

**TSG-RAN Meeting #12
Stockholm, Sweden, 12 - 15 June 2001**

TSGRP#12(01) 0380

Title: Agreed CRs to TS 25.423

Source: TSG-RAN WG3

Agenda item: 8.3.3/8.3.4

Tdoc_Num	Specification	CR_Num	Revision_Num	CR_Subject	CR_Category	WG_Status	Cur_Ver_Num	New_Ver_Num	Workitem
R3-011616	25.423	398		Correct term to refer to a MCC+MNC combination is PLMN identity.	F	agreed	3.5.0	3.6.0	TEI
R3-011619	25.423	399		Correct term to refer to a MCC+MNC combination is PLMN identity.	A	agreed	4.0.0	4.1.0	TEI
R3-011856	25.423	402	3	Cell Reserved for operator use	F	agreed	3.5.0	3.6.0	TEI
R3-011857	25.423	403	3	Cell Reserved for operator use	A	agreed	4.0.0	4.1.0	TEI
R3-011697	25.423	404		Correction to the critically information of DL Code Information in tabular format	F	agreed	3.5.0	3.6.0	TEI
R3-011698	25.423	405		Correction to the critically information of DL Code Information in tabular format	A	agreed	4.0.0	4.1.0	TEI
R3-011706	25.423	406		Alignment the range of TGPRC with RRC	F	agreed	3.5.0	3.6.0	TEI
R3-011707	25.423	407		Alignment the range of TGPRC with RRC	A	agreed	4.0.0	4.1.0	TEI
R3-011774	25.423	408	1	Addition of S-RNTI and D-RNTI to the ERROR INDICATION message	F	agreed	3.5.0	3.6.0	TEI
R3-011775	25.423	409	1	Addition of S-RNTI and D-RNTI to the ERROR INDICATION message	A	agreed	4.0.0	4.1.0	TEI
R3-011737	25.423	410		Reference to superseded versions of ASN.1 documents	F	agreed	3.5.0	3.6.0	TEI
R3-011738	25.423	411		Reference to superseded versions of ASN.1 documents	A	agreed	4.0.0	4.1.0	TEI

R3-011880	25.423	413	2	Alignment of Conditional Presence with RAN3 Specification Principles	F	agreed	3.5.0	3.6.0	TEI
R3-011881	25.423	414	2	Alignment of Conditional Presence with RAN3 Specification Principles	A	agreed	4.0.0	4.1.0	TEI

CHANGE REQUEST

⌘ **25.423 CR 398** ⌘ rev **-** ⌘ Current version: **3.5.0** ⌘

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

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

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

Reason for change:	⌘ In the current RNSAP specification the notion of a PLMN Identity is not consistently using the terminology of TR 21.905 According to TR 25.905 the term PLMN Identity shall be used.
Summary of change:	⌘ The term PLMN Identity is replacing any occurrence of the terms PLMN Id, PLMN ID and PLMN-ID, making the terminology with regards to PLMN Identity in accordance with TR 21.905.
Consequences if not approved:	⌘ The terminology with regards to PLMN Identity will remain inconsistent with TR 21.905. <u>Backward Compatibility:</u> This CR is backward compatible with the previous version of RNSAP.

Clauses affected:	⌘ 9.2.1.11, 9.2.1.12, 9.2.1.41C, 9.2.1.52, and 9.3.4.	
Other specs affected:	⌘ <input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘ TS 25.423 CR399 (Rel. 4)
Other comments:	⌘	

How to create CRs using this form:

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

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

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

9.2.1.11 CN CS Domain Identifier

Identification of the CN node in the CS Domain.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PLMN ID Identity	M		OCTET STRING (3)	<ul style="list-style-type: none"> - digits 0 to 9, two digits per octet, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n <p>-The PLMN ID Identity consists of 3 digits from MCC followed by either</p> <ul style="list-style-type: none"> -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -3 digits from MNC (in case of a 3 digit MNC).
LAC	M		OCTET STRING (2)	0000 and FFFE not allowed

9.2.1.12 CN PS Domain Identifier

Identification of the CN Node in the PS Domain.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
PLMN ID Identity	M		OCTET STRING (3)	<ul style="list-style-type: none"> - digits 0 to 9, two digits per octet, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n <p>-The PLMN ID Identity consists of 3 digits from MCC followed by either</p> <ul style="list-style-type: none"> -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -3 digits from MNC (in case of a 3 digit MNC).
LAC	M		OCTET STRING (2)	0000 and FFFE not allowed
RAC	M		OCTET STRING (1)	

9.2.1.41C Neighbouring GSM Cell Information

The *Neighbouring GSM Cell Information* IE provides information for one GSM Cell that is a neighbouring cell to a cell in the DRNC.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Neighbouring GSM Cell Information		<i>1..<maxnoofGSM neighbours></i>		
>CGI		1		Cell Global Identity as defined in ref. [1].
>>LAI		1		
>>>PLMN- ID <u>Identity</u>	M		OCTET STRING (3)	<ul style="list-style-type: none"> - digits 0 to 9, two digits per octet, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n <p>-The PLMN-ID <u>Identity</u> consists of 3 digits from MCC followed by either</p> <ul style="list-style-type: none"> -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -3 digits from MNC (in case of a 3 digit MNC).
>>>LAC	M		OCTET STRING (2)	0000 and FFFE not allowed
>>CI	M		OCTET STRING (2)	
>Q-Offset Serving to Neighbour	M		INTEGER (-50..50)	
>Q-RxlevMin	M		INTEGER (-58..-13)	Range: -115 to -25 dBm, Step: 2 dB Actual value = (IE value * 2) + 1: -58: -115 dBm -57: -113 dBm ... -13: -25 dBm
>Maximum Allowed UL Tx Power	M		9.2.1.35	
>BSIC		1		Base Station Identity Code as defined in ref. [1].
>>NCC	M		BIT STRING(3)	Network Colour Code.
>>BCC	M		BIT STRING(3)	Base Station Colour Code.
>BCCH ARFCN	M		INTEGER (0..1023)	BCCH Frequency as defined in ref. [29].
>GSM Output Power	O		Value range??	Output Power level of the GSM cell as defined in ref. [29].

Range bound	Explanation
MaxnoofGSMneighbours	Maximum number of neighbouring GSM cells for one cell.

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
PLMN Identity	M		OCTET STRING (3)	<ul style="list-style-type: none"> - digits 0 to 9, two digits per octet, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n <p>-The PLMN-ID Identity consists of 3 digits from MCC followed by either</p> <ul style="list-style-type: none"> -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -3 digits from MNC (in case of a 3 digit MNC).
LAC	M		OCTET STRING (2)	0000 and FFFE not allowed
SAC	M		OCTET STRING (2)	

9.3.4 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
```

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

```
CGI ::= SEQUENCE {
  LAI SEQUENCE {
    pLMN-IDentity PLMN-IDentity,
    lAC LAC,
    iE-Extensions ProtocolExtensionContainer { {LAI-ExtIEs} } OPTIONAL,
    ...
  },
  cI CI,
  iE-Extensions ProtocolExtensionContainer { {CGI-ExtIEs} } OPTIONAL
}
```

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

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

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

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

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

```
CN-PS-DomainIdentifier ::= SEQUENCE {
|   pLMN-IDentity      PLMN-IDentity,
      LAC,
      rAC,
      iE-Extensions    ProtocolExtensionContainer { {CN-PS-DomainIdentifier-ExtIEs} } OPTIONAL
}

```

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

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

```
| PLMN-IDentity ::= OCTET STRING (SIZE(3))
```

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

```
-- S
```

```
SAC ::= OCTET STRING (SIZE (2))
```

```
SAI ::= SEQUENCE {
|   pLMN-IDentity      PLMN-IDentity,
      LAC,
      sAC,
      iE-Extensions    ProtocolExtensionContainer { {SAI-ExtIEs} } OPTIONAL
}

```

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

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

CHANGE REQUEST

⌘ **25.423 CR 399** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

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

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

Title:	⌘ Correction to PLMN Identity Terminology		
Source:	⌘ R-WG3		
Work item code:	⌘ TEI	Date:	⌘ May, 2001
Category:	⌘ A	Release:	⌘ REL-4
	Use <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)
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Consequences if not approved:	⌘ The terminology with regards to PLMN Identity will remain inconsistent with TR 21.905. <u>Backward Compatibility:</u> This CR is backward compatible with the previous version of RNSAP.

Clauses affected:	⌘ 9.2.1.11, 9.2.1.12, 9.2.1.41C, 9.2.1.52, and 9.3.4.	
Other specs affected:	⌘ <input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘ TS 25.423 CR398 (Rel. '99)
Other comments:	⌘	

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LAC	M		OCTET STRING (2)	0000 and FFFE not allowed

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
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LAC	M		OCTET STRING (2)	0000 and FFFE not allowed
RAC	M		OCTET STRING (1)	

9.2.1.41C Neighbouring GSM Cell Information

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IE/Group Name	Presence	Range	IE type and reference	Semantics description
Neighbouring GSM Cell Information		<i>1..<maxnoofGSM neighbours></i>		
>CGI		1		Cell Global Identity as defined in ref. [1].
>>LAI		1		
>>>PLMN- ID <u>Identity</u>	M		OCTET STRING (3)	<ul style="list-style-type: none"> - digits 0 to 9, two digits per octet, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n <p>-The <u>PLMN-ID Identity</u> consists of 3 digits from MCC followed by either</p> <ul style="list-style-type: none"> -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -3 digits from MNC (in case of a 3 digit MNC).
>>>LAC	M		OCTET STRING (2)	0000 and FFFE not allowed
>>CI	M		OCTET STRING (2)	
>Q-Offset Serving to Neighbour	M		INTEGER (-50..50)	
>Q-RxlevMin	M		INTEGER (-58..-13)	Range: -115 to -25 dBm, Step: 2 dB Actual value = (IE value * 2) + 1: -58: -115 dBm -57: -113 dBm ... -13: -25 dBm
>Maximum Allowed UL Tx Power	M		9.2.1.35	
>BSIC		1		Base Station Identity Code as defined in ref. [1].
>>NCC	M		BIT STRING(3)	Network Colour Code.
>>BCC	M		BIT STRING(3)	Base Station Colour Code.
>BCCH ARFCN	M		INTEGER (0..1023)	BCCH Frequency as defined in ref. [29].
>GSM Output Power	O		Value range??	Output Power level of the GSM cell as defined in ref. [29].

Range bound	Explanation
MaxnoofGSMneighbours	Maximum number of neighbouring GSM cells for one cell.

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
PLMN Identity	M		OCTET STRING (3)	<ul style="list-style-type: none"> - digits 0 to 9, two digits per octet, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n <p>-The PLMN-ID Identity consists of 3 digits from MCC followed by either</p> <ul style="list-style-type: none"> -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -3 digits from MNC (in case of a 3 digit MNC).
LAC	M		OCTET STRING (2)	0000 and FFFE not allowed
SAC	M		OCTET STRING (2)	

9.3.4 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
```

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

```
CGI ::= SEQUENCE {
  LAI SEQUENCE {
    pLMN-Identity PLMN-Identity,
    lAC LAC,
    iE-Extensions ProtocolExtensionContainer { {LAI-ExtIEs} } OPTIONAL,
    ...
  },
  cI CI,
  iE-Extensions ProtocolExtensionContainer { {CGI-ExtIEs} } OPTIONAL
}
```

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

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

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

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

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

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

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

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

```
PLMN-IDentity ::= OCTET STRING (SIZE(3))
```

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

```
-- S
```

```
SAC ::= OCTET STRING (SIZE (2))
```

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

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

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

3GPP TSG-RAN Meeting #21
 Busan, Korea, 21 –25May, 2001

Tdoc R3-011856

<small>CR-Form-v3</small>
<h2 style="margin: 0;">CHANGE REQUEST</h2>
⌘ 25.423 CR 402 ⌘ rev R3 ⌘ Current version: 3.5.0 ⌘

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

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

Title:	⌘ Cell Reserved for operator use		
Source:	⌘ R-WG3		
Work item code:	⌘ TEI	Date:	⌘ 21 May, 2001
Category:	⌘ F	Release:	⌘ R99
Use <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)	

Reason for change:	⌘ IMSI is needed by RNC(both in SRNC and DRNC) to determine if the particular UE is allowed to perform handover to the cell reserved for operator use. The information to indicate whether the cell belong to the DRNC are reserved for operator use or not is added in the IE "Neighbouring FDD cell information" and the IE "Neighbouring TDD cell information". By using this mechanism, after one access to the target DRNC, SRNC can determine whether the target cell is reserved for operator use or not before sending Radio Link Setup/Addition Request message for all UEs.
Summary of change:	⌘ The IE "IMSI" is added in RADIO LINK SETUP REQUEST message as a mandatory information. The IE "Restriction State Indicator" is added in IEs "Neighbouring FDD/TDD cell information" as an optional information. For those cells belonging to other RNC, IE "Restriction State Indicator" may be absent and for those cells belong to the DRNC, IE "Restriction State Indicator" shall be present.
Consequences if not approved:	⌘ Any UE may establish a RL to the cell that is not considered to be "ready" by the operator. "The cell reserved for operator" concept in RAN2 will be incomplete. Backward compatibility: This CR is backward compatible at the ASN.1 point of view. But it is necessary for RNC to have new functionality in order to keep consistency with RAN2 specification.

Clauses affected: ⌘ 8.3.1.2, 8.3.2.2, 9.1.3.1, 9.1.3.2, 9.2.1.41B, 9.2.1.41D, addition of 9.2.1.X, 9.3.3, 9.3.4, 9.3.6

Other specs affected:	⌘ <input checked="" type="checkbox"/>	Other core specifications	⌘ CR 403 on TS 25.423 V4.0.0
	<input type="checkbox"/>	Test specifications	
	<input type="checkbox"/>	O&M Specifications	
Other comments:	⌘	This CR is created in response to LS from RAN2(R3-010968)	

How to create CRs using this form:

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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.

8.3 DCH procedures

8.3.1 Radio Link Setup

8.3.1.1 General

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

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

8.3.1.2 Successful Operation

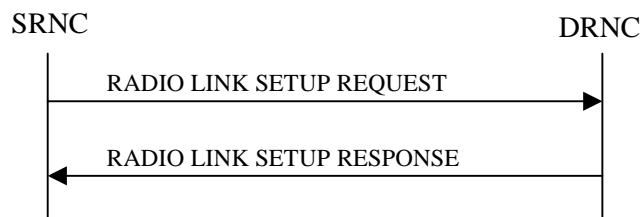


Figure 5: Radio Link Setup procedure: Successful Operation

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

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. The *First RLS Indicator* IE shall be used by the DRNS to determine the initial TPC pattern in the DL of the concerning RL and all RLs which are part of the same RLS, as described in [10], section 5.1.2.2.1.2.

[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 UL synchronisation on the Uu interface.]

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 both the *Initial DL TX Power* IE and *Uplink SIR Target* IE are included in the message, the DRNS shall use the indicated DL TX Power and Uplink SIR Target as initial value. If the value of the *Initial DL TX Power* IE is outside the configured DL TX power range, the DRNS shall apply these constraints 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 on the Uu interface for the concerning RLS or a DL POWER CONTROL REQUEST message is received. No inner loop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10] subclause 5.2.1.2) 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 on the Uu interface for the concerning RL. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22] subclause 4.2.3.3).]

[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 between different frames of the data frames of the DCHs in the downlink on the radio interface in congestion situations once the new RL(s) have been activated.

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

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

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

[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 Transmission Gap Pattern Sequences: for each sequence the *TGCFN* refers to latest passed CFN with that value.]

[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 established.

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

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

[FDD – 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 co-ordinated 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 controlling 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].

For the UMTS neighbouring cells which are controlled by the DRNC, the DRNC shall report in the RADIO LINK SETUP RESPONSE message the restriction state of those cells, otherwise *Restriction state indicator* IE may be absent. The DRNC shall include the *Restriction state indicator* IE for the neighbouring cells which are controlled by the DRNC in the *Neighbouring FDD Cell Information* IE and the *Neighbouring TDD 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.

[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.]

[TDD – If the *D-RNTI IE* was included in the RADIO LINK SETUP REQUEST message the DRNC shall include the *UARFCN IE*, the *Cell Parameter ID IE*, the *Sync Case IE*, the *SCH Time Slot IE*, the *Block STTD Indicator IE*, and the *PCCPCH 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 DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message the *Secondary CCPCH Info IE* 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, the DRNC shall not provide these IEs in the RADIO LINK SETUP RESPONSE message.]

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

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 on the Uu interface and start reception on the new RL. [FDD - The DRNS shall start DL transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [4].] [TDD – The DRNS shall start transmission on the new RL immediately as specified in ref. [4].]

[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 Indicator IE*].

[FDD- If the *Downlink Compressed Mode Method IE* in one or more Transmission Gap Pattern Sequence is set to 'SF/2' in the RADIO LINK SETUP REQUEST message, the 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 Uu 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 established in a cell where at least one URA Identity is being broadcast, the DRNC shall include a URA Identity for this cell in the *URA ID IE*, the *Multiple URAs Indicator IE* indicating whether or not multiple URA Identities are being broadcast in the cell, 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.

8.3.2 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

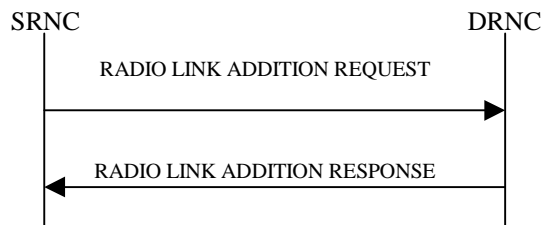


Figure 7: Radio Link Addition procedure: Successful Operation

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 on the Uu interface for that RLS or a DL POWER CONTROL REQUEST message is received. No inner loop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref. [10] subclause 5.2.1.2) 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 on the Uu interface 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)].

[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 compressed mode pattern in the new RLs, but the on going pattern in the existing RL shall be 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 a set of co-ordinated DCHs, the *Binding ID* IE and the *Transport Layer Address* IE shall be included for only one of the DCHs in the set of 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 UMTS cell 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 Mode1 Support Indicator* IE, and *Closed Loop Mode2 Support Indicator* IE] of the UMTS neighbouring cell.

For the UMTS neighbouring cells which are controlled by the DRNC, the DRNC shall report in the RADIO LINK SETUP RESPONSE message the restriction state of those cells, otherwise *Restriction state indicator* IE may be absent. The DRNC shall include the *Restriction state indicator* IE for the neighbouring cells which are controlled by the DRNC in the *Neighbouring FDD Cell Information* IE and the *Neighbouring TDD 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 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 UL Maximum SIR and UL Minimum SIR for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. These values are taken into consideration by DRNS admission control and shall be used by the SRNC as limits for the UL inner-loop power control target.

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 on the Uu interface and start reception on the new RL. [FDD - The DRNS shall start DL transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [4].] [TDD – The DRNS shall start transmission on the new RL immediately as specified in ref. [4].]

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

[FDD - If the UE has been allocated one or several DCH controlled by DRAC and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message the *Secondary CCPCH Info IE* 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, the DRNC shall not provide these IEs in the RADIO LINK ADDITION RESPONSE message.]

[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* using the diversity mode of the existing Radio Link(s).]

[FDD – After addition of the new RL(s), the UL Uu synchronisation detection algorithm defined in ref. [10] subclause 4.3 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 established in a cell where at least one URA Identity is being broadcast, the DRNC shall include a URA Identity for this cell in the *URA ID IE*, the *Multiple URAs Indicator IE* indicating whether or not multiple URA Identities are being broadcast in the cell, 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.

9.1.3 RADIO LINK SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
SRNC-Id	M		RNC-Id 9.2.1.50		YES	reject
S-RNTI	M		9.2.1.53		YES	reject
D-RNTI	O		9.2.1.24		YES	reject
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL DPCH Information		1			YES	reject
>UL Scrambling Code	M		9.2.2.53		–	
>Min UL Channelisation Code Length	M		9.2.2.25		–	
>Max Number of UL DPCHs	C – CodeLen		9.2.2.24		–	
>Puncture Limit	M		9.2.1.46	For the UL.	–	
>TFCS	M		TFCS for the UL 9.2.1.63		–	
>UL DPCH Slot Format	M		9.2.2.52		–	
>Uplink SIR Target	O		Uplink SIR 9.2.1.69		–	
>Diversity mode	M		9.2.2.8		–	
>SSDT Cell Identity Length	O		9.2.2.41		–	
>S Field Length	O		9.2.2.36		–	
DL DPCH Information		1			YES	reject
>TFCS	M		TFCS for the DL. 9.2.1.63		–	
>DL DPCH Slot Format	M		9.2.2.9		–	
>Number of DL Channelisation Codes	M		9.2.2.26A		–	
>TFCI Signalling Mode	M		9.2.2.46		–	
>TFCI Presence	C- SlotFormat		9.2.1.55		–	
>Multiplexing Position	M		9.2.2.26		–	
>Power Offset Information		1			–	
>>PO1	M		Power Offset 9.2.2.30	Power offset for the TFCI bits.	–	
>>PO2	M		Power Offset 9.2.2.30	Power offset for the TPC bits.	–	
>>PO3	M		Power Offset 9.2.2.30	Power offset for the pilot bits.	–	
>FDD TPC Downlink Step Size	M		9.2.2.16		–	
>Limited Power Increase	M		9.2.2.21A		–	
>Inner Loop DL PC Status	M		9.2.2.21a		–	
DCH Information	M		DCH FDD Information 9.2.2.4A		YES	reject
DSCH Information	O		DSCH FDD Information 9.2.2.13A		YES	reject
RL Information		1...<maxn oofRLs>			EACH	notify
>RL ID	M		9.2.1.49		–	

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
>C-Id	M		9.2.1.6		–	
>First RLS Indicator	M		9.2.2.16A		-	
>Frame Offset	M		9.2.1.30		–	
>Chip Offset	M		9.2.2.1		–	
>Propagation Delay	O		9.2.2.33		–	
>Diversity Control Field	C – NotFirstRL		9.2.1.20		–	
>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	O		9.2.2.40		–	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.48		–	
Transmission Gap Pattern Sequence Information	C – CM Active		9.2.2.47A		YES	reject
Active Pattern Sequence Information	O		9.2.2.A		YES	reject
IMSI	M		9.2.1.31		YES	ignore

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

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

9.1.3.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
SRNC-Id	M		RNC-Id 9.2.1.50		YES	reject
S-RNTI	M		9.2.1.53		YES	reject
D-RNTI	O		9.2.1.24		YES	reject
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL Physical Channel Information		1			YES	reject
>Maximum Number of Timeslots per Frame	M		9.2.3.3A	For the UL	–	
>Minimum Spreading Factor	M		9.2.3.4A	For the UL	–	
>Maximum Number of UL Physical Channels per Timeslot	M		9.2.3.3B		–	
DL Physical Channel Information		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 of CCTrCHs>		For DCH and USCH	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		9.2.1.46		–	
DL CCTrCH Information		0..<maxno of CCTrCHs>		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		–	
>Puncture Limit	M		9.2.1.46		–	
>TDD TPC Downlink Step Size	M		9.2.3.10		–	
>TPC CCTrCH List		0 to <maxnoCCTrCH>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.2		–	
DCH Information	O		DCH TDD Information 9.2.3.2A		YES	reject
DSCH Information	O		DSCH TDD Information 9.2.3.3a		YES	reject
USCH Information	O		9.2.3.15		YES	reject
RL Information		1			YES	reject
>RL ID	M		9.2.1.49		–	
>C-Id	M		9.2.1.6		–	
>Frame Offset	M		9.2.1.30		–	
>Special Burst Scheduling	M		9.2.3.7D		–	

>Primary CCPCH RSCP	O		9.2.3.5		-	
>DL Time Slot ISCP Info	O		9.2.3.2D		-	
IMSI	M		9.2.1.31		YES	ignore

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

9.2.1.41B Neighbouring FDD Cell Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Neighbouring FDD Cell Information		<i>1..<max noofFDD neighbours></i>			–	
>C-Id	M		9.2.1.6		–	
>UL UARFCN	M		UARFCN 9.2.1.66	Corresponds to Nu in ref. [6]	–	
>DL UARFCN	M		UARFCN 9.2.1.66	Corresponds to Nd in ref. [6]	–	
>Frame Offset	O		9.2.1.30		–	
>Primary Scrambling Code	M		9.2.1.45		–	
>Primary CPICH Power	O		9.2.1.44		–	
>Cell Individual Offset	O		9.2.1.7		–	
>Tx Diversity Indicator	M		9.2.2.50		–	
>STTD Support Indicator	O		9.2.2.45		–	
>Closed Loop Mode1 Support Indicator	O		9.2.2.2		–	
>Closed Loop Mode2 Support Indicator	O		9.2.2.3		–	
>Restriction State Indicator	O		9.2.1.X		yes	ignore

Range bound	Explanation
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell.

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.

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Neighbouring TDD Cell Information		<i>1..<maxno ofTDDneighbours></i>			–	
>C-Id	M		9.2.1.6		–	
>UARFCN	M		9.2.1.66	Corresponds to Nt in ref. [7]	–	
>Frame Offset	O		9.2.1.30		–	
>Cell Parameter ID	M		9.2.1.8		–	
>Sync Case	M		9.2.1.54		–	
>Time Slot	C-Case1		9.2.1.56		–	
>SCH Time Slot	C-Case2		9.2.1.51		–	
>Block STTD Indicator	M		9.2.1.4A		–	
>Cell Individual Offset	O		9.2.1.7		–	
>DPCH Constant Value	O		9.2.1.23		–	
>PCCPCH Power	O		9.2.1.43		–	
> Restriction State Indicator	O		9.2.1.X		yes	ignore

Condition	Explanation
Case1	This IE shall be present only if Sync Case = Case1.
Case2	This IE shall be present only if Sync Case = Case2.

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

9.2.1.X Restriction state indicator

The Restriction state indicator is the identifier indicates whether the cell is “Cell Reserved for Operator Use” or not. It is provided by DRNS and reported to SRNC.

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>Restriction state indicator</u>			<u>Enumerated(Cell Not Reserved for Operator Use, Cell Reserved for Operator Use, ...)</u>	

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,
PCCPCH-Power,
PC-Preamble,
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,
Secondary-CCPCH-Info,
Secondary-CCPCH-Info-TDD,
SpecialBurstScheduling,
SSDT-CellID,
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
STTD-Indicator,
STTD-SupportIndicator,
AdjustmentPeriod,
ScaledAdjustmentRatio,
MaxAdjustmentStep,
SecondaryCCPCH-SlotFormat,
SRB-Delay,
SyncCase,
SynchronisationConfiguration,
TDD-ChannelisationCode,
TDD-DCHs-to-Modify,
TDD-DL-Code-Information,
TDD-DPCHOffset,
TDD-PhysicalChannelOffset,
TDD-TPC-DownlinkStepSize,

```
TDD-UL-Code-Information,  
TFCI-Coding,  
TFCI-Presence,  
TFCI-SignallingMode,  
TimeSlot,  
TimingAdvanceApplied,  
ToAWE,  
ToAWS,  
TransmitDiversityIndicator,  
TransportBearerID,  
TransportBearerRequestIndicator,  
TFCS,  
Transmission-Gap-Pattern-Sequence-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{ },  
ProtocolIE-Container{ },  
ProtocolIE-Single-Container{ },  
RNSAP-PRIVATE-IES,  
RNSAP-PROTOCOL-EXTENSION,  
RNSAP-PROTOCOL-IES,  
RNSAP-PROTOCOL-IES-PAIR  
FROM RNSAP-Containers
```

```
maxNoOfDSCHs,  
maxNoOfUSCHs,  
maxNrOfCCTrCHs,  
maxNrOfDCHs,  
maxNrOfTS,  
maxNrOfDPCHs,
```

maxNrOfRLs,
maxNrOfRLSets,
maxNrOfRLs-1,
maxNrOfRLs-2,
maxNrOfULTs,
maxNrOfDLTs,

id-Active-Pattern-Sequence-Information,
id-AdjustmentRatio,
id-AllowedQueuingTime,
id-BindingID,
id-C-ID,
id-C-RNTI,
id-CFN,
id-CFNReportingIndicator,
id-CN-CS-DomainIdentifier,
id-CN-PS-DomainIdentifier,
id-Cause,
id-CauseLevel-RL-AdditionFailureFDD,
id-CauseLevel-RL-AdditionFailureTDD,
id-CauseLevel-RL-ReconfFailure,
id-CauseLevel-RL-SetupFailureFDD,
id-CauseLevel-RL-SetupFailureTDD,
id-CCTrCH-InformationItem-RL-FailureInd,
id-CCTrCH-InformationItem-RL-RestoreInd,
id-ClosedLoopModel-SupportIndicator,
id-ClosedLoopMode2-SupportIndicator,
id-CNOriginatedPage-PagingRqst,
id-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-ReconfReadyTDD,
id-DL-CCTrCH-InformationModifyItem-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-PhyChReconfRqstTDD,
id-DL-DPCH-InformationItem-RL-AdditionRspTDD,
id-DL-DPCH-InformationItem-RL-SetupRspTDD,
id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD,
id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD,
id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD,
id-DL-Physical-Channel-Information-RL-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,
id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD,
id-GA-Cell,
id-IMSI,
id-InnerLoopDLPCStatus,
id-L3-Information,
id-AdjustmentPeriod,
id-MaxAdjustmentStep,
id-MeasurementFilterCoefficient,
id-MeasurementID,
id-PagingArea-PagingRqst,
id-FACH-FlowControlInformation,

id-PowerAdjustmentType,
id-PropagationDelay,
id-RANAP-RelocationInformation,
id-RL-Information-PhyChReconfRqstFDD,
id-RL-Information-PhyChReconfRqstTDD,
id-RL-Information-RL-AdditionRqstFDD,
id-RL-Information-RL-AdditionRqstTDD,
id-RL-Information-RL-DeletionRqst,
id-RL-Information-RL-FailureInd,
id-RL-Information-RL-ReconfPrepFDD,
id-RL-Information-RL-RestoreInd,
id-RL-Information-RL-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-AdditionRqstFDD,
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,
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-timeSlot-ISCP,

```

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,
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-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-SetupRqstTDD,
id-UL-SIRTarget,
id-URA-Information,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-USCHs-to-Add,
id-USCH-DeleteList-RL-ReconfPrepTDD,
id-USCH-InformationListIE-RL-AdditionRspTDD,
id-USCH-InformationListIEs-RL-SetupRspTDD,
id-USCH-Information,
id-USCH-ModifyList-RL-ReconfPrepTDD,
id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD
FROM RNSAP-Constants;

```

```

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

```

```

RadioLinkSetupRequestFDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{RadioLinkSetupRequestFDD-IEs}},
    protocolExtensions         ProtocolExtensionContainer {{RadioLinkSetupRequestFDD-Extensions}}    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-SetupRqstFDD      CRITICALITY notify  TYPE RL-InformationList-RL-SetupRqstFDD PRESENCE mandatory } |
    { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject  TYPE Transmission-Gap-Pattern-Sequence-Information PRESENCE conditional } }
-- This IE shall be present when the Active Pattern Sequence Information IE is present, otherwise this IE is 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 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-CellIdLength     OPTIONAL,
    s-FieldLength              S-FieldLength         OPTIONAL,
    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 present if Slot Format is from 12 to 16 -- ,

```

```

multiplexingPosition           MultiplexingPosition,
powerOffsetInformation         PowerOffsetInformation-RL-SetupRqstFDD,
fdd-dl-TPC-DownlinkStepSize   FDD-TPC-DownlinkStepSize,
limitedPowerIncrease           LimitedPowerIncrease,
innerLoopDLPCStatus           InnerLoopDLPCStatus,
iE-Extensions                  ProtocolExtensionContainer { {DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
...
}

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

PowerOffsetInformation-RL-SetupRqstFDD ::= SEQUENCE {
    po1-ForTFCI-Bits           PowerOffset,
    po2-ForTPC-Bits            PowerOffset,
    po3-ForPilotBits           PowerOffset,
    iE-Extensions              ProtocolExtensionContainer { { PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RL-InformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-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-SetupRqstFDD ::= SEQUENCE {
    rL-ID                      RL-ID,
    c-ID                       C-ID,
    firstRLS-indicator         FirstRLS-Indicator,
    frameOffset                 FrameOffset,
    chipOffset                  ChipOffset,
    propagationDelay           PropagationDelay OPTIONAL,
    diversityControlField      DiversityControlField OPTIONAL
    -- This IE shall be 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 present unless Diversity Mode IE in UL DPCH Information group is "none"
    iE-Extensions              ProtocolExtensionContainer { {RL-InformationItem-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

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

RadioLinkSetupRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-IMSI CRITICALITY ignore EXTENSION IMSI PRESENCE mandatory },
    ...
}

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

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

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SRNC-ID CRITICALITY reject TYPE RNC-ID PRESENCE mandatory } |
    { ID id-S-RNTI CRITICALITY reject TYPE S-RNTI PRESENCE mandatory } |
    { ID id-D-RNTI CRITICALITY reject TYPE D-RNTI PRESENCE optional } |
    { ID id-UL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject TYPE UL-Physical-Channel-Information-RL-SetupRqstTDD PRESENCE
mandatory } |
    { ID id-DL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject TYPE DL-Physical-Channel-Information-RL-SetupRqstTDD PRESENCE
mandatory } |
    { ID id-AllowedQueuingTime CRITICALITY reject TYPE AllowedQueuingTime PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationList-RL-SetupRqstTDD CRITICALITY notify TYPE UL-CCTrCH-InformationList-RL-SetupRqstTDD PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationList-RL-SetupRqstTDD CRITICALITY notify TYPE DL-CCTrCH-InformationList-RL-SetupRqstTDD PRESENCE optional } |
    { ID id-DCH-TDD-Information CRITICALITY reject TYPE DCH-TDD-Information PRESENCE optional } |
    { ID id-DSCH-TDD-Information CRITICALITY reject TYPE DSCH-TDD-Information PRESENCE optional } |
    { ID id-USCH-Information CRITICALITY reject TYPE USCH-Information PRESENCE optional } |
    { ID id-RL-Information-RL-SetupRqstTDD CRITICALITY reject TYPE RL-Information-RL-SetupRqstTDD PRESENCE mandatory},
    ...
}

UL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
    maxNrTimeslots-UL MaxNrTimeslots,
    minimumSpreadingFactor-UL MinimumSpreadingFactor,
    maxNrULPhysicalchannels MaxNrULPhysicalchannels,
    iE-Extensions ProtocolExtensionContainer { {UL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
    maxNrTimeslots-DL          MaxNrTimeslots,
    minimumSpreadingFactor-DL  MinimumSpreadingFactor,
    maxNrDLPhysicalchannels    MaxNrDLPhysicalchannels,
    iE-Extensions              ProtocolExtensionContainer { {DL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

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

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

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

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

DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
CCTrCH-TPCList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCItem-RL-SetupRqstTDD
CCTrCH-TPCItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    iE-Extensions     ProtocolExtensionContainer { { CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}
CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
    rL-ID              RL-ID,
    c-ID               C-ID,
    frameOffset        FrameOffset,
    specialBurstScheduling SpecialBurstScheduling,
    primaryCCPCH-RSCP  PrimaryCCPCH-RSCP OPTIONAL,
    dL-TimeSlot-ISCP   DL-TimeSlot-ISCP-Info OPTIONAL,
    iE-Extensions     ProtocolExtensionContainer { {RL-Information-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}
RL-Information-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
RadioLinkSetupRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-IMSI          CRITICALITY ignore          EXTENSION IMSI          PRESENCE mandatory },
    ...
}

```

<< Ommited ASN.1 >>

9.3.4 Information Element Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxCodeNumComp-1,
    maxNrOfFACHs,
    maxFACHCountPlus1,
    maxIBSEG,
    maxNoOfDSCHs,
    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,
    maxNrOfSCCPCHs,
    maxTFCI1Combs,
    maxTFCI2Combs,
    maxTFCI2Combs-1,
    maxTGPS,
    maxTTI-Count,
```



```

id-Neighbouring-GSM-CellInformation,
id-Neighbouring-UMTS-CellInformationItem,
maxNrOfLevels,
id-MessageStructure,
id-RestrictionStateIndicator
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;

<<Ommited ASN.1>>

-- 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,
primaryCPICH-Power PrimaryCPICH-Power  OPTIONAL,
cellIndividualOffset CellIndividualOffset  OPTIONAL,
txDiversityIndicator TxDiversityIndicator,
sTTD-SupportIndicator STTD-SupportIndicator  OPTIONAL,
closedLoopModel-SupportIndicator ClosedLoopModel-SupportIndicator  OPTIONAL,
closedLoopMode2-SupportIndicator ClosedLoopMode2-SupportIndicator  OPTIONAL,
iE-Extensions      ProtocolExtensionContainer { { Neighbouring-FDD-CellInformationItem-ExtIEs } } OPTIONAL,
...
}

Neighbouring-FDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-RestrictionStateIndicator          CRITICALITY ignore          EXTENSION RestrictionStateIndicator  PRESENCE optional },
  ...
}

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 Q-Offset-Serving-to-Neighbour,
  q-RxlevMin         Q-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 shall be present only if Sync Case = Case1 -- ,
SCH-TimeSlot            SCH-TimeSlot            OPTIONAL
-- This IE shall be present only if Sync Case = Case2 -- ,
block-STTD-Indicator    Block-STTD-Indicator,
cellIndividualOffset     CellIndividualOffset    OPTIONAL,
dPCHConstantValue       DPCHConstantValue    OPTIONAL,
pCCPCH-Power            PCCPCH-Power          OPTIONAL,
iE-Extensions           ProtocolExtensionContainer { { Neighbouring-TDD-CellInformationItem-ExtIEs} } OPTIONAL,
...
}

Neighbouring-TDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-RestrictionStateIndicator          CRITICALITY ignore          EXTENSION RestrictionStateIndicator  PRESENCE optional },
  ...
}

NrOfDLchannelisationcodes ::= INTEGER (1..8)

NrOfTransportBlocks       ::= INTEGER (0..512)

<<Omitted ASN.1>>

-- 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

RefTFNumber ::= 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
    min               INTEGER (1..60,...),
    -- Unit min, Step 1min
    ...
}

RestrictionStateIndicator ::= ENUMERATED {
    cellNotResevedForOperatorUse,
    cellResevedForOperatorUse,
    ...
}

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

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

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

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

Round-Trip-Time-Value ::= INTEGER(0..32767)
-- According to mapping in [23]

RSCP-Value ::= INTEGER (0..127)
-- According to mapping in [24]

RSCP-Value-IncrDecrThres ::= INTEGER (0..126)

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

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

```

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Rx-Timing-Deviation-Value ::= INTEGER (0..8191)

<<Omitted ASN.1>>

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 ::= 1
id-compressedModeCommand                             ProcedureCode ::= 2
id-downlinkPowerControl                              ProcedureCode ::= 3
id-downlinkPowerTimeslotControl                      ProcedureCode ::= 4
id-downlinkSignallingTransfer                        ProcedureCode ::= 5
id-errorIndication                                  ProcedureCode ::= 6
id-dedicatedMeasurementFailure                      ProcedureCode ::= 7
id-dedicatedMeasurementInitiation                   ProcedureCode ::= 8
id-dedicatedMeasurementReporting                    ProcedureCode ::= 9
id-dedicatedMeasurementTermination                  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
id-synchronisedRadioLinkReconfigurationCancellation ProcedureCode ::= 21
id-synchronisedRadioLinkReconfigurationCommit        ProcedureCode ::= 22

```

```

id-synchronisedRadioLinkReconfigurationPreparation      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
maxNrOfRLLs              INTEGER ::= 16
maxNrOfRLLSets           INTEGER ::= maxNrOfRLLs
maxNrOfRLLs-1            INTEGER ::= 15 -- maxNrOfRLLs - 1
maxNrOfRLLs-2            INTEGER ::= 14 -- maxNrOfRLLs - 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
maxNrOfFACHs             INTEGER ::= 8
maxFACHCountPlus1       INTEGER ::= 10
maxIBSEG                 INTEGER ::= 16
maxNrOfSCCPCHs          INTEGER ::= 8
maxTFCI1Combs            INTEGER ::= 512
maxTFCI2Combs            INTEGER ::= 1024
maxTFCI2Combs-1         INTEGER ::= 1023
maxTGPS                  INTEGER ::= 6
maxNrOfTS                INTEGER ::= 15
maxNrOfLevels            INTEGER ::= 256
    
```

```

-- *****
    
```

```

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

id-AllowedQueuingTime          ProtocolIE-ID ::= 4
id-BindingID                   ProtocolIE-ID ::= 5
id-C-ID                        ProtocolIE-ID ::= 6
id-C-RNTI                      ProtocolIE-ID ::= 7
id-CFN                         ProtocolIE-ID ::= 8
id-CN-CS-DomainIdentifier      ProtocolIE-ID ::= 9
id-CN-PS-DomainIdentifier      ProtocolIE-ID ::= 10
id-Cause                       ProtocolIE-ID ::= 11
id-CriticalityDiagnostics      ProtocolIE-ID ::= 20
id-D-RNTI                      ProtocolIE-ID ::= 21
id-D-RNTI-ReleaseIndication    ProtocolIE-ID ::= 22
id-DCHs-to-Add-FDD            ProtocolIE-ID ::= 26
id-DCHs-to-Add-TDD            ProtocolIE-ID ::= 27
id-DCH-DeleteList-RL-ReconfPrepFDD ProtocolIE-ID ::= 30
id-DCH-DeleteList-RL-ReconfPrepTDD ProtocolIE-ID ::= 31
id-DCH-DeleteList-RL-ReconfRqstFDD ProtocolIE-ID ::= 32
id-DCH-DeleteList-RL-ReconfRqstTDD ProtocolIE-ID ::= 33
id-DCH-FDD-Information        ProtocolIE-ID ::= 34
id-DCH-TDD-Information        ProtocolIE-ID ::= 35
id-FDD-DCHs-to-Modify         ProtocolIE-ID ::= 39
id-TDD-DCHs-to-Modify         ProtocolIE-ID ::= 40
id-DCH-InformationResponse     ProtocolIE-ID ::= 43
id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ProtocolIE-ID ::= 44
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD ProtocolIE-ID ::= 45
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ProtocolIE-ID ::= 46
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD ProtocolIE-ID ::= 47
id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD ProtocolIE-ID ::= 48
id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD ProtocolIE-ID ::= 49
id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD ProtocolIE-ID ::= 50
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ProtocolIE-ID ::= 51
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ProtocolIE-ID ::= 52
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD ProtocolIE-ID ::= 53
id-FDD-DL-CodeInformation      ProtocolIE-ID ::= 54
id-DL-DPCH-Information-RL-ReconfPrepFDD ProtocolIE-ID ::= 59
id-DL-DPCH-Information-RL-SetupRqstFDD ProtocolIE-ID ::= 60
id-DL-DPCH-Information-RL-ReconfRqstFDD ProtocolIE-ID ::= 61
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD ProtocolIE-ID ::= 62
id-DL-DPCH-InformationItem-RL-AdditionRspTDD ProtocolIE-ID ::= 63
id-DL-DPCH-InformationItem-RL-SetupRspTDD ProtocolIE-ID ::= 64
id-DLReferencePower           ProtocolIE-ID ::= 67
id-DLReferencePowerList-DL-PC-Rqst ProtocolIE-ID ::= 68
id-DL-ReferencePowerInformation-DL-PC-Rqst ProtocolIE-ID ::= 69
id-DRXCycleLengthCoefficient  ProtocolIE-ID ::= 70
id-DedicatedMeasurementObjectType-DM-Rprt ProtocolIE-ID ::= 71
id-DedicatedMeasurementObjectType-DM-Rqst ProtocolIE-ID ::= 72
id-DedicatedMeasurementObjectType-DM-Rsp ProtocolIE-ID ::= 73

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id-DedicatedMeasurementType
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD
id-IMSI
id-L3-Information
id-AdjustmentPeriod
id-MaxAdjustmentStep
id-MeasurementFilterCoefficient
id-MessageStructure
id-MeasurementID
id-Neighbouring-GSM-CellInformation
id-Neighbouring-UMTS-CellInformationItem
id-PagingArea-PagingRqst
id-FACH-FlowControlInformation
id-PowerAdjustmentType
id-RANAP-RelocationInformation
id-RL-Information-PhyChReconfRqstFDD
id-RL-Information-PhyChReconfRqstTDD
id-RL-Information-RL-AdditionRqstFDD
id-RL-Information-RL-AdditionRqstTDD
id-RL-Information-RL-DeletionRqst
id-RL-Information-RL-FailureInd
id-RL-Information-RL-ReconfPrepFDD
id-RL-Information-RL-RestoreInd
id-RL-Information-RL-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-AdditionRqstFDD
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-Rqst
id-RL-Set-InformationItem-DM-Rsp

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ProtocolIE-ID ::= 74
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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-RNTI
id-SAI
id-SRNC-ID
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
id-TransportBearerID
id-TransportBearerRequestIndicator
id-TransportLayerAddress
id-UC-ID
id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD
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-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-SIRTarget
id-URA-Information
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD
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
id-DSCHs-to-Add-TDD

ProtocolIE-ID ::= 146
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ProtocolIE-ID ::= 152
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id-DSCHs-to-Add-FDD	ProtocolIE-ID ::= 216
id-DSCH-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 217
id-DSCH-Delete-RL-ReconfPrepFDD	ProtocolIE-ID ::= 218
id-DSCH-FDD-Information	ProtocolIE-ID ::= 219
id-DSCH-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 220
id-DSCH-InformationListIEs-RL-SetupRspTDD	ProtocolIE-ID ::= 221
id-DSCH-TDD-Information	ProtocolIE-ID ::= 222
id-DSCH-FDD-InformationResponse	ProtocolIE-ID ::= 223
id-DSCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 226
id-DSCH-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 227
id-DSCH-Modify-RL-ReconfPrepFDD	ProtocolIE-ID ::= 228
id-DSCHsToBeAddedOrModified-FDD	ProtocolIE-ID ::= 229
id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD	ProtocolIE-ID ::= 230
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
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-STD-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-ISCP	ProtocolIE-ID ::= 37
id-CCTrCH-InformationItem-RL-FailureInd	ProtocolIE-ID ::= 15
id-CCTrCH-InformationItem-RL-RestoreInd	ProtocolIE-ID ::= 16
<u>id-RestrictionStateIndicator</u>	ProtocolIE-ID ::= 142

END

3GPP TSG-RAN Meeting #21
 Busan, Korea, 21 –25May, 2001

Tdoc R3-011857

CR-Form-v3
CHANGE REQUEST
⌘ 25.423 CR 403 ⌘ rev R3 ⌘ Current version: 4.0.0 ⌘

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

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

Title:	⌘ Cell Reserved for operator use		
Source:	⌘ R-WG3		
Work item code:	⌘ TEI	Date:	⌘ 21 May, 2001
Category:	⌘ A	Release:	⌘ R4
Use <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)	

Reason for change:	⌘ IMSI is needed by RNC(both in SRNC and DRNC) to determine if the particular UE is allowed to perform handover to the cell reserved for operator use. The information to indicate whether the cell belong to the DRNC are reserved for operator use or not is added in the IE "Neighbouring FDD cell information" and the IE "Neighbouring TDD cell information". By using this mechanism, after one access to the target DRNC, SRNC can determine whether the target cell is reserved for operator use or not before sending Radio Link Setup/Addition Request message for all UEs.
Summary of change:	⌘ The IE "IMSI" is added in RADIO LINK SETUP REQUEST message as a mandatory information. The IE "Restriction State Indicator" is added in IEs "Neighbouring FDD/TDD cell information" as an optional information. For those cells belonging to other RNC, IE "Restriction State Indicator" may be absent and for those cells belong to the DRNC, IE "Restriction State Indicator" shall be present.
Consequences if not approved:	⌘ Any UE may establish a RL to the cell that is not considered to be "ready" by the operator. "The cell reserved for operator" concept in RAN2 will be incomplete. Backward compatibility: This CR is backward compatible at the ASN.1 point of view. But it is necessary for RNC to have new functionality in order to keep consistency with RAN2 specification.

Clauses affected:	⌘ 8.3.1.2, 8.3.2.2, 9.1.3.1, 9.1.3.2, 9.2.1.41B, 9.2.1.41D, addition of 9.2.1.X, 9.2.3.4D, 9.3.3, 9.3.4, 9.3.6
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Other specs affected:	⌘ <input checked="" type="checkbox"/>	Other core specifications	⌘ CR 402 on TS 25.423 V3.5.0
	<input type="checkbox"/>	Test specifications	
	<input type="checkbox"/>	O&M Specifications	
Other comments:	⌘	This CR is created in response to LS from RAN2(R3-010968)	

How to create CRs using this form:

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

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

8.3 DCH procedures

8.3.1 Radio Link Setup

8.3.1.1 General

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

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

8.3.1.2 Successful Operation

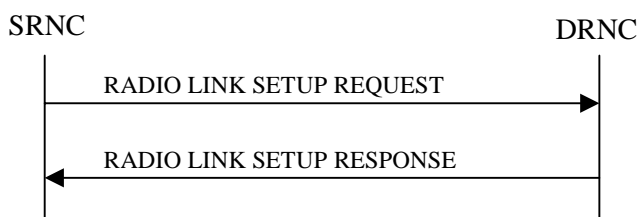


Figure 5: Radio Link Setup procedure: Successful Operation

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

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. The *First RLS Indicator* IE shall be used by the DRNS to determine the initial TPC pattern in the DL of the concerning RL and all RLs which are part of the same RLS, as described in [10], section 5.1.2.2.1.2.

[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 UL synchronisation on the Uu interface.]

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 both the *Initial DL TX Power* IE and *Uplink SIR Target* IE are included in the message, the DRNS shall use the indicated DL TX Power and Uplink SIR Target as initial value. If the value of the *Initial DL TX Power* IE is outside the configured DL TX power range, the DRNS shall apply these constraints 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 [3.84Mcps TDD - *DL Time Slot ISCP Info* IE] and/or the [1.28Mcps TDD - *DL Time Slot ISCP Info LCR* IE] are present, the DRNC should use the indicated values when deciding the Initial DL TX Power.]

[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 on the Uu interface for the concerning RLS or a DL POWER CONTROL REQUEST message is received. No inner loop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10] subclause 5.2.1.2) and the power control procedure (see 8.3.7).]

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

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

[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 between different frames of the data frames of the DCHs in the downlink on the radio interface in congestion situations once the new RL(s) have been activated.

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

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

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

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

- If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS may decide to request the SRNC to limit the user rate of the uplink of the DCH at any point in time. If the *DCH Specific Info* IE in the *DCH Information* IE does not include the *Guaranteed UL Rate* IE the DRNS shall regard the maximum rate as the guaranteed rate in the uplink of this DCH.
- If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS may decide to request the SRNC to limit the user rate of the downlink of the DCH at any point in time. If the *DCH Specific Info* IE in the *DCH Information* IE does not include the *Guaranteed DL Rate* IE the DRNS shall regard the maximum rate as the guaranteed rate in the downlink of this DCH.

[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 *SSDT Cell Identity for EDSCHPC* IE, the DRNS shall activate enhanced DSCH power control, if supported, using the *SSDT Cell Identity for EDSCHPC* IE and *SSDT Cell Identity Length* IE as well as *Enhanced DSCH PC* IE. If the RADIO LINK SETUP REQUEST message includes both *SSDT Cell Identity* IE and *SSDT Cell Identity for EDSCHPC* IE, then DRNS shall ignore the *SSDT Cell Identity for EDSCHPC* 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 Transmission Gap Pattern Sequences: for each sequence the *TGCFN* refers to latest passed CFN with that value.]

[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 established.

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

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

[FDD – 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 for all RLs but the first 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 not be included for the first 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 co-ordinated 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.

If the DRNS need to limit the user rate in the uplink of a DCH already when starting to utilise a new Radio Link, the DRNC shall include the *Allowed UL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK SETUP RESPONSE message for this Radio Link.

If the DRNS need to limit the user rate in the downlink of a DCH already when starting to utilise a new Radio Link, the DRNC shall include the *Allowed DL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK SETUP RESPONSE message for this Radio Link.

[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, [3.84Mcps TDD - the Sync Case, the SCH Time Slot information], the Block STTD Indicator] and the node identification of the CN nodes connected to the RNC controlling 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].

For the UMTS neighbouring cells which are controlled by the DRNC, the DRNC shall report in the RADIO LINK SETUP RESPONSE message the restriction state of those cells, otherwise *Restriction state indicator* IE may be absent. The DRNC shall include the *Restriction state indicator* IE for the neighbouring cells which are controlled by the DRNC in the *Neighbouring FDD Cell Information* IE, the *Neighbouring TDD Cell Information* IE and the *Neighbouring TDD Cell Information LCR* IE.

If there are GSM neighbouring cells to the cell(s) 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.

[FDD - If the *D-RNTI* IE was included in 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.]

[TDD – If the *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message the DRNC shall include the *UARFCN* IE, the *Cell Parameter ID* IE, the *Sync Case* IE, the *SCH Time Slot* IE, the *Block STTD Indicator* IE, and the *PCCPCH 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 DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message the *Secondary CCPCH Info* IE 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, the DRNC shall not provide these IEs in the RADIO LINK SETUP RESPONSE message.]

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

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell, represented either by the *Cell GAI* IE or by the *Cell GA Additional Shapes* IE 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 on the Uu interface and start reception on the new RL. [FDD - The DRNS shall start DL transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [4].] [TDD – The DRNS shall start transmission on the new RL immediately as specified in ref. [4].]

[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 Indicator* IE].

[FDD- If the *Downlink Compressed Mode Method* IE in one or more Transmission Gap Pattern Sequence is set to 'SF/2' in the RADIO LINK SETUP REQUEST message, the 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 Uu 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 established in a cell where at least one URA Identity is being broadcast, the DRNC shall include a URA Identity for this cell in the *URA ID* IE, the *Multiple URAs Indicator* IE indicating whether or not multiple URA Identities are being broadcast in the cell, 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.

8.3.2 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

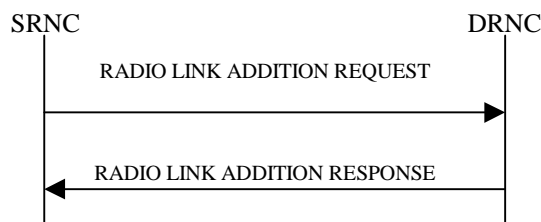


Figure 7: Radio Link Addition procedure: Successful Operation

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 Uu. 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 [3.84Mcps TDD - *DL Time Slot ISCP Info* IE] and/or the [1.28Mcps TDD - *DL Time Slot ISCP Info LCR* IE] are included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use them in the calculation of the Initial DL TX Power. If the *Primary CCPCH RSCP* IE and [3.84Mcps TDD - *DL Time Slot ISCP Info* IE] and [1.28Mcps TDD - *DL Time Slot ISCP Info LCR* 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 on the Uu interface for that RLs or a DL POWER CONTROL REQUEST message is received. No inner loop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref. [10] subclause 5.2.1.2) and the power control procedure (see 8.3.7)].

[TDD - The Initial DL TX Power shall be applied until UL synchronisation is achieved on the Uu interface for that RL. No 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)].

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

[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 compressed mode pattern in the new RLs, but the on going pattern in the existing RL shall be maintained.]

If all requested RLs are successfully added, the DRNS 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 DRNS 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.

[FDD - In the case of combining one or more RLs being established by this procedure, the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the *Diversity Indication* IE that the RL is combined with another RL for all RLs but the first RL. In this case the Reference RL ID shall be included to indicate one of the other RLs being established by this procedure that the new RL is combined with. The Reference *RL ID* IE shall not be included for the first of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.]

In the case of not combining an RL with 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 a set of co-ordinated DCHs, the *Binding ID* IE and the *Transport Layer Address* IE shall be included for only one of the DCHs in the set of co-ordinated DCHs.

If the DRNS need to limit the user rate in the uplink of a DCH already when starting to utilise a new Radio Link, the DRNC shall include the *Allowed UL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK ADDITION RESPONSE message for this Radio Link.

If the DRNS need to limit the user rate in the downlink of a DCH already when starting to utilise a new Radio Link, the DRNC shall include the *Allowed DL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK ADDITION RESPONSE message for this Radio Link.

[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 UMTS cell 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, [3.84Mcps TDD - 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 Mode1 Support Indicator* IE, and *Closed Loop Mode2 Support Indicator* IE] of the UMTS neighbouring cell.

For the UMTS neighbouring cells which are controlled by the DRNC, the DRNC shall report in the RADIO LINK SETUP RESPONSE message the restriction state of those cells, otherwise *Restriction state indicator* IE may be absent. The DRNC shall include the *Restriction state indicator* IE for the neighbouring cells which are controlled by the DRNC in the *Neighbouring FDD Cell Information* IE, the *Neighbouring TDD Cell Information* IE and the *Neighbouring TDD Cell Information LCR* IE.

If there are GSM neighbouring cells to the cell(s) 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 UL Maximum SIR and UL Minimum SIR for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. These values are taken into consideration by DRNS admission control and shall be used by the SRNC as limits for the UL inner-loop power control target.

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, represented either by the *Cell GAI* IE or by the *Cell GA Additional Shapes* IE, 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 on the Uu interface and start reception on the new RL. [FDD - The DRNS shall start DL transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [4].] [TDD – The DRNS shall start transmission on the new RL immediately as specified in ref. [4].]

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

[FDD - If the UE has been allocated one or several DCH controlled by DRAC and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message the *Secondary CCPCH Info* IE 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, the DRNC shall not provide these IEs in the RADIO LINK ADDITION RESPONSE message.]

[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 using the diversity mode of the existing Radio Link(s).]

[FDD – After addition of the new RL(s), the UL Uu synchronisation detection algorithm defined in ref. [10] subclause 4.3 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 established in a cell where at least one URA Identity is being broadcast, the DRNC shall include a URA Identity for this cell in the *URA ID* IE, the *Multiple URAs Indicator* IE indicating whether or not multiple URA Identities are being broadcast in the cell, 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.

9.1.3 RADIO LINK SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
SRNC-Id	M		RNC-Id 9.2.1.50		YES	reject
S-RNTI	M		9.2.1.53		YES	reject
D-RNTI	O		9.2.1.24		YES	reject
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL DPCH Information		1			YES	reject
>UL Scrambling Code	M		9.2.2.53		–	
>Min UL Channelisation Code Length	M		9.2.2.25		–	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.24		–	
>Puncture Limit	M		9.2.1.46	For the UL.	–	
>TFCS	M		TFCS for the UL 9.2.1.63		–	
>UL DPCH Slot Format	M		9.2.2.52		–	
>Uplink SIR Target	O		Uplink SIR 9.2.1.69		–	
>Diversity mode	M		9.2.2.8		–	
>SSDT Cell Identity Length	O		9.2.2.41		–	
>S Field Length	O		9.2.2.36		–	
>DPC Mode	O		9.2.2.12A		YES	reject
DL DPCH Information		1			YES	reject
>TFCS	M		TFCS for the DL. 9.2.1.63		–	
>DL DPCH Slot Format	M		9.2.2.9		–	
>Number of DL Channelisation Codes	M		9.2.2.26A		–	
>TFCI Signalling Mode	M		9.2.2.46		–	
>TFCI Presence	C- SlotFormat		9.2.1.55		–	
>Multiplexing Position	M		9.2.2.26		–	
>Power Offset Information		1			–	
>>PO1	M		Power Offset 9.2.2.30	Power offset for the TFCI bits.	–	
>>PO2	M		Power Offset 9.2.2.30	Power offset for the TPC bits.	–	
>>PO3	M		Power Offset 9.2.2.30	Power offset for the pilot bits.	–	
>FDD TPC Downlink Step Size	M		9.2.2.16		–	
>Limited Power Increase	M		9.2.2.21A		–	
>Inner Loop DL PC Status	M		9.2.2.21a		–	
DCH Information	M		DCH FDD Information 9.2.2.4A		YES	reject
DSCH Information	O		DSCH FDD Information 9.2.2.13A		YES	reject
RL Information		1...<maxn oofRLs>			EACH	notify

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
>RL ID	M		9.2.1.49		–	
>C-Id	M		9.2.1.6		–	
>First RLS Indicator	M		9.2.2.16A		-	
>Frame Offset	M		9.2.1.30		–	
>Chip Offset	M		9.2.2.1		–	
>Propagation Delay	O		9.2.2.33		–	
>Diversity Control Field	C – NotFirstRL		9.2.1.20		–	
>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	O		9.2.2.40		–	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.48		–	
>SSDT Cell Identity for EDSCHPC	C-EDSCHPC		9.2.2.40A		YES	ignore
Transmission Gap Pattern Sequence Information	C – CM Active		9.2.2.47A		YES	reject
Active Pattern Sequence Information	O		9.2.2.A		YES	reject
IMSI	M		9.2.1.31		YES	ignore

Condition	Explanation
CodeLen	This IE shall be present only if <i>Min UL Channelisation Code length</i> IE equals to 4
SlotFormat	This IE shall only be present if the <i>DL DPCH Slot Format</i> IE is equal to any of the values 12 to 16.
NotFirstRL	This IE shall be present only if the RL is not the first one in the <i>RL Information</i> IE.
Diversity mode	This IE shall be present unless <i>Diversity Mode</i> IE in <i>UL DPCH Information</i> IE is "none"
C_ifAlone	Either <i>Initial DL TX Power</i> IE or <i>Primary CPICH Ec/No</i> IE shall be present.
CM_Active	This IE shall be present when the <i>Active Pattern Sequence Information</i> IE is present, otherwise this IE is optional.
EDSCHPC	This IE shall be present if <i>Enhanced DSCH PC</i> IE is present in the <i>DSCH Information</i> IE.

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

9.1.3.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
SRNC-Id	M		RNC-Id 9.2.1.50		YES	reject
S-RNTI	M		9.2.1.53		YES	reject
D-RNTI	O		9.2.1.24		YES	reject
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL Physical Channel Information		1			YES	reject
>Maximum Number of Timeslots per Frame	M		9.2.3.3A	For the UL	–	
>Minimum Spreading Factor	M		9.2.3.4A	For the UL	–	
>Maximum Number of UL Physical Channels per Timeslot	M		9.2.3.3B		–	
DL Physical Channel Information		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 of CCTrCHs>		For DCH and USCH	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		9.2.1.46		–	
DL CCTrCH Information		0..<maxno of CCTrCHs>		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		–	
>Puncture Limit	M		9.2.1.46		–	
>TDD TPC Downlink Step Size	M		9.2.3.10		–	
>TPC CCTrCH List		0 to <maxnoCCTrCH>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.2		–	
DCH Information	O		DCH TDD Information 9.2.3.2A		YES	reject
DSCH Information	O		DSCH TDD Information 9.2.3.3a		YES	reject
USCH Information	O		9.2.3.15		YES	reject
RL Information		1			YES	reject
>RL ID	M		9.2.1.49		–	
>C-Id	M		9.2.1.6		–	
>Frame Offset	M		9.2.1.30		–	
>Special Burst Scheduling	M		9.2.3.7D		–	

>Primary CCPCH RSCP	O		9.2.3.5		-	
>DL Time Slot ISCP Info	O		9.2.3.2D	For 3.84Mcps TDD only	-	
>DL Time Slot ISCP Info LCR	O		9.2.3.2F	For 1.28Mcps TDD only	YES	reject
>TSTD Support Indicator	O		9.2.3.13F	For 1.28Mcps TDD only	YES	ignore
IMSI	M		9.2.1.31		YES	ignore

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

9.2.1.41B Neighbouring FDD Cell Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Neighbouring FDD Cell Information		<i>1..<max noofFDD neighbours></i>			–	
>C-Id	M		9.2.1.6		–	
>UL UARFCN	M		UARFCN 9.2.1.66	Corresponds to Nu in ref. [6]	–	
>DL UARFCN	M		UARFCN 9.2.1.66	Corresponds to Nd in ref. [6]	–	
>Frame Offset	O		9.2.1.30		–	
>Primary Scrambling Code	M		9.2.1.45		–	
>Primary CPICH Power	O		9.2.1.44		–	
>Cell Individual Offset	O		9.2.1.7		–	
>Tx Diversity Indicator	M		9.2.2.50		–	
>STTD Support Indicator	O		9.2.2.45		–	
>Closed Loop Mode1 Support Indicator	O		9.2.2.2		–	
>Closed Loop Mode2 Support Indicator	O		9.2.2.3		–	
> Restriction State Indicator	O		9.2.1.X		yes	ignore

Range bound	Explanation
MaxnoofFDDneighbours	Maximum number of neighbouring FDD cell for one cell.

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.

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Neighbouring TDD Cell Information		<i>1..<maxno ofTDDneighbours></i>			–	
>C-Id	M		9.2.1.6		–	
>UARFCN	M		9.2.1.66	Corresponds to Nt in ref. [7]	–	
>Frame Offset	O		9.2.1.30		–	
>Cell Parameter ID	M		9.2.1.8		–	
>Sync Case	M		9.2.1.54		–	
>Time Slot	C-Case1		9.2.1.56		–	
>SCH Time Slot	C-Case2		9.2.1.51		–	
>Block STTD Indicator	M		9.2.1.4A		–	
>Cell Individual Offset	O		9.2.1.7		–	
>DPCH Constant Value	O		9.2.1.23		–	
>PCCPCH Power	O		9.2.1.43		–	
> Restriction State Indicator	O		9.2.1.X		yes	ignore

Condition	Explanation
Case1	This IE shall be present only if Sync Case = Case1.
Case2	This IE shall be present only if Sync Case = Case2.

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

9.2.1.X Restriction state indicator

The Restriction state indicator is the identifier indicates whether the cell is “Cell Reserved for Operator Use” or not. It is provided by DRNS and reported to SRNC.

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>Restriction state indicator</u>			<u>Enumerated(Cell Not Reserved for Operator Use, Cell Reserved for Operator Use, ...)</u>	

9.2.3.4D Neighbouring TDD Cell Information LCR

The *Neighbouring TDD Cell Information LCR* IE provides information for 1.28Mcps TDD cells that are a neighbouring cells to a cell in the DRNC.

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Neighbouring TDD Cell Information LCR		<i>1..<maxno ofLCRTDD neighbours></i>			–	
>C-Id	M		9.2.1.6		–	
>UARFCN	M		9.2.1.66	Corresponds to Nt in ref. [7]	–	
>Frame Offset	O		9.2.1.30		–	
>Cell Parameter ID	M		9.2.1.8		–	
>Time Slot LCR	M		9.2.3.12a		–	
>Block STTD Indicator	M		9.2.1.4A		–	
>Cell Individual Offset	O		9.2.1.7		–	
>DPCH Constant Value	O		9.2.1.23		–	
>PCCPCH Power	O		9.2.1.43		–	
> Restriction State Indicator	O		9.2.1.X		=	

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

9.3.3 PDU Definitions

```

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
    Active-Pattern-Sequence-Information,
    AllocationRetentionPriority,
    AllowedQueuingTime,
    Allowed-Rate-Information,
    AlphaValue,
    BLER,
    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,
    CommonMeasurementAccuracy,
    CommonMeasurementType,
    CommonMeasurementValue,
    CommonMeasurementValueInformation,
    CriticalityDiagnostics,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-FDD-Information,
    DCH-ID,
    DCH-InformationResponse,
    DCH-TDD-Information,
    DL-DPCH-SlotFormat,
    DL-TimeslotISCP,
    DL-Power,
    DL-ScramblingCode,
    DL-Timeslot-Information,
    DL-TimeslotLCR-Information,
    DL-TimeSlot-ISCP-Info,
    DL-TimeSlot-ISCP-LCR-Info,
    DPC-Mode,
    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,
EnhancedDSCHPC,
EnhancedDSCHPCCounter,
EnhancedDSCHPCIndicator,
EnhancedDSCHPCWnd,
EnhancedDSCHPowerOffset,
FACH-FlowControlInformation,
FDD-DCHs-to-Modify,
FDD-DL-ChannelisationCodeNumber,
FDD-DL-CodeInformation,
FDD-S-CCPCH-Offset,
FDD-TPC-DownlinkStepSize,
FirstRLS-Indicator,
FNReportingIndicator,
FrameHandlingPriority,
FrameOffset,
GA-AccessPointPosition,
GA-Cell,
GA-CellAdditionalShapes,
IMSI,
InformationExchangeID,
InformationReportCharacteristics,
InformationType,
InnerLoopDLPCStatus,
L3-Information,
LimitedPowerIncrease,
MaximumAllowedULTxPower,
MaxNrDLPhysicalchannels,
MaxNrOfUL-DPCHs,
MaxNrTimeslots,
MaxNrULPhysicalchannels,
MeasurementFilterCoefficient,
MeasurementID,
MidambleAllocationMode,
MidambleShiftAndBurstType,
MidambleShiftLCR,
MinimumSpreadingFactor,
MinUL-ChannelisationCodeLength,
MultiplexingPosition,
NeighbouringFDDCellMeasurementInformation,
NeighbouringTDDCellMeasurementInformation,
Neighbouring-GSM-CellInformation,
Neighbouring-UMTS-CellInformation,
NrOfDLchannelisationcodes,
PagingCause,
PagingRecordType,
PDSCHCodeMapping,
PayloadCRC-PresenceIndicator,
PCCPCH-Power,
PC-Preamble,
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,
RequestedDataValue,
RequestedDataValueInformation,
RxTimingDeviationForTA,
S-FieldLength,
S-RNTI,
SCH-TimeSlot,
SAI,
SFN,
Secondary-CCPCH-Info,

Secondary-CCPCH-Info-TDD,

SpecialBurstScheduling,

SSDT-CellID,

SSDT-CellID-Length,

SSDT-Indication,

SSDT-SupportIndicator,

STTD-Indicator,

STTD-SupportIndicator,

AdjustmentPeriod,

ScaledAdjustmentRatio,

MaxAdjustmentStep,

SecondaryCCPCH-SlotFormat,

SRB-Delay,

SyncCase,

SynchronisationConfiguration,

TDD-ChannelisationCode,

TDD-DCHs-to-Modify,

TDD-DL-Code-Information,

TDD-DPCHOffset,

TDD-PhysicalChannelOffset,

TDD-TPC-DownlinkStepSize,

TDD-ChannelisationCodeLCR,

TDD-DL-Code-LCR-Information,

TDD-UL-Code-Information,

TDD-UL-Code-LCR-Information,

TFCI-Coding,

TFCI-Presence,

TFCI-SignallingMode,

TimeSlot,

TimeSlotLCR,

TimingAdvanceApplied,

ToAWE,

ToAWS,

TransmitDiversityIndicator,

TransportBearerID,

TransportBearerRequestIndicator,

TFCS,

Transmission-Gap-Pattern-Sequence-Information,

TransportFormatManagement,

TransportFormatSet,

TransportLayerAddress,

TrCH-SrcStatisticsDescr,

TSTD-Indicator,

TSTD-Support-Indicator,

UARFCN,

UC-ID,

UL-DPCCH-SlotFormat,

UL-SIR,

UL-FP-Mode,

UL-PhysCH-SF-Variation,

UL-ScramblingCode,

UL-Timeslot-Information,

UL-TimeslotLCR-Information,

UL-TimeSlot-ISCP-Info,

UL-TimeSlot-ISCP-LCR-Info,

URA-ID,

URA-Information,

USCH-ID,

USCH-Information

FROM RNSAP-IEs

PrivateIE-Container{ },

ProtocolExtensionContainer{ },

ProtocolIE-ContainerList{ },

ProtocolIE-ContainerPair{ },

ProtocolIE-ContainerPairList{ },

ProtocolIE-Container{ },

ProtocolIE-Single-Container{ },

RNSAP-PRIVATE-IES,

RNSAP-PROTOCOL-EXTENSION,

RNSAP-PROTOCOL-IES,

RNSAP-PROTOCOL-IES-PAIR

FROM RNSAP-Containers

maxNoOfDSCHs,

maxNoOfUSCHs,

maxNrOfCCTrCHs,

maxNrOfDCHs,

maxNrOfTS,
 maxNrOfDPCHs,
 maxNrOfRLs,
 maxNrOfRLSets,
 maxNrOfRLs-1,
 maxNrOfRLs-2,
 maxNrOfULTs,
 maxNrOfDLTs,
 maxNoOfDSCHsLCR,
 maxNoOfUSCHsLCR,
 maxNrOfCCTrCHsLCR,
 maxNrOfTsLCR,
 maxNrOfDLTsLCR,
 maxNrOfULTsLCR,
 maxNrOfDPCHsLCR,
 maxNrOfLCRTDDNeighboursPerRNC,
 maxNrOfMeasNCell,

 id-Active-Pattern-Sequence-Information,
 id-AdjustmentRatio,
 id-AllowedQueuingTime,
 id-BindingID,
 id-C-ID,
 id-C-RNTI,
 id-CFN,
 id-CFNReportingIndicator,
 id-CN-CS-DomainIdentifier,
 id-CN-PS-DomainIdentifier,
 id-Cause,
 id-CauseLevel-RL-AdditionFailureFDD,
 id-CauseLevel-RL-AdditionFailureTDD,
 id-CauseLevel-RL-ReconfFailure,
 id-CauseLevel-RL-SetupFailureFDD,
 id-CauseLevel-RL-SetupFailureTDD,
 id-CCTrCH-InformationItem-RL-FailureInd,
 id-CCTrCH-InformationItem-RL-RestoreInd,
 id-ClosedLoopModel-SupportIndicator,
 id-ClosedLoopMode2-SupportIndicator,
 id-CNOriginatedPage-PagingRqst,
 id-CommonMeasurementAccuracy,
 id-CommonMeasurementObjectType-CM-Rprt,
 id-CommonMeasurementObjectType-CM-Rqst,
 id-CommonMeasurementObjectType-CM-Rsp,
 id-CommonMeasurementType,
 id-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-DCH-Rate-InformationItem-RL-CongestInd,
 id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD,
 id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD,
 id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD,
 id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD,
 id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,
 id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,
 id-DL-CCTrCH-InformationItem-RL-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-PhyChReconfRqstTDD,
 id-DL-DPCH-InformationItem-RL-AdditionRspTDD,
 id-DL-DPCH-InformationItem-RL-SetupRspTDD,
 id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD,
 id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD,
 id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD,
 id-DL-Physical-Channel-Information-RL-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-DPC-Mode,
 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-ReconfReadyTDD,
 id-EnhancedDSCHPC,
 id-EnhancedDSCHPCIndicator,
 id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD,
 id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD,
 id-GA-Cell,
 id-GA-CellAdditionalShapes,
 id-IMSI,
 id-InformationExchangeID,
 id-InformationExchangeObjectType-InfEx-Rprt,
 id-InformationExchangeObjectType-InfEx-Rqst,
 id-InformationExchangeObjectType-InfEx-Rsp,
 id-InformationReportCharacteristics,
 id-InformationType,
 id-InnerLoopDLPCStatus,
 id-L3-Information,
 id-AdjustmentPeriod,
 id-MaxAdjustmentStep,
 id-MeasurementFilterCoefficient,
 id-MeasurementID,
 id-PagingArea-PagingRqst,
 id-FACH-FlowControlInformation,
 id-PowerAdjustmentType,
 id-PropagationDelay,
 id-RANAP-RelocationInformation,
 id-RL-Information-PhyChReconfRqstFDD,
 id-RL-Information-PhyChReconfRqstTDD,
 id-RL-Information-RL-AdditionRqstFDD,
 id-RL-Information-RL-AdditionRqstTDD,
 id-RL-Information-RL-DeletionRqst,
 id-RL-Information-RL-FailureInd,
 id-RL-Information-RL-ReconfPrepFDD,
 id-RL-Information-RL-RestoreInd,
 id-RL-Information-RL-SetupRqstFDD,
 id-RL-Information-RL-SetupRqstTDD,
 id-RL-InformationItem-RL-CongestInd,
 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-CongestInd,
 id-RL-InformationList-RL-AdditionRqstFDD,
 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,
 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-SFN,
 id-SFNReportingIndicator,
 id-SRNC-ID,
 id-SSDT-CellIDforEDSCHPC,
 id-STTD-SupportIndicator,
 id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
 id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,
 id-timeSlot-ISCP,
 id-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,
 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-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-SetupRqstTDD,
 id-UL-SIRTarget,
 id-URA-Information,
 id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
 id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD,
 id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
 id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
 id-USCHs-to-Add,
 id-USCH-DeleteList-RL-ReconfPrepTDD,
 id-USCH-InformationListIE-RL-AdditionRspTDD,
 id-USCH-InformationListIEs-RL-SetupRspTDD,
 id-USCH-Information,
 id-USCH-ModifyList-RL-ReconfPrepTDD,
 id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD,
 id-neighbouring-LCR-TDD-CellInformation,
 id-DL-TimeSlot-ISCP-LCR-Information-RL-SetupRqstTDD,
 id-RL-LCR-InformationResponse-RL-SetupRspTDD,
 id-UL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD,
 id-UL-DPCH-LCR-InformationItem-RL-SetupRspTDD,

```

id-DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD,
id-DL-DPCH-LCR-InformationItem-RL-SetupRspTDD,
id-DSCH-LCR-InformationListIEs-RL-SetupRspTDD,
id-USCH-LCR-InformationListIEs-RL-SetupRspTDD,
id-DL-Timeslot-ISCP-LCR-Information-RL-AdditionRqstTDD,
id-RL-LCR-InformationResponse-RL-AdditionRspTDD,
id-UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD,
id-UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD,
id-DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD,
id-DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD,
id-DSCH-LCR-InformationListIEs-RL-AdditionRspTDD,
id-USCH-LCR-InformationListIEs-RL-AdditionRspTDD,
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD,
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD,
id-UL-Timeslot-LCR-InformationList-RL-ReconfReadyTDD,
id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD,
id-DL-Timeslot-LCR-InformationList-RL-ReconfReadyTDD,
id-UL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD,
id-DL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD,
id-timeSlot-LCR-ISCPList-DL-PC-Rqst-TDD,
id-TSTD-Support-Indicator-RL-SetupRqstTDD
FROM RNSAP-Constants;

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

RadioLinkSetupRequestFDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container        {{RadioLinkSetupRequestFDD-IEs}},
    protocolExtensions          ProtocolExtensionContainer  {{RadioLinkSetupRequestFDD-
Extensions}}
    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-SetupRqstFDD      CRITICALITY notify   TYPE RL-InformationList-RL-
SetupRqstFDD PRESENCE mandatory } |
    { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject   TYPE
Transmission-Gap-Pattern-Sequence-Information PRESENCE conditional } ;
-- This IE shall be present when the Active Pattern Sequence Information IE is present,
otherwise this IE is 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 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,
    s-FieldLength                S-FieldLength       OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { {UL-DPCH-Information-RL-
SetupRqstFDD-ExtIEs} } OPTIONAL,

```

```

}
...
}
UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DPC-Mode          CRITICALITY reject          EXTENSION DPC-Mode  PRESENCE optional
},
  ...
}
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 present if Slot Format is from 12 to 16 --,
  multiplexingPosition MultiplexingPosition,
  powerOffsetInformation PowerOffsetInformation-RL-SetupRqstFDD,
  fdd-dl-TPC-DownlinkStepSize FDD-TPC-DownlinkStepSize,
  limitedPowerIncrease LimitedPowerIncrease,
  innerLoopDLPCStatus InnerLoopDLPCStatus,
  iE-Extensions        ProtocolExtensionContainer { {DL-DPCH-Information-RL-
SetupRqstFDD-ExtIEs} } OPTIONAL,
  ...
}
DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
PowerOffsetInformation-RL-SetupRqstFDD ::= SEQUENCE {
  po1-ForTFCI-Bits PowerOffset,
  po2-ForTPC-Bits PowerOffset,
  po3-ForPilotBits PowerOffset,
  iE-Extensions ProtocolExtensionContainer { { PowerOffsetInformation-RL-
SetupRqstFDD-ExtIEs} } OPTIONAL,
  ...
}
PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
RL-InformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-
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-SetupRqstFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  c-ID          C-ID,
  firstRLS-indicator FirstRLS-Indicator,
  frameOffset   FrameOffset,
  chipOffset    ChipOffset,
  propagationDelay PropagationDelay          OPTIONAL,
  diversityControlField DiversityControlField OPTIONAL
  -- This IE shall be 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 present unless Diversity Mode IE in UL DPCH Information group is "none"
  iE-Extensions ProtocolExtensionContainer { {RL-InformationItem-RL-
SetupRqstFDD-ExtIEs} } OPTIONAL,
  ...
}
RL-InformationItem-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-SSDT-CellIDforEDSCHPC CRITICALITY ignore EXTENSION SSdT-CellID PRESENCE
conditional },
  -- This IE shall be present if Enhanced DSCH PC IE is present in the DSCH Information IE.
  ...
}

```

```

RadioLinkSetupRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-IMSI          CRITICALITY ignore      EXTENSION IMSI      PRESENCE
  mandatory },
  ...
}

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

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

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-SRNC-ID          CRITICALITY reject   TYPE RNC-ID
  PRESENCE mandatory } |
  { ID id-S-RNTI          CRITICALITY reject   TYPE S-RNTI
  PRESENCE mandatory } |
  { ID id-D-RNTI          CRITICALITY reject   TYPE D-RNTI
  PRESENCE optional } |
  { ID id-UL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject   TYPE UL-Physical-
Channel-Information-RL-SetupRqstTDD PRESENCE mandatory } |
  { ID id-DL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject   TYPE DL-Physical-
Channel-Information-RL-SetupRqstTDD PRESENCE mandatory } |
  { ID id-AllowedQueuingTime          CRITICALITY reject   TYPE
AllowedQueuingTime PRESENCE optional } |
  { ID id-UL-CCTrCH-InformationList-RL-SetupRqstTDD CRITICALITY notify   TYPE UL-CCTrCH-
InformationList-RL-SetupRqstTDD PRESENCE optional } |
  { ID id-DL-CCTrCH-InformationList-RL-SetupRqstTDD CRITICALITY notify   TYPE DL-CCTrCH-
InformationList-RL-SetupRqstTDD PRESENCE optional } |
  { ID id-DCH-TDD-Information          CRITICALITY reject   TYPE DCH-TDD-Information
PRESENCE optional } |
  { ID id-DSCH-TDD-Information          CRITICALITY reject   TYPE DSCH-TDD-Information
PRESENCE optional } |
  { ID id-USCH-Information          CRITICALITY reject   TYPE USCH-Information          PRESENCE
optional } |
  { ID id-RL-Information-RL-SetupRqstTDD          CRITICALITY reject   TYPE RL-Information-
RL-SetupRqstTDD PRESENCE mandatory },
  ...
}

UL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
  maxNrTimeslots-UL          MaxNrTimeslots,
  minimumSpreadingFactor-UL MinimumSpreadingFactor,
  maxNrULPhysicalchannels    MaxNrULPhysicalchannels,
  iE-Extensions              ProtocolExtensionContainer { {UL-Physical-Channel-
InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
  maxNrTimeslots-DL          MaxNrTimeslots,
  minimumSpreadingFactor-DL MinimumSpreadingFactor,
  maxNrDLPhysicalchannels    MaxNrDLPhysicalchannels,
  iE-Extensions              ProtocolExtensionContainer { {DL-Physical-Channel-
InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

UL-CCTrCH-InformationItemIEs-RL-SetupRqstTDD RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD CRITICALITY notify TYPE UL-CCTrCH-
InformationItem-RL-SetupRqstTDD PRESENCE mandatory }
}

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

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

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

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

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

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

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

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

CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
    rL-ID RL-ID,
    c-ID C-ID,
    frameOffset FrameOffset,
    specialBurstScheduling SpecialBurstScheduling,
    primaryCCPCH-RSCP PrimaryCCPCH-RSCP OPTIONAL,
    dL-TimeSlot-ISCP DL-TimeSlot-ISCP-Info OPTIONAL
    --for 3.84Mcps TDD only,
    iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-SetupRqstTDD-
ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-TimeSlot-ISCP-LCR-Information-RL-SetupRqstTDD CRITICALITY reject EXTENSION
DL-TimeSlot-ISCP-LCR-Information PRESENCE optional },
    { ID id-TSTD-Support-Indicator-RL-SetupRqstTDD CRITICALITY ignore EXTENSION
TSTD-Support-Indicator PRESENCE optional },
    --for 1.28Mcps TDD only
    ...
}

```

```
RadioLinkSetupRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-IMSI CRITICALITY ignore EXTENSION IMSI PRESENCE
  mandatory },
  ...
}
```

<< Omitted ASN.1 >>

9.3.4 Information Element Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxCodeNumComp-1,
    maxNrOfFACHs,
    maxFACHCountPlus1,
    maxIBSEG,
    maxNoOfDSCHs,
    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,
    maxNrOfSCCPCHs,
    maxTFCI1Combs,
    maxTFCI2Combs,
    maxTFCI2Combs-1,
    maxTGPS,
    maxTTI-Count,
    maxNoGPSTypes,
    maxNoSat,

    id-Allowed-Rate-Information,
    id-Guaranteed-Rate-Information,
    id-Neighbouring-GSM-CellInformation,
    id-Neighbouring-UMTS-CellInformationItem,
    maxNrOfLevels,
    maxNrOfMeasNCell,
    maxNrOfMeasNCell-1,
    id-MessageStructure,
    id-EnhancedDSCHPC,
    id-RestrictionStateIndicator
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;

<< Ommited ASN.1 >>

-- 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 ::= {
    { id-neighbouring-LCR-TDD-CellInformation CRITICALITY ignore EXTENSION
Neighbouring-LCR-TDD-CellInformation PRESENCE optional },
    ...
}

Neighbouring-FDD-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfFDDNeighboursPerRNC,...)) OF
Neighbouring-FDD-CellInformationItem

Neighbouring-FDD-CellInformationItem ::= SEQUENCE {
    c-ID C-ID,
    uARFCNforNu UARFCN,
    uARFCNforNd UARFCN,
    frameOffset FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
    cellIndividualOffset CellIndividualOffset OPTIONAL,
    txDiversityIndicator TxDiversityIndicator,
    sTTD-SupportIndicator STTD-SupportIndicator OPTIONAL,
    closedLoopModel1-SupportIndicator ClosedLoopModel1-SupportIndicator OPTIONAL,
    closedLoopMode2-SupportIndicator ClosedLoopMode2-SupportIndicator OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { Neighbouring-FDD-
CellInformationItem-ExtIEs } } OPTIONAL,
    ...
}

Neighbouring-FDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-RestrictionStateIndicator CRITICALITY ignore EXTENSION
    RestrictionStateIndicator PRESENCE optional },
    ...
}

NeighbouringFDDCellMeasurementInformation ::= SEQUENCE {
    uC-ID UC-ID,
    uARFCN UARFCN,
    primaryScramblingCode PrimaryScramblingCode,
    iE-Extensions ProtocolExtensionContainer { {
NeighbouringFDDCellMeasurementInformationItem-ExtIEs } } OPTIONAL,
    ...
}

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

```

```

}

Neighbouring-GSM-CellInformation ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-
CellInformationIE }}

Neighbouring-GSM-CellInformationIE RNSAP-PROTOCOL-IES ::= {
  { ID id-Neighbouring-GSM-CellInformation    CRITICALITY ignore  TYPE      Neighbouring-GSM-
CellInformationIEs PRESENCE  mandatory }
}

Neighbouring-GSM-CellInformationIEs ::= SEQUENCE ( SIZE (1..maxNrOfGSMNeighboursPerRNC,...)) OF
Neighbouring-GSM-CellInformationItem

Neighbouring-GSM-CellInformationItem ::= SEQUENCE {
  CGI                      CGI,
  q-Offset-Serving-to-Neighbour    Q-Offset-Serving-to-Neighbour,
  q-RxlevMin                    Q-RxlevMin,
  maximumAllowedULTxPower        MaximumAllowedULTxPower,
  bSIC                          BSIC,
  bCCH-ARFCN                    BCCCH-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 shall be present only if Sync Case = Case1 -- ,
  sCH-TimeSlot            SCH-TimeSlot      OPTIONAL
  -- This IE shall be present only if Sync Case = Case2 -- ,
  block-STTD-Indicator    Block-STTD-Indicator,
  cellIndividualOffset    CellIndividualOffset  OPTIONAL,
  dPCHConstantValue      DPCHConstantValue  OPTIONAL,
  pCCPCH-Power           PCCPCH-Power      OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { Neighbouring-TDD-
CellInformationItem-ExtIEs} } OPTIONAL,
  ...
}

Neighbouring-TDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-RestrictionStateIndicator          CRITICALITY ignore      EXTENSION
RestrictionStateIndicator          PRESENCE optional },
  ...
}

NeighbouringTDDCellMeasurementInformation ::= SEQUENCE {
  uC-ID                      UC-ID,
  uARFCN                    UARFCN,
  cellParameterID          CellParameterID,
  iE-Extensions            ProtocolExtensionContainer { {
NeighbouringTDDCellMeasurementInformationItem-ExtIEs} } OPTIONAL,
  ...
}

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

Neighbouring-LCR-TDD-CellInformation ::= SEQUENCE (SIZE (1.. maxNrofLCRTDDNeighboursPerRNC,...))
OF Neighbouring-LCR-TDD-CellInformationItem

Neighbouring-LCR-TDD-CellInformationItem ::= SEQUENCE {
  c-ID                      C-ID,
  uARFCNforNt              UARFCN,

```

```

    frameOffset                FrameOffset                OPTIONAL,
    cellParameterID            CellParameterID,
    timeSlotLCR                TimeSlotLCR,
    block-STTD-Indicator        Block-STTD-Indicator,
    cellIndividualOffset        CellIndividualOffset        OPTIONAL,
    dPCHConstantValue          DPCHConstantValue        OPTIONAL,
    pCCPCH-Power                PCCPCH-Power                OPTIONAL,
    restrictionStateIndicator    RestrictionStateIndicator    OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { Neighbouring-LCR-TDD-
CellInformationItem-ExtIEs} } OPTIONAL,
    ...
}

Neighbouring-LCR TDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NrOfDLchannelisationcodes ::= INTEGER (1..8)

NrOfTransportBlocks          ::= INTEGER (0..512)

<< Ommited ASN.1>>

-- R

RAC                          ::= OCTET STRING (SIZE(1))

RANAP-RelocationInformation   ::= BIT STRING

Range-Correction-Rate ::= INTEGER (-127..127)
-- scaling factor 0.032 m/s

RateMatchingAttribute        ::= INTEGER (1..maxRateMatching)

RB-Identity                  ::= INTEGER (0..31)

RB-Info ::= SEQUENCE (SIZE(1..maxNoOfRB)) OF RB-Identity

Received-Total-Wideband-Power-Value ::= Received-total-wide-band-power

Received-Total-Wideband-Power-Value-IncrDecrThres ::= INTEGER(0..620)
-- Unit dB Step 0.1dB
-- e.g. value 100 means 10dB

RefTFCNumber ::= INTEGER (0..15)

RepetitionLength             ::= INTEGER (1..63)

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

RepetitionNumber ::= INTEGER (1..256)

ReportCharacteristics ::= CHOICE {
    onDemand                NULL,
    periodic                 Periodic,
    eventA                   EventA,
    eventB                   EventB,
    eventC                   EventC,
    eventD                   EventD,
    eventE                   EventE,
    eventF                   EventF,
    ...,
    onModification          OnModification
}

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

```

```

    min                INTEGER (1..60,...),
-- Unit min, Step lmin
    ...
}

RequestedDataValue ::= SEQUENCE {
    gA-AccessPointPosition          GA-AccessPointPosition
    OPTIONAL,
    iPDLParameters                  IPDLParameters
    OPTIONAL,
    dGPSCorrections                 DGPSCorrections
    OPTIONAL,
    gPS-NavigationModel-and-TimeRecovery GPS-NavigationModel-and-TimeRecovery
    OPTIONAL,
    gPS-Ionospheric-Model           GPS-Ionospheric-Model
    OPTIONAL,
    gPS-UTC-Model                   GPS-UTC-Model
    OPTIONAL,
    gPS-Almanac                     GPS-Almanac
    OPTIONAL,
    gPS-RealTime-Integrity          GPS-RealTime-Integrity
    OPTIONAL,
    gPS-RX-POS                      GPS-RX-POS
    OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {
RequestedDataValue-ExtIEs } }      OPTIONAL,
    ...
}

--at least one of the above IEs shall be present in the requested data value

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

RequestedDataValueInformation ::= CHOICE {
    informationAvailable           InformationAvailable,
    informationNotAvailable       InformationNotAvailable
}

RestrictionStateIndicator ::= ENUMERATED {
    cellNotResevedForOperatorUse,
    cellResevedForOperatorUse,
    ...
}

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

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

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

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

Round-Trip-Time-Value ::= INTEGER(0..32767)
-- According to mapping in [23]

RSCP-Value ::= INTEGER (0..127)
-- According to mapping in [24]

RSCP-Value-IncrDecrThres ::= INTEGER (0..126)

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

RxTimingDeviationForTA ::= INTEGER (0..127)
-- As specified in [5], ch. 6.2.7.6
-- For 1.28Mcps TDD this IE must be set to 0.

Rx-Timing-Deviation-Value ::= INTEGER (0..8191)
--According to mapping in [24][3.84Mcps TDD only]

<< Ommited ASN.1>>

```

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 ::= 1
id-compressedModeCommand                             ProcedureCode ::= 2
id-downlinkPowerControl                              ProcedureCode ::= 3
id-downlinkPowerTimeslotControl                     ProcedureCode ::= 4
id-downlinkSignallingTransfer                       ProcedureCode ::= 5
id-errorIndication                                  ProcedureCode ::= 6
id-dedicatedMeasurementFailure                      ProcedureCode ::= 7
id-dedicatedMeasurementInitiation                  ProcedureCode ::= 8
id-dedicatedMeasurementReporting                   ProcedureCode ::= 9
id-dedicatedMeasurementTermination                 ProcedureCode ::= 10
id-paging                                            ProcedureCode ::= 11
id-physicalChannelReconfiguration                   ProcedureCode ::= 12
id-privateMessage                                   ProcedureCode ::= 13
id-radioLinkAddition                               ProcedureCode ::= 14
id-radioLinkCongestion                             ProcedureCode ::= 34
id-radioLinkDeletion                               ProcedureCode ::= 15
id-radioLinkFailure                                ProcedureCode ::= 16
id-radioLinkPreemption                             ProcedureCode ::= 17
id-radioLinkRestoration                            ProcedureCode ::= 18
id-radioLinkSetup                                  ProcedureCode ::= 19
id-relocationCommit                                ProcedureCode ::= 20
id-synchronisedRadioLinkReconfigurationCancellation ProcedureCode ::= 21
id-synchronisedRadioLinkReconfigurationCommit       ProcedureCode ::= 22
id-synchronisedRadioLinkReconfigurationPreparation  ProcedureCode ::= 23
id-unSynchronisedRadioLinkReconfiguration          ProcedureCode ::= 24
id-uplinkSignallingTransfer                        ProcedureCode ::= 25
id-commonMeasurementFailure                        ProcedureCode ::= 26
id-commonMeasurementInitiation                    ProcedureCode ::= 27
id-commonMeasurementReporting                      ProcedureCode ::= 28
id-commonMeasurementTermination                   ProcedureCode ::= 29
id-informationExchangeFailure                     ProcedureCode ::= 30
id-informationExchangeInitiation                  ProcedureCode ::= 31
id-informationReporting                            ProcedureCode ::= 32
id-informationExchangeTermination                 ProcedureCode ::= 33

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

maxCodeNumComp-1      INTEGER ::= 255
maxRateMatching       INTEGER ::= 256
maxNoCodeGroups       INTEGER ::= 256
maxNoOfDSCHs         INTEGER ::= 10
maxNoOfDSCHsLCR      INTEGER ::= 10
maxNoOfRB             INTEGER ::= 32
maxNoOfUSCHs         INTEGER ::= 10
maxNoOfUSCHsLCR      INTEGER ::= 10

```

```

maxNoTFCIGroups          INTEGER ::= 256
maxNrOfTFCs              INTEGER ::= 1024
maxNrOfTFs               INTEGER ::= 32
maxNrOfCCTrCHs          INTEGER ::= 16
maxNrOfCCTrCHsLCR       INTEGER ::= 16
maxNrOfDCHs              INTEGER ::= 128
maxNrOfDL-Codes          INTEGER ::= 8
maxNrOfDPCHs             INTEGER ::= 240
maxNrOfDPCHsLCR         INTEGER ::= 240
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
maxNrOfULTsLCR           INTEGER ::= 6
maxNrOfDLTs              INTEGER ::= 15
maxNrOfDLTsLCR           INTEGER ::= 6
maxRNCinURA-1           INTEGER ::= 15
maxTTI-Count             INTEGER ::= 4
maxCTFC                  INTEGER ::= 16777215
maxNrOfNeighbouringRNCs INTEGER ::= 10
maxNrOfFDDNeighboursPerRNC INTEGER ::= 256
maxNrOfGSMNeighboursPerRNC INTEGER ::= 256
maxNrOfTDDNeighboursPerRNC INTEGER ::= 256
maxNrOfFACHs             INTEGER ::= 8
maxNrOfLCRTDDNeighboursPerRNC INTEGER ::= 256
maxFACHCountPlus1        INTEGER ::= 10
maxIBSEG                 INTEGER ::= 16
maxNrOfSCCPCHs           INTEGER ::= 8
maxTFCI1Combs            INTEGER ::= 512
maxTFCI2Combs            INTEGER ::= 1024
maxTFCI2Combs-1          INTEGER ::= 1023
maxTGPS                  INTEGER ::= 6
maxNrOfTS                INTEGER ::= 15
maxNrOfLevels            INTEGER ::= 256
maxNrOfTSLCR             INTEGER ::= 6
maxNoSat                 INTEGER ::= 16
maxNoGPSTypes            INTEGER ::= 8
maxNrOfMeasNCell         INTEGER ::= 96
maxNrOfMeasNCell -1      INTEGER ::= 95 -- maxNrOfMeasNCell - 1

```

```

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

```

```

id-AllowedQueuingTime      ProtocolIE-ID ::= 4
id-Allowed-Rate-Information ProtocolIE-ID ::= 42
id-BindingID               ProtocolIE-ID ::= 5
id-C-ID                    ProtocolIE-ID ::= 6
id-C-RNTI                  ProtocolIE-ID ::= 7
id-CFN                     ProtocolIE-ID ::= 8
id-CN-CS-DomainIdentifier  ProtocolIE-ID ::= 9
id-CN-PS-DomainIdentifier  ProtocolIE-ID ::= 10
id-Cause                   ProtocolIE-ID ::= 11
id-CriticalityDiagnostics  ProtocolIE-ID ::= 20
id-D-RNTI                  ProtocolIE-ID ::= 21
id-D-RNTI-ReleaseIndication ProtocolIE-ID ::= 22
id-DCHs-to-Add-FDD         ProtocolIE-ID ::= 26
id-DCHs-to-Add-TDD        ProtocolIE-ID ::= 27
id-DCH-DeleteList-RL-ReconfPrepFDD ProtocolIE-ID ::= 30
id-DCH-DeleteList-RL-ReconfPrepTDD ProtocolIE-ID ::= 31
id-DCH-DeleteList-RL-ReconfRqstFDD ProtocolIE-ID ::= 32
id-DCH-DeleteList-RL-ReconfRqstTDD ProtocolIE-ID ::= 33
id-DCH-FDD-Information     ProtocolIE-ID ::= 34
id-DCH-TDD-Information     ProtocolIE-ID ::= 35
id-FDD-DCHs-to-Modify     ProtocolIE-ID ::= 39
id-TDD-DCHs-to-Modify     ProtocolIE-ID ::= 40
id-DCH-InformationResponse ProtocolIE-ID ::= 43
id-DCH-Rate-InformationItem-RL-CongestInd ProtocolIE-ID ::= 38
id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ProtocolIE-ID ::= 44
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD ProtocolIE-ID ::= 45
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ProtocolIE-ID ::= 46
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD ProtocolIE-ID ::= 47

```

id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD	ProtocolIE-ID ::= 48
id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 49
id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD	ProtocolIE-ID ::= 50
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 51
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 52
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 53
id-FDD-DL-CodeInformation	ProtocolIE-ID ::= 54
id-DL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 59
id-DL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 60
id-DL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 61
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD	ProtocolIE-ID ::= 62
id-DL-DPCH-InformationItem-RL-AdditionRspTDD	ProtocolIE-ID ::= 63
id-DL-DPCH-InformationItem-RL-SetupRspTDD	ProtocolIE-ID ::= 64
id-DLReferencePower	ProtocolIE-ID ::= 67
id-DLReferencePowerList-DL-PC-Rqst	ProtocolIE-ID ::= 68
id-DL-ReferencePowerInformation-DL-PC-Rqst	ProtocolIE-ID ::= 69
id-DPC-Mode	ProtocolIE-ID ::= 12
id-DRXCycleLengthCoefficient	ProtocolIE-ID ::= 70
id-DedicatedMeasurementObjectType-DM-Rprt	ProtocolIE-ID ::= 71
id-DedicatedMeasurementObjectType-DM-Rqst	ProtocolIE-ID ::= 72
id-DedicatedMeasurementObjectType-DM-Rsp	ProtocolIE-ID ::= 73
id-DedicatedMeasurementType	ProtocolIE-ID ::= 74
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD	ProtocolIE-ID ::= 82
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD	ProtocolIE-ID ::= 83
id-Guaranteed-Rate-Information	ProtocolIE-ID ::= 41
id-IMSI	ProtocolIE-ID ::= 84
id-L3-Information	ProtocolIE-ID ::= 85
id-AdjustmentPeriod	ProtocolIE-ID ::= 90
id-MaxAdjustmentStep	ProtocolIE-ID ::= 91
id-MeasurementFilterCoefficient	ProtocolIE-ID ::= 92
id-MessageStructure	ProtocolIE-ID ::= 57
id-MeasurementID	ProtocolIE-ID ::= 93
id-Neighbouring-GSM-CellInformation	ProtocolIE-ID ::= 13
id-Neighbouring-UMTS-CellInformationItem	ProtocolIE-ID ::= 95
id-PagingArea-PagingRqst	ProtocolIE-ID ::= 102
id-FACH-FlowControlInformation	ProtocolIE-ID ::= 103
id-PowerAdjustmentType	ProtocolIE-ID ::= 107
id-RANAP-RelocationInformation	ProtocolIE-ID ::= 109
id-RL-Information-PhyChReconfRqstFDD	ProtocolIE-ID ::= 110
id-RL-Information-PhyChReconfRqstTDD	ProtocolIE-ID ::= 111
id-RL-Information-RL-AdditionRqstFDD	ProtocolIE-ID ::= 112
id-RL-Information-RL-AdditionRqstTDD	ProtocolIE-ID ::= 113
id-RL-Information-RL-DeletionRqst	ProtocolIE-ID ::= 114
id-RL-Information-RL-FailureInd	ProtocolIE-ID ::= 115
id-RL-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 116
id-RL-Information-RL-RestoreInd	ProtocolIE-ID ::= 117
id-RL-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 118
id-RL-Information-RL-SetupRqstTDD	ProtocolIE-ID ::= 119
id-RL-InformationItem-RL-CongestInd	ProtocolIE-ID ::= 55
id-RL-InformationItem-DM-Rprt	ProtocolIE-ID ::= 120
id-RL-InformationItem-DM-Rqst	ProtocolIE-ID ::= 121
id-RL-InformationItem-DM-Rsp	ProtocolIE-ID ::= 122
id-RL-InformationItem-RL-PreemptRequiredInd	ProtocolIE-ID ::= 2
id-RL-InformationItem-RL-SetupRqstFDD	ProtocolIE-ID ::= 123
id-RL-InformationList-RL-CongestInd	ProtocolIE-ID ::= 56
id-RL-InformationList-RL-AdditionRqstFDD	ProtocolIE-ID ::= 124
id-RL-InformationList-RL-DeletionRqst	ProtocolIE-ID ::= 125
id-RL-InformationList-RL-PreemptRequiredInd	ProtocolIE-ID ::= 1
id-RL-InformationList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 126
id-RL-InformationResponse-RL-AdditionRspTDD	ProtocolIE-ID ::= 127
id-RL-InformationResponse-RL-ReconfReadyTDD	ProtocolIE-ID ::= 128
id-RL-InformationResponse-RL-SetupRspTDD	ProtocolIE-ID ::= 129
id-RL-InformationResponseItem-RL-AdditionRspFDD	ProtocolIE-ID ::= 130
id-RL-InformationResponseItem-RL-ReconfReadyFDD	ProtocolIE-ID ::= 131
id-RL-InformationResponseItem-RL-ReconfRspFDD	ProtocolIE-ID ::= 132
id-RL-InformationResponseItem-RL-SetupRspFDD	ProtocolIE-ID ::= 133
id-RL-InformationResponseList-RL-AdditionRspFDD	ProtocolIE-ID ::= 134
id-RL-InformationResponseList-RL-ReconfReadyFDD	ProtocolIE-ID ::= 135
id-RL-InformationResponseList-RL-ReconfRspFDD	ProtocolIE-ID ::= 136
id-RL-InformationResponse-RL-ReconfRspTDD	ProtocolIE-ID ::= 28
id-RL-InformationResponseList-RL-SetupRspFDD	ProtocolIE-ID ::= 137
id-RL-ReconfigurationFailure-RL-ReconfFail	ProtocolIE-ID ::= 141
id-RL-Set-InformationItem-DM-Rprt	ProtocolIE-ID ::= 143
id-RL-Set-InformationItem-DM-Rqst	ProtocolIE-ID ::= 144
id-RL-Set-InformationItem-DM-Rsp	ProtocolIE-ID ::= 145
id-RL-Set-Information-RL-FailureInd	ProtocolIE-ID ::= 146
id-RL-Set-Information-RL-RestoreInd	ProtocolIE-ID ::= 147
id-ReportCharacteristics	ProtocolIE-ID ::= 152

id-Reporting-Object-RL-FailureInd	ProtocolIE-ID ::= 153
id-Reporting-Object-RL-RestoreInd	ProtocolIE-ID ::= 154
id-S-RNTI	ProtocolIE-ID ::= 155
id-SAI	ProtocolIE-ID ::= 156
id-SRNC-ID	ProtocolIE-ID ::= 157
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD	ProtocolIE-ID ::= 159
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD	ProtocolIE-ID ::= 160
id-TransportBearerID	ProtocolIE-ID ::= 163
id-TransportBearerRequestIndicator	ProtocolIE-ID ::= 164
id-TransportLayerAddress	ProtocolIE-ID ::= 165
id-UC-ID	ProtocolIE-ID ::= 166
id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD	ProtocolIE-ID ::= 167
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 169
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 171
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 172
id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD	ProtocolIE-ID ::= 173
id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 174
id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 175
id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD	ProtocolIE-ID ::= 176
id-UL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 177
id-UL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 178
id-UL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 179
id-UL-DPCH-InformationItem-PhyChReconfRqstTDD	ProtocolIE-ID ::= 180
id-UL-DPCH-InformationItem-RL-AdditionRspTDD	ProtocolIE-ID ::= 181
id-UL-DPCH-InformationItem-RL-SetupRspTDD	ProtocolIE-ID ::= 182
id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 183
id-UL-SIRTarget	ProtocolIE-ID ::= 184
id-URA-Information	ProtocolIE-ID ::= 185
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD	ProtocolIE-ID ::= 188
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD	ProtocolIE-ID ::= 189
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD	ProtocolIE-ID ::= 190
id-Active-Pattern-Sequence-Information	ProtocolIE-ID ::= 193
id-AdjustmentRatio	ProtocolIE-ID ::= 194
id-CauseLevel-RL-AdditionFailureFDD	ProtocolIE-ID ::= 197
id-CauseLevel-RL-AdditionFailureTDD	ProtocolIE-ID ::= 198
id-CauseLevel-RL-ReconfFailure	ProtocolIE-ID ::= 199
id-CauseLevel-RL-SetupFailureFDD	ProtocolIE-ID ::= 200
id-CauseLevel-RL-SetupFailureTDD	ProtocolIE-ID ::= 201
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD	ProtocolIE-ID ::= 205
id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD	ProtocolIE-ID ::= 206
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 207
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 208
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 209
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 210
id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 212
id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 213
id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 214
id-DSCHs-to-Add-TDD	ProtocolIE-ID ::= 215
id-DSCHs-to-Add-FDD	ProtocolIE-ID ::= 216
id-DSCH-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 217
id-DSCH-Delete-RL-ReconfPrepFDD	ProtocolIE-ID ::= 218
id-DSCH-FDD-Information	ProtocolIE-ID ::= 219
id-DSCH-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 220
id-DSCH-InformationListIEs-RL-SetupRspTDD	ProtocolIE-ID ::= 221
id-DSCH-TDD-Information	ProtocolIE-ID ::= 222
id-DSCH-FDD-InformationResponse	ProtocolIE-ID ::= 223
id-DSCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 226
id-DSCH-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 227
id-DSCH-Modify-RL-ReconfPrepFDD	ProtocolIE-ID ::= 228
id-DSCHsToBeAddedOrModified-FDD	ProtocolIE-ID ::= 229
id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD	ProtocolIE-ID ::= 230
id-EnhancedDSCHPC	ProtocolIE-ID ::= 29
id-EnhancedDSCHPCIndicator	ProtocolIE-ID ::= 34
id-GA-Cell	ProtocolIE-ID ::= 232
id-GA-CellAdditionalShapes	ProtocolIE-ID ::= 3
id-SSDT-CellIDforEDSCHPC	ProtocolIE-ID ::= 35
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
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-ISCP	ProtocolIE-ID ::= 37
id-CCTrCH-InformationItem-RL-FailureInd	ProtocolIE-ID ::= 15
id-CCTrCH-InformationItem-RL-RestoreInd	ProtocolIE-ID ::= 16
id-CommonMeasurementAccuracy	ProtocolIE-ID ::= 280
id-CommonMeasurementObjectType-CM-Rprt	ProtocolIE-ID ::= 281
id-CommonMeasurementObjectType-CM-Rqst	ProtocolIE-ID ::= 282
id-CommonMeasurementObjectType-CM-Rsp	ProtocolIE-ID ::= 283
id-CommonMeasurementType	ProtocolIE-ID ::= 284
id-SFN	ProtocolIE-ID ::= 285
id-SFNReportingIndicator	ProtocolIE-ID ::= 286
id-SFNReportingIndicator	ProtocolIE-ID ::= 286
id-InformationExchangeID	ProtocolIE-ID ::= 287
id-InformationExchangeObjectType-InfEx-Rprt	ProtocolIE-ID ::= 288
id-InformationExchangeObjectType-InfEx-Rqst	ProtocolIE-ID ::= 289
id-InformationExchangeObjectType-InfEx-Rsp	ProtocolIE-ID ::= 290
id-InformationReportCharacteristics	ProtocolIE-ID ::= 291
id-InformationType	ProtocolIE-ID ::= 292
id-neighbouring-LCR-TDD-CellInformation	protocolIE-ID ::= 58
id-DL-Timeslot-ISCP-LCR-Information-RL-SetupRqstTDD	ProtocolIE-ID ::= 65
id-RL-LCR-InformationResponse-RL-SetupRspTDD	ProtocolIE-ID ::= 66
id-UL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD	ProtocolIE-ID ::= 75
id-UL-DPCH-LCR-InformationItem-RL-SetupRspTDD	ProtocolIE-ID ::= 76
id-DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD	ProtocolIE-ID ::= 77
id-DL-DPCH-LCR-InformationItem-RL-SetupRspTDD	ProtocolIE-ID ::= 78
id-DSCH-LCR-InformationListIEs-RL-SetupRspTDD	ProtocolIE-ID ::= 79
id-USCH-LCR-InformationListIEs-RL-SetupRspTDD	ProtocolIE-ID ::= 80
id-DL-Timeslot-ISCP-LCR-Information-RL-AdditionRqstTDD	ProtocolIE-ID ::= 81
id-RL-LCR-InformationResponse-RL-AdditionRspTDD	ProtocolIE-ID ::= 86
id-UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 87
id-UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD	ProtocolIE-ID ::= 88
id-DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 89
id-DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD	ProtocolIE-ID ::= 94
id-DSCH-LCR-InformationListIEs-RL-AdditionRspTDD	ProtocolIE-ID ::= 96
id-USCH-LCR-InformationListIEs-RL-AdditionRspTDD	ProtocolIE-ID ::= 97
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 98
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 99
id-UL-TimeslotLCR-InformationList-RL-ReconfReadyTDD	ProtocolIE-ID ::= 100
id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 101
id-DL-TimeslotLCR-InformationList-RL-ReconfReadyTDD	ProtocolIE-ID ::= 104
id-UL-TimeslotLCR-InformationList-PhyChReconfRqstTDD	ProtocolIE-ID ::= 105
id-DL-TimeslotLCR-InformationList-PhyChReconfRqstTDD	ProtocolIE-ID ::= 106
id-timeSlot-ISCP-LCR-List-DL-PC-Rqst-TDD	ProtocolIE-ID ::= 138
id-TSTD-Support-Indicator-RL-SetupRqstTDD	ProtocolIE-ID ::= 139
id-RestrictionStateIndicator	ProtocolIE-ID ::= 142

END

CHANGE REQUEST

⌘ **25.423 CR 404** ⌘ rev ⌘ Current version: **3.5.0** ⌘

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

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

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

Reason for change:	⌘	The criticality information of DL Code Information in RL Setup Failure FDD message is not aligned between tabular format and ASN.1.	
Summary of change:	⌘	The criticality information of DL Code Information was deleted from tabular format.	
Consequences if not approved:	⌘	The misalignment of the criticality information between tabular format and ASN.1 still remains. Backward compatibility: This CR is backward compatible because ASN.1 is not changed.	

Clauses affected:	⌘	9.1.5.1	
Other specs affected:	⌘	<input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘ CR405, 25.423 version 4.0.0
Other comments:	⌘		

How to create CRs using this form:

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

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

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
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
CHOICE Cause Level	M				YES	ignore
>General					–	
>>Cause	M		9.2.1.5		–	
>RL Specific					–	
>>Unsuccessful RL Information Response		1...<maxn oofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.49		–	
>>>Cause	M		9.2.1.5		–	
>>Successful RL Information Response		0..<maxno ofRLs-1>			EACH	ignore
>>>RL ID	M		9.2.1.49		–	
>>>RL Set ID	M		9.2.2.35		–	
>>>URA Information	O		9.2.1.70B		–	
>>>SAI	M		9.2.1.52		–	
>>>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 9.2.2.14A		–YES	Ignore
>>>Diversity Indication	M		9.2.1.21		–	
>>>CHOICE Diversity Indication	M				–	
>>>>Combining					–	
>>>>>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		–	
>>>>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 Adjustment Mode	O		9.2.2.3A		–	
>>>>Maximum Allowed UL Tx Power	M		9.2.1.35		–	
>>>>Maximum DL TX	M		DL Power		–	

>>>Neighbouring UMTS Cell Information	O		9.2.1.41A		-	
>>>Neighbouring GSM Cell Information	O		9.2.1.41C		YES	ignore
Uplink SIR Target	O		Uplink SIR 9.2.1.69		YES	ignore
Criticality Diagnostics	O		9.2.1.13		YES	ignore

CHANGE REQUEST

⌘ **25.423 CR 405** ⌘ rev ⌘ Current version: **4.0.0** ⌘

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

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

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

Reason for change:	⌘	The criticality information of DL Code Information in RL Setup Failure FDD message is not aligned between tabular format and ASN.1.		
Summary of change:	⌘	The criticality information of DL Code Information was deleted from tabular format.		
Consequences if not approved:	⌘	The misalignment of the criticality information between tabular format and ASN.1 still remains. Backward compatibility: This CR is backward compatible because ASN.1 is not changed.		

Clauses affected:	⌘	9.1.5.1		
Other specs affected:	⌘	<input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	CR404, 25.423 version 3.5.0
Other comments:	⌘			

How to create CRs using this form:

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

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

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
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
CHOICE Cause Level	M				YES	ignore
>General					–	
>>Cause	M		9.2.1.5		–	
>RL Specific					–	
>>Unsuccessful RL Information Response		1...<maxn oofRLs>			EACH	ignore
>>>RL ID	M		9.2.1.49		–	
>>>Cause	M		9.2.1.5		–	
>>Successful RL Information Response		0..<maxno ofRLs-1>			EACH	ignore
>>>RL ID	M		9.2.1.49		–	
>>>RL Set ID	M		9.2.2.35		–	
>>>URA Information	O		9.2.1.70B		–	
>>>SAI	M		9.2.1.52		–	
>>>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 9.2.2.14A		YES	ignore
>>>Diversity Indication	M		9.2.1.21		–	
>>>CHOICE Diversity Indication	M				–	
>>>>Combining					–	
>>>>>RL ID	M		9.2.1.49	Reference RL ID for the combining	–	
>>>>>DCH Information Response	O		9.2.1.16A		YES	ignore
>>>>>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 9.2.1.69		–	
>>>>Minimum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>>>>Closed Loop Timing Adjustment Mode	O		9.2.2.3A		–	
>>>>Maximum Allowed	M		9.2.1.35		–	

			Response 9.2.2.13B			
>>>Neighbouring UMTS Cell Information	O		9.2.1.41A		-	
>>>Neighbouring GSM Cell Information	O		9.2.1.41C		-	
>>>Cell GA Additional Shapes	O		9.2.1.5B		YES	ignore
Uplink SIR Target	O		Uplink SIR 9.2.1.69		YES	ignore
Criticality Diagnostics	O		9.2.1.13		YES	ignore

CHANGE REQUEST

⌘ **25.423 CR 406** ⌘ rev ⌘ Current version: **3.5.0** ⌘

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

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

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

Reason for change:	⌘ In TS25.331 (RRC) v3.6.0, the range of TGPRC was changed to (0 .. 511). But in TS25.423 (RNSAP) v3.5.0, the range of TGPRC is (0 .. 63). It is necessary to align the range.
Summary of change:	⌘ The range of TGPRC is change to (0 .. 511).
Consequences if not approved:	⌘ The misalignment between RNSAP and RRC still remains. Backward compatibility: This CR is not backward compatible.

Clauses affected:	⌘ 9.2.2.A and 9.3.4.		
Other specs affected:	<input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	CR407, 25.423 version 4.0.0 CR461, 25.433 version 3.5.0 CR462, 25.433 version 4.0.0
Other comments:	⌘		

How to create CRs using this form:

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

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

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

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CM Configuration Change CFN	M		CFN 9.2.1.9	Defines when the old Active pattern sequences, if active, shall be terminated. From this moment on, the new sequences are activated at the given TGCFN .
Transmission Gap Pattern Sequence Status		0 to <MaxTGPS>		If the group is not present, none of the pattern sequences are activated.
>TGPSI Identifier	M		INTEGER(1.. <MaxTGPS >)	Establish a reference to the compressed mode pattern sequence. Up to <MaxAPS> simultaneous compressed mode pattern sequences can be activated.
>TGPRC	M		INTEGER(0.. 51163)	The number of transmission gap patterns within the Transmission Gap Pattern Sequence. 0=Infinity.
>TGCFN	M		CFN 9.2.1.9	Connection Frame Number of the first frame of the first pattern within the Transmission Gap Pattern Sequence.

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

-- Partly omitted --

9.3.4 Information Elements Definitions

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

-- Partly omitted --

```
TGD ::= INTEGER (0|15..269)
-- 0 = Undefined, only one transmission gap in the transmission gap pattern sequence

TGPRC ::= INTEGER (0..51163)
-- 0 = infinity

TGPSID ::= INTEGER (1.. maxTGPS)

TGSN ::= INTEGER (0..14)
```

CHANGE REQUEST

⌘ **25.423 CR 407** ⌘ rev ⌘ Current version: **4.0.0** ⌘

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

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

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

Reason for change:	⌘ In TS25.331 (RRC) v4.0.0, the range of TGPRC was changed to (0 .. 511). But in TS25.423 (RNSAP) v4.0.0, the range of TGPRC is (0 .. 63). It is necessary to align the range.
Summary of change:	⌘ The range of TGPRC is change to (0 .. 511).
Consequences if not approved:	⌘ The misalignment between RNSAP and RRC still remains. Backward compatibility: This CR is not backward compatible.

Clauses affected:	⌘ 9.2.2.A and 9.3.4.		
Other specs affected:	<input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	CR406, 25.423 version 3.5.0 CR461, 25.433 version 3.5.0 CR462, 25.433 version 4.0.0
Other comments:	⌘		

How to create CRs using this form:

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

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

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

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CM Configuration Change CFN	M		CFN 9.2.1.9	Defines when the old Active pattern sequences, if active, shall be terminated. From this moment on, the new sequences are activated at the given TGCFN .
Transmission Gap Pattern Sequence Status		0 to <MaxTGPS>		If the group is not present, none of the pattern sequences are activated.
>TGPSI Identifier	M		INTEGER(1.. <MaxTGPS >)	Establish a reference to the compressed mode pattern sequence. Up to <MaxAPS> simultaneous compressed mode pattern sequences can be activated.
>TGPRC	M		INTEGER(0.. 51163)	The number of transmission gap patterns within the Transmission Gap Pattern Sequence. 0=Infinity.
>TGCFN	M		CFN 9.2.1.9	Connection Frame Number of the first frame of the first pattern within the Transmission Gap Pattern Sequence.

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

-- Partly omitted --

9.3.4 Information Elements Definitions

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

-- Partly omitted --

```
TGD ::= INTEGER (0|15..269)
-- 0 = Undefined, only one transmission gap in the transmission gap pattern sequence

TGPRC ::= INTEGER (0..51163)
-- 0 = infinity

TGPSID ::= INTEGER (1.. maxTGPS)

TGSN ::= INTEGER (0..14)
```

CHANGE REQUEST

⌘ **25.423 CR 408** ⌘ rev **1** ⌘ Current version: **3.5.0** ⌘

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

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

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

Reason for change:	⌘ In the current RNSAP specification it is impossible to derive for which UE/UE Context a certain ERROR INDICATION message was received for procedures related to a specific UE/UE Context and that uses connectionless mode of the signalling bearer (SCCP). The reasons are that a) there is no UE/UE Context identifier (S-RNTI or D-RNTI) included in the message and b) the Transaction ID is only unique per UE/UE Context. Note! For connection-oriented messages this is not a problem since the SCCP connection identifies the UE/UE Context.
Summary of change:	⌘ The S-RNTI IE and D-RNTI IE have been included in the ERROR INDICATION message as optional IEs. The IEs shall be included, if available. S-RNTI in the SRNC direction and D-RNTI in the DRNC direction. R1: linking was corrected, the new IEs were placed in the extension container and the source was corrected.
Consequences if not approved:	⌘ The ERROR INDICATION message will not indicate for witch UE/UE Context a certain error occurred. The receiving node can thus not use the information to adapt its behaviour for a certain UE/UE Context. Consequently, the general Error Handling in RNSAP will be quite poor for procedures related to a specific UE/UE Context and that uses connectionless mode of the signalling bearer (SCCP). <u>Backward Compatibility:</u> This CR is backward compatible with the previous version of RNSAP.

Clauses affected:	⌘ 8.5.1.2, 9.1.39, and 9.3.3.	
Other specs affected:	⌘ <input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘ TS 25.423 CR409 (Rel. 4)

Other comments: ☹

How to create CRs using this form:

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

8.5.1 Error Indication

8.5.1.1 General

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

This procedure shall use the signalling bearer mode specified below.

8.5.1.2 Successful Operation

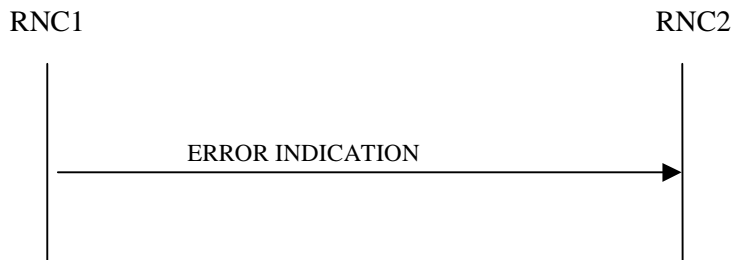


Figure 30: Error Indication procedure, Successful Operation

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

When the ERROR INDICATION message is sent from a DRNC to an SRNC using connectionless mode of the signalling bearer, the S-RNTI IE shall be included in the message if available. When the ERROR INDICATION message is sent from an SRNC to a DRNC using connectionless mode of the signalling bearer, the D-RNTI IE shall be included in the message if available.

When a message using connectionless mode of the signalling bearer is received for a specified UE Context in a DRNC with an invalid D-RNTI IE, the DRNC shall include the D-RNTI from the received message in the D-RNTI IE in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

When a message using connectionless mode of the signalling bearer is received for a specified UE in an SRNC with an invalid S-RNTI IE, the SRNC shall include the S-RNTI from the received message in the S-RNTI IE in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

Typical cause values for the ERROR INDICATION message are:

Protocol Causes:

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

8.5.1.3 Abnormal Conditions

-

9.1.39 ERROR INDICATION

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

Condition	Explanation
C_ifalone	At least the <i>Cause</i> IE or the <i>Criticality Diagnostics</i> IE shall be present.

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

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

-- *****
--
-- ERROR INDICATION
--
-- *****

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

ErrorIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause                CRITICALITY ignore TYPE Cause                PRESENCE conditional
    -- At least either of Cause IE or Criticality IE shall be present --
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE conditional
    -- At least either of Cause IE or Criticality IE shall be present --
    },
    ...
}

ErrorIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-S-RNTI                CRITICALITY ignore EXTENSION S-RNTI                PRESENCE optional } |
    { ID id-D-RNTI                CRITICALITY ignore EXTENSION D-RNTI                PRESENCE optional }
    ...
}

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

CHANGE REQUEST

⌘ **25.423 CR 409** ⌘ rev **1** ⌘ Current version: **4.0.0** ⌘

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

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

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

Reason for change:	⌘ In the current RNSAP specification it is impossible to derive for which UE/UE Context a certain ERROR INDICATION message was received for procedures related to a specific UE/UE Context and that uses connectionless mode of the signalling bearer (SCCP). The reasons are that a) there is no UE/UE Context identifier (S-RNTI or D-RNTI) included in the message and b) the Transaction ID is only unique per UE/UE Context. Note! For connection-oriented messages this is not a problem since the SCCP connection identifies the UE/UE Context.
Summary of change:	⌘ The S-RNTI IE and D-RNTI IE have been included in the ERROR INDICATION message as optional IEs. The IEs shall be included, if available. S-RNTI in the SRNC direction and D-RNTI in the DRNC direction. R1: linking was corrected, the new IEs were placed in the extension container and the source was corrected.
Consequences if not approved:	⌘ The ERROR INDICATION message will not indicate for witch UE/UE Context a certain error occurred. The receiving node can thus not use the information to adapt its behaviour for a certain UE/UE Context. Consequently, the general Error Handling in RNSAP will be quite poor for procedures related to a specific UE/UE Context and that uses connectionless mode of the signalling bearer (SCCP). <u>Backward Compatibility:</u> This CR is backward compatible with the previous version of RNSAP.

Clauses affected:	⌘ 8.5.1.2, 9.1.39, and 9.3.3.		
Other specs affected:	⌘ <input checked="" type="checkbox"/> Other core specifications	⌘ TS 25.423 CR408 (Rel. 99)	
	<input type="checkbox"/> Test specifications		

O&M Specifications

Other comments: ☞

How to create CRs using this form:

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

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

8.5.1 Error Indication

8.5.1.1 General

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

This procedure shall use the signalling bearer mode specified below.

8.5.1.2 Successful Operation

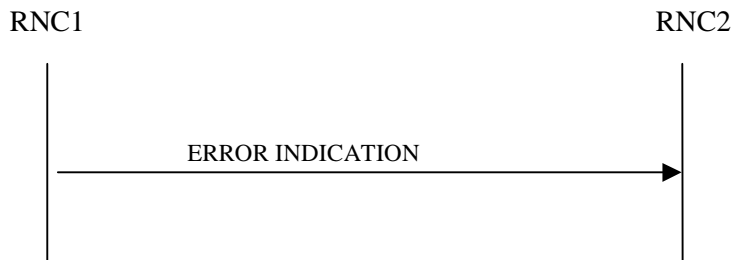


Figure 30: Error Indication procedure, Successful Operation

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

When the ERROR INDICATION message is sent from a DRNC to an SRNC using connectionless mode of the signalling bearer, the S-RNTI IE shall be included in the message if available. When the ERROR INDICATION message is sent from an SRNC to a DRNC using connectionless mode of the signalling bearer, the D-RNTI IE shall be included in the message if available.

When a message using connectionless mode of the signalling bearer is received for a specified UE Context in a DRNC with an invalid D-RNTI IE, the DRNC shall include the D-RNTI from the received message in the D-RNTI IE in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

When a message using connectionless mode of the signalling bearer is received for a specified UE in an SRNC with an invalid S-RNTI IE, the SRNC shall include the S-RNTI from the received message in the S-RNTI IE in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

Typical cause values for the ERROR INDICATION message are:

Protocol Causes:

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

8.5.1.3 Abnormal Conditions

-

9.1.39 ERROR INDICATION

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

Condition	Explanation
C_ifalone	At least the <i>Cause</i> IE or the <i>Criticality Diagnostics</i> IE shall be present.

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

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

-- *****
--
-- ERROR INDICATION
--
-- *****

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

ErrorIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause                CRITICALITY ignore TYPE Cause                PRESENCE conditional } |
    -- At least either of Cause IE or Criticality IE shall be present --
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE conditional } |
    -- At least either of Cause IE or Criticality IE shall be present --
    ...
}

ErrorIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-S-RNTI                CRITICALITY ignore EXTENSION S-RNTI                PRESENCE optional } |
    { ID id-D-RNTI                CRITICALITY ignore EXTENSION D-RNTI                PRESENCE optional }
    ...
}
```

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

CHANGE REQUEST

⌘ **25.423** **CR** **410** ⌘ rev **-** ⌘ Current version: **3.5.0** ⌘

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

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

Title:	⌘ Reference to superseded versions of ASN.1 documents		
Source:	⌘ R-WG3		
Work item code:	⌘ TEI	Date:	⌘ 2001-05-23
Category:	⌘ F	Release:	⌘ R99
	Use <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ The 1994 version of X.680 is referred to in 25.423. This version has, however, been superseded by the 1997 version. It is thus proposed to refer to the 1997 version instead.
Summary of change:	⌘ Version of ASN.1 specifications changed to 1997 version. 25.921 is also updated to state that even though version 1997 is referenced, the specifications will only make use of version 1994 functionality.
Consequences if not approved:	⌘ References are made to not maintained specification versions. The proposed changes are backward compatible.

Clauses affected:	⌘ 2	
Other specs affected:	⌘ <input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘ CR411 (25.423 V4.0.0), CRxxx (25.921 V3.3.0)
Other comments:	⌘	

How to create CRs using this form:

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

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

2 References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TS 23.003: "Numbering, addressing and identification".
- [2] 3GPP TS 25.413: "UTRAN Iu Interface RANAP Signalling".
- [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 (12/9497): "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 (V3.5): "Requirements for support of Radio Resource management (TDD)".
- [25] 3GPP TS 23.032: "Universal Graphical Area Description (GAD)".
- [26] 3GPP TS 25.302: "Services Provided by the Physical Layer".
- [27] 3GPP TS 25.213: "Spreading and modulation (FDD)".
- [28] 3GPP TR 25.921: "Guidelines and Principles for Protocol Description and Error Handling".
- [29] GSM TS 05.05: "Digital cellular telecommunications system (Phase 2+); Radio transmission and reception".

3GPP TSG-RAN WG3 Meeting #21
Busan, Korea, May 21st – 25th, 2001

R3-011738

CR-Form-v3
CHANGE REQUEST
⌘ 25.423 CR 411 ⌘ rev - ⌘ Current version: 4.0.0 ⌘

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

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

Title:	⌘ Reference to superseded versions of ASN.1 documents	Date:	⌘ 2001-05-23
Source:	⌘ R-WG3		
Work item code:	⌘ TEI	Release:	⌘ REL-4
Category:	⌘ A		
Use <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)	

Reason for change:	⌘ The 1994 version of X.680 is referred to in 25.423. This version has, however, been superseded by the 1997 version. It is thus proposed to refer to the 1997 version instead.
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Consequences if not approved:	⌘ References are made to not maintained specification versions. The proposed changes are backwards compatible.

Clauses affected:	⌘ 2	
Other specs affected:	<input checked="" type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘ CR410 (25.423 V3.5.0), CRxxx (25.921 V4.0.0)
Other comments:	⌘	

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- [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".
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- [10] 3GPP TS 25.214: "Physical Layer Procedures (FDD)".
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- [16] 3GPP TS 25.331: "RRC Protocol Specification".
- [17] 3GPP TS 25.402: "Synchronisation in UTRAN, Stage 2".
- [18] ITU-T Recommendation X.680 (12/9497): "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)".
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- [23] 3GPP TS 25.133 (V3.3): "Requirements for support of Radio Resource management (FDD)".
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- [29] GSM TS 05.05: "Digital cellular telecommunications system (Phase 2+); Radio transmission and reception".
- [30] ICD-GPS-200: "Navstar GPS Space Segment/Navigation User Interface".
- [31] RTCM-SC104: "RTCM Recommended Standards for Differential GNSS Service (v.2.2)".

3GPP TSG-RAN3 Meeting #21
Busan, Korea, 21-25 May 2001

Tdoc R3-011880

CR-Form-v3

CHANGE REQUEST

⌘ **25.423 CR 413** ⌘ rev **2** ⌘ Current version: **3.5.0** ⌘

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

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

Title:	⌘ Alignment of Conditional Presence with RAN3 Specification Principles		
Source:	⌘ R-WG3		
Work item code:	⌘ TEI	Date:	⌘ 24/05/01
Category:	⌘ F	Release:	⌘ R99
Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:	
F (essential correction)		2 (GSM Phase 2)	
A (corresponds to a correction in an earlier release)		R96 (Release 1996)	
B (Addition of feature),		R97 (Release 1997)	
C (Functional modification of feature)		R98 (Release 1998)	
D (Editorial modification)		R99 (Release 1999)	
Detailed explanations of the above categories can be found in 3GPP TR 21.900.		REL-4 (Release 4)	
		REL-5 (Release 5)	

Reason for change:	⌘ Many of the existing conditions are not aligned with the RAN3 rules on conditional presence, or require editorial correction.
Summary of change:	⌘ R2: Minor editorial corrections highlighted in yellow. R1: Minor corrections highlighted in green. Many conditions are reworded to use a standard wording; Some conditional elements are replaced with optional presence + procedure text Some lists of conditional elements are replaced with choices in the tabular format The change is backwards compatible, except that a different cause value may be used in a small number of error cases.
Consequences if not approved:	⌘ The error handling will be unnecessarily complex and will not be able to handle conditional elements in a consistent manner.

Clauses affected:	⌘ 8.3.1.4, 8.5.1.2, 9.1.2.1, 9.1.3.1, 9.1.4.1, 9.1.4.2, 9.1.11.1, 9.1.11.2, 9.1.2.0, 9.1.39, 9.2.1.19, 9.2.1.38, 9.2.1.39, 9.2.1.41D, 9.2.1.48, 9.2.1.63, 9.2.1.64, 9.2.2.37B, 9.2.3.2A, 9.2.3.4, 9.3.4.	
Other specs affected:	⌘ <input checked="" type="checkbox"/> Other core specifications	⌘ TS 25.423 v4.0.0 CR 414 TS 25.433 v4.0.0 CR 467 TS 25.433 v3.5.0 CR 466
	<input type="checkbox"/> Test specifications	
	<input type="checkbox"/> O&M Specifications	
Other comments:	⌘ When the changes to the tabular format result in empty rows, it is intended that the blank rows shall be deleted. When the change results in an empty table, the blank table shall be deleted.	

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8.3 DCH procedures

8.3.1 Radio Link Setup

8.3.1.1 General

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

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

8.3.1.2 Successful Operation

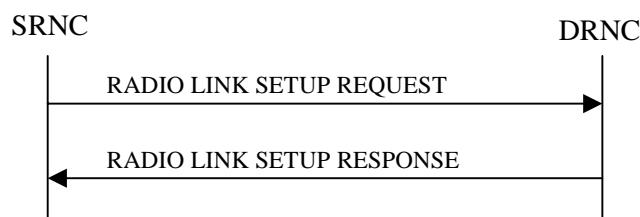


Figure 5: Radio Link Setup procedure: Successful Operation

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

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. The *First RLS Indicator* IE shall be used by the DRNS to determine the initial TPC pattern in the DL of the concerning RL and all RLs which are part of the same RLS, as described in [10], section 5.1.2.2.1.2.

[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 UL synchronisation on the Uu interface.]

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 both the *Initial DL TX Power* IE and *Uplink SIR Target* IE are included in the message, the DRNS shall use the indicated DL TX Power and Uplink SIR Target as initial value. If the value of the *Initial DL TX Power* IE is outside the configured DL TX power range, the DRNS shall apply these constraints 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 on the Uu interface for the concerning RLS or a DL POWER CONTROL REQUEST message is received. No inner loop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10] subclause 5.2.1.2) 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 on the Uu interface for the concerning RL. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22] subclause 4.2.3.3).]

[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 between different frames of the data frames of the DCHs in the downlink on the radio interface in congestion situations once the new RL(s) have been activated.

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

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

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

[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 Transmission Gap Pattern Sequences: for each sequence the *TGCFN* refers to latest passed CFN with that value.]

[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 established.

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

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

[FDD – 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 co-ordinated 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 controlling 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.

[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.]

[TDD – If the *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message the DRNC shall include the *UARFCN* IE, the *Cell Parameter ID* IE, the *Sync Case* IE, the *SCH Time Slot* IE, the *Block STTD Indicator* IE, and the *PCCPCH 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 DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message the *Secondary CCPCH Info* IE 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, the DRNC shall not provide these IEs in the RADIO LINK SETUP RESPONSE message.]

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

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 on the Uu interface and start reception on the new RL. [FDD - The DRNS shall start DL transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [4].] [TDD – The DRNS shall start transmission on the new RL immediately as specified in ref. [4].]

[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 Indicator* IE].

[FDD- If the *Downlink Compressed Mode Method* IE in one or more Transmission Gap Pattern Sequence is set to 'SF/2' in the RADIO LINK SETUP REQUEST message, the 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 Uu 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 established in a cell where at least one URA Identity is being broadcast, the DRNC shall include a URA Identity for this cell in the *URA ID* IE, the *Multiple URAs Indicator* IE indicating whether or not multiple URA Identities are being broadcast in the cell, 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

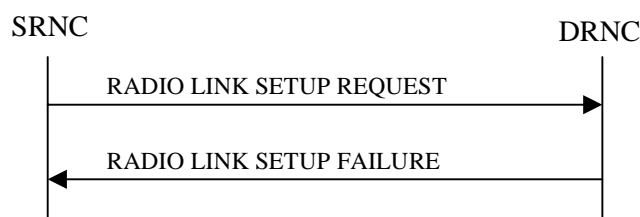


Figure 6: Radio Link Setup procedure: Unsuccessful Operation

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

[FDD - If only the *Initial DL TX Power* IE or the *Uplink SIR Target* IE is included in the RADIO LINK SETUP REQUEST message, then DRNC shall regard the Radio Link Setup procedure as failed and shall respond with the 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;
- Number of UL codes not supported;
- Dedicated Transport Channel Type not Supported;
- DL Shared Channel Type not Supported;
- [TDD - UL Shared Channel Type not Supported];
- [FDD - UL Spreading Factor not Supported];
- [FDD - DL Spreading Factor not Supported];
- CM not Supported.

Transport Layer Causes:

- Transport Resource Unavailable.

Miscellaneous Causes:

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

8.3.1.4 Abnormal Conditions

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

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

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

8.5 Global Procedures

8.5.1 Error Indication

8.5.1.1 General

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

This procedure shall use the signalling bearer mode specified below.

8.5.1.2 Successful Operation

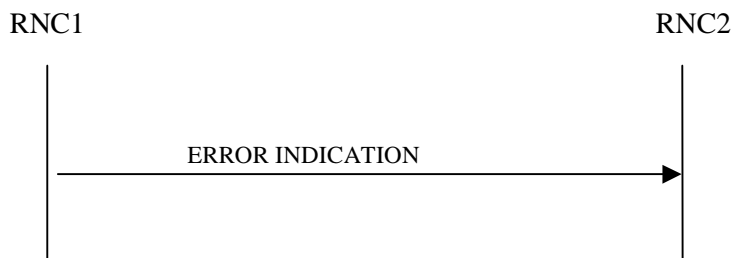


Figure 30: Error Indication procedure, Successful Operation

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

The ERROR INDICATION message shall include either the *Cause IE*, or the *Criticality Diagnostics IE*, or both the *Cause IE* and the *Criticality Diagnostics IE*.

Typical cause values for the ERROR INDICATION message are:

Protocol Causes:

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

8.5.1.3 Abnormal Conditions

-

9 Elements for RNSAP Communication

9.1 Message Functional Definition and Content

9.1.1 General

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

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

9.1.2 Message Contents

9.1.2.1 Presence

An information element can be of the following *types*:

M	IEs marked as Mandatory (M) shall always be included in the message. The information element is mandatory, i.e. always present in the message.
O	IEs marked as Optional (O) may or may not be included in the message. The information element is optional, i.e. may or may not be present in the message independently on the presence or value of other information elements in the same message.
C#	IEs marked as Conditional (C) shall be included in a message only if the condition is satisfied. Otherwise the IE shall not be included. The presence of the information element is conditional to the presence or to the value of another information element, as reported in the table below the message containing the explanation of the condition.

In case of an information element group, the group is preceded by a name for the info group (in bold). It is also indicated how many times a group may be repeated in the message and whether the group is conditional. Each group may be also repeated within one message. The presence field of the information elements inside one group defines if the information element is mandatory, optional or conditional if the group is present.

9.1.2.2 Criticality

Each information element or Group of information elements may have criticality information applied to it. Following cases are possible:

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

9.1.2.3 Range

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

9.1.2.4 Assigned Criticality

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

9.1.3 RADIO LINK SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
SRNC-Id	M		RNC-Id 9.2.1.50		YES	reject
S-RNTI	M		9.2.1.53		YES	reject
D-RNTI	O		9.2.1.24		YES	reject
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL DPCH Information		1			YES	reject
>UL Scrambling Code	M		9.2.2.53		–	
>Min UL Channelisation Code Length	M		9.2.2.25		–	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.24		–	
>Puncture Limit	M		9.2.1.46	For the UL.	–	
>TFCS	M		TFCS for the UL 9.2.1.63		–	
>UL DPCH Slot Format	M		9.2.2.52		–	
>Uplink SIR Target	O		Uplink SIR 9.2.1.69		–	
>Diversity mode	M		9.2.2.8		–	
>SSDT Cell Identity Length	O		9.2.2.41		–	
>S Field Length	O		9.2.2.36		–	
DL DPCH Information		1			YES	reject
>TFCS	M		TFCS for the DL. 9.2.1.63		–	
>DL DPCH Slot Format	M		9.2.2.9		–	
>Number of DL Channelisation Codes	M		9.2.2.26A		–	
>TFCI Signalling Mode	M		9.2.2.46		–	
>TFCI Presence	C- SlotFormat		9.2.1.55		–	
>Multiplexing Position	M		9.2.2.26		–	
>Power Offset Information		1			–	
>>PO1	M		Power Offset 9.2.2.30	Power offset for the TFCI bits.	–	
>>PO2	M		Power Offset 9.2.2.30	Power offset for the TPC bits.	–	
>>PO3	M		Power Offset 9.2.2.30	Power offset for the pilot bits.	–	
>FDD TPC Downlink Step Size	M		9.2.2.16		–	
>Limited Power Increase	M		9.2.2.21A		–	
>Inner Loop DL PC Status	M		9.2.2.21a		–	
DCH Information	M		DCH FDD Information 9.2.2.4A		YES	reject
DSCH Information	O		DSCH FDD Information 9.2.2.13A		YES	reject
RL Information		1...<maxn oofRLs>			EACH	notify
>RL ID	M		9.2.1.49		–	

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
>C-Id	M		9.2.1.6		–	
>First RLS Indicator	M		9.2.2.16A		-	
>Frame Offset	M		9.2.1.30		–	
>Chip Offset	M		9.2.2.1		–	
>Propagation Delay	O		9.2.2.33		–	
>Diversity Control Field	C – NotFirstRL		9.2.1.20		–	
>Initial DL TX Power	C _ifAlone O		DL Power 9.2.2.10		–	
>Primary CPICH Ec/No	C _ifAlone O		9.2.2.32		–	
>SSDT Cell Identity	O		9.2.2.40		–	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.48		–	
Transmission Gap Pattern Sequence Information	C – CM ActiveO		9.2.2.47A		YES	reject
Active Pattern Sequence Information	O		9.2.2.A		YES	reject

Condition	Explanation
CodeLen	This <u>The</u> IE shall be present <u>only</u> if <u>Min UL Channelisation Code #Length</u> IE equals to 4.
SlotFormat	This <u>The</u> IE shall <u>only</u> be present if the <u>DL DPCH Slot Format</u> IE is equal to any of the values <u>from</u> 12 to 16.
NotFirstRL	This <u>The</u> IE shall be present <u>only</u> if the RL is not the first one in the <u>RL Information</u> IE.
Diversity mode	This <u>The</u> IE shall be present <u>unless if</u> <u>Diversity Mode</u> IE <u>is present</u> in <u>UL DPCH Information</u> IE <u>and</u> <u>is not equal to "none"</u> .
C _ifAlone	Either <u>Initial DL TX Power</u> IE or <u>Primary CPICH Ec/No</u> IE shall be present.
CM _Active	This IE shall be present when the <u>Active Pattern Sequence Information</u> IE is present, otherwise this IE is optional.

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

9.1.4 RADIO LINK SETUP RESPONSE

9.1.4.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
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		1..<maxno ofRLs>			EACH	ignore
>RL ID	M		9.2.1.49		–	
>RL Set ID	M		9.2.2.35		–	
>URA Information	O		9.2.1.70B		–	
>SAI	M		9.2.1.52		–	
>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 9.2.2.14A		–	
>Diversity Indication	C-NotFirstRL		9.2.1.21		–	
>CHOICE <i>Diversity Indication</i>	M				–	
>> <i>Combining</i>					–	
>>>RL ID	M		9.2.1.49	Reference RL ID for the combining	–	
>> <i>Non Combining or First RL</i>					–	
>>>DCH Information Response	M		9.2.1.16A		–	
>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 Adjustment Mode	O		9.2.2.3A		–	
>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	Corresponds to Nu in ref. [6]	–	
>DL UARFCN	O		UARFCN 9.2.1.66	Corresponds to Nd in ref. [6]	–	
>Primary CPICH Power	O		9.2.1.44		–	
>DSCH Information Response	O		DSCH FDD Information Response		YES	ignore

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
			9.2.2.13B			
>Neighbouring UMTS Cell Information	O		9.2.1.41A		–	
>Neighbouring GSM Cell Information	O		9.2.1.41C		YES	ignore
>PC Preamble	M		9.2.2.27a		–	
>SRB Delay	M		9.2.2.39A		–	
Uplink SIR Target	O		Uplink SIR 9.2.1.69		YES	ignore
Criticality Diagnostics	O		9.2.1.13		YES	ignore

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

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

9.1.4.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
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		1			YES	ignore
>RL ID	M		9.2.1.49		–	
>URA Information	O		9.2.1.70B		–	
>SAI	M		9.2.1.52		–	
>Cell GAI	O		9.2.1.5A		–	
>UTRAN Access Point Position	O		9.2.1.70A		–	
>UL Time Slot ISCP Info	M		9.2.3.13D		–	
>Maximum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>Minimum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>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		–	
>UARFCN	O		UARFCN 9.2.1.66	Corresponds to Nt in ref. [7]	–	
>Cell Parameter ID	O		9.2.1.8		–	
>Sync Case	O		9.2.1.54		–	
>SCH Time Slot	C-Case2		9.2.1.51		–	
>Block STTD Indicator	O		9.2.3.A		–	
>PCCPCH Power	O		9.2.1.43		–	
>Timing Advance Applied	M		9.2.3.12A		–	
>Alpha Value	M		9.2.3.a		–	
>UL PhysCH SF Variation	M		9.2.3.13B		–	
>Synchronisation Configuration	M		9.2.3.7E		–	
>Secondary CCPCH Info TDD	O		9.2.3.7B		–	
>UL CCTrCH Information		0..<maxno of CCTrCHs>		For DCH	GLOBAL	ignore
>>CCTrCH ID	M		9.2.3.2		–	
>>UL DPCH Information		0..1			YES	ignore
>>>Repetition Period	M		9.2.3.7		–	
>>>Repetition Length	M		9.2.3.6		–	
>>>TDD DPCH Offset	M		9.2.3.8A		–	
>>>UL Timeslot Information	M		9.2.3.13C		–	
>DL CCTrCH Information		0..<maxno of CCTrCHs>		For DCH	GLOBAL	ignore
>>CCTrCH ID	M		9.2.3.2		–	
>>DL DPCH Information		0..1			YES	ignore
>>>Repetition Period	M		9.2.3.7		–	
>>>Repetition Length	M		9.2.3.6		–	
>>>TDD DPCH Offset	M		9.2.3.8A		–	
>>>DL Timeslot Information	M		9.2.3.2C		–	
>DCH Information Response	O		9.2.1.16A		YES	ignore
>DSCH Information		0..			GLOBAL	ignore

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Response		<Maxnoof DSCHs>				
>>DSCH ID	M		9.2.1.26A		–	
>>DSCH Flow Control Information	M		9.2.1.26B		–	
>>Binding ID	O		9.2.1.3		–	
>>Transport Layer Address	O		9.2.1.62		–	
>>Transport Format Management	M		9.2.3.13		–	
>USCH Information Response		0 .. <Maxnoof USCHs>			GLOBAL	ignore
>>USCH ID	M		9.2.3.14		–	
>>Binding ID	O		9.2.1.3		–	
>>Transport Layer Address	O		9.2.1.62		–	
>>Transport Format Management	M		9.2.3.13		–	
>Neighbouring UMTS Cell Information	O		9.2.1.41A		–	
>Neighbouring GSM Cell Information	O		9.2.1.41C		YES	ignore
Uplink SIR Target	M		Uplink SIR 9.2.1.69		YES	ignore
Criticality Diagnostics	O		9.2.1.13		YES	ignore

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

Range bound	Explanation
MaxnoofDSCHs	Maximum number of DSCHs for one UE.
MaxnoofUSCHs	Maximum number of USCHs for one UE.
MaxnoofCCTrCHs	Maximum number of CCTrCH for one UE.

9.1.11 RADIO LINK RECONFIGURATION PREPARE

9.1.11.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL DPCH Information		0..1			YES	reject
>UL Scrambling Code	O		9.2.2.53		–	
>UL SIR Target	O		Uplink SIR 9.2.1.69		–	
>Min UL Channelisation Code Length	O		9.2.2.25		–	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.24		–	
>Puncture Limit	O		9.2.1.46	For the UL.	–	
>TFCS	O		9.2.1.63	TFCS for the UL.	–	
>UL DPCCH Slot Format	O		9.2.2.52		–	
>Diversity Mode	O		9.2.2.8		–	
>SSDT Cell Identity Length	O		9.2.2.41		–	
>S-Field Length	O		9.2.2.36		–	
DL DPCH Information		0..1			YES	reject
>TFCS	O		9.2.1.63	TFCS for the DL.	–	
>DL DPCH Slot Format	O		9.2.2.9		–	
>Number of DL Channelisation Codes	O		9.2.2.26A		–	
>TFCI Signalling Mode	O		9.2.2.46		–	
>TFCI Presence	C- SlotFormat		9.2.1.55		–	
>Multiplexing Position	O		9.2.2.26		–	
>Limited Power Increase	O		9.2.2.21A		–	
DCHs to Modify	O		FDD DCHs to Modify 9.2.2.13C		YES	reject
DCHs to Add	O		DCH FDD Information 9.2.2.4A		YES	reject
DCHs to Delete		0..<maxnoof DCHs>			GLOBAL	reject
>DCH ID	M		9.2.1.16		–	
DSCHs to Modify		0..1			YES	reject
>DSCH Info		0..<maxnoof DSCHs>			–	
>>DSCH ID	M		9.2.1.26A		–	
>>TrCh Source Statistics Descriptor	O		9.2.1.65		–	
>>Transport Format Set	O		9.2.1.64	For DSCH	–	
>>Allocation/Retention Priority	O		9.2.1.1		–	
>>Scheduling Priority Indicator	O		9.2.1.51A		–	
>>BLER	O		9.2.1.4		–	
>>Transport Bearer Request Indicator	M		9.2.1.61		–	
>PDSCH RL ID	O		RL ID 9.2.1.49		–	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
>TFCS	O		9.2.1.63	For DSCH	–	
DSCHs to Add	O		DSCH FDD Information 9.2.2.13A		YES	reject
DSCHs to Delete		0..1			YES	reject
>DSCH Info		1..<maxnoof DSCHs>			–	
>>DSCH ID	M		9.2.1.26A		–	
RL Information		0..<maxnoof RLS>			EACH	reject
>RL ID	M		9.2.1.49		–	
>SSDT Indication	O		9.2.2.42		–	
>SSDT Cell Identity	C - SSDTIndON		9.2.2.40		–	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.48		–	
Transmission Gap Pattern Sequence Information	O		9.2.2.47A		YES	reject

Condition	Explanation
SSDTIndON	The IE may shall be present if the <i>SSDT Indication</i> IE is set to "SSDT Active in the UE".
CodeLen	This The IE shall be present only if the <i>Min UL Channelisation Code</i> length IE equals to 4.
SlotFormat	This The IE shall only be present if the <i>DL DPCH Slot Format</i> IE is equal to any of the values from 12 to 16.
Diversity mode	This The IE shall be present if <i>Diversity Mode</i> IE is present in the <i>UL DPCH Information</i> 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 and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL CCH to Add		<i>0..<maxno of CCHs></i>		For DCH and USCH	EACH	notify
>CCH 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		9.2.1.40		–	
UL CCH to Modify		<i>0..<maxno of CCHs></i>			EACH	notify
>CCH ID	M		9.2.3.2		–	
>TFCS	O		9.2.1.63	For the UL.	–	
>TFCI Coding	O		9.2.3.11		–	
>Puncture Limit	O		9.2.1.46		–	
UL CCH to Delete		<i>0..<maxno of CCHs></i>			EACH	notify
>CCH ID	M		9.2.3.2		–	
DL CCH to Add		<i>0..<maxno of CCHs></i>		For DCH and DSCH	EACH	notify
>CCH ID	M		9.2.3.2		–	
>TFCS	M		9.2.1.63	For the DL.	–	
>TFCI Coding	M		9.2.3.11		–	
>Puncture Limit	M		9.2.1.46		–	
>TPC CCH List		0 to <maxno CCHs>		List of uplink CCH which provide TPC	–	
>>TPC CCH ID	M		CCH ID 9.2.3.2		–	
DL CCH to Modify		<i>0..<maxno of CCHs></i>			EACH	notify
>CCH ID	M		9.2.3.2		–	
>TFCS	O		9.2.1.63	For the DL.	–	
>TFCI Coding	O		9.2.3.11		–	
>Puncture Limit	O		9.2.1.46		–	
>TPC CCH List		0 to <maxno CCHs>		List of uplink CCH which provide TPC	–	
>>TPC CCH ID	M		CCH ID 9.2.3.3		–	
DL CCH to Delete		<i>0..<maxno of CCHs></i>			EACH	notify
>CCH ID	M		9.2.3.2		–	
DCHs to Modify	O		TDD DCHs to Modify 9.2.3.8B		YES	reject
DCHs to Add	O		DCH TDD Information 9.2.3.2A		YES	reject
DCHs to Delete		<i>0..<maxno of DCHs></i>			GLOBAL	reject

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
>DCH ID	M		9.2.1.16		–	
DSCHs to Modify		0..<maxno ofDSCHs>			GLOBAL	reject
>DSCH ID	M		9.2.1.26A		–	
>CCTrCH Id	O		9.2.3.2	DL CCTrCH in which the DSCH is mapped.	–	
>TrCh Source Statistics Descriptor	O		9.2.1.65		–	
>Transport Format Set	O		9.2.1.64		–	
>Allocation/Retention Priority	O		9.2.1.1		–	
>Scheduling Priority Indicator	O		9.2.1.51A		–	
>BLER	O		9.2.1.4		–	
>Transport Bearer Request Indicator	M		9.2.1.61		–	
DSCHs to Add	O		DSCH TDD Information 9.2.3.3a		YES	reject
DSCHs to Delete		0..<maxno ofDSCHs>			GLOBAL	reject
>DSCH ID	M		9.2.1.26A		–	
USCHs to Modify		0..<maxno ofUSCHs>			GLOBAL	reject
>USCH ID	M		9.2.3.14		–	
>CCTrCH Id	O		9.2.3.2	UL CCTrCH in which the USCH is mapped.	–	
>TrCh Source Statistics Descriptor	O		9.2.1.65		–	
>Transport Format Set	O		9.2.1.64		–	
>Allocation/Retention Priority	O		9.2.1.1		–	
>Scheduling Priority Indicator	O		9.2.1.51A		–	
>BLER	O		9.2.1.4		–	
>Transport Bearer Request Indicator	M		9.2.1.61		–	
>RB Info		0 to <maxno of RB>		All Radio Bearers using this USCH	–	
>>RB Identity	M		9.2.3.5B		–	
USCHs to Add	O		USCH Information 9.2.3.15		YES	reject
USCHs to Delete		0..<maxno ofUSCHs>			GLOBAL	reject
>USCH ID	M		9.2.3.14		–	

Condition	Explanation
CoorDCH	This IE shall be 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.

9.1.20 DL POWER CONTROL REQUEST [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		–	
Power Adjustment Type	M		9.2.2.28		YES	ignore
<u>DL Reference Power</u> <u>DL Reference Power</u>	C-Common		DL Power 9.2.2.10		YES	ignore
Inner Loop DL PC Status	O		9.2.2.21a		YES	ignore
DL Reference Power Information	C-Individual	1..<maxnoofRLs>			GLOBAL	ignore
>RL ID	M		9.2.1.49		–	
>DL Reference Power	M		DL Power 9.2.2.10		–	
Max Adjustment Step	C-CommonOrIndividual		9.2.2.23		YES	ignore
Adjustment Period	C-CommonOrIndividual		9.2.2.B		YES	ignore
Adjustment Ratio	C-CommonOrIndividual		9.2.2.C		YES	ignore

Condition	Explanation
Common	This The IE shall be present only if the <i>Power Adjustment Type</i> IE is set to "Common".
Individual	This The IE shall be present only if the <i>Power Adjustment Type</i> IE is set to "Individual".
CommonOrIndividual	This The IE shall be present only if the <i>Power Adjustment Type</i> IE is set to "Common" or "Individual".

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

9.1.39 ERROR INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		–	
Cause	<u>C_ifalone</u> <u>O</u>		9.2.1.5		YES	ignore
Criticality Diagnostics	<u>C_ifalone</u> <u>O</u>		9.2.1.13		YES	ignore

Condition	Explanation
<u>C_ifalone</u>	At least the <i>Cause</i> IE or the <i>Criticality Diagnostics</i> IE shall be present.

9.2 Information Element Functional Definition and Contents

9.2.0 General

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

9.2.1 Common Parameters

This subclause contains parameters that are common to FDD and TDD.

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
<u>CHOICE</u> <u>Dedicated Measurement Type Indicator Value</u>				
<u>>SIR Value</u>				
<u>>>SIR Value</u>	<u>MG MeasValue</u>		INTEGER(0..63)	According to mapping in ref. [23] and [24]
<u>>SIR Error Value</u>				<u>FDD Only</u>
<u>>>SIR Error Value</u>	<u>MG MeasValue</u>		INTEGER(0..125)	According to mapping in [23], <u>{FDD only}</u>
<u>>Transmitted Code Power Value</u>				
<u>>>Transmitted Code Power Value</u>	<u>MG MeasValue</u>		INTEGER(0..127)	According to mapping in ref. [23] and [24]
<u>>RSCP</u>				<u>TDD Only</u>
<u>>>RSCP</u>	<u>MG MeasValue</u>		INTEGER(0..127)	According to mapping in ref. [24], <u>{TDD only}</u>
<u>>Rx Timing Deviation</u>				<u>TDD Only</u>
<u>>>Rx Timing Deviation</u>	<u>MG MeasValue</u>		INTEGER(0..8191)	According to mapping in [24], <u>{TDD only}</u>
<u>>Round Trip Time</u>				<u>FDD Only</u>
<u>>>Round Trip Time</u>	<u>MG MeasValue</u>		INTEGER(0..32767)	According to mapping in [23], <u>{FDD only}</u>

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

9.2.1.38 Measurement Increase/Decrease Threshold

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<u>CHOICE Measurement Type Indicator Increase/Decrease Threshold</u>				
<u>>SIR</u>				
<u>>>SIR</u>	<u>MC-Threshold</u>		INTEGER(0..62)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 62: 31dB
<u>>SIR Error</u>				<u>FDD Only</u>
<u>>>SIR Error</u>	<u>MC-Threshold</u>		INTEGER(0..124)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 124: 62 dB {FDD only}
<u>>Transmitted Code Power</u>				
<u>>>Transmitted Code Power</u>	<u>MC-Threshold</u>		INTEGER(0..112,...)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 112: 56 dB
<u>>RSCP</u>				<u>TDD Only</u>
<u>>>RSCP</u>	<u>MC-Threshold</u>		INTEGER(0..126)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 126: 63 dB {FDD only}
<u>>Rx Timing Deviation Round Trip Time</u>				<u>FDD Only</u>
<u>>>Round Trip Time</u>	<u>MC-Threshold</u>		INTEGER(0..32766)	0: 0 chips 1: 0.0625 chips 2: 0.1250 chips ... 32766: 2047.875 chips {FDD only}

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

9.2.1.39 Measurement Threshold

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
CHOICE Measurement Type Indicator Threshold				
>SIR				
>>SIR	MC- Threshold		INTEGER(0..63)	According to mapping in ref. [23] and [24].
>SIR Error				FDD Only
>>SIR Error	MC- Threshold		INTEGER(0..125)	According to mapping in [23], (FDD only)
>Transmitted Code Power				
>>Transmitted Code Power	MC- Threshold		INTEGER(0..127)	According to mapping in ref. [23] and [24].
>RSCP				TDD Only
>>RSCP	MC- Threshold		INTEGER(0..127)	According to mapping in ref. [24] (TDD only)
>Rx Timing Deviation				TDD Only
>>Rx Timing Deviation	MC- Threshold		INTEGER(0..8191)	According to mapping in [24] (TDD only)
>Rx Timing Deviation Round Trip Time				FDD Only
>>Round Trip Time	MC- 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.

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.

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

Condition	Explanation
Case1	This-The IE shall be present only if Sync Case = Sync Case IE is set to "Case1".
Case2	This-The IE shall be present only if Sync Case IE is set to Sync Case = "Case2" .

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

9.2.1.48 Report Characteristics

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Report Characteristics Type			ENUMERATED (On Demand, Periodic, Event A, Event B, Event C, Event D, Event E, Event F, ...)	
Periodic Report Information	C Periodic			
CHOICE Report Characteristics Type				
>OnDemand			NULL	
>Periodic				
>>Report Periodicity	M		ENUMERATED (10ms...1min, ...) step 10ms, (1min...1hr, ...) step 1min,...	The periodicity with which the DRNS shall send measurement reports.
Event A	C Event A			
>Event A				
>>Measurement Threshold	M		Measurement Threshold	The threshold for which the DRNS shall trigger a measurement report.
>>Measurement Hysteresis Time	O		ENUMERATED (10ms...1min, ...) step 10ms,...	
Event B	C Event B			
>Event B				
>>Measurement Threshold	M		Measurement Threshold	The threshold for which the DRNS shall trigger a measurement report.
>>Measurement Hysteresis Time	O		ENUMERATED (10ms...1min, ...) step 10ms,...	
Event C	C Event C			
>Event C				
>>Measurement Increase/Decrease Threshold	M		Measurement Increase/Decrease Threshold	
>>Measurement Change Time	M		ENUMERATED (10ms...1min, ...) step 10ms,...	The time within which the measurement entity shall rise, in order to trigger a measurement report.
Event D	C Event D			
>Event D				
>>Measurement Increase/Decrease Threshold	M		Measurement Increase/Decrease Threshold	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<u>>></u> Measurement Change Time	M		ENUMERATED (10ms...1min, ...) step 10ms,...	The time within which the measurement entity shall fall, in order to trigger a measurement report.
Event E	C -Event E			
<u>></u> Event E				
<u>>></u> Measurement Threshold 1	M		Measurement Threshold	
<u>>></u> Measurement Threshold 2	O		Measurement Threshold	
<u>>></u> Measurement Hysteresis Time	O		ENUMERATED (10ms...1min, ...) step 10ms,...	The hysteresis time in ms
<u>>></u> Report Periodicity	O		ENUMERATED (10ms...1min, ...) step 10ms, (1min...1hr, ...) step 1min,...	The periodicity with which the DRNS shall send measurement reports.
Event F	C -Event F			
<u>></u> Event F				
<u>>></u> Measurement Threshold 1	M		Measurement Threshold	
<u>>></u> Measurement Threshold 2	O		Measurement Threshold	
<u>>></u> Measurement Hysteresis Time	O		ENUMERATED (10ms...1min, ...) step 10ms,...	The hysteresis time in ms
<u>>></u> Report Periodicity	O		ENUMERATED (10ms...1min, ...) step 10ms, (1min...1hr, ...) step 1min,...	The periodicity with which the DRNS shall send measurement reports.

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

9.2.1.63 Transport Format Combination Set (TFCS)

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

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

Method #1 - TFCI range

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

Method #2 - Explicit

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE DSCH				
>No Split in the TFCI				This choice is made if : a) The TFCS refers to the uplink OR b) The mode is FDD and none of the Node B communication contexts are assigned any DSCH transport channels OR c) The mode is TDD
>>TFCS		1 to <maxnoofTFCs>		The first instance of the parameter corresponds to TFC zero, the second to 1 and so on.
>>>CTFC	M		INTEGER(0..MaxCTFC)	Integer number calculated according to ref. [16].
>>>CHOICE Gain Factors	C-PhysChan			
>>>>Signalled Gain Factors				
>>>>>Gain Factor β_C	M		INTEGER (0..15)	For UL DPCCCH or control part of PRACH in FDD ref. [21].
>>>>>Gain Factor β_D	M		INTEGER (0..15)	For UL DPDCH or data part of PRACH in FDD ref. [21].
>>>>>Reference TFC nr	O		INTEGER (0..15)	If this TFC is a reference TFC, this IE indicates the reference number
>>>>>Computed Gain Factors				
>>>>>Reference TFC nr	M		INTEGER (0..15)	Indicates the reference TFC to be used to calculate the gain factors for this TFC
>There is a split in the TFCI				This choice is made if : a) The TFCS refers to the downlink AND b) The mode is FDD and one of the Node B communication contexts is assigned one or more DSCH transport channels
>>Transport Format Combination_DCH		1 to <MaxTFCl_1_Comb>		The first instance of the <i>Transport format combination_DCH IE</i> corresponds to TFCl (field 1) = 0, the second to TFCl (field 1) = 1 and so on.
>>>CTFC(field1)	M		INTEGER(0..MaxCTFC)	Integer number calculated according to [16] . The calculation of CTFC ignores any DSCH transport channels which may be assigned
>>Choice Signalling Method				
>>>TFCI Range				
>>>>TFC Mapping on DSCH		1 to <MaxNoTFCIGroups>		
>>>>>Max TFCI(field2) Value	M		INTEGER(1..1023)	This is the Maximum value in the range of TFCI(field2) values for which the specified CTFC(field2) applies
>>>>>CTFC(field	M		INTEGER(0..	Integer number calculated

2)			.MaxCTFC)	according to [16] The calculation of CTFC ignores any DCH transport channels which may be assigned
>>>Explicit				
>>>>Transport Format Combination_DSC H		1 to <MaxTFCI_2_Comb>		The first instance of the <i>Transport format combination_DSC</i> IE corresponds to TFCI (field2) = 0, the second to TFCI (field 2) = 1 and so on.
>>>>>CTFC(field 2)	M		INTEGER(0..MaxCTFC)	Integer number calculated according to [16] . The calculation of CTFC ignores any DCH transport channels which may be assigned

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

Range bound	Explanation
<i>MaxnoofTFCs</i>	The maximum number of Transport Format Combinations.
MaxTFCI_1_Combs	Maximum number of TFCI (field 1) combinations (given by 2 raised to the power of the length of the TFCI (field 1)).
MaxTFCI_2_Combs	Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI (field 2)).
MaxNoTFCIGroups	Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single value of CTFC(field2) applies.
<i>MaxCTFC</i>	Maximum number of the CTFC value is calculated according to the following: $\sum_{i=1}^I (L_i - 1)P_i$ with the notation according to ref. [16].

9.2.1.64 Transport Format Set

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Dynamic Transport Format Information		1..<maxTFcount>		The first instance of the parameter corresponds to TFI zero, the second to 1 and so on.
>Number of Transport Blocks	M		INTEGER (0..512)	
>Transport Block Size	C – Blocks		INTEGER (0..5000)	Bits
>CHOICE Mode	M			
>>TDD				
>>>Transmission Time Interval Information	C-TTIdynamic	1..<maxTTIcount>		
>>>>Transmission Time Interval	M		ENUMERATED(10, 20, 40, 80,...)	msec
Semi-static Transport Format Information		1		
>Transmission Time Interval	M		ENUMERATED (10, 20, 40, 80, dynamic, ...)	msec Value "dynamic" for TDD only
>Type of Channel Coding	M		ENUMERATED (No coding, Convolutional, Turbo,...)	
>Coding Rate	C – Coding		ENUMERATED (1/2, 1/3,...)	
>Rate Matching Attribute	M		INTEGER (1..maxRM)	
>CRC size	M		ENUMERATED (0, 8, 12, 16, 24,...)	
>CHOICE Mode	M			
>>TDD				
>>>2 nd Interleaving Mode	M		ENUMERATED(Frame related, Timeslot related,...)	

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

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

9.2.2.37B Secondary CCPCH Info

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
FDD S-CCPCH Offset	M		9.2.2.15	Corresponds to: $T_{S-CCPCH,k}$, see ref. [8]	–	
DL Scrambling Code	M		9.2.2.8		–	
FDD DL Channelisation Code Number	M		9.2.2.14		–	
TFCS	M		9.2.1.63	For the DL.	–	
Secondary CCPCH Slot Format	M		9.2.2.38		–	
TFCI Presence	C - SlotFormat		9.2.1.55		–	
Multiplexing Position	M		9.2.2.26		–	
STTD Indicator	M		9.2.2.44		–	
FACH/PCH Information		1 .. $\langle \text{maxFACHcount} + 1 \rangle$			–	
>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	M		9.2.2.4		–	
>IB Segment Information		1.. $\langle \text{maxIBSEG} \rangle$			–	
>>IB_SG_POS	M		9.2.2.20		–	

Condition	Explanation
SlotFormat	This-The IE shall be present only if the <i>Secondary CCPCH Slot Format</i> IE is equal to any of the value from 8 to 17.

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

9.2.2.47A Transmission Gap Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence. For details see [16].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transmission Gap Pattern Sequence Information		1 to <MaxTGPS>		
>TGPSI Identifier	M		INTEGER(1..<MaxTGPS>)	Transmission Gap Pattern Sequence Identifier Establish a reference to the compressed mode pattern sequence. Up to <MaxTGPS> simultaneous compressed mode pattern sequences can be used.
>TGSN	M		INTEGER (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		INTEGER(1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.
>TGL2	O		INTEGER (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		INTEGER (0, 15.. 269)	Transmission gap distance indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to 0 (0 =undefined).
>TGPL1	M		INTEGER (1..144,...)	The duration of transmission gap pattern 1 in frames.
>TGPL2	O		INTEGER (1..144,...)	The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.
>UL/DL mode	M		Enumerated (UL only, DL only, UL/DL)	Defines whether only DL, only UL, or combined UL/DL compressed mode is used.
>Downlink Compressed Mode Method	C-DL		ENUMERATED (puncturing, SF/2, higher layer scheduling, ...)	Method for generating downlink compressed mode gap None means that compressed mode pattern is stopped.
>Uplink Compressed Mode Method	C-UL		ENUMERATED (SF/2, higher layer scheduling, ...)	Method for generating uplink compressed mode gap.
>Downlink Frame Type	M		ENUMERATED (A, B)	Defines if frame type 'A' or 'B' shall be used in downlink compressed mode.
>DeltaSIR1	M		INTEGER (0..30)	Delta in UL SIR target value to be set in the DRNS during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)
				Step 0.1 dB, Range 0-3dB

>DeltaSIRafter1	M		INTEGER (0..30)	Delta in UL SIR target value to be set in the DRNS one frame after the frame containing the start of the first transmission gap in the transmission gap pattern,. Step 0.1 dB, Range 0-3dB
>DeltaSIR2	O		INTEGER (0..30)	Delta in UL SIR target value to be set in the DRNS during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1. Step 0.1 dB, Range 0-3dB
>DeltaSIRafter2	O		INTEGER (0..30)	Delta in UL SIR target value to be set in the DRNS one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Step 0.1 dB, Range 0-3dB

Condition	Explanation
UL	This information element is only sent when The IE shall be present if the value of the "UL/DL mode" <i>UL/DL mode</i> IE is "UL only" or "UL/DL".
DL	This information element is only sent when The IE shall be present if the value of the "UL/DL mode" <i>UL/DL mode</i> IE is "DL only" or "UL/DL".

Range bound	Explanation
MaxTGPS	Maximum number of transmission gap pattern sequences.

9.2.3.2A DCH TDD Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
DCH Information		1..<maxno ofDCHs>			–	
>Payload CRC Presence Indicator	M		9.2.1.42		–	
>UL FP Mode	M		9.2.1.67		–	
>ToAWS	M		9.2.1.58		–	
>ToAWE	M		9.2.1.57		–	
>DCH Specific Info		1..<maxno ofDCHs>			–	
>>DCH ID	M		9.2.1.16		–	
>>CCTrCH ID	M		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	M		9.2.1.65		–	
>>Transport Format Set	M		9.2.1.64	For the UL.	–	
>>Transport Format Set	M		9.2.1.64	For the DL.	–	
>>BLER	M		9.2.1.4	For the UL.	–	
>>BLER	M		9.2.1.4	For the DL.	–	
>>Allocation/Retention Priority	M		9.2.1.1		–	
>>Frame Handling Priority	M		9.2.1.29		–	
>>QE-Selector	C-CoordDCH		9.2.1.46A		–	

Condition	Explanation
CoordDCH	This The IE shall be present only if this DCH is part of a set of coordinated DCHs (number of instances of the <i>DCH Specific Info</i> IE is greater than 1).

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

9.2.3.4 Midamble Shift and Burst Type

This information element indicates burst type and midamble allocation.

Three different midamble allocation schemes exist:

- Default midamble: the midamble shift is selected by layer 1 depending on the associated channelisation code (DL and UL);
- Common midamble: the midamble shift is chosen by layer 1 depending on the number of channelisation codes (possible in DL only);
- UE specific midamble: a UE specific midamble is explicitly assigned (DL and UL).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE <i>Burst Type</i>				
> <i>Type 1</i>				
>>Midamble Allocation Mode	M		ENUMERATED (Default midamble, Common midamble, UE specific midamble)	
>> Midamble Configuration Burst Type 1 And 3	M		Integer(4, 8, 16)	As defined in [12]
>>Midamble Shift	C-UE		INTEGER(0..15)	
> <i>Type 2</i>				
>>Midamble Allocation Mode	M		ENUMERATED (Default midamble, Common midamble, UE specific midamble)	
>> Midamble Configuration Burst Type 2	M		Integer(3,6)	As defined in [12]
>>Midamble Shift			INTEGER (0..15)	
> <i>Type 3</i>				UL only
>>Midamble Allocation Mode	M		ENUMERATED (Default midamble, UE specific midamble)	
>> Midamble Configuration Burst Type 1 And 3	M		Integer(4, 8, 16)	As defined in [12]
>>Midamble Shift	C-UE		INTEGER(0..15)	
>...				

Condition	Explanation
C-UE	This information element is only sent when The IE shall be present if the value of the "Midamble Allocation Mode" Midamble Allocation Mode IE is set to "UE-specific midamble".

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

9.3.0 General

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

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

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

If a RNSAP message that is not constructed as defined above is received, this shall be considered as Abstract Syntax Error, and the message shall be handled as defined for Abstract Syntax Error in subclause 10.3.6.

9.3.1 Usage of Private Message Mechanism for non-standard use

The private message mechanism for non-standard use may be used:

- for special operator (and/or vendor) specific features considered not to be part of the basic functionality, i.e. the functionality required for a complete and high-quality specification in order to guarantee multivendor inter-operability.
- by vendors for research purposes, e.g. to implement and evaluate new algorithms/features before such features are proposed for standardisation.

The private message mechanism shall not be used for basic functionality. Such functionality shall be standardised.

9.3.2 Elementary Procedure Definitions

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

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

IMPORTS
    Criticality,
    ProcedureID,
    TransactionID
FROM RNSAP-CommonDataTypes

    CommonTransportChannelResourcesFailure,
    CommonTransportChannelResourcesRequest,
    CommonTransportChannelResourcesReleaseRequest,
    CommonTransportChannelResourcesResponseFDD,
    CommonTransportChannelResourcesResponseTDD,
    CompressedModeCommand,
    DedicatedMeasurementFailureIndication,
    DedicatedMeasurementInitiationFailure,
    DedicatedMeasurementInitiationRequest,
    DedicatedMeasurementInitiationResponse,
    DedicatedMeasurementReport,
    DedicatedMeasurementTerminationRequest,
    DL-PowerControlRequest,
    DL-PowerTimeslotControlRequest,
    DownlinkSignallingTransferRequest,
    ErrorIndication,
    PagingRequest,
    PhysicalChannelReconfigurationCommand,
    PhysicalChannelReconfigurationFailure,
    PhysicalChannelReconfigurationRequestFDD,
    PhysicalChannelReconfigurationRequestTDD,
    PrivateMessage,
    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-dedicatedMeasurementFailure,
id-dedicatedMeasurementInitiation,
id-dedicatedMeasurementReporting,
id-dedicatedMeasurementTermination,
id-paging,
id-physicalChannelReconfiguration,
id-privateMessage,
id-radioLinkAddition,
id-radioLinkDeletion,
id-radioLinkFailure,
id-radioLinkPreemption,
id-radioLinkRestoration,
id-radioLinkSetup,
id-relocationCommit,
id-synchronisedRadioLinkReconfigurationCancellation,
id-synchronisedRadioLinkReconfigurationCommit,
id-synchronisedRadioLinkReconfigurationPreparation,
id-unsynchronisedRadioLinkReconfiguration,

```

    id-uplinkSignallingTransfer
FROM RNSAP-Constants;

-- *****
--
-- Interface Elementary Procedure Class
--
-- *****

RNSAP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage          ,
    &SuccessfulOutcome          OPTIONAL,
    &UnsuccessfulOutcome        OPTIONAL,
    &Outcome                    OPTIONAL,
    &procedureID                ProcedureID  UNIQUE,
    &criticality                Criticality  DEFAULT ignore
}
WITH SYNTAX {
    INITIATING MESSAGE      &InitiatingMessage
    [SUCCESSFUL OUTCOME     &SuccessfulOutcome]
    [UNSUCCESSFUL OUTCOME   &UnsuccessfulOutcome]
    [OUTCOME                &Outcome]
    PROCEDURE ID            &procedureID
    [CRITICALITY            &criticality]
}

-- *****
--
-- 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,
}

```



```

    value          RNSAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome   ({RNSAP-ELEMENTARY-PROCEDURES}{@procedureID})
  }

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

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

-- *****
--
-- Interface Elementary Procedure List
--
-- *****

RNSAP-ELEMENTARY-PROCEDURES RNSAP-ELEMENTARY-PROCEDURE ::= {
  RNSAP-ELEMENTARY-PROCEDURES-CLASS-1   |
  RNSAP-ELEMENTARY-PROCEDURES-CLASS-2   |
  RNSAP-ELEMENTARY-PROCEDURES-CLASS-3   ,
  ...
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 RNSAP-ELEMENTARY-PROCEDURE ::= {
  radioLinkSetupFDD                      |
  radioLinkSetupTDD                      |
  radioLinkAdditionFDD                   |
  radioLinkAdditionTDD                   |
  radioLinkDeletion                      |
  synchronisedRadioLinkReconfigurationPreparationFDD |
  synchronisedRadioLinkReconfigurationPreparationTDD |
  unSynchronisedRadioLinkReconfigurationFDD |
  unSynchronisedRadioLinkReconfigurationTDD |
  physicalChannelReconfigurationFDD      |
  physicalChannelReconfigurationTDD      |
  dedicatedMeasurementInitiation        |
  commonTransportChannelResourcesInitialisationFDD |
  commonTransportChannelResourcesInitialisationTDD |
  ...
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 RNSAP-ELEMENTARY-PROCEDURE ::= {
  uplinkSignallingTransferFDD           |
  uplinkSignallingTransferTDD           |

```

```

downlinkSignallingTransfer
relocationCommit
paging
synchronisedRadioLinkReconfigurationCommit
synchronisedRadioLinkReconfigurationCancellation
radioLinkFailure
radioLinkPreemption
radioLinkRestoration
dedicatedMeasurementReporting
dedicatedMeasurementTermination
dedicatedMeasurementFailure
downlinkPowerControlFDD
downlinkPowerTimeslotControl
compressedModeCommandFDD
commonTransportChannelResourcesRelease
errorIndication
privateMessage
...
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-3 RNSAP-ELEMENTARY-PROCEDURE ::= {
...
}

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

radioLinkSetupFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkSetupRequestFDD
  SUCCESSFUL OUTCOME  RadioLinkSetupResponseFDD
  UNSUCCESSFUL OUTCOME  RadioLinkSetupFailureFDD
  PROCEDURE ID        { procedureCode id-radioLinkSetup, ddMode fdd }
  CRITICALITY         reject
}

radioLinkSetupTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkSetupRequestTDD
  SUCCESSFUL OUTCOME  RadioLinkSetupResponseTDD
  UNSUCCESSFUL OUTCOME  RadioLinkSetupFailureTDD
  PROCEDURE ID        { procedureCode id-radioLinkSetup, ddMode tdd }
  CRITICALITY         reject
}

radioLinkAdditionFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkAdditionRequestFDD
  SUCCESSFUL OUTCOME  RadioLinkAdditionResponseFDD
  UNSUCCESSFUL OUTCOME  RadioLinkAdditionFailureFDD
  PROCEDURE ID        { procedureCode id-radioLinkAddition , ddMode fdd }
}

```

```
    CRITICALITY    reject
}

radioLinkAdditionTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkAdditionRequestTDD
    SUCCESSFUL OUTCOME  RadioLinkAdditionResponseTDD
    UNSUCCESSFUL OUTCOME  RadioLinkAdditionFailureTDD
    PROCEDURE ID        { procedureCode id-radioLinkAddition , ddMode tdd }
    CRITICALITY    reject
}

radioLinkDeletion RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkDeletionRequest
    SUCCESSFUL OUTCOME  RadioLinkDeletionResponse
    PROCEDURE ID        { procedureCode id-radioLinkDeletion, ddMode common }
    CRITICALITY    reject
}

synchronisedRadioLinkReconfigurationPreparationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkReconfigurationPrepareFDD
    SUCCESSFUL OUTCOME  RadioLinkReconfigurationReadyFDD
    UNSUCCESSFUL OUTCOME  RadioLinkReconfigurationFailure
    PROCEDURE ID        { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode fdd }
    CRITICALITY    reject
}

synchronisedRadioLinkReconfigurationPreparationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkReconfigurationPrepareTDD
    SUCCESSFUL OUTCOME  RadioLinkReconfigurationReadyTDD
    UNSUCCESSFUL OUTCOME  RadioLinkReconfigurationFailure
    PROCEDURE ID        { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode tdd }
    CRITICALITY    reject
}

unSynchronisedRadioLinkReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkReconfigurationRequestFDD
    SUCCESSFUL OUTCOME  RadioLinkReconfigurationResponseFDD
    UNSUCCESSFUL OUTCOME  RadioLinkReconfigurationFailure
    PROCEDURE ID        { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
    CRITICALITY    reject
}

unSynchronisedRadioLinkReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkReconfigurationRequestTDD
    SUCCESSFUL OUTCOME  RadioLinkReconfigurationResponseTDD
    UNSUCCESSFUL OUTCOME  RadioLinkReconfigurationFailure
    PROCEDURE ID        { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
    CRITICALITY    reject
}

physicalChannelReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
```

```

INITIATING MESSAGE PhysicalChannelReconfigurationRequestFDD
SUCCESSFUL OUTCOME PhysicalChannelReconfigurationCommand
UNSUCCESSFUL OUTCOME PhysicalChannelReconfigurationFailure
PROCEDURE ID      { procedureCode id-physicalChannelReconfiguration, ddMode fdd }
CRITICALITY      reject
}

physicalChannelReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE PhysicalChannelReconfigurationRequestTDD
  SUCCESSFUL OUTCOME PhysicalChannelReconfigurationCommand
  UNSUCCESSFUL OUTCOME PhysicalChannelReconfigurationFailure
  PROCEDURE ID      { procedureCode id-physicalChannelReconfiguration, ddMode tdd }
  CRITICALITY      reject
}

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

commonTransportChannelResourcesInitialisationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CommonTransportChannelResourcesRequest
  SUCCESSFUL OUTCOME CommonTransportChannelResourcesResponseFDD
  UNSUCCESSFUL OUTCOME CommonTransportChannelResourcesFailure
  PROCEDURE ID      { procedureCode id-commonTransportChannelResourcesInitialisation, ddMode fdd }
  CRITICALITY      reject
}

commonTransportChannelResourcesInitialisationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CommonTransportChannelResourcesRequest
  SUCCESSFUL OUTCOME CommonTransportChannelResourcesResponseTDD
  UNSUCCESSFUL OUTCOME CommonTransportChannelResourcesFailure
  PROCEDURE ID      { procedureCode id-commonTransportChannelResourcesInitialisation, ddMode tdd }
  CRITICALITY      reject
}

uplinkSignallingTransferFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE UplinkSignallingTransferIndicationFDD
  PROCEDURE ID      { procedureCode id-uplinkSignallingTransfer, ddMode fdd }
  CRITICALITY      ignore
}

uplinkSignallingTransferTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE UplinkSignallingTransferIndicationTDD
  PROCEDURE ID      { procedureCode id-uplinkSignallingTransfer, ddMode tdd }
  CRITICALITY      ignore
}

```

```
downlinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DownlinkSignallingTransferRequest
  PROCEDURE ID       { procedureCode id-downlinkSignallingTransfer, ddMode common }
  CRITICALITY       ignore
}

relocationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RelocationCommit
  PROCEDURE ID       { procedureCode id-relocationCommit, ddMode common }
  CRITICALITY       ignore
}

paging RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE PagingRequest
  PROCEDURE ID       { procedureCode id-paging, ddMode common }
  CRITICALITY       ignore
}

synchronisedRadioLinkReconfigurationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationCommit
  PROCEDURE ID       { procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode common }
  CRITICALITY       ignore
}

synchronisedRadioLinkReconfigurationCancellation RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationCancel
  PROCEDURE ID       { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode common }
  CRITICALITY       ignore
}

radioLinkFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkFailureIndication
  PROCEDURE ID       { procedureCode id-radioLinkFailure, ddMode common }
  CRITICALITY       ignore
}

radioLinkPreemption RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkPreemptionRequiredIndication
  PROCEDURE ID       { procedureCode id-radioLinkPreemption, ddMode common }
  CRITICALITY       ignore
}

radioLinkRestoration RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkRestoreIndication
  PROCEDURE ID       { procedureCode id-radioLinkRestoration, ddMode common }
  CRITICALITY       ignore
}

dedicatedMeasurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DedicatedMeasurementReport
  PROCEDURE ID       { procedureCode id-dedicatedMeasurementReporting, ddMode common }
}
```

```
    CRITICALITY    ignore
}

dedicatedMeasurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    DedicatedMeasurementTerminationRequest
    PROCEDURE ID          { procedureCode id-dedicatedMeasurementTermination, ddMode common }
    CRITICALITY          ignore
}

dedicatedMeasurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    DedicatedMeasurementFailureIndication
    PROCEDURE ID          { procedureCode id-dedicatedMeasurementFailure, ddMode common }
    CRITICALITY          ignore
}

downlinkPowerControlFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    DL-PowerControlRequest
    PROCEDURE ID          { procedureCode id-downlinkPowerControl, ddMode fdd }
    CRITICALITY          ignore
}

downlinkPowerTimeslotControl RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    DL-PowerTimeslotControlRequest
    PROCEDURE ID          { procedureCode id-downlinkPowerTimeslotControl, ddMode tdd }
    CRITICALITY          ignore
}

compressedModeCommandFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    CompressedModeCommand
    PROCEDURE ID          { procedureCode id-compressedModeCommand, ddMode fdd }
    CRITICALITY          ignore
}

commonTransportChannelResourcesRelease RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    CommonTransportChannelResourcesReleaseRequest
    PROCEDURE ID          { procedureCode id-commonTransportChannelResourcesRelease, ddMode common }
    CRITICALITY          ignore
}

errorIndication RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    ErrorIndication
    PROCEDURE ID          { procedureCode id-errorIndication, ddMode common }
    CRITICALITY          ignore
}

privateMessage RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    PrivateMessage
    PROCEDURE ID          { procedureCode id-privateMessage, ddMode common }
    CRITICALITY          ignore
}
```

END

9.3.3 PDU Definitions

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

RNSAP-PDU-Contents {
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,
PCCPCH-Power,
PC-Preamble,
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,
Secondary-CCPCH-Info,
Secondary-CCPCH-Info-TDD,
SpecialBurstScheduling,
SSDT-CellID,
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
STTD-Indicator,
STTD-SupportIndicator,
AdjustmentPeriod,
ScaledAdjustmentRatio,
MaxAdjustmentStep,
SecondaryCCPCH-SlotFormat,
SRB-Delay,
SyncCase,
SynchronisationConfiguration,
TDD-ChannelisationCode,
TDD-DCHs-to-Modify,
TDD-DL-Code-Information,
TDD-DPCHoffset,

```
TDD-PhysicalChannelOffset,  
TDD-TPC-DownlinkStepSize,  
TDD-UL-Code-Information,  
TFCI-Coding,  
TFCI-Presence,  
TFCI-SignallingMode,  
TimeSlot,  
TimingAdvanceApplied,  
ToAWE,  
ToAWS,  
TransmitDiversityIndicator,  
TransportBearerID,  
TransportBearerRequestIndicator,  
TFCS,  
Transmission-Gap-Pattern-Sequence-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{ },  
ProtocolIE-Container{ },  
ProtocolIE-Single-Container{ },  
RNSAP-PRIVATE-IES,  
RNSAP-PROTOCOL-EXTENSION,  
RNSAP-PROTOCOL-IES,  
RNSAP-PROTOCOL-IES-PAIR  
FROM RNSAP-Containers
```

```
maxNoOfDSCHs,  
maxNoOfUSCHs,  
maxNrOfCCTrCHs,  
maxNrOfDCHs,
```

maxNrOfTS,
maxNrOfDPCHs,
maxNrOfRLs,
maxNrOfRLSets,
maxNrOfRLs-1,
maxNrOfRLs-2,
maxNrOfULTs,
maxNrOfDLTs,

id-Active-Pattern-Sequence-Information,
id-AdjustmentRatio,
id-AllowedQueuingTime,
id-BindingID,
id-C-ID,
id-C-RNTI,
id-CFN,
id-CFNReportingIndicator,
id-CN-CS-DomainIdentifier,
id-CN-PS-DomainIdentifier,
id-Cause,
id-CauseLevel-RL-AdditionFailureFDD,
id-CauseLevel-RL-AdditionFailureTDD,
id-CauseLevel-RL-ReconfFailure,
id-CauseLevel-RL-SetupFailureFDD,
id-CauseLevel-RL-SetupFailureTDD,
id-CCTrCH-InformationItem-RL-FailureInd,
id-CCTrCH-InformationItem-RL-RestoreInd,
id-ClosedLoopModel-SupportIndicator,
id-ClosedLoopMode2-SupportIndicator,
id-CNOriginatedPage-PagingRqst,
id-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-ReconfReadyTDD,
id-DL-CCTrCH-InformationModifyItem-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-PhyChReconfRqstTDD,
id-DL-DPCH-InformationItem-RL-AdditionRspTDD,
id-DL-DPCH-InformationItem-RL-SetupRspTDD,
id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD,
id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD,
id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD,
id-DL-Physical-Channel-Information-RL-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,
id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD,
id-GA-Cell,
id-IMSI,
id-InnerLoopDLPCStatus,
id-L3-Information,
id-AdjustmentPeriod,
id-MaxAdjustmentStep,
id-MeasurementFilterCoefficient,
id-MeasurementID,

id-PagingArea-PagingRqst,
id-FACH-FlowControlInformation,
id-PowerAdjustmentType,
id-PropagationDelay,
id-RANAP-RelocationInformation,
id-RL-Information-PhyChReconfRqstFDD,
id-RL-Information-PhyChReconfRqstTDD,
id-RL-Information-RL-AdditionRqstFDD,
id-RL-Information-RL-AdditionRqstTDD,
id-RL-Information-RL-DeletionRqst,
id-RL-Information-RL-FailureInd,
id-RL-Information-RL-ReconfPrepFDD,
id-RL-Information-RL-RestoreInd,
id-RL-Information-RL-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-AdditionRqstFDD,
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,
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-timeSlot-ISCP,
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,
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-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-SetupRqstTDD,
id-UL-SIRTarget,
id-URA-Information,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-USCHs-to-Add,
id-USCH-DeleteList-RL-ReconfPrepTDD,
id-USCH-InformationListIE-RL-AdditionRspTDD,
id-USCH-InformationListIEs-RL-SetupRspTDD,
id-USCH-Information,
id-USCH-ModifyList-RL-ReconfPrepTDD,
id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD
FROM RNSAP-Constants;

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

```

```

--
-- *****
RadioLinkSetupRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkSetupRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupRequestFDD-Extensions}}    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-SetupRqstFDD CRITICALITY notify  TYPE RL-InformationList-RL-SetupRqstFDD PRESENCE mandatory } |
    { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject  TYPE Transmission-Gap-Pattern-Sequence-Information PRESENCE
optionalconditional } ¶
{ ID id-Active-Pattern-Sequence-Information CRITICALITY reject  TYPE Active-Pattern-Sequence-Information PRESENCE optional },
    ...
}

UL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
    ul-ScramblingCode          UL-ScramblingCode,
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPCHs            MaxNrOfUL-DPCHs            OPTIONAL
    -- This IE shall be present if minUL-ChannelisationCodeLength equals to 4 -- ,
    ul-PunctureLimit           PunctureLimit,
    ul-TFCS                     TFCS,
    ul-DPCCH-SlotFormat         UL-DPCCH-SlotFormat,
    ul-SIRTarget                UL-SIR                OPTIONAL,
    diversityMode               DiversityMode,
    sSDT-CellIdLength           SSDT-CellID-Length     OPTIONAL,
    s-FieldLength               S-FieldLength         OPTIONAL,
    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 present if Slot Format is from 12 to 16 --,
multiplexingPosition          MultiplexingPosition,
powerOffsetInformation        PowerOffsetInformation-RL-SetupRqstFDD,
fdd-dl-TPC-DownlinkStepSize  FDD-TPC-DownlinkStepSize,
limitedPowerIncrease          LimitedPowerIncrease,
innerLoopDLPCStatus          InnerLoopDLPCStatus,
iE-Extensions                 ProtocolExtensionContainer { {DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
...
}

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

PowerOffsetInformation-RL-SetupRqstFDD ::= SEQUENCE {
    po1-ForTFCI-Bits          PowerOffset,
    po2-ForTPC-Bits           PowerOffset,
    po3-ForPilotBits          PowerOffset,
    iE-Extensions             ProtocolExtensionContainer { { PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RL-InformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-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-SetupRqstFDD ::= SEQUENCE {
    rL-ID                     RL-ID,
    c-ID                       C-ID,
    firstRLS-indicator        FirstRLS-Indicator,
    frameOffset                FrameOffset,
    chipOffset                 ChipOffset,
    propagationDelay           PropagationDelay OPTIONAL,
    diversityControlField      DiversityControlField OPTIONAL
    -- This IE shall be present if the RL is not the first one in the RL-InformationList-RL-SetupRqstFDD --,
    dl-InitialTX-Power         DL-Power OPTIONAL,
    primaryCPICH-EcNo          PrimaryCPICH-EcNo OPTIONAL,
    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 present unless Diversity Mode IE in UL DPCH Information group is "none"
    iE-Extensions              ProtocolExtensionContainer { {RL-InformationItem-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

```



```

}

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

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

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

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

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SRNC-ID          CRITICALITY reject  TYPE RNC-ID          PRESENCE mandatory } |
    { ID id-S-RNTI          CRITICALITY reject  TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-D-RNTI          CRITICALITY reject  TYPE D-RNTI          PRESENCE optional } |
    { ID id-UL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject  TYPE UL-Physical-Channel-Information-RL-SetupRqstTDD PRESENCE mandatory } |
    { ID id-DL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject  TYPE DL-Physical-Channel-Information-RL-SetupRqstTDD PRESENCE mandatory } |
    { ID id-AllowedQueuingTime          CRITICALITY reject  TYPE AllowedQueuingTime          PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationList-RL-SetupRqstTDD CRITICALITY notify  TYPE UL-CCTrCH-InformationList-RL-SetupRqstTDD PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationList-RL-SetupRqstTDD CRITICALITY notify  TYPE DL-CCTrCH-InformationList-RL-SetupRqstTDD PRESENCE optional } |
    { ID id-DCH-TDD-Information          CRITICALITY reject  TYPE DCH-TDD-Information          PRESENCE optional } |
    { ID id-DSCH-TDD-Information          CRITICALITY reject  TYPE DSCH-TDD-Information          PRESENCE optional } |
    { ID id-USCH-Information          CRITICALITY reject  TYPE USCH-Information          PRESENCE optional } |
    { ID id-RL-Information-RL-SetupRqstTDD          CRITICALITY reject  TYPE RL-Information-RL-SetupRqstTDD          PRESENCE mandatory },
    ...
}

UL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
    maxNrTimeslots-UL          MaxNrTimeslots,
    minimumSpreadingFactor-UL  MinimumSpreadingFactor,
    maxNrULPhysicalchannels    MaxNrULPhysicalchannels,
    iE-Extensions              ProtocolExtensionContainer { {UL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
    maxNrTimeslots-DL           MaxNrTimeslots,
    minimumSpreadingFactor-DL   MinimumSpreadingFactor,
    maxNrDLPhysicalchannels     MaxNrDLPhysicalchannels,
    iE-Extensions               ProtocolExtensionContainer { {DL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

UL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cTrCH-ID                   CCTrCH-ID,
    ul-TFCS                    TFCS,
    tFCI-Coding                TFCI-Coding,
    ul-PunctureLimit           PunctureLimit,
    iE-Extensions              ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

DL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cTrCH-ID                   CCTrCH-ID,
    dl-TFCS                    TFCS,
    tFCI-Coding                TFCI-Coding,
    dl-PunctureLimit           PunctureLimit,
    tdd-TPC-DownlinkStepSize   TDD-TPC-DownlinkStepSize,
    cTrCH-TPCList              CCTrCH-TPCList-RL-SetupRqstTDD OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

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

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

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

CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
    rL-ID              RL-ID,
    c-ID              C-ID,
    frameOffset       FrameOffset,
    specialBurstScheduling SpecialBurstScheduling,
    primaryCCPCH-RSCP PrimaryCCPCH-RSCP OPTIONAL,
    dL-TimeSlot-ISCP DL-TimeSlot-ISCP-Info OPTIONAL,
    iE-Extensions     ProtocolExtensionContainer { { RL-Information-RL-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

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

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

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

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

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

```

```

{ ID id-RL-InformationResponseList-RL-SetupRspFDD CRITICALITY ignore TYPE RL-InformationResponseList-RL-SetupRspFDD PRESENCE mandatory } |
{ ID id-UL-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-ID RL-ID,
  rL-Set-ID RL-Set-ID,
  uRA-Information URA-Information OPTIONAL,
  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,
  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 Neighbouring-GSM-CellInformation OPTIONAL,
  pC-Preamble PC-Preamble,
  sRB-Delay SRB-Delay,
  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 }
}

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

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

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

RadioLinkSetupResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI CRITICALITY ignore TYPE D-RNTI PRESENCE optional } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |

```

```

{ ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-RL-SetupRspTDD PRESENCE mandatory } |
{ ID id-UL-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 OPTIONAL,
  sAI SAI,
  gA-Cell GA-Cell OPTIONAL,
  gA-AccessPointPosition GA-AccessPointPosition OPTIONAL,
  ul-TimeSlot-ISCP-Info UL-TimeSlot-ISCP-Info,
  maxUL-SIR UL-SIR,
  minUL-SIR UL-SIR,
  maximumAllowedULTxPower MaximumAllowedULTxPower,
  maximumDLTxPower DL-Power,
  minimumDLTxPower DL-Power,
  uARFCNforNt UARFCN OPTIONAL,
  cellParameterID CellParameterID OPTIONAL,
  syncCase SyncCase OPTIONAL,
  sCH-TimeSlot SCH-TimeSlot OPTIONAL,
  -- This IE shall be present when-if Sync Case IE is Case2. --
  block-STTD-Indicator Block-STTD-Indicator OPTIONAL,
  pCCPCH-Power pCCPCH-Power OPTIONAL,
  timingAdvanceApplied TimingAdvanceApplied,
  alphaValue AlphaValue,
  ul-PhysCH-SF-Variation UL-PhysCH-SF-Variation,
  synchronisationConfiguration SynchronisationConfiguration,
  secondary-CCPCH-Info-TDD Secondary-CCPCH-Info-TDD OPTIONAL,
  ul-CCTrCHInformation UL-CCTrCHInformationList-RL-SetupRspTDD OPTIONAL,
  dl-CCTrCHInformation DL-CCTrCHInformationList-RL-SetupRspTDD OPTIONAL,
  dCH-InformationResponse DCH-InformationResponseList-RL-SetupRspTDD OPTIONAL,
  dsch-InformationResponse DSCH-InformationResponse-RL-SetupRspTDD OPTIONAL,
  usch-InformationResponse USCH-InformationResponse-RL-SetupRspTDD OPTIONAL,
  neighbouring-UMTS-CellInformation Neighbouring-UMTS-CellInformation OPTIONAL,
  neighbouring-GSM-CellInformation Neighbouring-GSM-CellInformation OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {RL-InformationResponse-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

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

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

UL-DPCH-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {UL-DPCH-InformationListIEs-RL-SetupRspTDD} }

UL-DPCH-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationItem-RL-SetupRspTDD    CRITICALITY ignore    TYPE UL-DPCH-InformationItem-RL-SetupRspTDD    PRESENCE mandatory}
}

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

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

DL-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DL-CCTrCHInformationListIEs-RL-SetupRspTDD}}

DL-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { 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,
    iE-Extensions           ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

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

```

```

DL-DPCH-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {DL-DPCH-InformationListIEs-RL-SetupRspTDD} }

DL-DPCH-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationItem-RL-SetupRspTDD      CRITICALITY ignore  TYPE DL-DPCH-InformationItem-RL-SetupRspTDD  PRESENCE mandatory}
}

DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
  repetitionPeriod      RepetitionPeriod,
  repetitionLength      RepetitionLength,
  tDD-DPCHOffset        TDD-DPCHOffset,
  dL-Timeslot-Information  DL-Timeslot-Information,
  iE-Extensions          ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

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

DCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DCH-InformationResponseListIEs-RL-SetupRspTDD}}

DCH-InformationResponseListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { 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 ::= {
  { ID id-DSCH-InformationListIEs-RL-SetupRspTDD      CRITICALITY ignore  TYPE DSCH-InformationListIEs-RL-SetupRspTDD  PRESENCE mandatory }
}

DSCH-InformationListIEs-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCHInformationItem-RL-SetupRspTDD

DSCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
  dsch-ID                DSCH-ID,
  dsch-FlowControlInformation  DSCH-FlowControlInformation,
  bindingID              BindingID  OPTIONAL,
  transportLayerAddress  TransportLayerAddress  OPTIONAL,
  transportFormatManagement  TransportFormatManagement,
  iE-Extensions          ProtocolExtensionContainer { {DSCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

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

USCH-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{USCH-InformationList-RL-SetupRspTDD}}

USCH-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {

```



```

    { ID id-USCH-InformationListIEs-RL-SetupRspTDD      CRITICALITY ignore  TYPE USCH-InformationListIEs-RL-SetupRspTDD PRESENCE mandatory }
  }

USCH-InformationListIEs-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCHInformationItem-RL-SetupRspTDD

USCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    usch-ID                USCH-ID,
    bindingID              BindingID OPTIONAL,
    transportLayerAddress  TransportLayerAddress OPTIONAL,
    transportFormatManagement TransportFormatManagement,
    iE-Extensions          ProtocolExtensionContainer { {USCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

/*partly omitted*/

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- *****

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

RadioLinkReconfigurationPrepareFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY reject  TYPE AllowedQueuingTime          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-DPDCHs          OPTIONAL
    -- This IE shall be present if minUL-ChannelisationCodeLength equals to 4 --,
    ul-PunctureLimit          PunctureLimit            OPTIONAL,
    tFCS                       TFCS                    OPTIONAL,
    ul-DPCCH-SlotFormat        UL-DPCCH-SlotFormat        OPTIONAL,
    diversityMode              DiversityMode            OPTIONAL,
    sSDT-CellIDLength          SSDT-CellID-Length        OPTIONAL,
    s-FieldLength              S-FieldLength            OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

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

```

```

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 present if DL-DPCH-Slot Format is equal to any of the values 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,
    iE-Extensions            ProtocolExtensionContainer { {DSCH-Modify-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

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,
    bLER                      BLER                        OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    iE-Extensions            ProtocolExtensionContainer { {DSCH-ModifyInformationItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

DSCH-ModifyInformationItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-Delete-RL-ReconfPrepFDD ::= SEQUENCE {
    dSCH-Information          DSCH-Info-Delete-RL-ReconfPrepFDD,
    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 ProtocolIE-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-ID RL-ID,
  sSDT-Indication SSdT-Indication OPTIONAL,
  sSDT-CellIdentity SSdT-CellID OPTIONAL
  -- The IE may be shall be present if the sSDT-Indication is set to 'sSDT-active-in-the-UE' --,
  transmitDiversityIndicator TransmitDiversityIndicator OPTIONAL,
  -- This IE shall be present if Diversity Mode IE is present in UL DPCH Information IE group is present, unless it and is not 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 ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- *****

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

RadioLinkReconfigurationPrepareTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-AllowedQueuingTime CRITICALITY reject TYPE AllowedQueuingTime PRESENCE optional } |
  { ID id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD PRESENCE optional } |
  { ID id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD PRESENCE optional } |
  { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD PRESENCE optional } |
  { ID id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD PRESENCE optional } |
  { ID id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD PRESENCE optional } |
  { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD PRESENCE optional } |
  { ID id-TDD-DCHs-to-Modify CRITICALITY reject TYPE TDD-DCHs-to-Modify PRESENCE optional } |
}

```

```

{ ID id-DCHs-to-Add-TDD          CRITICALITY reject TYPE DCH-TDD-Information          PRESENCE optional } |
{ ID id-DCH-DeleteList-RL-ReconfPrepTDD  CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfPrepTDD  PRESENCE optional } |
{ ID id-DSCH-ModifyList-RL-ReconfPrepTDD  CRITICALITY reject TYPE DSCH-ModifyList-RL-ReconfPrepTDD  PRESENCE optional } |
{ ID id-DSCHs-to-Add-TDD          CRITICALITY reject TYPE DSCH-TDD-Information          PRESENCE optional } |
{ ID id-DSCH-DeleteList-RL-ReconfPrepTDD  CRITICALITY reject TYPE DSCH-DeleteList-RL-ReconfPrepTDD  PRESENCE optional } |
{ ID id-USCH-ModifyList-RL-ReconfPrepTDD  CRITICALITY reject TYPE USCH-ModifyList-RL-ReconfPrepTDD  PRESENCE optional } |
{ ID id-USCHs-to-Add              CRITICALITY reject TYPE USCH-Information          PRESENCE optional } |
{ ID id-USCH-DeleteList-RL-ReconfPrepTDD  CRITICALITY reject TYPE USCH-DeleteList-RL-ReconfPrepTDD  PRESENCE optional },
...
}

UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD  CRITICALITY notify TYPE UL-CCTrCH-AddInformation-RL-ReconfPrepTDD  PRESENCE mandatory }
}

UL-CCTrCH-AddInformation-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  tFCS               TFCS,
  tFCI-Coding        TFCI-Coding,
  punctureLimit      PunctureLimit,
  iE-Extensions      ProtocolExtensionContainer { {UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD  CRITICALITY notify TYPE UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD  PRESENCE mandatory }
}

UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  tFCS               TFCS          OPTIONAL,
  tFCI-Coding        TFCI-Coding  OPTIONAL,
  punctureLimit      PunctureLimit OPTIONAL,
  iE-Extensions      ProtocolExtensionContainer { {UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
DeleteInformation-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD PRESENCE mandatory
  }
}

UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  iE-Extensions ProtocolExtensionContainer { {UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-AddInformation-
RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD PRESENCE mandatory
  }
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  tFCS TFCS,
  tFCI-Coding TFCI-Coding,
  punctureLimit PunctureLimit,
  cCTrCH-TPCList CCTrCH-TPCAddList-RL-ReconfPrepTDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

CCTrCH-TPCAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCAddItem-RL-ReconfPrepTDD

CCTrCH-TPCAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  iE-Extensions ProtocolExtensionContainer { {CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

}

DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
ModifyInformation-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD  PRESENCE
mandatory  }
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  tFCS               TFCS          OPTIONAL,
  tFCI-Coding        TFCI-Coding   OPTIONAL,
  punctureLimit      PunctureLimit OPTIONAL,
  cCTrCH-TPCList     CCTrCH-TPCModifyList-RL-ReconfPrepTDD  OPTIONAL,
  iE-Extensions      ProtocolExtensionContainer { {DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

CCTrCH-TPCModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCModifyItem-RL-ReconfPrepTDD

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  iE-Extensions      ProtocolExtensionContainer { { CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
DeleteInformation-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD  PRESENCE
mandatory  }
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  iE-Extensions      ProtocolExtensionContainer { {DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
DCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepTDD

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

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

DSCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-ModifyItem-RL-ReconfPrepTDD

DSCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    dl-ccTrCHID            CTrCH-ID                OPTIONAL,
    trChSourceStatisticsDescriptor TrCh-SrcStatisticsDescr OPTIONAL,
    transportFormatSet     TransportFormatSet        OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    schedulingPriorityIndicator SchedulingPriorityIndicator OPTIONAL,
    bLER                   BLER                    OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    iE-Extensions         ProtocolExtensionContainer { {DSCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DSCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-DeleteItem-RL-ReconfPrepTDD

DSCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    iE-Extensions         ProtocolExtensionContainer { {DSCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DSCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCH-ModifyItem-RL-ReconfPrepTDD

USCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    ul-ccTrCHID            CTrCH-ID                OPTIONAL,

```



```

trChSourceStatisticsDescriptor      TrCh-SrcStatisticsDescr OPTIONAL,
transportFormatSet                  TransportFormatSet          OPTIONAL,
allocationRetentionPriority          AllocationRetentionPriority  OPTIONAL,
schedulingPriorityIndicator          SchedulingPriorityIndicator  OPTIONAL,
bLER                                 BLER                        OPTIONAL,
transportBearerRequestIndicator      TransportBearerRequestIndicator,
rb-Info                             RB-Info                     OPTIONAL,
iE-Extensions                        ProtocolExtensionContainer { {USCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

USCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

USCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCH-DeleteItem-RL-ReconfPrepTDD

USCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
  uSCH-ID                USCH-ID,
  iE-Extensions          ProtocolExtensionContainer { {USCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

USCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION READY FDD
--
-- *****

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

RadioLinkReconfigurationReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseList-RL-ReconfReadyFDD    CRITICALITY ignore  TYPE RL-InformationResponseList-RL-ReconfReadyFDD    PRESENCE optional
  } |
  { ID id-CriticalityDiagnostics                          CRITICALITY ignore  TYPE CriticalityDiagnostics      PRESENCE optional },
  ...
}

```

```

RL-InformationResponseList-RL-ReconfReadyFDD ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationResponse-RL-
ReconfReadyFDD-IEs} }

RL-InformationResponse-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseItem-RL-ReconfReadyFDD    CRITICALITY ignore  TYPE RL-InformationResponseItem-RL-ReconfReadyFDD    PRESENCE mandatory
  }
}

RL-InformationResponseItem-RL-ReconfReadyFDD ::= SEQUENCE {
  rL-ID                RL-ID,
  max-UL-SIR           UL-SIR           OPTIONAL,
  min-UL-SIR           UL-SIR           OPTIONAL,
  maximumDLTxPower    DL-Power         OPTIONAL,
  minimumDLTxPower    DL-Power         OPTIONAL,
  secondary-CCPCH-Info Secondary-CCPCH-Info OPTIONAL,
  dl-CodeInformationList DL-CodeInformationList-RL-ReconfReadyFDD OPTIONAL,
  dCHInformationResponse DCH-InformationResponseList-RL-ReconfReadyFDD OPTIONAL,
  dSCHsToBeAddedOrModified DSCHsToBeAddedOrModified-RL-ReconfReadyFDD OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
  ...
}

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

DL-CodeInformationList-RL-ReconfReadyFDD ::= ProtocolIE-Single-Container {{ DL-CodeInformationListIEs-RL-ReconfReadyFDD }}

DL-CodeInformationListIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-FDD-DL-CodeInformation    CRITICALITY ignore TYPE FDD-DL-CodeInformation    PRESENCE mandatory }
}

DCH-InformationResponseList-RL-ReconfReadyFDD ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfReadyFDD} }

DCH-InformationResponseListIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponse    CRITICALITY ignore TYPE DCH-InformationResponse    PRESENCE mandatory }
}

DSCHsToBeAddedOrModified-RL-ReconfReadyFDD ::= ProtocolIE-Single-Container { {DSCHsToBeAddedOrModifiedIEs-RL-ReconfReadyFDD} }

DSCHsToBeAddedOrModifiedIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DSCHsToBeAddedOrModified-FDD    CRITICALITY ignore TYPE DSCH-FDD-InformationResponse    PRESENCE mandatory }
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION READY TDD

```

```

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

RadioLinkReconfigurationReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponse-RL-ReconfReadyTDD
      CRITICALITY ignore TYPE RL-InformationResponse-RL-ReconfReadyTDD PRESENCE optional } |
    { ID id-CriticalityDiagnostics
      CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponse-RL-ReconfReadyTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    max-UL-SIR           UL-SIR          OPTIONAL,
    min-UL-SIR           UL-SIR          OPTIONAL,
    maximumDLTxPower    DL-Power        OPTIONAL,
    minimumDLTxPower    DL-Power        OPTIONAL,
    secondary-CCPCH-Info-TDD
                        Secondary-CCPCH-Info-TDD OPTIONAL,
    ul-CCTrCH-Information
                        UL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
    dl-CCTrCH-Information
                        DL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
    dCHInformationResponse
                        DCH-InformationResponseList-RL-ReconfReadyTDD OPTIONAL,
    dSCHsToBeAddedOrModified
                        DSCHToBeAddedOrModified-RL-ReconfReadyTDD OPTIONAL,
    uSCHsToBeAddedOrModified
                        USCHToBeAddedOrModified-RL-ReconfReadyTDD OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {RL-InformationResponse-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

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

UL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-CCTrCHInformationListIEs-RL-ReconfReadyTDD}}

UL-CCTrCHInformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD
      CRITICALITY ignore TYPE UL-CCTrCHInformationListIE-RL-ReconfReadyTDD PRESENCE mandatory }
}

UL-CCTrCHInformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-RL-ReconfReadyTDD

UL-CCTrCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
    cCtRch-ID          CCTrCH-ID,
    ul-DPCH-AddInformation
                      UL-DPCH-InformationAddList-RL-ReconfReadyTDD          OPTIONAL,
    ul-DPCH-ModifyInformation
                      UL-DPCH-InformationModifyList-RL-ReconfReadyTDD          OPTIONAL,
    ul-DPCH-DeleteInformation
                      UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD          OPTIONAL,
    iE-Extensions     ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
}

```

```

}
...
}
UL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
UL-DPCH-InformationAddList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD}}
UL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
{ ID id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD CRITICALITY ignore TYPE UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD PRESENCE
mandatory }
}
UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD ::= SEQUENCE {
repetitionPeriod RepetitionPeriod,
repetitionLength RepetitionLength,
tDD-DPCHOffset TDD-DPCHOffset,
rxTimingDeviationForTA RxTimingDeviationForTA OPTIONAL,
uL-Timeslot-Information UL-Timeslot-Information,
iE-Extensions ProtocolExtensionContainer { {UL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}
UL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
UL-DPCH-InformationModifyList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD}}
UL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
{ ID id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD CRITICALITY ignore TYPE UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD PRESENCE
mandatory }
}
UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD ::= SEQUENCE {
repetitionPeriod RepetitionPeriod OPTIONAL,
repetitionLength RepetitionLength OPTIONAL,
tDD-DPCHOffset TDD-DPCHOffset OPTIONAL,
uL-Timeslot-InformationModifyList-RL-ReconfReadyTDD UL-Timeslot-InformationModifyList-RL-ReconfReadyTDD OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {UL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}
UL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
UL-Timeslot-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD
UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {

```

```

timeSlot                TimeSlot,
midambleShiftAndBurstType  MidambleShiftAndBurstType          OPTIONAL,
tFCI-Presence            TFCI-Presence                      OPTIONAL,
uL-Code-Information      TDD-UL-Code-InformationModifyList-RL-ReconfReadyTDD  OPTIONAL,
iE-Extensions            ProtocolExtensionContainer { {UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}

UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

TDD-UL-Code-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD

TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
dPCH-ID                DPCH-ID,
tDD-ChannelisationCode  TDD-ChannelisationCode          OPTIONAL,
iE-Extensions            ProtocolExtensionContainer { {TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}

TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD}}

UL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
{ ID id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD  PRESENCE
mandatory }
}

UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF UL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD

UL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD ::= SEQUENCE {
dPCH-ID                DPCH-ID,
iE-Extensions            ProtocolExtensionContainer { {UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-CCTrCHInformationListIEs-RL-ReconfReadyTDD}}

DL-CCTrCHInformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
{ ID id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE DL-CCTrCHInformationListIE-RL-ReconfReadyTDD  PRESENCE mandatory
}
}

```

DL-CCTrCHInformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-RL-ReconfReadyTDD

```
DL-CCTrCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
  cCTrCH-ID                CCTrCH-ID,
  dl-DPCH-AddInformation    DL-DPCH-InformationAddList-RL-ReconfReadyTDD      OPTIONAL,
  dl-DPCH-ModifyInformation DL-DPCH-InformationModifyList-RL-ReconfReadyTDD    OPTIONAL,
  dl-DPCH-DeleteInformation DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD      OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}
```

```
DL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

DL-DPCH-InformationAddList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD}}

```
DL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD  CRITICALITY ignore TYPE DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD  PRESENCE
mandatory }
}
```

```
DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD ::= SEQUENCE {
  repetitionPeriod          RepetitionPeriod,
  repetitionLength          RepetitionLength,
  tDD-DPCHOffset           TDD-DPCHOffset,
  dL-Timeslot-Information   DL-Timeslot-Information,
  iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}
```

```
DL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

DL-DPCH-InformationModifyList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD}}

```
DL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD  CRITICALITY ignore TYPE DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD  PRESENCE
mandatory }
}
```

```
DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD ::= SEQUENCE {
  repetitionPeriod          RepetitionPeriod      OPTIONAL,
  repetitionLength          RepetitionLength      OPTIONAL,
  tDD-DPCHOffset           TDD-DPCHOffset        OPTIONAL,
  dL-Timeslot-InformationModifyList-RL-ReconfReadyTDD  DL-Timeslot-InformationModifyList-RL-ReconfReadyTDD  OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}
```

```

DL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD

DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType          OPTIONAL,
    tFCI-Presence            TFCI-Presence                       OPTIONAL,
    dL-Code-Information      TDD-DL-Code-InformationModifyList-RL-ReconfReadyTDD OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DL-Code-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD

TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode              OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD}}

DL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD CRITICALITY ignore TYPE DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD PRESENCE
mandatory }
}

DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD

DL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DCH-InformationResponseList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfReadyTDD} }

DCH-InformationResponseListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponse    CRITICALITY ignore  TYPE DCH-InformationResponse    PRESENCE mandatory }
}

DSCHToBeAddedOrModified-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container { {DSCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD} }

DSCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD  PRESENCE mandatory
  }
}

DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNoOfDSCHs)) OF DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD

DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD ::= SEQUENCE {
  dsch-ID                DSCH-ID,
  transportFormatManagement  TransportFormatManagement,
  dsch-FlowControlInformation  DSCH-FlowControlInformation,
  bindingID                BindingID  OPTIONAL,
  transportLayerAddress     TransportLayerAddress  OPTIONAL,
  iE-Extensions             ProtocolExtensionContainer { {DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

USCHToBeAddedOrModified-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container { {USCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD} }
}USCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD  PRESENCE mandatory
  }
}

USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNoOfUSCHs)) OF USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD

USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD ::= SEQUENCE {
  uSCH-ID                USCH-ID,
  transportFormatManagement  TransportFormatManagement,
  bindingID                BindingID  OPTIONAL,
  transportLayerAddress     TransportLayerAddress  OPTIONAL,
  iE-Extensions             ProtocolExtensionContainer { {USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

```



```

}
...
}
-- *****
--
-- RADIO LINK RECONFIGURATION COMMIT
--
-- *****

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

RadioLinkReconfigurationCommit-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CFN          CRITICALITY ignore  TYPE CFN          PRESENCE mandatory } |
    { ID id-Active-Pattern-Sequence-Information  CRITICALITY ignore  TYPE Active-Pattern-Sequence-Information  PRESENCE optional },
    ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION FAILURE
--
-- *****

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

RadioLinkReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CauseLevel-RL-ReconfFailure  CRITICALITY ignore  TYPE CauseLevel-RL-ReconfFailure  PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics       CRITICALITY ignore  TYPE CriticalityDiagnostics       PRESENCE optional },
    ...
}

CauseLevel-RL-ReconfFailure ::= CHOICE {
    generalCause          GeneralCauseList-RL-ReconfFailure,
    rLSpecificCause       RLSpecificCauseList-RL-ReconfFailure,
    ...
}

GeneralCauseList-RL-ReconfFailure ::= SEQUENCE {
    cause                 Cause,

```

```

    iE-Extensions          ProtocolExtensionContainer { { GeneralCauseItem-RL-ReconfFailure-ExtIEs} }          OPTIONAL,
    ...
}

GeneralCauseItem-RL-ReconfFailure-ExtIEs  RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-ReconfFailure ::= SEQUENCE {
    rL-ReconfigurationFailureList-RL-ReconfFailure          RL-ReconfigurationFailureList-RL-ReconfFailure          OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { RLSpecificCauseItem-RL-ReconfFailure-ExtIEs} }          OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-ReconfFailure-ExtIEs  RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-ReconfigurationFailureList-RL-ReconfFailure ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-ReconfigurationFailure-RL-ReconfFailure-IEs} }

RL-ReconfigurationFailure-RL-ReconfFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-ReconfigurationFailure-RL-ReconfFail CRITICALITY ignore TYPE RL-ReconfigurationFailure-RL-ReconfFail PRESENCE mandatory }
}

RL-ReconfigurationFailure-RL-ReconfFail ::= SEQUENCE {
    rL-ID          RL-ID,
    cause          Cause,
    iE-Extensions          ProtocolExtensionContainer { {RL-ReconfigurationFailure-RL-ReconfFailure-ExtIEs} } OPTIONAL,
    ...
}

RL-ReconfigurationFailure-RL-ReconfFailure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION CANCEL
--
-- *****

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

```

```

RadioLinkReconfigurationCancel-IEs RNSAP-PROTOCOL-IES ::= {
  ...
}

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

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

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

RadioLinkReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-AllowedQueuingTime          CRITICALITY reject TYPE AllowedQueuingTime          PRESENCE optional } |
  { ID id-UL-DPCH-Information-RL-ReconfRqstFDD CRITICALITY reject TYPE UL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
  { ID id-DL-DPCH-Information-RL-ReconfRqstFDD CRITICALITY reject TYPE DL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
  { ID id-FDD-DCHs-to-Modify          CRITICALITY reject TYPE FDD-DCHs-to-Modify          PRESENCE optional } |
  { ID id-DCHs-to-Add-FDD             CRITICALITY reject TYPE DCH-FDD-Information          PRESENCE optional } |
  { ID id-DCH-DeleteList-RL-ReconfRqstFDD CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfRqstFDD PRESENCE optional } |
  { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject TYPE Transmission-Gap-Pattern-Sequence-Information PRESENCE optional },
  ...
}

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

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

DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
  tFCS          TFCS OPTIONAL,
  tFCI-SignallingMode TFCI-SignallingMode OPTIONAL,
  limitedPowerIncrease LimitedPowerIncrease OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

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

```

```

}
...
DCH-DeleteList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstFDD

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

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

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

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

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

RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY reject  TYPE AllowedQueuingTime          PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD  CRITICALITY notify  TYPE UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD  PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD  CRITICALITY notify  TYPE UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD  PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD  CRITICALITY notify  TYPE DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD  PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD  CRITICALITY notify  TYPE DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD  PRESENCE optional } |
    { ID id-TDD-DCHs-to-Modify          CRITICALITY reject  TYPE TDD-DCHs-to-Modify          PRESENCE optional } |
    { ID id-DCHs-to-Add-TDD             CRITICALITY reject  TYPE DCH-TDD-Information          PRESENCE optional } |
    { ID id-DCH-DeleteList-RL-ReconfRqstTDD  CRITICALITY reject  TYPE DCH-DeleteList-RL-ReconfRqstTDD  PRESENCE optional },
    ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD    CRITICALITY notify    TYPE UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD    PRESENCE
mandatory    }
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCCTrCH-ID                CCTrCH-ID,
    tFCS                      TFCS        OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { {UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
InformationDeleteList-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD    CRITICALITY notify    TYPE UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD    PRESENCE
mandatory    }
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCCTrCH-ID                CCTrCH-ID,
    iE-Extensions             ProtocolExtensionContainer { {UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
InformationModifyList-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD    CRITICALITY notify    TYPE DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD    PRESENCE
mandatory    }
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCCTrCH-ID                CCTrCH-ID,
    tFCS                      TFCS        OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { {DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

```

```

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
InformationDeleteList-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD    CRITICALITY notify   TYPE DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD  PRESENCE
  mandatory          }
}

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

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

DCH-DeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE(0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstTDD

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

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

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

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

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

RadioLinkReconfigurationResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseList-RL-ReconfRspFDD    CRITICALITY ignore   TYPE RL-InformationResponseList-RL-ReconfRspFDD    PRESENCE optional
  } |
  { ID id-CriticalityDiagnostics          CRITICALITY ignore   TYPE CriticalityDiagnostics          PRESENCE optional },
}

```

```

}
...
}
RL-InformationResponseList-RL-ReconfRspFDD ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationResponse-RL-
ReconfRspFDD-IEs} }

RL-InformationResponse-RL-ReconfRspFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseItem-RL-ReconfRspFDD      CRITICALITY ignore  TYPE RL-InformationResponseItem-RL-ReconfRspFDD  PRESENCE mandatory
  }
}

RL-InformationResponseItem-RL-ReconfRspFDD ::= SEQUENCE {
  rL-ID                RL-ID,
  max-UL-SIR           UL-SIR          OPTIONAL,
  min-UL-SIR           UL-SIR          OPTIONAL,
  maximumDLTxPower    DL-Power        OPTIONAL,
  minimumDLTxPower    DL-Power        OPTIONAL,
  secondary-CCPCH-Info Secondary-CCPCH-Info OPTIONAL,
  dCHsInformationResponseList DCH-InformationResponseList-RL-ReconfRspFDD OPTIONAL,
  dL-CodeInformationList-RL-ReconfRspFDD DL-CodeInformationList-RL-ReconfRspFDD OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfRspFDD-ExtIEs} } OPTIONAL,
  ...
}

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

DCH-InformationResponseList-RL-ReconfRspFDD ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfRspFDD} }

DCH-InformationResponseListIEs-RL-ReconfRspFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponse      CRITICALITY ignore  TYPE DCH-InformationResponse      PRESENCE mandatory }
}

DL-CodeInformationList-RL-ReconfRspFDD ::= ProtocolIE-Single-Container {{ DL-CodeInformationListIEs-RL-ReconfRspFDD }}

DL-CodeInformationListIEs-RL-ReconfRspFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-FDD-DL-CodeInformation      CRITICALITY ignore  TYPE FDD-DL-CodeInformation      PRESENCE optional }
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE TDD
--
-- *****

RadioLinkReconfigurationResponseTDD ::= SEQUENCE {

```

```

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

RadioLinkReconfigurationResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponse-RL-ReconfRspTDD    CRITICALITY ignore  TYPE RL-InformationResponse-RL-ReconfRspTDD    PRESENCE optional } |
  { ID id-CriticalityDiagnostics                    CRITICALITY ignore  TYPE CriticalityDiagnostics    PRESENCE optional },
  ...
}

RL-InformationResponse-RL-ReconfRspTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  max-UL-SIR           UL-SIR          OPTIONAL,
  min-UL-SIR           UL-SIR          OPTIONAL,
  maximumDLTxPower    DL-Power        OPTIONAL,
  minimumDLTxPower    DL-Power        OPTIONAL,
  dCHsInformationResponseList DCH-InformationResponseList-RL-ReconfRspTDD OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {RL-InformationResponse-RL-ReconfRspTDD-ExtIEs} } OPTIONAL,
  ...
}

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

DCH-InformationResponseList-RL-ReconfRspTDD ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfRspTDD} }

DCH-InformationResponseListIEs-RL-ReconfRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponse CRITICALITY ignore  TYPE DCH-InformationResponse    PRESENCE optional }
}

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

-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****

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

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

```



```

}

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

RL-RL-FailureInd ::= SEQUENCE {
    rL-InformationList-RL-FailureInd  RL-InformationList-RL-FailureInd,
    iE-Extensions                     ProtocolExtensionContainer { { RLItem-RL-FailureInd-ExtIEs } } OPTIONAL,
    ...
}

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

RL-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-RL-FailureInd-IEs} }

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

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

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

RL-Set-RL-FailureInd ::= SEQUENCE {
    rL-Set-InformationList-RL-FailureInd  RL-Set-InformationList-RL-FailureInd,
    iE-Extensions                         ProtocolExtensionContainer { { RL-SetItem-RL-FailureInd-ExtIEs } } OPTIONAL,
    ...
}

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

RL-Set-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-Information-RL-FailureInd-IEs} }

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

```

```

}

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

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

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

CCTrCH-RL-FailureInd ::= SEQUENCE {
    rL-ID              RL-ID,
    cCTrCH-InformationList-RL-FailureInd  CCTrCH-InformationList-RL-FailureInd,
    iE-Extensions     ProtocolExtensionContainer { { CCTrCHItem-RL-FailureInd-ExtIEs } } OPTIONAL,
    ...
}

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

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

CCTrCH-InformationItemIE-RL-FailureInd RNSAP-PROTOCOL-IES ::= {
    { ID      id-CCTrCH-InformationItem-RL-FailureInd      CRITICALITY  ignore          TYPE  CCTrCH-InformationItem-RL-FailureInd      PRESENCE
      mandatory}
}

CCTrCH-InformationItem-RL-FailureInd ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    cause              Cause,
    iE-Extensions     ProtocolExtensionContainer { { CCTrCH-InformationItem-RL-FailureInd-ExtIEs } } OPTIONAL,
    ...
}

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

-- *****
--
-- RADIO LINK PREEMPTION REQUIRED INDICATION
--
-- *****

```

```

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

RadioLinkPreemptionRequiredIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationList-RL-PreemptRequiredInd    CRITICALITY ignore    TYPE RL-InformationList-RL-PreemptRequiredInd    PRESENCE optional },
    ...
}

RL-InformationList-RL-PreemptRequiredInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIEs-RL-PreemptRequiredInd} }

RL-InformationItemIEs-RL-PreemptRequiredInd RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-PreemptRequiredInd    CRITICALITY ignore    TYPE RL-InformationItem-RL-PreemptRequiredInd    PRESENCE mandatory
    }
}

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

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

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

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

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

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

```

```

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

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

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

RL-InformationList-RL-RestoreInd          ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-RL-RestoreInd-IEs} }

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

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

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

RL-Set-RL-RestoreInd ::= SEQUENCE {
    rL-Set-InformationList-RL-RestoreInd    RL-Set-InformationList-RL-RestoreInd,
    iE-Extensions                           ProtocolExtensionContainer { { RL-SetItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
    ...
}

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

RL-Set-InformationList-RL-RestoreInd          ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-Information-RL-RestoreInd-IEs} }

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

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

```

```

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

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

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

CCTrCH-RL-RestoreInd ::= SEQUENCE {
    rL-ID                    RL-ID,
    cCTrCH-InformationList-RL-RestoreInd    CCTrCH-InformationList-RL-RestoreInd,
    iE-Extensions            ProtocolExtensionContainer { { CCTrCHItem-RL-RestoreInd-ExtIEs } }    OPTIONAL,
    ...
}

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

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

CCTrCH-InformationItemIE-RL-RestoreInd RNSAP-PROTOCOL-IES ::= {
    { ID      id-CCTrCH-InformationItem-RL-RestoreInd    CRITICALITY    ignore          TYPE CCTrCH-InformationItem-RL-RestoreInd    PRESENCE
    mandatory}
}

CCTrCH-InformationItem-RL-RestoreInd ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    iE-Extensions            ProtocolExtensionContainer { { CCTrCH-InformationItem-RL-RestoreInd-ExtIEs } }    OPTIONAL,
    ...
}

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

-- *****
--
-- DOWNLINK POWER CONTROL REQUEST
--
-- *****

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

```

```

}

DL-PowerControlRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-PowerAdjustmentType          CRITICALITY ignore  TYPE PowerAdjustmentType          PRESENCE mandatory} |
  { ID id-DLReferencePower              CRITICALITY ignore  TYPE DL-Power                                PRESENCE conditional} |
  -- This IE shall be present only-if DL-Power Adjustment Type DL-Power equals to 'Common'
  { ID id-InnerLoopDLPCStatus           CRITICALITY ignore  TYPE InnerLoopDLPCStatus                    PRESENCE optional } |
  { ID id-DLReferencePowerList-DL-PC-Rqst CRITICALITY ignore  TYPE DL-ReferencePowerInformationList-DL-PC-Rqst PRESENCE conditional} |
  -- This IE shall be present only-if DL-Power Adjustment Type DL-Power equals to 'Individual'
  { ID id-MaxAdjustmentStep             CRITICALITY ignore  TYPE MaxAdjustmentStep                      PRESENCE conditional} |
  -- This IE shall be present only-if DL-Power Adjustment Type DL-Power equals to 'Common' or 'Individual'
  { ID id-AdjustmentPeriod              CRITICALITY ignore  TYPE AdjustmentPeriod                       PRESENCE conditional} |
  -- This IE shall be present only-if DL-Power Adjustment Type DL-Power equals to 'Common' or 'Individual'
  { ID id-AdjustmentRatio               CRITICALITY ignore  TYPE ScaledAdjustmentRatio                  PRESENCE conditional},
  -- This IE shall be present ifonly DL-Power Adjustment Type DL-Power equals to 'Common' or 'Individual'
  ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {DL-ReferencePowerInformation-DL-PC-Rqst-IEs} }

DL-ReferencePowerInformation-DL-PC-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-ReferencePowerInformation-DL-PC-Rqst CRITICALITY ignore  TYPE DL-ReferencePowerInformation-DL-PC-Rqst PRESENCE mandatory }
}

DL-ReferencePowerInformation-DL-PC-Rqst ::= SEQUENCE {
  rL-ID                               RL-ID,
  dl-Reference-Power                  DL-Power,
  iE-Extensions                       ProtocolExtensionContainer { {DL-ReferencePowerInformation-DL-PC-Rqst-ExtIEs} } OPTIONAL,
  ...
}

DL-ReferencePowerInformation-DL-PC-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

/*partly omitted*/

-- *****
--
-- ERROR INDICATION
--
-- *****

ErrorIndication ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container          {{ErrorIndication-IEs}},

```

```

    protocolExtensions          ProtocolExtensionContainer {{ErrorIndication-Extensions}}
  }
}

ErrorIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE conditionaloptional
  At least either of Cause IE or Criticality IE shall be present } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE conditionaloptional
  At least either of Cause IE or Criticality IE shall be present },
  ...
}

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

-- *****
--
-- PRIVATE MESSAGE
--
-- *****

PrivateMessage ::= SEQUENCE {
  privateIEs      PrivateIE-Container  {{PrivateMessage-IEs}},
  ...
}

PrivateMessage-IEs RNSAP-PRIVATE-IES ::= {
  ...
}

END

```

9.3.4 Information Element Definitions

```

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

```

```
maxCodeNumComp-1,
maxNrOfFACHs,
maxFACHCountPlus1,
maxIBSEG,
maxNoOfDSCHs,
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,
maxNrOfSCCPCHs,
maxTFCI1Combs,
maxTFCI2Combs,
maxTFCI2Combs-1,
maxTGPS,
maxTTI-Count,

id-Neighbouring-GSM-CellInformation,
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,
    iE-Extensions      ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs} } OPTIONAL,
    ...
}

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,
    misc              CauseMisc,
    ...
}

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

CauseProtocol ::= ENUMERATED {
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    message-not-compatible-with-receiver-state,
    semantic-error,
    unspecified,
    abstract-syntax-error-falsely-constructed-message,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    ul-scrambling-code-already-in-use,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    measurement-not-supported-for-the-object,
    combining-resources-not-available,
    combining-not-supported,
    reconfiguration-not-allowed,
    requested-configuration-not-supported,
    synchronisation-failure,
}
```

```

    requested-tx-diversity-mode-not-supported,
    measurement-temporarily-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-allocated,
    ...,
    number-of-UL-codes-not-supported
}

CauseTransport ::= ENUMERATED {
    transport-resource-unavailable,
    unspecified,
    ...
}

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

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

CellIndividualOffset ::= INTEGER (-20..20)

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

CFN ::= INTEGER (0..255)

CGI ::= SEQUENCE {
    LAI SEQUENCE {
        pLMN-ID PLMN-ID,
        lAC LAC,
        iE-Extensions ProtocolExtensionContainer { {LAI-ExtIEs} } OPTIONAL,
        ...
    },
    cI CI,
    iE-Extensions ProtocolExtensionContainer { {CGI-ExtIEs} } OPTIONAL
}

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

CGI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```
    ...
}

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

ChipOffset          ::= INTEGER (0..38399)

CI                  ::= OCTET STRING (SIZE (2))

ClosedLoopModel-SupportIndicator ::= ENUMERATED {
    closedLoop-Model-Supported,
    closedLoop-Model-not-Supported
}

ClosedLoopMode2-SupportIndicator ::= ENUMERATED {
    closedLoop-Mode2-Supported,
    closedLoop-Mode2-not-Supported
}

Closedlooptimingadjustmentmode ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    ...
}

CodeNumber ::= INTEGER (0..maxCodeNumComp-1)

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

CRC-Size           ::= ENUMERATED {
    v0,
    v8,
    v12,
    v16,
    v24,
    ...
}

CriticalityDiagnostics ::= SEQUENCE {
    procedureID          ProcedureID          OPTIONAL,
    triggeringMessage    TriggeringMessage    OPTIONAL,
    procedureCriticality Criticality          OPTIONAL,
}
```

```

transactionID          TransactionID          OPTIONAL,
iEsCriticalityDiagnostics CriticalityDiagnostics-IE-List OPTIONAL,
iE-Extensions          ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
...
}

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

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

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

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

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

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

CN-PS-DomainIdentifier ::= SEQUENCE {
    pLMN-ID                PLMN-ID,
    lAC                     LAC,
    rAC                     RAC,

```

```

    iE-Extensions      ProtocolExtensionContainer { {CN-PS-DomainIdentifier-ExtIEs} } OPTIONAL
  }

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

CNDomainType ::= ENUMERATED {
  cs-domain,
  ps-domain,
  dont-care,
  ...
}
-- See in [16]

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

-- 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,
  ...
}

```

```

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 ::= SEQUENCE (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,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority,
    qE-Selector QE-Selector OPTIONAL,
    -- This IE shall be present only if DCH is part of set of Coordinated DCHs

```

```

    iE-Extensions          ProtocolExtensionContainer { {DCH-Specific-TDD-Item-ExtIEs} } OPTIONAL,
    ...
}

DCH-Specific-TDD-Item-ExtIEs 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
    ...
}

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,
    closedLoopModel1,
    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 ::= {
    ...
}

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

DRACControl               ::= ENUMERATED {
    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,
    iE-Extensions              ProtocolExtensionContainer { {DSCH-FDD-Information-ExtIEs} } OPTIONAL,
    ...
}

DSCH-FDD-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-Specific-FDD-Item ::= SEQUENCE {
    dSCH-ID                     DSCH-ID,
    trChSourceStatisticsDescriptor TrCh-SrcStatisticsDescr,
    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,
    bindingID              BindingID OPTIONAL,
    transportLayerAddress  TransportLayerAddress OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {DSCH-Specific-FDD-Response-Item-ExtIEs} } OPTIONAL,
    ...
}

DSCH-Specific-FDD-Response-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-FlowControlInformation ::= SEQUENCE (SIZE(1..16)) OF DSCH-FlowControlItem

DSCH-FlowControlItem ::= SEQUENCE {
    dsch-SchedulingPriority SchedulingPriorityIndicator,
    mac-c-sh-SDU-Lengths  MAC-c-sh-SDU-LengthList,
    iE-Extensions         ProtocolExtensionContainer { {DSCH-FlowControlItem-ExtIEs} } OPTIONAL,
    ...
}

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            CCH-CH-ID, -- DL CCH-CH in which the DSCH is mapped
    trChSourceStatisticsDescriptor TrCh-SourceStatisticsDescr,
    transportFormatSet     TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    schedulingPriorityIndicator SchedulingPriorityIndicator,
    BLER                   BLER,
    iE-Extensions          ProtocolExtensionContainer { {DSCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

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

-- E

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

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

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

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

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

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

```

```

}

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

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

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

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

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

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

-- F

FACH-FlowControlInformation ::= SEQUENCE (SIZE (1..16)) OF FACH-FlowControlInformationItem

FACH-FlowControlInformationItem ::= SEQUENCE {
    fACH-SchedulingPriority                    SchedulingPriorityIndicator,
    mAC-c-sh-SDU-Lengths                      MAC-c-sh-SDU-LengthList,
    fACH-InitialWindowSize                    FACH-InitialWindowSize,
    iE-Extensions                            ProtocolExtensionContainer { {FACH-FlowControlInformationItem-ExtIEs} } OPTIONAL,
    ...
}

```

```

FACH-FlowControlInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

FACH-InformationList ::= SEQUENCE (SIZE(0.. maxNrOfFACHs)) OF FACH-InformationItem

FACH-InformationItem ::= SEQUENCE {
    transportFormatSet      TransportFormatSet,
    iE-Extensions           ProtocolExtensionContainer { { FACH-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

FACH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-PCH-InformationList ::= SEQUENCE (SIZE(1..maxFACHCountPlus1)) OF FACH-PCH-InformationItem

FACH-PCH-InformationItem ::= SEQUENCE {
    transportFormatSet      TransportFormatSet,
    iE-Extensions           ProtocolExtensionContainer { { FACH-PCH-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

FACH-PCH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifyItem

FDD-DCHs-to-ModifyItem ::= SEQUENCE {
    ul-FP-Mode              UL-FP-Mode          OPTIONAL,
    toAWS                   ToAWS              OPTIONAL,
    toAWE                   ToAWE              OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    dCH-SpecificInformationList FDD-DCHs-to-ModifySpecificInformationList,
    iE-Extensions           ProtocolExtensionContainer { { FDD-DCHs-to-ModifyItem-ExtIEs} } OPTIONAL,
    ...
}

FDD-DCHs-to-ModifyItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FDD-DCHs-to-ModifySpecificInformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifySpecificItem

FDD-DCHs-to-ModifySpecificItem ::= SEQUENCE {

```

```

    dCH-ID                DCH-ID,
    ul-TransportformatSet TransportFormatSet    OPTIONAL,
    dl-TransportformatSet TransportFormatSet    OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority    OPTIONAL,
    frameHandlingPriority  FrameHandlingPriority    OPTIONAL,
    dRACControl            DRACControl    OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { {FDD-DCHs-to-ModifySpecificItem-ExtIEs} } OPTIONAL,
    ...
}

FDD-DCHs-to-ModifySpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FDD-DL-ChannelisationCodeNumber ::= INTEGER (0..511)
-- According to the mapping in [27]. The maximum value is equal to the DL spreading factor -1--

FDD-DL-CodeInformation ::= SEQUENCE (SIZE (1..maxNrOfDL-Codes)) OF FDD-DL-CodeInformationItem

FDD-DL-CodeInformationItem ::= SEQUENCE {
    dl-ScramblingCode                DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
    transmission-Gap-Pattern-Sequence-ScramblingCode-Information  Transmission-Gap-Pattern-Sequence-ScramblingCode-Information OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { {FDD-DL-CodeInformationItem-ExtIEs} } OPTIONAL,
    ...
}

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

FDD-S-CCPCH-Offset ::= INTEGER (0..149)

FDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size0-5,
    step-size1,
    step-size1-5,
    step-size2,
    ...
}

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

FirstRLS-Indicator ::= ENUMERATED {
    first-RLS,
    not-first-RLS
}

FNReportingIndicator ::= ENUMERATED {
    fN-reporting-required,
    fN-reporting-not-required
}

```

```

}

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

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

-- G

GapLength ::= INTEGER (1..14)
-- Unit Slot

GapDuration ::= INTEGER (1..144,...)
-- Unit Frame

GA-Cell ::= SEQUENCE (SIZE (1..maxNrOfPoints)) OF
  SEQUENCE {
    geographicalCoordinate GeographicalCoordinate,
    iE-Extensions ProtocolExtensionContainer { {GA-Cell-ExtIEs} } OPTIONAL,
    ...
  }

GA-Cell-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

GA-AccessPointPosition ::= SEQUENCE {
  geographicalCoordinate GeographicalCoordinate,
  iE-Extensions ProtocolExtensionContainer { {GA-AccessPoint-ExtIEs} } OPTIONAL,
  ...
}

GA-AccessPoint-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

GeographicalCoordinate ::= SEQUENCE {
  latitudeSign ENUMERATED { north, south },
  latitude INTEGER (0..8388607),
  longitude INTEGER (-8388608..8388607),
  iE-Extensions ProtocolExtensionContainer { {GeographicalCoordinate-ExtIEs} } OPTIONAL,
  ...
}

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

GSM-Output-Power ::= SEQUENCE { -- Value range (and type?) to be aligned with WG2!!!!!!!!!!!!!!
}

```



```
-- H

-- I

IB-SchedulingInformation ::= SEQUENCE {
    iB-SG-Rep                IB-SG-REP,
    iB-segmentInformationList IB-SegmentInformationList,
    iE-Extensions            ProtocolExtensionContainer { { IB-SchedulingInformation-ExtIEs } } OPTIONAL,
    ...
}

IB-SchedulingInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

IB-SegmentInformationList ::= SEQUENCE (SIZE(1..maxIBSEG)) OF IB-SegmentInformationItem

IB-SegmentInformationItem ::= SEQUENCE {
    iB-SG-POS                IB-SG-POS,
    iE-Extensions            ProtocolExtensionContainer { { IB-SegmentInformationItem-ExtIEs } } OPTIONAL,
    ...
}

IB-SegmentInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

IB-SG-POS ::= INTEGER (0..4094)
-- Only even positions allowed

IB-SG-REP ::= ENUMERATED {rep4, rep8, rep16, rep32, rep64, rep128, rep256, rep512, rep1024, rep2048, rep4096}

IMSI ::= OCTET STRING (SIZE(3..8))

InnerLoopDLPCStatus ::= ENUMERATED {active, inactive}

-- J
-- K
-- L

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

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

L3-Information ::= BIT STRING

-- M
```

```
MaxNrOfUL-DPCHs ::= INTEGER (1..6)

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

MAC-c-sh-SDU-LengthList ::= SEQUENCE(SIZE(1..maxNrOfMACcshSDU-Length)) OF MAC-c-sh-SDU-Length

MaximumAllowedULTxPower ::= INTEGER (-50..33)

MaxNrDLPhysicalchannels ::= INTEGER (1..224)

MaxNrTimeslots ::= INTEGER (1..14)

MaxNrULPhysicalchannels ::= INTEGER (1..2)

MaxTFCIvalue ::= INTEGER (1..1023)

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

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 RSCP-Value-IncrDecrThres,
    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               RSCP-Value,
    rx-timing-deviation Rx-Timing-Deviation-Value,
    round-trip-time    Round-Trip-Time-Value,
    ...
}

MidambleConfigurationBurstType1And3 ::= ENUMERATED {v4, v8, v16}

MidambleConfigurationBurstType2 ::= ENUMERATED {v3, v6}

MidambleShiftAndBurstType ::= CHOICE {
    type1                SEQUENCE {
        midambleConfigurationBurstType1And3  MidambleConfigurationBurstType1And3,
        midambleAllocationMode                CHOICE {
            defaultMidamble                NULL,
            commonMidamble                  NULL,
            ueSpecificMidamble              MidambleShiftLong,
            ...
        },
        ...
    },
    type2                SEQUENCE {
        midambleConfigurationBurstType2        MidambleConfigurationBurstType2,
        midambleAllocationMode                CHOICE {
            defaultMidamble                NULL,
            commonMidamble                  NULL,
            ueSpecificMidamble              MidambleShiftShort,
            ...
        },
        ...
    },
    type3                SEQUENCE {
        midambleConfigurationBurstType1And3  MidambleConfigurationBurstType1And3,
        midambleAllocationMode                CHOICE {
            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,
    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,
}

```

```

primaryCPICH-Power          PrimaryCPICH-Power          OPTIONAL,
cellIndividualOffset        CellIndividualOffset        OPTIONAL,
txDiversityIndicator        TxDiversityIndicator,
STTD-SupportIndicator       STTD-SupportIndicator       OPTIONAL,
closedLoopModel-SupportIndicator ClosedLoopMode1-SupportIndicator OPTIONAL,
closedLoopMode2-SupportIndicator ClosedLoopMode2-SupportIndicator OPTIONAL,
iE-Extensions               ProtocolExtensionContainer { { Neighbouring-FDD-CellInformationItem-ExtIEs} } OPTIONAL,
...
}

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 Q-Offset-Serving-to-Neighbour,
q-RxlevMin                  Q-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 shall be present only if Sync Case = Case1 -- ,
sCH-TimeSlot                SCH-TimeSlot          OPTIONAL
-- This IE shall be present only if Sync Case = Case2 -- ,
block-STTD-Indicator        Block-STTD-Indicator,

```

```
    cellIndividualOffset      CellIndividualOffset  OPTIONAL,
    dPCHConstantValue        DPCHConstantValue  OPTIONAL,
    pCCPCH-Power             PCCPCH-Power      OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { Neighbouring-TDD-CellInformationItem-ExtIEs} } OPTIONAL,
    ...
}

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

NrOfDLchannelisationcodes ::= INTEGER (1..8)

NrOfTransportBlocks        ::= INTEGER (0..512)

-- O

-- P

PagingCause ::= ENUMERATED {
    terminating-conversational-call,
    terminating-streaming-call,
    terminating-interactive-call,
    terminating-background-call,
    terminating-low-priority-signalling,
    ...,
    terminating-high-priority-signalling,
    terminating-cause-unknown
}
-- See in [16]

PagingRecordType ::= ENUMERATED {
    imsi-gsm-map,
    tmsi-gsm-map,
    p-tmsi-gsm-map,
    imsi-ds-41,
    tmsi-ds-41,
    ...
}
-- See in [16]

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

PCCPCH-Power ::= INTEGER (-150..400,...)
-- PCCPCH-power = power * 10
-- If power <= -15 PCCPCH shall be set to -150
-- If power >= 40 PCCPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step 0.1dBm
```

```

PCH-InformationList ::= SEQUENCE (SIZE(0..1)) OF PCH-InformationItem

PCH-InformationItem ::= SEQUENCE {
    transportFormatSet      TransportFormatSet,
    iE-Extensions           ProtocolExtensionContainer { { PCH-InformationItem-ExtIEs } } OPTIONAL,
    ...
}

PCH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PC-Preamble ::= INTEGER(0..7,...)

PDSCHCodeMapping ::= SEQUENCE {
    dL-ScramblingCode      DL-ScramblingCode,
    signallingMethod       PDSCHCodeMapping-SignallingMethod,
    iE-Extensions          ProtocolExtensionContainer { { PDSCHCodeMapping-ExtIEs } } OPTIONAL,
    ...
}

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

PDSCHCodeMapping-SignallingMethod ::= CHOICE {
    pDSCHCodeMapping-SignallingMethod-CodeRange      PDSCHCodeMapping-SignallingMethod-CodeRange,
    pDSCHCodeMapping-SignallingMethod-TFCIRange      PDSCHCodeMapping-SignallingMethod-TFCIRange,
    pDSCHCodeMapping-SignallingMethod-Explicit      PDSCHCodeMapping-SignallingMethod-Explicit,
    ...
}

PDSCHCodeMapping-SignallingMethod-CodeRange ::= SEQUENCE (SIZE (1..maxNoCodeGroups)) OF
SEQUENCE {
    spreadingFactor      SpreadingFactor,
    multi-code-info      Multi-code-info,
    start-CodeNumber     CodeNumber,
    stop-CodeNumber      CodeNumber,
    iE-Extensions        ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-CodeRange-ExtIEs } } OPTIONAL,
    ...
}

PDSCHCodeMapping-SignallingMethod-CodeRange-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCHCodeMapping-SignallingMethod-TFCIRange ::= SEQUENCE (SIZE (1..maxNoTFCIGroups)) OF
SEQUENCE {
    maxTFCIvalue      MaxTFCIvalue,
    spreadingFactor    SpreadingFactor,

```

```

    multi-code-info      Multi-code-info,
    codeNumber           CodeNumber,
    iE-Extensions        ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-TFCIRange-ExtIEs } } OPTIONAL,
    ...
}

PDSCHCodeMapping-SignallingMethod-TFCIRange-ExtIEs 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)

PrimaryCCPCH-RSCP      ::= INTEGER (0..91)
-- According to mapping 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

-- Q

QE-Selector ::= ENUMERATED {
    selected,
    non-selected
}

Q-Offset-Serving-to-Neighbour ::= INTEGER (-50..50)

Q-RxlevMin ::= INTEGER (-58..-13)
-- Actual value = (IE value * 2) + 1
-- Range -115 to -25 dBm, Step 2 dB

-- 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  
    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..127)  
-- According to mapping in [24]  
  
RSCP-Value-IncrDecrThres ::= INTEGER (0..126)  
  
Received-total-wide-band-power          ::= INTEGER (0..621)  
-- According to mapping in [23]
```

```

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

Rx-Timing-Deviation-Value ::= INTEGER (0..8191)

-- S

SAC ::= OCTET STRING (SIZE (2))

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

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

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 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,
    iE-Extensions                ProtocolExtensionContainer { { Secondary-CCPCH-Info-ExtIEs} } OPTIONAL,
    ...
}

Secondary-CCPCH-Info-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CCPCH-Info-TDD ::= SEQUENCE {
    dl-TFCS                    TFCS,
    tFCI-Coding                 TFCI-Coding,
    secondary-CCPCH-TDD-InformationList Secondary-CCPCH-TDD-InformationList,
    fACH-InformationList        FACH-InformationList,
    pCH-InformationList          PCH-InformationList,
}

```

```

    iE-Extensions          ProtocolExtensionContainer { { Secondary-CCPCH-Info-TDD-ExtIEs} } OPTIONAL,
    ...
}

Secondary-CCPCH-Info-TDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CCPCH-TDD-InformationList ::= SEQUENCE (SIZE(0.. maxNrOfSCCPCHs)) OF Secondary-CCPCH-TDD-InformationItem

Secondary-CCPCH-TDD-InformationItem ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType,
    tFCI-Presence           TFCI-Presence,
    secondary-CCPCH-TDD-Code-Information Secondary-CCPCH-TDD-Code-Information,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionLength        RepetitionLength,
    repetitionPeriod        RepetitionPeriod,
    iE-Extensions          ProtocolExtensionContainer { { Secondary-CCPCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

Secondary-CCPCH-TDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CCPCH-TDD-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfSCCPCHs)) OF Secondary-CCPCH-TDD-Code-InformationItem

Secondary-CCPCH-TDD-Code-InformationItem ::= SEQUENCE {
    tDD-ChannelisationCode TDD-ChannelisationCode,
    iE-Extensions          ProtocolExtensionContainer { {Secondary-CCPCH-TDD-Code-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

Secondary-CCPCH-TDD-Code-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

S-FieldLength                 ::= ENUMERATED {
    v1,
    v2,
    ...
}

SpecialBurstScheduling ::= INTEGER (1..256)

SpreadingFactor               ::= INTEGER (4| 8| 16| 32| 64| 128| 256)

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

SRB-Delay ::= INTEGER(0..7,...)

SSDT-CellID ::= ENUMERATED {
    a,
    b,
    c,
    d,
    e,
    f,
    g,
    h
}

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

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

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

STTD-Indicator ::= ENUMERATED {
    active,
    inactive
}
```

```
STTD-SupportIndicator ::= ENUMERATED {
    sTTD-Supported,
    sTTD-not-Supported
}

SyncCase ::= INTEGER (1..2,...)

SynchronisationConfiguration ::= SEQUENCE {
    n-INSYNC-IND          INTEGER (1..256),
    n-OUTSYNC-IND        INTEGER (1..256),
    t-RLFAILURE          INTEGER (0..255),
    -- Unit seconds, Range 0s .. 25.5s, Step 0.1s
    iE-Extensions       ProtocolExtensionContainer { { SynchronisationConfiguration-ExtIEs} } OPTIONAL,
    ...
}

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

-- T

TDD-ChannelisationCode ::= ENUMERATED {
    chCode1div1,
    chCode2div1,
    chCode2div2,
    chCode4div1,
    chCode4div2,
    chCode4div3,
    chCode4div4,
    chCode8div1,
    chCode8div2,
    chCode8div3,
    chCode8div4,
    chCode8div5,
    chCode8div6,
    chCode8div7,
    chCode8div8,
    chCode16div1,
    chCode16div2,
    chCode16div3,
    chCode16div4,
    chCode16div5,
    chCode16div6,
    chCode16div7,
    chCode16div8,
    chCode16div9,
    chCode16div10,
    chCode16div11,
    chCode16div12,
```

```

    chCode16div13,
    chCode16div14,
    chCode16div15,
    chCode16div16,
    ...
}

TDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF TDD-DCHs-to-ModifyItem

TDD-DCHs-to-ModifyItem ::= SEQUENCE {
    ul-FP-Mode          UL-FP-Mode    OPTIONAL,
    toAWS               ToAWS         OPTIONAL,
    toAWE               ToAWE         OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    dCH-SpecificInformationList TDD-DCHs-to-ModifySpecificInformationList,
    iE-Extensions      ProtocolExtensionContainer { {TDD-DCHs-to-ModifyItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-DCHs-to-ModifyItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DCHs-to-ModifySpecificInformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF TDD-DCHs-to-ModifySpecificItem

TDD-DCHs-to-ModifySpecificItem ::= SEQUENCE {
    dCH-ID              DCH-ID,
    ul-CCTrCH-ID        CCTrCH-ID    OPTIONAL,
    dl-CCTrCH-ID        CCTrCH-ID    OPTIONAL,
    ul-TransportformatSet TransportFormatSet OPTIONAL,
    dl-TransportformatSet TransportFormatSet OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority FrameHandlingPriority OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { {TDD-DCHs-to-ModifySpecificItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-DCHs-to-ModifySpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DL-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-DL-Code-InformationItem

TDD-DL-Code-InformationItem ::= SEQUENCE {
    dPCH-ID             DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    iE-Extensions      ProtocolExtensionContainer { {TDD-DL-Code-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-DL-Code-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```
}
...
}
TDD-DPCHOffset ::= CHOICE {
    initialOffset      INTEGER (0..255),
    noinitialOffset    INTEGER (0..63)
}

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

TDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size1,
    step-size2,
    step-size3,
    ...
}

TDD-UL-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-UL-Code-InformationItem

TDD-UL-Code-InformationItem ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    iE-Extensions          ProtocolExtensionContainer { {TDD-UL-Code-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-UL-Code-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

TGD ::= INTEGER (0|15..269)
-- 0 = Undefined, only one transmission gap in the transmission gap pattern sequence
```



```

TGPRC ::= INTEGER (0..63)
-- 0 = infinity

TGPSID ::= INTEGER (1.. maxTGPS)

TGSN ::= INTEGER (0..14)

TimeSlot ::= INTEGER (0..14)

TimingAdvanceApplied ::= ENUMERATED {
    yes,
    no
}

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID TGPSID,
        tGSN TGSN,
        tGL1 GapLength,
        tGL2 GapLength OPTIONAL,
        tGD TGD,
        tGPL1 GapDuration,
        tGPL2 GapDuration OPTIONAL,
        uL-DL-mode UL-DL-mode,
        downlink-Compressed-Mode-Method Downlink-Compressed-Mode-Method OPTIONAL,
        -- This IE isonly shall be present if the value of the UL/DL mode IE is "DL only" or "UL/DL"
        uplink-Compressed-Mode-Method Uplink-Compressed-Mode-Method OPTIONAL,
        -- This IE isonly shall be present if the value of the UL/DL mode IE is "UL only" or "UL/DL"
        dL-FrameType DL-FrameType,
        delta-SIR1 DeltaSIR,
        delta-SIR-after1 DeltaSIR,
        delta-SIR2 DeltaSIR OPTIONAL,
        delta-SIR-after2 DeltaSIR OPTIONAL,
        iE-Extensions ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Transmission-Gap-Pattern-Sequence-ScramblingCode-Information ::= ENUMERATED{
    code-change,
    nocode-change
}

Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF

```

```

SEQUENCE {
    tGPSID          TGPSID,
    tGPRC           TGPRC,
    tGCFN           CFN,
    iE-Extensions  ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs } } OPTIONAL,
    ...
}

Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

TransmitDiversityIndicator ::= ENUMERATED {
    active,
    inactive
}

TransportBearerID          ::= INTEGER (0..4095)

TransportBearerRequestIndicator ::= ENUMERATED {
    bearer-requested,
    bearer-not-requested,
    ...
}

TransportBlockSize          ::= INTEGER (0..5000)
-- Unit is bits

TransportFormatCombination-Beta ::= CHOICE {
    signalledGainFactors SEQUENCE {
        betaC          BetaCD,
        betaD          BetaCD,
        refTFCNumber   RefTFCNumber OPTIONAL,
        iE-Extensions  ProtocolExtensionContainer { { SignalledGainFactors-ExtIEs } } OPTIONAL,
    }
}

```

```

    },
    refTFCNumber          RefTFCNumber,
    ...
}

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

TFCS ::= SEQUENCE {
    tFCSvalues            CHOICE {
        no-Split-in-TFCI      TFCS-TFCSList,
        split-in-TFCI         SEQUENCE {
            transportFormatCombination-DCH    TFCS-DCHList,
            signallingMethod                   CHOICE {
                tFCI-Range                     TFCS-MappingOnDSCHList,
                explicit                         TFCS-DSCHList,
                ...
            },
            iE-Extensions                      ProtocolExtensionContainer { { Split-in-TFCI-ExtIEs } } OPTIONAL,
            ...
        },
        ...
    },
    iE-Extensions          ProtocolExtensionContainer { { TFCS-ExtIEs } } OPTIONAL,
    ...
}

Split-in-TFCI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

TFCS-TFCSList ::= SEQUENCE (SIZE (1..maxNrOfTFCS)) OF
SEQUENCE {
    cTFC                TFCS-CTFC,
    tFC-Beta             TransportFormatCombination-Beta    OPTIONAL,
    -- The IE shall be present if the TFCS concerns a UL DPCH [FDD - or PRACH channel-3.3.2.2].--
    iE-Extensions       ProtocolExtensionContainer { { TFCS-TFCSList-ExtIEs } } OPTIONAL,
    ...
}

TFCS-TFCSList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-CTFC ::= CHOICE {

```

```

ctfc2bit          INTEGER (0..3),
ctfc4bit          INTEGER (0..15),
ctfc6bit          INTEGER (0..63),
ctfc8bit          INTEGER (0..255),
ctfc12bit         INTEGER (0..4095),
ctfc16bit         INTEGER (0..65535),
ctfcmaxbit        INTEGER (0..maxCTFC)
}

TFCS-DCHList ::= SEQUENCE (SIZE (1..maxTFCI1Combs)) OF
  SEQUENCE {
    cTFC          TFCS-CTFC,
    iE-Extensions ProtocolExtensionContainer { { TFCS-DCHList-ExtIEs} } OPTIONAL,
    ...
  }

TFCS-DCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TFCS-MappingOnDSCHList ::= SEQUENCE (SIZE (1..maxNoTFCIGroups)) OF
  SEQUENCE {
    maxTFCI-field2-Value      TFCS-MaxTFCI-field2-Value,
    cTFC-DSCH                 TFCS-CTFC,
    iE-Extensions             ProtocolExtensionContainer { { TFCS-MappingOnDSCHList-ExtIEs} } OPTIONAL,
    ...
  }

TFCS-MappingOnDSCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TFCS-MaxTFCI-field2-Value ::= INTEGER (1..maxTFCI2Combs-1)

TFCS-DSCHList ::= SEQUENCE (SIZE (1..maxTFCI2Combs)) OF
  SEQUENCE {
    cTFC-DSCH          TFCS-CTFC,
    iE-Extensions      ProtocolExtensionContainer { { TFCS-DSCHList-ExtIEs} } OPTIONAL,
    ...
  }

TFCS-DSCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

```

```

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

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

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

TransportFormatSet-ModeDP ::= CHOICE {
  tdd                    TDD-TransportFormatSet-ModeDP,
  notApplicable          NULL,
  ...
}

TDD-TransportFormatSet-ModeDP ::= SEQUENCE {
  transmissionTimeIntervalInformation  TransmissionTimeIntervalInformation      OPTIONAL,
  -- This IE is mandatoryshall be present if the "Transmission Time Interval" of the "Semi-static Transport Format Information" is "dynamic".
  Otherwise it is absent.
  iE-Extensions          ProtocolExtensionContainer { {TDD-TransportFormatSet-ModeDP-ExtIEs} } OPTIONAL,
  ...
}

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

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

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

Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in 25.215/25.225

```

```

Transmitted-Code-Power-Value-IncrDecrThres ::= INTEGER (0..112,...)

TransportFormatManagement ::= ENUMERATED {
    cell-based,
    ue-based,
    ...
}

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

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

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

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

TrCH-SrcStatisticsDescr ::= ENUMERATED {
    speech,
    rRC,
    unknown,
    ...
}

TxDiversityIndicator ::= ENUMERATED {
    true,
    false
}

-- U

UARFCN ::= INTEGER (0..16383,...)
-- Corresponds to: 0.0Hz..3276.6Mhz. See 25.101, 25.105

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,
    iE-Extensions            ProtocolExtensionContainer { { UL-TimeSlot-ISCP-InfoItem-ExtIEs} } 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,
    iE-Extensions            ProtocolExtensionContainer { {UC-ID-ExtIEs} } OPTIONAL,
    ...
}

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

```

```

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

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

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

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

UL-ScramblingCode-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}

UL-ScramblingCodeNumber ::= INTEGER (0..16777215)

UL-TimeslotISCP ::= INTEGER (0..127)
-- According to mapping in [14]

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

URA-Information ::= SEQUENCE {
    uRA-ID                URA-ID,
    multipleURAsIndicator MultipleURAsIndicator,
    rNCsWithCellsInTheAccessedURA-List RNCsWithCellsInTheAccessedURA-List OPTIONAL,
    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,
    iE-Extensions        ProtocolExtensionContainer { {RNCsWithCellsInTheAccessedURA-Item-ExtIEs} } OPTIONAL,
    ...
}

RNCsWithCellsInTheAccessedURA-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

USCH-Information ::= SEQUENCE (SIZE (1..maxNoOfUSCHs)) OF USCH-InformationItem

USCH-InformationItem ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    ul-CCTrCH-ID          CCTrCH-ID,
    trChSourceStatisticsDescriptor TrCH-SrcStatisticsDescr,
    transportFormatSet    TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    schedulingPriorityIndicator SchedulingPriorityIndicator,
    rb-Info                RB-Info,
    iE-Extensions        ProtocolExtensionContainer { {USCH-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

USCH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- V
-- W
-- X
-- Y
-- Z

END

```

9.3.5 Common Definitions

```

-- *****
--
-- Common definitions
--
-- *****

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

```

```
DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

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

maxPrivateIEs          INTEGER ::= 65535
maxProtocolExtensions  INTEGER ::= 65535
maxProtocolIEs        INTEGER ::= 65535

-- *****
--
-- Common Data Types
--
-- *****

Criticality           ::= ENUMERATED { reject, ignore, notify }

Presence              ::= ENUMERATED { optional, conditional, mandatory }

PrivateIE-ID         ::= CHOICE {
    local              INTEGER (0.. maxPrivateIEs),
    global              OBJECT IDENTIFIER
}

ProcedureCode        ::= INTEGER (0..255)

ProcedureID ::= SEQUENCE {
    procedureCode      ProcedureCode,
    ddMode             ENUMERATED { tdd, fdd, common, ... }
}

ProtocolExtensionID ::= INTEGER (0..maxProtocolExtensions)

ProtocolIE-ID        ::= INTEGER (0..maxProtocolIEs)

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

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

END
```

9.3.6 Constant Definitions

```

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

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 ::= 1
id-compressedModeCommand                             ProcedureCode ::= 2
id-downlinkPowerControl                              ProcedureCode ::= 3
id-downlinkPowerTimeslotControl                      ProcedureCode ::= 4
id-downlinkSignallingTransfer                        ProcedureCode ::= 5
id-errorIndication                                   ProcedureCode ::= 6
id-dedicatedMeasurementFailure                       ProcedureCode ::= 7
id-dedicatedMeasurementInitiation                   ProcedureCode ::= 8
id-dedicatedMeasurementReporting                    ProcedureCode ::= 9
id-dedicatedMeasurementTermination                   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
id-synchronisedRadioLinkReconfigurationCancellation ProcedureCode ::= 21
id-synchronisedRadioLinkReconfigurationCommit        ProcedureCode ::= 22

```

```

id-synchronisedRadioLinkReconfigurationPreparation      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
maxNrOfFACHs              INTEGER ::= 8
maxFACHCountPlus1        INTEGER ::= 10
maxIBSEG                  INTEGER ::= 16
maxNrOfSCCPCHs           INTEGER ::= 8
maxTFCI1Combs             INTEGER ::= 512
maxTFCI2Combs             INTEGER ::= 1024
maxTFCI2Combs-1          INTEGER ::= 1023
maxTGPS                   INTEGER ::= 6
maxNrOfTS                 INTEGER ::= 15
maxNrOfLevels             INTEGER ::= 256

```

```

-- *****

```

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

id-AllowedQueuingTime	ProtocolIE-ID ::= 4
id-BindingID	ProtocolIE-ID ::= 5
id-C-ID	ProtocolIE-ID ::= 6
id-C-RNTI	ProtocolIE-ID ::= 7
id-CFN	ProtocolIE-ID ::= 8
id-CN-CS-DomainIdentifier	ProtocolIE-ID ::= 9
id-CN-PS-DomainIdentifier	ProtocolIE-ID ::= 10
id-Cause	ProtocolIE-ID ::= 11
id-CriticalityDiagnostics	ProtocolIE-ID ::= 20
id-D-RNTI	ProtocolIE-ID ::= 21
id-D-RNTI-ReleaseIndication	ProtocolIE-ID ::= 22
id-DCHs-to-Add-FDD	ProtocolIE-ID ::= 26
id-DCHs-to-Add-TDD	ProtocolIE-ID ::= 27
id-DCH-DeleteList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 30
id-DCH-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 31
id-DCH-DeleteList-RL-ReconfRqstFDD	ProtocolIE-ID ::= 32
id-DCH-DeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 33
id-DCH-FDD-Information	ProtocolIE-ID ::= 34
id-DCH-TDD-Information	ProtocolIE-ID ::= 35
id-FDD-DCHs-to-Modify	ProtocolIE-ID ::= 39
id-TDD-DCHs-to-Modify	ProtocolIE-ID ::= 40
id-DCH-InformationResponse	ProtocolIE-ID ::= 43
id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD	ProtocolIE-ID ::= 44
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 45
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 46
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 47
id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD	ProtocolIE-ID ::= 48
id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 49
id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD	ProtocolIE-ID ::= 50
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 51
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 52
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 53
id-FDD-DL-CodeInformation	ProtocolIE-ID ::= 54
id-DL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 59
id-DL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 60
id-DL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 61
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD	ProtocolIE-ID ::= 62
id-DL-DPCH-InformationItem-RL-AdditionRspTDD	ProtocolIE-ID ::= 63
id-DL-DPCH-InformationItem-RL-SetupRspTDD	ProtocolIE-ID ::= 64
id-DLReferencePower	ProtocolIE-ID ::= 67
id-DLReferencePowerList-DL-PC-Rqst	ProtocolIE-ID ::= 68
id-DL-ReferencePowerInformation-DL-PC-Rqst	ProtocolIE-ID ::= 69
id-DRXCycleLengthCoefficient	ProtocolIE-ID ::= 70
id-DedicatedMeasurementObjectType-DM-Rprt	ProtocolIE-ID ::= 71
id-DedicatedMeasurementObjectType-DM-Rqst	ProtocolIE-ID ::= 72
id-DedicatedMeasurementObjectType-DM-Rsp	ProtocolIE-ID ::= 73

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id-DedicatedMeasurementType
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD
id-IMSI
id-L3-Information
id-AdjustmentPeriod
id-MaxAdjustmentStep
id-MeasurementFilterCoefficient
id-MessageStructure
id-MeasurementID
id-Neighbouring-GSM-CellInformation
id-Neighbouring-UMTS-CellInformationItem
id-PagingArea-PagingRqst
id-FACH-FlowControlInformation
id-PowerAdjustmentType
id-RANAP-RelocationInformation
id-RL-Information-PhyChReconfRqstFDD
id-RL-Information-PhyChReconfRqstTDD
id-RL-Information-RL-AdditionRqstFDD
id-RL-Information-RL-AdditionRqstTDD
id-RL-Information-RL-DeletionRqst
id-RL-Information-RL-FailureInd
id-RL-Information-RL-ReconfPrepFDD
id-RL-Information-RL-RestoreInd
id-RL-Information-RL-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-AdditionRqstFDD
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-Rqst
id-RL-Set-InformationItem-DM-Rsp

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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 ::= 57
ProtocolIE-ID ::= 93
ProtocolIE-ID ::= 13
ProtocolIE-ID ::= 95
ProtocolIE-ID ::= 102
ProtocolIE-ID ::= 103
ProtocolIE-ID ::= 107
ProtocolIE-ID ::= 109
ProtocolIE-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 ::= 119
ProtocolIE-ID ::= 120
ProtocolIE-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
ProtocolIE-ID ::= 128
ProtocolIE-ID ::= 129
ProtocolIE-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 ::= 143
ProtocolIE-ID ::= 144
ProtocolIE-ID ::= 145

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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-RNTI
id-SAI
id-SRNC-ID
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
id-TransportBearerID
id-TransportBearerRequestIndicator
id-TransportLayerAddress
id-UC-ID
id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD
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-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-SIRTarget
id-URA-Information
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD
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
id-DSCHs-to-Add-TDD

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ProtocolIE-ID ::= 146
ProtocolIE-ID ::= 147
ProtocolIE-ID ::= 152
ProtocolIE-ID ::= 153
ProtocolIE-ID ::= 154
ProtocolIE-ID ::= 155
ProtocolIE-ID ::= 156
ProtocolIE-ID ::= 157
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ProtocolIE-ID ::= 160
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ProtocolIE-ID ::= 210
ProtocolIE-ID ::= 212
ProtocolIE-ID ::= 213
ProtocolIE-ID ::= 214
ProtocolIE-ID ::= 215

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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-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-ReconfRqstTDD
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
id-timeSlot-ISCP
id-CCTrCH-InformationItem-RL-FailureInd
id-CCTrCH-InformationItem-RL-RestoreInd

END

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ProtocolIE-ID ::= 216
ProtocolIE-ID ::= 217
ProtocolIE-ID ::= 218
ProtocolIE-ID ::= 219
ProtocolIE-ID ::= 220
ProtocolIE-ID ::= 221
ProtocolIE-ID ::= 222
ProtocolIE-ID ::= 223
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ProtocolIE-ID ::= 227
ProtocolIE-ID ::= 228
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ProtocolIE-ID ::= 232
ProtocolIE-ID ::= 255
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ProtocolIE-ID ::= 275
ProtocolIE-ID ::= 276
ProtocolIE-ID ::= 277
ProtocolIE-ID ::= 279
ProtocolIE-ID ::= 14
ProtocolIE-ID ::= 23
ProtocolIE-ID ::= 24
ProtocolIE-ID ::= 25
ProtocolIE-ID ::= 36
ProtocolIE-ID ::= 37
ProtocolIE-ID ::= 15
ProtocolIE-ID ::= 16

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9.3.7 Container Definitions

```
-- *****
--
-- Container definitions
--
-- *****

RNSAP-Containers {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-Containers (5) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
    maxPrivateIEs,
    maxProtocolExtensions,
    maxProtocolIEs,
    Criticality,
    Presence,
    PrivateIE-ID,
    ProtocolExtensionID,
    ProtocolIE-ID
FROM RNSAP-CommonDataTypes;

-- *****
--
-- Class Definition for Protocol IEs
--
-- *****

RNSAP-PROTOCOL-IES ::= CLASS {
    &id          ProtocolIE-ID          UNIQUE,
    &criticality Criticality,
    &Value,
    &presence    Presence
}
WITH SYNTAX {
    ID          &id
    CRITICALITY &criticality
    TYPE        &Value
    PRESENCE    &presence
}
```

```
}

-- *****
--
-- Class Definition for Protocol IEs
--
-- *****

RNSAP-PROTOCOL-IES-PAIR ::= CLASS {
    &id                ProtocolIE-ID                UNIQUE,
    &firstCriticality  Criticality,
    &FirstValue,
    &secondCriticality Criticality,
    &SecondValue,
    &presence          Presence
}
WITH SYNTAX {
    ID                &id
    FIRST CRITICALITY &firstCriticality
    FIRST TYPE        &FirstValue
    SECOND CRITICALITY &secondCriticality
    SECOND TYPE       &SecondValue
    PRESENCE          &presence
}

-- *****
--
-- Class Definition for Protocol Extensions
--
-- *****

RNSAP-PROTOCOL-EXTENSION ::= CLASS {
    &id                ProtocolExtensionID          UNIQUE,
    &criticality        Criticality,
    &Extension,
    &presence          Presence
}
WITH SYNTAX {
    ID                &id
    CRITICALITY        &criticality
    EXTENSION          &Extension
    PRESENCE          &presence
}

-- *****
--
-- Class Definition for Private IEs
--
-- *****

RNSAP-PRIVATE-IES ::= CLASS {
```

```

    &id          PrivateIE-ID,
    &criticality Criticality,
    &Value,
    &presence    Presence
}
WITH SYNTAX {
    ID          &id
    CRITICALITY &criticality
    TYPE       &Value
    PRESENCE   &presence
}

-- *****
--
-- Container for Protocol IES
--
-- *****

ProtocolIE-Container {RNSAP-PROTOCOL-IES : IESSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-Field {{IESSetParam}}

ProtocolIE-Single-Container {RNSAP-PROTOCOL-IES : IESSetParam} ::=
    ProtocolIE-Field {{IESSetParam}}

ProtocolIE-Field {RNSAP-PROTOCOL-IES : IESSetParam} ::= SEQUENCE {
    id          RNSAP-PROTOCOL-IES.&id          ({IESSetParam}),
    criticality RNSAP-PROTOCOL-IES.&criticality  ({IESSetParam}{@id}),
    value       RNSAP-PROTOCOL-IES.&Value      ({IESSetParam}{@id})
}

-- *****
--
-- Container for Protocol IE Pairs
--
-- *****

ProtocolIE-ContainerPair {RNSAP-PROTOCOL-IES-PAIR : IESSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-FieldPair {{IESSetParam}}

ProtocolIE-FieldPair {RNSAP-PROTOCOL-IES-PAIR : IESSetParam} ::= SEQUENCE {
    id          RNSAP-PROTOCOL-IES-PAIR.&id          ({IESSetParam}),
    firstCriticality RNSAP-PROTOCOL-IES-PAIR.&firstCriticality  ({IESSetParam}{@id}),
    firstValue     RNSAP-PROTOCOL-IES-PAIR.&FirstValue      ({IESSetParam}{@id}),
    secondCriticality RNSAP-PROTOCOL-IES-PAIR.&secondCriticality ({IESSetParam}{@id}),
    secondValue    RNSAP-PROTOCOL-IES-PAIR.&SecondValue     ({IESSetParam}{@id})
}

-- *****
--

```

```

-- Container Lists for Protocol IE Containers
--
-- *****

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES : IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-Container {{IEsSetParam}}

ProtocolIE-ContainerPairList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-ContainerPair {{IEsSetParam}}

-- *****
--
-- Container for Protocol Extensions
--
-- *****

ProtocolExtensionContainer {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=
  SEQUENCE (SIZE (1..maxProtocolExtensions)) OF
    ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
  id                RNSAP-PROTOCOL-EXTENSION.&id                ({ExtensionSetParam}),
  criticality       RNSAP-PROTOCOL-EXTENSION.&criticality       ({ExtensionSetParam}@id}),
  extensionValue    RNSAP-PROTOCOL-EXTENSION.&Extension         ({ExtensionSetParam}@id)
}

-- *****
--
-- Container for Private IEs
--
-- *****

PrivateIE-Container {RNSAP-PRIVATE-IES : IEsSetParam} ::=
  SEQUENCE (SIZE (1..maxPrivateIEs)) OF
    PrivateIE-Field {{IEsSetParam}}

PrivateIE-Field {RNSAP-PRIVATE-IES : IEsSetParam} ::= SEQUENCE {
  id                RNSAP-PRIVATE-IES.&id                ({IEsSetParam}),
  criticality       RNSAP-PRIVATE-IES.&criticality       ({IEsSetParam}@id}),
  value            RNSAP-PRIVATE-IES.&Value            ({IEsSetParam}@id)
}

END

```

9.4 Message Transfer Syntax

RNSAP shall use the ASN.1 Basic Packed Encoding Rules (BASIC-PER) Aligned Variant as transfer syntax as specified in ref. [20].

9.5 Timers

$T_{Preempt}$

- Specifies the maximum time that a DRNS may wait for pre-emption of resources for establishment or reconfiguration of Radio Links.

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.

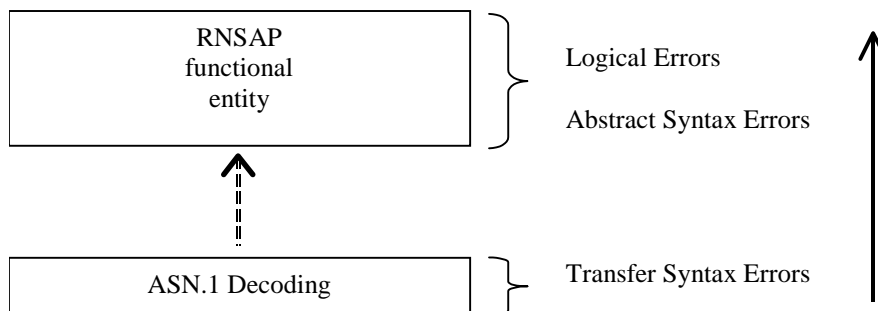


Figure 34: Protocol Errors in RNSAP

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);
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 of 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 terminate the procedure and initiate the Error Indication procedure.
- If a *response* message is received containing one or more IEs/IE groups marked with "*Reject IE*", that the receiving node does not comprehend, the receiving node shall initiate local error handling.

Ignore IE and Notify Sender:

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

Ignore IE:

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

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

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

10.3.5 Missing IE or IE group

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

Reject IE:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Reject IE*"; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the missing IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the message used to report the unsuccessful outcome of the procedure, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a received message *initiating* a procedure that does not have a message to report unsuccessful outcome is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall terminate the procedure and initiate the Error Indication procedure.
- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall initiate local error handling.

Ignore IE and Notify Sender:

- If a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE groups were missing. In case the information received in the initiating message was insufficient to determine a value for all IEs that are required to be present in the response message, the receiving node shall instead terminate the procedure and initiate the Error Indication procedure.
- If a received message *initiating* a procedure that does not have a message to report the outcome of the procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.
- If a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall initiate the Error Indication procedure.

Ignore IE:

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

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 terminate the procedure and initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".
- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall initiate local error handling.

10.4 Logical Error

Logical error situations occur when a message is comprehended correctly, but the information contained within the message is not valid (i.e. semantic error), or describes a procedure which is not compatible with the state of the receiver. In these conditions, the following behaviour shall be performed (unless otherwise specified) as defined by the class of the elementary procedure, irrespective of the criticality 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 procedure shall be terminated and the Error Indication procedure shall be initiated with an appropriate cause value.

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

Class 2:

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

Annex A (normative): Allocation and Pre-emption of Radio Links in the DRNS

A.1 Deriving Allocation Information for a Radio Link

A.1.1 Establishment of a New Radio Link

The Allocation Information for a Radio Link in the case of establishment of a new Radio Link shall be derived as follows:

- The latest received *Allocation/Retention Priority* IE for each transport channel shall be used.

Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in

- a) the procedure that establishes the first Radio Link for the UE in the DRNS or
- b) a procedure adding or modifying the transport channel.

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all transport channels that are intended to use the Radio Link is set to “not used”, the pre-emption capability of the Radio Link shall be set to “shall not trigger pre-emption”.
- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for one or more of the transport channels that are intended to use the Radio Link is not set to “not used”, the allocation priority and the pre-emption capability of the Radio Link shall be set according to the following:
 - The transport channels that have the *Priority Level* IE in the *Allocation/Retention Priority* IE set to “not used” shall be excluded when setting the allocation priority and pre-emption capability of a Radio Link.
 - The allocation priority for a Radio Link shall be set to highest priority level, given by the *Priority Level* IE in the *Allocation/Retention Priority* IE, for all non excluded transport channels that are intended to use the Radio Link.
 - If all non-excluded transport channels that are intended to use a Radio Link to be established have the pre-emption capability, given by the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE, set to “shall not trigger pre-emption”, the pre-emption capability of the Radio Link shall be set to “shall not trigger pre-emption”.
If one or more non-excluded transport channels that are intended to use the Radio Link to be established have the value of the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE set to “may trigger pre-emption”, the pre-emption capability of the Radio Link shall be set to “may trigger pre-emption”.

The derived allocation priority and pre-emption capability are only valid during this allocation/retention process.

A.1.2 Modification of an Existing Radio Link

The Allocation Information for a Radio Link in the case of modification of a Radio Link (addition or modification of transport channels using the Radio Link) shall be derived as follows:

- The latest received *Allocation/Retention Priority* IE for each transport channel shall be used.

Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in

- a) the procedure that establishes the first Radio Link for the UE in the DRNS,
- b) a previous procedure adding or modifying the transport channel, or
- c) the current procedure adding or modifying the transport channel.

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all transport channels to be added or modified in the Radio Link is set to “not used”, the pre-emption capability of the Radio Link to be modified shall be set to “shall not trigger pre-emption”.

- If the *Priority Level IE* in the *Allocation/Retention Priority IE* for one or more of the transport channels to be added or modified in the Radio Link is not set to “not used”, the allocation priority of and the pre-emption capability of the Radio Link to be modified shall be set according to the following:
 - The transport channels to be added or modified that have the *Priority Level IE* in the *Allocation/Retention Priority IE* set to “not used” shall be excluded when setting the allocation priority and pre-emption capability of a Radio Link to be modified.
 - The allocation priority for a Radio Link to be modified shall be set to highest priority level, given by the *Priority Level IE* in the *Allocation/Retention Priority IE*, for all the non-excluded transport channels that are to be added or modified.
 - If all non-excluded transport channels that are to be added or modified in the Radio Link have the pre-emption capability, given by the *Pre-emption Capability IE* in the *Allocation/Retention Priority IE*, set to “shall not trigger pre-emption”, the pre-emption capability of the Radio Link to be modified shall be set to “shall not trigger pre-emption”.
If one or more of the non-excluded transport channels to be added or modified in the Radio Link have the value of the *Pre-emption Capability IE* in the *Allocation/Retention Priority IE* set to “may trigger pre-emption”, the pre-emption capability of the Radio Link to be modified shall be set to “may trigger pre-emption”.

The derived allocation priority and pre-emption capability are only valid during this allocation/retention process.

A.2 Deriving Retention Information for a Radio Link

The Retention Information for an existing Radio Link shall be derived as follows:

- The latest received *Allocation/Retention Priority IE* for each transport channel shall be used.
- Note: The *Allocation/Retention Priority IE* for a transport channel may have been received in
- a) the procedure that establishes the first Radio Link for the UE in the DRNS or
 - b) a procedure adding or modifying the transport channel.
- If the *Priority Level IE* in the *Allocation/Retention Priority IE* for one or more transport channels using the Radio Link is set to “not used”, the pre-emption vulnerability of the Radio Link shall be set to “not pre-emptable”.
 - If the *Priority Level IE* in the *Allocation/Retention Priority IE* for all the transport channels using the Radio Link is not set to “not used”, the retention priority of the Radio Link and the pre-emption vulnerability of the Radio Link shall be set according to the following:
 - The retention priority for a Radio Link shall be set to highest priority level, given by the *Priority Level IE* in the *Allocation/Retention Priority IE*, for all transport channels that uses the Radio Link.
 - If all transport channels that uses the Radio Link have the pre-emption vulnerability, given by the *Pre-emption Vulnerability IE* in the *Allocation/Retention Priority IE*, set to “pre-emptable”, the pre-emption vulnerability of the Radio Link shall be set to “pre-emptable”.
If one or more transport channels that uses the Radio Link have the value of the *Pre-emption Vulnerability IE* in the *Allocation/Retention Priority IE* set to “not pre-emptable”, the pre-emption vulnerability of the Radio Link shall be set to “not pre-emptable”.

The derived retention priority and pre-emption vulnerability are valid until they are changed, or until the Radio Link is deleted. When new transport channels are added to or deleted from the Radio Link or when existing transport channels are modified with regards to the *Allocation/Retention Priority IE*, the retention information shall be derived again according to above.

A.3 The Allocation/Retention Process

The DRNS shall establish or modify the resources for a Radio Link according to:

- The value of the Allocation Information (allocation priority and pre-emption capability) of the Radio to be established or modified. The Allocation Information is derived according to clause A.1.

- The value of the Retention Information (retention priority and pre-emption vulnerability) of existing Radio Links. The Retention Information derived according to clause A.2.
- The resource situation in the DRNS.

Whilst the process and the extent of the pre-emption functionality is operator dependent, the pre-emption indicators (pre-emption capability and pre-emption vulnerability) shall be treated as follows:

- If the pre-emption capability for a Radio Link to be established or modified is set to “may trigger pre-emption” and the resource situation so requires, the DRNS may trigger the pre-emption process in clause A.4 to free resources for this allocation request.
- If the pre-emption capability for a Radio Link to be established or modified is set to “shall not trigger pre-emption”, then this allocation request shall not trigger the pre-emption process in clause A.4.
- If the pre-emption vulnerability for an existing Radio Link is set to “pre-emptable”, then this Radio Link shall be included in the pre-emption process in clause A.4.
- If the pre-emption vulnerability for an existing Radio Link is set to “not pre-emptable”, then this Radio Link shall not be included in the pre-emption process in clause A.4.

A.4 The Pre-emption Process

The pre-emption process shall only pre-empt Radio Links with lower retention priority than the allocation priority of the Radio Link to be established or modified. The Radio Links to be pre-empted shall be selected in ascending order of the retention priority.

When the pre-emption process detects that one or more Radio Links have to be pre-empted to free resources for a Radio Link(s) to be established or modified, the DRNS shall initiate the Radio Link Pre-emption procedure for all the UE Contexts having Radio Links selected for pre-emption and start the T_{Preempt} timer.

When enough resources are freed to establish or modify the Radio Link(s) according to the request, the DRNS shall stop the T_{Preempt} timer and complete the procedure that triggered the pre-emption process in accordance with the “Successful Operation” subclause of the procedure.

If the T_{Preempt} timer expires, the DRNS shall regard the procedure that triggered the pre-emption process as failed and complete the procedure in accordance with the “Unsuccessful Operation” subclause of the procedure.

Annex B (informative): Change history

Change history					
TSG RAN#	Version	CR	Tdoc RAN	New Version	Subject/Comment
RAN_06	-	-	RP-99755	3.0.0	Approved at TSG RAN #6 and placed under Change Control
RAN_07	3.0.0	-	RP-000100	3.1.0	Approved at TSG RAN #7
RAN_07	3.0.0	-	RP-000143	3.1.0	Approved at TSG RAN #7
RAN_07	3.0.0	-	RP-000146	3.1.0	Approved at TSG RAN #7
RAN_08	3.1.0	-	RP-000241	3.2.0	Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000242	3.2.0	Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000243	3.2.0	Approved at TSG RAN #8
RAN_08	3.1.0	-	RP-000244	3.2.0	Approved at TSG RAN #8
RAN_09	3.2.0	145-149, 151-154, 156-164, 166 167	RP-000379	3.3.0	Approved at TSG RAN #9
RAN_09	3.2.0	168 169 171 173 174 176 178-180 183-193	RP-000380	3.3.0	Approved at TSG RAN #9
RAN_09	3.2.0	194-200-	RP-000381	3.3.0	Approved at TSG RAN #9
RAN_10	3.3.0	202-219, 221-228, 230, 232-239, 241, 243-257, 259, 260, 263-265, 268-272, 274-278, 280, 281	RP-000618 RP-000619 RP-000621 RP-000696	3.4.0	Approved at TSG RAN #10
RAN_11	3.4.0	282-286, 288-293, 295-302, 304-308, 311, 313-319, 329, 332, 334-335	RP-010117 RP-010118	3.5.0	Approved at TSG RAN #11

3GPP TSG-RAN3 Meeting #21
 Busan, Korea, 21-25 May 2001

Tdoc R3-011881

CR-Form-v3	
CHANGE REQUEST	
⌘ 25.423 CR 414 ⌘ rev 2 ⌘ Current version: 4.0.0 ⌘	

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

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

Title:	⌘ Alignment of Conditional Presence with RAN3 Specification Principles		
Source:	⌘ R-WG3		
Work item code:	⌘ TEI	Date:	⌘ 24/05/01
Category:	⌘ A	Release:	⌘ REL-4
	Use <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		

Reason for change:	⌘ Many of the existing conditions are not aligned with the RAN3 rules on conditional presence, or require editorial correction.
Summary of change:	⌘ R2: Minor editorial corrections highlighted in yellow. R1: Minor corrections highlighted in green. In 9.2.1.31C, the condition has been changed to a choice to align with ASN.1 Many conditions are reworded to use a standard wording; Some conditional elements are replaced with optional presence + procedure text Some lists of conditional elements are replaced with choices in the tabular format The change is backwards compatible, except that a different cause value may be used in a small number of error cases.
Consequences if not approved:	⌘ The error handling will be unnecessarily complex and will not be able to handle conditional elements in a consistent manner.

Clauses affected:	⌘ 8.2.5.4, 8.5.6.2, 8.5.7.2, 9.1.2.1, 9.1.3.1, 9.1.4.1, 9.1.4.2, 9.1.11.1, 9.1.11.2, 9.1.20, 9.1.39, 9.1.43, 9.2.1.12A, 9.2.1.12D, 9.2.1.19, 9.2.1.31C, 9.2.1.31F, 9.2.1.38, 9.2.1.39, 9.2.1.41D, 9.2.1.48, 9.2.1.48A, 9.2.1.52B, 9.2.1.59C, 9.2.1.63, 9.2.1.64, 9.2.2.37B, 9.2.2.47A, 9.2.3.2A, 9.2.3.4, 9.2.3.4C, 9.3.4.	
Other specs affected:	⌘ <input checked="" type="checkbox"/> Other core specifications	⌘ TS 25.423 v3.5.0 CR 413 TS 25.433 v4.0.0 CR 467 TS 25.433 v3.5.0 CR 466
	<input type="checkbox"/> Test specifications	
	<input type="checkbox"/> O&M Specifications	
Other comments:	⌘ When the changes to the tabular format result in empty rows, it is intended that	

the blank rows shall be deleted. When the change results in an empty table, the blank table shall be deleted.

How to create CRs using this form:

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

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

8.3 DCH procedures

8.3.1 Radio Link Setup

8.3.1.1 General

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

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

8.3.1.2 Successful Operation

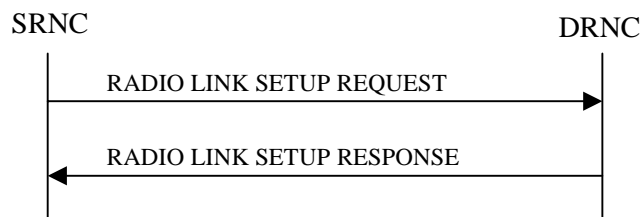


Figure 5: Radio Link Setup procedure: Successful Operation

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

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. The *First RLS Indicator* IE shall be used by the DRNS to determine the initial TPC pattern in the DL of the concerning RL and all RLs which are part of the same RLS, as described in [10], section 5.1.2.2.1.2.

[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 UL synchronisation on the Uu interface.]

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 both the *Initial DL TX Power* IE and *Uplink SIR Target* IE are included in the message, the DRNS shall use the indicated DL TX Power and Uplink SIR Target as initial value. If the value of the *Initial DL TX Power* IE is outside the configured DL TX power range, the DRNS shall apply these constraints 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 [3.84Mcps TDD - *DL Time Slot ISCP Info* IE] and/or the [1.28Mcps TDD - *DL Time Slot ISCP Info LCR* IE] are present, the DRNC should use the indicated values when deciding the Initial DL TX Power.]

[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 on the Uu interface for the concerning RLS or a DL POWER CONTROL REQUEST message is received. No inner loop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10] subclause 5.2.1.2) and the power control procedure (see 8.3.7).]

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

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

[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 between different frames of the data frames of the DCHs in the downlink on the radio interface in congestion situations once the new RL(s) have been activated.

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

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

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

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

- If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS may decide to request the SRNC to limit the user rate of the uplink of the DCH at any point in time. If the *DCH Specific Info* IE in the *DCH Information* IE does not include the *Guaranteed UL Rate* IE the DRNS shall regard the maximum rate as the guaranteed rate in the uplink of this DCH.
- If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS may decide to request the SRNC to limit the user rate of the downlink of the DCH at any point in time. If the *DCH Specific Info* IE in

the *DCH Information* IE does not include the *Guaranteed DL Rate* IE the DRNS shall regard the maximum rate as the guaranteed rate in the downlink of this DCH.

[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 *SSDT Cell Identity for EDSCHPC* IE, the DRNS shall activate enhanced DSCH power control, if supported, using the *SSDT Cell Identity for EDSCHPC* IE and *SSDT Cell Identity Length* IE as well as *Enhanced DSCH PC* IE. If the RADIO LINK SETUP REQUEST message includes both *SSDT Cell Identity* IE and *SSDT Cell Identity for EDSCHPC* IE, then DRNS shall ignore the *SSDT Cell Identity for EDSCHPC* 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 Transmission Gap Pattern Sequences: for each sequence the *TGCFN* refers to latest passed CFN with that value.]

[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 established.

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

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

[FDD – 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 for all RLs but the first 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 not be included for the first 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 co-ordinated 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.

If the DRNS need to limit the user rate in the uplink of a DCH already when starting to utilise a new Radio Link, the DRNC shall include the *Allowed UL Rate IE* of the *Allowed Rate Information IE* in the *DCH Information Response IE* for this DCH in the RADIO LINK SETUP RESPONSE message for this Radio Link.

If the DRNS need to limit the user rate in the downlink of a DCH already when starting to utilise a new Radio Link, the DRNC shall include the *Allowed DL Rate IE* of the *Allowed Rate Information IE* in the *DCH Information Response IE* for this DCH in the RADIO LINK SETUP RESPONSE message for this Radio Link.

[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, [3.84Mcps TDD - the Sync Case, the SCH Time Slot information], the Block STTD Indicator] and the node identification of the CN nodes connected to the RNC controlling 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.

[FDD - If the *D-RNTI IE* was included in 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.]

[TDD – If the *D-RNTI IE* was included in the RADIO LINK SETUP REQUEST message the DRNC shall include the *UARFCN IE*, the *Cell Parameter ID IE*, the *Sync Case IE*, the *SCH Time Slot IE*, the *Block STTD Indicator IE*, and the *PCCPCH 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 DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message the *Secondary CCPCH Info IE* 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, the DRNC shall not provide these IEs in the RADIO LINK SETUP RESPONSE message.]

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

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell, represented either by the *Cell GAI IE* or by the *Cell GA Additional Shapes IE* 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 on the Uu interface and start reception on the new RL. [FDD - The DRNS shall start DL transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [4].] [TDD – The DRNS shall start transmission on the new RL immediately as specified in ref. [4].]

[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 Indicator* IE].

[FDD- If the *Downlink Compressed Mode Method* IE in one or more Transmission Gap Pattern Sequence is set to 'SF/2' in the RADIO LINK SETUP REQUEST message, the 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 Uu 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 established in a cell where at least one URA Identity is being broadcast, the DRNC shall include a URA Identity for this cell in the *URA ID* IE, the *Multiple URAs Indicator* IE indicating whether or not multiple URA Identities are being broadcast in the cell, 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

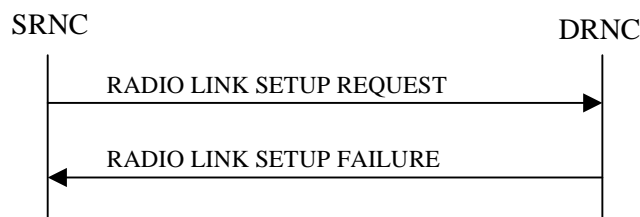


Figure 6: Radio Link Setup procedure: Unsuccessful Operation

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

[FDD - If only the *Initial DL TX Power* IE or the *Uplink SIR Target* IE is included in the RADIO LINK SETUP REQUEST message, then DRNC shall regard the Radio Link Setup procedure as failed and shall respond with the 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;
- Number of UL codes not supported;
- Dedicated Transport Channel Type not Supported;
- DL Shared Channel Type not Supported;
- [TDD - UL Shared Channel Type not Supported];
- [FDD - UL Spreading Factor not Supported];
- [FDD - DL Spreading Factor not Supported];
- CM not Supported;
- [FDD – DPC mode change not Supported].

Transport Layer Causes:

- Transport Resource Unavailable.

Miscellaneous Causes:

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

8.3.1.4 Abnormal Conditions

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

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

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

8.5.1 Error Indication

8.5.1.1 General

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

This procedure shall use the signalling bearer mode specified below.

8.5.1.2 Successful Operation

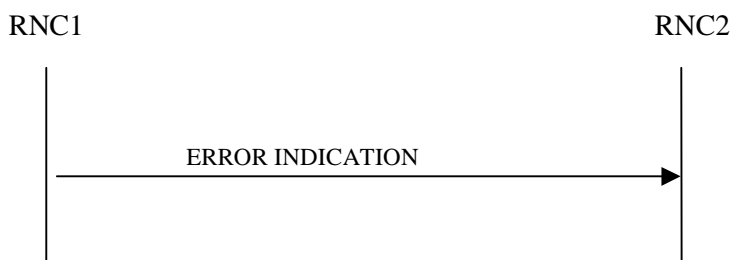


Figure 30: Error Indication procedure, Successful Operation

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

The ERROR INDICATION message shall include either the Cause IE, or the Criticality Diagnostics IE, or both the Cause IE and the Criticality Diagnostics IE.

Typical cause values for the ERROR INDICATION message are:

Protocol Causes:

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

8.5.1.3 Abnormal Conditions

-

8.5.2 Common Measurement Initiation

8.5.2.1 General

This procedure is used by an RNC to request the initiation of measurements of common resources to another RNC. The requesting RNC is referred to as RNC₁ and the RNC to which the request is sent is referred to as RNC₂.

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

8.5.2.2 Successful Operation

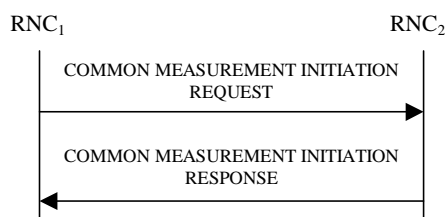


Figure 30A: Common Measurement Initiation procedure, Successful Operation

The procedure is initiated with a COMMON MEASUREMENT INITIATION REQUEST message sent from the RNC₁ to the RNC₂.

Upon reception, the RNC₂ shall initiate the requested measurement according to the parameters given in the request.

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

[TDD- If the Time Slot Information is provided in the *Common Measurement Object Type* IE , the measurement request shall apply to the requested time slot individually.]

If the *Common Measurement Type* IE is not set to 'SFN-SFN Observed Time Difference' and the *SFN Reporting Indicator* IE is set to "FN Reporting Required", the *SFN* IE shall be included in the measurement report or in the measurement response, the latter only in the case the *Report Characteristics* IE is set to 'On-Demand'. The reported SFN shall be the SFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [26]. If the *Common Measurement Type* IE is set to 'SFN-SFN Observed Time Difference', then the *SFN Reporting Indicator* IE is ignored.

If the *SFN* IE is provided, it indicates the frame for which the first measurement shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [26]. Furthermore, if the *SFN* IE is present and if the *Common Measurement Object Type* IE is set to "UP Neighbouring Cell", then the *SFN* IE relates to the Radio Frames of the Reference Cell identified by the first *UTRAN Cell Identifier* IE.

Common measurement type

If the *Common Measurement Type* IE is set to 'SFN-SFN Observed Time Difference', then the RNC₂ shall initiate the SFN-SFN Observed Time Difference measurements between the reference cell identified by *C-ID* IE and the neighbouring cells identified by the *UTRAN Cell Identifier* IE (*UC-Id*).

If the *Common Measurement Type* IE is set to 'load', the RNC₂ shall initiate measurements of uplink and downlink load on the measured object. If either uplink or downlink load satisfies the requested report characteristics, the RNC₂ shall report the result of both uplink and downlink measurements.

Report characteristics

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

If the *Report Characteristics* IE is set to 'On-Demand', the RNC₂ shall report the result of the requested measurement immediately.

If the *Report Characteristics* IE is set to 'Periodic', the RNC₂ shall periodically initiate a Measurement Reporting procedure for this measurement, with the requested report frequency. Furthermore, if the *Common Measurement Type* IE is set to 'SFN-SFN Observed Time Difference', then all the available measurements shall be reported in the *Successful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE and the neighbouring cells with no measurement result available shall be reported in the *Unsuccessful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE.

If the *Report Characteristics* IE is set to 'Event A', the RNC₂ shall initiate a Measurement Reporting procedure when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the RNC₂ shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event B', the RNC₂ shall initiate a Measurement Reporting procedure when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the RNC₂ shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event C', the RNC₂ shall initiate a Measurement Reporting procedure when the measured entity rises more than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event D', the RNC₂ shall initiate a Measurement Reporting procedure when the measured entity falls more than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event E', the RNC₂ shall initiate the 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 RNC₂ shall initiate the Measurement Reporting procedure periodically. If the conditions for Report A have been met and the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time', the RNC₂ shall initiate the Common Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the RNC₂ shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the RNC₂ 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 RNC₂ shall initiate the 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 RNC₂ shall also initiate the Measurement Reporting procedure periodically. If the conditions for Report A have been met and the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time', the RNC₂ shall initiate the Common Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the RNC₂ shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the RNC₂ shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to 'On Modification', the RNC₂ shall report the result of the requested measurement immediately. Then the RNC₂ shall initiate the Common Measurement Reporting procedure in accordance to the following conditions:

1. If the *Common Measurement Type* IE is set to 'UTRAN GPS Timing of Cell Frame for LCS':

- If the *T_{UTRAN-GPS} Change Limit* IE is included in the *T_{UTRAN-GPS} Measurement Threshold Information* IE, the RNC₂ shall each time a new measurement result is received from the physical layer measurement, calculate the change of T_{UTRAN-GPS} value (F_n). The RNC₂ shall initiate the Common Measurement Reporting procedure and set n equal to zero when the absolute value of F_n rises above the threshold indicated by the *T_{UTRAN-GPS} Change Limit* IE. The change of T_{UTRAN-GPS} value (F_n) is calculated according to the following:

$$F_n = 0 \text{ for } n = 0$$

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

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

M_n is the latest measurement result received from the physical layer measurements, measured at SFN_n.

M_{n-1} is the previous measurement result received from the physical layer measurements, measured at SFN_{n-1}.

M₁ is the first measurement result received from the physical layer measurements after first Common Measurement Reporting at initiation or after the last event was triggered.

M₀ is equal to the value reported in the first Common Measurement Reporting at initiation or in the Common Measurement Reporting when the event was triggered.

- If the *Predicted T_{UTRAN-GPS} Deviation Limit* IE is included in the *T_{UTRAN-GPS} Measurement Threshold Information* IE, the RNC₂ shall, each time a new measurement result is received from the physical layer measurement, update the P_n and F_n. The RNC₂ shall initiate the Common Measurement Reporting procedure and set n equal to zero when F_n rises above the threshold indicated by the *Predicted T_{UTRAN-GPS} Deviation Limit* IE. The P_n and F_n are calculated according to the following:

$$P_n = b \text{ for } n=0$$

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

$$F_n = \min(\text{abs}(M_n - P_n), \text{abs}(M_n - P_n - 37158912000000), \text{abs}(M_n - P_n + 37158912000000)) \text{ for } n>0$$

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

a is the last reported $T_{\text{UTRAN-GPS}}$ Drift Rate value.

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

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

M_n is the latest measurement result received from the physical layer measurements, measured at SFN_n .

M_1 is the first measurement result received from the physical layer measurements after first Common Measurement Reporting at initiation or after the last event was triggered.

The $T_{\text{UTRAN-GPS}}$ Drift Rate is determined by the Node B in an implementation-dependent way after point B (see model of physical layer measurements in [26]).

2. If the *Common Measurement Type* IE is set to ‘SFN-SFN Observed Time Difference’:

- If the *SFN-SFN Change Limit* IE is included in the *SFN-SFN Measurement Threshold Information* IE, the RNC₂ shall each time a new measurement result is received from the physical layer measurement, calculate the change of SFN-SFN value (F_n). The RNC₂ shall initiate the Common Measurement Reporting procedure in order to report the particular SFN-SFN measurement which has triggered the event and set n equal to zero when the absolute value of F_n rises above the threshold indicated by the *SFN-SFN Change Limit* IE. The change of the SFN-SFN value is calculated according to the following:

$$F_n = 0 \text{ for } n=0$$

$$F_n = (M_n - a) \bmod 40960 \text{ for } n>0$$

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

a is the last reported SFN-SFN.

M_n is the latest measurement result received from the physical layer measurements, measured at SFN_n .

M_1 is the first measurement result received from the physical layer measurements after first Common Measurement Reporting at initiation or after the last event was triggered.

- If the *Predicted SFN-SFN Deviation Limit* IE is included in the *SFN-SFN Measurement Threshold Information* IE, the RNC₂ shall each time a new measurement result is received from the physical layer measurement, update the P_n and F_n . The RNC₂ shall initiate the Common Measurement Reporting procedure in order to report the particular SFN-SFN measurement which has triggered the event and set n equal to zero when F_n rises above the threshold indicated by the *Predicted SFN-SFN Deviation Limit* IE. The P_n and F_n are calculated according to the following:

$$P_n = b \text{ for } n=0$$

$$P_n = ((a * (15 * ((SFN_n - SFN_{n-1}) \bmod 4096) + (TS_n - TS_{n-1})) * 2560 * 16 + P_{n-1}) \bmod 40960) - 20480 \text{ for } n>0$$

$$F_n = \min(\text{abs}(M_n - P_n), \text{abs}(M_n - P_n - 40960), \text{abs}(M_n - P_n + 40960)) \text{ for } n>0$$

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

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

b is the last reported SFN-SFN value.

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

M_n is the latest measurement result received from the physical layer measurements, measured at the Time Slot TS_n of the Frame SFN_n .

M_1 is the first measurement result received from the physical layer measurements after first Common Measurement Reporting at initiation or after the last event was triggered.

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

If the *Report Characteristics* IE is not set to 'On-Demand', the RNC₂ is required to perform reporting for a common measurement object, in accordance with the conditions provided in the COMMON MEASUREMENT INITIATION REQUEST message, as long as the object exists. If no common measurement object(s) for which a measurement is defined exists any more the RNC₂ shall terminate the measurement locally without reporting this to RNC₁.

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 RNC₂ shall initiate a Measurement Reporting procedure immediately, and then continue with the measurements as specified in the COMMON MEASUREMENT INITIATION REQUEST message.

Common measurement accuracy

If the *Common Measurement Type* IE is set to 'UTRAN GPS Timing of Cell Frames for LCS', then the *UTRAN GPS Timing Measurement Minimum Accuracy Class* IE included in the *Report Characteristics* IE indicates the minimum accuracy class required in the measurements.

- If the *UTRAN GPS Timing Measurement Minimum Accuracy Class* IE indicates 'Class A', then the concerned RNC₂ shall perform the measurement with the highest supported accuracy according to any of the accuracy classes A, B or C.
- If the *UTRAN GPS Timing Measurement Minimum Accuracy Class* IE indicates the 'Class B', then the concerned RNC₂ shall perform the measurements with the highest supported accuracy according to class B or C.
- If the *UTRAN GPS Timing Measurement Minimum Accuracy Class* IE indicates 'Class C', then the concerned RNC₂ shall perform the measurements with the highest supported accuracy according to class C only.
- If the *Common Measurement Type* IE is set to 'SFN-SFN Observed Time Difference', then the concerned RNC₂ shall initiate the SFN-SFN observed Time Difference measurements between the reference cell identified by *UC-ID* IE and the neighbouring cells identified by their UC-ID. The *Report Characteristics* IE applies to each of these measurements.

Higher layer filtering

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

The averaging shall be performed according to the following formula.

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

The variables in the formula are defined as follows

F_n is the updated filtered measurement result

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

M_n is the latest received measurement result from physical layer measurements

$a = 1/2^{(k/2)}$, 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 RNC₂ was able to initiate the measurement requested by RNC₁ it shall respond with the COMMON MEASUREMENT INITIATION RESPONSE message sent. The message shall include the same Measurement ID that was used in the measurement request. Only in the case when the *Report Characteristics* IE is set to "On-Demand" or "On Modification", the COMMON MEASUREMENT INITIATION RESPONSE message shall contain the measurement result. It shall also the *Common Measurement Achieved Accuracy* IE in the *Common Measurement Value* IE if the *Common Measurement Type* IE is set to 'UTRAN GPS Timing of Cell Frame for LCS'.

Furthermore, if the *Common Measurement Type* IE is set to 'SFN-SFN Observed Time Difference', then all the available measurements shall be reported in the *Successful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE and the neighbouring cells with no measurement result available shall be reported in the *Unsuccessful Neighbouring cell SFN-SFN Observed Time Difference Measurement Information* IE.

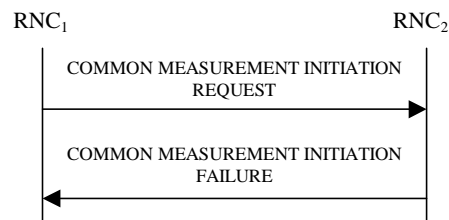
8.5.2.3 Unsuccessful Operation

Figure 30B: Common Measurement Initiation procedure, Unsuccessful Operation

If the Common Measurement Type received in the *Common Measurement Type* IE is not 'load', and if the Common Measurement Type received in the *Common Measurement Type* IE is not defined in ref. [11] or [15] to be measured on the Common Measurement Object Type received in the *Common Measurement Object Type* IE in the COMMON MEASUREMENT INITIATION REQUEST message the RNC₂ shall regard the Common Measurement Initiation procedure as failed.

If the requested measurement cannot be initiated, the RNC₂ shall send a COMMON MEASUREMENT INITIATION FAILURE message. The message shall include the same Measurement ID that was used in the COMMON MEASUREMENT INITIATION REQUEST message and the *Cause* IE set to an appropriate value.

If the *Common Measurement Type* IE is set to 'SFN-SFN Observed Time Difference', but the *Neighbouring Cell Measurement Information* IE is not received in the COMMON MEASUREMENT INITIATION REQUEST message, the RNC₂ shall regard the Common Measurement Initiation procedure as failed.

If the *Common Measurement Type* IE is set to 'UTRAN GPS Timing of Cell Frame for LCS', but the *T_{UTRAN-GPS} Measurement Minimum Accuracy Class* IE in the *Common Measurement Accuracy* IE is not received in the COMMON MEASUREMENT INITIATION REQUEST message, the RNC₂ shall regard the Common Measurement Initiation procedure as failed.

Typical cause values are as follows:

Radio Network Layer Cause

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

8.5.2.4 Abnormal Conditions

If the COMMON MEASUREMENT INITIATION REQUEST message contains the *SFN-SFN Measurement Threshold Information* IE (in the *Measurement Threshold* IE contained in the *Report Characteristics* IE) and it does not contain at least one IE, the RNC₂ shall reject the procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

If the COMMON MEASUREMENT INITIATION REQUEST message contains the *T_{UTRAN-GPS} Measurement Threshold Information* IE (in the *Measurement Threshold* IE contained in the *Report Characteristics* IE) and it does not

contain at least one IE, the RNC₂ shall reject the procedure using the COMMON MEASUREMENT INITIATION FAILURE message.

8.5.6 Information Exchange Initiation

8.5.6.1 General

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

This procedure uses the signalling bearer connection for the relevant Information Exchange Context.

8.5.6.2 Successful Operation

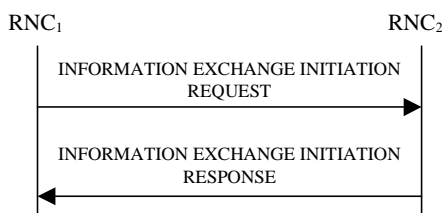


Figure 30F: Information Exchange Initiation procedure, Successful Operation

The procedure is initiated with an INFORMATION EXCHANGE INITIATION REQUEST message sent from RNC₁ to RNC₂.

Upon reception, the RNC₂ shall provide the requested information according to the parameters given in the request. Unless specified below, the meaning of the parameters are given in other specifications.

Information Report Characteristics:

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

If the *Information Report Characteristics* IE is set to 'On-Demand', the RNC₂ shall report the requested information immediately.

If the *Information Report Characteristics* IE is set to 'Periodic', the RNC₂ shall periodically initiate the Information Reporting procedure for all the requested information, with the requested report frequency.

If the *Information Report Characteristics* IE is set to 'On-Modification', the RNC₂ shall report the requested information immediately and then shall initiate the Information Reporting procedure in accordance to the following conditions:

- If the *Information Type Item* IE is set to 'IPDL Parameters', the RNC₂ shall initiate the Information Reporting procedure when any change in the parameters occurs.
- If the *Information Type Item* IE is set to 'DGPS Corrections', the RNC₂ shall initiate the Information Reporting procedure for this specific Information Type when either the PRC has drifted from the previously reported value more than the threshold indicated in the *PRC Deviation* IE or a change has occurred in the IODE.
- If the *Information Type Item* IE is set to 'GPS Information' and the *GPS Information Item* IE includes 'GPS Navigation Model & Recovery Assistance', the RNC₂ shall initiate the Information Reporting procedure for this specific GPS Information Type when a change has occurred regarding either the IODC or the list of visible satellites, identified by the *SatID* IEs.
- If the *Information Type Item* IE is set to 'GPS Information' and the *GPS Information Item* IE includes 'GPS Ionospheric Model', the RNC₂ shall initiate the Information Reporting procedure for this specific GPS Information Type when any change has occurred.
- If the *Information Type Item* IE is set to 'GPS Information' and the *GPS Information Item* IE includes 'GPS UTC Model', the RNC₂ shall initiate the Information Reporting procedure for this specific GPS Information Type when a change has occurred in the t_ot parameter.

- If the *Information Type Item* IE is set to 'GPS Information' and the *GPS Information Item* IE includes 'GPS Almanac', the RNC₂ shall initiate the Information Reporting procedure for this specific GPS Information Type when any change has occurred.
- If the *Information Type Item* IE is set to 'GPS Information' and the *GPS Information Item* IE includes 'GPS Real-Time Integrity', the RNC₂ shall initiate the Information Reporting procedure for this specific GPS Information Type when any change has occurred.

Response message:

If the RNC₂ was able to determine the information requested by the RNC₁, it shall respond with the INFORMATION EXCHANGE INITIATION RESPONSE message. The message shall include the same Information Exchange ID that was included in the INFORMATION EXCHANGE REQUEST message.

If the *Requested Data Value* IE is included in the INFORMATION EXCHANGE INITIATION RESPONSE message, it shall include at least one IE.

8.5.6.3 Unsuccessful Operation

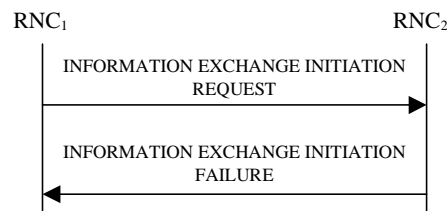


Figure 30G: Information Exchange Initiation procedure, Unsuccessful Operation

If the requested Information Type received in the *Information Type* IE indicates a type of information that RNC₂ cannot provide, the RNC₂ shall regard the Information Exchange Initiation procedure as failed.

If the requested information provision cannot be carried out, the RNC₂ shall send the INFORMATION EXCHANGE INITIATION FAILURE message. The message shall include the same Information Exchange ID that was used in the INFORMATION EXCHANGE INITIATION REQUEST message and the *Cause* IE set to an appropriate value.

Typical cause values are as follows:

Radio Network Layer Cause:

Information temporarily not available.

Information Provision not supported for the object.

8.5.6.4 Abnormal Conditions

-

8.5.7 Information Reporting

8.5.7.1 General

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

This procedure uses the signalling bearer connection for the relevant Information Exchange Context.

8.5.7.2 Successful Operation

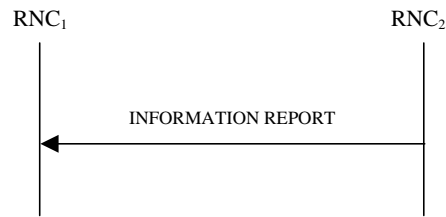


Figure 30H: Information Reporting procedure, Successful Operation

If the requested information reporting criteria are met, the RNC₂ shall initiate an Information Reporting procedure. Unless specified below, the meaning of the parameters are given in other specifications.

The *Information Exchange ID* IE shall be set to the Information Exchange ID provided by the RNC₁ when initiating the information exchange with the Information Exchange Initiation procedure.

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

8.5.7.3 Abnormal Conditions

-

9 Elements for RNSAP Communication

9.1 Message Functional Definition and Content

9.1.1 General

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

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

9.1.2 Message Contents

9.1.2.1 Presence

An information element can be of the following types:

M	IEs marked as Mandatory (M) shall always be included in the message. The information element is mandatory, i.e. always present in the message
O	IEs marked as Optional (O) may or may not be included in the message. The information element is optional, i.e. may or may not be present in the message independently on the presence or value of other information elements in the same message
C	IEs marked as Conditional (C) shall be included in a message only if the condition is satisfied. Otherwise the IE shall not be included. The presence of the information element is conditional to the presence or to the value of another information element, as reported in the table below the message containing the explanation of the condition

In case of an information element group, the group is preceded by a name for the info group (in bold). It is also indicated how many times a group may be repeated in the message and whether the group is conditional. The presence field of the information elements inside one group defines if the information element is mandatory, optional or conditional if the group is present.

9.1.2.2 Criticality

Each information element or Group of information elements may have criticality information applied to it. Following cases are possible:

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

9.1.2.3 Range

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

9.1.2.4 Assigned Criticality

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

9.1.3 RADIO LINK SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
SRNC-Id	M		RNC-Id 9.2.1.50		YES	reject
S-RNTI	M		9.2.1.53		YES	reject
D-RNTI	O		9.2.1.24		YES	reject
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL DPCH Information		1			YES	reject
>UL Scrambling Code	M		9.2.2.53		–	
>Min UL Channelisation Code Length	M		9.2.2.25		–	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.24		–	
>Puncture Limit	M		9.2.1.46	For the UL.	–	
>TFCS	M		TFCS for the UL 9.2.1.63		–	
>UL DPCCH Slot Format	M		9.2.2.52		–	
>Uplink SIR Target	O		Uplink SIR 9.2.1.69		–	
>Diversity mode	M		9.2.2.8		–	
>SSDT Cell Identity Length	O		9.2.2.41		–	
>S Field Length	O		9.2.2.36		–	
>DPC Mode	O		9.2.2.12A		YES	reject
DL DPCH Information		1			YES	reject
>TFCS	M		TFCS for the DL. 9.2.1.63		–	
>DL DPCH Slot Format	M		9.2.2.9		–	
>Number of DL Channelisation Codes	M		9.2.2.26A		–	
>TFCI Signalling Mode	M		9.2.2.46		–	
>TFCI Presence	C- SlotFormat		9.2.1.55		–	
>Multiplexing Position	M		9.2.2.26		–	
>Power Offset Information		1			–	
>>PO1	M		Power Offset 9.2.2.30	Power offset for the TFCI bits.	–	
>>PO2	M		Power Offset 9.2.2.30	Power offset for the TPC bits.	–	
>>PO3	M		Power Offset 9.2.2.30	Power offset for the pilot bits.	–	
>FDD TPC Downlink Step Size	M		9.2.2.16		–	
>Limited Power Increase	M		9.2.2.21A		–	
>Inner Loop DL PC Status	M		9.2.2.21a		–	
DCH Information	M		DCH FDD Information 9.2.2.4A		YES	reject
DSCH Information	O		DSCH FDD Information 9.2.2.13A		YES	reject
RL Information		1...<maxn oofRLs>			EACH	notify
>RL ID	M		9.2.1.49		–	

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
>C-Id	M		9.2.1.6		–	
>First RLS Indicator	M		9.2.2.16A		-	
>Frame Offset	M		9.2.1.30		–	
>Chip Offset	M		9.2.2.1		–	
>Propagation Delay	O		9.2.2.33		–	
>Diversity Control Field	C – NotFirstRL		9.2.1.20		–	
>Initial DL TX Power	C_ifAlone O		DL Power 9.2.2.10		–	
>Primary CPICH Ec/No	C_ifAlone O		9.2.2.32		–	
>SSDT Cell Identity	O		9.2.2.40		–	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.48		–	
>SSDT Cell Identity for EDSCHPC	C- EDSCHPC		9.2.2.40A		YES	ignore
Transmission Gap Pattern Sequence Information	C_CM ActiveO		9.2.2.47A		YES	reject
Active Pattern Sequence Information	O		9.2.2.A		YES	reject

Condition	Explanation
CodeLen	This-The IE shall be present only if <i>Min UL Channelisation Code #Length</i> IE equals to 4.
SlotFormat	This-The IE shall only be present if the <i>DL DPCH Slot Format</i> IE is equal to any of the values from 12 to 16.
NotFirstRL	This-The IE shall be present only if the RL is not the first one in the RL-Information IE in the RLS-Information IE.
Diversity mode	This-The IE shall be present unless-if <i>Diversity Mode</i> IE is present in <i>UL DPCH Information</i> IE and is not equal to "none".
C_ifAlone	Either Initial DL TX Power IE or Primary CPICH Ec/No IE shall be present.
CM_Active	This IE shall be present when the Active Pattern Sequence Information IE is present, otherwise this IE is optional.
EDSCHPC	This-The IE shall be present if <i>Enhanced DSCH PC</i> IE is present in the <i>DSCH Information</i> IE.

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

9.1.4 RADIO LINK SETUP RESPONSE

9.1.4.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
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		1..<maxno ofRLs>			EACH	ignore
>RL ID	M		9.2.1.49		–	
>RL Set ID	M		9.2.2.35		–	
>URA Information	O		9.2.1.70B		–	
>SAI	M		9.2.1.52		–	
>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 9.2.2.14A		–	
>Diversity Indication	C-NotFirstRL		9.2.1.21		–	
>CHOICE <i>Diversity Indication</i>	M				–	
>> <i>Combining</i>					–	
>>>RL ID	M		9.2.1.49	Reference RL ID for the combining	–	
>>>DCH Information Response	O		9.2.1.16A		YES	ignore
>> <i>Non Combining or First RL</i>					–	
>>>DCH Information Response	M		9.2.1.16A		–	
>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 Adjustment Mode	O		9.2.2.3A		–	
>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	Corresponds to Nu in ref. [6]	–	
>DL UARFCN	O		UARFCN 9.2.1.66	Corresponds to Nd in ref. [6]	–	
>Primary CPICH Power	O		9.2.1.44		–	
>DSCH Information Response	O		DSCH FDD Information		YES	ignore

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
			Response 9.2.2.13B			
>Neighbouring UMTS Cell Information	O		9.2.1.41A		–	
>Neighbouring GSM Cell Information	O		9.2.1.41C		YES	ignore
>PC Preamble	M		9.2.2.27a		–	
>SRB Delay	M		9.2.2.39A		–	
>Cell GA Additional Shapes	O		9.2.1.5B		YES	ignore
Uplink SIR Target	O		Uplink SIR 9.2.1.69		YES	ignore
Criticality Diagnostics	O		9.2.1.13		YES	ignore

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

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

9.1.4.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
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		0..1		Mandatory For 3.84Mcps TDD only	YES	ignore
>RL ID	M		9.2.1.49		–	
>URA Information	O		9.2.1.70B		–	
>SAI	M		9.2.1.52		–	
>Cell GAI	O		9.2.1.5A		–	
>UTRAN Access Point Position	O		9.2.1.70A		–	
>UL Time Slot ISCP Info	M		9.2.3.13D		–	
>Maximum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>Minimum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>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		–	
>UARFCN	O		UARFCN 9.2.1.66	Corresponds to Nt in ref. [7]	–	
>Cell Parameter ID	O		9.2.1.8		–	
>Sync Case	O		9.2.1.54		–	
>SCH Time Slot	C-Case2		9.2.1.51		–	
>Block STTD Indicator	O		9.2.3.A		–	
>PCCPCH Power	O		9.2.1.43		–	
>Timing Advance Applied	M		9.2.3.12A		–	
>Alpha Value	M		9.2.3.a		–	
>UL PhysCH SF Variation	M		9.2.3.13B		–	
>Synchronisation Configuration	M		9.2.3.7E		–	
>Secondary CCPCH Info TDD	O		9.2.3.7B		–	
>UL CCTrCH Information		0..<maxno of CCTrCHs>		For DCH	GLOBAL	ignore
>>CCTrCH ID	M		9.2.3.2		–	
>>UL DPCH Information		0..1			YES	ignore
>>>Repetition Period	M		9.2.3.7		–	
>>>Repetition Length	M		9.2.3.6		–	
>>>TDD DPCH Offset	M		9.2.3.8A		–	
>>>UL Timeslot Information	M		9.2.3.13C		–	
>DL CCTrCH Information		0..<maxno of CCTrCHs>		For DCH	GLOBAL	ignore
>>CCTrCH ID	M		9.2.3.2		–	
>>DL DPCH Information		0..1			YES	ignore
>>>Repetition Period	M		9.2.3.7		–	
>>>Repetition Length	M		9.2.3.6		–	
>>>TDD DPCH Offset	M		9.2.3.8A		–	
>>>DL Timeslot Information	M		9.2.3.2C		–	
>DCH Information Response	O		9.2.1.16A		YES	ignore

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
>DSCH Information Response		0 .. <Maxnoof DSCHs>			GLOBAL	ignore
>>DSCH ID	M		9.2.1.26A		–	
>>DSCH Flow Control Information	M		9.2.1.26B		–	
>>Binding ID	O		9.2.1.3		–	
>>Transport Layer Address	O		9.2.1.62		–	
>>Transport Format Management	M		9.2.3.13		–	
>USCH Information Response		0 .. <Maxnoof USCHs>			GLOBAL	ignore
>>USCH ID	M		9.2.3.14		–	
>>Binding ID	O		9.2.1.3		–	
>>Transport Layer Address	O		9.2.1.62		–	
>>Transport Format Management	M		9.2.3.13		–	
>Neighbouring UMTS Cell Information	O		9.2.1.41A		–	
>Neighbouring GSM Cell Information	O		9.2.1.41C		YES	ignore
>Cell GA Additional Shapes	O		9.2.1.5B		YES	ignore
RL Information Response LCR		0..1		Mandatory For 1.28Mcps TDD only	YES	ignore
>RL ID	M		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 Position	O		9.2.1.70A		–	
>UL Time Slot ISCP Info LCR	M		9.2.3.13H		–	
>Maximum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>Minimum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>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		–	
>UL PhysCH SF Variation	M		9.2.3.13B		–	
>UL CCTrCH Information LCR		0..<maxno of CCTrCHs LCR>		For DCH	GLOBAL	ignore
>>CCTrCH ID	M		9.2.3.2		–	
>>UL DPCH Information LCR		0..1			YES	ignore
>>>Repetition Period	M		9.2.3.7		–	
>>>Repetition Length	M		9.2.3.6		–	
>>>TDD DPCH Offset	M		9.2.3.8A		–	
>>>UL Timeslot Information LCR	M		9.2.3.x5		–	
>DL CCTrCH Information LCR		0..<maxno of CCTrCHs LCR>		For DCH	GLOBAL	ignore
>>CCTrCH ID	M		9.2.3.2		–	
>>DL DPCH Information LCR		0..1			YES	ignore

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
>>>Repetition Period	M		9.2.3.7		–	
>>>Repetition Length	M		9.2.3.6		–	
>>>TDD DPCH Offset	M		9.2.3.8A		–	
>>>DL Timeslot Information LCR	M		9.2.3.2E			
>>>TSTD Indicator	M		9.2.3.13E		–	
>DCH Information Response	O		9.2.1.16A		YES	ignore
>DSCH Information Response LCR		0 .. <Maxnoof DSCHsLCR>			GLOBAL	ignore
>>DSCH ID	M		9.2.1.26A		–	
>>DSCH Flow Control Information	M		9.2.1.26B		–	
>>Binding ID	O		9.2.1.3		–	
>>Transport Layer Address	O		9.2.1.62		–	
>>Transport Format Management	M		9.2.3.13		–	
>USCH Information Response LCR		0 .. <Maxnoof USCHsLCR>			GLOBAL	ignore
>>USCH ID	M		9.2.3.14		–	
>>Binding ID	O		9.2.1.3		–	
>>Transport Layer Address	O		9.2.1.62		–	
>>Transport Format Management	M		9.2.3.13		–	
>Neighbouring UMTS Cell Information	O		9.2.1.41A		–	
>Neighbouring GSM Cell Information	O		9.2.1.41C		–	
Uplink SIR Target	M		Uplink SIR 9.2.1.69		YES	ignore
Criticality Diagnostics	O		9.2.1.13		YES	ignore

Condition	Explanation
Case2	This The IE shall be present when-if Sync Case IE is equivalent "Case2".

Range bound	Explanation
MaxnoofDSCHs	Maximum number of DSCHs for one UE for 3.84Mcps TDD.
MaxnoofUSCHs	Maximum number of USCHs for one UE for 3.84Mcps TDD.
MaxnoofCCTrCHs	Maximum number of CCTrCH for one UE for 3.84Mcps TDD.
MaxnoofDSCHsLCR	Maximum number of DSCHs for one UE for 1.28Mcps TDD.
MaxnoofUSCHsLCR	Maximum number of USCHs for one UE for 1.28Mcps TDD.
MaxnoofCCTrCHsLCR	Maximum number of CCTrCH for one UE for 1.28Mcps TDD.

9.1.11 RADIO LINK RECONFIGURATION PREPARE

9.1.11.1 FDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL DPCH Information		0..1			YES	reject
>UL Scrambling Code	O		9.2.2.53		–	
>UL SIR Target	O		Uplink SIR 9.2.1.69		–	
>Min UL Channelisation Code Length	O		9.2.2.25		–	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.24		–	
>Puncture Limit	O		9.2.1.46	For the UL.	–	
>TFCS	O		9.2.1.63	TFCS for the UL.	–	
>UL DPCCH Slot Format	O		9.2.2.52		–	
>Diversity Mode	O		9.2.2.8		–	
>SSDT Cell Identity Length	O		9.2.2.41		–	
>S-Field Length	O		9.2.2.36		–	
DL DPCH Information		0..1			YES	reject
>TFCS	O		9.2.1.63	TFCS for the DL.	–	
>DL DPCH Slot Format	O		9.2.2.9		–	
>Number of DL Channelisation Codes	O		9.2.2.26A		–	
>TFCI Signalling Mode	O		9.2.2.46		–	
>TFCI Presence	C- SlotFormat		9.2.1.55		–	
>Multiplexing Position	O		9.2.2.26		–	
>Limited Power Increase	O		9.2.2.21A		–	
DCHs to Modify	O		FDD DCHs to Modify 9.2.2.13C		YES	reject
DCHs to Add	O		DCH FDD Information 9.2.2.4A		YES	reject
DCHs to Delete		0..<maxnoof DCHs>			GLOBAL	reject
>DCH ID	M		9.2.1.16		–	
DSCHs to Modify		0..1			YES	reject
>DSCH Info		0..<maxnoof DSCHs>			–	
>>DSCH ID	M		9.2.1.26A		–	
>>TrCh Source Statistics Descriptor	O		9.2.1.65		–	
>>Transport Format Set	O		9.2.1.64	For DSCH	–	
>>Allocation/ Retention Priority	O		9.2.1.1		–	
>>Scheduling Priority Indicator	O		9.2.1.51A		–	
>>BLER	O		9.2.1.4		–	
>>Transport Bearer Request Indicator	M		9.2.1.61		–	
>PDSCH RL ID	O		RL ID 9.2.1.49		–	
>TFCS	O		9.2.1.63	For DSCH	–	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
>Enhanced DSCH PC Indicator	O		9.2.2.13F		YES	ignore
>Enhanced DSCH PC	C-EDSCHPC On		9.2.2.13D		YES	ignore
DSCHs to Add	O		DSCH FDD Information 9.2.2.13A		YES	reject
DSCHs to Delete		0..1			YES	reject
>DSCH Info		1..<maxnoof DSCHs>			-	
>>DSCH ID	M		9.2.1.26A		-	
RL Information		0..<maxnoof RLs>			EACH	reject
>RL ID	M		9.2.1.49		-	
>SSDT Indication	O		9.2.2.42		-	
>SSDT Cell Identity	C - SSDTIndON		9.2.2.40		-	
>Transmit Diversity Indicator	C - Diversity mode		9.2.2.48		-	
>SSDT Cell Identity for EDSCHPC	C-EDSCHPC		9.2.2.40A		YES	ignore
Transmission Gap Pattern Sequence Information	O		9.2.2.47A		YES	reject

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

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

9.1.11.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL CCTrCH to Add		0..<maxno of CCTrCHs>		For DCH and USCH	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		9.2.1.40		–	
UL CCTrCH to Modify		0..<maxno of CCTrCHs>			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	O		9.2.1.63	For the UL.	–	
>TFCI Coding	O		9.2.3.11		–	
>Puncture Limit	O		9.2.1.46		–	
UL CCTrCH to Delete		0..<maxno of CCTrCHs>			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
DL CCTrCH to Add		0..<maxno of CCTrCHs>		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		–	
>Puncture Limit	M		9.2.1.46		–	
>TPC CCTrCH List		0 to <maxno CCTrCHs>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.2		–	
DL CCTrCH to Modify		0..<maxno of CCTrCHs>			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	O		9.2.1.63	For the DL.	–	
>TFCI Coding	O		9.2.3.11		–	
>Puncture Limit	O		9.2.1.46		–	
>TPC CCTrCH List		0 to <maxno CCTrCHs>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
DL CCTrCH to Delete		0..<maxno of CCTrCHs>			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
DCHs to Modify	O		TDD DCHs to Modify 9.2.3.8B		YES	reject
DCHs to Add	O		DCH TDD Information 9.2.3.2A		YES	reject
DCHs to Delete		0..<maxno of DCHs>			GLOBAL	reject
>DCH ID	M		9.2.1.16		–	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DSCHs to Modify		0..<maxno ofDSCHs>			GLOBAL	reject
>DSCH ID	M		9.2.1.26A		–	
>CCTrCH Id	O		9.2.3.2	DL CCTrCH in which the DSCH is mapped.	–	
>TrCh Source Statistics Descriptor	O		9.2.1.65		–	
>Transport Format Set	O		9.2.1.64		–	
>Allocation/Retention Priority	O		9.2.1.1		–	
>Scheduling Priority Indicator	O		9.2.1.51A		–	
>BLER	O		9.2.1.4		–	
>Transport Bearer Request Indicator	M		9.2.1.61		–	
DSCHs to Add	O		DSCH TDD Information 9.2.3.3a		YES	reject
DSCHs to Delete		0..<maxno ofDSCHs>			GLOBAL	reject
>DSCH ID	M		9.2.1.26A		–	
USCHs to Modify		0..<maxno ofUSCHs>			GLOBAL	reject
>USCH ID	M		9.2.3.14		–	
>CCTrCH Id	O		9.2.3.2	UL CCTrCH in which the USCH is mapped.	–	
>TrCh Source Statistics Descriptor	O		9.2.1.65		–	
>Transport Format Set	O		9.2.1.64		–	
>Allocation/Retention Priority	O		9.2.1.1		–	
>Scheduling Priority Indicator	O		9.2.1.51A		–	
>BLER	O		9.2.1.4		–	
>Transport Bearer Request Indicator	M		9.2.1.61		–	
>RB Info		0 to <maxno of RB>		All Radio Bearers using this USCH	–	
>>RB Identity	M		9.2.3.5B		–	
USCHs to Add	O		USCH Information 9.2.3.15		YES	reject
USCHs to Delete		0..<maxno ofUSCHs>			GLOBAL	reject
>USCH ID	M		9.2.3.14		–	

Condition	Explanation
CoorDCH	This IE shall be 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.

9.1.20 DL POWER CONTROL REQUEST [FDD]

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		–	
Power Adjustment Type	M		9.2.2.28		YES	ignore
DL Reference Power DL Reference Power	C- Common		DL Power 9.2.2.10		YES	ignore
Inner Loop DL PC Status	O		9.2.2.21a		YES	ignore
DL Reference Power Information	C- Individual	1..<maxnoofRLs>			GLOBAL	ignore
>RL ID	M		9.2.1.49		–	
>DL Reference Power	M		DL Power 9.2.2.10		–	
Max Adjustment Step	C- Common Or Individual		9.2.2.23		YES	ignore
Adjustment Period	C- Common Or Individual		9.2.2.B		YES	ignore
Adjustment Ratio	C- Common Or Individual		9.2.2.C		YES	ignore

Condition	Explanation
Common	This-The IE shall be present only if the <i>Power Adjustment Type</i> IE is set to "Common".
Individual	This-The IE shall be present only if the <i>Power Adjustment Type</i> IE is set to "Individual".
CommonOrIndividual	This-The IE shall be present only if the <i>Power Adjustment Type</i> IE is set to "Common" or "Individual".

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

9.1.39 ERROR INDICATION

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		–	
Cause	C-ifalone O		9.2.1.5		YES	ignore
Criticality Diagnostics	C-ifalone O		9.2.1.13		YES	ignore

Condition	Explanation
C-ifalone	At least the Cause IE or the Criticality Diagnostics IE shall be present.

9.1.43 COMMON MEASUREMENT INITIATION REQUEST

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		-	
Measurement ID	M		9.2.1.37		YES	reject
Common Measurement Object Type	M		9.2.1.12B		YES	reject
CHOICE Common Measurement Object Type	M				YES	reject
>Cell					-	
>>UTRAN Cell Identifier	M		9.2.1.71		-	
>>Neighbouring Cell Measurement Information		0..<maxnoof MeasNCells >			-	
>>>CHOICE Neighbouring Cell Measurement Information						
>>>> Neighbouring FDD Cell Measurement Information						
>>>> Neighbouring FDD Cell Measurement Information	C-CellInfo M		9.2.1.41G		-	
>>>> Neighbouring TDD Cell Measurement Information						
>>>> Neighbouring TDD Cell Measurement Information	C-CellInfo M		9.2.1.41H		-	
>>Time Slot	O		9.2.1.56	TDD Only		
Common Measurement Type	M		9.2.1.12C		YES	reject
Measurement Filter Coefficient	O		9.2.1.41		YES	reject
Report Characteristics	M		9.2.1.48		YES	reject
SFN reporting indicator	M		FN reporting indicator 9.2.1.28A		YES	reject
SFN	O		9.2.1.52A		YES	reject
Common Measurement Accuracy	O		9.2.1.12A		YES	reject

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

Condition	Explanation
CellInfo	Only one Neighbouring Cell Measurement Information IE can be present at the same time.

9.2.1.12A Common Measurement Accuracy

The Common Measurement Accuracy IE indicates the accuracy of the common measurement.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE Common Measurement Type Indicator Accuracy				
>T_{UTRAN-GPS} Measurement Accuracy Class UTRAN GPS Timing of Cell Frames for LCS				
>>T_{UTRAN-GPS} Measurement Accuracy Class	MC-Measurement Accuracy		T _{UTRAN-GPS} Accuracy Class 9.2.1.59B	

Condition	Explanation
C-MeasurementAccuracy	Only one IE shall be present.

9.2.1.12D Common Measurement Value

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<u>CHOICE Common Measurement Type Indicator Value</u>				
<u>>UTRAN-GPS Timing of Cell Frames for LCS T_{UTRAN-GPS} Measurement Value Information</u>				
<u>>>T_{UTRAN-GPS} Measurement Value Information</u>	<u>MG MeasValue</u>		9.2.1.59D	
<u>> SFN-SFN Observed Time Difference Measurement Value Information</u>				
<u>>>SFN-SFN Measurement Value Information</u>	<u>MG MeasValue</u>		9.2.1.52C	
<u>>Load Value</u>				
<u>>>Load Value</u>	<u>MG MeasValue</u>		9.2.1.33A	
<u>>Transmitted Carrier Power Value</u>				
<u>>>Transmitted Carrier Power Value</u>	<u>MG MeasValue</u>		Transmitted Carrier Power 9.2.1.59A	
<u>>Received Total Wide Band Power Value</u>				
<u>>>Received Total Wide Band Power Value</u>	<u>MG MeasValue</u>		Received Total Wide Band Power 9.2.2.35A	
<u>>UL Timeslot ISCP Value</u>				<u>TDD Only</u>
<u>>>UL Timeslot ISCP Value</u>	<u>MG MeasValue</u>		UL Timeslot ISCP 9.2.3.13A	<u>Only applicable for TDD.</u>

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

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
<u>CHOICE</u> <u>Dedicated Measurement Type</u> <u>Indicator Value</u>				
<u>>SIR Value</u>				
<u>>>SIR Value</u>	<u>MG</u> <u>MeasValue</u>		INTEGER(0..63)	According to mapping in ref. [23] and [24]
<u>>SIR Error Value</u>				<u>FDD Only</u>
<u>>>SIR Error Value</u>	<u>MG</u> <u>MeasValue</u>		INTEGER(0..125)	According to mapping in [23], <u>{FDD-only}</u>
<u>>Transmitted Code Power Value</u>				
<u>>>Transmitted Code Power Value</u>	<u>MG</u> <u>MeasValue</u>		INTEGER(0..127)	According to mapping in ref. [23] and [24]
<u>>RSCP</u>				<u>TDD Only</u>
<u>>>RSCP</u>	<u>MG</u> <u>MeasValue</u>		INTEGER(0..127)	According to mapping in ref. [24], <u>{TDD-only}</u>
<u>>Rx Timing Deviation Value</u>				<u>3.84Mcps TDD Only</u>
<u>>>Rx Timing Deviation Value</u>	<u>MG</u> <u>MeasValue</u>		INTEGER(0..8191)	According to mapping in [24], <u>{3.84Mcps TDD-only}</u>
<u>>Round Trip Time</u>				<u>FDD Only</u>
<u>>>Round Trip Time</u>	<u>MG</u> <u>MeasValue</u>		INTEGER(0..32767)	According to mapping in [23], <u>{FDD-only}</u>

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

9.2.1.31C Information Report Characteristics

The information report characteristics define how the reporting shall be performed.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Information Report Characteristics Type	M		ENUMERATED/On Demand/Periodic/On Modification	
Periodic Information	C-Periodic			
CHOICE Information Report Characteristics Type				
>OnDemand			NULL	
->Periodic				
>Information Report Periodicity	M		ENUMERATED (1min...1hr, ...) step 1min, (1hr...24hr, ...) step 1hr, ...	The frequency with which the RNS shall send information reports.
On Modification Information	C-OnModification			
>On Modification				
->Information Threshold	M		9.2.1.31D	

Condition	Explanation
Periodic	This IE shall be present if the Information Report Characteristics Type IE indicates periodic
OnModification	This IE shall be present if the Information Report Characteristics Type IE indicates on modification

9.2.1.31F IPDL parameters

Information Element/Group name	Presence	Range	IE Type and Reference	Semantics description
<u>CHOICE IPDL Parameters</u>				
<u>>IPDL FDD Parameters</u>				
<u>>>IPDL FDD parameters</u>	<u>MC-IPDLparams</u>		9.2.2.21B	
<u>>IPDL TDD Parameters</u>				
<u>>>IPDL TDD parameters</u>	<u>MC-IPDLparams</u>		9.2.1.4B	

Condition	Explanation
<u>IPDLparams</u>	<u>Only one of these IEs can be present at the same time</u>

9.2.1.38 Measurement Increase/Decrease Threshold

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

IE/ Group Name	Presence	Range	IE Type and Reference	Semantics Description
<u>CHOICE Measurement Type Indicator Increase/Decrease Threshold</u>				
<u>>SIR</u>				
<u>>>SIR</u>	<u>MC-Threshold</u>		INTEGER(0..62)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 62: 31dB
<u>>SIR Error</u>				<u>FDD Only</u>
<u>>>SIR Error</u>	<u>MC-Threshold</u>		INTEGER(0..124)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 124: 62 dB <u>[FDD only]</u>
<u>>Transmitted Code Power RSCP</u>				
<u>>>Transmitted Code Power</u>	<u>MC-Threshold</u>		INTEGER(0..112,...)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 112: 56 dB
<u>>RSCP</u>				<u>TDD Only</u>
<u>>>RSCP</u>	<u>MC-Threshold</u>		INTEGER(0..126)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 126: 63 dB <u>[TDD only]</u>
<u>>Round Trip Time</u>				<u>FDD Only</u>
<u>>>Round Trip Time</u>	<u>MC-Threshold</u>		INTEGER(0..32766)	0: 0 chips 1: 0.0625 chips 2: 0.1250 chips ... 32766: 2047.875 chips <u>[FDD only]</u>
<u>>Load</u>				
<u>>>Load</u>	<u>MC-Threshold</u>		INTEGER(0..9)	Units are the same as for the Uplink Load Value IE and Downlink Load Value IE.
<u>>Transmitted Carrier Power</u>				
<u>>>Transmitted Carrier Power</u>	<u>MC-Threshold</u>		INTEGER(0..100)	According to mapping in [23] and [24].
<u>>Received Total Wide Band Power</u>				
<u>>>Received Total Wide Band Power</u>	<u>MC-Threshold</u>		INTEGER(0..620)	0: 0dB 1: 0.1dB 2: 0.2dB ... 620: 62dB
<u>>UL Timeslot ISCP</u>				<u>TDD Only</u>
<u>>>UL Timeslot ISCP</u>	<u>MC-Threshold</u>		INTEGER(0..126)	0: 0dB 1: 0.5dB 2: 1dB ... 126: 63dB <u>Only applicable for TDD</u>

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

9.2.1.39 Measurement Threshold

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

IE/ Group Name	Presence	Range	IE Type and Reference	Semantics Description
<i>CHOICE Measurement Type Indicator Threshold</i>				
<i>>SIR</i>				
<i>>>SIR</i>	<i>MC-Threshold</i>		INTEGER(0..63)	According to mapping in ref. [23] and [24].
<i>>SIR Error</i>				<i>FDD Only</i>
<i>>>SIR Error</i>	<i>MC-Threshold</i>		INTEGER(0..125)	According to mapping in [23], <i>(FDD only)</i>
<i>>Transmitted Carrier Power</i>				
<i>>>Transmitted Code Power</i>	<i>MC-Threshold</i>		INTEGER(0..127)	According to mapping in ref. [23] and [24].
<i>>RSCP</i>				<i>TDD Only</i>
<i>>>RSCP</i>	<i>MC-Threshold</i>		INTEGER(0..127)	According to mapping in ref. [24] <i>(TDD only)</i>
<i>>Rx Timing Deviation</i>				<i>TDD Only</i>
<i>>>Rx Timing Deviation</i>	<i>MC-Threshold</i>		INTEGER(0..8191)	According to mapping in [24] <i>(TDD only)</i>
<i>>Round Trip Time</i>				<i>FDD Only</i>
<i>>>Round Trip Time</i>	<i>MC-Threshold</i>		INTEGER(0..32767)	According to mapping in [23] <i>(FDD only)</i>
<i>>UTRAN-GPS Timing of Cell Frames for LCS T_{UTRAN-GPS} Measurement Threshold Information</i>				
<i>>>T_{UTRAN-GPS} Measurement Threshold Information</i>	<i>MC-Threshold</i>		9.2.1.59C	
<i>>SFN-SFN Observed Time Difference Measurement Threshold Information</i>				
<i>>>SFN-SFN Measurement Threshold Information</i>	<i>MC-Threshold</i>		9.2.1.52B	
<i>>Load</i>				
<i>>>Load</i>	<i>MC-Threshold</i>		INTEGER(0..9)	0 is the minimum indicated load, and 9 is the maximum indicated load.
<i>>Transmitted Carrier Power</i>				
<i>>>Transmitted Carrier Power</i>	<i>MC-Threshold</i>		INTEGER(0..100)	According to mapping in [23] and [24].
<i>>Received Total Wide Band Power</i>				
<i>>>Received Total Wide Band Power</i>	<i>MC-Threshold</i>		INTEGER(0..621)	According to mapping in [23] and [24].
<i>>UL Timeslot ISCP</i>				<i>TDD Only</i>
<i>>>UL Timeslot ISCP</i>	<i>MC-Threshold</i>		INTEGER(0..127)	According to mapping in [24]. <i>Only applicable for TDD.</i>

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

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.

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

Condition	Explanation
Case1	This-The IE shall be present only-if Sync-Case the Sync Case IE= is set to "Case1" .
Case2	This-The IE shall be present only-if Sync-Case the Sync Case IE= is set to "Case2" .

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

9.2.1.48 Report Characteristics

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
<u>Report Characteristics Type</u>			ENUMERATED (On Demand, Periodic, Event A, Event B, Event C, Event D, Event E, Event F, ..., On Modification)	
Periodic Report Information	C —Periodic			
<u>CHOICE Report Characteristics Type</u>				
<u>>OnDemand</u>			NULL	
<u>>Periodic</u>				
<u>>>Report Periodicity</u>	M		ENUMERATED (10ms...1min, ...) step 10ms, (1min...1hr, ...) step 1min,...	The periodicity with which the DRNS shall send measurement reports.
Event A	C —Event A			
<u>>Event A</u>				
<u>>>Measurement Threshold</u>	M		Measurement Threshold	The threshold for which the DRNS shall trigger a measurement report.
<u>>>Measurement Hysteresis Time</u>	O		ENUMERATED (10ms...1min, ...) step 10ms,...	
Event B	C —Event B			
<u>>Event B</u>				
<u>>>Measurement Threshold</u>	M		Measurement Threshold	The threshold for which the DRNS shall trigger a measurement report.
<u>>>Measurement Hysteresis Time</u>	O		ENUMERATED (10ms...1min, ...) step 10ms,...	
Event C	C —Event C			
<u>>Event C</u>				
<u>>>Measurement Increase/Decrease Threshold</u>	M		Measurement Increase/Decrease Threshold	
<u>>>Measurement Change Time</u>	M		ENUMERATED (10ms...1min, ...) step 10ms,...	The time within which the measurement entity shall rise, in order to trigger a measurement report.
Event D	C —Event D			
<u>>Event D</u>				
<u>>>Measurement Increase/Decrease Threshold</u>	M		Measurement Increase/Decrease	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
			Threshold	
<u>>></u> Measurement Change Time	M		ENUMERATED (10ms...1min, ...) step 10ms,...	The time within which the measurement entity shall fall, in order to trigger a measurement report.
Event E	C —Event E			
<u>></u> Event E				
<u>>></u> Measurement Threshold 1	M		Measurement Threshold	
<u>>></u> Measurement Threshold 2	O		Measurement Threshold	
<u>>></u> Measurement Hysteresis Time	O		ENUMERATED (10ms...1min, ...) step 10ms,...	The hysteresis time in ms
<u>>></u> Report Periodicity	O		ENUMERATED (10ms...1min, ...) step 10ms, (1min...1hr, ...) step 1min,...	The periodicity with which the DRNS shall send measurement reports.
Event F	C —Event F			
<u>></u> Event F				
<u>>></u> Measurement Threshold 1	M		Measurement Threshold	
<u>>></u> Measurement Threshold 2	O		Measurement Threshold	
<u>>></u> Measurement Hysteresis Time	O		ENUMERATED (10ms...1min, ...) step 10ms,...	The hysteresis time in ms
<u>>></u> Report Periodicity	O		ENUMERATED (10ms...1min, ...) step 10ms, (1min...1hr, ...) step 1min,...	The periodicity with which the DRNS shall send measurement reports.
<u>></u> On Modification	C —On Modification			
<u>></u> On Modification				
<u>>></u> Measurement Threshold			Measurement Threshold 9.2.1.39	

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

9.2.1.48A Requested Data Value

The Requested Data Value contains the relevant data concerning the ongoing information exchange.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
UTRAN Access Point Position	OC-DataVal		9.2.1.70A	
IPDL Parameters	OC-DataVal		9.2.1.31F	
DGPS Corrections	OC-DataVal		9.2.1.19B	
GPS Navigation Model and Time Recovery	OC-DataVal		9.2.1.30I	
GPS Ionospheric Model	OC-DataVal		9.2.1.30H	
GPS UTC Model	OC-DataVal		9.2.1.30L	
GPS Almanac	OC-DataVal		9.2.1.30G	
GPS Real-Time Integrity	OC-DataVal		9.2.1.30J	
GPS RX Pos	OC-DataVal		9.2.1.30K	

Condition	Explanation
C-DataVal	At least one of these IEs shall be present.

9.2.1.52B SFN-SFN Measurement Threshold Information

The SFN-SFN Measurement Threshold Information defines the related thresholds SFN-SFN Observed Time Difference measurements which shall trigger the Event On Modification.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
SFN-SFN Change Limit	OC SFNSFNLimit		INTEGER(1..16384,...)	Change of SFN-SFN value compared to previously reported value, which shall trigger a new report. Unit in 1/16 chip.
Predicted SFN-SFN Deviation Limit	OC SFNSFNLimit		INTEGER(1..16384,...)	Deviation the Predicted SFN-SFN from the latest measurement result, which shall trigger a new report. Unit in 1/16 chip.

Condition	Explanation
C-SFNSFNLimit	At least one threshold shall be present.

9.2.1.59C $T_{\text{UTRAN-GPS}}$ Measurement Threshold Information

The $T_{\text{UTRAN-GPS}}$ Measurement Threshold Information defines the related thresholds for UTRAN GPS Timing of Cell Frame for LCS measurements shall trigger the Event On Modification.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
$T_{\text{UTRAN-GPS}}$ Change Limit	OC-UTRANGP SLimit		INTEGER(1.. 2^{20} ,...)	Change of $T_{\text{UTRAN-GPS}}$ value compared to previously reported value, which shall trigger a new report. Unit in 1/16 chip.
Predicted $T_{\text{UTRAN-GPS}}$ Deviation Limit	OC-UTRANGP SLimit		INTEGER(1.. 2^{20} ,...)	Deviation of the Predicted $T_{\text{UTRAN-GPS}}$ from the latest measurement result, which shall trigger a new report. Unit in 1/16 chip.

Condition	Explanation
C-UTRANGPSLimit	At least one threshold shall be present.

9.2.1.63 Transport Format Combination Set (TFCS)

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

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

Method #1 - TFCI range

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

Method #2 - Explicit

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE DSCH				
>No Split in the TFCI				This choice is made if : a) The TFCS refers to the uplink OR b) The mode is FDD and none of the Node B communication contexts are assigned any DSCH transport channels OR c) The mode is TDD
>>TFCS		1 to <maxnoofTFCs>		The first instance of the parameter corresponds to TFC zero, the second to 1 and so on.
>>>CTFC	M		INTEGER(0..MaxCTFC)	Integer number calculated according to ref. [16].
>>>CHOICE Gain Factors	C-PhysChan			
>>>>Signalled Gain Factors				
>>>>>Gain Factor β_C	M		INTEGER (0..15)	For UL DPCCCH or control part of PRACH in FDD ref. [21].
>>>>>Gain Factor β_D	M		INTEGER (0..15)	For UL DPDCH or data part of PRACH in FDD ref. [21].
>>>>>Reference TFC nr	O		INTEGER (0..15)	If this TFC is a reference TFC, this IE indicates the reference number
>>>>>Computed Gain Factors				
>>>>>Reference TFC nr	M		INTEGER (0..15)	Indicates the reference TFC to be used to calculate the gain factors for this TFC
>There is a split in the TFCI				This choice is made if : a) The TFCS refers to the downlink AND b) The mode is FDD and one of the Node B communication contexts is assigned one or more DSCH transport channels
>>Transport Format Combination_DCH		1 to <MaxTFCI_1_Comb>		The first instance of the <i>Transport format combination_DCH IE</i> corresponds to TFCI (field 1) = 0, the second to TFCI (field 1) = 1 and so on.
>>>CTFC(field1)	M		INTEGER(0..MaxCTFC)	Integer number calculated according to [16] . The calculation of CTFC ignores any DSCH transport channels which may be assigned
>>Choice Signalling Method				
>>>TFCI Range				
>>>>TFC Mapping on DSCH		1 to <MaxNoTFCIGroups>		
>>>>>Max TFCI(field2) Value	M		INTEGER(1..1023)	This is the Maximum value in the range of TFCI(field2) values for which the specified CTFC(field2) applies
>>>>>CTFC(field	M		INTEGER(0..	Integer number calculated

2)			.MaxCTFC)	according to [16] The calculation of CTFC ignores any DCH transport channels which may be assigned
>>>Explicit				
>>>>Transport Format Combination_DSC H		1 to <MaxTFCI_2_Comb>		The first instance of the <i>Transport format combination_DSC</i> IE corresponds to TFCI (field2) = 0, the second to TFCI (field 2) = 1 and so on.
>>>>>CTFC(field 2)	M		INTEGER(0..MaxCTFC)	Integer number calculated according to [16] . The calculation of CTFC ignores any DCH transport channels which may be assigned

Condition	Explanation
PhysChan	The choice IE shall be present if the TFCS concerns a UL DPCH or [FDD – or PRACH channel [3.5.2.1]], not when the TFCS is used for other physical channels.

Range bound	Explanation
<i>MaxnoofTFCs</i>	The maximum number of Transport Format Combinations.
<i>MaxTFCI_1_Combs</i>	Maximum number of TFCI (field 1) combinations (given by 2 raised to the power of the length of the TFCI (field 1)).
<i>MaxTFCI_2_Combs</i>	Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI (field 2)).
<i>MaxNoTFCIGroups</i>	Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single value of CTFC(field2) applies.
<i>MaxCTFC</i>	Maximum number of the CTFC value is calculated according to the following: $\sum_{i=1}^I (L_i - 1)P_i$ with the notation according to ref. [16].

9.2.1.64 Transport Format Set

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

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

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

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

9.2.2.37B Secondary CCPCH Info

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
FDD S-CCPCH Offset	M		9.2.2.15	Corresponds to: $\tau_{S-CCPCH,k}$, see ref. [8]	–	
DL Scrambling Code	M		9.2.2.8		–	
FDD DL Channelisation Code Number	M		9.2.2.14		–	
TFCS	M		9.2.1.63	For the DL.	–	
Secondary CCPCH Slot Format	M		9.2.2.38		–	
TFCI Presence	C - SlotFormat		9.2.1.55		–	
Multiplexing Position	M		9.2.2.26		–	
STTD Indicator	M		9.2.2.44		–	
FACH/PCH Information		1 .. <maxFACHcount+1>			–	
>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	M		9.2.2.4		–	
>IB Segment Information		1.. <maxIBSEG>			–	
>>IB_SG_POS	M		9.2.2.20		–	

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

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

9.2.2.47A Transmission Gap Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence. For details see [16].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Transmission Gap Pattern Sequence Information		1 to <MaxTGPS>		
>TGPSI Identifier	M		INTEGER(1..<MaxTGPS>)	Transmission Gap Pattern Sequence Identifier Establish a reference to the compressed mode pattern sequence. Up to <MaxTGPS> simultaneous compressed mode pattern sequences can be used.
>TGSN	M		INTEGER (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		INTEGER(1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.
>TGL2	O		INTEGER (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		INTEGER (0, 15.. 269)	Transmission gap distance indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to 0 (0 =undefined).
>TGPL1	M		INTEGER (1..144,...)	The duration of transmission gap pattern 1 in frames.
>TGPL2	O		INTEGER (1..144,...)	The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.
>UL/DL mode	M		Enumerated (UL only, DL only, UL/DL)	Defines whether only DL, only UL, or combined UL/DL compressed mode is used.
>Downlink Compressed Mode Method	C-DL		ENUMERATED (puncturing, SF/2, higher layer scheduling, ...)	Method for generating downlink compressed mode gap None means that compressed mode pattern is stopped.
>Uplink Compressed Mode Method	C-UL		ENUMERATED (SF/2, higher layer scheduling, ...)	Method for generating uplink compressed mode gap.
>Downlink Frame Type	M		ENUMERATED (A, B)	Defines if frame type 'A' or 'B' shall be used in downlink compressed mode.
>DeltaSIR1	M		INTEGER (0..30)	Delta in UL SIR target value to be set in the DRNS during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)
				Step 0.1 dB, Range 0-3dB

>DeltaSIRafter1	M		INTEGER (0..30)	Delta in UL SIR target value to be set in the DRNS one frame after the frame containing the start of the first transmission gap in the transmission gap pattern,. Step 0.1 dB, Range 0-3dB
>DeltaSIR2	O		INTEGER (0..30)	Delta in UL SIR target value to be set in the DRNS during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1. Step 0.1 dB, Range 0-3dB
>DeltaSIRafter2	O		INTEGER (0..30)	Delta in UL SIR target value to be set in the DRNS one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Step 0.1 dB, Range 0-3dB

Condition	Explanation
UL	This information element shall be present when if the value of the "UL/DL mode" IE is set to "UL only" or "UL/DL". The IE is only sent when shall be present if the value of the "UL/DL mode" IE is set to "UL only" or "UL/DL".
DL	This information element shall be present if the value of the "UL/DL mode" IE is set to "DL only" or "UL/DL". The IE is only sent when shall be present if the value of the "UL/DL mode" IE is set to "DL only" or "UL/DL".

Range bound	Explanation
MaxTGPS	Maximum number of transmission gap pattern sequences.

9.2.3.2A DCH TDD Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
DCH Information		1..<maxno ofDCHs>			–	
>Payload CRC Presence Indicator	M		9.2.1.42		–	
>UL FP Mode	M		9.2.1.67		–	
>ToAWS	M		9.2.1.58		–	
>ToAWE	M		9.2.1.57		–	
>DCH Specific Info		1..<maxno ofDCHs>			–	
>>DCH ID	M		9.2.1.16		–	
>>CCTrCH ID	M		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	M		9.2.1.65		–	
>>Transport Format Set	M		9.2.1.64	For the UL.	–	
>>Transport Format Set	M		9.2.1.64	For the DL.	–	
>>BLER	M		9.2.1.4	For the UL.	–	
>>BLER	M		9.2.1.4	For the DL.	–	
>>Allocation/Retention Priority	M		9.2.1.1		–	
>>Frame Handling Priority	M		9.2.1.29		–	
>>QE-Selector	C-CoordDCH		9.2.1.46A		–	
>>Guaranteed Rate Information	O		9.2.1.30M		YES	ignore

Condition	Explanation
CoordDCH	One-Of IE shall be present only if this DCH is part of a set of coordinated DCHs (number of instances of the <i>DCH Specific Info</i> IE is greater than 1).

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

9.2.3.4 Midamble Shift and Burst Type

This information element indicates burst type and midamble allocation.

Three different midamble allocation schemes exist:

- Default midamble: the midamble shift is selected by layer 1 depending on the associated channelisation code (DL and UL);
- Common midamble: the midamble shift is chosen by layer 1 depending on the number of channelisation codes (possible in DL only);
- UE specific midamble: a UE specific midamble is explicitly assigned (DL and UL).

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE <i>Burst Type</i>				
> <i>Type 1</i>				
>>Midamble Allocation Mode	M		ENUMERATED (Default midamble, Common midamble, UE specific midamble)	
>> Midamble Configuration Burst Type 1 And 3	M		Integer(4, 8, 16)	As defined in [12]
>>Midamble Shift	C-UE		INTEGER(0..15)	
> <i>Type 2</i>				
>>Midamble Allocation Mode	M		ENUMERATED (Default midamble, Common midamble, UE specific midamble)	
>> Midamble Configuration Burst Type 2	M		Integer(3,6)	As defined in [12]
>>Midamble Shift			INTEGER (0..15)	
> <i>Type 3</i>				UL only
>>Midamble Allocation Mode	M		ENUMERATED (Default midamble, UE specific midamble)	
>> Midamble Configuration Burst Type 1 And 3	M		Integer(4, 8, 16)	As defined in [12]
>>Midamble Shift	C-UE		INTEGER(0..15)	

Condition	Explanation
C-UE	This information element The IE is only sent when shall be present if the value of the "Midamble Allocation Mode" Midamble Allocation Mode IE is set to "UE-specific midamble".

9.2.3.4C Midamble shift LCR

This information element indicates midamble allocation in 1.28Mcps TDD.

IE/Group name	Presence	Range	IE type and reference	Semantics description
Midamble Allocation Mode	M		Enumerated (Default midamble, Common midamble, UE specific midamble)	
Midamble Shift	C-UE		Integer(0..15)	

Condition	Explanation
UEUE	This information element The IE is only sent when shall be present if the value of the "Midamble Allocation Mode" <i>Midamble Allocation Mode</i> IE is set to "UE-specific midamble".

9.3.3 PDU Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
    Active-Pattern-Sequence-Information,
    AllocationRetentionPriority,
    AllowedQueuingTime,
    Allowed-Rate-Information,
    AlphaValue,
    BLER,
    Block-STTD-Indicator,
    BindingID,
    C-ID,
    C-RNTI,
    CTrCH-ID,
    CFN,
    ClosedLoopModel-SupportIndicator,
    ClosedLoopMode2-SupportIndicator,
    ClosedLoopTimingadjustmentmode,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CNDomainType,
    Cause,
    CellParameterID,
    ChipOffset,
    CommonMeasurementAccuracy,
    CommonMeasurementType,
    CommonMeasurementValue,
    CommonMeasurementValueInformation,
    CriticalityDiagnostics,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-FDD-Information,
    DCH-ID,
    DCH-InformationResponse,
    DCH-TDD-Information,
    DL-DPCH-SlotFormat,
    DL-TimeslotISCP,
    DL-Power,
    DL-ScramblingCode,
    DL-Timeslot-Information,
    DL-TimeslotLCR-Information,
    DL-TimeSlot-ISCP-Info,
    DL-TimeSlot-ISCP-LCR-Info,
    DPC-Mode,
    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,
EnhancedDSCHPC,
EnhancedDSCHPCCounter,
EnhancedDSCHPCIndicator,
EnhancedDSCHPCWnd,
EnhancedDSCHPowerOffset,
FACH-FlowControlInformation,
FDD-DCHs-to-Modify,
FDD-DL-ChannelisationCodeNumber,
FDD-DL-CodeInformation,
FDD-S-CCPCH-Offset,
FDD-TPC-DownlinkStepSize,
FirstRLS-Indicator,
FNReportingIndicator,
FrameHandlingPriority,
FrameOffset,
GA-AccessPointPosition,
GA-Cell,
GA-CellAdditionalShapes,
IMSI,
InformationExchangeID,
InformationReportCharacteristics,
InformationType,
InnerLoopDLPCStatus,
L3-Information,
LimitedPowerIncrease,
MaximumAllowedULTxPower,
MaxNrDLPhysicalchannels,
MaxNrOFUL-DPCHs,
MaxNrTimeslots,
MaxNrULPhysicalchannels,
MeasurementFilterCoefficient,
MeasurementID,
MidambleAllocationMode,
MidambleShiftAndBurstType,
MidambleShiftLCR,
MinimumSpreadingFactor,
MinUL-ChannelisationCodeLength,
MultiplexingPosition,
NeighbouringFDDCellMeasurementInformation,
NeighbouringTDDCellMeasurementInformation,
Neighbouring-GSM-CellInformation,
Neighbouring-UMTS-CellInformation,
NrOfDLchannelisationcodes,
PagingCause,
PagingRecordType,
PDSCHCodeMapping,
PayloadCRC-PresenceIndicator,
PCCPCH-Power,
PC-Preamble,
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,
RequestedDataValue,
RequestedDataValueInformation,
RxTimingDeviationForTA,
S-FieldLength,
S-RNTI,
SCH-TimeSlot,
SAI,
SFN,
Secondary-CCPCH-Info,
Secondary-CCPCH-Info-TDD

```
SpecialBurstScheduling,
SSDT-CellID,
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
STTD-Indicator,
STTD-SupportIndicator,
AdjustmentPeriod,
ScaledAdjustmentRatio,
MaxAdjustmentStep,
SecondaryCCPCH-SlotFormat,
SRB-Delay,
SyncCase,
SynchronisationConfiguration,
TDD-ChannelisationCode,
TDD-DCHs-to-Modify,
TDD-DL-Code-Information,
TDD-DPCHOffset,
TDD-PhysicalChannelOffset,
TDD-TPC-DownlinkStepSize,
TDD-ChannelisationCodeLCR,
TDD-DL-Code-LCR-Information,
TDD-UL-Code-Information,
TDD-UL-Code-LCR-Information,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TimeSlot,
TimeSlotLCR,
TimingAdvanceApplied,
ToAWE,
ToAWS,
TransmitDiversityIndicator,
TransportBearerID,
TransportBearerRequestIndicator,
TFCS,
Transmission-Gap-Pattern-Sequence-Information,
TransportFormatManagement,
TransportFormatSet,
TransportLayerAddress,
TrCH-SrcStatisticsDescr,
TSTD-Indicator,
TSTD-Support-Indicator,
UARFCN,
UC-ID,
UL-DPCCH-SlotFormat,
UL-SIR,
UL-FP-Mode,
UL-PhysCH-SF-Variation,
UL-ScramblingCode,
UL-Timeslot-Information,
UL-TimeslotLCR-Information,
UL-TimeSlot-ISCP-Info,
UL-TimeSlot-ISCP-LCR-Info,
URA-ID,
URA-Information,
USCH-ID,
USCH-Information
FROM RNSAP-IEs

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

maxNoOfDSCHs,
maxNoOfUSCHs,
maxNrOfCCTrCHs,
maxNrOfDCHs,
maxNrOfTS,
maxNrOfDPCHs,
```

maxNrOfRLs,
maxNrOfRLSets,
maxNrOfRLs-1,
maxNrOfRLs-2,
maxNrOfULTs,
maxNrOfDLTs,
maxNoOfDSCHsLCR,
maxNoOfUSCHsLCR,
maxNrOfCCTrCHsLCR,
maxNrOfTsLCR,
maxNrOfDLTsLCR,
maxNrOfULTsLCR,
maxNrOfDPCHsLCR,
maxNrOfLCRTDDNeighboursPerRNC,
maxNrOfMeasNCell,

id-Active-Pattern-Sequence-Information,
id-AdjustmentRatio,
id-AllowedQueuingTime,
id-BindingID,
id-C-ID,
id-C-RNTI,
id-CFN,
id-CFNReportingIndicator,
id-CN-CS-DomainIdentifier,
id-CN-PS-DomainIdentifier,
id-Cause,
id-CauseLevel-RL-AdditionFailureFDD,
id-CauseLevel-RL-AdditionFailureTDD,
id-CauseLevel-RL-ReconfFailure,
id-CauseLevel-RL-SetupFailureFDD,
id-CauseLevel-RL-SetupFailureTDD,
id-CCTrCH-InformationItem-RL-FailureInd,
id-CCTrCH-InformationItem-RL-RestoreInd,
id-ClosedLoopModel-SupportIndicator,
id-ClosedLoopMode2-SupportIndicator,
id-CNOriginatedPage-PagingRqst,
id-CommonMeasurementAccuracy,
id-CommonMeasurementObjectType-CM-Rprt,
id-CommonMeasurementObjectType-CM-Rqst,
id-CommonMeasurementObjectType-CM-Rsp,
id-CommonMeasurementType,
id-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-DCH-Rate-InformationItem-RL-CongestInd,
id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD,
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationItem-RL-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-PhyChReconfRqstTDD,
id-DL-DPCH-InformationItem-RL-AdditionRspTDD,

id-DL-DPCH-InformationItem-RL-SetupRspTDD,
id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD,
id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD,
id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD,
id-DL-Physical-Channel-Information-RL-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-DPC-Mode,
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-ReconfReadyTDD,
id-EnhancedDSCHPC,
id-EnhancedDSCHPCIndicator,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD,
id-GA-Cell,
id-GA-CellAdditionalShapes,
id-IMSI,
id-InformationExchangeID,
id-InformationExchangeObjectType-InfEx-Rprt,
id-InformationExchangeObjectType-InfEx-Rqst,
id-InformationExchangeObjectType-InfEx-Rsp,
id-InformationReportCharacteristics,
id-InformationType,
id-InnerLoopDLPCStatus,
id-L3-Information,
id-AdjustmentPeriod,
id-MaxAdjustmentStep,
id-MeasurementFilterCoefficient,
id-MeasurementID,
id-PagingArea-PagingRqst,
id-FACH-FlowControlInformation,
id-PowerAdjustmentType,
id-PropagationDelay,
id-RANAP-RelocationInformation,
id-RL-Information-PhyChReconfRqstFDD,
id-RL-Information-PhyChReconfRqstTDD,
id-RL-Information-RL-AdditionRqstFDD,
id-RL-Information-RL-AdditionRqstTDD,
id-RL-Information-RL-DeletionRqst,
id-RL-Information-RL-FailureInd,
id-RL-Information-RL-ReconfPrepFDD,
id-RL-Information-RL-RestoreInd,
id-RL-Information-RL-SetupRqstFDD,
id-RL-Information-RL-SetupRqstTDD,
id-RL-InformationItem-RL-CongestInd,
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-CongestInd,
id-RL-InformationList-RL-AdditionRqstFDD,
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,
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-SFN,
id-SFNReportingIndicator,
id-SRNC-ID,
id-SSDT-CellIDforEDSCHPC,
id-STTD-SupportIndicator,
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-timeSlot-ISCP,
id-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,
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-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-SetupRqstTDD,
id-UL-SIRTarget,
id-URA-Information,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-USCHs-to-Add,
id-USCH-DeleteList-RL-ReconfPrepTDD,
id-USCH-InformationListIE-RL-AdditionRspTDD,
id-USCH-InformationListIEs-RL-SetupRspTDD,
id-USCH-Information,
id-USCH-ModifyList-RL-ReconfPrepTDD,
id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD,
id-neighbouring-LCR-TDD-CellInformation,
id-DL-Timeslot-ISCP-LCR-Information-RL-SetupRqstTDD,
id-RL-LCR-InformationResponse-RL-SetupRspTDD,
id-UL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD,
id-UL-DPCH-LCR-InformationItem-RL-SetupRspTDD,
id-DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD,
id-DL-DPCH-LCR-InformationItem-RL-SetupRspTDD,
id-DSCH-LCR-InformationListIEs-RL-SetupRspTDD,
id-USCH-LCR-InformationListIEs-RL-SetupRspTDD,
id-DL-Timeslot-ISCP-LCR-Information-RL-AdditionRqstTDD,

```

id-RL-LCR-InformationResponse-RL-AdditionRspTDD,
id-UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD,
id-UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD,
id-DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD,
id-DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD,
id-DSCH-LCR-InformationListIEs-RL-AdditionRspTDD,
id-USCH-LCR-InformationListIEs-RL-AdditionRspTDD,
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD,
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD,
id-UL-Timeslot-LCR-InformationList-RL-ReconfReadyTDD,
id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD,
id-DL-Timeslot-LCR-InformationList-RL-ReconfReadyTDD,
id-UL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD,
id-DL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD,
id-timeSlot-LCR-ISCPList-DL-PC-Rqst-TDD,
id-TSTD-Support-Indicator-RL-SetupRqstTDD

```

```
FROM RNSAP-Constants;
```

```

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

```

```

RadioLinkSetupRequestFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container      {{RadioLinkSetupRequestFDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkSetupRequestFDD-
Extensions}}          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-SetupRqstFDD      CRITICALITY notify  TYPE RL-InformationList-RL-
SetupRqstFDD          PRESENCE mandatory } |
  { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject  TYPE
Transmission-Gap-Pattern-Sequence-Information PRESENCE conditional-optional } ¶
This IE shall be present when the Active-Pattern-Sequence-Information IE is present
otherwise this IE is 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 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,
  s-FieldLength             S-FieldLength          OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { {UL-DPCH-Information-RL-
SetupRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

```

```
UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
{ ID id-DPC-Mode                CRITICALITY reject      EXTENSION DPC-Mode  PRESENCE optional
},
...
}

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 present if DL DPCH Slot Format IE is present in the RACH from 12
to 16 --,
    multiplexingPosition      MultiplexingPosition,
    powerOffsetInformation     PowerOffsetInformation-RL-SetupRqstFDD,
    fdd-dl-TPC-DownlinkStepSize  FDD-TPC-DownlinkStepSize,
    limitedPowerIncrease       LimitedPowerIncrease,
    innerLoopDLPCStatus        InnerLoopDLPCStatus,
    iE-Extensions              ProtocolExtensionContainer { {DL-DPCH-Information-RL-
SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

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

PowerOffsetInformation-RL-SetupRqstFDD ::= SEQUENCE {
    po1-ForTFCI-Bits          PowerOffset,
    po2-ForTPC-Bits           PowerOffset,
    po3-ForPilotBits          PowerOffset,
    iE-Extensions              ProtocolExtensionContainer { { PowerOffsetInformation-RL-
SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-
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-SetupRqstFDD ::= SEQUENCE {
    rL-ID                    RL-ID,
    c-ID                      C-ID,
    firstRLS-indicator        FirstRLS-Indicator,
    frameOffset               FrameOffset,
    chipOffset                ChipOffset,
    propagationDelay          PropagationDelay                OPTIONAL,
    diversityControlField      DiversityControlField          OPTIONAL
    -- This IE shall be 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 present unless Diversity Mode IE in UL DPCH Information group is "none"
    iE-Extensions              ProtocolExtensionContainer { {RL-InformationItem-RL-
SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-SSDT-CellIDforEDSCHPC  CRITICALITY ignore  EXTENSION SSDT-CellID          PRESENCE
conditional },
    -- This IE shall be present if Enhanced DSCH PC IE is present in the DSCH Information IE.
    ...
}

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



```

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

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

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SRNC-ID                CRITICALITY reject  TYPE RNC-ID
    PRESENCE mandatory } |
    { ID id-S-RNTI                  CRITICALITY reject  TYPE S-RNTI
    PRESENCE mandatory } |
    { ID id-D-RNTI                  CRITICALITY reject  TYPE D-RNTI
    PRESENCE optional  } |
    { ID id-UL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject  TYPE UL-Physical-
Channel-Information-RL-SetupRqstTDD PRESENCE mandatory } |
    { ID id-DL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject  TYPE DL-Physical-
Channel-Information-RL-SetupRqstTDD PRESENCE mandatory } |
    { ID id-AllowedQueueingTime     CRITICALITY reject  TYPE
AllowedQueueingTime PRESENCE optional  } |
    { ID id-UL-CCTrCH-InformationList-RL-SetupRqstTDD CRITICALITY notify  TYPE UL-CCTrCH-
InformationList-RL-SetupRqstTDD PRESENCE optional  } |
    { ID id-DL-CCTrCH-InformationList-RL-SetupRqstTDD CRITICALITY notify  TYPE DL-CCTrCH-
InformationList-RL-SetupRqstTDD PRESENCE optional  } |
    { ID id-DCH-TDD-Information     CRITICALITY reject  TYPE DCH-TDD-Information
PRESENCE optional  } |
    { ID id-DSCH-TDD-Information    CRITICALITY reject  TYPE DSCH-TDD-Information
PRESENCE optional  } |
    { ID id-USCH-Information        CRITICALITY reject  TYPE USCH-Information          PRESENCE
optional  } |
    { ID id-RL-Information-RL-SetupRqstTDD CRITICALITY reject  TYPE RL-Information-
RL-SetupRqstTDD PRESENCE mandatory},
    ...
}

UL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
    maxNrTimeslots-UL              MaxNrTimeslots,
    minimumSpreadingFactor-UL      MinimumSpreadingFactor,
    maxNrULPhysicalchannels        MaxNrULPhysicalchannels,
    iE-Extensions                  ProtocolExtensionContainer { {UL-Physical-Channel-
InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
    maxNrTimeslots-DL              MaxNrTimeslots,
    minimumSpreadingFactor-DL      MinimumSpreadingFactor,
    maxNrDLPhysicalchannels        MaxNrDLPhysicalchannels,
    iE-Extensions                  ProtocolExtensionContainer { {DL-Physical-Channel-
InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

UL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID                      CCTrCH-ID,
    ul-TFCS                         TFCS,
}

```

```

    tFCI-Coding          TFCI-Coding,
    ul-PunctureLimit     PunctureLimit,
    iE-Extensions        ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-
SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

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

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

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

CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
    rL-ID              RL-ID,
    c-ID               C-ID,
    frameOffset        FrameOffset,
    specialBurstScheduling SpecialBurstScheduling,
    primaryCCPCH-RSCP PrimaryCCPCH-RSCP OPTIONAL,
    dL-TimeSlot-ISCP DL-TimeSlot-ISCP-Info OPTIONAL
    --for 3.84Mcps TDD only,
    iE-Extensions      ProtocolExtensionContainer { {RL-Information-RL-SetupRqstTDD-
ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-TimeSlot-ISCP-LCR-Information-RL-SetupRqstTDD CRITICALITY reject EXTENSION
DL-TimeSlot-ISCP-LCR-Information PRESENCE optional },
    { ID id-TSTD-Support-Indicator-RL-SetupRqstTDD CRITICALITY ignore EXTENSION
TSTD-Support-Indicator PRESENCE optional },
    --for 1.28Mcps TDD only
    ...
}

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

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

```

```
-- *****  
RadioLinkSetupResponseFDD ::= SEQUENCE {  
    protocolIEs                ProtocolIE-Container        {{RadioLinkSetupResponseFDD-IEs}},  
    protocolExtensions          ProtocolExtensionContainer {{RadioLinkSetupResponseFDD-  
Extensions}}  
    OPTIONAL,  
    ...  
}  
  
RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {  
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI  
    PRESENCE optional } |  
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier  
    PRESENCE optional } |  
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier  
    PRESENCE optional } |  
    { ID id-RL-InformationResponseList-RL-SetupRspFDD CRITICALITY ignore TYPE RL-  
InformationResponseList-RL-SetupRspFDD PRESENCE mandatory } |  
    { ID id-UL-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-ID                RL-ID,  
    rL-Set-ID            RL-Set-ID,  
    uRA-Information      URA-Information OPTIONAL,  
    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,  
    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 Neighbouring-GSM-CellInformation OPTIONAL,  
    pC-Preamble          PC-Preamble,  
    sRB-Delay            SRB-Delay,  
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponseItem-RL-  
SetupRspFDD-ExtIEs} } OPTIONAL,  
    ...  
}  
  
RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    { ID id-GA-CellAdditionalShapes CRITICALITY ignore EXTENSION GA-  
CellAdditionalShapes  
    PRESENCE optional },  
    ...  
}  
  
DiversityIndication-RL-SetupRspFDD ::= CHOICE {  
    combining                Combining-RL-SetupRspFDD,  
    nonCombiningOrFirstRL    NonCombiningOrFirstRL-RL-SetupRspFDD  
}
```

```

Combining-RL-SetupRspFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    iE-Extensions        ProtocolExtensionContainer { { CombiningItem-RL-SetupRspFDD-
ExtIEs} } OPTIONAL,
    ...
}

CombiningItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
    { ID id-DCH-InformationResponse          CRITICALITY ignore  EXTENSION DCH-InformationResponse
      PRESENCE optional }
}

NonCombiningOrFirstRL-RL-SetupRspFDD ::= SEQUENCE {
    dCH-InformationResponse    DCH-InformationResponse,
    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 }
}

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

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

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

RadioLinkSetupResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore  TYPE D-RNTI                PRESENCE
optional } |
    { ID id-CN-PS-DomainIdentifier    CRITICALITY ignore  TYPE CN-PS-DomainIdentifier
PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier    CRITICALITY ignore  TYPE CN-CS-DomainIdentifier
PRESENCE optional } |
    { ID id-RL-InformationResponse-RL-SetupRspTDD  CRITICALITY ignore  TYPE RL-
InformationResponse-RL-SetupRspTDD PRESENCE mandatory }
    --For 3.84Mcps TDD only |
    { 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    OPTIONAL,
    sAI                  SAI,
    gA-Cell              GA-Cell    OPTIONAL,
    gA-AccessPointPosition  GA-AccessPointPosition  OPTIONAL,
    ul-TimeSlot-ISCP-Info  UL-TimeSlot-ISCP-Info,
    maxUL-SIR            UL-SIR,
    minUL-SIR            UL-SIR,
    maximumAllowedULTxPower  MaximumAllowedULTxPower,
    maximumDLTxPower      DL-Power,
    minimumDLTxPower      DL-Power,
}

```

```

uARFCNforNt                UARFCN                OPTIONAL,
cellParameterID            CellParameterID        OPTIONAL,
syncCase                   SyncCase                OPTIONAL,
sCH-TimeSlot               SCH-TimeSlot          OPTIONAL,
-- This IE shall be present when-if Sync Case IE is Case2. --
block-STTD-Indicator       Block-STTD-Indicator   OPTIONAL,
pCCPCH-Power               pCCPCH-Power         OPTIONAL,
timingAdvanceApplied        TimingAdvanceApplied,
alphaValue                 AlphaValue,
ul-PhysCH-SF-Variation     UL-PhysCH-SF-Variation,
synchronisationConfiguration SynchronisationConfiguration,
secondary-CCPCH-Info-TDD   Secondary-CCPCH-Info-TDD OPTIONAL,
ul-CCTrCHInformation       UL-CCTrCHInformationList-RL-SetupRspTDD OPTIONAL,
dl-CCTrCHInformation       DL-CCTrCHInformationList-RL-SetupRspTDD OPTIONAL,
dCH-InformationResponse    DCH-InformationResponseList-RL-SetupRspTDD OPTIONAL,
dsch-InformationResponse   DSCH-InformationResponse-RL-SetupRspTDD OPTIONAL,
usch-InformationResponse    USCH-InformationResponse-RL-SetupRspTDD OPTIONAL,
neighbouring-UMTS-CellInformation Neighbouring-UMTS-CellInformation OPTIONAL,
neighbouring-GSM-CellInformation Neighbouring-GSM-CellInformation OPTIONAL,
iE-Extensions              ProtocolExtensionContainer { {RL-InformationResponse-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-GA-CellAdditionalShapes          CRITICALITY ignore EXTENSION GA-
CellAdditionalShapes          PRESENCE optional },
  ...
}

UL-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{UL-
CCTrCHInformationListIEs-RL-SetupRspTDD}}

UL-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD CRITICALITY ignore TYPE UL-
CCTrCHInformationListIE-RL-SetupRspTDD PRESENCE mandatory }
}

UL-CCTrCHInformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-
CCTrCHInformationItem-RL-SetupRspTDD

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

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

UL-DPCH-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {UL-DPCH-
InformationListIEs-RL-SetupRspTDD} }

UL-DPCH-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationItem-RL-SetupRspTDD CRITICALITY ignore TYPE UL-DPCH-
InformationItem-RL-SetupRspTDD PRESENCE mandatory }
}

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

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

DL-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DL-
CCTrCHInformationListIEs-RL-SetupRspTDD}}

```

```
DL-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { 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,
  iE-Extensions ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-
  SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

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

DL-DPCH-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {DL-DPCH-
InformationListIEs-RL-SetupRspTDD} }

DL-DPCH-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationItem-RL-SetupRspTDD CRITICALITY ignore TYPE DL-DPCH-
InformationItem-RL-SetupRspTDD PRESENCE mandatory }
}

DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  tDD-DPCHOffset TDD-DPCHOffset,
  dL-Timeslot-Information DL-Timeslot-Information,
  iE-Extensions ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-
  SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

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

DCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DCH-
InformationResponseListIEs-RL-SetupRspTDD}}

DCH-InformationResponseListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { 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 ::= {
  { ID id-DSCH-InformationListIEs-RL-SetupRspTDD CRITICALITY ignore TYPE DSCH-
InformationListIEs-RL-SetupRspTDD PRESENCE mandatory }
}

DSCH-InformationListIEs-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF
DSCHInformationItem-RL-SetupRspTDD

DSCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
  dsch-ID DSCH-ID,
  dsch-FlowControlInformation DSCH-FlowControlInformation,
  bindingID BindingID OPTIONAL,
  transportLayerAddress TransportLayerAddress OPTIONAL,
  transportFormatManagement TransportFormatManagement,
  iE-Extensions ProtocolExtensionContainer { {DSCHInformationItem-RL-SetupRspTDD-
  ExtIEs} } OPTIONAL,
  ...
}

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

USCH-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{USCH-InformationList-
RL-SetupRspTDD}}
```

```

USCH-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-USCH-InformationListIES-RL-SetupRspTDD      CRITICALITY ignore  TYPE USCH-
InformationListIES-RL-SetupRspTDD PRESENCE mandatory }
}

USCH-InformationListIES-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF
USCHInformationItem-RL-SetupRspTDD

USCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
  usch-ID                USCH-ID,
  bindingID              BindingID  OPTIONAL,
  transportLayerAddress  TransportLayerAddress  OPTIONAL,
  transportFormatManagement  TransportFormatManagement,
  iE-Extensions          ProtocolExtensionContainer { {USCHInformationItem-RL-SetupRspTDD-
ExtIES} } OPTIONAL,
  ...
}

USCHInformationItem-RL-SetupRspTDD-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkSetupResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-RL-LCR-InformationResponse-RL-SetupRspTDD  CRITICALITY ignore  EXTENSION  RL-LCR-
InformationResponse-RL-SetupRspTDD      PRESENCE mandatory},
  --For 1.28Mcps TDD only
  ...
}

RL-LCR-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  uRA-Information      URA-Information,
  sAI                  SAI,
  gA-Cell              GA-Cell  OPTIONAL,
  uTRAN-AccessPointPosition  UTRAN-AccessPointPosition  OPTIONAL,
  ul-TimeSlot-ISCP-LCR-Info  UL-TimeSlot-ISCP-LCR-Info,
  maxUL-SIR            UL-SIR,
  minUL-SIR            UL-SIR,
  maximumAllowedULTxPower  MaximumAllowedULTxPower,
  maximumDLTxPower     DL-Power,
  minimumDLTxPower     DL-Power,
  ul-PhysCH-SF-Variation  UL-PhysCH-SF-Variation,
  ul-LCR-CCTrCHInformation  UL-LCR-CCTrCHInformationList-RL-SetupRspTDD
OPTIONAL,
  dl-LCR-CCTrCHInformation  DL-LCR-CCTrCHInformationList-RL-SetupRspTDD
OPTIONAL,
  dCH-InformationResponse  DCH-InformationResponseList-RL-SetupRspTDD
OPTIONAL,
  dsch-LCR-InformationResponse  DSCH-LCR-InformationResponse-RL-SetupRspTDD
OPTIONAL,
  usch-LCR-InformationResponse  USCH-LCR-InformationResponse-RL-SetupRspTDD
OPTIONAL,
  neighbouring-UMTS-CellInformation  Neighbouring-UMTS-CellInformation
OPTIONAL,
  neighbouring-GSM-CellInformation  Neighbouring-GSM-CellInformation
OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { RL-LCR-
InformationResponseList-RL-SetupRspTDD-ExtIES} } OPTIONAL,
  ...
}

RL-LCR-InformationResponseList-RL-SetupRspTDD-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-LCR-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{UL-LCR-
CCTrCHInformationListIES-RL-SetupRspTDD}}

UL-LCR-CCTrCHInformationListIES-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD  CRITICALITY ignore  TYPE UL-LCR-
CCTrCHInformationListIE-RL-SetupRspTDD      PRESENCE mandatory }
}

UL-LCR-CCTrCHInformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHsLCR)) OF UL-
LCR-CCTrCHInformationItem-RL-SetupRspTDD

UL-LCR-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
  cCtRCH-ID            CCTrCH-ID,
  ul-DPCH-LCR-Information  UL-DPCH-LCR-InformationList-RL-SetupRspTDD      OPTIONAL,

```

```
iE-Extensions                ProtocolExtensionContainer { {UL-LCR-CCTrCHInformationItem-
RL-SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

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

UL-DPCH-LCR-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {UL-DPCH-LCR-
InformationListIEs-RL-SetupRspTDD} }

UL-DPCH-LCR-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
{ ID id-UL-DPCH-LCR-InformationItem-RL-SetupRspTDD      CRITICALITY ignore  TYPE UL-DPCH-LCR-
InformationItem-RL-SetupRspTDD  PRESENCE mandatory }
}

UL-DPCH-LCR-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
repetitionPeriod          RepetitionPeriod,
repetitionLength          RepetitionLength,
tDD-DPCHOffset            TDD-DPCHOffset,
uL-TimeslotLCR-Information UL-TimeslotLCR-Information,
iE-Extensions             ProtocolExtensionContainer { {UL-DPCH-LCR-InformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

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

DL-LCR-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DL-LCR-
CCTrCHInformationListIEs-RL-SetupRspTDD}}

DL-LCR-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
{ ID id-DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD  CRITICALITY ignore  TYPE DL-CCTrCH-
LCR-InformationListIE-RL-SetupRspTDD  PRESENCE mandatory }
}

DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHsLCR)) OF DL-
CCTrCH-LCR-InformationItem-RL-SetupRspTDD

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

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

DL-DPCH-LCR-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {DL-DPCH-LCR-
InformationListIEs-RL-SetupRspTDD} }

DL-DPCH-LCR-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
{ ID id-DL-DPCH-LCR-InformationItem-RL-SetupRspTDD      CRITICALITY ignore  TYPE DL-DPCH-LCR-
InformationItem-RL-SetupRspTDD  PRESENCE mandatory }
}

DL-DPCH-LCR-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
repetitionPeriod          RepetitionPeriod,
repetitionLength          RepetitionLength,
tDD-DPCHOffset            TDD-DPCHOffset,
dL-Timeslot-LCR-Information DL-Timeslot-LCR-Information,
tSTD-Indicator            TSTD-Indicator,
iE-Extensions             ProtocolExtensionContainer { {DL-DPCH-LCR-InformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

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

DCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-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-LCR-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DSCH-LCR-
InformationList-RL-SetupRspTDD}}

DSCH-LCR-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DSCH-LCR-InformationListIEs-RL-SetupRspTDD  CRITICALITY ignore  TYPE DSCH-LCR-
InformationListIEs-RL-SetupRspTDD PRESENCE mandatory }
}

DSCH-LCR-InformationListIEs-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHsLCR)) OF DSCH-LCR-
InformationItem-RL-SetupRspTDD

DSCH-LCR-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
  dsch-ID          DSCH-ID,
  dsch-FlowControlInformation  DSCH-FlowControlInformation,
  bindingID        BindingID  OPTIONAL,
  transportLayerAddress  TransportLayerAddress  OPTIONAL,
  transportFormatManagement  TransportFormatManagement,
  iE-Extensions      ProtocolExtensionContainer { {DSCH-LCR-InformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

DSCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

USCH-LCR-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{USCH-LCR-
InformationList-RL-SetupRspTDD}}

USCH-LCR-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-USCH-LCR-InformationListIEs-RL-SetupRspTDD  CRITICALITY ignore  TYPE USCH-LCR-
InformationListIEs-RL-SetupRspTDD PRESENCE mandatory }
}

USCH-LCR-InformationListIEs-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHsLCR)) OF USCH-LCR-
InformationItem-RL-SetupRspTDD

USCH-LCR-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
  usch-ID          USCH-ID,
  bindingID        BindingID  OPTIONAL,
  transportLayerAddress  TransportLayerAddress  OPTIONAL,
  transportFormatManagement  TransportFormatManagement,
  iE-Extensions      ProtocolExtensionContainer { {USCH-LCR-InformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

USCH-LCR-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

/* partly omitted */

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- *****

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

RadioLinkReconfigurationPrepareFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-AllowedQueuingTime  CRITICALITY reject  TYPE AllowedQueuingTime
  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-DPDCHs          OPTIONAL
    -- This IE shall be present only if minUL-ChannelisationCodeLength equals to 4 --,
    ul-PunctureLimit          PunctureLimit              OPTIONAL,
    tFCS                      TFCS                      OPTIONAL,
    ul-DPCCH-SlotFormat        UL-DPCCH-SlotFormat        OPTIONAL,
    diversityMode              DiversityMode                OPTIONAL,
    sSDT-CellIDLength          SSdT-CellID-Length          OPTIONAL,
    s-FieldLength              S-FieldLength              OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {UL-DPCH-Information-RL-
ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

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

```

```

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 present if DL-DPCH Slot Format IE is from 12 to 16 --,
    multiplexingPosition        MultiplexingPosition        OPTIONAL,
    limitedPowerIncrease        LimitedPowerIncrease        OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {DL-DPCH-Information-RL-
ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

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

```

```

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,
    iE-Extensions              ProtocolExtensionContainer { {DSCH-Modify-RL-
ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

}

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,
    bLER                      BLER                            OPTIONAL,
    transportBearerRequestIndicator    TransportBearerRequestIndicator,
    iE-Extensions            ProtocolExtensionContainer { {DSCH-ModifyInformationItem-
RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

DSCH-ModifyInformationItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-EnhancedDSCHPCIndicator    CRITICALITY ignore  EXTENSION EnhancedDSCHPCIndicator
      PRESENCE optional } |
    { ID id-EnhancedDSCHPC            CRITICALITY ignore  EXTENSION EnhancedDSCHPC
      PRESENCE conditional } },
    -- The IE shall be present only if the Enhanced DSCH PC Indicator IE is set to "Enhanced DSCH
PC Active in the UE".
    ...
}

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 ProtocolIE-
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-ID                RL-ID,
    sSDT-Indication        SSDT-Indication    OPTIONAL,
    sSDT-CellIdentity        SSDT-CellID    OPTIONAL
    -- The IE may shall be present if the sSDT-Indication is set to 'sSDT-active-in-the-UE' --,
    transmitDiversityIndicator    TransmitDiversityIndicator    OPTIONAL,
    -- This IE shall be present if Diversity Mode IE is present in UL DPCH Information IE is
present, unless it and is not equal to "none"
    iE-Extensions            ProtocolExtensionContainer { {RL-Information-RL-
ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

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

```

```

    { ID id-SSDT-CellIDforEDSCHPC CRITICALITY ignore EXTENSION SSDT-CellID PRESENCE
conditional },
    -- This IE shall be present if Enhanced DSCH PC IE is present in either the DSCHs to Modify
    IE or the DSCHs to Add IE.
    ...
}

```

```

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

```

```

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- *****

```

```

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

```

```

RadioLinkReconfigurationPrepareTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime CRITICALITY reject TYPE AllowedQueuingTime
    PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-
    InformationAddList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-
    CCTrCH-InformationModifyList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-
    CCTrCH-InformationDeleteList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-CCTrCH-
    InformationAddList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-
    CCTrCH-InformationModifyList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-
    CCTrCH-InformationDeleteList-RL-ReconfPrepTDD PRESENCE optional } |
    { ID id-TDD-DCHs-to-Modify CRITICALITY reject TYPE TDD-DCHs-to-Modify PRESENCE
    optional } |
    { ID id-DCHs-to-Add-TDD CRITICALITY reject TYPE DCH-TDD-Information PRESENCE
    optional } |
    { ID id-DCH-DeleteList-RL-ReconfPrepTDD CRITICALITY reject TYPE DCH-DeleteList-RL-
    ReconfPrepTDD PRESENCE optional } |
    { ID id-DSCH-ModifyList-RL-ReconfPrepTDD CRITICALITY reject TYPE DSCH-ModifyList-RL-
    ReconfPrepTDD PRESENCE optional } |
    { ID id-DSCHs-to-Add-TDD CRITICALITY reject TYPE DSCH-TDD-Information
    PRESENCE optional } |
    { ID id-DSCH-DeleteList-RL-ReconfPrepTDD CRITICALITY reject TYPE DSCH-DeleteList-RL-
    ReconfPrepTDD PRESENCE optional } |
    { ID id-USCH-ModifyList-RL-ReconfPrepTDD CRITICALITY reject TYPE USCH-ModifyList-RL-
    ReconfPrepTDD PRESENCE optional } |
    { ID id-USCHs-to-Add CRITICALITY reject TYPE USCH-Information PRESENCE
    optional } |
    { ID id-USCH-DeleteList-RL-ReconfPrepTDD CRITICALITY reject TYPE USCH-DeleteList-RL-
    ReconfPrepTDD PRESENCE optional },
    ...
}

```

```

UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF
ProtocolIE-Single-Container { {UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs} }

```

```

UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-
    AddInformation-RL-ReconfPrepTDD PRESENCE mandatory }
}

```

```

UL-CCTrCH-AddInformation-RL-ReconfPrepTDD ::= SEQUENCE {
    cTrCH-ID CCTrCH-ID,
    tFCS TFCS,
    tFCI-Coding TFCI-Coding,
    punctureLimit PunctureLimit,
    iE-Extensions ProtocolExtensionContainer { {UL-CCTrCH-AddInformation-RL-
    ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```
UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs))
OF ProtocolIE-Single-Container { {UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-
ModifyInformation-RL-ReconfPrepTDD PRESENCE mandatory }
}

UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID CCTrCH-ID,
    tFCS TFCS OPTIONAL,
    tFCI-Coding TFCSI-Coding OPTIONAL,
    punctureLimit PunctureLimit OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {UL-CCTrCH-ModifyInformation-RL-
ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs))
OF ProtocolIE-Single-Container { {UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD CRITICALITY notify TYPE UL-CCTrCH-
DeleteInformation-RL-ReconfPrepTDD PRESENCE mandatory }
}

UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID CCTrCH-ID,
    iE-Extensions ProtocolExtensionContainer { {UL-CCTrCH-DeleteInformation-RL-
ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF
ProtocolIE-Single-Container { {DL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-CCTrCH-
InformationAddItem-RL-ReconfPrepTDD PRESENCE mandatory }
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID CCTrCH-ID,
    tFCS TFCS,
    tFCI-Coding TFCSI-Coding,
    punctureLimit PunctureLimit,
    cCTrCH-TPCList CCTrCH-TPCAddList-RL-ReconfPrepTDD OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {DL-CCTrCH-InformationAddItem-
RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-TPCAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCAddItem-
RL-ReconfPrepTDD

CCTrCH-TPCAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID CCTrCH-ID,
    iE-Extensions ProtocolExtensionContainer { { CCTrCH-TPCAddItem-RL-
ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
  }

DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs))
OF ProtocolIE-Single-Container { {DL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-
CCTrCH-InformationModifyItem-RL-ReconfPrepTDD PRESENCE mandatory }
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  tFCS               TFCS          OPTIONAL,
  tFCI-Coding        TFCI-Coding   OPTIONAL,
  punctureLimit      PunctureLimit OPTIONAL,
  cCTrCH-TPCList     CCTrCH-TPCModifyList-RL-ReconfPrepTDD OPTIONAL,
  iE-Extensions      ProtocolExtensionContainer { {DL-CCTrCH-
InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

CCTrCH-TPCModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-
TPCModifyItem-RL-ReconfPrepTDD

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  iE-Extensions      ProtocolExtensionContainer { { CCTrCH-TPCModifyItem-RL-
ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs))
OF ProtocolIE-Single-Container { {DL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD CRITICALITY notify TYPE DL-
CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD PRESENCE mandatory }
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  iE-Extensions      ProtocolExtensionContainer { {DL-CCTrCH-
InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-
DeleteItem-RL-ReconfPrepTDD

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

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

DSCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-ModifyItem-RL-
ReconfPrepTDD

DSCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
  dSCH-ID          DSCH-ID,
  dl-ccTrCHID     CCTrCH-ID          OPTIONAL,

```

```

trChSourceStatisticsDescriptor      TrCH-SrcStatisticsDescr OPTIONAL,
transportFormatSet                  TransportFormatSet          OPTIONAL,
allocationRetentionPriority          AllocationRetentionPriority OPTIONAL,
schedulingPriorityIndicator          SchedulingPriorityIndicator OPTIONAL,
bLER                                BLER                        OPTIONAL,
transportBearerRequestIndicator      TransportBearerRequestIndicator,
iE-Extensions                        ProtocolExtensionContainer { {DSCH-ModifyItem-RL-
ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

DSCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DSCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-DeleteItem-RL-
ReconfPrepTDD

DSCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
dSCH-ID                             DSCH-ID,
iE-Extensions                        ProtocolExtensionContainer { {DSCH-DeleteItem-RL-
ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

DSCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

USCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCH-ModifyItem-RL-
ReconfPrepTDD

USCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
uSCH-ID                             USCH-ID,
ul-ccTrCHID                          CTrCH-ID                      OPTIONAL,
trChSourceStatisticsDescriptor        TrCH-SrcStatisticsDescr OPTIONAL,
transportFormatSet                    TransportFormatSet             OPTIONAL,
allocationRetentionPriority            AllocationRetentionPriority     OPTIONAL,
schedulingPriorityIndicator            SchedulingPriorityIndicator    OPTIONAL,
bLER                                  BLER                           OPTIONAL,
transportBearerRequestIndicator        TransportBearerRequestIndicator,
rb-Info                               RB-Info                       OPTIONAL,
iE-Extensions                        ProtocolExtensionContainer { {USCH-ModifyItem-RL-
ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

USCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

USCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCH-DeleteItem-RL-
ReconfPrepTDD

USCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
uSCH-ID                             USCH-ID,
iE-Extensions                        ProtocolExtensionContainer { {USCH-DeleteItem-RL-
ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

USCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION READY FDD
--
-- *****

RadioLinkReconfigurationReadyFDD ::= SEQUENCE {
protocolIEs                          ProtocolIE-Container
}

```

```
    protocolExtensions          ProtocolExtensionContainer
  {{RadioLinkReconfigurationReadyFDD-Extensions}}          OPTIONAL,
  ...
}

RadioLinkReconfigurationReadyFDD-IES RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseList-RL-ReconfReadyFDD  CRITICALITY ignore  TYPE RL-
  InformationResponseList-RL-ReconfReadyFDD             PRESENCE optional  } |
  { ID id-CriticalityDiagnostics                        CRITICALITY ignore  TYPE CriticalityDiagnostics
  PRESENCE optional  },
  ...
}

RL-InformationResponseList-RL-ReconfReadyFDD ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF
ProtocolIE-Single-Container { {RL-InformationResponse-RL-ReconfReadyFDD-IES} }

RL-InformationResponse-RL-ReconfReadyFDD-IES RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseItem-RL-ReconfReadyFDD  CRITICALITY ignore  TYPE RL-
  InformationResponseItem-RL-ReconfReadyFDD             PRESENCE mandatory  }
}

RL-InformationResponseItem-RL-ReconfReadyFDD ::= SEQUENCE {
  rL-ID                RL-ID,
  max-UL-SIR           UL-SIR          OPTIONAL,
  min-UL-SIR           UL-SIR          OPTIONAL,
  maximumDLTxPower    DL-Power        OPTIONAL,
  minimumDLTxPower    DL-Power        OPTIONAL,
  secondary-CCPCH-Info Secondary-CCPCH-Info OPTIONAL,
  dl-CodeInformationList DL-CodeInformationList-RL-ReconfReadyFDD OPTIONAL,
  dCHInformationResponse DCH-InformationResponseList-RL-ReconfReadyFDD OPTIONAL,
  dSCHsToBeAddedOrModified DSCHsToBeAddedOrModified-RL-ReconfReadyFDD OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
  ReconfReadyFDD-ExtIEs} } OPTIONAL,
  ...
}

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

DL-CodeInformationList-RL-ReconfReadyFDD ::= ProtocolIE-Single-Container { { DL-
CodeInformationListIEs-RL-ReconfReadyFDD } }

DL-CodeInformationListIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-FDD-DL-CodeInformation  CRITICALITY ignore  TYPE FDD-DL-CodeInformation  PRESENCE
  mandatory  }
}

DCH-InformationResponseList-RL-ReconfReadyFDD ::= ProtocolIE-Single-Container {
  {DCH-InformationResponseListIEs-RL-ReconfReadyFDD} }

DCH-InformationResponseListIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponse  CRITICALITY ignore  TYPE DCH-InformationResponse
  PRESENCE mandatory  }
}

DSCHsToBeAddedOrModified-RL-ReconfReadyFDD ::= ProtocolIE-Single-Container {
  {DSCHsToBeAddedOrModifiedIEs-RL-ReconfReadyFDD} }

DSCHsToBeAddedOrModifiedIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DSCHsToBeAddedOrModified-FDD  CRITICALITY ignore  TYPE DSCH-FDD-InformationResponse
  PRESENCE mandatory  }
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION READY TDD
--
-- *****

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



```

}
...
}

RadioLinkReconfigurationReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponse-RL-ReconfReadyTDD
    CRITICALITY ignore TYPE RL-InformationResponse-RL-ReconfReadyTDD
    PRESENCE optional } |
  { ID id-CriticalityDiagnostics
    CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE optional },
  ...
}

RL-InformationResponse-RL-ReconfReadyTDD ::= SEQUENCE {
  rL-ID
  RL-ID,
  max-UL-SIR
  UL-SIR OPTIONAL,
  min-UL-SIR
  UL-SIR OPTIONAL,
  maximumDLTxPower
  DL-Power OPTIONAL,
  minimumDLTxPower
  DL-Power OPTIONAL,
  secondary-CCPCH-Info-TDD
  Secondary-CCPCH-Info-TDD OPTIONAL,
  ul-CCTrCH-Information
  UL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
  dl-CCTrCH-Information
  DL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
  dCHInformationResponse
  DCH-InformationResponseList-RL-ReconfReadyTDD OPTIONAL,
  dSCHsToBeAddedOrModified
  DSCHToBeAddedOrModified-RL-ReconfReadyTDD OPTIONAL,
  uSCHsToBeAddedOrModified
  USCHToBeAddedOrModified-RL-ReconfReadyTDD OPTIONAL,
  iE-Extensions
  ProtocolExtensionContainer { {RL-InformationResponse-RL-
ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

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

UL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-
CCTrCHInformationListIEs-RL-ReconfReadyTDD}}

UL-CCTrCHInformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD
    CRITICALITY ignore TYPE UL-
CCTrCHInformationListIE-RL-ReconfReadyTDD
    PRESENCE mandatory }
}

UL-CCTrCHInformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF UL-
CCTrCH-InformationItem-RL-ReconfReadyTDD

UL-CCTrCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
  cCCTrCH-ID
  CCTrCH-ID,
  ul-DPCH-AddInformation
  UL-DPCH-InformationAddList-RL-ReconfReadyTDD
  OPTIONAL
  --For 3.84Mcps TDD only,
  ul-DPCH-ModifyInformation
  UL-DPCH-InformationModifyList-RL-ReconfReadyTDD
  OPTIONAL
  --For 3.84Mcps TDD only,
  ul-DPCH-DeleteInformation
  UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD
  OPTIONAL,
  iE-Extensions
  ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-
ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD
    CRITICALITY ignore EXTENSION
  UL-DPCH-LCR-InformationAddList-RL-ReconfReadyTDD
    PRESENCE optional },
  --For 1.28Mcps TDD only
  ...
}

UL-DPCH-LCR-InformationAddList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-LCR-
InformationAddListIEs-RL-ReconfReadyTDD}}

UL-DPCH-LCR-InformationAddListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD
    CRITICALITY ignore TYPE UL-DPCH-
LCR-InformationAddListIE-RL-ReconfReadyTDD
    PRESENCE mandatory }
}

UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD ::= SEQUENCE {
  repetitionPeriod
  RepetitionPeriod,
  repetitionLength
  RepetitionLength,
  tDD-DPCHOffset
  TDD-DPCHOffset,
  uL-TimeslotLCR-Info
  UL-TimeslotLCR-Info,

```

```
iE-Extensions                               ProtocolExtensionContainer { {UL-DPCH-LCR-InformationAddItem-
RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-LCR-InformationAddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

UL-DPCH-InformationAddList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-
InformationAddListIEs-RL-ReconfReadyTDD}}

UL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD  CRITICALITY ignore TYPE UL-DPCH-
InformationAddListIE-RL-ReconfReadyTDD  PRESENCE optional }
}

UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD ::= SEQUENCE {
  repetitionPeriod          RepetitionPeriod,
  repetitionLength          RepetitionLength,
  tDD-DPCHOffset           TDD-DPCHOffset,
  rxTimingDeviationForTA   RxTimingDeviationForTA          OPTIONAL,
  uL-Timeslot-Information   UL-Timeslot-Information,
  iE-Extensions            ProtocolExtensionContainer { {UL-DPCH-InformationAddItem-RL-
ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

UL-DPCH-InformationModifyList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-
InformationModifyListIEs-RL-ReconfReadyTDD}}

UL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD  CRITICALITY ignore TYPE UL-DPCH-
InformationModifyListIE-RL-ReconfReadyTDD  PRESENCE mandatory }
}

UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD ::= SEQUENCE {
  repetitionPeriod          RepetitionPeriod          OPTIONAL,
  repetitionLength          RepetitionLength          OPTIONAL,
  tDD-DPCHOffset           TDD-DPCHOffset           OPTIONAL,
  uL-Timeslot-Information   UL-Timeslot-Information
InformationModifyList-RL-ReconfReadyTDD          OPTIONAL
  --For 3.84Mcps TDD only,
  iE-Extensions            ProtocolExtensionContainer { {UL-DPCH-InformationModifyItem-
RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-UL-TimeslotLCR-InformationList-RL-ReconfReadyTDD  CRITICALITY ignore EXTENSION
UL-TimeslotLCR-InformationList-RL-ReconfReadyTDD  PRESENCE optional },
  --For 1.28Mcps TDD only
  ...
}

UL-TimeslotLCR-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfTSLCR)) OF
UL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD

UL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
  timeSlotLCR              TimeSlotLCR,
  midambleShiftLCR         MidambleShiftLCR          OPTIONAL,
  tFCI-Presence            TFCI-Presence              OPTIONAL,
  tDD-uL-Code-LCR-Information TDD-UL-Code-LCR-InformationModifyList-RL-ReconfReadyTDD
OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { {UL-TimeslotLCR-
InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}

TDD-UL-Code-LCR-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfDPCHLCR))
OF TDD-UL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD

TDD-UL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
  dPCH-ID                  DPCH-ID,
  tDD-ChannelisationCodeLCR TDD-ChannelisationCodeLCR          OPTIONAL,
```

```
    iE-Extensions                ProtocolExtensionContainer { {TDD-UL-Code-LCR-
InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

TDD-UL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-LCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF UL-
Timeslot-InformationModifyItem-RL-ReconfReadyTDD

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

UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-UL-Code-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-
UL-Code-InformationModifyItem-RL-ReconfReadyTDD

TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    dPCH-ID                       DPCH-ID,
    tDD-ChannelisationCode        TDD-ChannelisationCode          OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { {TDD-UL-Code-
InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-
InformationDeleteListIEs-RL-ReconfReadyTDD}}

UL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD CRITICALITY ignore TYPE UL-DPCH-
InformationDeleteListIE-RL-ReconfReadyTDD PRESENCE mandatory }
}

UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF UL-
DPCH-InformationDeleteItem-RL-ReconfReadyTDD

UL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD ::= SEQUENCE {
    dPCH-ID                       DPCH-ID,
    iE-Extensions                ProtocolExtensionContainer { {UL-DPCH-InformationDeleteList-
RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-
CCTrCHInformationListIEs-RL-ReconfReadyTDD}}

DL-CCTrCHInformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD CRITICALITY ignore TYPE DL-
CCTrCHInformationListIE-RL-ReconfReadyTDD PRESENCE mandatory }
}

DL-CCTrCHInformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF DL-
CCTrCH-InformationItem-RL-ReconfReadyTDD
```

```
DL-CCTrCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dl-DPCH-AddInformation    DL-DPCH-InformationAddList-RL-ReconfReadyTDD
    OPTIONAL
    --For 3.84Mcps TDD only,
    dl-DPCH-ModifyInformation DL-DPCH-InformationModifyList-RL-ReconfReadyTDD
    OPTIONAL
    --For 3.84Mcps TDD only,
    dl-DPCH-DeleteInformation DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD
    OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-
ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD  CRITICALITY ignore
EXTENSION  DL-DPCH-LCR-InformationAddList-RL-ReconfReadyTDD      PRESENCE },
    --For 1.28Mcps TDD only
    ...
}

DL-DPCH-LCR-InformationAddList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-DPCH-LCR-
InformationAddListIEs-RL-ReconfReadyTDD}}

DL-DPCH-LCR-InformationAddListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD  CRITICALITY ignore TYPE DL-DPCH-
LCR-InformationAddListIE-RL-ReconfReadyTDD      PRESENCE mandatory }
}

DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tDD-DPCHOffset           TDD-DPCHOffset,
    dL-TimeslotLCR-Info       DL-TimeslotLCR-Info,
    iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-LCR-InformationAddItem-
RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-LCR-InformationAddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationAddList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-DPCH-
InformationAddListIEs-RL-ReconfReadyTDD}}

DL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD  CRITICALITY ignore TYPE DL-DPCH-
InformationAddListIE-RL-ReconfReadyTDD      PRESENCE mandatory }
}

DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tDD-DPCHOffset           TDD-DPCHOffset,
    dL-Timeslot-Information   DL-Timeslot-Information,
    iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-InformationAddItem-RL-
ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModifyList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-DPCH-
InformationModifyListIEs-RL-ReconfReadyTDD}}

DL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD  CRITICALITY ignore TYPE DL-DPCH-
InformationModifyListIE-RL-ReconfReadyTDD      PRESENCE mandatory }
}

DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod          OPTIONAL,
    repetitionLength          RepetitionLength          OPTIONAL,
    tDD-DPCHOffset           TDD-DPCHOffset            OPTIONAL,
```

```
DL-Timeslot-InformationModifyList-RL-ReconfReadyTDD DL-Timeslot-
InformationModifyList-RL-ReconfReadyTDD OPTIONAL
--For 3.84Mcps TDD only,
iE-Extensions ProtocolExtensionContainer { {DL-DPCH-InformationModifyItem-
RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-DL-TimeslotLCR-InformationList-RL-ReconfReadyTDD CRITICALITY ignore EXTENSION
DL-TimeslotLCR-InformationList-RL-ReconfReadyTDD PRESENCE optional },
--For 1.28Mcps TDD only
...
}

DL-TimeslotLCR-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfTSLCR)) OF
DL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD

DL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
timeSlotLCR TimeSlotLCR,
midambleShiftLCR MidambleShiftLCR OPTIONAL,
tFCI-Presence TFCI-Presence OPTIONAL,
tDD-dL-Code-LCR-Information TDD-DL-Code-LCR-InformationModifyList-RL-ReconfReadyTDD
OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {DL-TimeslotLCR-
InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}

TDD-DL-Code-LCR-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfDPCHLCR))
OF TDD-DL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD

TDD-DL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
dPCH-ID DPCH-ID,
tDD-ChannelisationCodeLCR TDD-ChannelisationCodeLCR OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {TDD-DL-Code-LCR-
InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}

TDD-DL-Code-LCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DL-TimeslotLCR-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DL-Timeslot-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF DL-
Timeslot-InformationModifyItem-RL-ReconfReadyTDD

DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
timeSlot TimeSlot,
midambleShiftAndBurstType MidambleShiftAndBurstType OPTIONAL,
tFCI-Presence TFCI-Presence OPTIONAL,
dL-Code-Information TDD-DL-Code-InformationModifyList-RL-ReconfReadyTDD
OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {DL-Timeslot-
InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}

DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

TDD-DL-Code-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-
DL-Code-InformationModifyItem-RL-ReconfReadyTDD

TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
dPCH-ID DPCH-ID,
tDD-ChannelisationCode TDD-ChannelisationCode OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {TDD-DL-Code-
InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}

TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
```

```
DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {DL-DPCH-
InformationDeleteListIEs-RL-ReconfReadyTDD}

DL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE DL-DPCH-
InformationDeleteListIE-RL-ReconfReadyTDD  PRESENCE mandatory }
}

DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-
DPCH-InformationDeleteItem-RL-ReconfReadyTDD

DL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD ::= SEQUENCE {
  dPCH-ID          DPCH-ID,
  iE-Extensions    ProtocolExtensionContainer { {DL-DPCH-InformationDeleteList-
RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-InformationResponseList-RL-ReconfReadyTDD          ::= ProtocolIE-Single-Container {
{DCH-InformationResponseListIEs-RL-ReconfReadyTDD} }

DCH-InformationResponseListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponse  CRITICALITY ignore  TYPE DCH-InformationResponse
  PRESENCE mandatory }
}

DSCHToBeAddedOrModified-RL-ReconfReadyTDD          ::= ProtocolIE-Single-Container {
{DSCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD} }

DSCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE
DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD  PRESENCE mandatory }
}

DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNoOfDSCHs)) OF
DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD

DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD ::= SEQUENCE {
  dsch-ID          DSCH-ID,
  transportFormatManagement  TransportFormatManagement,
  dsch-FlowControlInformation  DSCH-FlowControlInformation,
  bindingID          BindingID  OPTIONAL,
  transportLayerAddress  TransportLayerAddress  OPTIONAL,
  iE-Extensions    ProtocolExtensionContainer { {DSCHToBeAddedOrModifiedItem-RL-
ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

USCHToBeAddedOrModified-RL-ReconfReadyTDD          ::= ProtocolIE-Single-Container {
{USCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD} }USCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD
RNSAP-PROTOCOL-IES ::= {
  { ID id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE
USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD  PRESENCE mandatory }
}

USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNoOfUSCHs)) OF
USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD

USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD ::= SEQUENCE {
  uSCH-ID          USCH-ID,
  transportFormatManagement  TransportFormatManagement,
  bindingID          BindingID  OPTIONAL,
  transportLayerAddress  TransportLayerAddress  OPTIONAL,
  iE-Extensions    ProtocolExtensionContainer { {USCHToBeAddedOrModifiedItem-RL-
ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
  }

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

-- *****
--
-- RADIO LINK RECONFIGURATION COMMIT
--
-- *****

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

RadioLinkReconfigurationCommit-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CFN          CRITICALITY ignore TYPE CFN          PRESENCE
  mandatory } |
  { ID id-Active-Pattern-Sequence-Information CRITICALITY ignore TYPE Active-Pattern-
  Sequence-Information PRESENCE optional },
  ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION FAILURE
--
-- *****

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

RadioLinkReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CauseLevel-RL-ReconfFailure CRITICALITY ignore TYPE CauseLevel-RL-ReconfFailure
  PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
  PRESENCE optional },
  ...
}

CauseLevel-RL-ReconfFailure ::= CHOICE {
  generalCause          GeneralCauseList-RL-ReconfFailure,
  rLSpecificCause       RLSpecificCauseList-RL-ReconfFailure,
  ...
}

GeneralCauseList-RL-ReconfFailure ::= SEQUENCE {
  cause                Cause,
  iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-
  RL-ReconfFailure-ExtIEs} }
  OPTIONAL,
  ...
}

GeneralCauseItem-RL-ReconfFailure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RLSpecificCauseList-RL-ReconfFailure ::= SEQUENCE {
  rL-ReconfigurationFailureList-RL-ReconfFailure RL-ReconfigurationFailureList-RL-
  ReconfFailure OPTIONAL,
  iE-Extensions        ProtocolExtensionContainer { {
  RLSpecificCauseItem-RL-ReconfFailure-ExtIEs} }
  OPTIONAL,
  ...
}
```

```
RLSpecificCauseItem-RL-ReconfFailure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-ReconfigurationFailureList-RL-ReconfFailure ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-
Single-Container { {RL-ReconfigurationFailure-RL-ReconfFailure-IEs} }

RL-ReconfigurationFailure-RL-ReconfFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-ReconfigurationFailure-RL-ReconfFail CRITICALITY ignore TYPE RL-
ReconfigurationFailure-RL-ReconfFail PRESENCE mandatory }
}

RL-ReconfigurationFailure-RL-ReconfFail ::= SEQUENCE {
  rL-ID RL-ID,
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { {RL-ReconfigurationFailure-RL-
ReconfFailure-ExtIEs} } OPTIONAL,
  ...
}

RL-ReconfigurationFailure-RL-ReconfFailure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION CANCEL
--
-- *****

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

RadioLinkReconfigurationCancel-IEs RNSAP-PROTOCOL-IES ::= {
  ...
}

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

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

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

RadioLinkReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-AllowedQueuingTime CRITICALITY reject TYPE AllowedQueuingTime
  PRESENCE optional } |
  { ID id-UL-DPCH-Information-RL-ReconfRqstFDD CRITICALITY reject TYPE UL-DPCH-
Information-RL-ReconfRqstFDD PRESENCE optional } |
  { ID id-DL-DPCH-Information-RL-ReconfRqstFDD CRITICALITY reject TYPE DL-DPCH-
Information-RL-ReconfRqstFDD PRESENCE optional } |
  { ID id-FDD-DCHs-to-Modify CRITICALITY reject TYPE FDD-DCHs-to-Modify PRESENCE
optional } |
  { ID id-DCHs-to-Add-FDD CRITICALITY reject TYPE DCH-FDD-Information PRESENCE
optional } |
  { ID id-DCH-DeleteList-RL-ReconfRqstFDD CRITICALITY reject TYPE DCH-DeleteList-RL-
ReconfRqstFDD PRESENCE optional } |
}
```



```
{ ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject TYPE
Transmission-Gap-Pattern-Sequence-Information PRESENCE optional },
...
}

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

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

DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    tFCS TFCS OPTIONAL,
    tFCI-SignallingMode TFCI-SignallingMode OPTIONAL,
    limitedPowerIncrease LimitedPowerIncrease OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {DL-DPCH-Information-RL-
ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

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

DCH-DeleteList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-
DeleteItem-RL-ReconfRqstFDD

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

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

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

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

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

RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime CRITICALITY reject TYPE AllowedQueuingTime
PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD CRITICALITY notify TYPE UL-
CCTrCH-InformationModifyList-RL-ReconfRqstTDD PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD CRITICALITY notify TYPE UL-
CCTrCH-InformationDeleteList-RL-ReconfRqstTDD PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD CRITICALITY notify TYPE DL-
CCTrCH-InformationModifyList-RL-ReconfRqstTDD PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD CRITICALITY notify TYPE DL-
CCTrCH-InformationDeleteList-RL-ReconfRqstTDD PRESENCE optional } |
    { ID id-TDD-DCHs-to-Modify CRITICALITY reject TYPE TDD-DCHs-to-Modify PRESENCE
optional } |
    { ID id-DCHs-to-Add-TDD CRITICALITY reject TYPE DCH-TDD-Information PRESENCE
optional } |
    { ID id-DCH-DeleteList-RL-ReconfRqstTDD CRITICALITY reject TYPE DCH-DeleteList-RL-
ReconfRqstTDD PRESENCE optional },
    ...
}
```

```
}

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs))
OF ProtocolIE-Single-Container { {UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD CRITICALITY notify TYPE UL-
  CCTrCH-InformationModifyItem-RL-ReconfRqstTDD PRESENCE mandatory }
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  tFCS              TFCS          OPTIONAL,
  iE-Extensions     ProtocolExtensionContainer { {UL-CCTrCH-
  InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

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

UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs))
OF ProtocolIE-Single-Container { {UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD CRITICALITY notify TYPE UL-
  CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD PRESENCE mandatory }
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  iE-Extensions     ProtocolExtensionContainer { {UL-CCTrCH-
  InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

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

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs))
OF ProtocolIE-Single-Container { {DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD CRITICALITY notify TYPE DL-
  CCTrCH-InformationModifyItem-RL-ReconfRqstTDD PRESENCE mandatory }
}

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

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

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs))
OF ProtocolIE-Single-Container { {DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD CRITICALITY notify TYPE DL-
  CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD PRESENCE mandatory }
}

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

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

```
DCH-DeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE(0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstTDD

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

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

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

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

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

RadioLinkReconfigurationResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseList-RL-ReconfRspFDD CRITICALITY ignore TYPE RL-InformationResponseList-RL-ReconfRspFDD PRESENCE optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-ReconfRspFDD ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationResponse-RL-ReconfRspFDD-IEs} }

RL-InformationResponse-RL-ReconfRspFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-ReconfRspFDD CRITICALITY ignore TYPE RL-InformationResponseItem-RL-ReconfRspFDD PRESENCE mandatory }
}

RL-InformationResponseItem-RL-ReconfRspFDD ::= SEQUENCE {
    rL-ID RL-ID,
    max-UL-SIR UL-SIR OPTIONAL,
    min-UL-SIR UL-SIR OPTIONAL,
    maximumDLTxPower DL-Power OPTIONAL,
    minimumDLTxPower DL-Power OPTIONAL,
    secondary-CCPCH-Info Secondary-CCPCH-Info OPTIONAL,
    dCHsInformationResponseList DCH-InformationResponseList-RL-ReconfRspFDD OPTIONAL,
    dL-CodeInformationList-RL-ReconfRspFDD DL-CodeInformationList-RL-ReconfRspFDD OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfRspFDD-ExtIEs} } OPTIONAL,
    ...
}

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

DCH-InformationResponseList-RL-ReconfRspFDD ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfRspFDD} }

DCH-InformationResponseListIEs-RL-ReconfRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse CRITICALITY ignore TYPE DCH-InformationResponse PRESENCE mandatory }
}

DL-CodeInformationList-RL-ReconfRspFDD ::= ProtocolIE-Single-Container {{ DL-CodeInformationListIEs-RL-ReconfRspFDD }}

DL-CodeInformationListIEs-RL-ReconfRspFDD RNSAP-PROTOCOL-IES ::= {
```

```
{ ID id-FDD-DL-CodeInformation CRITICALITY ignore TYPE FDD-DL-CodeInformation PRESENCE
optional }
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE TDD
--
-- *****

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

RadioLinkReconfigurationResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponse-RL-ReconfRspTDD CRITICALITY ignore TYPE RL-
InformationResponse-RL-ReconfRspTDD PRESENCE optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

RL-InformationResponse-RL-ReconfRspTDD ::= SEQUENCE {
    rL-ID RL-ID,
    max-UL-SIR UL-SIR OPTIONAL,
    min-UL-SIR UL-SIR OPTIONAL,
    maximumDLTxPower DL-Power OPTIONAL,
    minimumDLTxPower DL-Power OPTIONAL,
    dChsInformationResponseList DCH-InformationResponseList-RL-ReconfRspTDD OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {RL-InformationResponse-RL-
ReconfRspTDD-ExtIEs} } OPTIONAL,
    ...
}

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

DCH-InformationResponseList-RL-ReconfRspTDD ::= ProtocolIE-Single-Container { {DCH-
InformationResponseListIEs-RL-ReconfRspTDD} }

DCH-InformationResponseListIEs-RL-ReconfRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse CRITICALITY ignore TYPE DCH-InformationResponse PRESENCE
optional }
}

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

-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****

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

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

Reporting-Object-RL-FailureInd ::= CHOICE {
```

```

    rL                               RL-RL-FailureInd,
    rL-Set                           RL-Set-RL-FailureInd,
    . . . ,
    cCTrCH                           CCTrCH-RL-FailureInd
}

RL-RL-FailureInd ::= SEQUENCE {
    rL-InformationList-RL-FailureInd  RL-InformationList-RL-FailureInd,
    iE-Extensions                     ProtocolExtensionContainer { { RLItem-RL-FailureInd-
ExtIEs} } OPTIONAL,
    . . .
}

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

RL-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-
Single-Container { {RL-Information-RL-FailureInd-IEs} }

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

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

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

RL-Set-RL-FailureInd ::= SEQUENCE {
    rL-Set-InformationList-RL-FailureInd  RL-Set-InformationList-RL-FailureInd,
    iE-Extensions                       ProtocolExtensionContainer { { RL-SetItem-RL-
FailureInd-ExtIEs} } OPTIONAL,
    . . .
}

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

RL-Set-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF
ProtocolIE-Single-Container { {RL-Set-Information-RL-FailureInd-IEs} }

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

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

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

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

CCTrCH-RL-FailureInd ::= SEQUENCE {
    rL-ID                               RL-ID,
    cCTrCH-InformationList-RL-FailureInd  CCTrCH-InformationList-RL-FailureInd,
    iE-Extensions                       ProtocolExtensionContainer { { CCTrCHItem-RL-
FailureInd-ExtIEs } } OPTIONAL,
    . . .
}

```

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

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

CCTrCH-InformationItemIE-RL-FailureInd RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-InformationItem-RL-FailureInd CRITICALITY ignore TYPE
      CCTrCH-InformationItem-RL-FailureInd PRESENCE mandatory}
}

CCTrCH-InformationItem-RL-FailureInd ::= SEQUENCE {
    cCTrCH-ID CCTrCH-ID,
    cause Cause,
    iE-Extensions ProtocolExtensionContainer { { CCTrCH-
InformationItem-RL-FailureInd-ExtIEs } } OPTIONAL,
    ...
}

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

-- *****
--
-- RADIO LINK PREEMPTION REQUIRED INDICATION
--
-- *****

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

RadioLinkPreemptionRequiredIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationList-RL-PreemptRequiredInd CRITICALITY ignore TYPE RL-
InformationList-RL-PreemptRequiredInd PRESENCE optional },
    ...
}

RL-InformationList-RL-PreemptRequiredInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF
ProtocolIE-Single-Container {{RL-InformationItemIEs-RL-PreemptRequiredInd}}

RL-InformationItemIEs-RL-PreemptRequiredInd RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-PreemptRequiredInd CRITICALITY ignore TYPE RL-
InformationItem-RL-PreemptRequiredInd PRESENCE mandatory }
}

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

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

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

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

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

```
    ...
  }

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

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

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

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

RL-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-
Single-Container { {RL-Information-RL-RestoreInd-IEs} }

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

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

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

RL-Set-RL-RestoreInd ::= SEQUENCE {
  rL-Set-InformationList-RL-RestoreInd RL-Set-InformationList-RL-RestoreInd,
  iE-Extensions ProtocolExtensionContainer { { RL-SetItem-RL-
RestoreInd-ExtIEs} } OPTIONAL,
  ...
}

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

RL-Set-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF
ProtocolIE-Single-Container { {RL-Set-Information-RL-RestoreInd-IEs} }

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

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

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

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

```
CCTrCH-RL-RestoreInd ::= SEQUENCE {
    rL-ID
    CCTrCH-InformationList-RL-RestoreInd
    iE-Extensions
RestoreInd-ExtIEs } } OPTIONAL,
    ...
}

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

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

CCTrCH-InformationItemIE-RL-RestoreInd RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-InformationItem-RL-RestoreInd CRITICALITY ignore TYPE
    CCTrCH-InformationItem-RL-RestoreInd PRESENCE mandatory}
}

CCTrCH-InformationItem-RL-RestoreInd ::= SEQUENCE {
    cCCTrCH-ID
    iE-Extensions
InformationItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
    ...
}

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

-- *****
--
-- DOWNLINK POWER CONTROL REQUEST
--
-- *****

DL-PowerControlRequest ::= SEQUENCE {
    protocolIEs
    protocolExtensions
Extensions} } OPTIONAL,
    ...
}

DL-PowerControlRequest-IES RNSAP-PROTOCOL-IES ::= {
    { ID id-PowerAdjustmentType CRITICALITY ignore TYPE PowerAdjustmentType
    PRESENCE mandatory} |
    { ID id-DLReferencePower CRITICALITY ignore TYPE DL-Power
    PRESENCE conditional} |
    -- This IE shall be present only-if DL-PC-RQST Adjustment Type DL-PC-RQST equals to 'Common'
    { ID id-InnerLoopDLPCStatus CRITICALITY ignore TYPE InnerLoopDLPCStatus
    PRESENCE optional} |
    { ID id-DLReferencePowerList-DL-PC-Rqst CRITICALITY ignore TYPE DL-
ReferencePowerInformationList-DL-PC-Rqst PRESENCE conditional} |
    -- This IE shall be present only-if DL-PC-RQST Adjustment Type DL-PC-RQST equals to 'Individual'
    { ID id-MaxAdjustmentStep CRITICALITY ignore TYPE MaxAdjustmentStep
    PRESENCE conditional } |
    -- This IE shall be present only-if DL-PC-RQST Adjustment Type DL-PC-RQST equals to 'Common' or
'Individual'
    { ID id-AdjustmentPeriod CRITICALITY ignore TYPE AdjustmentPeriod
    PRESENCE conditional } |
    -- This IE shall be present only-if DL-PC-RQST Adjustment Type DL-PC-RQST equals to 'Common' or
'Individual'
    { ID id-AdjustmentRatio CRITICALITY ignore TYPE ScaledAdjustmentRatio
    PRESENCE conditional },
    -- This IE shall be present only-if DL-PC-RQST Adjustment Type DL-PC-RQST equals to 'Common' or
'Individual'
    ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF
ProtocolIE-Single-Container {{DL-ReferencePowerInformation-DL-PC-Rqst-IES}}

DL-ReferencePowerInformation-DL-PC-Rqst-IES RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-ReferencePowerInformation-DL-PC-Rqst CRITICALITY ignore TYPE DL-
ReferencePowerInformation-DL-PC-Rqst PRESENCE mandatory }
}
```



```

DL-ReferencePowerInformation-DL-PC-Rqst ::= SEQUENCE {
    rL-ID                               RL-ID,
    dl-Reference-Power                   DL-Power,
    iE-Extensions                         ProtocolExtensionContainer { {DL-ReferencePowerInformation-
DL-PC-Rqst-ExtIEs} } OPTIONAL,
    ...
}

DL-ReferencePowerInformation-DL-PC-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

/* partly omitted */

-- *****
--
-- ERROR INDICATION
--
-- *****

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

ErrorIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause                        CRITICALITY ignore TYPE Cause                PRESENCE
conditionaloptional
    --- At least either of Cause IE or Criticality IE shall be present ---
    } |
    { ID id-CriticalityDiagnostics        CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE conditionaloptional
    --- At least either of Cause IE or Criticality IE shall be present ---
    },
    ...
}

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

-- *****
--
-- COMMON MEASUREMENT INITIATION REQUEST
--
-- *****

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

CommonMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID                 CRITICALITY reject      TYPE
    MeasurementID                         PRESENCE mandatory     } |
    { ID id-CommonMeasurementObjectType-CM-Rqst
    CommonMeasurementObjectType-CM-Rqst    PRESENCE mandatory     } |
    -- This IE represents both the Common Measurement Object Type IE and the choice based on the
Common Measurement Object Type
    -- as described in the tabular message format in subclause 9.1.
    { ID id-CommonMeasurementType         CRITICALITY reject      TYPE
    CommonMeasurementType                  PRESENCE mandatory     } |
    { ID id-MeasurementFilterCoefficient   CRITICALITY reject      TYPE
    MeasurementFilterCoefficient           PRESENCE optional       } |
    { ID id-ReportCharacteristics          CRITICALITY reject      TYPE
    ReportCharacteristics                  PRESENCE mandatory     } |
    { ID id-SFNReportingIndicator          CRITICALITY reject      TYPE
    SFNReportingIndicator                  PRESENCE mandatory
    } |
}

```

```

    { ID      id-SFN                                CRITICALITY reject      TYPE
      SFN                                           PRESENCE optional
    }
    { ID      id-CommonMeasurementAccuracy          CRITICALITY reject      TYPE
      CommonMeasurementAccuracy                    PRESENCE optional
    },
    ...
}

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

CommonMeasurementObjectType-CM-Rqst ::= CHOICE {
    cell                                Cell-CM-Rqst,
    ...
}

Cell-CM-Rqst ::= SEQUENCE {
    uC-ID                                UC-ID,
    neighbouringCellMeasurementInformation SEQUENCE (SIZE (1..maxNrOfMeasNCell)) OF
        CHOICE {
            neighbouringFDDCellMeasurementInformation
            NeighbouringFDDCellMeasurementInformation,
            neighbouringTDDCellMeasurementInformation
            NeighbouringTDDCellMeasurementInformation,
            ...
        }
    iE-Extensions                        ProtocolExtensionContainer { { CellItem-CM-Rqst-ExtIEs } }
    OPTIONAL,
    ...
}

CellItem-CM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

/* partly omitted */

```

9.3.4 Information Element Definitions

```

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxCodeNumComp-1,
    maxNrOfFACHs,
    maxFACHCountPlus1,
    maxIBSEG,
    maxNoOfDSCHs,
    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,
maxNrOfSCCPCHs,
maxTFCI1Combs,
maxTFCI2Combs,
maxTFCI2Combs-1,
maxTGPS,
maxTTI-Count,
maxNoGPSTypes,
maxNoSat,

id-Allowed-Rate-Information,
id-Guaranteed-Rate-Information,
id-Neighbouring-GSM-CellInformation,
id-Neighbouring-UMTS-CellInformationItem,
maxNrOfLevels,
maxNrOfMeasNCell,
maxNrOfMeasNCell-1,
id-MessageStructure,
id-EnhancedDSCHPC
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,
    iE-Extensions          ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs}
} OPTIONAL,
    ...
}

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

Allowed-Rate-Information ::= SEQUENCE {
    allowed-UL-Rate          Allowed-Rate OPTIONAL,
    allowed-DL-Rate          Allowed-Rate OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {Allowed-Rate-Information-ExtIEs} }
OPTIONAL,
    ...
}

Allowed-Rate-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
}

Allowed-Rate ::= INTEGER (1..maxNrOfTFs)

AllowedQueuingTime ::= INTEGER (1..60)
-- seconds

AlphaValue ::= INTEGER (0..8)
-- Actual value = Alpha / 8

-- B

BadSatellites ::= SEQUENCE {
    badSatelliteInformation SEQUENCE (SIZE (1..maxNoSat) OF
        SEQUENCE {
            badSAT-ID SAT-ID,
            iE-Extensions ProtocolExtensionContainer { { BadSatelliteInformation-
ExtIes} } OPTIONAL,
            ...
        },
        iE-Extensions ProtocolExtensionContainer { { BadSatellites-ExtIes} }
        OPTIONAL,
        ...
    }

BadSatelliteInformation-ExtIes RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

BadSatellites-ExtIes RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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
}

BurstModeParameters ::= SEQUENCE {
    burstStart INTEGER (0..15),
    burstLength INTEGER (10..25),
    burstFreq INTEGER (1..16),
    iE-Extensions ProtocolExtensionContainer { { BurstModeParameters-ExtIes} }
    OPTIONAL,
    ...
}

BurstModeParameters-ExtIes RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- C

Cause ::= CHOICE {
    radioNetwork CauseRadioNetwork,
    transport CauseTransport,
    protocol CauseProtocol,
    misc CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
```

```
hardware-failure,
om-intervention,
not-enough-user-plane-processing-resources,
unspecified,
...
}

CauseProtocol ::= ENUMERATED {
transfer-syntax-error,
abstract-syntax-error-reject,
abstract-syntax-error-ignore-and-notify,
message-not-compatible-with-receiver-state,
semantic-error,
unspecified,
abstract-syntax-error-falsely-constructed-message,
...
}

CauseRadioNetwork ::= ENUMERATED {
unknown-C-ID,
cell-not-available,
power-level-not-supported,
ul-scrambling-code-already-in-use,
dl-radio-resources-not-available,
ul-radio-resources-not-available,
measurement-not-supported-for-the-object,
combining-resources-not-available,
combining-not-supported,
reconfiguration-not-allowed,
requested-configuration-not-supported,
synchronisation-failure,
requested-tx-diversity-mode-not-supported,
measurement-temporarily-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-allocated,
...,
number-of-UL-codes-not-supported,
dpc-mode-change-not-supported,
information-temporarily-not-available,
information-provision-not-supported-for-the-object
}

CauseTransport ::= ENUMERATED {
transport-resource-unavailable,
unspecified,
...
}

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

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

CellIndividualOffset ::= INTEGER (-20..20)

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

CFN ::= INTEGER (0..255)

CGI ::= SEQUENCE {
LAI SEQUENCE {
pLMN-ID PLMN-ID,
LAC LAC,
iE-Extensions ProtocolExtensionContainer { {LAI-ExtIEs} } OPTIONAL,
...
},
cI CI,
iE-Extensions ProtocolExtensionContainer { {CGI-ExtIEs} } OPTIONAL
}
```

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

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

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

ChipOffset ::= INTEGER (0..38399)

CI ::= OCTET STRING (SIZE (2))

ClosedLoopModel-SupportIndicator ::= ENUMERATED {
    closedLoop-Model-Supported,
    closedLoop-Model-not-Supported
}

ClosedLoopMode2-SupportIndicator ::= ENUMERATED {
    closedLoop-Mode2-Supported,
    closedLoop-Mode2-not-Supported
}

Closedlooptimingadjustmentmode ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    ...
}

CodeNumber ::= INTEGER (0..maxCodeNumComp-1)

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

CommonMeasurementAccuracy ::= CHOICE {
    tUTRANGPSMeasurementAccuracyClass    TUTRANGPSAccuracyClass,
    ...
}

CommonMeasurementType ::= ENUMERATED {
    uTRAN-GPS-timing-of-cell-frames-for-LCS,
    sFN-SFN-observervd-time-difference,
    load,
    transmitted-carrier-power,
    received-total-wide-band-power,
    uplink-timeslot-iscp,
    ...
}

CommonMeasurementValue ::= CHOICE {
    tUTRANGPSMeasurementValueInformation    TUTRANGPSMeasurementValueInformation,
    sFNSFNMeasurementValueInformation    SFNSFNMeasurementValueInformation,
    loadValue                                LoadValue,
    transmittedCarrierPowerValue            INTEGER(0..100),
    receivedTotalWideBandPowerValue        INTEGER(0..621),
    uplinkTimeslotISCPValue                UL-Timeslot-ISCP,
    ...
}

CommonMeasurementValueInformation ::= CHOICE {
    measurementAvailable    CommonMeasurementAvailable,
    measurementnotAvailable    NULL
}

CommonMeasurementAvailable ::= SEQUENCE {
    commonMeasurementValue    CommonMeasurementValue,
    iE-Extensions              ProtocolExtensionContainer { {
CommonMeasurementAvailableItem-ExtIEs} }    OPTIONAL,
    ...
}
```

```
}  
  
CommonMeasurementAvailableItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
  ...  
}  
  
CRC-Size ::= ENUMERATED {  
  v0,  
  v8,  
  v12,  
  v16,  
  v24,  
  ...  
}  
  
CriticalityDiagnostics ::= SEQUENCE {  
  procedureID ProcedureID OPTIONAL,  
  triggeringMessage TriggeringMessage OPTIONAL,  
  procedureCriticality Criticality OPTIONAL,  
  transactionID TransactionID OPTIONAL,  
  iEsCriticalityDiagnostics CriticalityDiagnostics-IE-List OPTIONAL,  
  iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} }  
OPTIONAL,  
  ...  
}  
  
CriticalityDiagnostics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
  ...  
}  
  
CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF  
  SEQUENCE {  
    iECriticality Criticality,  
    iE-ID ProtocolIE-ID,  
    repetitionNumber RepetitionNumber OPTIONAL,  
    iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-  
ExtIEs} } OPTIONAL,  
    ...  
  }  
  
CriticalityDiagnostics-IE-List-ExtIEs 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,  
    iE-Extensions ProtocolExtensionContainer { {MessageStructure-ExtIEs} }  
OPTIONAL,  
    ...  
  }  
  
MessageStructure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
  ...  
}  
  
CN-CS-DomainIdentifier ::= SEQUENCE {  
  pLMN-ID PLMN-ID,  
  lAC LAC,  
  iE-Extensions ProtocolExtensionContainer { {CN-CS-DomainIdentifier-ExtIEs} } OPTIONAL  
}  
  
CN-CS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
  ...  
}  
  
CN-PS-DomainIdentifier ::= SEQUENCE {  
  pLMN-ID PLMN-ID,  
  lAC LAC,  
  rAC RAC,  
  iE-Extensions ProtocolExtensionContainer { {CN-PS-DomainIdentifier-ExtIEs} } OPTIONAL  
}  
  
CN-PS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
  ...  
}
```

```
}

CNDomainType ::= ENUMERATED {
    cs-domain,
    ps-domain,
    dont-care,
    ...
}
-- See in [16]

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

-- 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,
    ...
}

DCH-FDD-SpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...,
    { ID id-Guaranteed-Rate-Information CRITICALITY ignore EXTENSION Guaranteed-Rate-
Information PRESENCE optional }
}

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

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

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

DCH-InformationResponseItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...,
    { ID id-Allowed-Rate-Information CRITICALITY ignore EXTENSION Allowed-Rate-
Information PRESENCE optional }
}

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

DCH-TDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode UL-FP-Mode,
    toAWS ToAWS,
```



```

toAWE                                ToAWE,
dCH-SpecificInformationList          DCH-Specific-TDD-InformationList,
ie-Extensions                        ProtocolExtensionContainer { {DCH-TDD-InformationItem-
ExtIEs} } OPTIONAL,
...
}

```

```

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

```

```

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

```

```

DCH-Specific-TDD-Item ::= SEQUENCE {
dCH-ID                                DCH-ID,
ul-cCtRCH-ID                          CCTrCH-ID, -- UL CCTrCH in which the DCH is mapped
dl-cCtRCH-ID                          CCTrCH-ID, -- DL CCTrCH in which the DCH is mapped
trCH-SrcStatisticsDescr               TrCH-SrcStatisticsDescr,
ul-transportFormatSet                TransportFormatSet,
dl-transportFormatSet                TransportFormatSet,
ul-BLER                               BLER,
dl-BLER                               BLER,
allocationRetentionPriority           AllocationRetentionPriority,
frameHandlingPriority                 FrameHandlingPriority,
qe-Selector                           QE-Selector OPTIONAL,
-- This IE shall be present if DCH is part of set of Co-ordinated DCHs
ie-Extensions                        ProtocolExtensionContainer { {DCH-Specific-TDD-Item-
ExtIEs} } OPTIONAL,
...
}

```

```

DCH-Specific-TDD-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...,
{ ID id-Guaranteed-Rate-Information    CRITICALITY ignore EXTENSION Guaranteed-Rate-
Information PRESENCE optional }
}

```

```

DedicatedMeasurementType ::= ENUMERATED {
sir,
sir-error,
transmitted-code-power,
rSCP,
rx-timing-deviation,
round-trip-time,
...
}

```

```

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
...
}

```

```

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.

```

```
DGPSCorrections ::= SEQUENCE {
    gPSTOW                                GPSTOW,
    gPS-Status-Health                    GPS-Status-Health,
    satellite-DGPSCorrections-Information SEQUENCE (SIZE (1..maxNoSat)) OF
        SEQUENCE {
            SAT-ID                        SAT-ID,
            iode-dgps                     BIT STRING (SIZE (8)),
            uDRE                          UDRE,
            pRC                            PRC,
            range-Correction-Rate        Range-Correction-Rate,
            iE-Extensions                 ProtocolExtensionContainer { { Satellite-
DGPSCorrections-Information-ExtIEs} } OPTIONAL,
            ...
        },
    iE-Extensions                        ProtocolExtensionContainer { { DGPSCorrections-ExtIEs} }
OPTIONAL,
    ...
}

Satellite-DGPSCorrections-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

DGPSThreshold ::= SEQUENCE {
    pRCDeviation                        PRCDeviation,
    iE-Extensions                       ProtocolExtensionContainer { { DGPSThreshold-ExtIEs} } OPTIONAL,
    ...
}

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

DiversityControlField ::= ENUMERATED {
    may,
    must,
    must-not
}

DiversityMode ::= ENUMERATED {
    none,
    sTTD,
    closedLoopModel1,
    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 ::= {
...
}

DL-TimeslotLCR-Information ::= SEQUENCE (SIZE (1.. maxNrOfDLsLCR)) OF DL-TimeslotLCR-
InformationItem

DL-TimeslotLCR-InformationItem ::= SEQUENCE {
timeSlotLCR                TimeSlotLCR,
midambleShiftLCR           MidambleShiftLCR,
tFCI-Presence              TFCI-Presence,
tDD-dL-Code-LCR-Information TDD-DL-Code-LCR-Information,
iE-Extensions              ProtocolExtensionContainer { { DL-TimeslotLCR-
InformationItem-ExtIEs} } OPTIONAL,
...
}

DL-TimeslotLCR-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfDLs)) 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-Timeslot-ISCP-LCR-Information ::= SEQUENCE (SIZE (1..maxNrOfDLsLCR)) OF DL-TimeSlot-ISCP-LCR-
InfoItem

DL-TimeSlot-ISCP-LCR-InfoItem ::= SEQUENCE {
timeSlotLCR                TimeSlotLCR,
dL-TimeslotISCP           DL-TimeslotISCP,
iE-Extensions              ProtocolExtensionContainer { { DL-TimeSlot-ISCP-LCR-InfoItem-
ExtIEs} } OPTIONAL,
...
}

DL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DL-TimeslotISCP ::= INTEGER (0..91)
-- According to mapping in [24]

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

DPC-Mode ::= ENUMERATED {
mode0,
mode1,
...
}

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

DPCHConstantValue ::= INTEGER (-10..10)
-- Unit dB, Step 1dB
```

```
DRACControl ::= ENUMERATED {
    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,
    iE-Extensions ProtocolExtensionContainer { {DSCH-FDD-Information-
ExtIEs} } OPTIONAL,
    ...
}

DSCH-FDD-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-EnhancedDSCHPC CRITICALITY ignore EXTENSION EnhancedDSCHPC
PRESENCE optional },
    ...
}

DSCH-Specific-FDD-Item ::= SEQUENCE {
    dsch-ID DSCH-ID,
    trChSourceStatisticsDescriptor TrCH-SrcStatisticsDescr,
    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,
    bindingID BindingID OPTIONAL,
    transportLayerAddress TransportLayerAddress OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {DSCH-Specific-FDD-Response-
Item-ExtIEs} } OPTIONAL,
    ...
}

DSCH-Specific-FDD-Response-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-FlowControlInformation ::= SEQUENCE (SIZE(1..16)) OF DSCH-FlowControlItem

DSCH-FlowControlItem ::= SEQUENCE {
    dsch-SchedulingPriority SchedulingPriorityIndicator,
    mac-c-sh-SDU-Lengths MAC-c-sh-SDU-LengthList,
    iE-Extensions ProtocolExtensionContainer { {DSCH-FlowControlItem-
ExtIEs} } OPTIONAL,
    ...
}
```

```
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 CTrCH-ID, -- DL CTrCH 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

EnhancedDSCHPC ::= SEQUENCE {
    enhancedDSCHPCWnd EnhancedDSCHPCWnd,
    enhancedDSCHPCCounter EnhancedDSCHPCCounter,
    enhancedDSCHPowerOffset EnhancedDSCHPowerOffset,
    ...
}

EnhancedDSCHPCCounter ::= INTEGER (1..50)

EnhancedDSCHPCIndicator ::= ENUMERATED {
    enhancedDSCHPCActiveInTheUE,
    enhancedDSCHPCNotActiveInTheUE
}

EnhancedDSCHPCWnd ::= INTEGER (1..10)

EnhancedDSCHPowerOffset ::= INTEGER (-15..0)

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

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

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

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

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

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

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

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

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

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

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

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

-- F

FACH-FlowControlInformation ::= SEQUENCE (SIZE (1..16)) OF FACH-FlowControlInformationItem

FACH-FlowControlInformationItem ::= SEQUENCE {
    fACH-SchedulingPriority                  SchedulingPriorityIndicator,
    mAC-c-sh-SDU-Lengths                    MAC-c-sh-SDU-LengthList,
    fACH-InitialWindowSize                  FACH-InitialWindowSize,
    iE-Extensions                          ProtocolExtensionContainer { {FACH-
FlowControlInformationItem-ExtIEs} } OPTIONAL,
    ...
}

FACH-FlowControlInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

FACH-InformationList ::= SEQUENCE (SIZE(0.. maxNrOfFACHs)) OF FACH-InformationItem

FACH-InformationItem ::= SEQUENCE {
    transportFormatSet                      TransportFormatSet,
    iE-Extensions                          ProtocolExtensionContainer { { FACH-InformationItem-ExtIEs} }
OPTIONAL,
    ...
}

FACH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-PCH-InformationList ::= SEQUENCE (SIZE(1..maxFACHCountPlus1)) OF FACH-PCH-InformationItem

FACH-PCH-InformationItem ::= SEQUENCE {
    transportFormatSet                      TransportFormatSet,
    iE-Extensions                          ProtocolExtensionContainer { { FACH-PCH-InformationItem-
ExtIEs} } OPTIONAL,
    ...
}
```

```
FACH-PCH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifyItem

FDD-DCHs-to-ModifyItem ::= SEQUENCE {
    ul-FP-Mode                UL-FP-Mode                OPTIONAL,
    toAWS                     ToAWS                     OPTIONAL,
    toAWE                     ToAWE                     OPTIONAL,
    transportBearerRequestIndicator
    dCH-SpecificInformationList
    iE-Extensions             ProtocolExtensionContainer { {FDD-DCHs-to-ModifyItem-
ExtIEs} } OPTIONAL,
    ...
}

FDD-DCHs-to-ModifyItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FDD-DCHs-to-ModifySpecificInformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-
ModifySpecificItem

FDD-DCHs-to-ModifySpecificItem ::= SEQUENCE {
    dCH-ID                    DCH-ID,
    ul-TransportformatSet     TransportFormatSet     OPTIONAL,
    dl-TransportformatSet     TransportFormatSet     OPTIONAL,
    allocationRetentionPriority
    frameHandlingPriority     FrameHandlingPriority  OPTIONAL,
    dRACControl               DRACControl           OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { {FDD-DCHs-to-ModifySpecificItem-
ExtIEs} } OPTIONAL,
    ...
}

FDD-DCHs-to-ModifySpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
    { ID id-Guaranteed-Rate-Information     CRITICALITY ignore EXTENSION Guaranteed-Rate-
Information     PRESENCE optional }
}

FDD-DL-ChannelisationCodeNumber ::= INTEGER (0..511)
-- According to the mapping in [27]. The maximum value is equal to the DL spreading factor -1--

FDD-DL-CodeInformation ::= SEQUENCE (SIZE (1..maxNrOfDL-Codes)) OF FDD-DL-CodeInformationItem

FDD-DL-CodeInformationItem ::= SEQUENCE {
    dl-ScramblingCode                DL-ScramblingCode,
    fdd-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
    transmission-Gap-Pattern-Sequence-ScramblingCode-Information
    Sequence-ScramblingCode-Information OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { {FDD-DL-
CodeInformationItem-ExtIEs} } OPTIONAL,
    ...
}

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

FDD-S-CCPCH-Offset ::= INTEGER (0..149)

FDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size0-5,
    step-size1,
    step-size1-5,
    step-size2,
    ...
}

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

FirstRLS-Indicator ::= ENUMERATED {
    first-RLS,
    not-first-RLS
}
```

```
FNReportingIndicator ::= ENUMERATED {
    fN-reporting-required,
    fN-reporting-not-required
}

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

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

-- G

GapLength ::= INTEGER (1..14)
-- Unit Slot

GapDuration ::= INTEGER (1..144,...)
-- Unit Frame

GA-Cell ::= SEQUENCE (SIZE (1..maxNrOfPoints)) OF
    SEQUENCE {
        Cell-GAIgeographicalCoordinate GeographicalCoordinate,
        iE-Extensions ProtocolExtensionContainer { {GA-Cell-ExtIEs} } OPTIONAL,
        ...
    }

GA-Cell-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-CellAdditionalShapes ::= CHOICE {
    pointWithUncertainty GA-PointWithUncertainty,
    pointWithUncertaintyEllipse GA-PointWithUncertaintyEllipse,
    pointWithAltitude GA-PointWithAltitude,
    pointWithAltitudeAndUncertaintyEllipsoid GA-PointWithAltitudeAndUncertaintyEllipsoid,
    ellipsoidArc GA-EllipsoidArc,
    iE-Extensions ProtocolExtensionContainer { {GA-
CellAdditionalShapes-ExtIEs} } OPTIONAL,
    ...
}

GA-CellAdditionalShapes-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-AltitudeAndDirection ::= SEQUENCE {
    directionOfAltitude ENUMERATED {height, depth},
    altitude INTEGER (0..32767),
    ...
}

GA-EllipsoidArc ::= SEQUENCE {
    geographicalCoordinates GeographicalCoordinate,
    innerRadius INTEGER (0..65535),
    uncertaintyRadius INTEGER (0..127),
    offsetAngle INTEGER (0..179),
    includedAngle INTEGER (0..179),
    confidence INTEGER (0..127),
    iE-Extensions ProtocolExtensionContainer { { GA-EllipsoidArc-ExtIEs } }
OPTIONAL,
    ...
}

GA-EllipsoidArc-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithAltitude ::= SEQUENCE {
    geographicalCoordinates GeographicalCoordinate,
    altitudeAndDirection GA-AltitudeAndDirection,
    iE-Extensions ProtocolExtensionContainer { { GA-PointWithAltitude-ExtIEs } }
OPTIONAL,
    ...
}

GA-PointWithAltitude-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithAltitudeAndUncertaintyEllipsoid ::= SEQUENCE {
```



```
geographicalCoordinates      GeographicalCoordinate,
altitudeAndDirection         GA-AltitudeAndDirection,
uncertaintyEllipse          GA-UncertaintyEllipse,
uncertaintyAltitude         INTEGER (0..127),
confidence                   INTEGER (0..127),
iE-Extensions               ProtocolExtensionContainer { { GA-
PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs} } OPTIONAL,
...
}

GA-PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

GA-PointWithUnCertaintyEllipse ::= SEQUENCE {
geographicalCoordinates      GeographicalCoordinate,
uncertaintyEllipse          GA-UncertaintyEllipse,
confidence                   INTEGER (0..127),
iE-Extensions               ProtocolExtensionContainer { { GA-PointWithUnCertaintyEllipse-
ExtIEs} } OPTIONAL,
...
}

GA-PointWithUnCertaintyEllipse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

GA-UncertaintyEllipse ::= SEQUENCE {
uncertaintySemi-major       INTEGER (0..127),
uncertaintySemi-minor       INTEGER (0..127),
orientationOfMajorAxis      INTEGER (0..179),
...
}

GA-PointWithUnCertainty ::=SEQUENCE {
geographicalCoordinates      GeographicalCoordinate,
iE-Extensions               ProtocolExtensionContainer { {GA-PointWithUnCertainty-ExtIEs} }
OPTIONAL,
uncertaintyCode              INTEGER (0..127)
}

GA-PointWithUnCertainty-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

GA-AccessPointPosition ::= SEQUENCE {
geographicalCoordinate       GeographicalCoordinate,
iE-Extensions               ProtocolExtensionContainer { {GA-AccessPoint-ExtIEs} } OPTIONAL,
...
}

GA-AccessPoint-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

GeographicalCoordinate ::= SEQUENCE {
latitudeSign                 ENUMERATED { north, south },
latitude                     INTEGER (0..8388607),
longitude                    INTEGER (-8388608..8388607),
iE-Extensions               ProtocolExtensionContainer { {GeographicalCoordinate-ExtIEs} }
OPTIONAL,
...
}

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

GPS-Almanac ::= SEQUENCE {
wna-alm                     BIT STRING (SIZE (8)),
satellite-Almanac-Information SEQUENCE (SIZE (1..maxNoSat)) OF
SEQUENCE {
SAT-ID,
gps-e-alm                     BIT STRING (SIZE (16)),
gps-toa-alm                   BIT STRING (SIZE (8)),
gps-delta-I-alm               BIT STRING (SIZE (16)),
omegadot-alm                  BIT STRING (SIZE (16)),
svhealth-alm                  BIT STRING (SIZE (8)),
gps-a-sqrt-alm                BIT STRING (SIZE (24)),
```

```

    omegazero-alm          BIT STRING (SIZE (24)),
    m-zero-alm            BIT STRING (SIZE (24)),
    gps-omega-alm         BIT STRING (SIZE (24)),
    gps-af-zero-alm       BIT STRING (SIZE (11)),
    gps-af-one-alm        BIT STRING (SIZE (11)),
    iE-Extensions         ProtocolExtensionContainer { { Satellite-Almanac-Information-
ExtIEs} }                OPTIONAL,
    ...
  },
  iE-Extensions           ProtocolExtensionContainer { { GPS-Almanac-ExtIEs} }    OPTIONAL,
  ...
}

Satellite-Almanac-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

GPS-Almanac-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

GPSInformation ::= SEQUENCE (SIZE (1..maxNoGPSTypes)) OF
  SEQUENCE {
    gpsInformationItem     ENUMERATED {
      gps-NavigationModel-and-TimeRecovery,
      gps-Ionospheric-Model,
      gps-UTC-Model,
      gps-Almanac,
      gps-RealTime-Integrity,
      ...
    },
    iE-Extensions         ProtocolExtensionContainer { { GPSInformation-ExtIEs} }
  }
  OPTIONAL,
  ...
}

-- This IE shall be present if the Information Type IE indicates 'GPS Information'

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

GPS-Ionospheric-Model ::= SEQUENCE {
  alpha-zero-ionos        BIT STRING (SIZE (8)),
  alpha-one-ionos         BIT STRING (SIZE (8)),
  alpha-two-ionos         BIT STRING (SIZE (8)),
  alpha-three-ionos       BIT STRING (SIZE (8)),
  beta-zero-ionos         BIT STRING (SIZE (8)),
  beta-one-ionos          BIT STRING (SIZE (8)),
  beta-two-ionos          BIT STRING (SIZE (8)),
  beta-three-ionos        BIT STRING (SIZE (8)),
  iE-Extensions           ProtocolExtensionContainer { { GPS-Ionospheric-Model-ExtIEs} }
  OPTIONAL,
  ...
}

GPS-Ionospheric-Model-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

GPS-NavigationModel-and-TimeRecovery ::= SEQUENCE (SIZE (1..maxNoSat)) OF
  SEQUENCE {
    tx-tow-nav             INTEGER (0..1048575),
    sAT-ID                 SAT-ID,
    tlm-message-nav        BIT STRING (SIZE (14)),
    tlm-revd-c-nav         BIT STRING (SIZE (2)),
    ho-word-nav            BIT STRING (SIZE (22)),
    w-n-nav                BIT STRING (SIZE (10)),
    ca-or-p-on-l2-nav      BIT STRING (SIZE (2)),
    user-range-accuracy-index-nav BIT STRING (SIZE (4)),
    sv-health-nav          BIT STRING (SIZE (6)),
    iodc-nav               BIT STRING (SIZE (10)),
    l2-p-dataflag-nav      BIT STRING (SIZE (1)),
    sfl-reserved-nav       BIT STRING (SIZE (87)),
    t-gd-nav               BIT STRING (SIZE (8)),
    t-oc-nav               BIT STRING (SIZE (16)),
    a-f-2-nav              BIT STRING (SIZE (8)),
    a-f-1-nav              BIT STRING (SIZE (16)),
    a-f-zero-nav           BIT STRING (SIZE (22)),
    c-rs-nav               BIT STRING (SIZE (16)),
  }

```

```

    delta-n-nav          BIT STRING (SIZE (16)),
    m-zero-nav          BIT STRING (SIZE (32)),
    c-uc-nav            BIT STRING (SIZE (16)),
    gps-e-nav           BIT STRING (SIZE (32)),
    c-us-nav            BIT STRING (SIZE (16)),
    a-sqrt-nav          BIT STRING (SIZE (32)),
    t-oe-nav            BIT STRING (SIZE (16)),
    fit-interval-flag-nav BIT STRING (SIZE (1)),
    aodo-nav            BIT STRING (SIZE (5)),
    c-ic-nav            BIT STRING (SIZE (16)),
    omega-zero-nav      BIT STRING (SIZE (32)),
    c-is-nav            BIT STRING (SIZE (16)),
    i-zero-nav          BIT STRING (SIZE (32)),
    c-rc-nav            BIT STRING (SIZE (16)),
    gps-omega-nav       BIT STRING (SIZE (32)),
    omegadot-nav        BIT STRING (SIZE (24)),
    idot-nav            BIT STRING (SIZE (14)),
    spare-zero-fill     BIT STRING (SIZE (20)),
    iE-Extensions       ProtocolExtensionContainer { { GPS-NavigationModel-and-
TimeRecoveryItem-ExtIEs} } OPTIONAL,
    ...
}

GPS-NavigationModel-and-TimeRecoveryItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-RealTime-Integrity ::= CHOICE {
    badSatellites          BadSatellites,
    noBadSatellite        NULL
}

GPS-RX-POS ::= SEQUENCE {
    geographicalCoordinate GeographicalCoordinate,
    iE-Extensions         ProtocolExtensionContainer { { GPS-RX-POS-ExtIEs} } OPTIONAL,
    ...
}

GPS-RX-POS-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-Status-Health ::= ENUMERATED {
    udre-1-0,
    udre-0-75,
    udre-0-5,
    udre-0-3,
    udre-0-1,
    no-data,
    invalid-data
}

GPSTOW ::= INTEGER (0..604799)

GPS-UTC-Model ::= SEQUENCE {
    a-one-utc          BIT STRING (SIZE (24)),
    a-zero-utc         BIT STRING (SIZE (32)),
    t-ot-utc           BIT STRING (SIZE (8)),
    delta-t-ls-utc     BIT STRING (SIZE (8)),
    w-n-t-utc          BIT STRING (SIZE (8)),
    w-n-lsf-utc        BIT STRING (SIZE (8)),
    dn-utc             BIT STRING (SIZE (8)),
    delta-t-lsf-utc    BIT STRING (SIZE (8)),
    iE-Extensions     ProtocolExtensionContainer { { GPS-UTC-Model-ExtIEs} } OPTIONAL,
    ...
}

GPS-UTC-Model-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GSM-Output-Power ::= SEQUENCE { -- Value range (and type?) to be aligned with WG2!!!!!!!!!!!!!!!!!!!!
}

Guaranteed-Rate-Information ::= SEQUENCE {
    guaranteed-UL-Rate    Guaranteed-Rate OPTIONAL,
    guaranteed-DL-Rate    Guaranteed-Rate OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { {Guaranteed-Rate-Information-ExtIEs}
} OPTIONAL,

```

```
    ...
  }

Guaranteed-Rate-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

Guaranteed-Rate ::= INTEGER (1..maxNrOfTFs)

-- H

-- I

IB-SchedulingInformation ::= SEQUENCE {
  iB-SG-Rep          IB-SG-REP,
  iB-segmentInformationList  IB-SegmentInformationList,
  iE-Extensions      ProtocolExtensionContainer { { IB-SchedulingInformation-
ExtIEs } } OPTIONAL,
  ...
}

IB-SchedulingInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

IB-SegmentInformationList ::= SEQUENCE (SIZE(1..maxIBSEG)) OF IB-SegmentInformationItem

IB-SegmentInformationItem ::= SEQUENCE {
  iB-SG-POS          IB-SG-POS,
  iE-Extensions      ProtocolExtensionContainer { { IB-SegmentInformationItem-
ExtIEs } } OPTIONAL,
  ...
}

IB-SegmentInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

IB-SG-POS ::= INTEGER (0..4094)
-- Only even positions allowed

IB-SG-REP ::= ENUMERATED {rep4, rep8, rep16, rep32, rep64, rep128, rep256, rep512, rep1024,
rep2048, rep4096}

IMSI ::= OCTET STRING (SIZE(3..8))

InformationAvailable ::= SEQUENCE {
  requestedDataValue RequestedDataValue,
  iE-Extensions      ProtocolExtensionContainer { { InformationAvailable-ExtIEs } }
OPTIONAL,
  ...
}

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

InformationExchangeID ::= INTEGER (0..1048575)

InformationNotAvailable ::= NULL

InformationReportCharacteristics ::= CHOICE {
  onDemand          NULL,
  periodic          PeriodicInformation,
  onModification    OnModificationInformation,
  ...
}

InformationReportPeriodicity ::= CHOICE {
  min              INTEGER (1..60,...),
  -- Unit min, Step lmin
  hour            INTEGER (1..24,...),
  -- Unit hour, Step lhour
  ...
}

InformationThreshold ::= CHOICE {
  dGPSThreshold    DGPSThreshold,
  ...
}
```

```
InformationType ::= SEQUENCE {
    informationTypeItem      ENUMERATED {
        gA-AccessPointPosition,
        iPDLParameters,
        gPSInformation,
        dGPSCorrections,
        gPS-RX-POS,
        ...
    },
    gPSInformation           GPSInformation      OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { { InformationType-ExtIEs } }
    OPTIONAL,
    ...
}

-- The GPS Information IE shall be present if the Information Exchange Type IE indicates 'GPS
Information'

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

InnerLoopDLPCStatus      ::= ENUMERATED {active, inactive}

IPDLParameters ::= CHOICE {
    iPDL-FDD-Parameters    IPDL-FDD-Parameters,
    iPDL-TDD-Parameters    IPDL-TDD-Parameters
}

IPDL-FDD-Parameters ::= SEQUENCE {
    iPSpacingFDD           IPSpacingFDD,
    iPLength               IPLength,
    iPOffset               IPOffset,
    seed                   Seed,
    burstModeParameters    BurstModeParameters OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { IPDL-FDD-Parameters-ExtIEs } }
    OPTIONAL,
    ...
}

IPDL-FDD-Parameters-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPDL-TDD-Parameters ::= SEQUENCE {
    iPSpacingTDD           IPSpacingTDD,
    iPStart                IPStart,
    iPSlot                  IPSlot,
    iP-P-CCPCH             IP-P-CCPCH,
    burstModeParameters    BurstModeParameters OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { IPDL-TDD-Parameters-ExtIEs } }
    OPTIONAL,
    ...
}

-- The BurstModeParameters IE shall be included if the Idle Periods are arranged in Burst Mode.

IPDL-TDD-Parameters-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

IPLength ::= ENUMERATED {
    ip15,
    ip110,
    ...
}

IPOffset ::= INTEGER (0..9)

IP-P-CCPCH ::= ENUMERATED {
    SwitchOff-1-Frame,
    SwitchOff-2-Frames
}

IPSlot ::= INTEGER (0..14)

IPSpacingFDD ::= ENUMERATED {
```

```
    ipsF5,
    ipsF7,
    ipsF10,
    ipsF15,
    ipsF20,
    ipsF30,
    ipsF40,
    ipsF50,
    ...
}

IPSpacingTDD ::= ENUMERATED {
    ipsT30,
    ipsT40,
    ipsT50,
    ipsT70,
    ipsT100,
    ...
}

IPStart ::= INTEGER (0..4095)

-- J
-- K
-- L

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

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

L3-Information ::= BIT STRING

Load-Value-IncrDecrThres ::= INTEGER(0..9)

Load-Value ::= INTEGER(0..9)

LoadValue ::= SEQUENCE {
    uplinkLoadValue INTEGER(0..9),
    downlinkLoadValue INTEGER(0..9)
}

-- M

MaxNrOfUL-DPCHs ::= INTEGER (1..6)

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

MAC-c-sh-SDU-LengthList ::= SEQUENCE(SIZE(1..maxNrOfMACcshSDU-Length)) OF MAC-c-sh-SDU-Length

MaximumAllowedULTxPower ::= INTEGER (-50..33)

MaxNrDLPhysicalchannels ::= INTEGER (1..224)

MaxNrTimeslots ::= INTEGER (1..14)

MaxNrULPhysicalchannels ::= INTEGER (1..2)

MaxTFCIvalue ::= INTEGER (1..1023)

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

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 RSCP-Value-IncrDecrThres,
  round-trip-time Round-Trip-Time-IncrDecrThres,
  ...,
  load Load-Value-IncrDecrThres,
  transmitted-carrier-power Transmitted-Carrier-Power-Value-IncrDecrThres,
  received-total-wide-band-power Received-Total-Wideband-Power-Value-IncrDecrThres,
  ul-timeslot-iscp UL-Timeslot-ISCP-Value-IncrDecrThres
}

MeasurementThreshold ::= CHOICE {
  sir SIR-Value,
  sir-error SIR-Error-Value,
  transmitted-code-power Transmitted-Code-Power-Value,
  rscp RSCP-Value,
  rx-timing-deviation Rx-Timing-Deviation-Value,
  round-trip-time Round-Trip-Time-Value,
  ...,
  t-utran-gps-measurement-threshold-information TUTRANGPSMeasurementThresholdInformation,
  sfn-sfn-measurement-threshold-information SFNSFNMeasurementThresholdInformation,
  load Load-Value,
  transmitted-carrier-power Transmitted-Carrier-Power-Value,
  received-total-wide-band-power Received-Total-Wideband-Power-Value,
  ul-timeslot-iscp UL-Timeslot-ISCP-Value
}

MidambleConfigurationBurstType1And3 ::= ENUMERATED {v4, v8, v16}

MidambleConfigurationBurstType2 ::= ENUMERATED {v3, v6}

MidambleShiftAndBurstType ::= CHOICE {
  type1 SEQUENCE {
    midambleConfigurationBurstType1And3 MidambleConfigurationBurstType1And3,
    midambleAllocationMode CHOICE {
      defaultMidamble NULL,
      commonMidamble NULL,
      ueSpecificMidamble MidambleShiftLong,
      ...
    },
    ...
  },
  type2 SEQUENCE {
    midambleConfigurationBurstType2 MidambleConfigurationBurstType2,
    midambleAllocationMode CHOICE {
      defaultMidamble NULL,
      commonMidamble NULL,
      ueSpecificMidamble MidambleShiftShort,
      ...
    },
    ...
  },
  type3 SEQUENCE {
    midambleConfigurationBurstType1And3 MidambleConfigurationBurstType1And3,
    midambleAllocationMode CHOICE {
      defaultMidamble NULL,
      ueSpecificMidamble MidambleShiftLong,
      ...
    },
    ...
  },
  ...
}
```

```
MidambleShiftLong ::= INTEGER (0..15)

MidambleShiftShort ::= INTEGER (0..5)

MidambleShiftLCR ::= SEQUENCE {
    midambleAllocationMode MidambleAllocationMode,
    midambleShift MidambleShiftLong OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {MidambleShiftLCR-ExtIEs} }
    OPTIONAL,
    ...
}

MidambleAllocationMode ::= ENUMERATED {
    DefaultMidamble,
    CommonMidamble,
    UESpecificMidamble,
    ...
}

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

MinUL-ChannelisationCodeLength ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256
}

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,
    iE-Extensions ProtocolExtensionContainer { {Neighbouring-UMTS-
CellInformationItem-ExtIEs} } OPTIONAL,
    ...
}

Neighbouring-UMTS-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { id-neighbouring-LCR-TDD-CellInformation CRITICALITY ignore EXTENSION
Neighbouring-LCR-TDD-CellInformation PRESENCE optional },
    ...
}

Neighbouring-FDD-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfFDDNeighboursPerRNC,...)) OF
Neighbouring-FDD-CellInformationItem

Neighbouring-FDD-CellInformationItem ::= SEQUENCE {
    c-ID C-ID,
    uARFCNforNu UARFCN,
    uARFCNforNd UARFCN,
    frameOffset FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
    cellIndividualOffset CellIndividualOffset OPTIONAL,
    txDiversityIndicator TxDiversityIndicator,
```



```

sTTD-SupportIndicator          STTD-SupportIndicator    OPTIONAL,
closedLoopModel1-SupportIndicator ClosedLoopModel1-SupportIndicator  OPTIONAL,
closedLoopMode2-SupportIndicator ClosedLoopMode2-SupportIndicator  OPTIONAL,
iE-Extensions                  ProtocolExtensionContainer { { Neighbouring-FDD-
CellInformationItem-ExtIEs} } OPTIONAL,
...
}

Neighbouring-FDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringFDDCellMeasurementInformation ::= SEQUENCE {
  uC-ID          UC-ID,
  uARFCN         UARFCN,
  primaryScramblingCode PrimaryScramblingCode,
  iE-Extensions ProtocolExtensionContainer { {
NeighbouringFDDCellMeasurementInformationItem-ExtIEs} } OPTIONAL,
...
}

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

Neighbouring-GSM-CellInformation ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-
CellInformationIE }}

Neighbouring-GSM-CellInformationIE RNSAP-PROTOCOL-IES ::= {
  { ID id-Neighbouring-GSM-CellInformation    CRITICALITY ignore  TYPE      Neighbouring-GSM-
CellInformationIEs PRESENCE mandatory }
}

Neighbouring-GSM-CellInformationItem ::= SEQUENCE ( SIZE (1..maxNrOfGSMNeighboursPerRNC,...)) OF
Neighbouring-GSM-CellInformationItem

Neighbouring-GSM-CellInformationItem ::= SEQUENCE {
  CGI          CGI,
  q-Offset-Serving-to-Neighbour Q-Offset-Serving-to-Neighbour,
  q-RxlevMin   Q-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 shall be present only if Sync Case = Casel -- ,
  sCH-TimeSlot SCH-TimeSlot         OPTIONAL
  -- This IE shall be present only if Sync Case = Case2 -- ,
  block-STTD-Indicator Block-STTD-Indicator,
  cellIndividualOffset CellIndividualOffset  OPTIONAL,
  dPCHConstantValue  DPCHConstantValue  OPTIONAL,
  pCCPCH-Power       PCCPCH-Power       OPTIONAL,
  iE-Extensions     ProtocolExtensionContainer { { Neighbouring-TDD-
CellInformationItem-ExtIEs} } OPTIONAL,
...
}

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

```

```
NeighbouringTDDCellMeasurementInformation ::= SEQUENCE {
    uC-ID                UC-ID,
    uARFCN                UARFCN,
    cellParameterID      CellParameterID,
    iE-Extensions        ProtocolExtensionContainer { {
NeighbouringTDDCellMeasurementInformationItem-ExtIEs} } OPTIONAL,
    ...
}

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

Neighbouring-LCR-TDD-CellInformation ::= SEQUENCE (SIZE (1.. maxNrofLCRTDDNeighboursPerRNC,..))
OF Neighbouring-LCR-TDD-CellInformationItem

Neighbouring-LCR-TDD-CellInformationItem ::= SEQUENCE {
    c-ID                C-ID,
    uARFCNforNt         UARFCN,
    frameOffset         FrameOffset          OPTIONAL,
    cellParameterID     CellParameterID,
    timeSlotLCR         TimeSlotLCR,
    block-STTD-Indicator Block-STTD-Indicator,
    cellIndividualOffset CellIndividualOffset OPTIONAL,
    dPCHConstantValue   DPCHConstantValue   OPTIONAL,
    pCCPCH-Power        PCCPCH-Power        OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { { Neighbouring-LCR-TDD-
CellInformationItem-ExtIEs} } OPTIONAL,
    ...
}

Neighbouring-LCR TDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NrOfDLchannelisationcodes ::= INTEGER (1..8)

NrOfTransportBlocks       ::= INTEGER (0..512)

-- 0

OnModification ::= SEQUENCE {
    measurementThreshold MeasurementThreshold,
    iE-Extensions        ProtocolExtensionContainer { {OnModification-ExtIEs} } OPTIONAL,
    ...
}

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

-- P

PagingCause ::= ENUMERATED {
    terminating-conversational-call,
    terminating-streaming-call,
    terminating-interactive-call,
    terminating-background-call,
    terminating-low-priority-signalling,
    ...,
    terminating-high-priority-signalling,
    terminating-cause-unknown
}
-- See in [16]

PagingRecordType ::= ENUMERATED {
    imsi-gsm-map,
    tmsi-gsm-map,
    p-tmsi-gsm-map,
    imsi-ds-41,
    tmsi-ds-41,
    ...
}
-- See in [16]

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

```
}

PCCPCH-Power ::= INTEGER (-150..400,...)
-- PCCPCH-power = power * 10
-- If power <= -15 PCCPCH shall be set to -150
-- If power >= 40 PCCPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step 0.1dBm

PCH-InformationList ::= SEQUENCE (SIZE(0..1)) OF PCH-InformationItem

PCH-InformationItem ::= SEQUENCE {
    transportFormatSet      TransportFormatSet,
    iE-Extensions           ProtocolExtensionContainer { { PCH-InformationItem-ExtIEs } }
OPTIONAL,
    ...
}

PCH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PC-Preamble ::= INTEGER(0..7,...)

PDSCHCodeMapping ::= SEQUENCE {
    dl-ScramblingCode       DL-ScramblingCode,
    signallingMethod        PDSCHCodeMapping-SignallingMethod,
    iE-Extensions           ProtocolExtensionContainer { { PDSCHCodeMapping-ExtIEs } } OPTIONAL,
    ...
}

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

PDSCHCodeMapping-SignallingMethod ::= CHOICE {
    pDSCHCodeMapping-SignallingMethod-CodeRange      PDSCHCodeMapping-SignallingMethod-CodeRange,
    pDSCHCodeMapping-SignallingMethod-TFCIRange      PDSCHCodeMapping-SignallingMethod-TFCIRange,
    pDSCHCodeMapping-SignallingMethod-Explicit      PDSCHCodeMapping-SignallingMethod-Explicit,
    ...
}

PDSCHCodeMapping-SignallingMethod-CodeRange ::= SEQUENCE (SIZE (1..maxNoCodeGroups)) OF
SEQUENCE {
    spreadingFactor      SpreadingFactor,
    multi-code-info      Multi-code-info,
    start-CodeNumber     CodeNumber,
    stop-CodeNumber      CodeNumber,
    iE-Extensions        ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-
CodeRange-ExtIEs } } OPTIONAL,
    ...
}

PDSCHCodeMapping-SignallingMethod-CodeRange-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCHCodeMapping-SignallingMethod-TFCIRange ::= SEQUENCE (SIZE (1..maxNoTFCIGroups)) OF
SEQUENCE {
    maxTFCIvalue      MaxTFCIvalue,
    spreadingFactor    SpreadingFactor,
    multi-code-info    Multi-code-info,
    codeNumber         CodeNumber,
    iE-Extensions      ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-
TFCIRange-ExtIEs } } OPTIONAL,
    ...
}

PDSCHCodeMapping-SignallingMethod-TFCIRange-ExtIEs 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 ::= {  
    ...  
}  
  
PeriodicInformation ::= SEQUENCE {  
    informationReportPeriodicity      InformationReportPeriodicity,  
    iE-Extensions                    ProtocolExtensionContainer { {PeriodicInformation-ExtIEs}  
}  
    OPTIONAL,  
    ...  
}  
  
PeriodicInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
  
PLMN-ID ::= OCTET STRING (SIZE(3))  
  
PowerAdjustmentType ::= ENUMERATED {  
    none,  
    common,  
    individual  
}  
  
PowerOffset ::= INTEGER (0..24)  
  
PRC ::= INTEGER (-2047..2047)  
--pseudo range correction; scaling factor 0.32 meters  
  
PRCDeviation ::= ENUMERATED {  
    prcd1,  
    prcd2,  
    prcd5,  
    prcd10,  
    ...  
}  
  
Pre-emptionCapability ::= ENUMERATED {  
    shall-not-trigger-pre-emption,  
    may-trigger-pre-emption  
}  
  
Pre-emptionVulnerability ::= ENUMERATED {  
    not-pre-emptable,  
    pre-emptable  
}  
  
PredictedSFNSFNDeviationLimit ::= INTEGER (1..16384)  
  
PredictedTUTRANGPSDeviationLimit ::= INTEGER (1..1048576)  
  
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 mapiing 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
```

```
-- Q

QE-Selector ::= ENUMERATED {
    selected,
    non-selected
}

Q-Offset-Serving-to-Neighbour ::= INTEGER (-50..50)

Q-RxlevMin ::= INTEGER (-58..-13)
-- Actual value = (IE value * 2) + 1
-- Range -115 to -25 dBm, Step 2 dB

-- R

RAC                ::= OCTET STRING (SIZE(1))

RANAP-RelocationInformation    ::= BIT STRING

Range-Correction-Rate ::= INTEGER (-127..127)
-- scaling factor 0.032 m/s

RateMatchingAttribute          ::= INTEGER (1..maxRateMatching)

RB-Identity              ::= INTEGER (0..31)

RB-Info ::= SEQUENCE (SIZE(1..maxNoOfRB)) OF RB-Identity

Received-Total-Wideband-Power-Value ::= Received-total-wide-band-power

Received-Total-Wideband-Power-Value-IncrDecrThres ::= INTEGER(0..620)
-- Unit dB Step 0.1dB
-- e.g. value 100 means 10dB

RefTFCNumber ::= INTEGER (0..15)

RepetitionLength          ::= INTEGER (1..63)

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

RepetitionNumber ::= INTEGER (1..256)

ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          Periodic,
    eventA            EventA,
    eventB            EventB,
    eventC            EventC,
    eventD            EventD,
    eventE            EventE,
    eventF            EventF,
    ...,
    onModification    OnModification
}

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
    min               INTEGER (1..60,...),
    -- Unit min, Step 1min
    ...
}

RequestedDataValue ::= SEQUENCE {
    gA-AccessPointPosition    GA-AccessPointPosition
    OPTIONAL,
    iPDLParameters            IPDLParameters
    OPTIONAL,

```

dGPSCorrections	DGPSCorrections
OPTIONAL,	
gPS-NavigationModel-and-TimeRecovery	GPS-NavigationModel-and-TimeRecovery
OPTIONAL,	
gPS-Ionospheric-Model	GPS-Ionospheric-Model
OPTIONAL,	
gPS-UTC-Model	GPS-UTC-Model
OPTIONAL,	
gPS-Almanac	GPS-Almanac
OPTIONAL,	
gPS-RealTime-Integrity	GPS-RealTime-Integrity
OPTIONAL,	
gPS-RX-POS	GPS-RX-POS
OPTIONAL,	
iE-Extensions	ProtocolExtensionContainer { {
RequestedDataValue-ExtIEs } } OPTIONAL,	
...	
}	

~~at least one of the above IEs shall be present in the requested data value~~

```

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

RequestedDataValueInformation ::= CHOICE {
    informationAvailable      InformationAvailable,
    informationNotAvailable   InformationNotAvailable
}

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

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

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

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

Round-Trip-Time-Value ::= INTEGER(0..32767)
-- According to mapping in [23]

RSCP-Value ::= INTEGER (0..127)
-- According to mapping in [24]

RSCP-Value-IncrDecrThres ::= INTEGER (0..126)

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

RxTimingDeviationForTA ::= INTEGER (0..127)
-- As specified in [5], ch. 6.2.7.6
-- For 1.28Mcps TDD this IE must be set to 0.

Rx-Timing-Deviation-Value ::= INTEGER (0..8191)
--According to mapping in [24][3.84Mcps TDD only]

-- S

SAC ::= OCTET STRING (SIZE (2))

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

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

SAT-ID ::= INTEGER (0..63)

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

ScaledAdjustmentRatio ::= INTEGER(0..100)
-- AdjustmentRatio = ScaledAdjustmentRatio / 100

Secondary-CCPCH-Info ::= SEQUENCE {

```

```

fDD-S-CCPCH-Offset          FDD-S-CCPCH-Offset,
dl-ScramblingCode          DL-ScramblingCode,
fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
dl-TFCS                    TFCS,
secondaryCCPCH-SlotFormat  SecondaryCCPCH-SlotFormat,
tFCI-Presence              tFCI-Presence OPTIONAL,
-- This IE shall be present only if the Secondary CCPCH Slot Format [1] is equal to any of the
values [2] 8 to 17
multiplexingPosition        MultiplexingPosition,
sTTD-Indicator              sTTD-Indicator,
fACH-PCH-InformationList    FACH-PCH-InformationList,
iB-schedulingInformation    IB-SchedulingInformation,
iE-Extensions               ProtocolExtensionContainer { { Secondary-CCPCH-Info-
ExtIEs} } OPTIONAL,
...
}

Secondary-CCPCH-Info-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Secondary-CCPCH-Info-TDD ::= SEQUENCE {
dl-TFCS                    TFCS,
tFCI-Coding                tFCI-Coding,
secondary-CCPCH-TDD-InformationList Secondary-CCPCH-TDD-InformationList,
fACH-InformationList       FACH-InformationList,
pCH-InformationList        PCH-InformationList,
iE-Extensions              ProtocolExtensionContainer { { Secondary-CCPCH-Info-
TDD-ExtIEs} } OPTIONAL,
...
}

Secondary-CCPCH-Info-TDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Secondary-CCPCH-TDD-InformationList ::= SEQUENCE (SIZE(0.. maxNrOfSCCPCHs)) OF Secondary-CCPCH-
TDD-InformationItem

Secondary-CCPCH-TDD-InformationItem ::= SEQUENCE {
timeSlot                    TimeSlot,
midambleShiftAndBurstType  MidambleShiftAndBurstType,
tFCI-Presence               tFCI-Presence,
secondary-CCPCH-TDD-Code-Information Secondary-CCPCH-TDD-Code-Information,
tDD-PhysicalChannelOffset  TDD-PhysicalChannelOffset,
repetitionLength            RepetitionLength,
repetitionPeriod            RepetitionPeriod,
iE-Extensions              ProtocolExtensionContainer { { Secondary-CCPCH-TDD-
InformationItem-ExtIEs} } OPTIONAL,
...
}

Secondary-CCPCH-TDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Secondary-CCPCH-TDD-Code-Information ::= SEQUENCE ( SIZE ( 1..maxNrOfSCCPCHs)) OF Secondary-CCPCH-
TDD-Code-InformationItem

Secondary-CCPCH-TDD-Code-InformationItem ::= SEQUENCE {
tDD-ChannelisationCode      TDD-ChannelisationCode,
iE-Extensions              ProtocolExtensionContainer { {Secondary-CCPCH-TDD-Code-
InformationItem-ExtIEs} } OPTIONAL,
...
}

Secondary-CCPCH-TDD-Code-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

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

Seed ::= INTEGER (0..63)

SFN ::= INTEGER (0..4095)

```

```
SFNSFN ::= INTEGER(-20480..20479)

SFNSFNChangeLimit ::= INTEGER (1..16384)

SFNSFNDriftRate ::= INTEGER (-16383..16383)

SFNSFNDriftRateQuality ::= INTEGER (0..16383)

SFNSFNMeasurementThresholdInformation ::= SEQUENCE {
    sFNSFNChangeLimit          SFNSFNChangeLimit          OPTIONAL,
    predictedSFNSFNDeviationLimit PredictedSFNSFNDeviationLimit  OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {
SFNSFNMeasurementThresholdInformation-ExtIEs} }          OPTIONAL,
    ...
}

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

SFNSFNMeasurementValueInformation ::= SEQUENCE {
    successfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformation SEQUENCE
(SIZE(1..maxNrOfMeasNCell)) OF
    SEQUENCE {
        uC-ID          UC-ID,
        sFNSFN         SFNSFN,
        sFNSFNQuality SFNSFNQuality,
        sFNSFNDriftRate SFNSFNDriftRate,
        sFNSFNDriftRateQuality SFNSFNDriftRateQuality,
        sFN            SFN,
        timeSlot       TimeSlot,
        iE-Extensions ProtocolExtensionContainer { {
SuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-ExtIEs} }
        OPTIONAL,
        ...
    },
    unsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformation SEQUENCE
(SIZE(0..maxNrOfMeasNCell-1)) OF
    SEQUENCE {
        uC-ID          UC-ID,
        iE-Extensions ProtocolExtensionContainer { {
UnsuccessfullNeighbouringCellSFNSFNObservedTimeDifferenceMeasurementInformationItem-ExtIEs} }
        OPTIONAL,
        ...
    }
    iE-Extensions ProtocolExtensionContainer { { SFNSFNMeasurementValueInformationItem-
ExtIEs} }          OPTIONAL,
    ...
}

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

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

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

SFNSFNQuality ::= INTEGER (0..16383)

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

S-FieldLength ::= ENUMERATED {
    v1,
    v2,
    ...
}

SpecialBurstScheduling ::= INTEGER (1..256)

SpreadingFactor ::= INTEGER (4| 8| 16| 32| 64| 128| 256)

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

SRB-Delay ::= INTEGER(0..7,...)

SSDT-CellID ::= ENUMERATED {
    a,
    b,
    c,
    d,
    e,
    f,
    g,
    h
}

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

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

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

STTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

STTD-SupportIndicator ::= ENUMERATED {
    sTTD-Supported,
    sTTD-not-Supported
}

SyncCase ::= INTEGER (1..2,...)

SynchronisationConfiguration ::= SEQUENCE {
    n-INSYNC-IND INTEGER (1..256),
    n-OUTSYNC-IND INTEGER (1..256),
    t-RLFFAILURE INTEGER (0..255),
    -- Unit seconds, Range 0s .. 25.5s, Step 0.1s
    iE-Extensions ProtocolExtensionContainer { { SynchronisationConfiguration-ExtIEs} }
    OPTIONAL,
    ...
}

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

-- T

TDD-ChannelisationCode ::= ENUMERATED {
    chCode1div1,
    chCode2div1,
    chCode2div2,
    chCode4div1,
```

```

    chCode4div2,
    chCode4div3,
    chCode4div4,
    chCode8div1,
    chCode8div2,
    chCode8div3,
    chCode8div4,
    chCode8div5,
    chCode8div6,
    chCode8div7,
    chCode8div8,
    chCode16div1,
    chCode16div2,
    chCode16div3,
    chCode16div4,
    chCode16div5,
    chCode16div6,
    chCode16div7,
    chCode16div8,
    chCode16div9,
    chCode16div10,
    chCode16div11,
    chCode16div12,
    chCode16div13,
    chCode16div14,
    chCode16div15,
    chCode16div16,
    ...
}

TDD-ChannelisationCodeLCR ::= CHOICE {
    sfl          ENUMERATED { QPSK, 8PSK, ... },
    sfx          TDD-ChannelisationCode,
    ...
}

TDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF TDD-DCHs-to-ModifyItem

TDD-DCHs-to-ModifyItem ::= SEQUENCE {
    ul-FP-Mode      UL-FP-Mode      OPTIONAL,
    toAWS           ToAWS           OPTIONAL,
    toAWE           ToAWE           OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    dCH-SpecificInformationList TDD-DCHs-to-ModifySpecificInformationList,
    iE-Extensions  ProtocolExtensionContainer { {TDD-DCHs-to-ModifyItem-
ExtIEs} } OPTIONAL,
    ...
}

TDD-DCHs-to-ModifyItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DCHs-to-ModifySpecificInformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF TDD-DCHs-to-
ModifySpecificItem

TDD-DCHs-to-ModifySpecificItem ::= SEQUENCE {
    dCH-ID          DCH-ID,
    ul-CCTrCH-ID   CCTrCH-ID      OPTIONAL,
    dl-CCTrCH-ID   CCTrCH-ID      OPTIONAL,
    ul-TransportformatSet TransportFormatSet OPTIONAL,
    dl-TransportformatSet TransportFormatSet OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority FrameHandlingPriority OPTIONAL,
    iE-Extensions  ProtocolExtensionContainer { {TDD-DCHs-to-ModifySpecificItem-
ExtIEs} } OPTIONAL,
    ...
}

TDD-DCHs-to-ModifySpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
    { ID id-Guaranteed-Rate-Information      CRITICALITY ignore  EXTENSION Guaranteed-Rate-
Information      PRESENCE optional  }
}

TDD-DL-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-DL-Code-InformationItem

TDD-DL-Code-InformationItem ::= SEQUENCE {
    dPCH-ID          DPCH-ID,

```

```
tDD-ChannelisationCode      TDD-ChannelisationCode,
  iE-Extensions              ProtocolExtensionContainer { {TDD-DL-Code-InformationItem-
ExtIEs} } OPTIONAL,
  ...
}

TDD-DL-Code-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TDD-DL-Code-LCR-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHsLCR)) OF TDD-DL-Code-LCR-
InformationItem

TDD-DL-Code-LCR-InformationItem ::= SEQUENCE {
  dPCH-ID                    DPCH-ID,
  tdd-ChannelisationCodeLCR   TDD-ChannelisationCodeLCR,
  iE-Extensions              ProtocolExtensionContainer { { TDD-DL-Code-LCR-
InformationItem-ExtIEs} } OPTIONAL,
  ...
}

TDD-DL-Code-LCR-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TDD-DPCHOffset ::= CHOICE {
  initialOffset      INTEGER (0..255),
  noinitialOffset    INTEGER (0..63)
}

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

TDD-TPC-DownlinkStepSize ::= ENUMERATED {
  step-size1,
  step-size2,
  step-size3,
  ...
}

TDD-UL-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-UL-Code-InformationItem

TDD-UL-Code-InformationItem ::= SEQUENCE {
  dPCH-ID                    DPCH-ID,
  tDD-ChannelisationCode     TDD-ChannelisationCode,
  iE-Extensions              ProtocolExtensionContainer { {TDD-UL-Code-InformationItem-
ExtIEs} } OPTIONAL,
  ...
}

TDD-UL-Code-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TDD-UL-Code-LCR-Information ::= SEQUENCE (SIZE (1..maxNrOfDPCHsLCR)) OF TDD-UL-Code-LCR-
InformationItem

TDD-UL-Code-LCR-InformationItem ::= SEQUENCE {
  dPCH-ID                    DPCH-ID,
  tdd-ChannelisationCodeLCR   TDD-ChannelisationCodeLCR,
  iE-Extensions              ProtocolExtensionContainer { { TDD-UL-Code-LCR-
InformationItem-ExtIEs} } OPTIONAL,
  ...
}

TDD-UL-Code-LCR-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

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

```
}

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

TGD ::= INTEGER (0|15..269)
-- 0 = Undefined, only one transmission gap in the transmission gap pattern sequence

TGPRC ::= INTEGER (0..63)
-- 0 = infinity

TGPSID ::= INTEGER (1.. maxTGPS)

TGSN ::= INTEGER (0..14)

TimeSlot ::= INTEGER (0..14)

TimeSlotLCR ::= INTEGER (0..6)

TimingAdvanceApplied ::= ENUMERATED {
    yes,
    no
}

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGSN            TGSN,
        tGL1            GapLength,
        tGL2            GapLength OPTIONAL,
        tGD             TGD,
        tGPL1           GapDuration,
        tGPL2           GapDuration OPTIONAL,
        uL-DL-mode      UL-DL-mode,
        downlink-Compressed-Mode-Method Downlink-Compressed-Mode-Method OPTIONAL,
        -- This IE is-onlyshall be present if the value of the UL/DL mode IE is "DL only" or
"UL/DL"
        uplink-Compressed-Mode-Method Uplink-Compressed-Mode-Method OPTIONAL,
        -- This IE is-onlyshall be present if the value of the UL/DL mode IE is "UL only" or
"UL/DL"
        dL-FrameType    DL-FrameType,
        delta-SIR1       DeltaSIR,
        delta-SIR-after1 DeltaSIR,
        delta-SIR2       DeltaSIR OPTIONAL,
        delta-SIR-after2 DeltaSIR OPTIONAL,
        iE-Extensions    ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-
Information-ExtIEs} } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Transmission-Gap-Pattern-Sequence-ScramblingCode-Information ::= ENUMERATED{
    code-change,
    nocode-change
}

Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGPRC           TGPRC,
        tGCFN           CFN,
        iE-Extensions    ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-
Status-List-ExtIEs } } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

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

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

TransmitDiversityIndicator ::= ENUMERATED {
    active,
    inactive
}

Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
-- according to mapping in [23] and [24]

Transmitted-Carrier-Power-Value-IncrDecrThres ::= INTEGER(0..100)
-- according to mapping in [23] and [24]

TUTRANGPS ::= INTEGER (0..37158911999999)

TUTRANGPSChangeLimit ::= INTEGER (1..1048576)

TUTRANGPSDriftRate ::= INTEGER (-16383..16383)

TUTRANGPSDriftRateQuality ::= INTEGER (0..16383)

TUTRANGPSAccuracyClass ::= ENUMERATED {
    accuracy-class-A,
    accuracy-class-B,
    accuracy-class-C,
    ...
}

TUTRANGPSMeasurementThresholdInformation ::= SEQUENCE {
    tUTRANGPSChangeLimit                TUTRANGPSChangeLimit                OPTIONAL,
    predictedTUTRANGPSDeviationLimit     PredictedTUTRANGPSDeviationLimit     OPTIONAL,
    iE-Extensions                        ProtocolExtensionContainer { {
TUTRANGPSMeasurementThresholdInformation-ExtIEs} } OPTIONAL,
    ...
}

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

TUTRANGPSMeasurementValueInformation ::= SEQUENCE {
    tUTRANGPS                TUTRANGPS,
    tUTRANGPSQuality          TUTRANGPSQuality,
    tUTRANGPSDriftRate       TUTRANGPSDriftRate,
    tUTRANGPSDriftRateQuality TUTRANGPSDriftRateQuality,
    iEe-Extensions           ProtocolExtensionContainer { {
TUTRANGPSMeasurementValueInformationItem-ExtIEs} } OPTIONAL,
    ...
}

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

TUTRANGPSQuality ::= INTEGER (0..1048575)

TransportBearerID ::= INTEGER (0..4095)

TransportBearerRequestIndicator ::= ENUMERATED {
    bearer-requested,
    bearer-not-requested,
    ...
}
```

```
}

TransportBlockSize ::= INTEGER (0..5000)
-- Unit is bits

TransportFormatCombination-Beta ::= CHOICE {
    signalledGainFactors SEQUENCE {
        betaC BetaCD,
        betaD BetaCD,
        refTFCNumber RefTFCNumber OPTIONAL,
        iE-Extensions ProtocolExtensionContainer { { SignalledGainFactors-ExtIEs } }
OPTIONAL,
        ...
    },
    refTFCNumber RefTFCNumber,
    ...
}

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

TFCS ::= SEQUENCE {
    tFCSvalues CHOICE {
        no-Split-in-TFCI TFCS-TFCSList,
        split-in-TFCI SEQUENCE {
            transportFormatCombination-DCH TFCS-DCHList,
            signallingMethod CHOICE {
                tFCI-Range TFCS-MappingOnDSCHList,
                explicit TFCS-DSCHList,
                ...
            },
            iE-Extensions ProtocolExtensionContainer { { Split-in-TFCI-
ExtIEs } } OPTIONAL,
            ...
        },
        ...
    },
    iE-Extensions ProtocolExtensionContainer { { TFCS-ExtIEs } } OPTIONAL,
    ...
}

Split-in-TFCI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

TFCS-TFCSList ::= SEQUENCE (SIZE (1..maxNrOfTFCS)) OF
SEQUENCE {
    cTFC TFCS-CTFC,
    tFC-Beta TransportFormatCombination-Beta OPTIONAL,
    -- The IE shall be present if the TFCS concerns a UL DPCH [FDD - or PRACH channel XXXXXX]
    iE-Extensions ProtocolExtensionContainer { { TFCS-TFCSList-ExtIEs } } OPTIONAL,
    ...
}

TFCS-TFCSList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-CTFC ::= CHOICE {
    ctfc2bit INTEGER (0..3),
    ctfc4bit INTEGER (0..15),
    ctfc6bit INTEGER (0..63),
    ctfc8bit INTEGER (0..255),
    ctfc12bit INTEGER (0..4095),
    ctfc16bit INTEGER (0..65535),
    ctfcmaxbit INTEGER (0..maxCTFC)
}

TFCS-DCHList ::= SEQUENCE (SIZE (1..maxTFCI1Combs)) OF
SEQUENCE {
    cTFC TFCS-CTFC,
    iE-Extensions ProtocolExtensionContainer { { TFCS-DCHList-ExtIEs } } OPTIONAL,
    ...
}
```

```
TFCS-DCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-MappingOnDSCHList ::= SEQUENCE (SIZE (1..maxNoTFCIGroups)) OF
    SEQUENCE {
        maxTFCI-field2-Value          TFCS-MaxTFCI-field2-Value,
        cTFC-DSCH                     TFCS-CTFC,
        iE-Extensions                 ProtocolExtensionContainer { { TFCS-MappingOnDSCHList-ExtIEs}
    }
    OPTIONAL,
    ...
}

TFCS-MappingOnDSCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-MaxTFCI-field2-Value ::= INTEGER (1..maxTFCI2Combs-1)

TFCS-DSCHList ::= SEQUENCE (SIZE (1..maxTFCI2Combs)) OF
    SEQUENCE {
        cTFC-DSCH                     TFCS-CTFC,
        iE-Extensions                 ProtocolExtensionContainer { { TFCS-DSCHList-ExtIEs} }
    }
    OPTIONAL,
    ...
}

TFCS-DSCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

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

TransportFormatSet-ModeDP ::= CHOICE {
    tdd                               TDD-TransportFormatSet-ModeDP,
    notApplicable                     NULL,
    ...
}

TDD-TransportFormatSet-ModeDP ::= SEQUENCE {
    transmissionTimeIntervalInformation TransmissionTimeIntervalInformation OPTIONAL,
    -- This IE is mandatory shall be present if the "Transmission Time Interval" of the "Semi-
static Transport Format Information" is "dynamic". Otherwise it is absent.
    iE-Extensions                     ProtocolExtensionContainer { {TDD-TransportFormatSet-
ModeDP-ExtIEs} } OPTIONAL,
    ...
}

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

TransmissionTimeIntervalInformation ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
    SEQUENCE {
```

```
        transmissionTimeInterval      TransmissionTimeIntervalDynamic,
        iE-Extensions                 ProtocolExtensionContainer {
{TransmissionTimeIntervalInformation-ExtIEs} } OPTIONAL,
        ...
    }

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

Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in 25.215/25.225

Transmitted-Code-Power-Value-IncrDecrThres ::= INTEGER (0..112,...)

TransportFormatManagement ::= ENUMERATED {
    cell-based,
    ue-based,
    ...
}

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

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

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

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

TrCH-SrcStatisticsDescr   ::= ENUMERATED {
    speech,
    rRC,
    unknown,
    ...
}

TSTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

TSTD-Support-Indicator ::= ENUMERATED {
    tSTD-supported,
    tSTD-not-supported
}

TxDiversityIndicator      ::= ENUMERATED {
    true,
    false
}

-- U

UARFCN                    ::= INTEGER (0..16383,...)
-- Corresponds to: 0.0Hz..3276.6Mhz. See 25.101, 25.105

UDRE ::= ENUMERATED {
    lessThan1,
    between1-and-4,
    between4-and-8,
    over8,
    ...
}
```



```
}

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

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

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

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

UL-TimeslotLCR-Information ::= SEQUENCE (SIZE (1..maxNrOfULTsLCR)) OF UL-TimeslotLCR-
InformationItem

UL-TimeslotLCR-InformationItem ::= SEQUENCE {
    timeSlotLCR                TimeSlotLCR,
    midambleShiftLCR            MidambleShiftLCR,
    tFCI-Presence                TFCI-Presence,
    tDD-uL-Code-LCR-InformationList TDD-UL-Code-LCR-Information,
    iE-Extensions                ProtocolExtensionContainer { { UL-TimeslotLCR-
InformationItem-ExtIEs} } OPTIONAL,
    ...
}

UL-TimeslotLCR-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfULTs)) OF UL-TimeSlot-ISCP-InfoItem

UL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
    timeSlot                TimeSlot,
    uL-TimeslotISCP        UL-TimeslotISCP,
    iE-Extensions            ProtocolExtensionContainer { { UL-TimeSlot-ISCP-InfoItem-ExtIEs}
} OPTIONAL,
    ...
}

UL-TimeSlot-ISCP-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeSlot-ISCP-LCR-Info ::= SEQUENCE (SIZE (1..maxNrOfULTsLCR)) OF UL-TimeSlot-ISCP-LCR-
InfoItem

UL-TimeSlot-ISCP-LCR-InfoItem ::= SEQUENCE {
    timeSlotLCR                TimeSlotLCR,
    iSCP                        UL-TimeslotISCP-Value,
    iE-Extensions                ProtocolExtensionContainer { { UL-TimeSlot-ISCP-InfoItem-
ExtIEs} } OPTIONAL,
    ...
}

UL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-ISCP-Value ::= UL-TimeslotISCP

UL-Timeslot-ISCP-Value-IncrDecrThres ::= INTEGER(0..126)
-- Unit dB. Step 0.5dB
-- e.g. Value 100 means 50dB

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

```
    ...
  }

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,
  iE-Extensions  ProtocolExtensionContainer { {UC-ID-ExtIEs} } OPTIONAL,
  ...
}

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

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

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

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

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

UL-ScramblingCode-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-ScramblingCodeLength ::= ENUMERATED {
  short,
  long
}

UL-ScramblingCodeNumber ::= INTEGER (0..16777215)

UL-TimeslotISCP ::= INTEGER (0..127)
-- According to mapping in [14]

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

URA-Information ::= SEQUENCE {
  uRA-ID          URA-ID,
  multipleURAsIndicator  MultipleURAsIndicator,
  rNCsWithCellsInTheAccessedURA-List  RNCsWithCellsInTheAccessedURA-List OPTIONAL,
  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,
  iE-Extensions  ProtocolExtensionContainer { {RNCsWithCellsInTheAccessedURA-
Item-ExtIEs} } OPTIONAL,
  ...
}

RNCsWithCellsInTheAccessedURA-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

}

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

USCH-Information ::= SEQUENCE (SIZE (1..maxNoOfUSCHs)) OF USCH-InformationItem

```
USCH-InformationItem ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    ul-CCTrCH-ID           CCTrCH-ID,
    trChSourceStatisticsDescriptor TrCH-SrcStatisticsDescr,
    transportFormatSet     TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    schedulingPriorityIndicator SchedulingPriorityIndicator,
    rb-Info                RB-Info,
    iE-Extensions          ProtocolExtensionContainer { {USCH-InformationItem-
ExtIEs} } OPTIONAL,
    ...
}
```

```
USCH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
-- V
-- W
-- X
-- Y
-- Z
```

END