup>24</sup> -1)	
►UL Scrambling Code Length	М		ENUMERAT ED(Short, Long)	

# 3GPP TSG-RAN WG3 Meeting #19 Cardiff, South Wales, UK, 26<sup>th</sup> February –2<sup>nd</sup> March 2001

R3-011025

				CR-Form-v3			
ж	<b>25.4</b>	23 CR 318	ж rev	<b>2</b> <sup>#</sup>	Current versi	<sup>ion:</sup> 3.4.0	ж
For <u>HELP</u> or	n using this	s form, see bottom	of this page or	look at th	e pop-up text	over the X syn	nbols.
Proposed chang	ge affects:	ж (U)SIM	ME/UE	Radio A	ccess Network	Core Ne	twork
Title:	ំ Forwa	ard Compatibility of	RNSAP with r	egards to	Dedicated Me	asurements	
Source:	<mark>ឌ R-WG</mark>	3					
Work item code:	:#				<i>Date:</i>	February, 200	01
Category:	ដ F				Release: ೫	R99	
	A B C D Detailed be found	(essential correction, (corresponds to a co (Addition of feature), (Functional modifica (Editorial modificatio d explanations of the d in 3GPP TR 21.900	) prrection in an ea tion of feature) n) above categorie 0.	erlier releas	2 R96 R97 R98 R99 REL-4 REL-5	(GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5)	
	ru n tt n a n ru ru	esources the speci neasurements (in c ne status in RNSA neasurements that inticipating the evo neasurements, e.g eleases.	fication is not a contrast to com P since the dec exist in the Re Jution of RNSA . common mea	always cle mon mea dicated me lease (99 NP by inclu surement	ar that it actua surements as easurements a RNSAP speci ision of other t s, this may be	ally is <u>dedicated</u> exist in NBAP). are the only ification. Howey ypes of ambiguous in f	This is /er, future
Summary of cha	ange: # T a b c As As • • • •	he CR clarifies that ictually is dedicated of clarify reference values, i) clarify reference "measurement i) in cases where clarified to be <u>d</u> is a consequence to SN.1 have been up further more, In ad larified: For event type of greater than". For event type of than". "Measurement INITIATION RE The reference to be "Measurement Information IE".	at when referrin d measuremen es to measuremen es to measuremen procedures", a referring to "m <u>edicated</u> meas the clarification odated accordin dition to the ab C "rises more the request" is clar QUEST messa o "Measureme ent not availabl	ng to meas nent value ment proc nd easurement. on "b)" abo ngly. han " is rep nan " is rep ified to be age" in two nt not ava e shall be	surements on o es to mean <u>dec</u> edures" to me ent"-only could ove the <i>Messa</i> cation the follo placed by "falls oblaced by "falls oblaced by "falls oblaced by "falls oblaced by "falls oblaced by the follocet oblaced by the follocet oblaced by the follocet oblaced by the follocet oblaced by the follocet oblacet by the follocet by the follocet oblacet by the follocet by the folloce	dedicate resour dicated measur ean <u>dedicated</u> be ambiguous ge Type IE and owing have bee es by an amount o MEASUREME reported " is cl <u>e Measuremen</u>	rces it ements it is I the I the greater ENT arified to <u>t Value</u>

	<ul> <li>The Measurement Id is clarified to be unique for a <u>dedicated</u> measurement <u>within a UE Context</u>.</li> <li>The reference to "accuracy requirement" in the Measurement Reporting procedure is clarified to be the accuracy requirement specified in 25.123 and 25.133.</li> <li>Backward compatibility: This CR is backward compatible with the previous version of RNSAP.</li> </ul>
Consequences if solution of approved:	If this CR is not approved the above described unclear description will remain in the specification.
Clauses affected:	<b>7</b> , 8.1, 8.3.11, 8.3.12, 8.3.13, 8.3.14, 9.2.1.37, 9.2.1.40, 9.3.2, and 9.3.6.
Other specs affected:	Contractions       #         Test specifications       #         O&M Specifications       •
Other comments:	£

#### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G\_Specs/CRs.htm</u>. Below is a brief summary:

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

# 7 Functions of RNSAP

The RNSAP protocol has the following functions:

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

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

Function	Elementary Procedure(s)
Radio Link Management	a) Radio Link Setup b) Radio Link Addition
	c) Radio Link Deletion
	d) Unsynchronised Radio Link Reconfiguration
	e) Synchronised Radio Link Reconfiguration
	Preparation
	f) Synchronised Radio Link Reconfiguration
	Commit
	g) Synchronised Radio Link Reconfiguration
	Cancellation
	h) Radio Link Pre-emption
Physical Channel Reconfiguration	Physical Channel Reconfiguration
Radio Link Supervision	a) Radio Link Failure
	<ul> <li>b) Radio Link Restoration</li> </ul>
Compressed Mode Control [FDD]	a) Radio Link Setup
	b) Radio Link Addition
	c) Compressed Mode Command
	d) Unsynchronised Radio Link Reconfiguration
	e) Synchronised Radio Link Reconfiguration
	Preparation
	f) Synchronised Radio Link Reconfiguration
	Commit
	g) Synchronised Radio Link Reconfiguration
	Cancellation
Measurements on Dedicated Resources	a) <u>Dedicated</u> Measurement Initiation
	b) Dedicated Measurement Reporting
	c) <u>Dedicated</u> Measurement Termination
DI Dower Drifting Correction (EDD)	d) Dedicated Measurement Failure
DL Power Drifting Correction [FDD]	Downlink Power Control
CCCH Signalling Transfer	a) Uplink Signalling Transfer
Desine	D) Downlink Signalling Transler
Paying Common Transport Channel Bessuress	Payling
Management	a) Common Transport Channel Resources
Management	h) Common Transport Channel Resources
	Release
Relocation Execution	Relocation Commit
Reporting of General Error Situations	Fror Indication
DL Power Timeslot Correction [TDD]	Downlink Power Timeslot Control

## Table 1: Mapping between functions and RNSAP elementary procedures

#### **Elementary Procedures** 8.1

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

Elementary	Initiating Message	Successful Outcome	Unsuccessful Outcome	
Procedure		Response message	Response message	Timer
Radio Link Setup	RADIO LINK SETUP	RADIO LINK SETUP	RADIO LINK SETUP	
	REQUEST	RESPONSE	FAILURE	
Radio Link	RADIO LINK	RADIO LINK	RADIO LINK	
Addition	ADDITION REQUEST	ADDITION	ADDITION FAILURE	
		RESPONSE		
Radio Link	RADIO LINK	RADIO LINK		
Deletion	DELETION REQUEST	DELETION		
		RESPONSE		
Synchronised	RADIO LINK	RADIO LINK	RADIO LINK	
Radio Link	RECONFIGURATION	RECONFIGURATION	RECONFIGURATION	
Reconfiguration	PREPARE	READY	FAILURE	
Preparation				
Unsynchronised				
Radio Link	RECONFIGURATION	RECONFIGURATION	RECONFIGURATION	
Reconfiguration		RESPONSE		
Physical Channel	PHYSICAL CHANNEL	PHYSICAL CHANNEL	PHYSICAL CHANNEL	
Reconfiguration	RECONFIGURATION	RECONFIGURATION	RECONFIGURATION	
Dedicated	REQUEST			
<u>Dedicated</u>				
Initiation				
milialion	INITIATION REQUEST		INITIATION FAILURE	
		RESPONSE		
Common	COMMON	COMMON	COMMON	
Transport	TRANSPORT	TRANSPORT	TRANSPORT	
Channel	CHANNEL	CHANNEL	CHANNEL	
Resources	RESOURCES	RESOURCES	RESOURCES	
Initialisation	REQUEST	RESPONSE	FAILURE	

#### Table 2: Class 1

The need for Timers will be defined on a per procedure basis. The content of this column is thus FFS.

1

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

## 8.3.11 <u>Dedicated Measurement Initiation</u>

#### 8.3.11.1 General

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

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

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

### 8.3.11.2 Successful Operation



#### Figure 20: <u>Dedicated Measurement Initiation procedure</u>, 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 <u>dedicated</u> measurement according to the parameters given in the request. Unless specified below, the meaning of the parameters are given in other specifications.

If the *Dedicated Measurement Object Type* IE is set to "RL", measurement results shall be reported for all the indicated Radio Links.

[FDD - If the *Dedicated Measurement Object Type* IE is set to "RLS", measurement results shall be reported for all the indicated Radio Link Sets.]

If the *Dedicated Measurement Object Type* IE is set to "ALL RL", measurement results shall be reported for all current and future Radio Links within the UE Context.

[FDD - If the *Dedicated Measurement Object Type* IE is set to "ALL RLS", measurement results shall be reported for all the existing and future Radio Link Sets within the UE Context.]

If the *CFN Reporting Indicator* IE is set to "FN Reporting Required", the *CFN* IE shall be included in the measurement report or in the measurement response, the latter only in the case the *Report Characteristics* IE is set to 'On-Demand'. The reported CFN shall be the CFN at the time when the <u>dedicated</u> measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [26].

If the *CFN* IE is provided, it indicates the frame for which the first measurement shall be provided. The provided measurement value shall be the one reported by the layer 3 filter referred to as point C in the measurement model [26].

#### **Report characteristics**

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

If the Report Characteristics IE is set to 'On-Demand', the DRNS shall report the measurement result immediately.

If the *Report Characteristics* IE is set to 'Periodic', the DRNS shall periodically initiate a-the Dedicated Measurement Report procedure for this measurement, with the requested report periodicity.

If the *Report Characteristics* IE is set to 'Event A', the DRNS shall initiate <u>a-the Dedicated</u> 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 is set to 'Event B', the DRNS shall initiate <u>a-the Dedicated</u> 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 is set to 'Event C', the DRNS shall initiate <u>a-the Dedicated</u> Measurement Reporting procedure when the measured entity rises <u>by an amount greater</u> more than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event D', the DRNS shall initiate <del>a the Dedicated</del> Measurement Reporting procedure when the measured entity falls by an amount greater more than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event E', the DRNS shall initiate <u>a-the Dedicated</u> 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 <u>a-the Dedicated</u> Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity* IE is provided, the DRNS shall initiate <u>the Dedicated</u> 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 is set to 'Event F', the DRNS shall initiate <u>a-the Dedicated</u> 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 <u>a-the Dedicated</u> Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity* IE is provided, the DRNS shall initiate <u>the Dedicated</u> 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 is not set to 'On-Demand', the DRNS is required to perform reporting for a dedicated measurement object, in accordance with the conditions provided in the DEDICATED MEASUREMENT INITIATION REQUEST message, as long as the object exists. If no dedicated measurement object(s) for which a measurement is defined exists any more the DRNS shall terminate the measurement locally without reporting this to the SRNC.

If at the start of the measurement, the reporting criteria are fulfilled for any of Event A, Event B, Event E or Event F, the DRNS shall initiate <u>a-the Dedicated</u> Measurement Reporting procedure immediately, and then continue with the measurements as specified in the DEDICATED MEASUREMENT INITIATION REQUEST message.

#### **Higher layer filtering**

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

The averaging shall be performed according to the following formula.

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

The variables in the formula are defined as follows:

 $F_n$  is the updated filtered measurement result

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

 $M_n$  is the latest received measurement result from physical layer measurements

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

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

#### **Response message**

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

Only in the case when the *Report Characteristics* IE is set to "On-Demand", the DEDICATED MEASUREMENT INITIATION RESPONSE message shall contain the measurement result. In this case also the *Dedicated Measurement Object* IE shall be included if it was included in the <u>DEDICATED MEASUREMENT INITIATION REQUEST</u>request message.

### 8.3.11.3 Unsuccessful Operation



#### Figure 21: Dedicated Measurement Initiation procedure, Unsuccessful Operation

If the Dedicated Measurement Type received in the *Dedicated Measurement Type* IE is not defined in ref. [11] or [14] to be measured on the Dedicated Measurement Object Type received in the *Dedicated Measurement Object Type* IE in the DEDICATED MEASUREMENT INITIATION REQUEST message the DRNS shall regard the Dedicated Measurement Initiation procedure as failed.

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

Typical cause values are:

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

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

#### **Miscellaneous Causes:**

- Control Processing Overload
- HW Failure

### 8.3.11.4 Abnormal Conditions

-

# 8.3.12 <u>Dedicated Measurements</u> Reporting

### 8.3.12.1 General

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

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

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

### 8.3.12.2 Successful Operation



#### Figure 22: <u>Dedicated</u> Measurement Reporting procedure, Successful Operation

If the requested measurement reporting criteria are met, the DRNS shall initiate <u>a-the Dedicated Measurement</u> Reporting procedure. If the measurement was initiated (by the <u>Dedicated Measurement Initiation procedure</u>) for multiple dedicated measurement objects, the DRNC may include <u>dedicated measurement values in the *Dedicated* <u>Measurement Value Information IE</u> for multiple objects in the DEDICATED MEASUREMENT REPORT message. Unless specified below, the meaning of the parameters are given in other specifications.</u>

The *Dedicated Measurement Id* IE shall be set to the Dedicated Measurement Id provided by the SRNC when initiating the measurement with the <u>Dedicated Measurement Initiation procedure</u>.

If the achieved measurement accuracy does not fulfil the given accuracy requirement <u>specified in ref. [23] and [24]</u>, the Measurement not available shall be reported in the *Dedicated Measurement Value Information* IE.

### 8.3.12.3 Abnormal Conditions

# 8.3.13 <u>Dedicated Measurement Termination</u>

### 8.3.13.1 General

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

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

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

### 8.3.13.2 Successful Operation



#### Figure 23: <u>Dedicated</u> Measurement Termination procedure, Successful Operation

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

Upon reception, the DRNS shall terminate reporting of measurements corresponding to the received Dedicated Measurement Id.

### 8.3.13.3 Abnormal Conditions

# 8.3.14 Dedicated Measurement Failure

### 8.3.14.1 General

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

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

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

### 8.3.14.2 Successful Operation



### Figure 24: <u>Dedicated</u> Measurement Failure procedure, Successful Operation

This procedure is initiated with a DEDICATED MEASUREMENT FAILURE INDICATION message, sent from the DRNC to the SRNC, to inform the SRNC that a previously requested <u>dedicated</u> measurement can no longer be reported. The DRNC has locally terminated the indicated measurement.

Typical cause values are:

#### **Miscellaneous Causes:**

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

### 8.3.14.3 Abnormal Conditions

### 9.2.1.37 Measurement ID

The Measurement Id uniquely identifies <u>any a dedicated</u> measurement <del>on dedicated resources requested over <u>RNSAP</u><u>within a UE Context</u>.</del>

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

## 9.2.1.40 Message Type

The Message Type uniquely identifies the message being sent.

IE/Group Name	Presence	Range	IE type and reference	Semantics
				description
Message Type				
>Procedure ID		1		
>>Procedure	М		ENUMERATED (RL Setup,	
Code			RL Addition,	
			RL Deletion,	
			Synchronised RL Reconfiguration Preparation,	
			Synchronised RL Reconfiguration Commit,	
			Synchronised RL Reconfiguration Cancel,	
			Unsynchronised RL Reconfiguration Request,	
			RL Failure,	
			RL Restoration,	
			DL Power Control,	
			DL Power Timeslot Control,	
			Physical Channel Reconfiguration,	
			UL Signalling Transfer,	
			DL Signalling Transfer,	
			Relocation Commit,	
			Paging,	
			Dedicated Measurement Initiation,	
			Dedicated Measurement Reporting,	
			Dedicated Measurement Termination,	
			Dedicated Measurement Failure,	
			Common Transport Channel Resources	
			Initiation,	
			Common Transport Channel Resources	
			Release,	
			Compressed Mode Command,	
			Error Indication,)	
>>Ddmode	М		ENUMERATED (FDD, TDD, Common,)	Common =
				common to FDD
				and TDD.
>Type of	M		ENUMERATED (Initiating Message,	
Message			Successful Outcome, Unsuccessful	
			Outcome, Outcome)	

9.3.2 Elementary Procedure Definitions
************************************
Elementary Procedure definitions
**********************************
RNSAP-PDU-Descriptions { itu-t (0) identified-organization (4) etsi (0) mobileDomain (0) umts-Access (20) modules (3) rnsap (1) versionl (1) rnsap-PDU-Descriptions (0) }
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN
************************************
IE parameter types from other modules.
 ********************************
<pre>IMPORTS Criticality, ProcedureID, TransactionID FROM RNSAP-CommonDataTypes CommonTransportChannelResourcesFailure, CommonTransportChannelResourcesRequest, CommonTransportChannelResourcesResponseFDD, CommonTransportChannelResourcesResponseTDD, CommonTransportChannelResourcesResponseTDD, CommonTransportChannelResourcesResponseTDD, CommonTransportChannelResourcesResponseTDD, CompressedModeCommand, DedicatedMeasurementFailureIndication, DedicatedMeasurementFailureIndication, DedicatedMeasurementFailureIndication, DedicatedMeasurementFailureIndication, DedicatedMeasurementFailureIndication, DedicatedMeasurementFailureIndication, DedicatedMeasurementTrainationRequest, DL-PowerControlRequest, DL-PowerTimeslotControlRequest, ErrorIndication, PagingRequest, PhysicalChannelReconfigurationCommand, PhysicalChannelReconfigurationFailure, PhysicalChannelReconfigurationRequestFDD, PhysicalChannelReconfigurationRequestFDD, PhysicalChannelReconfigurationRequestTD, PhysicalChan</pre>

#### Release 1999

RadioLinkAdditionFailureFDD, RadioLinkAdditionFailureTDD. RadioLinkAdditionRequestFDD. RadioLinkAdditionRequestTDD, RadioLinkAdditionResponseFDD, RadioLinkAdditionResponseTDD, RadioLinkDeletionRequest, RadioLinkDeletionResponse, RadioLinkFailureIndication, RadioLinkPreemptionRequiredIndication, RadioLinkReconfigurationCancel, RadioLinkReconfigurationCommit, RadioLinkReconfigurationFailure, RadioLinkReconfigurationPrepareFDD, RadioLinkReconfigurationPrepareTDD, RadioLinkReconfigurationReadyFDD, RadioLinkReconfigurationReadyTDD, RadioLinkReconfigurationRequestFDD, RadioLinkReconfigurationRequestTDD, RadioLinkReconfigurationResponseFDD, RadioLinkReconfigurationResponseTDD, RadioLinkRestoreIndication, RadioLinkSetupFailureFDD, RadioLinkSetupFailureTDD, RadioLinkSetupRequestFDD, RadioLinkSetupRequestTDD, RadioLinkSetupResponseFDD, RadioLinkSetupResponseTDD, RelocationCommit, UplinkSignallingTransferIndicationFDD, UplinkSignallingTransferIndicationTDD FROM RNSAP-PDU-Contents

id-commonTransportChannelResourcesInitialisation, id-commonTransportChannelResourcesRelease, id-compressedModeCommand, id-downlinkPowerControl, id-downlinkSignallingTransfer, id-downlinkPowerTimeslotControl, id-errorIndication, id-dedicatedmMeasurementFailure, id-dedicatedmMeasurementInitiation, id-dedicatedmMeasurementReporting, id-dedicatedmMeasurementTermination, id-paging, id-physicalChannelReconfiguration, id-privateMessage, id-radioLinkAddition, id-radioLinkDeletion, id-radioLinkFailure, id-radioLinkPreemption,

#### Release 1999

id-radioLinkRestoration, id-radioLinkSetup, id-relocationCommit, id-synchronisedRadioLinkReconfigurationCancellation, id-synchronisedRadioLinkReconfigurationCommit, id-synchronisedRadioLinkReconfigurationPreparation, id-unSynchronisedRadioLinkReconfiguration, id-uplinkSignallingTransfer

FROM RNSAP-Constants;

#### <Editor's note: Parts of the module is skipped.> \_ \_ -- Interface Elementary Procedure List RNSAP-ELEMENTARY-PROCEDURES RNSAP-ELEMENTARY-PROCEDURE ::= { RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 RNSAP-ELEMENTARY-PROCEDURES-CLASS-3 . . . RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 RNSAP-ELEMENTARY-PROCEDURE ::= { radioLinkSetupFDD radioLinkSetupTDD radioLinkAdditionFDD radioLinkAdditionTDD radioLinkDeletion synchronisedRadioLinkReconfigurationPreparationFDD synchronisedRadioLinkReconfigurationPreparationTDD unSynchronisedRadioLinkReconfigurationFDD unSynchronisedRadioLinkReconfigurationTDD physicalChannelReconfigurationFDD physicalChannelReconfigurationTDD dedicatedmMeasurementInitiation commonTransportChannelResourcesInitialisationFDD commonTransportChannelResourcesInitialisationTDD . . . RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 RNSAP-ELEMENTARY-PROCEDURE ::= { uplinkSignallingTransferFDD uplinkSignallingTransferTDD downlinkSignallingTransfer relocationCommit paging synchronisedRadioLinkReconfigurationCommit synchronisedRadioLinkReconfigurationCancellation

#### Release 1999

radioLinkFailure
radioLinkPreemption
radioLinkRestoration
dedicatedmMeasurementReporting
dedicatedmMeasurementTermination
dedicatedmMeasurementFailure
downlinkPowerControlFDD
downlinkPowerTimeslotControl
compressedModeCommandFDD
commonTransportChannelResourcesRelease
errorIndication
privateMessage

#### <Editor's note: Parts of the module is skipped.>

dedicatedmMeasurementInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {
 INITIATING MESSAGE DedicatedMeasurementInitiationRequest
 SUCCESSFUL OUTCOME DedicatedMeasurementInitiationResponse
 UNSUCCESSFUL OUTCOME DedicatedMeasurementInitiationFailure
 PROCEDURE ID { procedureCode id-dedicatedmMeasurementInitiation, ddMode common }
 CRITICALITY reject
}

#### <Editor's note: Parts of the module is skipped.>

```
dedicatedmMeasurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DedicatedMeasurementReport
    PROCEDURE ID
                       { procedureCode id-dedicatedmMeasurementReporting, ddMode common }
    CRITICALITY
                   ignore
dedicatedmMeasurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DedicatedMeasurementTerminationRequest
                       { procedureCode id-dedicatedmMeasurementTermination, ddMode common }
    PROCEDURE ID
    CRITICALITY
                   ignore
dedicatedmMeasurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DedicatedMeasurementFailureIndication
                       { procedureCode id-dedicatedmMeasurementFailure, ddMode common }
    PROCEDURE ID
    CRITICALITY
                   ignore
<Editor's note: The rest of the module is skipped.>
```

#### 9.3.6 **Constant Definitions** \*\*\*\*\* Constant definitions \_\_\_\_ \*\*\*\*\* RNSAP-Constants { itu-t (0) identified-organization (4) etsi (0) mobileDomain (0) umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-Constants (4) } DEFINITIONS AUTOMATIC TAGS ::= BEGIN IMPORTS ProcedureCode, ProtocolIE-ID FROM RNSAP-CommonDataTypes; \_ \_ -- Elementary Procedures ProcedureCode ::= 0 id-commonTransportChannelResourcesInitialisation id-commonTransportChannelResourcesRelease ProcedureCode ::= 1 id-compressedModeCommand ProcedureCode ::= 2 id-downlinkPowerControl ProcedureCode ::= 3 id-downlinkPowerTimeslotControl ProcedureCode ::= 4id-downlinkSignallingTransfer ProcedureCode ::= 5 id-errorIndication ProcedureCode ::= 6 id-dedicatedmMeasurementFailure -ProcedureCode ::= 7 id-dedicatedmMeasurementInitiation -ProcedureCode ::= 8 id-dedicatedmMeasurementReporting ProcedureCode ::= 9 id-dedicatedmMeasurementTermination -ProcedureCode ::= 10 id-paging ProcedureCode ::= 11 id-physicalChannelReconfiguration ProcedureCode ::= 12 id-privateMessage ProcedureCode ::= 13 id-radioLinkAddition ProcedureCode ::= 14 id-radioLinkDeletion ProcedureCode ::= 15 id-radioLinkFailure ProcedureCode ::= 16 id-radioLinkPreemption ProcedureCode ::= 17 id-radioLinkRestoration ProcedureCode ::= 18 id-radioLinkSetup ProcedureCode ::= 19 id-relocationCommit ProcedureCode ::= 20 ${\it id-synchronised} Radio {\it Link} Reconfiguration Cancellation$ ProcedureCode ::= 21 id-synchronisedRadioLinkReconfigurationCommit ProcedureCode ::= 22

Release 1999	20
id-synchronisedRadioLinkReconfigurationPreparation	ProcedureCode ::= 23
id-unSynchronisedRadioLinkReconfiguration	ProcedureCode ::= 24
id-uplinkSignallingTransfer	ProcedureCode ::= 25

<Editor's note: The rest of the module is skipped.>

# 3GPP TSG-RAN WG3 Meeting #19 Cardiff, South Wales, UK, 26<sup>th</sup> February –2<sup>nd</sup> March 2001

R3-011008

CHANGE REQUEST			
ж	25.423 CR 319 <sup># rev</sup> 1 <sup># Current version:</sup>	<b>3.4.0</b> <sup>#</sup>	
For <u>HELP</u> on u	ng this form, see bottom of this page or look at the pop-up text over	the	
Proposed change affects: # (U)SIM ME/UE Radio Access Network X Core Network			
<i>Title:</i> ដ	Remaining Errors after CR Implementation		
Source: ೫	R-WG3		
Work item code: %	Date: ೫ <mark>Feb</mark>	oruary, 2001	
Category: ೫	F Release: # R99	Э	
	Ise one of the following categories:Use one of the following categories:F (essential correction)2A (corresponds to a correction in an earlier release)R96B (Addition of feature),R97C (Functional modification of feature)R98D (Editorial modification)R99e found in 3GPP TR 21.900.REL-5	llowing releases: 1 Phase 2) ase 1996) ase 1997) ase 1998) ase 1999) ase 4) ase 5)	
Peason for change	Le the current RNSAP there are a few errors remaining from the		
Reason for change	implementation on v3.3.0.	5 017	
Summary of chang	<ul> <li>The CR clarifies corrects the following errors remaining since the implementation on v3.3.0:</li> <li>a) CR216r2 adds one sentence to the second last paragraph heading "Physical Channel Modification" in chapter 8.3.4.2 sentence is missing in v3.4.0 (interaction with CR232r2). The missing sentence (and a closing bracket for the FDD taggin b) CR232r2 adds two bullets under the sub-heading "DSCH Addition/Modification/Deletion:" in chapter 8.3.4.2 starting v DSCH Info IE includes any of the Allocation/Retention Prior. If the DSCH Info IE includes any of the Allocation/Retention Prior. If the DSCH Info IE includes any of the Transport Format S intention was to have these bullets indented "twice". This C paragraph style to "B2" (from "B1", i.e. one indentation).</li> <li>c) When assigning chapter numbers to all new chapters the "Information" was assigned the number 9.2.3.14A. This is in there was no 9.2.3.15 and thus no need to use the rule on chapters in-between existing chapters". The "USCH Inform consequently assigned the number 9.2.3.15 in this CR.</li> <li>d) (r1 addition): As a consequence of CR253r2 the ASN.1 typ Id for the Neighbouring GSM Cell Information IE introduced have been moved to the IE Definitions Module (9.3.4) as pa conflicts between CRs. Unfortunately this was not done. The ASN.1 type to chapter 9.3.4.</li> </ul>	ne CR under the sub- . This additional his CR adds the ng). with "[FDD: If the <i>rity</i> IE" and "[FDD: Set IE". The Changes the USCH neorrect since "insertion of lation" is the carrying the IE d by CR252 should art of sorting out his CR moves that	
not approved:	remain and the RNSAP specification will not be in accordance agreed by the TSG RAN meeting #10.	with the CRs	

	This CR is not backward compatible with the previous version of RNSAP.
Clauses affected:	# 8.3.4.2, 9.1.3.2, 9.1.11.2, and 9.2.3.14A.
Other specs affected:	#       Other core specifications       #         Test specifications       0&M Specifications
Other comments:	¥

#### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G\_Specs/CRs.htm</u>. Below is a brief summary:

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

### 8.3.4.2 Successful Operation



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

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

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

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

#### **DCH Modification:**

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

- If the *DCHs to Modify IE* includes the *UL FP Mode* IE for a DCH or a DCH which belongs to a set of coordinated DCHs to be modified, the DRNS shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify IE* includes the *ToAWS* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify IE* includes the *ToAWE* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify IE* includes multiple *DCH Specific Info* IEs then the DRNS shall treat the DCHs in the *DCHs to Modify* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCH Specific Info* IE 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 *DCH Specific Info* IE includes the *Transport Format Set* IE for the UL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.
- If the *DCH Specific Info* IE includes the *Transport Format Set* IE for the DL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.
- [FDD If, in the DCH Specific Info IE, the DRAC Control IE is present and set to "requested" for at least one DCH and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the Secondary CCPCH Info IE to be received on FACH, for each Radio Link. If the DRNS does not support DRAC, it shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]
- [TDD If the *DCH Specific Info* IE includes the *CCTrCH ID* IE for the UL, the DRNS shall map the DCH onto the referenced UL CCTrCH.]
- [TDD - If the *DCH Specific Info* IE includes the *CCTrCH ID* IE for the DL, the DRNS shall map the DCH onto the referenced DL CCTrCH.]

## DCH Addition:

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

- The DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.
- If the *DCHs to Add* IE includes a *DCHs to Add* IE with multiple *DCH Specific Info* IEs then the DRNS shall treat the DCHs in the *DCHs to Add* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- [FDD For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to "selected ", the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [4]. If the QE-Selector is set to "non-selected ", the Physical channel BER shall be used for the QE in the UL data frames, ref. [4].]
- [FDD For a set of co-ordinated DCHs the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected " shall be used for the QE in the UL data frames, ref. [4]. [FDD If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [4]. If all DCHs have *QE-Selector* IE set to "non-selected " the Physical channel BER shall be used for the QE, ref. [4].]
- The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.
- The DRNS shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The DRNS shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The DRNS shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [FDD If the *DRAC Control* IE is set to "requested" in the *DCH Specific Info* IE for at least one DCH and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE to be received on FACH, for each Radio Link. If the DRNS does not support DRAC, it shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

## **DCH Deletion:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCH to Delete*, the DRNS shall not include the referenced DCHs in the new configuration.

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

## **Physical Channel Modification:**

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

- [FDD If the *UL DPCH Information* IE includes the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]
- [FDD If the *UL DPCH Information* IE includes the *Min UL Channelisation Code Length* IE, the DRNS shall apply the new Min UL Channelisation Code Length in the new configuration.]

- [FDD If the *UL DPCH Information* IE includes the *TFCS* IE, the DRNS shall use the *TFCS* IE for the UL when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the Uplink of the new configuration.]
- [FDD If the *UL DPCH Information* IE includes the *UL DPCCH Slot Format* IE, the DRNS shall apply the new Uplink DPCCH *Slot Format* to the new configuration.]
- [FDD If the *UL DPCH Information* IE includes the *UL SIR Target* IE, the DRNS shall set the UL inner loop power control to the UL SIR target when the new configuration is being used.]
- [FDD If the *UL DPCH Information* IE includes the *Puncture Limit* IE, the DRNS shall apply the value in the uplink of the new configuration.]
- [FDD If the *UL DPCH Information* IE includes the *Diversity Mode* IE, the DRNS shall apply diversity according to the given value.]
- [FDD If the *UL DPCH Information* IE includes an *SSDT Cell Identity Length* IE and/or an *S-Field Length* IE, the DRNS shall apply the values in the new configuration.]

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

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

Sequence within the *Transmission Gap Pattern Sequence Information* IE is set to 'SF/2', the DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information IE* to the RADIO LINK RECONFIGURATION READY message indicating for each Channelisation Code whether the alternative scrambling code shall be used or not].

## [TDD - UL/DL CCTrCH Modification]

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

[TDD - If any of the *UL CCTrCH to Modify* IEs or *DL CCTrCH to Modify* IEs includes any of *TFCS* IE, *TFCI coding* IE, *Puncture limit* IE, or *TPC CCTrCH ID* IEs the DRNS shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]

- [TDD – The DRNC shall include in the RADIO LINK RECONFIGURATION READY message DPCH information to be modified and the IEs modified if any of *Repetition Period* IE, *Repetition Length* IE, *TDD DPCH Offset* IE or timeslot information was modified. The DRNC shall include timeslot information and the IEs modified if any of *Midamble Shift and Burst Type* IE, *Time Slot* IE, *TFCI Presence* IE or Code information was modified. The DRNC shall include code information if *TDD Channelisation Code* IE was modified.]

## [TDD – UL/DL CCTrCH Addition]

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

[TDD – If the DRNS has reserved the required resources for any requested DPCHs, the DRNC shall include the DPCH information within DPCH to be added in the RADIO LINK RECONFIGURATION READY message. If no DPCH was active before the reconfiguration, and if a valid Rx Timing Deviation measurement is known in DRNC, then the DRNC shall include the *Rx Timing Deviation* IE in the RADIO LINK RECONFIGURATION READY message.]

## [TDD – UL/DL CCTrCH Deletion]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH to Delete* IEs *or DL CCTrCH to Delete* IEs, the DRNS shall remove this CCTrCH in the new configuration.]

## **SSDT Activation/Deactivation:**

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

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

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

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

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

- [FDD: If the DSCH to Modify IE includes any DSCH Info IEs, then the DRNS shall treat them each as follows:]
  - <u>FDD: If the DSCH Info IE includes any of the Allocation/Retention Priority IE, Scheduling Priority</u> <u>Indicator IE or TrCH Source Statistics Descriptor IE, the DNRS shall use them to update the set of DSCH</u> <u>Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.</u>]
  - [FDD: If the *DSCH Info* IE includes any of the *Transport Format Set* IE or *BLER* IE, the DRNS shall apply the parameters to the new configuration.]

- [FDD: If the DSCH Info IE includes any of the Allocation/Retention Priority IE, Scheduling Priority Indicator IE or TrCH Source Statistics Descriptor IE, the DNRS shall use them to update the set of DSCH Priority classes each of which is associated with a set of supported MAC c/sh SDU lengths.]
- [FDD: If the DSCH Info IE includes any of the Transport Format Set IE or BLER IE, the DRNS shall apply the parameters to the new configuration.]
- [FDD: If the *DSCH to Modify* IE includes the *PDSCH RL ID* IE, then the DRNS shall use it as the new DSCH RL identifier.]
- [FDD: If the *DSCH to Modify* IE includes the *Transport Format Combination Set* IE, then the DRNS shall use it as the new Transport Format Combination Set associated with the DSCH.]
- [TDD: If the *DSCHs to Modify* IE includes the *CCTrCH Id* IE, then the DRNS shall map the DSCH onto the referenced DL CCTrCH.]
- [TDD: If the *DSCHs to Modify* IE includes any of the *Allocation/Retention Priority* IE, *Scheduling Priority Indicator* IE or *TrCH Source Statistics Descriptor* IE, the DNRS shall use them to update the set of DSCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.]
- [TDD: If the *DSCHs to Modify* IE includes any of the *Transport Format Set* IE or *BLER* IE, the DRNS shall apply the parameters to the new configuration.]

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

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

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

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

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

- If the USCH to Modify IE includes any of the Allocation/Retention Priority IE, Scheduling Priority Indicator IE or TrCH Source Statistics Descriptor IE, the DNRS shall use them to update the set of USCH Priority classes.
- If the USCH to Modify IE includes any of the CCTrCH Id IE, Transport Format Set IE, BLER IE or RB Info IE, the DRNS shall apply the parameters to the new configuration.

If the requested modifications are allowed by the DRNC and the DRNC has successfully reserved the required resources for the new configuration of the Radio Link(s), it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message.

### General

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

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

If the requested modifications are allowed by the DRNS, and the DRNS has successfully reserved the required resources for the new configuration of the Radio Link(s) it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message. When this procedure has been completed successfully there exist a Prepared Reconfiguration, as defined in subclause 3.1.

The DRNS decides the maximum and minimum SIR for the uplink of the Radio Link(s) and shall return this in the *Maximum Uplink SIR* IE and *Minimum Uplink SIR* IE for each Radio Link in the RADIO LINK RECONFIGURATION READY message.

8

If the DL TX power upper or lower limit has been re-configured the DRNC shall return this in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE respectively in the RADIO LINK RECONFIGURATION RESPONSE message.

## 9.1.3.2 TDD Message

Message Type         M         92.140         YES         reject           Transaction ID         M         92.150         -         -           SRNC-Id         M         92.150         -         -           SRNC-Id         M         92.150         YES         reject           SRNTI         M         92.124         YES         reject           Allowed Queuing Time         O         92.124         YES         reject           Information         7         -         YES         reject           Maximum Number of Unoperation         9.2.33A         For the UL         -         -           SMaximum Number of Unoperatin Spreading         M         9.2.33A         For the DL         -         -           SMaximum Number of Unoperatin Spreading         M         9.2.33A         For the DL         -         -           SMaximum Number of Dr         M         9.2.33A         For the DL         -         -           VL COTYCH Information         0.         9.2.33A         For the DL         -         -           SMaximum Number of Unoperatin Spreading         M         9.2.3.3C         -         -         -           VL COTYCH Information         0.	IE/Group Name	Presence	Range	IE type	Semantics	Criticality	Assigned
Message Type         M         9.21.40         YES         reject           Transaction ID         M         9.21.59             SRNC-Id         M         9.21.53             SRNC-Id         M         9.21.53         YES         reject           D-RNTI         O         9.21.24         YES         reject           Allowed Queuing Time         O         9.21.24         YES         reject           Maximum Number of Ithormation         7         -         -         -           Maximum Number of Ithormation         9.23.34         For the UL         -         -           Maximum Number of Ithormation         M         9.23.34         For the UL         -           Physical Channels per Trame         1         9.23.34         For the DL         -           DL Physical Channels per Trame         9.23.34         For the DL         -         -           SMaximum Number of DL Physical Channels per Frame         9.23.34         For the DL         -         -           SMaximum Number of DL Physical Channels per Frame         M         9.23.34         For the DL         -         -           SMaximum Number of DL Physical Channels per Frame         M<				and	description		Criticality
Message Type         M         9.2.1.40         YES         reject           SRNC-Id         M         9.2.1.59         -         -           SRNC-Id         M         9.2.1.53         YES         reject           S-RNTI         M         9.2.1.53         YES         reject           JENTI         O         9.2.1.24         YES         reject           Allowed Queuing Time         O         9.2.1.24         YES         reject           Information         f         -         YES         reject           Maximum Number of UL         M         9.2.3.3A         For the UL         -           SMaximum Number of UL         M         9.2.3.3A         For the UL         -           SMaximum Number of UL         M         9.2.3.3A         For the DL         -           SMaximum Number of UL         M         9.2.3.3A         For the DL         -           Versical Channels per Trame         f         9.2.3.3C         -         -           Maximum Number of DL         M         9.2.3.3C         -         -           Physical Channels per Trame         M         9.2.3.3C         -         -           VL CCT/CH Information         0emax				reference			
Transaction ID         M         9.21.59         -           SRNC-Id         M         9.21.50         YES         reject           SRNTI         M         9.21.50         YES         reject           D_RNTI         O         9.21.24         YES         reject           Allowed Queuing Time         O         9.21.24         YES         reject           Maximum Number of Timesides per Frame         1         YES         reject           >Maximum Number of Timesides per Frame         1         9.2.3.3A         For the UL         -           >Maximum Number of UL Physical Channels per Timesides per Frame         1         9.2.3.3A         For the DL         -           DL Physical Channels per Timesides per frame         1         9.2.3.3A         For the DL         -           SMaximum Number of DL Physical Channels per Frame         1         9.2.3.3A         For the DL         -           >Minimum Spreading Factor         M         9.2.3.3A         For the DL         -         -           >Maximum Number of DL Physical Channels per Frame         M         9.2.3.3A         For the DL         -         -           >Minimum Spreading Frame         M         9.2.3.3A         For the DL         -         - <td>Message Type</td> <td>M</td> <td></td> <td>9.2.1.40</td> <td></td> <td>YES</td> <td>reject</td>	Message Type	M		9.2.1.40		YES	reject
SRNC-Id         M         RNC-Id         YRC-Id         YFES         reject           S-RNTI         M         9.21.53         YES         reject           DRNTI         O         9.21.24         YES         reject           Allowed Queuing Time         O         9.21.24         YES         reject           Ider Channel         1         YES         reject         reject           Maximum Number of L         9.23.3A         For the UL         -         -           SMaximum Number of UL         M         9.23.3A         For the UL         -           SMaximum Number of UL         M         9.23.3A         For the DL         -           SMaximum Number of UL         M         9.23.3A         For the DL         -           SMaximum Number of DL         M         9.23.3A         For the DL         -           SectorCH ID         M         9.23.3C         -         -         -           SectorCH ID         M         9.23.3C         -         -         -           SectorCH ID         M         9.23.2         -         -         -           SectorCH ID         M         9.23.2         -         -         -	Transaction ID	M		9.2.1.59		_	
S-RNTI         M         9.2.1.50         YES         reject           D-RNTI         O         9.2.1.24         YES         reject           Allowed Queuing Time         O         9.2.1.24         YES         reject           Maximum Number of Timesolos per Frame         1         YES         reject           >Maximum Number of Timesolos per Frame         M         9.2.3.3A         For the UL         -           >DL Physical Channels per Timesolos per frame         M         9.2.3.3A         For the UL         -           >DL Physical Channels per Timesolos per frame         M         9.2.3.3B         -         -           >DL Physical Channels per Timesolos per frame         1         YES         reject           >Maximum Number of DL Physical Channels per frame         M         9.2.3.3A         For the DL         -           >Maximum Number of DL Physical Channels per frame         M         9.2.3.3C         -         -           >Maximum Number of DL Physical Channels per frame         M         9.2.3.3C         -         -           >Maximum Number of DL Physical Channels per frame         M         9.2.3.2C         -         -           >SCCTrCH Information         0.         -         -         -         -	SRNC-Id	M		RNC-Id		YES	reject
SHRITI         M         9.2.1,24         YES         reject           Allowed Queuing Time         O         9.2.1,24         YES         reject           Allowed Queuing Time         O         9.2.1,24         YES         reject           Information         1         YES         reject         reject           SMaximum Number of M         9.2.3,3A         For the UL         -         -           SMaximum Number of UL         Psical Channel         9.2.3,3A         For the UL         -         -           SMaximum Number of UL         Psical Channel         1         9.2.3,3A         For the UL         -         -           SMaximum Number of UL         M         9.2.3,3A         For the DL         -         -           SMaximum Number of DL         M         9.2.3,3A         For the DL         -         -           SMaximum Number of DL         M         9.2.3,2A         For the DL         -         -           SMaximum Number of DL         M         9.2.3,2C         -         -         -           SectricH Information         0.cmaxno         sectricH and USCH         -         -         -           SectricH Information         M         9.2.3,16         For				9.2.1.50			
D-KNII         D         9.2.1.24         YES         reject           Allowed Queuing Time         0         9.2.1.2         YES         reject           UL Physical Channel Information         1         YES         reject           SMaximum Number of Timestots per Frame         9.2.3.3A         For the UL         -           SMaximum Number of UL Physical Channels per Timestots per Frame         M         9.2.3.3A         For the UL         -           DL Physical Channels per Timestot         1         9.2.3.3A         For the DL         -         -           SMaximum Number of UL Physical Channels per Timestot         M         9.2.3.3A         For the DL         -         -           SMaximum Number of DL Physical Channels per Frame         M         9.2.3.3C         For the DL         -         -           UL CCTCCH Information         0.cmaxno of CCTrCH         S         9.2.3.2         -         -           VL CCTCCH Information         0.cmaxno of CCTrCH         S         9.2.3.2         -         -           SCTCH ID         M         9.2.3.2         -         -         -           VE CCTCCH Information         0.cmaxno of CCTrCH         For DCH and DSCH         EACH and DSCH         -           SCTCH ID	S-RN11	M		9.2.1.53		YES	reject
Aldves Uulung line         O         9.2.12         TES         reject           Information         T         YES         reject           SMaximum Number of Timestots per Frame         M         9.2.3.3A         For the UL         -           SMinimum Spreading Factor         M         9.2.3.3B         -         -           SMaximum Number of Information         1         9.2.3.3B         -         -           SMaximum Number of Information         1         9.2.3.3A         For the UL         -           SMaximum Number of Information         1         9.2.3.3A         For the DL         -           SMaximum Number of DL Physical Channels per Frame         M         9.2.3.4A         For the DL         -           SMaximum Number of DL Physical Channels per Frame         M         9.2.3.4A         For the DL         -           SMaximum Number of DL Physical Channels per Frame         M         9.2.3.4C         For the DL         -           SMaximum Number of DL Physical Channels per Frame         M         9.2.3.4C         For the DL         -           SCTICH ID         M         9.2.3.2         -         -         -           VECCTCH ID         M         9.2.1.63         For the UL         -         -	D-RNII	0		9.2.1.24		YES	reject
DL Prysical Channel         T         TES         reject           Maximum Number of Timesiols per Frame         M         9.2.3.3A         For the UL         -           SMinimum Spreading Factor         M         9.2.3.3B         For the UL         -           DL Physical Channels per Timesiots per Frame         M         9.2.3.3B         -         -           DL Physical Channel per Timesiots per Frame         M         9.2.3.3A         For the DL         -           SMaximum Number of DL Physical Channel per Frame         M         9.2.3.3A         For the DL         -           SMaximum Number of DL Physical Channels per Frame         M         9.2.3.4A         For the DL         -           SMaximum Number of DL Physical Channels per Frame         M         9.2.3.3C         -         -           UL CCTCH Information         0crmaxno of CCTrCH S>         For DCH and USCH         For DCH and USCH         notify           >CCTrCH ID         M         9.2.3.2         -         -         -           >TFCS         M         9.2.1.61         -         -           >TFC CotrCH ID         M         9.2.3.2         -         -           >TFC CotrCH Information         0crmaxno of CCTrCH S>         For DCH and DSCH         -	Allowed Queuing Time	0	4	9.2.1.2		YES	reject
Internation         Maximum Number of Timeslots per Frame         M         9.2.3.3A         For the UL         -           SMaximum Spreading Factor         M         9.2.3.4A         For the UL         -         -           SMaximum Number of UL Physical Channels per Timeslots per Frame         9.2.3.3B         -         -         -           SMaximum Number of UL Physical Channels per Timeslots per Frame         1         9.2.3.3A         For the DL         -         -           SMaximum Number of DL Physical Channels per Frame         M         9.2.3.4A         For the DL         -         -           SMaximum Number of DL Physical Channels per Frame         M         9.2.3.4A         For the DL         -         -           SMaximum Number of DL Physical Channels per Frame         M         9.2.3.2C         -         -         -           UL CCTCH Information         0.crmaxno of CCTrCH S>         9.2.163         For the UL, -         -         -         -           >FTCI Coding         M         9.2.3.2         -         -         -         -           >FTCS         M         9.2.1.63         For the UL, -         -         -         -           >FTCS         M         9.2.3.2         -         -         -         -	UL Physical Channel		1			YES	reject
Jumashing Number of Line         M         9.2.3.3A         For the DL         -           >Minimum Spreading Factor         M         9.2.3.4A         For the UL         -           SMaximum Number of UL Physical Channels per Timeslots per Frame         M         9.2.3.3B         -         -           DL Physical Channels per Timeslots per Frame         1         Provide DL         -         -           >Maximum Number of DL Physical Channels per Frame         M         9.2.3.3A         For the DL         -           >Maximum Number of DL Physical Channels per Frame         M         9.2.3.3C         -         -           SCTCTCH Information         0.cmaxno of/CCTTCH Frame         Por DCH and USCH         EACH         notify           VECTCH Information         0.cmaxno of/CCTTCH S         9.2.3.2         -         -           >TFCI Coding         M         9.2.3.2         -         -           >Puncture Limit         M         9.2.3.2         -         -           >CTCTCH Information         0.cmaxno of/CCTCH S         So         -         -         -           >Puncture Limit         M         9.2.3.2         -         -         -           >TFCI Coding         M         9.2.3.2         -         - <td>Movimum Number of</td> <td>M</td> <td>-</td> <td>0.2.2.24</td> <td>For the LII</td> <td></td> <td></td>	Movimum Number of	M	-	0.2.2.24	For the LII		
Initiation Spreading Factor       M       9.2.3.4A       For the UL       -         >Maximum Number of UL Physical Channels per Timeslots D       M       9.2.3.3B       -       -         >MAximum Number of Timeslots per Frame       1       VES       reject         >Maximum Number of Timeslots per Frame       M       9.2.3.3A       For the DL       -         >Minimum Spreading Factor       M       9.2.3.3C       -       -         >Maximum Number of Timeslots per Frame       M       9.2.3.3C       -       -         SMaximum Number of DL Physical Channels per Frame       M       9.2.3.2       -       -         VL CCTrCH ID       M       9.2.3.2       -       -       -         >SCCTrCH ID       M       9.2.3.11       -       -       -         >Puncture Linit       M       9.2.3.2       -       -       -         >VECTCH ID       M       9.2.3.13       For the DL       -       -       -         >VECTCH INformation       0.c.maxno of CCTrCH       For the DL       -       -       -       -         >VECTCH ID       M       9.2.3.2       -       -       -       -       -         >TFCI Coding       M       <	Timeslots per Frame	IVI		9.2.3.3A	FOI THE OL	—	
Participation         M         S.2.3.44         For the DL         -           >Maximum Number of UL Physical Channels per Trimeslot         M         9.2.3.38         -         -         -           DL Physical Channels Information         1         9.2.3.34         For the DL         -         -           >Maximum Number of M Physical Channels per Frame         M         9.2.3.34         For the DL         -         -           >Maximum Number of DL Physical Channels per Frame         M         9.2.3.34         For the DL         -         -           VL CCT/CH Information         M         9.2.3.32         -         -         -           VL CCT/CH Information         0.cmaxno of/CCT/CH S>         For DCH and USCH         EACH Physical Channels per Frame         -         -           VL CCT/CH Information         M         9.2.3.2         -         -         -           >VECTYCH Information         M         9.2.3.11         -         -         -           >VECTYCH Information         0.cmaxno of/CCT/CH S>         For the DL         -         -         -           >VECTYCH Information         0.cmaxno of/CCT/CH S>         For the DL         -         -         -           >VECTYCH Information         0.cmaxno of/CCT/CH<	Minimum Spreading	M		02340	For the LII		
Maximum Number of UL Physical Channels per Timesida     M     9.2.3.3B     -     -       DL Physical Channel Information     1     YES     reject       Maximum Number of Timesida per Frame     M     9.2.3.3A     For the DL     -       >Minimum Spreading Pactor     M     9.2.3.4A     For the DL     -     -       >Maximum Number of Timesida Der Frame     M     9.2.3.4A     For the DL     -     -       Softwinnum Spreading Pactor     M     9.2.3.2C     -     -     -       Softwinnum Number of DL Physical Channels per Frame     M     9.2.3.2     -     -       VL CCTrCH Information     0cmaxno or CCTrCH     For the UL.     -     -       > CCTrCH ID     M     9.2.1.63     For the UL.     -       > TFCS     M     9.2.3.2     -     -       > Puncture Limit     M     9.2.3.11     -     -       > Puncture Limit     M     9.2.3.2     -     -       > TFCS     M     9.2.3.2     -     -       > TFCS     M     9.2.3.11     -     -       > Puncture Limit     M     9.2.3.2     -     -       > TFCS     M     9.2.3.2     -     -       > TFCS     M     9.2.3.2	Factor	IVI		3.2.3. <del>4</del> A		_	
Physical Channels for trimstot     m     Description       DL Physical Channel Information     1     YES     reject       >Maximum Number of Timeslots per Frame     1     Protect     -       >Maximum Number of DL Physical Channels per Frame     M     9.2.3.3A     For the DL     -       Maximum Number of DL Physical Channels per Frame     M     9.2.3.3C     For the DL     -       UL CCTrCH Information     0cmaxno of CCTrCH     For DCH and USCH     EACH     notify       >CCTrCH ID     M     9.2.3.2     -     -       >TFCS     M     9.2.1.31     -     -       >Puncture Limit     M     9.2.1.46     For DCH and DSCH     -       >CCTrCH ID     M     9.2.3.2     -     -       >Puncture Limit     M     9.2.3.2     -     -       >VCTrCH ID     M     9.2.1.46     For DCH and DSCH     -       >VCTrCH ID     M     9.2.1.63     For the DL     -       >TTCS     M     9.2.3.10     -     -       >TTCS     M     9.2.3.10 <t< td=""><td>&gt;Maximum Number of UI</td><td>M</td><td></td><td>9233B</td><td></td><td>_</td><td></td></t<>	>Maximum Number of UI	M		9233B		_	
Timesion         Image: Constraint of the problem	Physical Channels per	101		0.2.0.00			
DL Physical Channel Information       1       1       YES       reject         Minimum Number of Timeslots per Frame       M       9.2.3.3A       For the DL       -         Minimum Spreading Factor       M       9.2.3.3A       For the DL       -         Minimum Spreading Frame       M       9.2.3.3C       -       -         VLCCTrCH Information       0       9.2.3.3C       -       -         VLCCTrCH Information       0       9.2.3.2C       -       -         VLCCTrCH ID       M       9.2.3.2       -       -         >Trename       M       9.2.1.63       For the UL.       -         >TFC Coding       M       9.2.3.11       -       -         >TFC Coding       M       9.2.1.63       For DCH and DSCH       -         >Puncture Limit       M       9.2.3.2       -       -         >TCT CS       M       9.2.3.11       -       -         >TCT CTCH ID       M       9.2.3.2       -       -         >TCT CT PCS       M       9.2.3.10       -       -         >TCT CTC Downlink Step       M       9.2.3.10       -       -         >TPC CCTrCH List       O to       CCTr	Timeslot						
InformationImage: Constraint of the second seco	DL Physical Channel		1			YES	reject
Maximum Number of Timeslots per Frame       M       9.2.3.3A       For the DL          >Minimum Spreading Factor       M       9.2.3.4A       For the DL          >Maximum Number of DL Physical Channels per Frame       M       9.2.3.3C           UL CCTrCH Information       0. <maxno ofCCTrCH s&gt;       For DCH and USCH       EACH       notify         &gt;CCTrCH ID       M       9.2.3.2           &gt;TFCS       M       9.2.3.11           &gt;TFCS       M       9.2.1.46       For the UL.          &gt;Puncture Limit       M       0.<maxno ofCCTrCH s&gt;       For DCH and DSCH       EACH       notify         &gt;CCTrCH ID       M       9.2.3.2            &gt;TFCS       M       9.2.3.11            &gt;CCTrCH ID       M       9.2.3.2             &gt;TFCS       M       9.2.3.2                         </maxno </maxno 	Information						,
Timeslos per Frame         M         9.2.3.4A         For the DL         -           >Maximum Number of DL Physical Channels per Frame         M         9.2.3.4A         For the DL         -           UL CCTrCH Information         0. <maxno ofCCTrCH S&gt;         For DCH and USCH         EACH         notify           &gt;CCTrCH ID         M         9.2.3.2         -         -         -           &gt;TFCS         M         9.2.1.63         For the UL         -         -           &gt;TFCI Coding         M         9.2.1.46         -         -         -           &gt;Puncture Limit         M         9.2.1.46         -         -         -           &gt;Puncture Limit         M         9.2.1.46         -         -         -           &gt;CCTrCH Information         0.<maxno ofCCTrCH s&gt;         For DCH and DSCH         -         -         -           &gt;TFCI Coding         M         9.2.3.2         -         -         -         -           &gt;TFCS         M         9.2.3.10         -         -         -         -           &gt;TFCI Coding         M         9.2.3.10         -         -         -         -           &gt;Puncture Limit         M         9.2.3.10         &lt;</maxno </maxno 	>Maximum Number of	Μ		9.2.3.3A	For the DL	_	
>Minimum Spreading FactorM9.2.3.4AFor the DL>Maximum Number of DL Physical Channels per FrameM9.2.3.3CUL CCTrCH Information0.0.For DCH and USCHEACH and USCHnotify>CCTrCH IDM9.2.3.2>TFCSM9.2.1.63For the UL>TFCSM9.2.1.46DL CCTrCH Information0.0.9.2.1.46>UL CCTrCH InformationM9.2.1.46>TFCSM0.9.2.1.46DL CCTrCH InformationM9.2.3.11>CTrCSM9.2.3.12>TCG CodingM9.2.3.11>TCG CodingM9.2.3.10>TPC CCTrCH IDM9.2.3.10>TPC CCTrCH List0 to cmaxnoC CTrCH>>TPC CCTrCH List0 to cmaxnoC CTrCH>>TPC CCTrCH List000.2.3.24DCH Information000.2.3.24>SCH Information000.2.3.24DCH Information000.2.3.24DCH Information000.2.3.24DCH Information000.2.3.34 <td< td=""><td>Timeslots per Frame</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	Timeslots per Frame						
FactorImage: constraint of the sector of the s	>Minimum Spreading	Μ		9.2.3.4A	For the DL	_	
Maximum Number of DL Physical Channels per FrameM9.2.3.3CP-UL CCTrCH Information0. 0. For DCH s>EACH and USCHnotifySCCTrCH IDM9.2.3.2>TFCSM9.2.1.63For the UL->TFCI CodingM9.2.1.46DL CCTrCH InformationM9.2.1.46>Puncture LimitM9.2.1.46DL CCTrCH Information0. 0. For DCH and DSCHEACH and DSCHnotify>CCTrCH IDM9.2.3.2>TFCSM9.2.3.2>TFCSM9.2.3.16For the DL->TFCSM9.2.3.10>TFC CodingM9.2.3.10>TFC CodingM9.2.3.10>TFC CCTrCH List0 to  <maxnoc </maxnoc  CTrCH>List of upink provide TPC->TFC CCTrCH List0 to <maxnoc </maxnoc  CTrCH>>TFC CCTrCH List0CCTrCH NDCH Information0DCH TDD Information 9.2.3.2AYESrejectDCH Information0SCH NYESrejectWork1>CCTrCH List0-SCH NSCH Information0DSCH N-YESrejectNCH Information09.2.3.441 N	Factor						
Physical Channels per Frame       Image: Section of CCTrCH       For DCH and USCH       EACH       notify         UL CCTrCH Information       M       9.2.3.2       -       -       -         >TFCS       M       9.2.1.63       For the UL.       -       -         >TFCI Coding       M       9.2.1.63       For the UL.       -       -         >Puncture Limit       M       9.2.1.46       -       -       -         DL CCTrCH Information       0 <maxno of CCTrCH       For DCH and DSCH       -       -       -         SCCTrCH ID       M       9.2.3.1       -       -       -       -         &gt;CCTrCH Information       0<maxno of CCTrCH       For DCH and DSCH       -       -       -       -         &gt;CCTrCH ID       M       9.2.3.10       -       -       -       -       -         &gt;TFCI Coding       M       9.2.3.10       -</maxno </maxno 	>Maximum Number of DL	Μ		9.2.3.3C		-	
FrameImage: constraint of the sector of the sec	Physical Channels per						
UL CCTrCH Information0maxno ofCCTrCH s>For DCH and USCHEACH and USCHnotify>CCTrCH IDM9.2.1.63For the UL>TFCSM9.2.1.61>TFCI CodingM9.2.1.46DL CCTrCH Information0 <maxno </maxno  ofCCTrCH s>For DCH and DSCHEACH -notifyDL CCTrCH IDM9.2.3.2>TFCSM9.2.3.2>TFCSM9.2.3.14>TFCSM9.2.3.14>TFCSM9.2.3.16>TFC CodingM9.2.3.10>TPC CCTrCH ListM9.2.3.10>TPC CCTrCH List0 to cmaxnoC CTrCH>>TPC CCTrCH List0 to cmaxnoC CTrCH>>TPC CCTrCH List0DCH Information0DCH TDD InformationDCH Information0-DSCH S2.3.2DCH Information0-DSCH TDD InformationYESrejectUSCH Information0-9.2.3.441USCH Information0DSCH Information0	Frame						
ofCCTrCH IDM $9.2.3.2$ $-$ >TFCSM $9.2.1.63$ For the UL. $-$ >TFCI CodingM $9.2.1.63$ For the UL. $-$ >Puncture LimitM $9.2.3.11$ $ -$ DL CCTrCH InformationM $9.2.1.46$ $ -$ >CCTrCH IDM $9.2.3.2$ $ -$ >TFCSM $9.2.3.2$ $ -$ >TFCSM $9.2.3.63$ For the DL. $-$ >TFCSM $9.2.3.63$ For the DL. $-$ >TFCI CodingM $9.2.3.11$ $ -$ >TFCI CodingM $9.2.3.10$ $ -$ >TDD TPC Downlink StepM $9.2.3.10$ $ -$ >TPC CCTrCH List $0$ to $cmaxnoCCTrCH->TPC CCTrCH List0 tocmaxnoCCTrCH->TPC CCTrCH IDM0 tocTrCH+->TPC CCTrCH IDM0 tocTrCH+->TPC CCTrCH IDM0 tocTrCH+-DCH Information0DCH TDDreject-DSCH Information009.2.3.24 -USCH Information09.2.3.441 -USCH Information 1  009.2.3.441  0 1  0 1 -$	UL CCTrCH Information		0 <maxno< td=""><td></td><td>For DCH</td><td>EACH</td><td>notify</td></maxno<>		For DCH	EACH	notify
>CCTrCH ID         M         9.2.3.2 $$ $>TFCS$ M         9.2.1.63         For the UL. $$ $>TFCI Coding$ M         9.2.3.11 $$ $$ $>Puncture Limit$ M         9.2.3.11 $$ $$ $DL CCTrCH Information$ $0<    DL CCTrCH ID         M         9.2.3.2            >CCTrCH ID         M         9.2.3.2            >TFCS         M         9.2.3.11            >TFCI Coding         M         9.2.3.10            >TPOC turburb Limit         M         9.2.3.10            >TPC COTrCH List         M         9.2.3.10            >TPC CCTrCH List         0 to cmaxnoC         CTrCH    >TPC CCTrCH ID         M         0 0    $			ofCCTrCH		and USCH		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			S>				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		M		9.2.3.2		_	
SPEC Coding         M         9.2.3.11            >Puncture Limit         M         9.2.1.46             DL CCTrCH Information         0smaxno ofCCTrCH         For DCH and DSCH         EACH         notify           >CCTrCH ID         M         9.2.3.2          -           >TFCS         M         9.2.3.11          -           >TFCI Coding         M         9.2.3.11          -           >Puncture Limit         M         9.2.3.10          -           >TDD TPC Downlink Step Size         M         9.2.3.10          -           >TPC CCTrCH List         M         9.2.3.10          -           >TPC CCTrCH List         M         9.2.3.10          -           >TPC CCTrCH List         N         O to (maxnoC CTrCH>         -         -         -           >TPC CCTrCH ID         M         CCTrCH ID         -         -         -         -           >TPC CCTrCH ID         M         CCTrCH ID         -         -         -         -           DCH Information         O         DCH TDD Information 9.2.3.2A         -         -         - </td <td>&gt;IFUS</td> <td>M</td> <td></td> <td>9.2.1.63</td> <td>For the UL.</td> <td>_</td> <td></td>	>IFUS	M		9.2.1.63	For the UL.	_	
Security     Image: Marking of Cerrich security     For DCH and DSCH     Image: Cerrich security     For DCH and DSCH     EACH     notify       >CCTrCH ID     M     9.2.3.2     -     -     -     -       >TFCS     M     9.2.1.63     For the DL.     -     -       >TFCI Coding     M     9.2.3.11     -     -       >TDD TPC Downlink Step     M     9.2.3.10     -     -       STDD TPC Downlink Step     M     9.2.3.10     -     -       STPC CCTrCH List     0 to <maxnoc CTrCH&gt;     List of uplink cmaxnoC CTrCH&gt;     -     -       &gt;TPC CCTrCH List     M     CCTrCH ID     -     -     -       &gt;STPC CCTrCH ID     M     CCTrCH ID     -     -     -       DCH Information     O     DCH TDD Information     -     -     -       DSCH Information     O     DSCH     YES     reject       Information     -     1     -     -     -       USCH Information     0     9.2.3.44A1     YES     reject       Information     -     -     -     -       DSCH Information     -     1     -     -       SCL Information     -     1     -     -       S</maxnoc 	>TFCI Coding	M		9.2.3.11			
DE CETTER InformationDescriptionPositionPositionPach and DSCHPositionPach and DSCHPosition> SCTrCH IDM9.2.3.2> TFCSM9.2.1.63For the DL> TFC CodingM9.2.3.10> TDD TPC Downlink Step SizeM9.2.3.10> TPC CCTrCH List0 to (maxnoc) CTrCH>List of uplink (CTrCH)> TPC CCTrCH List0 to (maxnoc) CTrCH>List of uplink (CTrCH)> TPC CCTrCH IDMCCTrCH (DDCH InformationODCH TDD (Information 9.2.3.2AYESreject-DSCH InformationODSCH (DLYESrejectUSCH Information09.2.3.4A1YESreject-Number offsetM9.2.1.49Number offsetM9.2.1.30	>Puncture Limit	IVI	0 (2000)	9.2.1.40			n otifu (
$\begin{array}{ c c c c c c c } & \text{and DSCIT} & \text{and DSCIT} & \text{and DSCIT} & \\ & \text{s} & \text{and DSCIT} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{TFCI Coding} & \text{M} & 9.2.3.2 & & & - & \\ & \text{s} & \text{For the DL} & - & & & \\ & \text{s} & \text{porture Limit} & \text{M} & 9.2.3.11 & & & - & \\ & \text{s} & \text{Puncture Limit} & \text{M} & 9.2.3.10 & & & - & \\ & \text{s} & \text{TDD TPC Downlink Step} & \text{M} & 9.2.3.10 & & & & - & \\ & \text{s} & \text{TDD TPC Downlink Step} & \text{M} & 9.2.3.10 & & & & & \\ & \text{s} & \text{s} & \text{c} & \text{c} & \text{c} & \text{c} & \text{c} & \text{c} & \\ & \text{s} & \text{s} & \text{c} & \text{c} & \text{c} & \text{c} & \text{s} & \\ & \text{s} & \\ & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & \text{s} & \\ & \text{s} & \text{s} & \text{s} & \text{s} & \text{s} & \\ & s$	DE CETTER Information		0 <iiiaxii0< td=""><td></td><td></td><td>EACH</td><td>notiry</td></iiiaxii0<>			EACH	notiry
>CCTrCH ID         M         9.2.3.2            >TFCS         M         9.2.1.63         For the DL.            >TTCI Coding         M         9.2.3.11             >Puncture Limit         M         9.2.3.10             >TDD TPC Downlink Step         M         9.2.3.10             >TDD TPC Downlink Step         M         9.2.3.10             >TPC CCTrCH List         0 to 0 to CCTrCH, which             >TPC CCTrCH List         0 to         CCTrCH, 9.2.3.2              >TPC CCTrCH ID         M         CCTrCH, 9.2.3.2              DCH Information         O         DCH TDD, 9.2.3.2         YES         reject           DSCH Information         O         9.2.3.4             USCH Information         O         9.2.3.44A1         YES         reject           Information         -         9.2.3.44A1         YES         reject           USCH Information         0         9.2.3.44A1         YES         reject <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
>TFCS         M         9.2.1.63         For the DL.         -           >TFCI Coding         M         9.2.1.3         For the DL.         -           >Puncture Limit         M         9.2.1.46         -         -           >TDD TPC Downlink Step Size         M         9.2.3.10         -         -           >TPC CCTrCH List         M         9.2.3.10         -         -           >TPC CCTrCH List         0 to (maxnoC CTrCH>         List of uplink CCTrCH         -         -           >TPC CCTrCH ID         M         CCTrCH>         -         -         -           >STPC CCTrCH ID         M         CCTrCH>         -         -         -           DCH Information         O         DCH TDD Information         YES         reject           DSCH Information         O         9.2.3.2A         -         -           USCH Information         O         9.2.3.3a         -         -           USCH Information         O         9.2.3.14A1         YES         reject           Standard         -         9.2.3.3a         -         -           USCH Information         -         9.2.3.14A1         YES         reject           Stando		М	07	9232			
>TFCI Coding         M         9.2.3.11         -           >Puncture Limit         M         9.2.3.11         -           >TDD TPC Downlink Step Size         M         9.2.3.10         -           >TPC CCTrCH List         0 to <maxnoc CTrCH&gt;         List of uplink CCTrCH which provide TPC         -           &gt;TPC CCTrCH ID         M         CCTrCH&gt;         List of uplink CCTrCH Which provide TPC         -           &gt;TPC CCTrCH ID         M         CCTrCH&gt;         -         -           DCH Information         O         DCH TDD Information         YES         reject           DSCH Information         O         9.2.3.24         YES         reject           USCH Information         O         9.2.3.34         YES         reject           USCH Information         O         9.2.3.34         YES         reject           USCH Information         O         9.2.3.34         YES         reject           USCH Information         O         9.2.3.44A1         YES         reject           S         1         -         -         -         -           VES PC-Id         M         9.2.1.49         -         -           SC-Id         M         9.2.1.30</maxnoc 	STECS	M		92163	For the DI		
>Puncture LimitM9.2.1.46->TDD TPC Downlink Step SizeM9.2.3.10->TPC CCTrCH List0 to <maxnoc </maxnoc  CTrCH>List of uplink CCTrCH which provide TPC->TPC CCTrCH listMCCTrCH>->TPC CCTrCH listMCCTrCH>->TPC CCTrCH listMCCTrCH 9.2.3.2-DCH InformationODCH TDD 9.2.3.2YESDCH InformationODCH TDD 9.2.3.2AYESDSCH InformationODSCH 9.2.3.3aYESUSCH InformationO9.2.3.14A1 9.2.3.3aYESUSCH InformationO9.2.3.14A1 9.2.3.3aYESUSCH InformationI1YESPC-IdM9.2.1.49->RL IDM9.2.1.6->Frame OffsetM9.2.1.30-	>TFCL Coding	M		92311	TOT TO DE.		
>TDD TPC Downlink Step SizeM9.2.3.10->TPC CCTrCH List0 to <maxnoc </maxnoc  CTrCH>List of uplink CCTrCH which provide TPC->>TPC CCTrCH IDMCCTrCH ID 9.2.3.2DCH InformationODCH TDD 10YESrejectDSCH InformationODSCH 9.2.3.2YESrejectDSCH InformationO9.2.3.44A1 9.2.3.3aYESrejectUSCH InformationO9.2.3.44A1 5YESrejectRL Information1YESreject>RL IDM9.2.1.49>CIdM9.2.1.60>Frame OffsetM9.2.1.30	>Puncture Limit	M		9.2.1.46		_	
SizeImage: SizeImage: SizeImage: SizeImage: SizeImage: SizeImage: Size>TPC CCTrCH List0 to <maxnoc </maxnoc  CTrCH>Ist of uplink cCTrCH U>>TPC CCTrCH IDMCCTrCH U9.2.3.2DCH InformationODCH TDD uDCH TDD uYESrejectDSCH InformationODCH TDD uYESrejectDSCH InformationOSCH uDSCH uYESrejectUSCH InformationO9.2.3.24YESrejectUSCH InformationO9.2.3.34YESrejectDSCH InformationO9.2.3.44A1 SYESrejectVES InformationO9.2.3.44A1 SYESrejectSRL IDM9.2.1.49>C-IdM9.2.1.6>Frame OffsetM9.2.1.30	>TDD TPC Downlink Step	M		9.2.3.10		_	
>TPC CCTrCH List0 to <maxnoc </maxnoc  CTrCH>List of uplink CCTrCH which provide TPC->>TPC CCTrCH IDMCCTrCH ID 9.2.3.2DCH InformationODCH TDD Information 9.2.3.2YESrejectDCH InformationODSCH Information 9.2.3.3aYESrejectDSCH InformationO9.2.3.2YESrejectDSCH InformationODSCH 100YESrejectDSCH InformationO9.2.3.3aYESrejectIUSCH InformationO9.2.3.44A1 5YESrejectRL Information1YESreject>RL IDM9.2.1.49>CIdM9.2.1.6>Frame OffsetM9.2.1.30	Size			0.2.0.10			
  >>TPC CCTrCH IDM  CCTrCH>CCTrCH which provide TPC->>TPC CCTrCH IDMCCTrCH ID 9.2.3.2DCH InformationODCH TDD Information 9.2.3.2AYESrejectDSCH InformationODSCH 100 9.2.3.2AYESrejectDSCH InformationODSCH 100 100YESrejectDSCH InformationO9.2.3.2AYESrejectDSCH InformationO9.2.3.3a-YESrejectUSCH InformationO9.2.3.14A1 5YESrejectRL InformationI-YESrejectSRL IDM9.2.1.49>CIdM9.2.1.6>Frame OffsetM9.2.1.30	>TPC CCTrCH List		0 to		List of uplink	_	
CTrCH>which provide TPC >>TPC CCTrCH IDMCCTrCH ID 9.2.3.2DCH InformationODCH TDD Information 9.2.3.2AYESDCH InformationODCH TDD Information 9.2.3.2AYESDSCH InformationODSCH TDD Information 9.2.3.3aYESUSCH InformationOSCH 9.2.3.3aYESUSCH InformationO9.2.3.14A1 9.2.3.3aYESVES11VESRL Information1YES>RL IDM9.2.1.49>CldM9.2.1.30-			<maxnoc< td=""><td></td><td>CCTrCH</td><td></td><td></td></maxnoc<>		CCTrCH		
>>TPC CCTrCH IDMCCTrCH ID 9.2.3.2DCH InformationODCH TDD Information 9.2.3.2AYESrejectDSCH InformationODSCH Information 9.2.3.2AYESrejectDSCH InformationODSCH Information 9.2.3.3AYESrejectUSCH InformationO9.2.3.2AYESrejectUSCH InformationO9.2.3.3AYESrejectUSCH InformationO9.2.3.3AVSCH InformationO9.2.3.44A1SectrejectSRL IDM9.2.1.49>CldM9.2.1.6>Frame OffsetM9.2.1.30			CTrCH>		which		
>>TPC CCTrCH IDMCCTrCH ID 9.2.3.2-DCH InformationODCH TDD Information 9.2.3.2AYESrejectDSCH InformationODSCH TDD Information 9.2.3.3aYESrejectUSCH InformationO9.2.3.14A1 5YESrejectRL InformationO9.2.3.14A1 5YESreject>RL InformationIIYESreject>RL IDM9.2.1.49-I>CIdM9.2.1.6-I>Frame OffsetM9.2.1.30-					provide TPC		
ID 9.2.3.2ID 9.2.3.2ID 9.2.3.2DCH Information DSCH InformationODCH TDD Information 9.2.3.2AYESrejectDSCH Information USCH InformationODSCH TDD Information 9.2.3.3aYESrejectUSCH Information PO9.2.3.14A1 5YESrejectRL Information >RL IDM9.2.1.49->C-IdM9.2.1.6->Frame OffsetM9.2.1.30-	>>TPC CCTrCH ID	Μ		CCTrCH		_	
DCH InformationODCH TDD Information 9.2.3.2AYESrejectDSCH Information DSCH InformationODSCH TDD Information 9.2.3.2AYESrejectDSCH Information DSCH TDD Information 9.2.3.3aYESrejectUSCH Information PO9.2.3.44A1 5YESrejectRL Information >RL IDM9.2.1.49>C-IdM9.2.1.6>Frame OffsetM9.2.1.30				ID			
DCH InformationODCH TDD Information 9.2.3.2AYESrejectDSCH InformationODSCH TDD Information 9.2.3.3aYESrejectUSCH InformationODSCH TDD Information 9.2.3.3aYESrejectUSCH InformationO9.2.3.14A1 5YESrejectRL InformationIIYESreject>RL IDM9.2.1.49-Image: Comparison of the sect				9.2.3.2			
Information 9.2.3.2AInformation 9.2.3.2AYESrejectDSCH Information USCH Information PODSCH TDD Information 9.2.3.3aYESrejectUSCH Information PO9.2.3.14A1 5YESrejectRL Information >RL IDM9.2.1.49-YES>RL IDM9.2.1.6>Frame OffsetM9.2.1.30	DCH Information	0		DCH TDD		YES	reject
DSCH InformationODSCH TDD Information 9.2.3.3aYESrejectUSCH Information SCHO9.2.3.3aYESrejectUSCH Information SRL IDO9.2.3.14A1 5YESrejectSRL IDM9.2.1.49-YES>CldM9.2.1.6->Frame OffsetM9.2.1.30-				Information			
DSCH monitationODSCH TDD Information 9.2.3.3aYESrejectUSCH Information SCHO9.2.3.44A1 5YESrejectRL InformationO9.2.3.144A1 5YESrejectSRL IDM9.2.1.49>C-IdM9.2.1.6>Frame OffsetM9.2.1.30	DSCH Information			9.2.3.2A		VES	roject
Information 9.2.3.3aYESUSCH Information 9.2.3.3a9.2.3.44A1 5YESRL Information09.2.3.44A1 5YESRL Information1YES>RL IDM9.2.1.49>C-IdM9.2.1.6>Frame OffsetM9.2.1.30						IES	reject
Information9.2.3.3aUSCH InformationO9.2.3.44A1 5YESrejectRL Information1YESreject>RL IDM9.2.1.49->C-IdM9.2.1.6->Frame OffsetM9.2.1.30-				Information			
USCH Information         O         9.2.3.44A1         YES         reject           RL Information         1         YES         reject           >RL ID         M         9.2.1.49         -           >C-Id         M         9.2.1.6         -           >Frame Offset         M         9.2.1.30         -				92332			
RL Information         1         YES         reject           >RL ID         M         9.2.1.49         -           >C-Id         M         9.2.1.6         -           >Frame Offset         M         9.2.1.30         -	USCH Information	0		923 <u>14A</u> 1		YES	reject
RL Information         1         YES         reject           >RL ID         M         9.2.1.49         -         -           >C-Id         M         9.2.1.6         -         -           >Frame Offset         M         9.2.1.30         -         -		Ĭ		5		.20	10,000
>RL ID         M         9.2.1.49         -           >C-Id         M         9.2.1.6         -           >Frame Offset         M         9.2.1.30         -	RL Information		1			YES	reject
>C-Id         M         9.2.1.6         -           >Frame Offset         M         9.2.1.30         -	>RL ID	М		9.2.1.49		_	
>Frame Offset M 9.2.1.30 –	>C-ld	М		9.2.1.6		_	
	>Frame Offset	М		9.2.1.30		—	

>Primary CCPCH RSCP	0	9.2.3.5	—	
>DL Time Slot ISCP Info	0	9.2.3.2D		

Range bound	Explanation
MaxnoofCCTrCHs	Maximum number of CCTrCH for one UE.

## 9.1.11.2 TDD Message

IE/Group Name	Presence	Range	IE Type	Semantics	Criticality	Assigned
			and	Description		Criticality
			Reference			
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
Allowed Queuing Time	0		9.2.1.2		YES	reject
UL CCTrCH to Add		0 <maxno< td=""><td></td><td>For DCH and</td><td>EACH</td><td>notify</td></maxno<>		For DCH and	EACH	notify
		OTCCTTCH		USCH		
	N.4	\$>	0.0.0.0			
	M		9.2.3.2	E a a da a dall	_	
>IFCS	IVI N4		9.2.1.63	For the UL.	_	
>TFCI Coding	IVI NA		9.2.3.11			
>Puncture Limit	IVI	0	9.2.1.40		-	
OL COTTOR to Modify					EACH	notiry
		S				
>CCTrCH ID	М	02	9232		_	
>TECS	0		92163	For the UI	_	
>TECI Coding	0		9.2.3.11		_	
>Puncture Limit	0		9.2.1.46		_	
UL CCTrCH toDdelete	-	0 <maxno< td=""><td></td><td></td><td>EACH</td><td>notify</td></maxno<>			EACH	notify
		ofCCTrCH			-	
		s>				
>CCTrCH ID	М		9.2.3.2		-	
DL CCTrCH to Add		0 <maxno< td=""><td></td><td>For DCH and</td><td>EACH</td><td>notify</td></maxno<>		For DCH and	EACH	notify
		ofCCTrCH		DSCH		
		S>				
>CCTrCH ID	М		9.2.3.2		—	
>TFCS	М		9.2.1.63	For the DL.	_	
>TFCI Coding	М		9.2.3.11		-	
>Puncture Limit	М		9.2.1.46		—	
>TPC CCTrCH List		0 to		List of uplink	-	
		<maxnoc< td=""><td></td><td>CCIrCH</td><td></td><td></td></maxnoc<>		CCIrCH		
				which provide TPC		
	NA			provide TPC		
>>TFC CCTICITID	171				_	
			9232			
DL CCTrCH to Modify		0 <maxno< td=""><td>0.2.0.2</td><td></td><td>EACH</td><td>notify</td></maxno<>	0.2.0.2		EACH	notify
,		ofCCTrCH			_/	nomy
		S>				
>CCTrCH ID	М		9.2.3.2		—	
>TFCS	0		9.2.1.63	For the DL.	_	
>TFCI Coding	0		9.2.3.11		_	
>Puncture Limit	0		9.2.1.46		_	
>TPC CCTrCH List		0 to		List of uplink	-	
		<maxnoc< td=""><td></td><td>CCTrCH</td><td></td><td></td></maxnoc<>		CCTrCH		
		CTrCH>		which		
				provide TPC		
>>TPC CCTICH ID	IVI				_	
DL CCTrCH to Delete		0 < maxmo	9.2.3.3		EACH	notify
DE COTTOIT lo Delete		ofCCTrCH			LACIT	notity
		s>				
>CCTrCH ID	м		9.2.3.2		_	
DCHs to Modify	0		TDD DCHs		YES	reiect
			to Modify			· <b>,</b>
			9.2.3.8B			
DCHs to Add	0		DCH TDD		YES	reject
			Information			
			9.2.3.2A			
DCHs to Delete		0 <maxno< td=""><td></td><td></td><td>GLOBAL</td><td>reject</td></maxno<>			GLOBAL	reject

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
		ofDCHs>				
>DCH ID	М		9.2.1.16		—	
DSCHs to Modify		0 <maxno ofDSCHs&gt;</maxno 			GLOBAL	reject
>DSCH ID	М		9.2.1.26A		_	
>CCTrCH Id	0		9.2.3.2	DL CCTrCH in which the DSCH is mapped.	-	
>TrCh Source Statistics Descriptor	0		9.2.1.65		-	
>Transport Format Set	0		9.2.1.64		-	
>Allocation/Retention Priority	0		9.2.1.1		_	
>Scheduling Priority Indicator	0		9.2.1.51A		-	
>BLER	0		9.2.1.4		_	
>Transport Bearer Request Indicator	М		9.2.1.61		_	
DSCHs to Add	0		DSCH TDD Information 9.2.3.3a		YES	reject
DSCHs to Delete		0 <maxno ofDSCHs&gt;</maxno 			GLOBAL	reject
>DSCH ID	М		9.2.1.26A		_	
USCHs to Modify		0 <maxno ofUSCHs&gt;</maxno 			GLOBAL	reject
>USCH ID	М		9.2.3.14		-	
>CCTrCH Id	0		9.2.3.2	UL CCTrCH in which the USCH is mapped.	_	
>TrCh Source Statistics Descriptor	0		9.2.1.65		_	
>Transport Format Set	0		9.2.1.64		-	
>Allocation/Retention Priority	0		9.2.1.1		-	
>Scheduling Priority Indicator	0		9.2.1.51A		_	
>BLER	0		9.2.1.4		_	
>Transport Bearer Request Indicator	M		9.2.1.61		_	
>RB Info		0 to <maxnoof RB&gt;</maxnoof 		All Radio Bearers using this USCH	_	
>>RB Identity	Μ		9.2.3.5B		-	
USCHs to Add	0		USCH Information 9.2.3. <del>14A<u>1</u> 5</del>		YES	reject
USCHs to Delete		0 <maxno ofUSCHs&gt;</maxno 			GLOBAL	reject
>USCH ID	М		9.2.3.14		-	

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

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for a UE.
MaxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.
MaxnoofDSCHs	Maximum number of DSCHs for one UE.
MaxnoofUSCHs	Maximum number of USCHs for one UE.

## 9.2.3.14A15 USCH Information

The USCH Information IE provides information for USCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
USCH Information		1 to <maxnoof USCHs&gt;</maxnoof 			-	
>USCH ID	М		9.2.3.14		-	
>CCTrCH ID	М		9.2.3.2	UL CCTrCH in which the USCH is mapped	-	
>TrCh Source Statistics Descriptor	М		9.2.1.65		-	
>Transport Format Set	Μ		9.2.1.64	For USCH	_	
>Allocation/Retention Priority	Μ		9.2.1.1		_	
>Scheduling Priority Indicator	М		9.2.1.51A		_	
>BLER	Μ		9.2.1.4			
>RB Info		1 to <maxnoof RB&gt;</maxnoof 		All Radio Bearers using this USCH	_	
>>RB Identity	Μ		9.2.3.5B		-	

Range bound	Explanation
MaxnoofUSCHs	Maximum number of USCHs for one UE.
MaxnoofRBs	Maximum number of Radio Bearers for one UE.

#### 9.3.3 **PDU Definitions** \_ \_ -- PDU definitions for RNSAP. \_\_\_ RNSAP-PDU-Contents { itu-t (0) identified-organization (4) etsi (0) mobileDomain (0) umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-PDU-Contents (1) } DEFINITIONS AUTOMATIC TAGS ::= BEGIN \_\_\_\_ -- IE parameter types from other modules. \_ \_ IMPORTS Active-Pattern-Sequence-Information, AllocationRetentionPriority, AllowedQueuingTime, AlphaValue, BLER, Block-STTD-Indicator, BindingID, C-ID, C-RNTI, CCTrCH-ID, CFN, ClosedLoopModel-SupportIndicator, ClosedLoopMode2-SupportIndicator, Closedlooptimingadjustmentmode, CN-CS-DomainIdentifier, CN-PS-DomainIdentifier, CNDomainType, Cause, CellParameterID, ChipOffset, CriticalityDiagnostics, D-RNTI, D-RNTI-ReleaseIndication, DCH-FDD-Information, DCH-ID, DCH-InformationResponse, DCH-TDD-Information, DL-DPCH-SlotFormat,

DL-TimeslotISCP, DL-Power. DL-ScramblingCode. DL-Timeslot-Information, DL-TimeSlot-ISCP-Info, DPCH-ID, DRACControl, DRXCycleLengthCoefficient, DedicatedMeasurementType, DedicatedMeasurementValue, DedicatedMeasurementValueInformation, DiversityControlField, DiversityMode, DSCH-FDD-Information, DSCH-FDD-InformationResponse, DSCH-FlowControlInformation, DSCH-FlowControlItem, DSCH-TDD-Information, DSCH-ID, SchedulingPriorityIndicator, FACH-FlowControlInformation, FDD-DCHs-to-Modify, FDD-DL-ChannelisationCodeNumber, FDD-DL-CodeInformation, FDD-S-CCPCH-Offset, FDD-TPC-DownlinkStepSize, FirstRLS-Indicator, FNReportingIndicator, FrameHandlingPriority, FrameOffset, GA-AccessPointPosition, GA-Cell, IMSI, InnerLoopDLPCStatus, L3-Information, LimitedPowerIncrease, MaximumAllowedULTxPower, MaxNrDLPhysicalchannels, MaxNrOfUL-DPCHs, MaxNrTimeslots, MaxNrULPhysicalchannels, MeasurementFilterCoefficient, MeasurementID, MidambleShiftAndBurstType, MinimumSpreadingFactor, MinUL-ChannelisationCodeLength, MultiplexingPosition, Neighbouring-GSM-CellInformation, Neighbouring-UMTS-CellInformation, NrOfDLchannelisationcodes, PagingCause, PagingRecordType, PDSCHCodeMapping,

PayloadCRC-PresenceIndicator, PowerAdjustmentType, PowerOffset. PrimaryCCPCH-RSCP, PrimaryCPICH-EcNo, PrimaryCPICH-Power, PrimaryScramblingCode, PropagationDelay, PunctureLimit, QE-Selector, RANAP-RelocationInformation, RB-Info, RL-ID, RL-Set-ID, RNC-ID, RepetitionLength, RepetitionPeriod, ReportCharacteristics, Received-total-wide-band-power, RxTimingDeviationForTA, S-FieldLength, S-RNTI, SCH-TimeSlot, SAI, SN, Secondary-CCPCH-Info, SSDT-CellID, SSDT-CellID-Length, SSDT-Indication, SSDT-SupportIndicator, STTD-Indicator, STTD-SupportIndicator, AdjustmentPeriod, ScaledAdjustmentRatio, MaxAdjustmentStep, SecondaryCCPCH-SlotFormat, SyncCase, TDD-ChannelisationCode, TDD-DCHs-to-Modify, TDD-DL-Code-Information, TDD-DPCHOffset, TDD-PhysicalChannelOffset, TDD-TPC-DownlinkStepSize, TDD-UL-Code-Information, TFCI-Coding, TFCI-Presence, TFCI-SignallingMode, TimeSlot, TimingAdvanceApplied, TOAWE, TOAWS, TransmitDiversityIndicator, TransportBearerID,

```
TransportBearerRequestIndicator,
    TFCS,
    Transmission-Gap-Pattern-Sequence-Information,
    Transmission-Gap-Pattern-Sequence-ScramblingCode-Information,
    TransportFormatManagement,
    TransportFormatSet,
    TransportLayerAddress,
    TrCH-SrcStatisticsDescr,
    UARFCN,
    UC-ID,
    UL-DPCCH-SlotFormat,
    UL-SIR,
    UL-FP-Mode,
    UL-PhysCH-SF-Variation,
    UL-ScramblingCode,
    UL-Timeslot-Information,
    UL-TimeSlot-ISCP-Info,
    URA-ID,
    URA-Information,
    USCH-ID,
    USCH-Information
FROM RNSAP-IEs
    PrivateIE-Container{},
    ProtocolExtensionContainer{},
    ProtocolIE-ContainerList{},
    ProtocolIE-ContainerPair{},
    ProtocolIE-ContainerPairList{},
    ProtocollE-Container{},
    ProtocolIE-Single-Container{},
    RNSAP-PRIVATE-IES,
    RNSAP-PROTOCOL-EXTENSION,
    RNSAP-PROTOCOL-IES,
    RNSAP-PROTOCOL-IES-PAIR
FROM RNSAP-Containers
    maxNoOfDSCHs,
    maxNoOfUSCHs,
    maxNrOfCCTrCHs,
    maxNrOfDCHs,
    maxNrOfTS,
    maxNrOfDPCHs,
    maxNrOfRLs,
    maxNrOfRLSets,
    maxNrOfRLs-1,
    maxNrOfRLs-2,
```

id-Active-Pattern-Sequence-Information, id-AdjustmentRatio, id-AllowedQueuingTime, id-BindingID,

maxNrOfULTs,
maxNrOfDLTs,

id-C-ID. id-C-RNTI. id-CFN. id-CFNReportingIndicator, id-CN-CS-DomainIdentifier. id-CN-PS-DomainIdentifier, id-Cause, id-CauseLevel-RL-AdditionFailureFDD, id-CauseLevel-RL-AdditionFailureTDD. id-CauseLevel-RL-ReconfFailure, id-CauseLevel-RL-SetupFailureFDD, id-CauseLevel-RL-SetupFailureTDD, id-ClosedLoopModel-SupportIndicator, id-ClosedLoopMode2-SupportIndicator, id-CNOriginatedPage-PagingRgst, id-CriticalityDiagnostics, id-D-RNTI. id-D-RNTI-ReleaseIndication, id-DCHs-to-Add-FDD, id-DCHs-to-Add-TDD, id-DCH-DeleteList-RL-ReconfPrepFDD, id-DCH-DeleteList-RL-ReconfPrepTDD, id-DCH-DeleteList-RL-ReconfRqstFDD, id-DCH-DeleteList-RL-ReconfRgstTDD, id-DCH-FDD-Information, id-DCH-TDD-Information. id-FDD-DCHs-to-Modify, id-TDD-DCHs-to-Modify, id-DCH-InformationResponse, id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationListIE-RL-ReconfReadvTDD, id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD, id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRgstTDD, id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD, id-DL-CCTrCH-InformationListIE-PhyChReconfRgstTDD, id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD, id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD, id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD, id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD, id-DL-CCTrCH-InformationList-RL-SetupRgstTDD, id-FDD-DL-CodeInformation, id-DL-DPCH-Information-RL-ReconfPrepFDD, id-DL-DPCH-Information-RL-SetupRqstFDD, id-DL-DPCH-Information-RL-ReconfRqstFDD, id-DL-DPCH-InformationItem-PhyChReconfRgstTDD, id-DL-DPCH-InformationItem-RL-AdditionRspTDD, id-DL-DPCH-InformationItem-RL-SetupRspTDD, id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD,

19

3GPP

id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD, id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD, id-DL-Physical-Channel-Information-RL-SetupRgstTDD. id-DLReferencePower. id-DLReferencePowerList-DL-PC-Rqst, id-DL-ReferencePowerInformation-DL-PC-Rost, id-DRXCycleLengthCoefficient, id-DedicatedMeasurementObjectType-DM-Rprt, id-DedicatedMeasurementObjectType-DM-Rqst, id-DedicatedMeasurementObjectType-DM-Rsp, id-DedicatedMeasurementType, id-DSCHs-to-Add-FDD, id-DSCHs-to-Add-TDD. id-DSCH-DeleteList-RL-ReconfPrepTDD, id-DSCH-Delete-RL-ReconfPrepFDD, id-DSCH-FDD-Information. id-DSCH-InformationListIE-RL-AdditionRspTDD, id-DSCH-InformationListIEs-RL-SetupRspTDD, id-DSCH-TDD-Information, id-DSCH-FDD-InformationResponse, id-DSCH-ModifyList-RL-ReconfPrepTDD, id-DSCH-Modify-RL-ReconfPrepFDD, id-DSCHsToBeAddedOrModified-FDD, id-DSCHToBeAddedOrModifiedList-RL-ReconfReadvTDD, id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD, id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD, id-GA-AccessPointPosition, id-GA-Cell, id-IMSI, id-InnerLoopDLPCStatus, id-L3-Information, id-AdjustmentPeriod, id-MaxAdjustmentStep, id-MeasurementFilterCoefficient, id-MeasurementID, id-Neighbouring-GSM-CellInformation, id-PagingArea-PagingRqst, id-FACH-FlowControlInformation, id-PowerAdjustmentType, id-ProcedureScope-DL-PC-Rqst, id-PropagationDelay, id-RANAP-RelocationInformation. id-RL-Information-PhyChReconfRqstFDD, id-RL-Information-PhyChReconfRqstTDD, id-RL-Information-RL-AdditionRgstFDD, id-RL-Information-RL-AdditionRqstTDD, id-RL-Information-RL-DeletionRgst, id-RL-Information-RL-FailureInd, id-RL-Information-RL-ReconfPrepFDD, id-RL-Information-RL-RestoreInd, id-RL-Information-RL-SetupRqstFDD, id-RL-Information-RL-SetupRqstTDD, id-RL-InformationItem-DM-Rprt,

id-RL-InformationItem-DM-Rqst, id-RL-InformationItem-DM-Rsp. id-RL-InformationItem-RL-PreemptRequiredInd. id-RL-InformationItem-RL-SetupRgstFDD, id-RL-InformationList-RL-AdditionRqstFDD, id-RL-InformationList-RL-DeletionRgst, id-RL-InformationList-RL-PreemptRequiredInd, id-RL-InformationList-RL-ReconfPrepFDD, id-RL-InformationResponse-RL-AdditionRspTDD, id-RL-InformationResponse-RL-ReconfReadvTDD, id-RL-InformationResponse-RL-ReconfRspTDD, id-RL-InformationResponse-RL-SetupRspTDD, id-RL-InformationResponseItem-RL-AdditionRspFDD, id-RL-InformationResponseItem-RL-ReconfReadvFDD. id-RL-InformationResponseItem-RL-ReconfRspFDD, id-RL-InformationResponseItem-RL-SetupRspFDD, id-RL-InformationResponseList-RL-AdditionRspFDD, id-RL-InformationResponseList-RL-ReconfReadyFDD, id-RL-InformationResponseList-RL-ReconfRspFDD, id-RL-InformationResponseList-RL-SetupRspFDD, id-RL-ReconfigurationFailure-RL-ReconfFail, id-RL-Set-InformationItem-DM-Rprt, id-RL-Set-InformationItem-DM-Rqst, id-RL-Set-InformationItem-DM-Rsp, id-RL-Set-Information-RL-FailureInd, id-RL-Set-Information-RL-RestoreInd. id-ReportCharacteristics, id-Reporting-Object-RL-FailureInd, id-Reporting-Object-RL-RestoreInd, id-RxTimingDeviationForTA, id-S-RNTI, id-SAI, id-SRNC-ID, id-STTD-SupportIndicator, id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD, id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD, id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD, id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD, id-timeSlot-ISCPList-DL-PC-Rgst-TDD, id-TransportBearerID, id-TransportBearerRequestIndicator, id-TransportLayerAddress, id-UC-ID, id-Transmission-Gap-Pattern-Sequence-Information, id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD, id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD, id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD, id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD, id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD, id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD, id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD, id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD, id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,

21

3GPP

id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD, id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD, id-UL-CCTrCH-InformationList-RL-SetupRgstTDD. id-UL-CCTrCH-InformationListIE-PhyChReconfRgstTDD, id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD, id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD, id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD, id-UL-DPCH-Information-RL-ReconfPrepFDD, id-UL-DPCH-Information-RL-ReconfRqstFDD, id-UL-DPCH-Information-RL-SetupRqstFDD, id-UL-DPCH-InformationItem-PhyChReconfRqstTDD, id-UL-DPCH-InformationItem-RL-AdditionRspTDD, id-UL-DPCH-InformationItem-RL-SetupRspTDD, id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD, id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD, id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD, id-UL-Physical-Channel-Information-RL-SetupRgstTDD, id-UL-SIRTarget, id-URA-Information, id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD, id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD, id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD, id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD, id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD. id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD, id-USCHs-to-Add. id-USCH-DeleteList-RL-ReconfPrepTDD, id-USCH-InformationListIE-RL-AdditionRspTDD, id-USCH-InformationListIEs-RL-SetupRspTDD, id-USCH-Information, id-USCH-ModifyList-RL-ReconfPrepTDD, id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD

FROM RNSAP-Constants;

## <Editor's note: Parts of the module is skipped.>

*	* * * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * * *	* * *		
R.	ADIO LINK SETUP RESPONSE FDD				
*	* * * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * * *	* * *		
Radi	oLinkSetupResponseFDD ::= SEQUE	NCE {			
	protocolles protocolExtensions	ProtocolExtensionContainer	{{RadioLinkSetupResponseFDD-II	tensions}}	OPTIONAL.
					of froming
}					
Radi	oLinkSetupResponseFDD-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 }	

Release 1999 23 3GPP TS 25.423 V3.4.0 (2000-12) ID id-RL-InformationResponseList-RL-SetupRspFDD CRITICALITY ignore TYPE RL-InformationResponseList-RL-SetupRspFDD PRESENCE mandatory } ID id-UL-SIRTarget CRITICALITY ignore TYPE UL-SIR PRESENCE optional } CRITICALITY ignore TYPE CriticalityDiagnostics ID id-CriticalityDiagnostics PRESENCE optional }. . . . } ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationResponseItemIEs-RL-InformationResponseList-RL-SetupRspFDD RL-SetupRspFDD} } RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= { { ID id-RL-InformationResponseItem-RL-SetupRspFDD CRITICALITY ignore TYPE RL-InformationResponseItem-RL-SetupRspFDD PRESENCE mandatory } RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE { rL-ID RL-ID. rL-Set-ID RL-Set-ID, uRA-Information URA-Information, sAI SAI, qA-Cell GA-Cell OPTIONAL, gA-AccessPointPosition GA-AccessPointPosition OPTIONAL. received-total-wide-band-power Received-total-wide-band-power, secondary-CCPCH-Info Secondary-CCPCH-Info OPTIONAL, dl-CodeInformation FDD-DL-CodeInformation, diversityIndication DiversityIndication-RL-SetupRspFDD, -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in -- the tabular message format in subclause 9.1. sSDT-SupportIndicator SSDT-SupportIndicator, maxUL-SIR UL-SIR, minUL-SIR UL-SIR, closedlooptimingadjustmentmode Closedlooptimingadjustmentmode OPTIONAL, maximumAllowedULTxPower MaximumAllowedULTxPower, maximumDLTxPower DL-Power, minimumDLTxPower DL-Power, primaryScramblingCode PrimaryScramblingCode OPTIONAL, uL-UARFCN UARFCN OPTIONAL, dL-UARFCN UARFCN OPTIONAL, primaryCPICH-Power PrimaryCPICH-Power OPTIONAL, dSCHInformationResponse DSCH-InformationResponse-RL-SetupRspFDD OPTIONAL, neighbouring-UMTS-CellInformation Neighbouring-UMTS-CellInformation OPTIONAL, Neighbouring-GSM-CellInformation-RL-SetupRspFDD OPTIONAL, neighbouring-GSM-CellInformation iE-Extensions ProtocolExtensionContainer { {RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL, . . . RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { . . . } DiversityIndication-RL-SetupRspFDD ::= CHOICE { combining Combining-RL-SetupRspFDD, nonCombiningOrFirstRL NonCombiningOrFirstRL-RL-SetupRspFDD

```
Combining-RL-SetupRspFDD ::= SEQUENCE {
   rL-ID
                              RL-ID.
   iE-Extensions
                              ProtocolExtensionContainer { { CombiningItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    . . .
}
CombiningItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
NonCombiningOrFirstRL-RL-SetupRspFDD ::= SEQUENCE {
   dCH-InformationResponse
                              DCH-InformationResponse,
   iE-Extensions
                              ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    . . .
}
NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DSCH-InformationResponse-RL-SetupRspFDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseIE-RL-SetupRspFDD }}
DSCH-InformationResponseIE-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DSCH-FDD-InformationResponse CRITICALITY ignore TYPE
                                                                    DSCH-FDD-InformationResponse PRESENCE mandatory }
}
Neighbouring-GSM-CellInformation-RL-SetupRspFDD ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-CellInformationItem-RL-SetupRspFDD }}
Neighbouring-GSM-CellInformationItem-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
   { ID id Neighbouring GSM CellInformation CRITICALITY ignore TYPE Neighbouring GSM CellInformation PRESENCE mandatory }
+
RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
     _ _
-- RADIO LINK SETUP RESPONSE TDD
      RadioLinkSetupResponseTDD ::= SEQUENCE {
                                                            {{RadioLinkSetupResponseTDD-IEs}},
   protocolIEs
                                  ProtocolIE-Container
   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 }
```

Release 1999 25 3GPP TS 25.423 V3.4.0 (2000-12) ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-RL-SetupRspTDD PRESENCE mandatory } ID id-UL-SIRTarget CRITICALITY ignore TYPE UL-SIR PRESENCE mandatory } ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional }, . . . } RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE { rL-ID RL-ID, uRA-Information URA-Information, sAI SAI, GA-Cell qA-Cell OPTIONAL, gA-AccessPointPosition GA-AccessPointPosition OPTIONAL, ul-TimeSlot-ISCP-Info UL-TimeSlot-ISCP-Info, maxUL-SIR UL-SIR. minUL-SIR UL-SIR, maximumAllowedULTxPower MaximumAllowedULTxPower, maximumDLTxPower DL-Power, minimumDLTxPower DL-Power, timingAdvanceApplied TimingAdvanceApplied, alphaValue AlphaValue, ul-PhysCH-SF-Variation UL-PhysCH-SF-Variation, ul-CCTrCHInformation UL-CCTrCHInformationList-RL-SetupRspTDD OPTIONAL, dl-CCTrCHInformation DL-CCTrCHInformationList-RL-SetupRspTDD OPTIONAL, dCH-InformationResponse DCH-InformationResponseList-RL-SetupRspTDD OPTIONAL, dsch-InformationResponse DSCH-InformationResponse-RL-SetupRspTDD OPTIONAL, usch-InformationResponse USCH-InformationResponse-RL-SetupRspTDD OPTIONAL, Neighbouring-UMTS-CellInformation OPTIONAL, neighbouring-UMTS-CellInformation neighbouring-GSM-CellInformation Neighbouring-GSM-CellInformation-RL-SetupRspTDD OPTIONAL, ProtocolExtensionContainer { {RL-InformationResponse-RL-SetupRspTDD-ExtIEs } } OPTIONAL, iE-Extensions . . . RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { . . . UL-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{UL-CCTrCHInformationListIEs-RL-SetupRspTDD}} UL-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= { { ID id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD CRITICALITY ignore TYPE UL-CCTrCHInformationListIE-RL-SetupRspTDD PRESENCE mandatory } UL-CCTrCHInformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-SetupRspTDD UL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEOUENCE { cCTrCH-ID CCTrCH-ID, ul-DPCH-Information UL-DPCH-InformationList-RL-SetupRspTDD OPTIONAL, ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL, iE-Extensions . . . UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

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Release 1999
                                                                          26
                                                                                                                         3GPP TS 25.423 V3.4.0 (2000-12)
}
UL-DPCH-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {UL-DPCH-InformationListIEs-RL-SetupRspTDD}
UL-DPCH-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationItem-RL-SetupRspTDD
                                                        CRITICALITY ignore TYPE UL-DPCH-InformationItem-RL-SetupRspTDD PRESENCE mandatory
UL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE
    repetitionPeriod
                                   RepetitionPeriod,
                                    RepetitionLength,
    repetitionLength
    tDD-DPCHOffset
                                    TDD-DPCHOffset,
    uL-Timeslot-Information
                                    UL-Timeslot-Information.
                                    ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DL-CCTrCHInformationList-RL-SetupRspTDD ::= Protocolle-Single-Container {{DL-CCTrCHInformationListIEs-RL-SetupRspTDD}}
DL-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD CRITICALITY ignore TYPE DL-CCTrCHInformationListIE-RL-SetupRspTDD PRESENCE mandatory
}
DL-CCTrCHInformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-SetupRspTDD
DL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID
                                CCTrCH-ID,
    dl-DPCH-Information
                                    DL-DPCH-InformationList-RL-SetupRspTDD
                                                                                OPTIONAL,
                                    ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DL-DPCH-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {DL-DPCH-InformationListIEs-RL-SetupRspTDD }
DL-DPCH-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
                                                     CRITICALITY ignore TYPE DL-DPCH-InformationItem-RL-SetupRspTDD PRESENCE mandatory
    { ID id-DL-DPCH-InformationItem-RL-SetupRspTDD
DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    repetitionPeriod
                                    RepetitionPeriod,
    repetitionLength
                                    RepetitionLength,
    tDD-DPCHOffset
                                    TDD-DPCHOffset,
    dL-Timeslot-Information
                                    DL-Timeslot-Information,
    iE-Extensions
                                    ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
```

```
. . .
}
DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DCH-InformationResponseList-RL-SetupRspTDD ::= ProtocollE-Single-Container {{DCH-InformationResponseListIEs-RL-SetupRspTDD}}
DCH-InformationResponseListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse CRITICALITY ignore TYPE DCH-InformationResponse PRESENCE mandatory }
}
DSCH-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DSCH-InformationList-RL-SetupRspTDD}}
DSCH-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
                                                       CRITICALITY ignore TYPE DSCH-InformationListIEs-RL-SetupRspTDD PRESENCE mandatory }
    { ID id-DSCH-InformationListIEs-RL-SetupRspTDD
DSCH-InformationListIEs-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCHInformationItem-RL-SetupRspTDD
DSCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dsch-ID
                           DSCH-ID,
    dSCH-FlowControlInformation
                                   DSCH-FlowControlInformation,
   bindingID
                           BindingID OPTIONAL,
    transportLayerAddress TransportLayerAddress OPTIONAL,
    transportFormatManagement TransportFormatManagement,
    iE-Extensions
                            ProtocolExtensionContainer { {DSCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    . . .
DSCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
USCH-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{USCH-InformationList-RL-SetupRspTDD}}
USCH-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-USCH-InformationListIEs-RL-SetupRspTDD
                                                       CRITICALITY ignore TYPE USCH-InformationListIEs-RL-SetupRspTDD PRESENCE mandatory }
}
USCH-InformationListIEs-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCHInformationItem-RL-SetupRspTDD
USCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    usch-ID
                                USCH-ID,
    bindingID
                                BindingID OPTIONAL,
    transportLayerAddress
                               TransportLayerAddress
                                                       OPTIONAL,
    transportFormatManagement TransportFormatManagement,
                                ProtocolExtensionContainer { {USCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
}
```

USCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```
}
Neighbouring-GSM-CellInformation-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-CellInformationItem-RL-SetupRspTDD }}
Neighbouring GSM CellInformationItem RL SetupRspTDD RNSAP PROTOCOL IES ::= {
   }
RadioLinkSetupResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
   _ _
-- RADIO LINK SETUP FAILURE FDD
  RadioLinkSetupFailureFDD ::= SEQUENCE {
   protocolIEs
                               ProtocolIE-Container
                                                       {{RadioLinkSetupFailureFDD-IEs}},
                               ProtocolExtensionContainer {{RadioLinkSetupFailureFDD-Extensions}}
                                                                                                          OPTIONAL
   protocolExtensions
   . . .
}
RadioLinkSetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
                                                                          PRESENCE optional } |
     ID id-D-RNTI
                               CRITICALITY ignore TYPE D-RNTI
     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-CauseLevel-RL-SetupFailureFDD
                                                 CRITICALITY ignore
                                                                     TYPE CauseLevel-RL-SetupFailureFDD
                                                                                                        PRESENCE mandatory } |
     ID id-UL-SIRTarget
                                   CRITICALITY ignore TYPE UL-SIR
                                                                             PRESENCE optional }
    ID id-CriticalityDiagnostics
                                                                                      PRESENCE optional },
                                      CRITICALITY ignore TYPE CriticalityDiagnostics
   . . .
}
CauseLevel-RL-SetupFailureFDD ::= CHOICE {
   generalCause
                     GeneralCauseList-RL-SetupFailureFDD,
   rLSpecificCause
                     RLSpecificCauseList-RL-SetupFailureFDD,
   . . .
}
GeneralCauseList-RL-SetupFailureFDD ::= SEQUENCE
   cause
                                          Cause.
                                          ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureFDD-ExtIEs} }
   iE-Extensions
                                                                                                               OPTIONAL,
   . . .
GeneralCauseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
RLSpecificCauseList-RL-SetupFailureFDD ::= SEQUENCE {
   unsuccessful-RL-InformationRespList-RL-SetupFailureFDD
                                                        UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
```

```
Release 1999
                                                                          29
                                                                                                                          3GPP TS 25.423 V3.4.0 (2000-12)
                                                                 SuccessfulRL-InformationResponseList-RL-SetupFailureFDD OPTIONAL,
    successful-RL-InformationRespList-RL-SetupFailureFDD
   iE-Extensions
                                                ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs } }
                                                                                                                                    OPTIONAL.
    . . .
RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { { UnsuccessfulRL-
InformationResponse-RL-SetupFailureFDD-IEs} }
UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
                                                                         CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
SetupFailureFDD
                    PRESENCE mandatory }
}
UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= 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 ::= SEOUENCE (SIZE (0..maxNrOfRLs-1)) OF ProtocollE-Single-Container { {SuccessfulRL-
InformationResponse-RL-SetupFailureFDD-IEs} }
SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
                                                                     CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-SetupFailureFDD
    PRESENCE mandatory }
}
SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE
    rL-ID
                                            RL-ID,
    rL-Set-ID
                                            RL-Set-ID,
    uRA-Information
                                            URA-Information,
    sAI
                                            SAI,
    gA-Cell
                                            GA-Cell
                                                         OPTIONAL.
    gA-AccessPointPosition
                                            GA-AccessPointPosition
                                                                         OPTIONAL,
    received-total-wide-band-power
                                                                     Received-total-wide-band-power,
                                            Secondary-CCPCH-Info
    secondary-CCPCH-Info
                                                                         OPTIONAL,
    dl-CodeInformation
                                            FDD-DL-CodeInformation,
    diversitvIndication
                                            DiversityIndication-RL-SetupFailureFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator
                                            SSDT-SupportIndicator,
    maxUL-SIR
                                            UL-SIR,
    minUL-SIR
                                            UL-SIR,
    closedlooptimingadjustmentmode
                                            Closedlooptimingadjustmentmode OPTIONAL,
```

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3GPP
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```
Release 1999
                                                                          30
                                                                                                                          3GPP TS 25.423 V3.4.0 (2000-12)
    maximumAllowedULTxPower
                                            MaximumAllowedULTxPower,
    maximumDLTxPower
                                            DL-Power.
    minimumDLTxPower
                                            DL-Power.
    dSCH-InformationResponse-RL-SetupFailureFDD
                                                     DSCH-InformationResponseList-RL-SetupFailureFDD
                                                                                                         OPTIONAL.
    neighbouring-UMTS-CellInformation
                                            Neighbouring-UMTS-CellInformation OPTIONAL,
                                            Neighbouring-GSM-CellInformation RL SetupFailureFDD OPTIONAL,
    neighbouring-GSM-CellInformation
    iE-Extensions
                                            ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    . . .
SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DiversityIndication-RL-SetupFailureFDD ::= CHOICE {
    combining
                                    Combining-RL-SetupFailureFDD,
    nonCombiningOrFirstRL
                                NonCombiningOrFirstRL-RL-SetupFailureFDD
Combining-RL-SetupFailureFDD ::= SEQUENCE {
    rL-TD
                                RL-ID,
    iE-Extensions
                                ProtocolExtensionContainer { { CombiningItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
    . . .
CombiningItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
NonCombiningOrFirstRL-RL-SetupFailureFDD ::= SEQUENCE {
    dCH-InformationResponse
                                            DCH-InformationResponse,
                                            ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
}
NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DSCH-InformationResponseList-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-SetupFailureFDD }}
DSCH-InformationResponseListIEs-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DSCH-FDD-InformationResponse CRITICALITY ignore TYPE DSCH-FDD-InformationResponse
                                                                                                      PRESENCE mandatory }
}
Neighbouring-GSM-CellInformation-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-CellInformationItem-RL-SetupFailureFDD }}
Neighbouring GSM CellInformationItem RL SetupFailureFDD RNSAP PROTOCOL IES ::= {
    { ID id Neighbouring GSM CellInformation CRITICALITY ignore TYPE Neighbouring GSM CellInformation PRESENCE mandatory }
}
RadioLinkSetupFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
```

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3GPP
```

}

<Editor's note: Parts of the module is skipped.>

```
_
  RADIO LINK ADDITION RESPONSE FDD
  RadioLinkAdditionResponseFDD ::= SEQUENCE {
   protocollEs
                                  ProtocolIE-Container
                                                            {{RadioLinkAdditionResponseFDD-IEs}}.
   protocolExtensions
                                  ProtocolExtensionContainer {{RadioLinkAdditionResponseFDD-Extensions}}
                                                                                                                      OPTIONAL,
   . . .
}
RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
   { ID id-RL-InformationResponseList-RL-AdditionRspFDD
                                                        CRITICALITY ignore TYPE RL-InformationResponseList-RL-AdditionRspFDD
                                                                                                                             PRESENCE
mandatory } |
   { ID id-CriticalityDiagnostics
                                         CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                            PRESENCE optional },
   . . .
}
RL-InformationResponseList-RL-AdditionRspFDD
                                                 ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container { {RL-
InformationResponseItemIEs-RL-AdditionRspFDD } 
RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
   { ID id-RL-InformationResponseItem-RL-AdditionRspFDD
                                                            CRITICALITY ignore TYPE RL-InformationResponseItem-RL-AdditionRspFDD
                                                                                                                                PRESENCE
mandatory }
}
RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
   rL-ID
                                  RL-ID,
   rL-Set-ID
                                  RL-Set-ID,
   uRA-Information
                                  URA-Information,
   sAI
                                  SAI,
                                  GA-Cell
                                             OPTIONAL,
   qA-Cell
   qA-AccessPointPosition
                                 GA-AccessPointPosition OPTIONAL,
   received-total-wide-band-power Received-total-wide-band-power,
   secondary-CCPCH-Info
                                  Secondary-CCPCH-Info
                                                            OPTIONAL,
   dl-CodeInformation
                                 DL-CodeInformationList-RL-AdditionRspFDD,
   diversityIndication
                                 DiversityIndication-RL-AdditionRspFDD,
   -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
   -- the tabular message format in subclause 9.1.
   sSDT-SupportIndicator
                                     SSDT-SupportIndicator,
   minUL-SIR
                                     UL-SIR,
   maxUL-SIR
                                     UL-SIR,
   closedlooptimingadjustmentmode
                                     Closedlooptimingadjustmentmode OPTIONAL,
   maximumAllowedULTxPower
                                     MaximumAllowedULTxPower,
   maximumDLTxPower
                                     DL-Power,
   minimumDLTxPower
                                     DL-Power,
```

```
32
```

```
Neighbouring-UMTS-CellInformation OPTIONAL,
    neighbouring-UMTS-CellInformation
    neighbouring-GSM-CellInformation
                                       Neighbouring-GSM-CellInformation RL AdditionRspFDD OPTIONAL,
    iE-Extensions
                                       ProtocolExtensionContainer { {RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    . . .
RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DL-CodeInformationList-RL-AdditionRspFDD ::= ProtocolIE-Single-Container {{ DL-CodeInformationListIEs-RL-AdditionRspFDD }}
DL-CodeInformationListIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-FDD-DL-CodeInformation CRITICALITY ignore TYPE FDD-DL-CodeInformation
                                                                                      PRESENCE mandatory }
}
DiversityIndication-RL-AdditionRspFDD ::= CHOICE
    combining
                                   Combining-RL-AdditionRspFDD,
    nonCombining
                                   NonCombining-RL-AdditionRspFDD
}
Combining-RL-AdditionRspFDD ::= SEQUENCE {
   rL-ID
                               RL-ID,
    iE-Extensions
                               ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL.
    . . .
CombiningItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
NonCombining-RL-AdditionRspFDD ::= SEQUENCE
    dCH-InformationResponse
                                           DCH-InformationResponse,
                                               ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
NonCombiningItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Neighbouring-GSM-CellInformation-RL-AdditionRspFDD ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-CellInformationItem-RL-AdditionRspFDD }}
Neighbouring GSM CellInformationItem RL AdditionRspFDD RNSAP PROTOCOL IES ::= {
    { ID id-Neighbouring-GSM-CellInformation CRITICALITY ignore TYPE Neighbouring-GSM-CellInformation PRESENCE mandatory }
}
RadioLinkAdditionResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
```

```
-- RADIO LINK ADDITION RESPONSE TDD
  RadioLinkAdditionResponseTDD ::= SEQUENCE {
    protocolIEs
                                   ProtocolIE-Container
                                                              {{RadioLinkAdditionResponseTDD-IEs}},
   protocolExtensions
                                   ProtocolExtensionContainer {{RadioLinkAdditionResponseTDD-Extensions}}
                                                                                                                           OPTIONAL,
    . . .
}
RadioLinkAdditionResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponse-RL-AdditionRspTDD
                           CRITICALITY ignore TYPE RL-InformationResponse-RL-AdditionRspTDD
                                                                                              PRESENCE mandatory }
    { ID id-CriticalityDiagnostics
                                           CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                                PRESENCE optional },
    . . .
}
RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID
                                       RL-ID,
    uRA-Information
                                       URA-Information,
    sAT
                                       SAT.
    qA-Cell
                                                   OPTIONAL,
                                       GA-Cell
    gA-AccessPointPosition
                                       GA-AccessPointPosition OPTIONAL,
    ul-TimeSlot-ISCP-Info
                                       UL-TimeSlot-ISCP-Info,
    minUL-SIR
                                       UL-SIR,
    maxUL-SIR
                                       UL-SIR,
    maximumAllowedULTxPower
                                       MaximumAllowedULTxPower,
    maximumDLTxPower
                                       DL-Power,
    minimumDLTxPower
                                       DL-Power,
                                       TimingAdvanceApplied,
    timingAdvanceApplied
    alphaValue
                                       AlphaValue,
    ul-PhysCH-SF-Variation
                                       UL-PhysCH-SF-Variation,
    ul-CCTrCHInformation
                                       UL-CCTrCHInformationList-RL-AdditionRspTDD
                                                                                      OPTIONAL,
    dl-CCTrCHInformation
                                       DL-CCTrCHInformationList-RL-AdditionRspTDD
                                                                                      OPTIONAL,
    dCH-Information
                                       DCH-Information-RL-AdditionRspTDD
                                                                                      OPTIONAL,
    dSCH-InformationResponse
                                       DSCH-InformationResponse-RL-AdditionRspTDD
                                                                                      OPTIONAL,
    uSCH-InformationResponse
                                       USCH-InformationResponse-RL-AdditionRspTDD
                                                                                      OPTIONAL,
    neighbouring-UMTS-CellInformation
                                       Neighbouring-UMTS-CellInformation OPTIONAL,
    neighbouring-GSM-CellInformation
                                       Neighbouring-GSM-CellInformation-RL-AdditionRspTDD OPTIONAL,
    iE-Extensions
                                       ProtocolExtensionContainer { {RL-InformationResponse-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
    . . .
RL-InformationResponse-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
UL-CCTrCHInformationList-RL-AdditionRspTDD ::= Protocolle-Single-Container {{UL-CCTrCHInformationListles-RL-AdditionRspTDD}}
UL-CCTrCHInformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD CRITICALITY ignore TYPE UL-CCTrCHInformationListIE-RL-AdditionRspTDD
                                                                                                                                   PRESENCE
mandatory }
```

```
UL-CCTrCHInformationListIE-RL-AdditionRspTDD ::= SEOUENCE (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
                                                                                     OPTIONAL,
                                    ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
ι
UL-DPCH-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container { { UL-DPCH-InformationListIEs-RL-AdditionRspTDD } }
UL-DPCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
      ID id-UL-DPCH-InformationItem-RL-AdditionRspTDD
                                                            CRITICALITY ignore TYPE UL-DPCH-InformationItem-RL-AdditionRspTDD PRESENCE mandatory
}
UL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    repetitionPeriod
                                    RepetitionPeriod,
    repetitionLength
                                    RepetitionLength,
    tDD-DPCHOffset
                                    TDD-DPCHOffset,
    uL-Timeslot-Information
                                    UL-Timeslot-Information,
                                    ProtocolExtensionContainer { { UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DL-CCTrCHInformationList-RL-AdditionRspTDD ::= Protocolle-Single-Container {{DL-CCTrCHInformationListIEs-RL-AdditionRspTDD}}
DL-CCTrCHInformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD CRITICALITY ignore TYPE DL-CCTrCHInformationListIE-RL-AdditionRspTDD
                                                                                                                                       PRESENCE
mandatory }
}
DL-CCTrCHInformationListIE-RL-AdditionRspTDD ::= SEOUENCE (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
                                                                                     OPTIONAL,
   iE-Extensions
                                    ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL.
    . . .
DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
```

```
Release 1999
```

```
35
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DL-DPCH-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container { {DL-DPCH-InformationListIEs-RL-AdditionRspTDD } }
DL-DPCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
      ID id-DL-DPCH-InformationItem-RL-AdditionRspTDD
                                                            CRITICALITY ignore TYPE DL-DPCH-InformationItem-RL-AdditionRspTDD PRESENCE mandatory
}
DL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    repetitionPeriod
                                    RepetitionPeriod,
    repetitionLength
                                    RepetitionLength,
    tDD-DPCHOffset
                                    TDD-DPCHOffset,
    dL-Timeslot-Information
                                    DL-Timeslot-Information,
    iE-Extensions
                                    ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
    . . .
}
DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DCH-Information-RL-AdditionRspTDD ::= SEQUENCE {
    diversityIndication
                                        DiversityIndication-RL-AdditionRspTDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    iE-Extensions
                                    ProtocolExtensionContainer { { DCH-Information-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
    . . .
DCH-Information-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DiversityIndication-RL-AdditionRspTDD ::= CHOICE {
    combining
                    Combining-RL-AdditionRspTDD.
    nonCombining
                 NonCombining-RL-AdditionRspTDD
}
Combining-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID
                                RL-ID,
                                ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
    iE-Extensions
}
CombiningItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
NonCombining-RL-AdditionRspTDD ::= SEQUENCE {
    dCH-InformationResponse
                                DCH-InformationResponse,
                                     ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
```

```
NonCombiningItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DSCH-InformationResponse-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{DSCH-InformationListIEs-RL-AdditionRspTDD}}
DSCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationListIE-RL-AdditionRspTDD
                                                       CRITICALITY ignore TYPE DSCH-InformationListIE-RL-AdditionRspTDD
                                                                                                                             PRESENCE mandatory }
DSCH-InformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCHInformationItem-RL-AdditionRspTDD
DSCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dsch-ID
                           DSCH-ID,
    transportFormatManagement TransportFormatManagement,
    dSCH-FlowControlInformation
                                    DSCH-FlowControlInformation,
                           DiversityIndication-RL-AdditionRspTDD2 OPTIONAL,
    diversityIndication
    -- diversityIndication present, if CHOICE = nonCombining
    iE-Extensions
                           ProtocolExtensionContainer { {DSCHInformationItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
    . . .
DSCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
DiversityIndication-RL-AdditionRspTDD2 ::= SEQUENCE {
    bindingID
                           BindingID OPTIONAL,
    transportLayerAddress TransportLayerAddress
                                                   OPTIONAL,
    iE-Extensions
                            ProtocolExtensionContainer { {DiversityIndication-RL-AdditionRspTDD2-ExtIEs } } OPTIONAL,
    . . .
DiversityIndication-RL-AdditionRspTDD2-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
USCH-InformationResponse-RL-AdditionRspTDD ::= Protocolle-Single-Container {{USCH-InformationListles-RL-AdditionRspTDD}}
USCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-USCH-InformationListIE-RL-AdditionRspTDD
                                                      CRITICALITY ignore TYPE USCH-InformationListIE-RL-AdditionRspTDD
                                                                                                                             PRESENCE mandatory }
}
USCH-InformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCHInformationItem-RL-AdditionRspTDD
USCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    uSCH-ID
                            USCH-ID,
    transportFormatManagement TransportFormatManagement,
    diversityIndication
                           DiversityIndication-RL-AdditionRspTDD2 OPTIONAL,
    -- diversityIndication present, if CHOICE = nonCombining
                           ProtocolExtensionContainer { {USCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
```

```
USCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Neighbouring GSM CellInformation RL AdditionRspTDD ::= ProtocolIE Single Container {{ Neighbouring GSM CellInformationItem RL AdditionRspTDD }}
Neighbouring GSM CellInformationItem RL AdditionRspTDD RNSAP PROTOCOL IES ::= {
   { ID id Neighbouring GSM CellInformation CRITICALITY ignore TYPE Neighbouring GSM CellInformation PRESENCE mandatory }
}
RadioLinkAdditionResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
         *****
-- RADIO LINK ADDITION FAILURE FDD
*****
RadioLinkAdditionFailureFDD ::= SEQUENCE {
                                                             {{RadioLinkAdditionFailureFDD-IEs}},
   protocolIEs
                                  ProtocolIE-Container
   protocolExtensions
                                  ProtocolExtensionContainer {{RadioLinkAdditionFailureFDD-Extensions}}
                                                                                                                       OPTIONAL,
    . . .
}
RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
                                                                                             TYPE CauseLevel-RL-AdditionFailureFDD
    { ID id-CauseLevel-RL-AdditionFailureFDD
                                                             CRITICALITY
                                                                             ignore
       PRESENCE
                  mandatory } |
    { ID id-CriticalityDiagnostics
                                          CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                             PRESENCE optional },
    . . .
}
CauseLevel-RL-AdditionFailureFDD ::= CHOICE {
    generalCause
                      GeneralCauseList-RL-AdditionFailureFDD,
    rLSpecificCause
                      RLSpecificCauseList-RL-AdditionFailureFDD,
    . . .
GeneralCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
    cause
                                              Cause,
                                              ProtocolExtensionContainer { { GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs } }
    iE-Extensions
                                                                                                                               OPTIONAL,
    . . .
GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
RLSpecificCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD
                                                                 UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
    successful-RL-InformationRespList-RL-AdditionFailureFDD
                                                                 SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD OPTIONAL,
```

```
Release 1999
                                                                          38
                                                                                                                         3GPP TS 25.423 V3.4.0 (2000-12)
    iE-Extensions
                                                ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs } }
                                                                                                                                          OPTIONAL,
}
RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container { {UnsuccessfulRL-
InformationResponse-RL-AdditionFailureFDD-IEs} }
UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
                                                                         CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
AdditionFailureFDD
                        PRESENCE mandatory }
}
UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE
    rL-ID
                                    RL-ID,
    cause
                                    Cause,
    iE-Extensions
                                    ProtocolExtensionContainer { { UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs } } OPTIONAL,
    . . .
UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= SEOUENCE (SIZE (0..maxNrOfRLs-2)) OF ProtocollE-Single-Container { {SuccessfulRL-
InformationResponse-RL-AdditionFailureFDD-IEs} }
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
                                                                         CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-
AdditionFailureFDD
                        PRESENCE mandatory }
}
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID
                                        RL-ID,
    rL-Set-ID
                                        RL-Set-ID,
    uRA-Information
                                        URA-Information,
    sAI
                                        SAI,
    qA-Cell
                                        GA-Cell
                                                    OPTIONAL,
    qA-AccessPointPosition
                                        GA-AccessPointPosition
                                                                     OPTIONAL.
    received-total-wide-band-power
                                        Received-total-wide-band-power,
    secondary-CCPCH-Info
                                        Secondary-CCPCH-Info
                                                                     OPTIONAL,
    dl-CodeInformation
                                        DL-CodeInformationList-RL-AdditionFailureFDD,
    diversitvIndication
                                        DiversityIndication-RL-AdditionFailureFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator
                                        SSDT-SupportIndicator,
    minUL-SIR
                                        UL-SIR,
    maxUL-SIR
                                        UL-SIR,
    closedlooptimingadjustmentmode
                                        Closedlooptimingadjustmentmode OPTIONAL,
    maximumAllowedULTxPower
                                        MaximumAllowedULTxPower,
```

```
39
```

```
maximumDLTxPower
                                      DL-Power,
    minimumDLTxPower
                                      DL-Power.
    neighbouring-UMTS-CellInformation
                                     Neighbouring-UMTS-CellInformation OPTIONAL,
    neighbouring-GSM-CellInformation
                                      Neighbouring-GSM-CellInformation-RL-AdditionFailureFDD OPTIONAL,
    iE-Extensions
                                      ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs } OPTIONAL,
    . . .
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DL-CodeInformationList-RL-AdditionFailureFDD ::= ProtocolIE-Single-Container {{ DL-CodeInformationListIEs-RL-AdditionFailureFDD }}
DL-CodeInformationListIEs-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-FDD-DL-CodeInformation CRITICALITY ignore TYPE FDD-DL-CodeInformation
                                                                                   PRESENCE mandatory }
DiversityIndication-RL-AdditionFailureFDD ::= CHOICE {
    combining
                                  Combining-RL-AdditionFailureFDD,
    nonCombining
                                  NonCombining-RL-AdditionFailureFDD
Combining-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID
                              RL-ID,
    iE-Extensions
                              ProtocolExtensionContainer { { CombiningItem-RL-AdditionFailureFDD-ExtIEs } } OPTIONAL,
    . . .
CombiningItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= ·
    . . .
NonCombining-RL-AdditionFailureFDD ::= SEQUENCE {
    dCH-InformationResponse
                              DCH-InformationResponse,
    iE-Extensions
                                             ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionFailureFDD-ExtIEs } } OPTIONAL,
    . . .
NonCombiningItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
Neighbouring GSM CellInformation RL AdditionFailureFDD ::= ProtocolIE Single Container {{ Neighbouring GSM CellInformationItem RL AdditionFailureFDD
+
Neighbouring-GSM-CellInformationItem-RL-AdditionFailureFDD_RNSAP-PROTOCOL-IES ::= {
    +
RadioLinkAdditionFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
```
<Editor's note: The rest of the module is skipped.>

#### Information Element Definitions 9.3.4 \*\*\*\*\*\*\*\*\*\* \_ \_ \_ \_ -- Information Element Definitions \_\_\_ RNSAP-IEs { itu-t (0) identified-organization (4) etsi (0) mobileDomain (0) umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-IEs (2) } DEFINITIONS AUTOMATIC TAGS ::= BEGIN IMPORTS maxCodeNumComp-1, maxFACHCountPlus1, maxIBSEG, maxNoOfDSCHs, maxNoOfUSCHs, maxNoTFCIGroups, maxNoCodeGroups, maxNrOfDCHs, maxNrOfDL-Codes, maxNrOfDLTs, maxNrOfDPCHs, maxNrOfErrors, maxNrOfFDDNeighboursPerRNC, maxNrOfMACcshSDU-Length, maxNrOfNeighbouringRNCs, maxNrOfTDDNeighboursPerRNC, maxNrOfTS, maxNrOfULTs, maxNrOfGSMNeighboursPerRNC, maxRateMatching, maxNrOfPoints, maxNoOfRB, maxNrOfTFCs, maxNrOfTFs, maxCTFC, maxRNCinURA-1, maxTFCI1Combs, maxTFCI2Combs, maxTFCI2Combs-1, maxTGPS, maxTTI-Count,

id-Neighbouring-GSM-CellInformation,

id-Neighbouring-UMTS-CellInformationItem

FROM RNSAP-Constants

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

```
ProtocolIE-Single-Container{},
ProtocolExtensionContainer{},
RNSAP-PROTOCOL-IES,
RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;
```

-- A

#### <Editor's note: Parts of the module is skipped.>

```
-- N
```

NCC ::= BIT STRING (SIZE (3))

Neighbouring-UMTS-CellInformation ::= SEQUENCE (SIZE (1..maxNrOfNeighbouringRNCs)) OF ProtocolIE-Single-Container {{ Neighbouring-UMTS-CellInformationItemIE }}

```
Neighbouring-UMTS-CellInformationItemIE RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-UMTS-CellInformationItem CRITICALITY ignore TYPE
                                                                                 Neighbouring-UMTS-CellInformationItem PRESENCE mandatory }
}
Neighbouring-UMTS-CellInformationItem ::= SEQUENCE {
    rNC-ID
                                            RNC-ID,
    cN-PS-DomainIdentifier
                                            CN-PS-DomainIdentifier
                                                                         OPTIONAL,
    cN-CS-DomainIdentifier
                                            CN-CS-DomainIdentifier
                                                                         OPTIONAL,
    neighbouring-FDD-CellInformation
                                            Neighbouring-FDD-CellInformation
                                                                                 OPTIONAL,
    neighbouring-TDD-CellInformation
                                            Neighbouring-TDD-CellInformation
                                                                                 OPTIONAL,
    iE-Extensions
                                            ProtocolExtensionContainer { {Neighbouring-UMTS-CellInformationItem-ExtIEs} } OPTIONAL,
    . . .
}
Neighbouring-UMTS-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Neighbouring-FDD-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfFDDNeighboursPerRNC,...)) OF Neighbouring-FDD-CellInformationItem
Neighbouring-FDD-CellInformationItem ::= SEQUENCE {
    c-ID
                                        C-ID,
    uARFCNforNu
                                        UARFCN,
    uARFCNforNd
                                        UARFCN,
    frameOffset
                                        FrameOffset
                                                             OPTIONAL,
    primaryScramblingCode
                                        PrimaryScramblingCode,
```

```
Release 1999
                                                                           43
                                                                                                                           3GPP TS 25.423 V3.4.0 (2000-12)
    primaryCPICH-Power
                                         PrimaryCPICH-Power
                                                                 OPTIONAL,
    cellIndividualOffset
                                        CellIndividualOffset
                                                                 OPTIONAL,
    txDiversitvIndicator
                                        TxDiversitvIndicator.
    sTTD-SupportIndicator
                                        STTD-SupportIndicator
                                                                 OPTIONAL,
    closedLoopModel-SupportIndicator
                                        ClosedLoopModel-SupportIndicator
                                                                             OPTIONAL.
    closedLoopMode2-SupportIndicator
                                        ClosedLoopMode2-SupportIndicator
                                                                             OPTIONAL,
                                         ProtocolExtensionContainer { { Neighbouring-FDD-CellInformationItem-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
Neighbouring-FDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Neighbouring-GSM-CellInformation ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-CellInformationIE }}
Neighbouring-GSM-CellInformationIE RNSAP-PROTOCOL-IES ::= {
      ID id-Neighbouring-GSM-CellInformation
                                                 CRITICALITY ignore TYPE
                                                                             Neighbouring-GSM-CellInformationIEs PRESENCE mandatory }
Neighbouring-GSM-CellInformationIEs ::= SEQUENCE ( SIZE (1..maxNrOfGSMNeighboursPerRNC,...)) OF Neighbouring-GSM-CellInformationItem
Neighbouring-GSM-CellInformationItem ::= SEQUENCE {
    cGI
                                         CGI,
    q-Offset-Serving-to-Neighbour
                                        O-Offset-Serving-to-Neighbour,
    q-RxlevMin
                                         O-RxlevMin,
    maximumAllowedULTxPower
                                        MaximumAllowedULTxPower,
    bSIC
                                        BSIC,
    bCCH-ARFCN
                                        BCCH-ARFCN,
    gSM-Output-Power
                                        GSM-Output-Power OPTIONAL,
    iE-Extensions
                                         ProtocolExtensionContainer { { Neighbouring-GSM-CellInformationItem-ExtIEs } } OPTIONAL,
    . . .
Neighbouring-GSM-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Neighbouring-TDD-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfTDDNeighboursPerRNC,...)) OF Neighbouring-TDD-CellInformationItem
Neighbouring-TDD-CellInformationItem ::= SEQUENCE {
    c-ID
                                     C-ID,
    uARFCNforNt
                                    UARFCN,
    frameOffset
                                     FrameOffset
                                                         OPTIONAL,
    cellParameterID
                                     CellParameterID,
    syncCase
                                     SyncCase,
    timeSlot
                                    TimeSlot
                                                         OPTIONAL
    -- This IE is present only if Sync Case = Casel -- ,
    sCH-TimeSlot
                                     SCH-TimeSlot
                                                             OPTIONAL
    -- This IE is present only if Sync Case = Case2 -- ,
    block-STTD-Indicator
                                    Block-STTD-Indicator,
    cellIndividualOffset
                                    CellIndividualOffset
                                                             OPTIONAL,
    dPCHConstantValue
                                    DPCHConstantValue OPTIONAL,
```

. . .

44

 pCCPCH-Power
 PCCPCH-Power
 OPTIONAL,

 iE-Extensions
 ProtocolExtensionContainer { { Neighbouring-TDD-CellInformationItem-ExtIEs} } OPTIONAL,

 ...

}

Neighbouring-TDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```
}
```

NrOfDLchannelisationcodes ::= INTEGER (1..8)

NrOfTransportBlocks ::= INTEGER (0..512)

-- O

<Editor's note: The rest of the module is skipped.>

## 3GPP TSG-RAN WG3 Meeting #19 Cardiff, UK, Feb 26<sup>th</sup> – March 2<sup>nd</sup>, 2001

						CR-Form-V3						
ж	25.	<mark>423</mark>	CR	329	ж	rev	2	ж	Current vers	ion:	3.4.0	ж
For <mark>HI</mark>	ELP on u	sing t	his form, se	e bottom of	this pa	ge or	look a	at the	e pop-up text	over	the X syn	nbols.
Proposed	l change a	affect	<b>s:</b>	SIM	ME/UE		Radi	io Ac	cess Network	k X	Core Ne	twork
Title:	ж	Erro	neous Critic	ality Diagn	ostics I	E						
Source:	ж	R-W	/G3									
Work iten	n code: ೫								Date: ೫	200	<mark>)1-03-02</mark>	
Category:	: ж	F							Release: ೫	R9	9	
		Use <u>c</u> J L Detail be fou	one of the foll (essential of (correspond (Addition of (Functional (Editorial n ed explanation und in 3GPP	owing categ correction) ds to a corre f feature), I modification hodification) ons of the ab TR 21.900.	ories: ection in n of feat pove cate	an ea ure) egorie	rlier re s can	eleas	Use <u>one</u> of 2 R96 R97 R98 R99 REL-4 REL-5	the fo (GSM (Rele (Rele (Rele (Rele (Rele	llowing rele 1 Phase 2) ase 1996) ase 1997) ase 1998) ase 1999) ase 4) ase 5)	eases:
Reason fo	or change	e: #	The IE Critic same ASN.	ality Diagn i identity wi	ostics o thin one	an't d e mes	isting sage	uish . See	between mul e also Tdoc R	tiple ( 3-01)	occurance 0834.	s of the
Summary	of chang	<b>ю:</b> Ж	The possib introduced	ility to repo in the Critic	rt the m cality Di	iessag agnos	ge str stics I	uctu E.	re down to the	e erro	neous IE	is
Conseque not appro	ences if oved:	¥	In case the the same r not be una Additional in The propos	e same ASN nessage, a mbiguous. nformation: ed change	I.1 iden n error is back	tity oc report	curs ed wi	in m ith C patik	ore than one riticality Diagr ble.	place nostic	structure s for this I	within E will
Clauses a	offected	ж	9.2.1 13 9	2.1.x 9.3.4	9.36							
Other spe affected:	ecs	*	Other co Test spe O&M Sp	pre specifications	ations	ж						
Other con	nments:	Ж										

#### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G\_Specs/CRs.htm</u>. Below is a brief summary:

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

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

## 9.2.1.13 Criticality Diagnostics

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Criticality Diagnostics				
>Procedure ID		01		Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error
>>Procedure Code	М		INTEGER (0255)	
>>Ddmode	М		ENUMERAT ED (FDD, TDD, Common)	Common = common to FDD and TDD.
>Triggering Message	0		ENUMERAT ED(initiating message, successful outcome, unsuccessful outcome, outcome)	The Triggering Message is used only if the Criticality Diagnostics is part of Error Indication.
> Procedure Criticality	0		ENUMERAT ED(reject, ignore, notify)	This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure). The value 'ignore' shall never be used.
>Transaction ID	0		Transaction ID	
Information Element Criticality Diagnostics		0 <maxnoof errors&gt;</maxnoof 		
>IE Criticality	М		ENUMERAT ED(reject, ignore, notify)	The IE Criticality is used for reporting the criticality of the triggering IE. The value 'Ignore" shall never be used.
>IE ld	Μ		INTEGER (065535)	The IE Id of the not understood or missing IE as defined in the ASN.1 part of the specification.
>Repetition Number	0		INTEGER (1256)	The repetition number of the not understood IE within the bottom most repetition level identified by the message structure IE, if applicable
<u>&gt;Message Structure</u>	<u>0</u>		<u>9.2.1.x</u>	

Range bound	Explanation
Maxnooferrors	Maximum number of IE errors allowed to be reported with a single
	message.

# 9.2.1.x Message Structure

IE/Group Name	Presence	Range	IE type and	Semantics description	<b>Criticality</b>	Assigned Criticality
<u>Message</u> <u>structure</u>		<u>1 to</u> <u><maxnoofle< u=""> <u>vels&gt;</u></maxnoofle<></u>		Information given per level with assigned criticality in an hierachical message structure. Given from top level down to the level above the reported level for the occured error (reported in the Information Element Criticality Diagnostics IE).	<u>GLOBAL</u>	ignore
<u>&gt;IE ID</u>	M		<u>INTEGER</u> (065535)	The IE ID of this level's IE containing the not understood or missing IE.	<u>-</u>	
<u>&gt;Repetition</u> <u>Number</u>	<u>0</u>		<u>INTEGER</u> (1256)	The repetition number of this level's reported IE, if applicable	2	

Range bound	Explanation				
maxnooflevels	Maximum no. of message levels to report. The value for				
	maxnooflevels is 256.				

maxNoOfRB, maxNrOfTFCs, maxNrOfTFs, maxCTFC,

## 9.3.4 Information Element Definitions

\_\_ \*\* \_ \_ -- Information Element Definitions \_ \_ RNSAP-IEs { itu-t (0) identified-organization (4) etsi (0) mobileDomain (0) umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-IEs (2) } DEFINITIONS AUTOMATIC TAGS ::= BEGIN IMPORTS maxCodeNumComp-1, maxFACHCountPlus1, maxIBSEG, maxNoOfDSCHs, maxNoOfUSCHs, maxNoTFCIGroups, maxNoCodeGroups, maxNrOfDCHs, maxNrOfDL-Codes, maxNrOfDLTs, maxNrOfDPCHs, maxNrOfErrors, maxNrOfFDDNeighboursPerRNC, maxNrOfMACcshSDU-Length, maxNrOfNeighbouringRNCs, maxNrOfTDDNeighboursPerRNC, maxNrOfTS, maxNrOfULTs, maxNrOfGSMNeighboursPerRNC, maxRateMatching, maxNrOfPoints,

maxRNCinURA-1, maxTFCI1Combs, maxTFCI2Combs, maxTFCI2Combs-1, maxTGPS, maxTTI-Count, id-Neighbouring-UMTS-CellInformationItem, maxNrOfLevels, id-MessageStructure

FROM RNSAP-Constants

```
Criticality,
    ProcedureID,
    ProtocolIE-ID.
    TransactionID.
    TriggeringMessage
FROM RNSAP-CommonDataTypes
    ProtocolIE-Single-Container{},
    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-IES,
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;
-- A
Active-Pattern-Sequence-Information ::= SEQUENCE {
    cMConfigurationChangeCFN
                                    CFN,
    transmission-Gap-Pattern-Sequence-Status Transmission-Gap-Pattern-Sequence-Status-List
                                                                                                 OPTIONAL,
    iE-Extensions
                      ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    . . .
}
Active-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
AdjustmentPeriod
                          ::= INTEGER(1..256)
-- Unit Frame
AllocationRetentionPriority ::= SEQUENCE {
    priorityLevel
                               PriorityLevel,
    pre-emptionCapability
                               Pre-emptionCapability,
    pre-emptionVulnerability Pre-emptionVulnerability,
                                ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs} } OPTIONAL,
        iE-Extensions
        . . .
}
AllocationRetentionPriority-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
AllowedQueuingTime
                          ::= INTEGER (1..60)
-- seconds
AlphaValue
                           ::= INTEGER (0...8)
-- Actual value = Alpha / 8
-- B
BCC ::= BIT STRING (SIZE (3))
BCCH-ARFCN ::= INTEGER (0..1023)
```

```
BetaCD ::= INTEGER (0..15)
BindingID
                        ::= OCTET STRING (SIZE (1..4,...))
BLER
                        ::= INTEGER (-63..0)
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER
Block-STTD-Indicator
                        ::= ENUMERATED {
    active,
    inactive
}
BSIC ::= SEQUENCE {
    nCC
                NCC,
    bCC
                BCC
}
-- C
Cause ::= CHOICE {
    radioNetwork
                        CauseRadioNetwork,
    transport
                        CauseTransport,
    protocol
                        CauseProtocol,
                        CauseMisc,
    misc
    . . .
CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    . . .
CauseProtocol ::= ENUMERATED {
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    message-not-compatible-with-receiver-state,
    semantic-error,
    unspecified,
    abstract-syntax-error-falsely-constructed-message,
    . . .
CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    ul-scrambling-code-already-in-use,
    dl-radio-resources-not-available,
```

ul-radio-resources-not-available, measurement-not-supported-for-the-object, combining-resources-not-available, combining-not-supported, reconfiguration-not-allowed, requested-configuration-not-supported, synchronisation-failure, requested-tx-diversity-mode-not-supported, measurement-temporaily-not-available, unspecified, invalid-CM-settings, reconfiguration-CFN-not-elapsed, number-of-DL-codes-not-supported, dedicated-transport-channel-type-not-supported, dl-shared-channel-type-not-supported, ul-shared-channel-type-not-supported, common-transport-channel-type-not-supported, ul-spreading-factor-not-supported, dl-spreading-factor-not-supported, cm-not-supported, transaction-not-supported-by-destination-node-b, rl-already-activated-or-alocated, . . . l CauseTransport ::= ENUMERATED { transport-resource-unavailable, unspecified, . . . } ::= INTEGER (0..65535) C-ID CCTrCH-ID ::= INTEGER (0..15) CellIndividualOffset ::= INTEGER (-20..20) CellParameterID ::= INTEGER (0..127,...) CFN ::= INTEGER (0..255) CGI ::= SEOUENCE { SEOUENCE { lai PLMN-ID, pLMN-ID lac LAC, iE-Extensions ProtocolExtensionContainer { {LAI-ExtIEs} } OPTIONAL, . . . }, сI CI, iE-Extensions ProtocolExtensionContainer { {CGI-ExtIEs} } OPTIONAL ļ LAI-EXTIES RNSAP-PROTOCOL-EXTENSION ::= { . . .

3GPP TS 25.423 V3.4.0 (2000-12)

```
}
CGI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
ChannelCodingType ::= ENUMERATED {
    no-coding,
    convolutional-coding,
    turbo-coding,
    . . .
ļ
ChipOffset
                        ::= INTEGER (0..38399)
CI
                    ::= OCTET STRING (SIZE (2))
ClosedLoopMode1-SupportIndicator
                                     ::= ENUMERATED {
    closedLoop-Model-Supported,
    closedLoop-Model-not-Supported
}
ClosedLoopMode2-SupportIndicator
                                     ::= ENUMERATED {
    closedLoop-Mode2-Supported,
    closedLoop-Mode2-not-Supported
}
Closedlooptimingadjustmentmode ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    . . .
}
CodeNumber ::= INTEGER (0..maxCodeNumComp-1)
CodingRate ::= ENUMERATED {
    half,
    third,
    . . .
ļ
CRC-Size
                        ::= ENUMERATED {
    v0,
    v8,
    v12,
    v16,
    v24,
    . . .
CriticalityDiagnostics ::= SEQUENCE {
    procedureID
                                 ProcedureID
                                                      OPTIONAL,
    triggeringMessage
                                 TriggeringMessage
                                                          OPTIONAL,
    procedureCriticality
                                 Criticality
                                                          OPTIONAL,
```

258

transactionID TransactionID OPTIONAL, iEsCriticalityDiagnostics CriticalityDiagnostics-IE-List OPTIONAL, iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL, . . . } CriticalityDiagnostics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { . . . } CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF SEQUENCE { iECriticality Criticality, iE-ID ProtocolIE-ID, repetitionNumber RepetitionNumber OPTIONAL, ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs } } OPTIONAL, iE-Extensions . . . CriticalityDiagnostics-IE-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { ID id-MessageStructure CRITICALITY ignore EXTENSION MessageStructure PRESENCE optional - }*.* . . . } MessageStructure ::= SEQUENCE (SIZE (1..maxNrOfLevels)) OF SEQUENCE { iE-ID ProtocolIE-ID, repetitionNumber RepetitionNumber OPTIONAL, ProtocolExtensionContainer { {MessageStructure-ExtIEs} } OPTIONAL, iE-Extensions MessageStructure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

## 9.3.6 Constant Definitions

-- Constant definitions

RNSAP-Constants {
 itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
 umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

\_ \_

\_ \_

IMPORTS ProcedureCode, ProtocolIE-ID FROM RNSAP-CommonDataTypes;

\*\*\*\*\* \_ \_ \_ \_ -- Elementary Procedures \_ \_ id-commonTransportChannelResourcesInitialisation ProcedureCode ::= 0 id-commonTransportChannelResourcesRelease ProcedureCode ::= 1id-compressedModeCommand ProcedureCode ::= 2id-downlinkPowerControl ProcedureCode ::= 3id-downlinkPowerTimeslotControl ProcedureCode ::= 4 id-downlinkSignallingTransfer ProcedureCode ::= 5 id-errorIndication ProcedureCode ::= 6 id-measurementFailure ProcedureCode ::= 7 id-measurementInitiation ProcedureCode ::= 8 id-measurementReporting ProcedureCode ::= 9 ProcedureCode ::= 10 id-measurementTermination ProcedureCode ::= 11 id-paging id-physicalChannelReconfiguration ProcedureCode ::= 12id-privateMessage ProcedureCode ::= 13 id-radioLinkAddition ProcedureCode ::= 14 id-radioLinkDeletion ProcedureCode ::= 15 id-radioLinkFailure ProcedureCode ::= 16 id-radioLinkPreemption ProcedureCode ::= 17 id-radioLinkRestoration ProcedureCode ::= 18id-radioLinkSetup ProcedureCode ::= 19 id-relocationCommit ProcedureCode ::= 20 id-synchronisedRadioLinkReconfigurationCancellation ProcedureCode ::= 21 id-synchronisedRadioLinkReconfigurationCommit ProcedureCode ::= 22  $id-synchronised {\tt RadioLink} {\tt Reconfiguration} {\tt Preparation}$ ProcedureCode ::= 23 id-unSynchronisedRadioLinkReconfiguration ProcedureCode ::= 24 id-uplinkSignallingTransfer ProcedureCode ::= 25

\_\_\_

************************************	* * * * * * * * * * * * * * * * * * * *
Lists	
************************************	* * * * * * * * * * * * * * * * * * * *
maxCodeNumComp-1	INTEGER ::= 255
maxRateMatching	INTEGER ::= 256
maxNoCodeGroups	INTEGER ::= 256
maxNoOfDSCHs	INTEGER ::= 10
maxNoOfRB	INTEGER ::= 32
maxNoOfUSCHs	INTEGER ::= 10
maxNoTFCIGroups	INTEGER ::= 256
maxNrOfTFCs	INTEGER ::= 1024
maxNrOfTFs	INTEGER ::= 32
maxNrOfCCTrCHs	INTEGER ::= 16
maxNrOfDCHs	INTEGER ::= 128
maxNrOfDL-Codes	INTEGER ::= 8
maxNrOfDPCHs	INTEGER ::= 240
maxNrOfErrors	INTEGER ::= 256
maxNrOfMACcshSDU-Length	INTEGER ::= 16
maxNrOfPoints	INTEGER ::= 15
maxNrOfRLs	INTEGER ::= 16
maxNrOfRLSets	INTEGER ::= maxNrOfRLs
maxNrOfRLs-1	INTEGER ::= 15 maxNrOfRLs - 1
maxNrOfRLs-2	INTEGER ::= 14 maxNrOfRLs - 2
maxNrOfULTs	INTEGER ::= 15
maxNrOfDLTs	INTEGER ::= 15
maxRNCinURA-1	INTEGER ::= 15
maxTTI-Count	INTEGER ::= 4
maxCTFC	INTEGER ::= 16777215
maxNrOfNeighbouringRNCs	INTEGER ::= 10
maxNrOfFDDNeighboursPerRNC	INTEGER ::= 256
maxNrOfGSMNeighboursPerRNC	INTEGER ::= 256
maxNrOfTDDNeighboursPerRNC	INTEGER ::= 256
maxFACHCountPlus1	INTEGER ::= 10
maxIBSEG	INTEGER ::= 16
maxTFCI1Combs	INTEGER ::= 512
maxTFCI2Combs	INTEGER ::= 1024
maxTFCI2Combs-1	INTEGER ::= 1023
maxTGPS	INTEGER ::= 6
maxNrOfTS	INTEGER ::= 15
maxNrOfLevels	INTEGER ::= 256
****	* * * * * * * * * * * * * * * * * * * *
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
1ES	

id-AllowedQueuingTime	ProtocolIE-ID	::= 4
id-BindingID	ProtocolIE-ID	::= 5
id-C-ID	ProtocolIE-ID	::= б

id-C-RNTI id-CFN id-CN-CS-DomainIdentifier id-CN-PS-DomainIdentifier id-Cause id-CriticalityDiagnostics id-D-RNTI id-D-RNTI-ReleaseIndication id-DCHs-to-Add-FDD id-DCHs-to-Add-TDD id-DCH-DeleteList-RL-ReconfPrepFDD id-DCH-DeleteList-RL-ReconfPrepTDD id-DCH-DeleteList-RL-ReconfRgstFDD id-DCH-DeleteList-RL-ReconfRqstTDD id-DCH-FDD-Information id-DCH-TDD-Information id-FDD-DCHs-to-Modify id-TDD-DCHs-to-Modify id-DCH-InformationResponse id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD id-DL-CCTrCH-InformationListIE-PhyChReconfRgstTDD id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD id-DL-CCTrCH-InformationList-RL-SetupRgstTDD id-FDD-DL-CodeInformation id-DL-DPCH-Information-RL-ReconfPrepFDD id-DL-DPCH-Information-RL-SetupRqstFDD id-DL-DPCH-Information-RL-ReconfRqstFDD id-DL-DPCH-InformationItem-PhyChReconfRqstTDD id-DL-DPCH-InformationItem-RL-AdditionRspTDD id-DL-DPCH-InformationItem-RL-SetupRspTDD id-DLReferencePower id-DLReferencePowerList-DL-PC-Rqst id-DL-ReferencePowerInformation-DL-PC-Rqst id-DRXCycleLengthCoefficient id-DedicatedMeasurementObjectType-DM-Rprt id-DedicatedMeasurementObjectType-DM-Rqst id-DedicatedMeasurementObjectType-DM-Rsp id-DedicatedMeasurementType id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD id-IMST id-L3-Information id-AdjustmentPeriod id-MaxAdjustmentStep id-MeasurementFilterCoefficient id-MeasurementID

ProtocolIE-ID	::=	7	
ProtocolIE-ID	::=	8	
ProtocolIE-ID	::=	9	
ProtocolIE-ID	::=	10	
ProtocolIE-ID	::=	11	
ProtocolIE-ID	::=	20	
ProtocolIE-ID	::=	21	
ProtocolIE-ID	::=	22	
ProtocolIE-ID	::=	26	
ProtocolIE-ID	::=	27	
ProtocolIE-ID	::=	30	
ProtocolIE-ID		31	
ProtocoliE ID		33	
ProtocoliE-ID		22	
ProtocollE-ID		22	
ProtocollE-ID		24	
ProtocollE-ID	••=	35	
ProtocollE-ID	=	39	
ProtocollE-ID	::=	40	
ProtocolIE-ID	::=	43	
ProtocolIE-ID	::=	44	
ProtocolIE-ID	::=	45	
ProtocolIE-ID	::=	46	
ProtocolIE-ID	::=	47	
ProtocolIE-ID	::=	48	
ProtocolIE-ID	::=	49	
ProtocolIE-ID	::=	50	
ProtocolIE-ID	::=	51	
ProtocolIE-ID	::=	52	
ProtocolIE-ID	::=	53	
ProtocolIE-ID	::=	54	
ProtocolIE-ID	::=	59	
ProtocolIE-ID	::=	60	
ProtocolIE-ID	::=	61	
ProtocolIE-ID	::=	62	
ProtocolIE-ID		63	
ProtocolIE-ID		64	
ProtocoliE ID		67	
ProtocollE-ID		60	
ProtocollE-ID		60	
ProtocollE-ID	=	20	
ProtocollE-ID	••=	70	
ProtocollE-ID	••=	/1	
ProtocolIE-ID	::=	72	
ProtocolIE-ID	::=	73	
ProtocolIE-ID	::=	74	
ProtocolIE-ID	::=	82	
ProtocolIE-ID	::=	83	
ProtocolIE-ID	::=	84	
ProtocolIE-ID	::=	85	
ProtocolIE-ID	::=	90	
ProtocolIE-ID	::=	91	
ProtocolIE-ID	::=	92	
ProtocolIE-ID	::=	93	
ProtocolIE-ID	::=	57	
ProtocolIE-ID	::=	13	

id-Neighbouring-UMTS-CellInformationItem id-PagingArea-PagingRgst id-FACH-FlowControlInformation id-PowerAdjustmentType id-ProcedureScope-DL-PC-Rast id-RANAP-RelocationInformation id-RL-Information-PhyChReconfRqstFDD id-RL-Information-PhyChReconfRqstTDD id-RL-Information-RL-AdditionRgstFDD id-RL-Information-RL-AdditionRqstTDD id-RL-Information-RL-DeletionRgst id-RL-Information-RL-FailureInd id-RL-Information-RL-ReconfPrepFDD id-RL-Information-RL-RestoreInd id-RL-Information-RL-SetupRqstFDD id-RL-Information-RL-SetupRgstTDD id-RL-InformationItem-DM-Rprt id-RL-InformationItem-DM-Rgst id-RL-InformationItem-DM-Rsp id-RL-InformationItem-RL-PreemptRequiredInd id-RL-InformationItem-RL-SetupRqstFDD id-RL-InformationList-RL-AdditionRgstFDD id-RL-InformationList-RL-DeletionRqst id-RL-InformationList-RL-PreemptRequiredInd id-RL-InformationList-RL-ReconfPrepFDD 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-ReconfRspFDD id-RL-InformationResponseItem-RL-SetupRspFDD id-RL-InformationResponseList-RL-AdditionRspFDD id-RL-InformationResponseList-RL-ReconfReadyFDD id-RL-InformationResponseList-RL-ReconfRspFDD id-RL-InformationResponse-RL-ReconfRspTDD id-RL-InformationResponseList-RL-SetupRspFDD id-RL-ReconfigurationFailure-RL-ReconfFail id-RL-Set-InformationItem-DM-Rprt id-RL-Set-InformationItem-DM-Rgst id-RL-Set-InformationItem-DM-Rsp id-RL-Set-Information-RL-FailureInd id-RL-Set-Information-RL-RestoreInd id-ReportCharacteristics id-Reporting-Object-RL-FailureInd id-Reporting-Object-RL-RestoreInd id-S-RNTT id-SAI id-SRNC-ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD

ProtocolIE-ID	::=	95
ProtocolIE-ID	::=	102
ProtocolIE-ID	::=	103
ProtocolIE-ID	::=	107
ProtocolIE-ID		108
ProtocollE-ID		100
ProtocollE-ID	••=	110
ProtocollE-ID	::=	110
ProtocolIE-ID	::=	111
ProtocolIE-ID	::=	112
ProtocolIE-ID	::=	113
ProtocolIE-ID	::=	114
ProtocolIE-ID	::=	115
ProtocolIE-ID	::=	116
ProtocolIE-ID	::=	117
ProtocolIE-ID		118
ProtocoliE ID		110
ProtocollE-ID	••=	100
ProtocollE-ID	••=	120
ProtocollE-ID	::=	121
ProtocolIE-ID	::=	122
ProtocolIE-ID	::=	2
ProtocolIE-ID	::=	123
ProtocolIE-ID	::=	124
ProtocolIE-ID	::=	125
ProtocolIE-ID	::=	1
ProtocolIE-ID	::=	126
ProtocolIE-ID		127
ProtocollE ID		1 2 0
ProtocollE-ID	••=	120
ProtocollE-ID	••=	129
ProtocollE-ID	::=	130
ProtocolIE-ID	::=	131
ProtocolIE-ID	::=	132
ProtocolIE-ID	::=	133
ProtocolIE-ID	::=	134
ProtocolIE-ID	::=	135
ProtocolIE-ID	::=	136
ProtocolIE-ID	::=	28
ProtocolIE-ID	::-	137
ProtocolIE-ID		141
ProtocoliE ID		1/2
ProtocollE-ID		143
ProtocollE-ID	••=	144
ProtocollE-ID	::=	145
ProtocolIE-ID	::=	146
ProtocolIE-ID	::=	147
ProtocolIE-ID	::=	152
ProtocolIE-ID	::=	153
ProtocolIE-ID	::=	154
ProtocolIE-ID	::=	155
ProtocolIE-ID	::=	156
ProtocolIE-ID	::=	157
ProtocolIE-ID	••-	159
ProtocoliE-ID		160
FICCOCOTTE-ID	=	161
ProtocollE-ID	••=	101
ProtocollE-ID	::=	162
ProtocolIE-ID	::=	163

id-TransportBearerRequestIndicator id-TransportLaverAddress id-UC-TD id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD id-UL-CCTrCH-InformationAddItem-RL-ReconfRgstTDD id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD id-UL-CCTrCH-InformationAddList-RL-ReconfRqstTDD id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD id-UL-CCTrCH-InformationList-RL-SetupRgstTDD id-UL-CCTrCH-InformationListIE-PhyChReconfRgstTDD id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD id-UL-CCTrCH-InformationListIE-RL-ReconfReadvTDD id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD id-UL-DPCH-Information-RL-ReconfPrepFDD id-UL-DPCH-Information-RL-ReconfRqstFDD id-UL-DPCH-Information-RL-SetupRgstFDD id-UL-DPCH-InformationItem-PhyChReconfRgstTDD id-UL-DPCH-InformationItem-RL-AdditionRspTDD id-UL-DPCH-InformationItem-RL-SetupRspTDD id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD id-UL-SIRTarget id-URA-Information 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 id-Active-Pattern-Sequence-Information id-AdjustmentRatio id-CauseLevel-RL-AdditionFailureFDD id-CauseLevel-RL-AdditionFailureTDD id-CauseLevel-RL-ReconfFailure id-CauseLevel-RL-SetupFailureFDD id-CauseLevel-RL-SetupFailureTDD id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD id-DL-CCTrCH-InformationModifyItem-RL-ReconfRgstTDD id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD id-DSCHs-to-Add-TDD id-DSCHs-to-Add-FDD id-DSCH-DeleteList-RL-ReconfPrepTDD id-DSCH-Delete-RL-ReconfPrepFDD id-DSCH-FDD-Information id-DSCH-InformationListIE-RL-AdditionRspTDD id-DSCH-InformationListIEs-RL-SetupRspTDD id-DSCH-TDD-Information id-DSCH-FDD-InformationResponse

id-DSCH-Information-RL-SetupRqstFDD id-DSCH-ModifyList-RL-ReconfPrepTDD ProtocolIE-ID ::= 164

ProtocolIE-ID ::= 165

ProtocolIE-ID ::= 166

ProtocolIE-ID ::= 167

ProtocolIE-ID ::= 168

ProtocolIE-ID ::= 169

ProtocolIE-ID ::= 170

ProtocolIE-ID ::= 171

ProtocolIE-ID ::= 172

ProtocolIE-ID ::= 173

ProtocolIE-ID ::= 174

ProtocolIE-ID ::= 175

ProtocolIE-ID ::= 176

ProtocolIE-ID ::= 177

ProtocolIE-ID ::= 178

ProtocolTE-TD ::= 179

ProtocolIE-ID ::= 180

ProtocolIE-ID ::= 181

ProtocolIE-ID ::= 182

ProtocolIE-ID ::= 183

ProtocolIE-ID ::= 184

ProtocolIE-ID ::= 185

ProtocolIE-ID ::= 188

ProtocolIE-ID ::= 189

ProtocolIE-ID ::= 190

ProtocolIE-ID ::= 191

ProtocolIE-ID ::= 192

ProtocolIE-ID ::= 193

ProtocolIE-ID ::= 194

ProtocolIE-ID ::= 197

ProtocolIE-ID ::= 198

ProtocolIE-ID ::= 199

ProtocolIE-ID ::= 200

ProtocolIE-ID ::= 201

ProtocolIE-ID ::= 205

ProtocolIE-ID ::= 206

ProtocolIE-ID ::= 207

ProtocolIE-ID ::= 208

ProtocolIE-ID ::= 209

ProtocolIE-ID ::= 210

ProtocolIE-ID ::= 212

ProtocolIE-ID ::= 213

ProtocolIE-ID ::= 214

ProtocolIE-ID ::= 215

ProtocolIE-ID ::= 216

ProtocolIE-ID ::= 217

ProtocolIE-ID ::= 218

ProtocolIE-ID ::= 219

ProtocolIE-ID ::= 220

ProtocolIE-ID ::= 221

ProtocolIE-ID ::= 222

ProtocolIE-ID ::= 223

ProtocolIE-ID ::= 226

ProtocolIE-ID ::= 227

id-DSCH-Modify-RL-ReconfPrepFDD	ProtocolIE-ID	::=	228
id-DSCHsToBeAddedOrModified-FDD	ProtocolIE-ID	::=	229
id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD	ProtocolIE-ID	::=	230
id-GA-AccessPointPosition	ProtocolIE-ID	::=	231
id-GA-Cell	ProtocolIE-ID	::=	232
id-Transmission-Gap-Pattern-Sequence-Information	ProtocolIE-ID	::=	255
id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD	ProtocolIE-ID	::=	256
id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD	ProtocolIE-ID	::=	257
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	ProtocolIE-ID	::=	258
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	ProtocolIE-ID	::=	259
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	ProtocolIE-ID	::=	260
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	ProtocolIE-ID	::=	261
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	ProtocolIE-ID	::=	262
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID	::=	263
id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD	ProtocolIE-ID	::=	264
id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD	ProtocolIE-ID	::=	265
${\tt id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD}$	ProtocolIE-ID	::=	266
id-USCHs-to-Add	ProtocolIE-ID	::=	267
id-USCH-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID	::=	268
id-USCH-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID	::=	269
id-USCH-InformationListIEs-RL-SetupRspTDD	ProtocolIE-ID	::=	270
id-USCH-Information	ProtocolIE-ID	::=	271
id-USCH-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID	::=	272
id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD	ProtocolIE-ID	::=	273
id-DL-Physical-Channel-Information-RL-SetupRqstTDD	ProtocolIE-ID	::=	274
id-UL-Physical-Channel-Information-RL-SetupRqstTDD	ProtocolIE-ID	::=	275
id-ClosedLoopModel-SupportIndicator	ProtocolIE-ID	::=	276
id-ClosedLoopMode2-SupportIndicator	ProtocolIE-ID	::=	277
id-STTD-SupportIndicator	ProtocolIE-ID	::=	279
id-CFNReportingIndicator	ProtocolIE-ID	::=	14
id-CNOriginatedPage-PagingRqst	ProtocolIE-ID	::=	23
id-InnerLoopDLPCStatus	ProtocolIE-ID	::=	24
id-PropagationDelay	ProtocolIE-ID	::=	25
id-RxTimingDeviationForTA	ProtocolIE-ID	::=	36
id-timeSlot-ISCPList-DL-PC-Rqst-TDD	ProtocolIE-ID	::=	37

END

# 3GPP TSG-RAN WG3 Meeting #19 Cardiff, South Wales, UK, 26<sup>th</sup> February –2<sup>nd</sup> March 2001

R3-010784

	CHANGE REQUEST									
¥	25	.423	CR <mark>332</mark>	ж	rev	<b>-</b> *	Current vers	sion:	<b>3.4.0</b>	ж
For <u>HELP</u> on	using	this forn	n, see bottom	of this pa	ge or l	ook at th	e pop-up tex	t over	the ¥ sy	mbols.
Proposed change affects: # (U)SIM ME/UE Radio Access Network X Core Network										
Title:	€ Ha Re	ndling o sponse	f Not Compre Message	hended ar	nd Mis	sing IEs	Leading to Ir	ncapal	oility to C	ompile a
Source:	₭ <mark>R-\</mark>	WG3								
Work item code:	f						Date: #	Feb	oruary, 20	01
Category:	f F						Release: #	R9	9	
	Use Deta be fo	one of th F (esse A (corre B (Addi C (Fund D (Edito bund in 30	te following cat ntial correction esponds to a co tion of feature), tional modification anations of the GPP TR 21.90	regories: ) prrection in a , tion of featu n) above cate 0.	an earl ure) egories	ier releas can	Use <u>one</u> of 2 e) R96 R97 R98 R99 REL-4 REL-5	f the fo (GSN (Rele (Rele (Rele (Rele (Rele	llowing rel 1 Phase 2) ase 1996) ase 1997) ase 1998) ase 1999) ase 4) ase 5)	eases:
Reason for chang	ye: ж	In the	current RNS/	AP specific	cation	it is not 1	100% clear w	hat ha	appens to	а
		procee critica the ma conse compr	dure in the ca lity reject or n andatory cont quently not b rehended or n	ises of not otify) if the ents of the e possible nissing IE.	comp e inforr e respo to use	rehendin nation re onse me the pro	g or missing eceived is not ssage. In this cedure mess	certai suffic case ages t	i IEs (ma sient to ind it would to report t	arked with clude all he non-
<ul> <li>Summary of change: # The CR clarifies that if the information received is not sufficient to include all to mandatory contents of the response message in the cases of         <ul> <li>a) not comprehending or missing certain IEs (marked with criticality reject or notify) or</li> <li>b) a falsely constructed message, e.g. where duplication of IEs leads to confusion (e.g. due to duplicated IEs having different values) then the node shall terminate the procedure and initiate the Error Indication procedure.</li> </ul> </li> </ul>						e all the ect or o tion				
Consequences if not approved:	ж	If this the sp Backw This C versio workin	CR is not app ecification. vard compatib CR is backwar n of RNSAP. ng problems.	proved the pility: rd compati However,	above ble wit differe	describ h the on ent interp	ed unclear de ly "reasonabl retation may	e" use exist	tion will re	emain in revious nter-
Clauses affected:	× ¥	10.								
Other specs affected:	ж	Oth Tes O&	er core speci st specification M Specification	fications ns ons	ж					

#### Other comments: #

#### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G\_Specs/CRs.htm</u>. Below is a brief summary:

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

# 10 Handling of Unknown, Unforeseen and Erroneous Protocol Data

## 10.1 General

Protocol Error cases can be divided into three classes:

- 1. Transfer Syntax Error;
- 2. Abstract Syntax Error;
- 3. Logical Error.

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



Figure 34: Protocol Errors in RNSAP

# 10.2 Transfer Syntax Error

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

Examples for Transfer Syntax Errors are:

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

# 10.3 Abstract Syntax Error

## 10.3.1 General

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

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

4

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

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

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error that belong to cases 1-3 act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5. The handling of case 4 is specified in subclause 10.3.7.

# 10.3.2 Criticality Information

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

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

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

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

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

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

Note that this restriction is not applicable to a sending entity for constructing messages.

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

## 10.3.3 Presence Information

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

The presence field of the indicated classes supports three values:

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

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

# 10.3.4 Not Comprehended IE/IE group

## 10.3.4.1 Procedure ID

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

#### **Reject IE:**

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

#### Ignore IE and Notify Sender:

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

#### **Ignore IE:**

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

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

## 10.3.4.2 IEs other than the Procedure ID

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

#### **Reject IE:**

- if a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- if a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall initiate the Error Indication procedure.
- if a *response* message is received containing one or more IEs/IE groups marked with "*Reject IE*, that the receiving node does not comprehend, the receiving node shall initiate local error handling.

#### Ignore IE and Notify Sender:

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

6

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

#### **Ignore IE:**

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

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

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

# 10.3.5 Missing IE or IE group

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

#### **Reject IE:**

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

#### Ignore IE and Notify Sender:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE groups were missing. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- if a received message *initiating* a procedure that does not have a message to report the outcome of the procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.
- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall initiate the Error Indication procedure.

**Ignore IE:** 

7

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

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

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

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

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

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

# 10.4 Logical Error

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

#### Class 1:

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

#### **Protocol Causes:**

- 1. Semantic Error;
- 2. Message not Compatible with Receiver State.

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

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

#### Class 2:

Where the logical error occurs in a message of a class 2 procedure, the Error Indication procedure shall be initiated with an appropriate cause value.

# 3GPP TSG-RAN WG3 Meeting #19 Cardiff, South Wales, UK, 26<sup>th</sup> February –2<sup>nd</sup> March 2001

R3-011024

CR-Form-v3								
æ	25.423 CR 334 <sup># rev</sup> 1 <sup>#</sup>	Current version: <b>3.4.0</b> <sup>#</sup>						
For <mark>HELP</mark> on l	For <b>HELP</b> on using this form, see bottom of this page or look at the pop-up text over the <b>#</b> symbols.							
Proposed change	affects: # (U)SIM ME/UE Radio Ac	cess Network X Core Network						
Title: #	Merged Clarifications to the Measurement Procee	dures						
Source: #	R-WG3							
Work item code:₩	8	Date: # February, 2001						
Category: #	B F	Release: # R99						
	<ul> <li>A (corresponds to a correction in an earlier release</li> <li>B (Addition of feature),</li> <li>C (Functional modification of feature)</li> <li>D (Editorial modification)</li> <li>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</li> </ul>	2 (GSM Filase 2) 9) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)						
Reason for chang	e: # Both CR301r1 (Clarification of operation of M (Forward Compatibility of RNSAP with regard clarifies the measurement procedures. To av this CR merges the two CRs.	Measurement Initiation) and CR318r1 ds to Dedicated Measurements) void conflicts at CR implementation,						
Summary of chang	ge: # <u>CR301r1:</u> Correct the procedure text to clarify that a me periodically when first threshold conditions a event types E and F.	easurement report is sent re met, till second conditions met for						
	<ul> <li><u>CR318r2:</u> The CR clarifies that when referring to measure actually is dedicated measurements by: <ul> <li>a) clarify references to measurement values,</li> <li>b) clarify references to "measurement procedures,", and</li> <li>c) in cases where referring to "measurement ended to the procedure of the procedure of</li></ul></li></ul>	urements on dedicate resources it s to mean <u>dedicated</u> measurements edures" to mean <u>dedicated</u> nt"-only could be ambiguous it is						
	As a consequence to the clarification "b)" above ASN.1 have been updated accordingly.	ve the <i>Message Type</i> IE and the						
	<ul> <li>For event type C "rises more than " is rep greater than".</li> <li>For event type D "falls more than " is rep than".</li> <li>"Measurement request" is clarified to be</li> </ul>	placed by "rises by an amount laced by "falls by an amount greater "DEDICATED MEASUREMENT						
	INITIATION REQUEST message" in two     The reference to "Measurement not avai	places. lable shall be reported " is clarified to						

		<ul> <li>be "Measurement not available shall be reported in the Measurement Value <u>Information IE</u>".</li> <li>The Measurement Id is clarified to be unique for a <u>dedicated</u> measurement <u>within a UE Context</u>.</li> <li>The reference to "accuracy requirement" in the Measurement Reporting procedure is clarified to be the accuracy requirement specified in 25.123 and 25.133.</li> </ul>			
Consequences if not approved:	ж	# If this CR is not approved the above described unclear description will remain in the specification.			
		Backward compatibility:			
		This CR is backward compatible with the previous version of RNSAP.			
Clauses affected:	ж	7, 8.1, 8.3.11, 8.3.12, 8.3.13, 8.3.14, 9.2.1.37, 9.2.1.40, 9.3.2, and 9.3.6.			
Other specs affected:	ж	Other core specifications       #         Test specifications       #         O&M Specifications       •			
0.1	00				
Other comments:	ж	IT approved this UK replaces the UKS 301r1 and 318r2.			

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

# 7 Functions of RNSAP

The RNSAP protocol has the following functions:

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

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

Function	Elementary Procedure(s)
Radio Link Management	a) Radio Link Setup b) Radio Link Addition
	c) Radio Link Deletion
	d) Unsynchronised Radio Link Reconfiguration
	e) Synchronised Radio Link Reconfiguration
	Preparation
	f) Synchronised Radio Link Reconfiguration
	Commit
	g) Synchronised Radio Link Reconfiguration
	Cancellation
	h) Radio Link Pre-emption
Physical Channel Reconfiguration	Physical Channel Reconfiguration
Radio Link Supervision	a) Radio Link Failure
	b) Radio Link Restoration
Compressed Mode Control [FDD]	a) Radio Link Setup
	b) Radio Link Addition
	c) Compressed Mode Command
	d) Unsynchronised Radio Link Reconfiguration
	e) Synchronised Radio Link Reconfiguration
	Preparation
	f) Synchronised Radio Link Reconfiguration
	Commit
	g) Synchronised Radio Link Reconfiguration
	Cancellation
Measurements on Dedicated Resources	a) <u>Dedicated</u> Measurement Initiation
	b) Dedicated Measurement Reporting
	c) <u>Dedicated</u> Measurement Termination
DI Dower Drifting Correction (EDD)	d) Dedicated Measurement Failure
DL Power Drifting Correction [FDD]	Downlink Power Control
CCCH Signalling Transfer	a) Uplink Signalling Transfer
Deging	
Common Transport Channel Resources	A Common Transport Channel Resources
Management	
Management	h) Common Transport Channel Resources
	Release
Relocation Execution	Relocation Commit
Reporting of General Error Situations	Fror Indication
DL Power Timeslot Correction [TDD]	Downlink Power Timeslot Control

## Table 1: Mapping between functions and RNSAP elementary procedures

#### **Elementary Procedures** 8.1

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

Elementary	Initiating Message	Successful Outcome	Unsuccessful Outcome	
Procedure		Response message	Response message	Timer
Radio Link Setup	RADIO LINK SETUP	RADIO LINK SETUP	RADIO LINK SETUP	
	REQUEST	RESPONSE	FAILURE	
Radio Link	RADIO LINK	RADIO LINK	RADIO LINK	
Addition	ADDITION REQUEST	ADDITION	ADDITION FAILURE	
		RESPONSE		
Radio Link	RADIO LINK	RADIO LINK		
Deletion	DELETION REQUEST	DELETION		
		RESPONSE		
Synchronised	RADIO LINK	RADIO LINK	RADIO LINK	
Radio Link	RECONFIGURATION	RECONFIGURATION	RECONFIGURATION	
Reconfiguration	PREPARE	READY	FAILURE	
Preparation				
Unsynchronised				
Radio Link	RECONFIGURATION	RECONFIGURATION	RECONFIGURATION	
Reconfiguration		RESPONSE		
Physical Channel	PHYSICAL CHANNEL	PHYSICAL CHANNEL	PHYSICAL CHANNEL	
Reconfiguration	RECONFIGURATION	RECONFIGURATION	RECONFIGURATION	
Dedicated	REQUEST			
<u>Dedicated</u>				
Initiation				
milialion	INITIATION REQUEST			
		RESPONSE		
Common	COMMON	COMMON	COMMON	
Transport	TRANSPORT	TRANSPORT	TRANSPORT	
Channel	CHANNEL	CHANNEL	CHANNEL	
Resources	RESOURCES	RESOURCES	RESOURCES	
Initialisation	REQUEST	RESPONSE	FAILURE	

#### Table 2: Class 1

The need for Timers will be defined on a per procedure basis. The content of this column is thus FFS.

1

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

## 8.3.11 <u>Dedicated Measurement Initiation</u>

#### 8.3.11.1 General

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

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

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

### 8.3.11.2 Successful Operation



#### Figure 20: Dedicated Measurement Initiation procedure, Successful Operation

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

Upon reception, the DRNC shall initiate the requested <u>dedicated</u> measurement according to the parameters given in the request. Unless specified below, the meaning of the parameters are given in other specifications.

If the *Dedicated Measurement Object Type* IE is set to "RL", measurement results shall be reported for all the indicated Radio Links.

[FDD - If the *Dedicated Measurement Object Type* IE is set to "RLS", measurement results shall be reported for all the indicated Radio Link Sets.]

If the *Dedicated Measurement Object Type* IE is set to "ALL RL", measurement results shall be reported for all current and future Radio Links within the UE Context.

[FDD - If the *Dedicated Measurement Object Type* IE is set to "ALL RLS", measurement results shall be reported for all the existing and future Radio Link Sets within the UE Context.]

If the *CFN Reporting Indicator* IE is set to "FN Reporting Required", the *CFN* IE shall be included in the measurement report or in the measurement response, the latter only in the case the *Report Characteristics* IE is set to 'On-Demand'. The reported CFN shall be the CFN at the time when the <u>dedicated</u> measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [26].

If the *CFN* IE is provided, it indicates the frame for which the first measurement shall be provided. The provided measurement value shall be the one reported by the layer 3 filter referred to as point C in the measurement model [26].

#### **Report characteristics**

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

If the Report Characteristics IE is set to 'On-Demand', the DRNS shall report the measurement result immediately.

If the *Report Characteristics* IE is set to 'Periodic', the DRNS shall periodically initiate a-the Dedicated Measurement Report procedure for this measurement, with the requested report periodicity.

If the *Report Characteristics* IE is set to 'Event A', the DRNS shall initiate <u>a-the Dedicated</u> 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 is set to 'Event B', the DRNS shall initiate a-the Dedicated Measurement Reporting procedure when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event C', the DRNS shall initiate <u>a-the Dedicated</u> Measurement Reporting procedure when the measured entity rises <u>by an amount greater</u> more than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event D', the DRNS shall initiate <del>a the Dedicated</del> Measurement Reporting procedure when the measured entity falls by an amount greater more than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event E', the DRNS shall initiate a-the Dedicated Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided the The DRNS shall also initiate a-the Dedicated Measurement Reporting procedure periodically. If the conditions for Report A have been met and when the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time', the DRNS shall initiate the Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If the *Report Periodicity* IE is provided, the DRNS shall initiate Measurement Threshold 2' is not present, the DRNS shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the DRNS shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to 'Event F', the DRNS shall initiate a the Dedicated Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided the The DRNS shall also initiate a the Dedicated Measurement Reporting procedure periodically. If the conditions for Report A have been met and when the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time', the DRNS shall initiate the Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If the *Report Periodicity* IE is provided, the DRNS shall initiate 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 is not set to 'On-Demand', the DRNS is required to perform reporting for a dedicated measurement object, in accordance with the conditions provided in the DEDICATED MEASUREMENT INITIATION REQUEST message, as long as the object exists. If no dedicated measurement object(s) for which a measurement is defined exists any more the DRNS shall terminate the measurement locally without reporting this to the SRNC.

If at the start of the measurement, the reporting criteria are fulfilled for any of Event A, Event B, Event E or Event F, the DRNS shall initiate a the Dedicated Measurement Reporting procedure immediately, and then continue with the measurements as specified in the DEDICATED MEASUREMENT INITIATION REQUEST message.

#### **Higher layer filtering**

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

The averaging shall be performed according to the following formula.

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

The variables in the formula are defined as follows:

 $F_n$  is the updated filtered measurement result

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

 $M_n$  is the latest received measurement result from physical layer measurements

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

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

If the DRNS was able to initiate the measurement requested by the SRNS it shall respond with the DEDICATED MEASUREMENT INITIATION RESPONSE message. The message shall include the same Measurement Id that was used in the <u>DEDICATED MEASUREMENT INITIATION REQUEST messagemeasurement request</u>.

Only in the case when the *Report Characteristics* IE is set to "On-Demand", the DEDICATED MEASUREMENT INITIATION RESPONSE message shall contain the measurement result. In this case also the *Dedicated Measurement Object* IE shall be included if it was included in the <u>DEDICATED MEASUREMENT INITIATION REQUEST</u>request message.

# 8.3.11.3 Unsuccessful Operation



## Figure 21: Dedicated Measurement Initiation procedure, Unsuccessful Operation

If the Dedicated Measurement Type received in the *Dedicated Measurement Type* IE is not defined in ref. [11] or [14] to be measured on the Dedicated Measurement Object Type received in the *Dedicated Measurement Object Type* IE in the DEDICATED MEASUREMENT INITIATION REQUEST message the DRNS shall regard the Dedicated Measurement Initiation procedure as failed.

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

Typical cause values are:

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

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

### **Miscellaneous Causes:**

- Control Processing Overload
- HW Failure

## 8.3.11.4 Abnormal Conditions

# 8.3.12 <u>Dedicated Measurements</u> Reporting

# 8.3.12.1 General

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

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

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

# 8.3.12.2 Successful Operation



## Figure 22: <u>Dedicated</u> Measurement Reporting procedure, Successful Operation

If the requested measurement reporting criteria are met, the DRNS shall initiate <u>a-the Dedicated Measurement</u> Reporting procedure. If the measurement was initiated (by the <u>Dedicated Measurement Initiation procedure</u>) for multiple dedicated measurement objects, the DRNC may include <u>dedicated measurement values in the *Dedicated* <u>Measurement Value Information IE</u> for multiple objects in the DEDICATED MEASUREMENT REPORT message. Unless specified below, the meaning of the parameters are given in other specifications.</u>

The *Dedicated Measurement Id* IE shall be set to the Dedicated Measurement Id provided by the SRNC when initiating the measurement with the <u>Dedicated Measurement Initiation procedure</u>.

If the achieved measurement accuracy does not fulfil the given accuracy requirement <u>specified in ref. [23] and [24]</u>, the Measurement not available shall be reported in the *Dedicated Measurement Value Information* IE.

# 8.3.12.3 Abnormal Conditions

# 8.3.13 <u>Dedicated Measurement Termination</u>

# 8.3.13.1 General

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

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

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

# 8.3.13.2 Successful Operation



## Figure 23: <u>Dedicated</u> Measurement Termination procedure, Successful Operation

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

3GPP

Upon reception, the DRNS shall terminate reporting of measurements corresponding to the received Dedicated Measurement Id.

## 8.3.13.3 Abnormal Conditions

# 8.3.14 Dedicated Measurement Failure

# 8.3.14.1 General

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

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

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

# 8.3.14.2 Successful Operation



## Figure 24: <u>Dedicated</u> Measurement Failure procedure, Successful Operation

This procedure is initiated with a DEDICATED MEASUREMENT FAILURE INDICATION message, sent from the DRNC to the SRNC, to inform the SRNC that a previously requested <u>dedicated</u> measurement can no longer be reported. The DRNC has locally terminated the indicated measurement.

Typical cause values are:

### **Miscellaneous Causes:**

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

## 8.3.14.3 Abnormal Conditions

# 9.2.1.37 Measurement ID

The Measurement Id uniquely identifies <u>any a dedicated</u> measurement <del>on dedicated resources requested over <u>RNSAP</u><u>within a UE Context</u>.</del>

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

# 9.2.1.40 Message Type

The Message Type uniquely identifies the message being sent.

IE/Group Name	Presence	Range	IE type and reference	Semantics	
				description	
Message Type					
>Procedure ID		1			
>>Procedure	М		ENUMERATED (RL Setup,		
Code			RL Addition,		
			RL Deletion,		
			Synchronised RL Reconfiguration Preparation,		
			Synchronised RL Reconfiguration Commit,		
			Synchronised RL Reconfiguration Cancel,		
			Unsynchronised RL Reconfiguration Request,		
			RL Failure,		
			RL Restoration,		
			DL Power Control,		
			DL Power Timeslot Control,		
			Physical Channel Reconfiguration,		
			UL Signalling Transfer,		
			DL Signalling Transfer,		
			Relocation Commit,		
			Paging,		
			Dedicated Measurement Initiation,		
			Dedicated Measurement Reporting,		
			Dedicated Measurement Termination,		
			Dedicated Measurement Failure,		
			Common Transport Channel Resources		
			Initiation,		
			Common Transport Channel Resources		
			Release,		
			Compressed Mode Command,		
			Error Indication,)		
>>Ddmode	М		ENUMERATED (FDD, TDD, Common,)	Common =	
				common to FDD	
				and TDD.	
>Type of	М		ENUMERATED (Initiating Message,		
Message			Successful Outcome, Unsuccessful		
			Outcome, Outcome)		

9.3.2 Elementary Procedure Definitions
************************************
Elementary Procedure definitions
**********************************
RNSAP-PDU-Descriptions { itu-t (0) identified-organization (4) etsi (0) mobileDomain (0) umts-Access (20) modules (3) rnsap (1) versionl (1) rnsap-PDU-Descriptions (0) }
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN
************************************
IE parameter types from other modules.
 ********************************
<pre>IMPORTS Criticality, ProcedureID, TransactionID FROM RNSAP-CommonDataTypes CommonTransportChannelResourcesFailure, CommonTransportChannelResourcesRequest, CommonTransportChannelResourcesResponseFDD, CommonTransportChannelResourcesResponseTDD, CommonTransportChannelResourcesResponseTDD, CommonTransportChannelResourcesResponseTDD, CommonTransportChannelResourcesResponseTDD, CompressedModeCommand, DedicatedMeasurementFailureIndication, DedicatedMeasurementFailureIndication, DedicatedMeasurementFailureIndication, DedicatedMeasurementFailureIndication, DedicatedMeasurementFailureIndication, DedicatedMeasurementFailureIndication, DedicatedMeasurementTrainationRequest, DL-PowerControlRequest, DL-PowerControlRequest, DL-PowerIimeslotControlRequest, ErrorIndication, PagingRequest, PhysicalChannelReconfigurationCommand, PhysicalChannelReconfigurationFailure, PhysicalChannelReconfigurationRequestFDD, PhysicalChannelReconfigurationRequestTD, PhysicalChannelReconfiguration</pre>

#### Release 1999

RadioLinkAdditionFailureFDD, RadioLinkAdditionFailureTDD. RadioLinkAdditionRequestFDD. RadioLinkAdditionRequestTDD, RadioLinkAdditionResponseFDD, RadioLinkAdditionResponseTDD, RadioLinkDeletionRequest, RadioLinkDeletionResponse, RadioLinkFailureIndication, RadioLinkPreemptionRequiredIndication, RadioLinkReconfigurationCancel, RadioLinkReconfigurationCommit, RadioLinkReconfigurationFailure, RadioLinkReconfigurationPrepareFDD, RadioLinkReconfigurationPrepareTDD, RadioLinkReconfigurationReadyFDD, RadioLinkReconfigurationReadyTDD, RadioLinkReconfigurationRequestFDD, RadioLinkReconfigurationRequestTDD, RadioLinkReconfigurationResponseFDD, RadioLinkReconfigurationResponseTDD, RadioLinkRestoreIndication, RadioLinkSetupFailureFDD, RadioLinkSetupFailureTDD, RadioLinkSetupRequestFDD, RadioLinkSetupRequestTDD, RadioLinkSetupResponseFDD, RadioLinkSetupResponseTDD, RelocationCommit, UplinkSignallingTransferIndicationFDD, UplinkSignallingTransferIndicationTDD FROM RNSAP-PDU-Contents

id-commonTransportChannelResourcesInitialisation, id-commonTransportChannelResourcesRelease, id-compressedModeCommand, id-downlinkPowerControl, id-downlinkSignallingTransfer, id-downlinkPowerTimeslotControl, id-errorIndication, id-dedicatedmMeasurementFailure, id-dedicatedmMeasurementInitiation, id-dedicatedmMeasurementReporting, id-dedicatedmMeasurementTermination, id-paging, id-physicalChannelReconfiguration, id-privateMessage, id-radioLinkAddition, id-radioLinkDeletion, id-radioLinkFailure, id-radioLinkPreemption,

16

#### Release 1999

id-radioLinkRestoration, id-radioLinkSetup, id-relocationCommit, id-synchronisedRadioLinkReconfigurationCancellation, id-synchronisedRadioLinkReconfigurationCommit, id-synchronisedRadioLinkReconfigurationPreparation, id-unSynchronisedRadioLinkReconfiguration, id-uplinkSignallingTransfer

FROM RNSAP-Constants;

### <Editor's note: Parts of the module is skipped.> \_ \_ -- Interface Elementary Procedure List RNSAP-ELEMENTARY-PROCEDURES RNSAP-ELEMENTARY-PROCEDURE ::= { RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 RNSAP-ELEMENTARY-PROCEDURES-CLASS-3 . . . RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 RNSAP-ELEMENTARY-PROCEDURE ::= { radioLinkSetupFDD radioLinkSetupTDD radioLinkAdditionFDD radioLinkAdditionTDD radioLinkDeletion synchronisedRadioLinkReconfigurationPreparationFDD synchronisedRadioLinkReconfigurationPreparationTDD unSynchronisedRadioLinkReconfigurationFDD unSynchronisedRadioLinkReconfigurationTDD physicalChannelReconfigurationFDD physicalChannelReconfigurationTDD dedicatedmMeasurementInitiation commonTransportChannelResourcesInitialisationFDD commonTransportChannelResourcesInitialisationTDD . . . RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 RNSAP-ELEMENTARY-PROCEDURE ::= { uplinkSignallingTransferFDD uplinkSignallingTransferTDD downlinkSignallingTransfer relocationCommit paging synchronisedRadioLinkReconfigurationCommit synchronisedRadioLinkReconfigurationCancellation

#### Release 1999

radioLinkFailure
radioLinkPreemption
radioLinkRestoration
dedicatedmMeasurementReporting
dedicatedmMeasurementTermination
dedicatedmMeasurementFailure
downlinkPowerControlFDD
downlinkPowerTimeslotControl
compressedModeCommandFDD
commonTransportChannelResourcesRelease
errorIndication
privateMessage

### <Editor's note: Parts of the module is skipped.>

dedicatedmMeasurementInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {
 INITIATING MESSAGE DedicatedMeasurementInitiationRequest
 SUCCESSFUL OUTCOME DedicatedMeasurementInitiationResponse
 UNSUCCESSFUL OUTCOME DedicatedMeasurementInitiationFailure
 PROCEDURE ID { procedureCode id-dedicatedmMeasurementInitiation, ddMode common }
 CRITICALITY reject
}

### <Editor's note: Parts of the module is skipped.>

```
dedicatedmMeasurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DedicatedMeasurementReport
    PROCEDURE ID
                       { procedureCode id-dedicatedmMeasurementReporting, ddMode common }
    CRITICALITY
                   ignore
dedicatedmMeasurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DedicatedMeasurementTerminationRequest
                       { procedureCode id-dedicatedmMeasurementTermination, ddMode common }
    PROCEDURE ID
    CRITICALITY
                   ignore
dedicatedmMeasurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE DedicatedMeasurementFailureIndication
                       { procedureCode id-dedicatedmMeasurementFailure, ddMode common }
    PROCEDURE ID
    CRITICALITY
                   ignore
<Editor's note: The rest of the module is skipped.>
```

18

#### 9.3.6 **Constant Definitions** \*\*\*\*\* Constant definitions \_\_\_\_ \*\*\*\*\* RNSAP-Constants { itu-t (0) identified-organization (4) etsi (0) mobileDomain (0) umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-Constants (4) } DEFINITIONS AUTOMATIC TAGS ::= BEGIN IMPORTS ProcedureCode, ProtocolIE-ID FROM RNSAP-CommonDataTypes; \_ \_ -- Elementary Procedures ProcedureCode ::= 0 id-commonTransportChannelResourcesInitialisation id-commonTransportChannelResourcesRelease ProcedureCode ::= 1 id-compressedModeCommand ProcedureCode ::= 2 id-downlinkPowerControl ProcedureCode ::= 3 id-downlinkPowerTimeslotControl ProcedureCode ::= 4id-downlinkSignallingTransfer ProcedureCode ::= 5 id-errorIndication ProcedureCode ::= 6 id-dedicatedmMeasurementFailure -ProcedureCode ::= 7 id-dedicatedmMeasurementInitiation -ProcedureCode ::= 8 id-dedicatedmMeasurementReporting ProcedureCode ::= 9 id-dedicatedmMeasurementTermination -ProcedureCode ::= 10 id-paging ProcedureCode ::= 11 id-physicalChannelReconfiguration ProcedureCode ::= 12 id-privateMessage ProcedureCode ::= 13 id-radioLinkAddition ProcedureCode ::= 14 id-radioLinkDeletion ProcedureCode ::= 15 id-radioLinkFailure ProcedureCode ::= 16 id-radioLinkPreemption ProcedureCode ::= 17 id-radioLinkRestoration ProcedureCode ::= 18 id-radioLinkSetup ProcedureCode ::= 19 id-relocationCommit ProcedureCode ::= 20 ${\it id-synchronised} Radio {\it Link} Reconfiguration Cancellation$ ProcedureCode ::= 21 id-synchronisedRadioLinkReconfigurationCommit ProcedureCode ::= 22

Release 1999	20
id-synchronisedRadioLinkReconfigurationPreparation	ProcedureCode ::= 23
id-unSynchronisedRadioLinkReconfiguration	ProcedureCode ::= 24
id-uplinkSignallingTransfer	ProcedureCode ::= 25

<Editor's note: The rest of the module is skipped.>

# R3-011032

# 3GPP TSG-RAN WG3 Meeting #19 Cardiff, UK, Feb 26<sup>th</sup> – March 2<sup>nd</sup>, 2001

CHANGE REQUEST							
ж	25.423	CR 335	<b>೫ re</b> v	<b>1</b> <sup>#</sup>	Current versio	<sup>on:</sup> <b>3.4.0</b>	ж
For <u>HELP</u>	on using	this form, see bottom	of this page o	or look at th	e pop-up text o	over the X syn	nbols.
Proposed cha	ange affec	cts: ೫ (U)SIM	ME/UE	Radio Ad	ccess Network	X Core Ne	twork
Title:	ដ <mark>ៅ</mark>	roduction of the PC P	reamble and S	SRB Delay	IEs.		
Source:	<mark>ដ R-</mark> \	WG3					
Work item co	de: #				Date: ೫	2001-02-27	
Category:	<del>ដ</del> F				Release: ೫	R99	
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Consequence not approved	<b>s if %</b> Misalignment with RAN2 specification and as the result performance deterioration of the power control while acquiring synchronisation on the Uu and delayed response messages due to the RLC retransmission.						
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Other comme	ents: ೫						

### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at: <u>http://www.3gpp.org/3G\_Specs/CRs.htm</u>. Below is a brief summary:

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

# 9.1.4 RADIO LINK SETUP RESPONSE

# 9.1.4.1 FDD Message

Message Type         M         9.2.1.40         YES         reject           Transaction ID         M         9.2.1.40         YES         reject           D-RNTI         O         9.2.1.24         YES         ignore           CN PS Domain Identifier         O         9.2.1.12         YES         ignore           CN CS Domain Identifier         O         9.2.1.11         YES         ignore           CN CS Domain Identifier         O         9.2.1.12         YES         ignore           CN CS Domain Identifier         O         9.2.1.14         YES         ignore           SRL ID         M         9.2.1.70         EACH         ignore           >RL Information         M         9.2.1.52         -         -           >SRL Sti ID         M         9.2.1.52         -         -           >VITRAN Access Point         O         9.2.1.52         -         -           Position         M         9.2.2.35A         -         -           >DC Code Information         M         9.2.2.37B         -         -           >DL Code Information         M         P.2.2.7T         -         -           >DL Code Information         M         9.2	IE/Group Name	Presence	Range	IE type	Semantics	Criticality	Assigned
Message Type         M         9.2.1.40         YES         reject           Transaction ID         M         9.2.1.59         -<			_	and	description		Criticality
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Transaction ID         M         9.2.1.59         -           DRNTI         0         9.2.1.24         YES         ignore           CN PS Domain Identifier         0         9.2.1.12         YES         ignore           CN CS Domain Identifier         0         9.2.1.11         YES         ignore           CN CS Domain Identifier         0         9.2.1.49         -         -           SRL Information Response         1, «maxno offLs»         EACH         ignore           >RL Information         M         9.2.1.52         -         -           >JRA Information         M         9.2.1.52         -         -           >SRA Information         M         9.2.1.52         -         -           >SCell GAI         0         9.2.1.52         -         -           >VITRAN Access Point         0         9.2.1.70A         -         -           >Secondary CCPCH Info         0         9.2.2.37B         -         -           >Secondary CCPCH Info         0         9.2.2.4A         -         -           >Diversity Indication         C-         9.2.1.49         -         -           >Secondary CCPCH Info         0         9.2.1.49         - <td>Message Type</td> <td>Μ</td> <td></td> <td>9.2.1.40</td> <td></td> <td>YES</td> <td>reject</td>	Message Type	Μ		9.2.1.40		YES	reject
D-RNTI         O         9.2.1.24         YES         ignore           CN PS Domain Identifier         O         9.2.1.12         YES         ignore           CN CS Domain Identifier         O         9.2.1.11         YES         ignore           RL Information Response         1cmaxno ofRLs>         EACH         ignore           >RL ID         M         9.2.1.49         -           >RL Set ID         M         9.2.35         -           >SRI Al Information         M         9.2.152         -           >SAI         O         9.2.15A         -           >UTRAN Access Point         O         9.2.15A         -           >JUR Station         O         9.2.15A         -           >With A Access Point         O         9.2.17A         -           >Secondary CCPCH Info         O         9.2.2.37B         -           >DL Code Information         M         P2.2.37         -           >DL Code Information         M         9.2.149         -           >Secondary CCPCH Info         O         9.2.170         -           >DL Code Information         M         9.2.149         -           >Secombining         -         -	Transaction ID	M		9.2.1.59		_	
CN PS Domain Identifier         O         9.2.1.12         YES         ignore           CN CS Domain Identifier         O         .9.2.1.11         YES         ignore           CN CS Domain Identifier         O         .9.2.1.49         -         -           >RL Information         M         9.2.2.35         -         -           >JRA Information         M         9.2.1.52         -         -           >SAIR Information         M         9.2.1.52         -         -           >SCell GAI         O         9.2.1.52         -         -           >SCall GAI         M         9.2.2.35A         -         -           >Sceword total wide band power         9.2.2.37B         -         -           >Secondary CCPCH Info         O         9.2.2.37B         -         -           >DL Code Information         M         FDD DL         -         -           >Schondary CCPCH Info         O         9.2.2.14A         -         -           >DL Code Information         M         FDD DL         -         -           >Schoning         -         -         -         -           >>>>>>>>>>>>>>>>>>>>>>>>>>>>	D-RNTI	0		9.2.1.24		YES	ignore
CN CS Domain identifier         O         9.21.11         YES         ignore           RL Information Response         1cmaxno ofRLs>         EACH         ignore           >RL D         M         9.21.49         -         -           >RL Ast Information         M         9.21.70B         -         -           >SAI         M         9.21.52         -         -           >SAI M         M         9.21.52         -         -           >SAI Status         O         9.21.52         -         -           >UTRAN Access Point Position         O         9.22.35A         -         -           >DL Code Information         M         9.22.37B         -         -           >DL Code Information         M         FDD D         -         -           >DL Code Information         9.22.7         -         -         -           >CHOICE Diversity         M         9.22.7         -         -         -           NotFirstRL         9.22.7         -         -         -         -           >DL Code Information         P         9.2.1.49         Reference Ruinda         -         -           >SDT Support Indicator         M	CN PS Domain Identifier	0		9.2.1.12		YES	ignore
RL information Response         7cmaxno ofRLs>         EACH         ignore           >RL B0         M         9.2.1.49         -         -           >RL Set ID         M         9.2.1.70B         -         -           >URA Information         M         9.2.1.70B         -         -           >Cell GAI         O         9.2.1.52         -         -           >Cell GAI         O         9.2.1.5A         -         -           >NTRAN Access Point         O         9.2.1.5A         -         -           >NTRAN Access Point         O         9.2.2.37B         -         -           >Secondary CCPCH Info         O         9.2.2.37B         -         -           >DL Code Information         M         FDD DL         -         -           >Secondary CCPCH Info         O         9.2.2.7         -         -           >Diversity Indication         C-         9.2.2.14A         -         -           >ChOICE Diversity         M         -         -         -           Information         9.2.1.49         Reference         -         -           >>Non Combining or First         -         -         -         -	CN CS Domain Identifier	0		9.2.1.11		YES	ignore
>RL ID         M         9.2.1.49            >>RL Set ID         M         9.2.2.35            >URA Information         M         9.2.1.70B            >SAI         M         9.2.1.70B            >Cell GAI         O         9.2.1.52            >VITRAN Access Point         O         9.2.1.5A            Position         O         9.2.1.70A            >Received total wide band         M         9.2.2.37B            >Secondary CCPCH Info         O         9.2.2.37B            >DL Code Information         M         FDD DL         -           Secondary CCPCH Info         O         9.2.2.37B         -           >DL Code Information         M         FDD DL         -           Scombining         -         9.2.14A         -           >ChOICE Diversity         M         9.2.149         Reference         -           Non Combining or First RL         9.2.1.49         Reference         -           >SSDT Support Indicator         M         9.2.1.64         -         -           >SSDT Support Indicator         M         9.2.1.69         - </td <td>RL Information Response</td> <td></td> <td>1<maxno ofRLs&gt;</maxno </td> <td></td> <td></td> <td>EACH</td> <td>ignore</td>	RL Information Response		1 <maxno ofRLs&gt;</maxno 			EACH	ignore
>RL Set ID         M         9.2.2.35            >SA1         M         9.2.1.70B            >Cell GA1         O         9.2.1.52            >UTRAN Access Point         O         9.2.1.5A            >UTRAN Access Point         O         9.2.1.5A            >VITRAN Access Point         O         9.2.1.70A            Position         9.2.2.37B             >Received total wide band         M         9.2.2.37B            >DL Code Information         M         FDD DL            Code         Information         9.2.2.14A            >Diversity Indication         C-         9.2.2.7            >CHOICE Diversity         M         9.2.1.49         Reference           Indication         M         9.2.1.49         Reference           >>Non Combining or First         -         -         -           Noresponse         9.2.1.68         -         -           >>SDT Support Indicator         M         9.2.1.68         -         -           >Maximum Uplink SIR         M         Uplink SIR         -         -	>RL ID	Μ		9.2.1.49		_	
>URA Information         M         9.2.1.70B            >SAI         M         9.2.1.52         -           >Cell GAI         O         9.2.1.5A         -           >UTRAN Access Point         O         9.2.1.7A         -           Position         9.2.1.7A         -         -           >Received total wide band power         M         9.2.2.35A         -           >Secondary CCPCH Info         O         9.2.2.37B         -           >DL Code Information         M         FDD DL Code Information         -           >Diversity Indication         C-         9.2.2.37B         -           >CHOICE Diversity Indication         C-         9.2.2.7         -           >CHOICE Diversity Indication         M         9.2.1.49         Reference RL ID for the combining         -           >>SCombining or First RL         -         -         -         -           >>Non Combining or First RL         -         -         -         -           >>SSDCH Information Response         M         9.2.1.6A         -         -           >>SSDT Support Indicator         M         9.2.1.6B         -         -           >Maximum Uplink SIR         M         9.2.1.6B </td <td>&gt;RL Set ID</td> <td>Μ</td> <td></td> <td>9.2.2.35</td> <td></td> <td>-</td> <td></td>	>RL Set ID	Μ		9.2.2.35		-	
>SAI         M         9.2.1.52         -           >Cell GAI         O         9.2.1.5A         -           >NTRAN Access Point         O         9.2.1.70A         -           Position         9.2.2.35A         -           >Received total wide band         M         9.2.2.37B         -           >Secondary CCPCH Info         O         9.2.2.37B         -           >DL Code Information         M         FDD DL         -           Code         Information         -         -           >DL Code Information         M         FDD DL         -           Secondary CCPCH Info         O         9.2.2.37B         -           >DL Code Information         M         FDD DL         -           Seconding         9.2.1.49         Reference         -           >CHOICE Diversity         M         9.2.1.49         Reference         -           NotFirst RL         -         -         -         -           >>Non Combining or First RL         -         -         -         -           >>SbDCH Information         M         9.2.1.64         -         -           >>SbSDT Support Indicator         M         9.2.1.69         - <td>&gt;URA Information</td> <td>Μ</td> <td></td> <td>9.2.1.70B</td> <td></td> <td>_</td> <td></td>	>URA Information	Μ		9.2.1.70B		_	
>Cell GAI         O         9.2.1.5A         -           >UTRAN Access Point Position         O         9.2.1.70A         -           >Received total wide band power         M         9.2.2.35A         -           >Secondary CCPCH Info         O         9.2.2.37B         -           >DL Code Information         M         FDD DL Code Information         -           >Diversity Indication         C-         9.2.2.14A         -           >Diversity Indication         C-         9.2.2.7         -           >CHOICE Diversity Indication         M         9.2.1.49         Reference R I ID for the combining         -           >Non Combining or First RL         -         -         -         -           >>Non Combining or First RL         -         -         -         -           >SSDT Support Indicator         M         9.2.1.6A         -         -           >Maximum Uplink SIR         M         Uplink SIR         -         -	>SAI	Μ		9.2.1.52		_	
>UTRAN Access Point Position       0       9.2.1.70A       -         >Received total wide band power       M       9.2.2.35A       -         >Secondary CCPCH Info       0       9.2.2.37B       -         >DL Code Information       M       FDD DL Code Information       -         >Diversity Indication       C- NotFirstRL       9.2.2.7       -         >CHOICE Diversity Indication       M       9.2.1.49       -         >>Combining       -       -       -         >>>Combining       -       -       -         >>>Non Combining or First RL       -       -       -         >>>DCH Information       M       9.2.1.49       Reference RL ID for the combining       -         >>Non Combining or First RL       -       -       -       -         >>>DCH Information Response       M       9.2.1.69       -       -         >Maximum Uplink SIR       M       Uplink SIR       -       -         >Maximum Allowed UL Tx Power       M       9.2.1.35       -       -         >Maximum DL TX Power       M       9.2.1.49       -       -         >Maximum DL TX Power       M       9.2.1.45       -       -         >Maximum DL TX	>Cell GAI	0		9.2.1.5A		_	
Position       9.2.2.36       -         >Received total wide band power       9.2.2.37B       -         >Secondary CCPCH Info       0       9.2.2.37B       -         >DL Code Information       M       FDD DL Code Information       -         Secondary CCPCH Info       0       9.2.2.37B       -         >DL Code Information       M       FDD DL Code Information       -         9.2.2.14A       9.2.2.14A       -       -         >ChOICE Diversity       M       -       -         Indication       C-       9.2.1.49       Reference         >>Combining       9.2.1.49       Reference       -         >>Non Combining or First RL       -       -       -         RL       D       M       9.2.1.16A       -         >>Non Combining or First RL       -       -       -         SSDT Support Indicator       M       9.2.2.43       -         >Maximum Uplink SIR       M       Uplink SIR       -         >Maximum Uplink SIR       M       9.2.1.69       -         >Maximum Allowed UL Tx       M       9.2.1.35       -         >Maximum Allowed UL Tx       M       9.2.2.10       - <t< td=""><td>&gt;UTRAN Access Point</td><td>0</td><td></td><td>9.2.1.70A</td><td></td><td>-</td><td></td></t<>	>UTRAN Access Point	0		9.2.1.70A		-	
>Received total wide band power     M     9.2.2.35A     -       >Secondary CCPCH Info     O     9.2.2.37B     -       >DL Code Information     M     FDD DL Code Information     -       Secondary CCPCH Info     O     9.2.2.37B     -       >DL Code Information     M     FDD DL Code Information     -       Secondary CCPCH Info     C-     9.2.2.14A     -       >Diversity Indication     C-     9.2.2.7     -       >CHOICE Diversity     M     -     -       Indication     N     9.2.1.49     Reference RL ID for the combining       >>Combining or First RL     -     -       >>Non Combining or First RL     -     -       >     -     -     -       >SSDT Support Indicator     M	Position						
power     -       >Secondary CCPCH Info     0       9.2.2.37B     -       >DL Code Information     M       Information     FDD DL Code Information       >Diversity Indication     C-       NotFirstRL     9.2.2.14A       >C-MOICE Diversity     M       Indication     -       >>Combining     -       >>Combining     -       >>Non Combining or First RL     -       Reference RL ID for the combining     -       >>Non Combining or First RL     -       Response     9.2.1.16A       >SSDCH Information     M       9.2.2.43     -       >>SSDT Support Indicator     M       9.2.1.69     -       >Maximum Uplink SIR     -       9.2.1.69     -       >Maximum Uplink SIR     -       9.2.1.69     -       >Maximum Allowed UL Tx     M       Power     -       >Maximum DL TX Power     -       >Maximum DL TX Power     -       Seconds     9.2.1.69       >Maximum DL TX Power     -       Shaimum Allowed UL Tx     M       Power     -       >Maximum DL TX Power     -       Shaimum Allowed UL Tx     M       Sub Allower	>Received total wide band	М		9.2.2.35A		-	
>Secondary CCPCH Initio       0       9.2.2.37B       -         >DL Code Information       M       FDD DL Code Information       -         >Diversity Indication       C- NotFirstRL       9.2.2.14A       -         >CHOICE Diversity Indication       M       -       -         >>Combining       9.2.2.14A       -       -         >>Combining       9.2.2.149       Reference RL ID for the combining       -         >>Non Combining or First RL       -       -       -         >>Non Combining or First RL       -       -       -         >>SSDCH Information       M       9.2.1.16A       -       -         >SSDT Support Indicator       M       9.2.2.43       -       -         >Maximum Uplink SIR       M       Uplink SIR       -       -         >Minimum Uplink SIR       M       9.2.1.69       -       -         >Closed Loop Timing Adjustment Mode       0       9.2.1.35       -       -         >Maximum DL TX Power       M       DL Power       -       -         >Maximum DL TX Power       M       DL Power       -       -         >VL UARFCN       O       UARFCN       Corresponds 0       -       -      <	power	0		0.0.0.70			
>DL Code Information       M       FDD DL Code Information       -         >Diversity Indication       C- NotFirstRL       9.2.2.14A       -         >CHOICE Diversity       M       -       -         Indication       M       9.2.2.7       -         >>ChOIE Diversity       M       -       -         Indication       M       9.2.1.49       Reference RL ID for the combining       -         >>Non Combining or First RL       M       9.2.1.49       -       -         >>Non Combining or First RL       -       -       -       -         >>DCH Information       M       9.2.1.16A       -       -         >SSDT Support Indicator       M       9.2.1.69       -       -         >Maximum Uplink SIR       M       Uplink SIR       -       -         >Closed Loop Timing Adjustment Mode       0       9.2.1.35       -       -         >Maximum DL TX Power       M       DL Power       -       -         >Minimum DL TX Power       M       9.2.1.65       -       -         >Minimum DL TX Power       M       DL Power       -       -         >Minimum DL TX Power       M       9.2.1.0       -       - </td <td>&gt;Secondary CCPCH Info</td> <td>0</td> <td></td> <td>9.2.2.37B</td> <td></td> <td>_</td> <td></td>	>Secondary CCPCH Info	0		9.2.2.37B		_	
>Diversity Indication     C- NotFirstRL     9.2.2.14A       >CHOICE Diversity     M     -       >CHOICE Diversity     M     -       >>Combining     -     -       >>>Combining     -     -       >>>Combining or First RL     M     9.2.1.49     Reference RL ID for the combining     -       >>>DCH Information Response     M     9.2.1.16A     -       >>>DCH Information Response     M     9.2.1.16A     -       >SSDT Support Indicator     M     9.2.2.43     -       >Maximum Uplink SIR     M     Uplink SIR     -       >Maximum Uplink SIR     M     Uplink SIR     -       >Closed Loop Timing Adjustment Mode     0     9.2.1.35     -       >Maximum DL TX Power     M     DL Power     -       >Maximum DL TX Power     M     DL Power     -       >Maximum DL TX Power     M     DL Power     -       >Primary Scrambling Code     0     9.2.145     -       >DL UARFCN     O     UARFCN     Corresponds     -	>DL Code Information	IVI		FDD DL		-	
Solution       C-       9.2.2.14A         >Diversity Indication       C-       9.2.2.7         ScHOICE Diversity       M       -         Indication       M       -         >>Combining       -       -         >>>Combining       -       -         >>>Not First       -       -         >>>DCH Information       M       9.2.1.49       Reference RL ID for the combining       -         >>>DCH Information       M       9.2.1.16A       -       -         >>>DCH Information       M       9.2.1.16A       -       -         >>>DCH Information       M       9.2.1.49       -       -       -         >SSDT Support Indicator       M       9.2.1.69       -       -       -         >Maximum Uplink SIR       M       Uplink SIR       -       -       -       -         >Closed Loop Timing       O       9.2.2.3A       -       -       -       -         >Maximum DL TX Power       M       DL Power       -       -       -       -         >Maximum DL TX Power       M       DL Power       -       -       -       -       -         >Primary Scrambling Code <td< td=""><td></td><td></td><td></td><td>Loformation</td><td></td><td></td><td></td></td<>				Loformation			
>Diversity Indication       C- NotFirstRL       9.2.2.7       -         >CHOICE Diversity Indication       M       -       -         >>Combining       -       -       -         >>>RL ID       M       9.2.1.49       Reference RL ID for the combining       -         >>>RL ID       M       9.2.1.49       Reference RL ID for the combining       -         >>>DCH Information Response       M       9.2.1.6A       -         >SSDT Support Indicator       M       9.2.1.69       -         >Maximum Uplink SIR       M       Uplink SIR       -         >Closed Loop Timing Adjustment Mode       0       9.2.2.3A       -         >Maximum DL TX Power       M       9.2.1.35       -         >Minimum DL TX Power       M       DL Power       -         >Minimum DL TX Power       M       0       9.2.2.10       -         >Primary Scrambing Code       0       9.2.1.46       -       -         >DL UARFCN       O       UARFCN       Corresponds       -         >DL UARFCN       O       UARFCN       Corresponds       -				0 2 2 1/A			
>CHORSING Modellish       NotFirstRL       SEEC.1         >CHOICE Diversity Indication       M       -         >>Combining       -       -         >>>Combining       M       9.2.1.49       Reference RL ID for the combining       -         >>Non Combining or First RL       M       9.2.1.49       Reference combining       -         >>>DCH Information Response       M       9.2.1.16A       -         >SSDT Support Indicator       M       9.2.2.43       -         >Maximum Uplink SIR       M       Uplink SIR       -         >Minimum Uplink SIR       M       Uplink SIR       -         SClosed Loop Timing Adjustment Mode       0       9.2.1.35       -         >Maximum DL TX Power       M       DL Power       -         >Minimum DL TX Power       M       DL Power       -         >Minimum DL TX Power       0       9.2.1.45       -         >UU UARFCN       O       UARFCN       Corresponds       -         >DL Power       -       -       -       -         >LI UARFCN       O       UARFCN       Corresponds       -	>Diversity Indication	C-		9227			
>CHOICE Diversity Indication       M       -       -         >>Combining       -       -       -         >>>RL ID       M       9.2.1.49       Reference RL ID for the combining       -         >>Non Combining or First RL       M       9.2.1.49       Reference -       -         >>>DCH Information Response       M       9.2.1.16A       -         >>SSDT Support Indicator       M       9.2.2.43       -         >Maximum Uplink SIR       M       Uplink SIR       -         >Minimum Uplink SIR       M       Uplink SIR       -         >Closed Loop Timing Adjustment Mode       0       9.2.1.69       -         >Maximum DL TX Power       M       9.2.1.35       -         >Maximum DL TX Power       M       DL Power       -         >Minimum DL TX Power       M       DL Power       -         >VUL UARFCN       O       UARFCN       Corresponds       -         >DL UARFCN       O       UARFCN       Corresponds       -		NotFirstRL		0.2.2.1			
Indication       -         >>>Combining       -         >>>RL ID       M       9.2.1.49       Reference combining         RL ID for the combining or First RL       -       -         >>Non Combining or First RL       -       -         >>>DCH Information       M       9.2.1.16A       -         >>>DCH Information       M       9.2.2.43       -         >SSDT Support Indicator       M       9.2.2.43       -         >Maximum Uplink SIR       M       Uplink SIR       -         9.2.1.69       -       -       -         >Minimum Uplink SIR       M       Uplink SIR       -         9.2.1.69       -       -       -         >Closed Loop Timing       O       9.2.2.3A       -         Adjustment Mode       -       -       -         >Maximum Allowed UL Tx       M       9.2.1.35       -         Power       M       DL Power       -         >Maximum DL TX Power       M       DL Power       -         9.2.1.35       -       -       -         >Minimum DL TX Power       M       DL Power       -         >UU UARFCN       O       UARFCN       - <td>&gt;CHOICE Diversity</td> <td>M</td> <td></td> <td></td> <td></td> <td>_</td> <td></td>	>CHOICE Diversity	M				_	
>>Combining       M       9.2.1.49       Reference RL ID for the combining       -         >>Non Combining or First RL       -       -       -         >>>DCH Information Response       M       9.2.1.16A       -         >>>DCH Information Response       M       9.2.1.16A       -         >SSDT Support Indicator       M       9.2.2.43       -         >Maximum Uplink SIR       M       Uplink SIR       -         >Maximum Uplink SIR       M       Uplink SIR       -         >Closed Loop Timing Adjustment Mode       O       9.2.1.35       -         >Maximum DL TX Power       M       9.2.1.35       -         >Maximum DL TX Power       M       DL Power       -         >VL UARFCN       O       9.2.1.69       -	Indication						
>>>RL ID       M       9.2.1.49       Reference RL ID for the combining       -         >>Non Combining or First RL       -       -       -         >>>DCH Information Response       M       9.2.1.16A       -         >>>DCH Information Response       M       9.2.2.43       -         >SSDT Support Indicator       M       9.2.2.43       -         >Maximum Uplink SIR       M       Uplink SIR       -         >Minimum Uplink SIR       M       Uplink SIR       -         >Closed Loop Timing Adjustment Mode       O       9.2.2.3A       -         >Maximum Allowed UL Tx Power       M       9.2.1.35       -         >Maximum DL TX Power       M       DL Power       -         >Minimum DL TX Power       M       DL Power       -         >VL UARFCN       O       9.2.1.45       -         >DL UARFCN       O       9.2.1.66       -         >DL VARFCN       Corresponds to Nu in ref.       -         >DL UARFCN       O       UARFCN       Corresponds to Nu in ref.	>>Combining					_	
RL ID for the combining       >>Non Combining or First RL       RL       >>>DCH Information Response       >SSDT Support Indicator       M     9.2.1.16A       >Maximum Uplink SIR       M     9.2.2.43       >Maximum Uplink SIR       M     Uplink SIR       9.2.1.69       >Minimum Uplink SIR       M     Uplink SIR       -       9.2.1.69       >Minimum Uplink SIR       M       9.2.1.69       >Closed Loop Timing       Adjustment Mode       -       >Maximum DL TX Power       M       DL Power       -       9.2.1.00       >Minimum DL TX Power       M       DL Power       -       9.2.1.01       >Minimum DL TX Power       M       DL Power       -       9.2.1.05       -       -       -       9.2.1.05       -       -       -       -       -       -       -       -       -       -       -       -       -       -    <	>>>RL ID	Μ		9.2.1.49	Reference	_	
>>Non Combining or First RL     combining       >>>DCH Information Response     M     9.2.1.16A     -       >SSDT Support Indicator     M     9.2.2.43     -       >Maximum Uplink SIR     M     Uplink SIR     -       >Minimum Uplink SIR     M     Uplink SIR     -       >Sclosed Loop Timing Adjustment Mode     O     9.2.1.35     -       >Maximum DL TX Power     M     DL Power     -       >Minimum DL TX Power     M     DL Power     -       >VL UARFCN     O     UARFCN     Corresponds     -					RL ID for the		
>>Non Combining or First RL       -         >>>DCH Information Response       M       9.2.1.16A       -         >SSDT Support Indicator       M       9.2.2.43       -         >Maximum Uplink SIR       M       Uplink SIR       -         >Minimum Uplink SIR       M       Uplink SIR       -         >Closed Loop Timing Adjustment Mode       0       9.2.1.69       -         >Maximum Allowed UL Tx Power       M       9.2.1.35       -         >Maximum DL TX Power       M       DL Power       -         >Minimum DL TX Power       M       DL Power       -         >VL UARFCN       O       9.2.1.45       -         >DL UARFCN       O       UARFCN       Corresponds       -         >DL UARFCN       O       UARFCN       Corresponds       -					combining		
>>>DCH Information Response       M       9.2.1.16A       -         >SSDT Support Indicator       M       9.2.2.43       -         >Maximum Uplink SIR       M       Uplink SIR       -         >Minimum Uplink SIR       M       Uplink SIR       -         >Minimum Uplink SIR       M       Uplink SIR       -         >Minimum Uplink SIR       M       Uplink SIR       -         >Closed Loop Timing Adjustment Mode       O       9.2.1.69       -         >Maximum Allowed UL Tx Power       M       9.2.1.35       -         >Maximum DL TX Power       M       DL Power       -         >Minimum DL TX Power       M       DL Power       -         >VL UARFCN       O       9.2.1.45       -         >DL UARFCN       O       UARFCN       Corresponds       -         >DL UARFCN       O       UARFCN       Corresponds       -	>>Non Combining or First					-	
ResponseIIIJuint of the second	>>>DCH Information	М		9.2.1.16A		_	
>SSDT Support Indicator       M       9.2.2.43       -         >Maximum Uplink SIR       M       Uplink SIR       -         >Minimum Uplink SIR       M       Uplink SIR       -         >Closed Loop Timing       O       9.2.1.69       -         >Closed Loop Timing       O       9.2.1.69       -         >Adjustment Mode       9.2.1.35       -         >Maximum Allowed UL Tx       M       9.2.1.35       -         Power       M       DL Power       -         >Maximum DL TX Power       M       DL Power       -         >Minimum DL TX Power       M       DL Power       -         >VL UARFCN       O       9.2.1.45       -         >DL UARFCN       O       UARFCN       -         >DL UARFCN       O       UARFCN       -	Response			0.2			
>Maximum Uplink SIR       M       Uplink SIR       -         >Minimum Uplink SIR       M       Uplink SIR       -         >Closed Loop Timing       O       9.2.1.69       -         >Closed Loop Timing       O       9.2.2.3A       -         Adjustment Mode       O       9.2.1.35       -         >Maximum Allowed UL Tx       M       9.2.1.35       -         Power       M       DL Power       -         >Maximum DL TX Power       M       DL Power       -         >Minimum DL TX Power       M       DL Power       -         >Primary Scrambling Code       O       9.2.1.45       -         >UL UARFCN       O       UARFCN       Corresponds       -         >DL UARFCN       O       UARFCN       Corresponds       -	>SSDT Support Indicator	М		9.2.2.43		-	
>Minimum Uplink SIRMUplink SIR 9.2.1.69->Closed Loop Timing Adjustment ModeO9.2.2.3A->Maximum Allowed UL Tx PowerM9.2.1.35->Maximum DL TX PowerMDL Power 9.2.2.10->Minimum DL TX PowerMDL Power 9.2.2.10->Minimum DL TX PowerMDL Power 9.2.2.10->Minimum DL TX PowerMDL Power 9.2.2.10->DL UARFCNO9.2.1.45->DL UARFCNOUARFCN 9.2.1.66->DL UARFCNOUARFCN 9.2.1.66->DL UARFCNOUARFCN 9.2.1.66-	>Maximum Uplink SIR	Μ		Uplink SIR		_	
>Minimum Uplink SIRMUplink SIR->Closed Loop Timing Adjustment ModeO9.2.1.69->Maximum Allowed UL TxM9.2.1.35->Maximum DL TX PowerMDL Power 9.2.2.10->Maximum DL TX PowerMDL Power 9.2.2.10->Minimum DL TX PowerMDL Power 9.2.2.10->Minimum DL TX PowerMDL Power 9.2.1.65->UL UARFCNO9.2.1.45->DL UARFCNOUARFCN 9.2.1.66->DL UARFCNOUARFCN 9.2.1.66->DL UARFCNOUARFCN 9.2.1.66->DL UARFCNOUARFCN 9.2.1.66-				9.2.1.69			
>Closed Loop Timing Adjustment Mode       0       9.2.1.69       -         >Maximum Allowed UL Tx Power       M       9.2.1.35       -         >Maximum DL TX Power       M       DL Power       -         >Maximum DL TX Power       M       DL Power       -         >Minimum DL TX Power       M       DL Power       -         >VIL UARFCN       O       9.2.1.45       -         >DL UARFCN       O       UARFCN       Corresponds       -         >DL UARFCN       O       UARFCN       Corresponds       -         >DL UARFCN       O       UARFCN       Corresponds       -	>Minimum Uplink SIR	Μ		Uplink SIR		—	
>Closed Loop Timing Adjustment Mode       0       9.2.2.3A       -         >Maximum Allowed UL Tx Power       M       9.2.1.35       -         >Maximum DL TX Power       M       DL Power       -         >Maximum DL TX Power       M       DL Power       -         >Minimum DL TX Power       M       DL Power       -         >Vinimum DL TX Power       M       DL Power       -         >VIL UARFCN       O       9.2.1.45       -         >DL UARFCN       O       UARFCN       Corresponds       -         >DL UARFCN       O       UARFCN       Corresponds       -         >DL UARFCN       O       UARFCN       Corresponds       -		-		9.2.1.69			
Adjustment Mode       M       9.2.1.35       -         >Maximum Allowed UL Tx Power       M       9.2.1.35       -         >Maximum DL TX Power       M       DL Power 9.2.2.10       -         >Minimum DL TX Power       M       DL Power 9.2.2.10       -         >Primary Scrambling Code       O       9.2.1.45       -         >UL UARFCN       O       UARFCN 9.2.1.66       -         >DL UARFCN       O       UARFCN 9.2.1.66       -	>Closed Loop Timing	0		9.2.2.3A		-	
>Maximum Allowed UL TX       M       9.2.1.35       -         Power       M       DL Power       -         >Maximum DL TX Power       M       DL Power       -         9.2.2.10       DL Power       -       -         >Minimum DL TX Power       M       DL Power       -         9.2.2.10       DL Power       -       -         >Primary Scrambling Code       0       9.2.1.45       -         >UL UARFCN       O       UARFCN       Corresponds       -         >DL UARFCN       O       UARFCN       Corresponds       -         >DL UARFCN       O       UARFCN       Corresponds       -	Adjustment Mode			0.04.05			
>Maximum DL TX Power     M     DL Power     -       >Minimum DL TX Power     M     DL Power     -       >Minimum DL TX Power     M     DL Power     -       >Primary Scrambling Code     O     9.2.1.45     -       >UL UARFCN     O     UARFCN     Corresponds     -       >DL UARFCN     O     UARFCN     Corresponds     -       >DL UARFCN     O     UARFCN     to Nu in ref.     6]	>Maximum Allowed UL TX Power	IVI		9.2.1.35		_	
Minimum DL TX Power     M     DL Power     -       >Primary Scrambling Code     O     9.2.1.45     -       >UL UARFCN     O     UARFCN     Corresponds     -       >DL UARFCN     O     UARFCN     Corresponds     -	>Maximum DL TX Power	М	T	DL Power	1	—	
>Minimum DL TX Power     M     DL Power     -       >Primary Scrambling Code     O     9.2.1.45     -       >UL UARFCN     O     UARFCN     Corresponds     -       >DL UARFCN     O     UARFCN     Corresponds     -				9.2.2.10			
Primary Scrambling Code         0         9.2.2.10           >Primary Scrambling Code         0         9.2.1.45         –           >UL UARFCN         0         UARFCN         Corresponds         –           >DL UARFCN         0         UARFCN         Ion Nu in ref.         [6]           >DL UARFCN         0         UARFCN         Corresponds         –           9.2.1.66         to Nu in ref.         [6]         –	>Minimum DL TX Power	Μ		DL Power		-	
>Primary Scrambling Code       O       9.2.1.45          >UL UARFCN       O       UARFCN       Corresponds       -         9.2.1.66       to Nu in ref.       [6]       -         >DL UARFCN       O       UARFCN       Corresponds       -         9.2.1.66       to Nu in ref.       [6]       -       -         >DL UARFCN       O       UARFCN       Corresponds       -				9.2.2.10			
>UL UARFCN     O     UARFCN     Corresponds     -       9.2.1.66     to Nu in ref.     [6]       >DL UARFCN     O     UARFCN     Corresponds     -       9.2.1.66     to Nu in ref.     [6]     -	>Primary Scrambling Code	0		9.2.1.45	-	_	
>DL UARFCN     O     UARFCN     Corresponds     -       9.2.1.66     to Nu in ref.     [6]	>UL UARFCN	0		UARFCN	Corresponds	—	
>DL UARFCN     O     UARFCN     Corresponds     -       9.2.1.66     to Nd in ref				9.2.1.66	to Nu in ref.		
U UARFON U UARFON Corresponds -							
				0 2 1 66	to Nd in ref	_	

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
				[6]		
>Primary CPICH Power	0		9.2.1.44		-	
>DSCH Information Response	0		DSCH FDD Information Response 9.2.2.13B		YES	ignore
>Neighbouring UMTS Cell Information	0		9.2.1.41A		-	
>Neighbouring GSM Cell Information	0		9.2.1.41C		YES	ignore
>PC Preamble	M		<u>9.2.2.xx</u>		<u>_</u>	
SRB Delay	<u>M</u>		<u>9.2.2.xx</u>		<u>_</u>	
Uplink SIR Target	0		Uplink SIR 9.2.1.69		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore
Condition				Explanation		

NotFirstRL	The IE is present only if the RL is not the first RL in the RL Information

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

# 9.1.7 RADIO LINK ADDITION RESPONSE

# 9.1.7.1 FDD Message

IE/Group Name	Presence	Range	IE type	Semantics	Criticality	Assigned
			and	description		Criticality
			reference			
Message Type	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		-	
RL Information Response		1 <maxno ofRLs-1&gt;</maxno 			EACH	ignore
>RL ID	М		9.2.1.49		-	
>RL Set ID	М		9.2.2.35		_	
>URA Information	М		9.2.1.70B		-	
>SAI	М		9.2.1.52		-	
>Cell GAI	0		9.2.1.5A		-	
>UTRAN Access Point Position	0		9.2.1.70A		_	
>Received total wide band power	М		9.2.2.35A		-	
>Secondary CCPCH Info	0		9.2.2.37B		_	
>DL Code Information	М		FDD DL		YES	ignore
			Code			Ū.
			Information 9.2.2.14A			
>Diversity Indication	М		9.2.2.7		_	
>CHOICE Diversity Indication	М				-	
>>Combining					_	
>>>RL ID	М		9.2.1.49	Reference RL ID	-	
>>Non Combining					-	
>>>DCH Information Response	М		9.2.1.16A		_	
>SSDT Support Indicator	М		9.2.2.43		_	
>Minimum Uplink SIR	М		Uplink SIR 9.2.1.69		_	
>Maximum Uplink SIR	М		Uplink SIR		_	
>Closed Loop Timing	0		9.2.2.3A		-	
>Maximum Allowed UL	М		9.2.1.35		_	
>Maximum DL TX Power	М		DL Power		-	
>Minimum DL TX Power	М		DL Power 9 2 2 10		_	
>Neighbouring UMTS Cell Information	0		9.2.1.41A		_	
>Neighbouring GSM Cell	0		9.2.1.41C		YES	ignore
>PC Preamble	М		9.2.2.xx		-	
>SRB Delay	M	1	9.2.2.xx		-	
Criticality Diagnostics	0		9.2.1.13		YES	ignore
endenty Englission	1	1		1	0	.9010

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

# 9.2.2.xx PC Preamble

Indicates DPDCH power control preamble length [7].

IE/Group Name	Presence	<u>Range</u>	IE type and	Semantics description	
			<u>reference</u>		
PCP Preamble			INTEGER(0.	In number of frames.	
			.7)		

# 9.2.2.xx SRB Delay

Indicates the number of frames after the PC Preamble period during which transmission of data on some RRC Signalling Bearers shall be prohibited by UE in accordance with ref. [16].

IE/Group Name	Presence	<u>Range</u>	IE type and reference	Semantics description
SRB Delay			<u>INTEGER(0.</u> .7,)	In number of frames.

# 9.3.3 PDU Definitions

# Unaffected text has been omitted.

PagingCause, PagingRecordType, PDSCHCodeMapping, PayloadCRC-PresenceIndicator, PC-Preamble, PowerAdjustmentType, PowerOffset, PrimaryCCPCH-RSCP,

## Unaffected text has been omitted.

ScaledAdjustmentRatio,					
MaxAdjustmentStep,					
SecondaryCCPCH-SlotFormat,					
SRB-Delay,					
SyncCase,					
TDD-ChannelisationCode,					
TDD-DCHs-to-Modify,					

1

# Unaffected text has been omitted.

nau	protocollEs protocolExtensions	ProtocolExtensionContainer	{{RadioLinkSetupResponseFDD-Extensions}}	
Pad	lioLinkSetupResponseFDD ::=	SEQUENCE {	{{RadioLinkSetupResponseFDD-IEs}},	
	* * * * * * * * * * * * * * * * * * * *	*****	***	
	RADIO LINK SETUP RESPONSE H	DD		
	*************************	* * * * * * * * * * * * * * * * * * * *	* * *	

```
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-SIRTarget
                                            CRITICALITY ignore TYPE UL-SIR
                                                                                             PRESENCE optional
                                                                                                                } |
    { ID id-CriticalityDiagnostics
                                            CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                                  PRESENCE optional
                                                                                                                         },
    . . .
RL-InformationResponseList-RL-SetupRspFDD
                                                ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {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-TD
                                    RL-ID,
    rL-Set-TD
                                    RL-Set-ID,
    uRA-Information
                                    URA-Information,
    sAI
                                    SAI,
    gA-Cell
                                    GA-Cell
                                                OPTIONAL.
    qA-AccessPointPosition
                                    GA-AccessPointPosition
                                                                OPTIONAL,
    received-total-wide-band-power Received-total-wide-band-power,
    secondary-CCPCH-Info
                                    Secondary-CCPCH-Info
                                                                OPTIONAL,
    dl-CodeInformation
                                    FDD-DL-CodeInformation,
    diversitvIndication
                                    DiversityIndication-RL-SetupRspFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator
                                    SSDT-SupportIndicator,
    maxUL-SIR
                                    UL-SIR,
    minUL-SIR
                                    UL-SIR,
    closedlooptimingadjustmentmode
                                   Closedlooptimingadjustmentmode OPTIONAL,
    maximumAllowedULTxPower
                                    MaximumAllowedULTxPower,
    maximumDLTxPower
                                    DL-Power,
    minimumDLTxPower
                                    DL-Power,
    primaryScramblingCode
                                    PrimaryScramblingCode
                                                            OPTIONAL,
    uL-UARFCN
                                    UARFCN
                                                            OPTIONAL,
    dL-UARFCN
                                    UARFCN
                                                            OPTIONAL,
    primaryCPICH-Power
                                    PrimaryCPICH-Power
                                                            OPTIONAL,
    dSCHInformationResponse
                                    DSCH-InformationResponse-RL-SetupRspFDD OPTIONAL,
    neighbouring-UMTS-CellInformation
                                       Neighbouring-UMTS-CellInformation OPTIONAL,
    neighbouring-GSM-CellInformation
                                        Neighbouring-GSM-CellInformation-RL-SetupRspFDD OPTIONAL,
    pC-Preamble
                                    PC-Preamble,
```

76

```
SRB-Delay,
    sRB-Delay
                                    ProtocolExtensionContainer { {RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DiversityIndication-RL-SetupRspFDD ::= CHOICE
    combining
                                    Combining-RL-SetupRspFDD,
    nonCombiningOrFirstRL
                                    NonCombiningOrFirstRL-RL-SetupRspFDD
Combining-RL-SetupRspFDD ::= SEQUENCE {
    rL-ID
                                RL-ID,
    iE-Extensions
                                ProtocolExtensionContainer { { CombiningItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    . . .
CombiningItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
NonCombiningOrFirstRL-RL-SetupRspFDD ::= SEQUENCE
    dCH-InformationResponse
                                DCH-InformationResponse,
    iE-Extensions
                                ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    . . .
NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DSCH-InformationResponse-RL-SetupRspFDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseIE-RL-SetupRspFDD }}
DSCH-InformationResponseIE-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DSCH-FDD-InformationResponse CRITICALITY ignore TYPE
                                                                        DSCH-FDD-InformationResponse PRESENCE
                                                                                                                 mandatory }
Neighbouring-GSM-CellInformation-RL-SetupRspFDD ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-CellInformationItem-RL-SetupRspFDD
} }
Neighbouring-GSM-CellInformationItem-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-GSM-CellInformation CRITICALITY ignore TYPE Neighbouring-GSM-CellInformation
                                                                                                                 PRESENCE
    mandatory }
```

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

Unaffected text has been omitted.

```
-- RADIO LINK ADDITION RESPONSE FDD
RadioLinkAdditionResponseFDD ::= SEQUENCE {
                                 ProtocolIE-Container
                                                          {{RadioLinkAdditionResponseFDD-IEs}},
   protocolIEs
   protocolExtensions
                                 ProtocolExtensionContainer {{RadioLinkAdditionResponseFDD-Extensions}}
                                                                                                                   OPTIONAL,
   . . .
RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
   { ID id-RL-InformationResponseList-RL-AdditionRspFDD
                                                       CRITICALITY ignore TYPE RL-InformationResponseList-RL-AdditionRspFDD
   PRESENCE mandatory } |
   { ID id-CriticalityDiagnostics
                                        CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                          PRESENCE optional
                                                                                                               },
   . . .
RL-InformationResponseList-RL-AdditionRspFDD
                                                ::= SEOUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container { {RL-
InformationResponseItemIEs-RL-AdditionRspFDD } }
RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-AdditionRspFDD
                                                           CRITICALITY ignore TYPE RL-InformationResponseItem-RL-AdditionRspFDD
   PRESENCE mandatory }
RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
   rL-ID
                                 RL-ID,
   rL-Set-ID
                                 RL-Set-ID,
   uRA-Information
                                 URA-Information,
   sAI
                                 SAI,
   qA-Cell
                                 GA-Cell
                                            OPTIONAL,
   gA-AccessPointPosition
                                 GA-AccessPointPosition OPTIONAL,
   received-total-wide-band-power Received-total-wide-band-power,
   secondary-CCPCH-Info
                                 Secondary-CCPCH-Info
                                                           OPTIONAL,
   dl-CodeInformation
                                 DL-CodeInformationList-RL-AdditionRspFDD,
   diversityIndication
                                 DiversityIndication-RL-AdditionRspFDD,
```

-- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in

```
-- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator
                                        SSDT-SupportIndicator,
    minUL-SIR
                                        UL-SIR,
    maxUL-SIR
                                        UL-SIR.
    closedlooptimingadjustmentmode
                                        Closedlooptimingadjustmentmode OPTIONAL,
    maximumAllowedULTxPower
                                        MaximumAllowedULTxPower,
    maximumDLTxPower
                                        DL-Power,
    minimumDLTxPower
                                        DL-Power,
    neighbouring-UMTS-CellInformation
                                        Neighbouring-UMTS-CellInformation OPTIONAL,
    neighbouring-GSM-CellInformation
                                        Neighbouring-GSM-CellInformation-RL-AdditionRspFDD OPTIONAL,
    pC-Preamble
                                        PC-Preamble,
   sRB-Delay
                                        SRB-Delay,
                                        ProtocolExtensionContainer { {RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DL-CodeInformationList-RL-AdditionRspFDD ::= ProtocolIE-Single-Container {{ DL-CodeInformationListIEs-RL-AdditionRspFDD }}
DL-CodeInformationListIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-FDD-DL-CodeInformation CRITICALITY ignore TYPE FDD-DL-CodeInformation
                                                                                         PRESENCE mandatory
DiversityIndication-RL-AdditionRspFDD ::= CHOICE {
                                    Combining-RL-AdditionRspFDD,
    combining
    nonCombining
                                    NonCombining-RL-AdditionRspFDD
Combining-RL-AdditionRspFDD ::= SEQUENCE {
   rL-ID
                                RL-ID,
    iE-Extensions
                                ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    . . .
CombiningItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
NonCombining-RL-AdditionRspFDD ::= SEQUENCE {
   dCH-InformationResponse
                                            DCH-InformationResponse,
                                                ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
```

-- P

79

```
NonCombiningItem-RL-AdditionRspFDD-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
Neighbouring-GSM-CellInformation-RL-AdditionRspFDD ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-CellInformationItem-RL-
AdditionRspFDD }}
Neighbouring-GSM-CellInformationItem-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-GSM-CellInformation CRITICALITY ignore TYPE Neighbouring-GSM-CellInformation PRESENCE
    mandatory }
RadioLinkAdditionResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

# 9.3.4 Information Element Definitions

```
Unaffected text has been omitted.
```

```
PagingCause ::= ENUMERATED {
   terminating-conversational-call,
   terminating-interactive-call,
   terminating-background-call,
   sms,
   ...
}
-- See in [16]
PagingRecordType ::= ENUMERATED {
   imsi-gsm-map,
   tmsi-gsm-map,
   imsi-ds-41,
   tmsi-ds-41,
   ...
```

```
}
-- See in [16]
PayloadCRC-PresenceIndicator ::= ENUMERATED {
    crc-included,
    crc-not-included
}
PCCPCH-Power ::= INTEGER (-150..400,...)
-- PCCPCH-power = power * 10
-- If power <= -15 PCCPCH shall be set to -150
-- If power >= 40 PCCPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dBm
PC-Preamble ::= INTEGER(0..7,...)
PDSCHCodeMapping ::= SEQUENCE {
```

dL-ScramblingCode DL-ScramblingCode, signallingMethod PDSCHCodeMapping-SignallingMethod, iE-Extensions ProtocolExtensionContainer { { PDSCHCodeMapping-ExtIEs } } OPTIONAL, ...}

Unaffected text has been omitted.

-- S

Unaffected text has been omitted.

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

SRB-Delay ::= INTEGER(0..7,...)