TSGRP#12(01) 0378

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

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
R3-011862	25.423	340	3	Corrections and introduction of an appendix for usage of Criticality Diagnostics IE	F	agreed	3.5.0	3.6.0	TEI
R3-011863	25.423	341	2	Corrections and introduction of an appendix for usage of Criticality Diagnostics IE	A	agreed	4.0.0	4.1.0	TEI
R3-011327	25.423	342		Reporting of Logical Error with Error Indication Procedure	F	agreed	3.4.0	3.5.0	TEI
R3-011328	25.423	343		Reporting of Logical Error with Error Indication Procedure	A	agreed	4.0.0	4.1.0	TEI
R3-011335	25.423	344		Clarification of IEs order rule	F	agreed	3.4.0	3.5.0	TEI
R3-011336	25.423	345		Clarification of IEs order rule	A	agreed	4.0.0	4.1.0	TEI
R3-011366	25.423	346		Modification of RL-Setup and RL-Addition procedure text	F	agreed	3.5.0	3.6.0	TEI
R3-011367	25.423	347		Modification of RL-Setup and RL-Addition procedure text	A	agreed	4.0.0	4.1.0	TEI
R3-011370	25.423	348		Clarification on Procedure Parallelism for RL Restoration	F	agreed	3.5.0	3.6.0	TEI
R3-011371	25.423	349		Clarification on Procedure Parallelism for RL Restoration	A	agreed	4.0.0	4.1.0	TEI
R3-011765	25.423	350	2	Measurement reporting clarification	F	agreed	3.5.0	3.6.0	TEI
R3-011766	25.423	351	2	Measurement reporting clarification	A	agreed	4.0.0	4.1.0	TEI

R3-011378	25.423	352	Clarification of the CM Configuration Change CFN IE	F	agreed	3.5.0	3.6.0	TEI
R3-011379	25.423	353	Clarification of the CM Configuration Change CFN IE	A	agreed	4.0.0	4.1.0	TEI
R3-011382	25.423	354	Correction to the UMTS neighbouring cell handling	F	agreed	3.5.0	3.6.0	TEI
R3-011383	25.423	355	Correction to the UMTS neighbouring cell handling	A	agreed	4.0.0	4.1.0	TEI
R3-011384	25.423	356	Clarification of the Initial DL Tx Power in RL Addition	F	agreed	3.5.0	3.6.0	TEI
R3-011385	25.423	357	Clarification of the Initial DL Tx Power in RL Addition	A	agreed	4.0.0	4.1.0	TEI
R3-011386	25.423	358	Criticality setting of Neighbouring GSM Cell Information	F	agreed	3.5.0	3.6.0	TEI
R3-011387	25.423	359	Criticality setting of Neighbouring GSM Cell Information	A	agreed	4.0.0	4.1.0	TEI

CR-Form-v3 CHANGE REQUEST ж CR ж rev ж Current version: ж 25.423 340 3.5.0For **HELP** on using this form, see bottom of this page or look at the pop-up text over the **#** symbols. ME/UE Radio Access Network X Core Network Proposed change affects: # (U)SIM Title: ж Corrections and introduction of an appendix for usage of Criticality Diagnostics IE Source: R-WG3 ж Work item code: # TEI Date: # 2001-05-16 Category: жF Release: # R99 Use one of the following categories: Use one 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 REL-4 (Release 4) be found in 3GPP TR 21.900. REL-5 (Release 5) Reason for change: # The Criticality Diagnostics IE cannot tell if a reported error is due to a not understood or a missing IE. This needs to be added. Also the usage of Criticality Diagnostics IE needs to be made easier to understand. An informative annex is thus added. Summary of change: # Type of Error is added to the *Criticality Diagnostics* IE and an informative appendix with examples of the usage of Criticality Diagnostics IE is also added. Changes since R3 #20: The semantics of the Repetition Number IE in the Criticality Diagnostics IE and Message Structure IE have been improved. One figure per example have been included in the Appendix. One example on "missing IE" has been included in the Appendix. The Type of Error IE has been added in the Information Element Criticality Diagnostics IE in the Criticality Diagnostics IE to allow the reporting of multiple causes to the inclusion of the Criticality Diagnostics IE. The main reason for reporting Criticality Diagnostics can be indicated by the Cause IE, but the reason may be different for different reported IEs. E.g the main reason my be a missing IE (cause="Abstract Syntax Error (Falsely Constructed Message)") but still there may be a not understood IE reported as well (cause="Abstract Syntax Error (Reject)" or "Abstract Syntax Error (Ignore and Notify)"). The value range for the Repetition Number IE in the Criticality Diagnostics IE

The value range for the Repetition Number IE in the Criticality Diagnostics IE has been changed from (1..256) to (0..255, ...).
 The value range for the Repetition Number IE in the Massace Structure IE

• The value range for the *Repetition Number* IE in the *Message Structure* IE has been changed from (1..256) to (1..256, ...).

Rev2: the id value was allocated.

Rev3: It was recognised, that the addition of the extension marker for the *Repetition Number* IE in the *Criticality Diagnostics* IE and the *Message Structure* IE will lead to a non backwards compatible change, as it e.g. causes an transfer

	syntax (decoder) error if this IE is received by a node of an version which did not implemented this change. As an outcome one correction in ASN.1+removal of ellipsis from the repetition number were performed.
Consequences if not approved:	 It will not be possible to know what type of error that is reported, making it difficult to take appropriate actions. The proposed change is not backwards compatible due to: The changes done to the value range for Repetition Number. The introduction of the possibility to report missing IEs, thus making received information ambiguous for a receiver implemented according to Criticality Diagnostics without this possibility.
Clauses affected:	# 9.2.1.13, 9.2.1.39A, 9.3.4, 9.3.6 and Appendix B (new)
Other specs	X Other core specifications # 25.413 V3.5.0, CR276 25.413 V4.0.0, CR277

Other specs	Ж Х	Other core specifications	ж	25.413 V3.5.0, CR276
-				25.413 V4.0.0, CR277
				25.419 V3.4.0, CR035
				25.419 V4.0.0, CR036
				25.423 V4.0.0, CR341
				25.433 V3.5.0, CR389
				25.433 V4.0.0, CR390
affected:		Test specifications		
		O&M Specifications		
Other comments:	Ж			

How to create CRs using this form:

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

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

9.2.1.13 Criticality Diagnostics

For further details on how to use the Criticality Diagnostics IE, see Annex B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Procedure ID		01		Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error
>Procedure Code	Μ		INTEGER (0255)	
>Ddmode	M		ENUMERAT ED (FDD, TDD, Common)	Common = common to FDD and TDD.
Triggering Message	0		ENUMERAT ED(initiating message, successful outcome, unsuccessful outcome, outcome,	The Triggering Message is used only if the Criticality Diagnostics is part of Error Indication.
Procedure Criticality	0		ENUMEŔAT ED(reject, ignore, notify)	This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure). The value 'ignore' shall never be used.
Transaction ID	0		Transaction ID	
Information Element Criticality Diagnostics		0 <maxnoof errors></maxnoof 		
>IE Criticality	M		ENUMERAT ED(reject, ignore, notify)	The IE Criticality is used for reporting the criticality of the triggering IE. The value 'Ignore" shall never be used.
>IE ld	M		INTEGER (065535)	The IE Id of the not understood or missing IE as defined in the ASN.1 part of the specification.
>Repetition Number	0		INTEGER (<u>0</u> 425 <u>5</u> 6)	The Repetition Number IE gives
				in case of a not understood IE: <u>The number of</u> occurrences of the reported IE up to and including the not understood occurrence
				<u>in case of a missing IE:</u> <u>The number of</u> <u>occurrences up to but</u> <u>not including the missing</u> <u>occurrence.</u>
				Note: All the counted occurrences of the reported IE must have the same topdown hierachical message structure of IEs with assigned criticality above them. The repetition number of the not understood IE within the
				bottom most repetition level identified by the message

			structure IE, if applicable
>Message Structure	0	9.2.1.39A	The Message Structure IE describes the structure where the not understood or missing IE was detected. This IE is included if the not understood IE is not the top level of the message.
≥Type of Error	M	ENUMERAT ED(not understood, missing,)	

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

9.2.1.39A Message Structure

The *Message Structure* IE gives information for each level with assigned criticality in an hierachical message structure from top level down to the lowest level above the reported level for the occured error (reported in the *Information Element Criticality Diagnostics* IE).

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message structure		1 to <maxnoofle vels></maxnoofle 		The first repetition of the Message Structure IE corresponds to the top level of the message. The last repetition of the Message Structure IE corresponds to the level above the reported level for the occured error of the message.Informatio n given per level with assigned criticality in an hierachical message structure. Given from top level down to the level above the reported level for the occured error (reported in the Information Element Criticality	GLOBAL	ignore
>IE ID	M		INTEGER (065535)	Diagnostics IE). The IE ID of this level's IE containing the not understood or missing IE.	-	
>Repetition Number	0		INTEGER (1256)	The RepetitionNumber IE gives, ifapplicable, thenumber ofoccurrences of thislevel's reported IEup to and includingthe occurrencecontaining the notunderstood ormissing IE.Note: All the countedoccurrences of thereported IE musthave the sametopdown hierachical	-	
				<u>message structure</u> of IEs with assigned <u>criticality above</u> <u>them. The repetition</u> number of this level's reported IE, if applicable		

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

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

```
-- B
BCC ::= BIT STRING (SIZE (3))
BCCH-ARFCN ::= INTEGER (0..1023)
BetaCD ::= INTEGER (0..15)
BindingID
                        ::= OCTET STRING (SIZE (1..4,...))
BLER
                        ::= INTEGER (-63..0)
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER
Block-STTD-Indicator
                        ::= ENUMERATED {
    active,
    inactive
}
BSIC ::= SEQUENCE {
    nCC
                NCC,
    bCC
                BCC
}
-- C
Cause ::= CHOICE {
    radioNetwork
                        CauseRadioNetwork,
    transport
                        CauseTransport,
                        CauseProtocol,
    protocol
    misc
                        CauseMisc,
    . . .
CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    . . .
CauseProtocol ::= ENUMERATED {
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    message-not-compatible-with-receiver-state,
    semantic-error,
    unspecified,
    abstract-syntax-error-falsely-constructed-message,
    . . .
```

CauseRadioNetwork ::= ENUMERATED { unknown-C-ID. cell-not-available, power-level-not-supported, ul-scrambling-code-already-in-use, dl-radio-resources-not-available, ul-radio-resources-not-available, measurement-not-supported-for-the-object, combining-resources-not-available, combining-not-supported, reconfiguration-not-allowed, requested-configuration-not-supported, synchronisation-failure, requested-tx-diversity-mode-not-supported, measurement-temporaily-not-available, unspecified, invalid-CM-settings, reconfiguration-CFN-not-elapsed, number-of-DL-codes-not-supported, dedicated-transport-channel-type-not-supported, dl-shared-channel-type-not-supported, ul-shared-channel-type-not-supported, common-transport-channel-type-not-supported, ul-spreading-factor-not-supported, dl-spreading-factor-not-supported, cm-not-supported, transaction-not-supported-by-destination-node-b, rl-already-activated-or-alocated, . . . , number-of-UL-codes-not-supported CauseTransport ::= ENUMERATED { transport-resource-unavailable, unspecified, . . . C-ID ::= INTEGER (0..65535) CCTrCH-ID ::= INTEGER (0..15) CellIndividualOffset ::= INTEGER (-20..20) CellParameterID ::= INTEGER (0..127,...) ::= INTEGER (0..255) CFN CGI ::= SEQUENCE { lai SEQUENCE { pLMN-ID PLMN-ID, lac LAC,

```
ProtocolExtensionContainer { {LAI-ExtIEs} } OPTIONAL,
        iE-Extensions
        . . .
    },
    сI
                    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,
    . . .
l
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, ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL, iE-Extensions . . . CriticalityDiagnostics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { . . . } CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF SEQUENCE { iECriticality Criticality, iE-ID ProtocolIE-ID, repetitionNumber RepetitionNumber0 OPTIONAL, iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL, . . . CriticalityDiagnostics-IE-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { PRESENCE optional $|_{\tau}$ ID id-MessageStructure CRITICALITY ignore EXTENSION MessageStructure ID id-TypeOfError CRITICALITY ignore EXTENSION TypeOfError PRESENCE mandatory }, . . . MessageStructure ::= SEQUENCE (SIZE (1..maxNrOfLevels)) OF SEQUENCE { iE-ID ProtocolIE-ID, repetitionNumber RepetitionNumber1 OPTIONAL, iE-Extensions ProtocolExtensionContainer { {MessageStructure-ExtIEs} } OPTIONAL, . . . MessageStructure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { . . .

**** LOTS OF UNAFFECTED ASN.1 DESCRIPTION FROM SECTION 9.3.4 NOT SHOWN ****

RepetitionPeriod ::= ENUMERATED {

v1, v2, v4, v8, v16, v32, v64

RepetitionNumber $\underline{0}$::= INTEGER ($\underline{01}$..25 $\underline{56}$)

RepetitionNumber1 ::= INTEGER (1..256)

**** LOTS OF UNAFFECTED ASN.1 DESCRIPTION FROM SECTION 9.3.4 NOT SHOWN ****

TxDiversityIndicator ::= ENUMERATED {
 true,
 false
}
TypeOfError ::= ENUMERATED {
 not-understood,
 missing,
 ...
}

-- U

**** LOTS OF UNAFFECTED ASN.1 DESCRIPTION FROM SECTION 9.3.4 NOT SHOWN ****

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	
************************************	* * * * * * * * *
${\tt id}-{\tt commonTransportChannelResourcesInitialisation}$	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
${\tt id-synchronisedRadioLinkReconfigurationCancellation}$	ProcedureCode ::= 21
id-synchronisedRadioLinkReconfigurationCommit	ProcedureCode ::= 22
${\tt id-synchronised} Radio {\tt Link} Reconfiguration {\tt Preparation}$	ProcedureCode ::= 23

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id-unSynchronisedRadioLinkReconfigurati id-uplinkSignallingTransfer	on ProcedureCode ::= 24 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
maxNr0fDL-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
	* * * * * * * * * * * * * * * * * * * *

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-- IEs

id-AllowedOueuingTime id-BindingID id-C-TD id-C-RNTI id-CFN id-CN-CS-DomainIdentifier id-CN-PS-DomainIdentifier id-Cause id-CriticalityDiagnostics id-D-RNTI id-D-RNTI-ReleaseIndication id-DCHs-to-Add-FDD id-DCHs-to-Add-TDD id-DCH-DeleteList-RL-ReconfPrepFDD id-DCH-DeleteList-RL-ReconfPrepTDD id-DCH-DeleteList-RL-ReconfRgstFDD id-DCH-DeleteList-RL-ReconfRastTDD id-DCH-FDD-Information id-DCH-TDD-Information id-FDD-DCHs-to-Modify id-TDD-DCHs-to-Modify id-DCH-InformationResponse id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD id-DL-CCTrCH-InformationItem-RL-SetupRgstTDD id-DL-CCTrCH-InformationListIE-PhvChReconfRgstTDD id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD id-DL-CCTrCH-InformationList-RL-SetupRgstTDD id-FDD-DL-CodeInformation id-DL-DPCH-Information-RL-ReconfPrepFDD id-DL-DPCH-Information-RL-SetupRqstFDD id-DL-DPCH-Information-RL-ReconfRqstFDD id-DL-DPCH-InformationItem-PhyChReconfRqstTDD id-DL-DPCH-InformationItem-RL-AdditionRspTDD id-DL-DPCH-InformationItem-RL-SetupRspTDD id-DLReferencePower id-DLReferencePowerList-DL-PC-Rqst id-DL-ReferencePowerInformation-DL-PC-Rqst id-DRXCycleLengthCoefficient id-DedicatedMeasurementObjectType-DM-Rprt id-DedicatedMeasurementObjectType-DM-Rgst id-DedicatedMeasurementObjectType-DM-Rsp id-DedicatedMeasurementType id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD id-IMSI

id-L3-Information

ProtocolIE-ID ::= 4 ProtocolIE-ID ::= 5 ProtocolTE-TD := 6ProtocolIE-ID ::= 7 ProtocolIE-ID ::= 8 ProtocolIE-ID ::= 9 ProtocolIE-ID ::= 10 ProtocolIE-ID ::= 11 ProtocolIE-ID ::= 20 ProtocolIE-ID ::= 21 ProtocolIE-ID ::= 22 ProtocolIE-ID ::= 26 ProtocolIE-ID ::= 27 ProtocolIE-ID ::= 30 ProtocolIE-ID ::= 31 ProtocolIE-ID ::= 32 ProtocolIE-ID ::= 33 ProtocolIE-ID ::= 34 ProtocolIE-ID ::= 35 ProtocolIE-ID ::= 39 ProtocolIE-ID ::= 40 ProtocolIE-ID ::= 43 ProtocolIE-ID ::= 44 ProtocolIE-ID ::= 45 ProtocolIE-ID ::= 46 ProtocolIE-ID ::= 47 ProtocolIE-ID ::= 48 ProtocolIE-ID ::= 49 ProtocolIE-ID ::= 50 ProtocolIE-ID ::= 51 ProtocolIE-ID ::= 52 ProtocolIE-ID ::= 53 ProtocolIE-ID ::= 54 ProtocolIE-ID ::= 59 ProtocolIE-ID ::= 60 ProtocolIE-ID ::= 61 ProtocolIE-ID ::= 62 ProtocolIE-ID ::= 63 ProtocolIE-ID ::= 64 ProtocolTE-TD := 67ProtocolIE-ID ::= 68 ProtocolIE-ID ::= 69 ProtocolIE-ID ::= 70 ProtocolIE-ID ::= 71 ProtocolIE-ID ::= 72 ProtocolIE-ID ::= 73 ProtocolIE-ID ::= 74 ProtocolIE-ID ::= 82 ProtocolIE-ID ::= 83

ProtocolIE-ID ::= 84

ProtocolIE-ID ::= 85

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id-AdjustmentPeriod id-MaxAdjustmentStep id-MeasurementFilterCoefficient id-MessageStructure id-MeasurementID id-Neighbouring-GSM-CellInformation id-Neighbouring-UMTS-CellInformationItem id-PagingArea-PagingRgst id-FACH-FlowControlInformation id-PowerAdjustmentType id-RANAP-RelocationInformation id-RL-Information-PhyChReconfRqstFDD id-RL-Information-PhyChReconfRgstTDD id-RL-Information-RL-AdditionRqstFDD id-RL-Information-RL-AdditionRgstTDD 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-Rgst id-RL-InformationItem-DM-Rsp id-RL-InformationItem-RL-PreemptRequiredInd id-RL-InformationItem-RL-SetupRqstFDD id-RL-InformationList-RL-AdditionRqstFDD id-RL-InformationList-RL-DeletionRgst id-RL-InformationList-RL-PreemptRequiredInd id-RL-InformationList-RL-ReconfPrepFDD id-RL-InformationResponse-RL-AdditionRspTDD id-RL-InformationResponse-RL-ReconfReadyTDD id-RL-InformationResponse-RL-SetupRspTDD id-RL-InformationResponseItem-RL-AdditionRspFDD id-RL-InformationResponseItem-RL-ReconfReadyFDD id-RL-InformationResponseItem-RL-ReconfRspFDD id-RL-InformationResponseItem-RL-SetupRspFDD id-RL-InformationResponseList-RL-AdditionRspFDD id-RL-InformationResponseList-RL-ReconfReadyFDD id-RL-InformationResponseList-RL-ReconfRspFDD id-RL-InformationResponse-RL-ReconfRspTDD id-RL-InformationResponseList-RL-SetupRspFDD id-RL-ReconfigurationFailure-RL-ReconfFail id-RL-Set-InformationItem-DM-Rprt id-RL-Set-InformationItem-DM-Rgst id-RL-Set-InformationItem-DM-Rsp id-RL-Set-Information-RL-FailureInd id-RL-Set-Information-RL-RestoreInd id-ReportCharacteristics id-Reporting-Object-RL-FailureInd id-Reporing-Object-RL-RestoreInd id-S-RNTI id-SAT

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 ProtocolIE-ID ::= 146 ProtocolIE-ID ::= 147 ProtocolIE-ID ::= 152 ProtocolIE-ID ::= 153 ProtocolIE-ID ::= 154 ProtocolIE-ID ::= 155 ProtocolIE-ID ::= 156

id-SRNC-ID	ProtocolIE-ID ::= 157
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD	ProtocolIE-ID ::= 159
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD	ProtocolIE-ID ::= 160
id-TransportBearerID	ProtocolIE-ID ::= 163
id-TransportBearerRequestIndicator	ProtocolIE-ID ::= 164
id-TransportLayerAddress	ProtocolIE-ID ::= 165
id-TypeOfError	ProtocolIE-ID ::= 140
id-UC-ID	ProtocolIE-ID ::= 166
id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD	ProtocolIE-ID ::= 167
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 169
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 ProtocolIE-ID ::= 184
id-UL-SIRTarget id-URA-Information	ProtocolIE-ID ··= 184 ProtocolIE-ID ··= 185
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD	ProtocolIE-ID ··= 185 ProtocolIE-ID ··= 188
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD	ProtocolIE-ID ::= 188
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD	ProtocolIE-ID ::= 190
id-Active-Pattern-Sequence-Information	ProtocolIE-ID ··= 190 ProtocolIE-ID ··= 193
id-AdjustmentRatio	ProtocolIE-ID ::= 193
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

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id-DSCH-Information-RL-SetupRgstFDD ProtocolIE-ID ::= 226 id-DSCH-ModifyList-RL-ReconfPrepTDD ProtocolIE-ID ::= 227 id-DSCH-Modify-RL-ReconfPrepFDD ProtocolIE-ID ::= 228 ProtocolIE-ID ::= 229 id-DSCHsToBeAddedOrModified-FDD id-DSCHToBeAddedOrModifiedList-RL-ReconfReadvTDD 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-InformationModifvListIE-RL-ReconfReadvTDD 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-SetupRgstTDD 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-PagingRgst ProtocolIE-ID ::= 23 id-InnerLoopDLPCStatus ProtocolIE-ID ::= 24 id-PropagationDelay ProtocolIE-ID ::= 25 id-RxTimingDeviationForTA ProtocolIE-ID ::= 36 id-timeSlot-ISCP ProtocolIE-ID ::= 37 id-CCTrCH-InformationItem-RL-FailureInd ProtocolIE-ID ::= 15 id-CCTrCH-InformationItem-RL-RestoreInd ProtocolIE-ID ::= 16

END

Annex B (informative) Guidelines for Usage of the Criticality Diagnostics IE

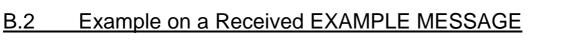
B.1 EXAMPLE MESSAGE Layout

Assume the following message format:

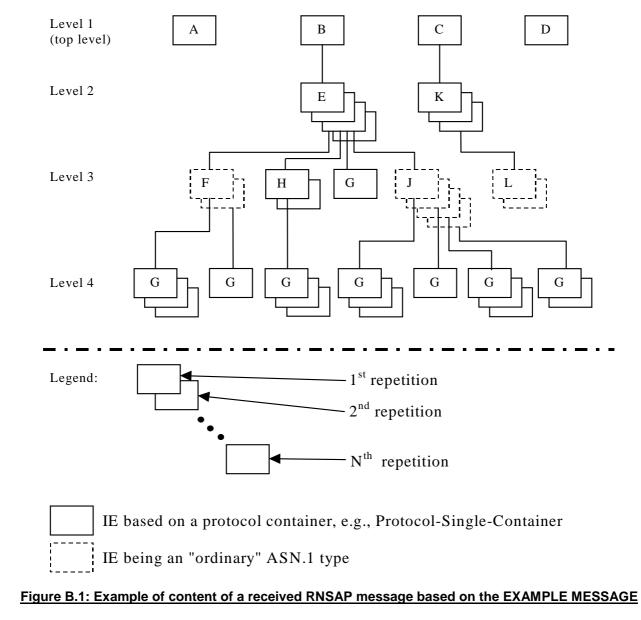
<u>IE/Group Name</u>	Presence	<u>Range</u>	<u>IE type</u> and referenc	Semantics description	<u>Criticality</u>	<u>Assigned</u> <u>Criticality</u>
Maaaaga Turaa	N.4		<u>e</u>		VES	reject
Message Type	M				<u>YES</u>	reject
Transaction ID	M					
<u>A</u>	<u>M</u>				<u>YES</u>	<u>reject</u>
В	<u>M</u>				<u>YES</u>	<u>reject</u>
<u>>E</u>		<u>1<maxe></maxe></u>			EACH	ignore
>>F		<u>1<maxf></maxf></u>			-	
<u>>>>G</u>		03,			EACH	ignore
>>H		<u>1<maxh></maxh></u>			EACH	ignore
<u>>>>G</u>		<u>03,</u>			EACH	ignore and notify
<u>>>G</u>	М				YES	reject
<u>>>J</u>		<u>1<maxj></maxj></u>			-	
<u>>>>G</u>		<u>03,</u>			EACH	reject
<u>C</u>	M				YES	reject
<u>>K</u>		<u>1<maxk></maxk></u>			<u>EACH</u>	ignore and notify
<u>>>L</u>		<u>1<maxl></maxl></u>			<u>-</u>	
<u>>>>M</u>	<u>0</u>				<u> </u>	
<u>D</u>	<u>M</u>				YES	<u>reject</u>

Note 1.The IEs F, J, and L do not have assigned criticality. The IEs F, J, and L are consequently realised as the
ASN.1 type SEQUENCE OF of "ordinary" ASN.1 type, e.g. INTEGER. On the other hand, the repeatable
IEs with assigned criticality are realised as the ASN.1 type SEQUENCE OF of an IE object, e.g.
ProtocolIE-Single-Container.

For the corresponding ASN.1 layout, see subclause B.4.



Assume further more that a received message based on the above tabular format is according to the figure below.



B.3 Content of Criticality Diagnostics

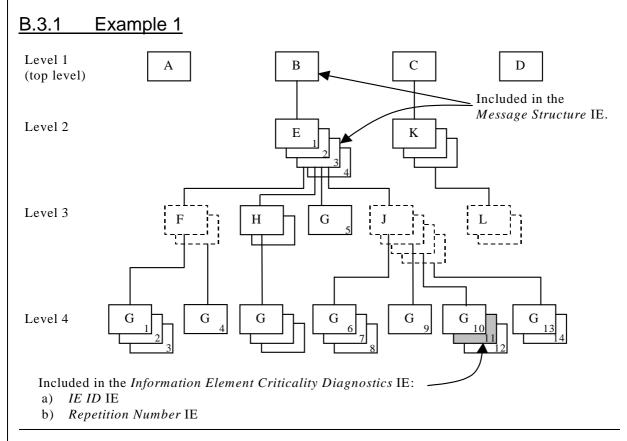


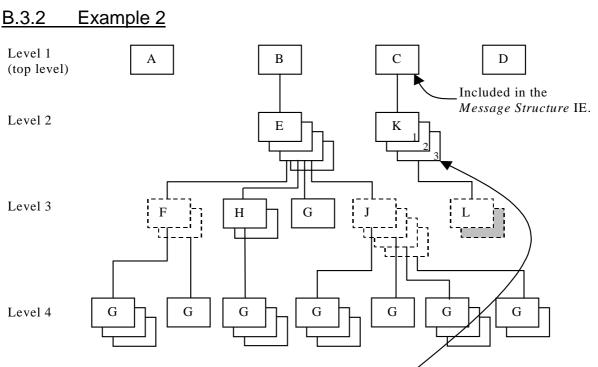
Figure B.2: Example of a received RNSAP message containing a not comprehended IE

If there is an error within the instance marked as grey in the IE G in the IE J shown in the figure B.2 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	<u>Comment</u>
IE Criticality	<u>reject</u>	Criticality for IE on the reported level, i.e. level 4.
<u>IE ID</u>	id-G	IE ID from the reported level, i.e. level 4.
Repetition	<u>11</u>	Repetition number on the reported level, i.e. level 4.
Number		(Since the IE E (level 2) is the lowest level included in the Message Structure IE this is
		the eleventh occurrence of IE G within the IE E (level 2).
Type of Error	<u>not</u>	
	<u>underst</u>	
	<u>ood</u>	
Message Structur	<u>e, first rep</u> e	etition
<u>>IE ID</u>	id-B	IE ID from level 1.
Message Structur	e, second	<u>repetition</u>
<u>>IE ID</u>	<u>id-E</u>	IE ID from the lowest level above the reported level, i.e. level 2.
>Repetition	<u>3</u>	Repetition number from the lowest level above the reported level, i.e. level 2.
Number		

Note 2. The IE J on level 3 cannot be included in the *Message Structure* IE since they have no criticality of their <u>own.</u>

Note 3. The repetition number of the reported IE indicates the number of repetitions of IE G received up to the detected erroneous repetition, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).



Included in the Information Element Criticality Diagnostics IE: a) IE ID IE

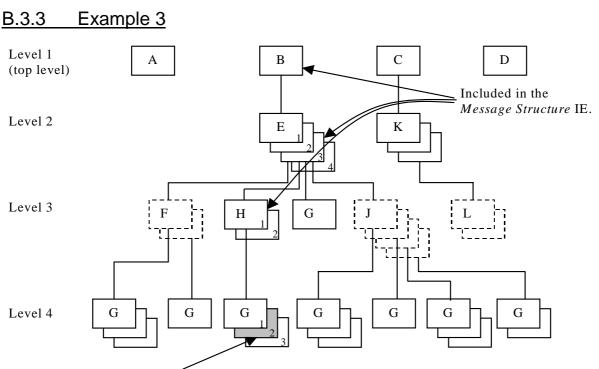
b) Repetition Number IE

Figure B.3: Example of a received RNSAP message containing a not comprehended IE

If there is an error within the second instance (marked as grey) in the sequence (IE L in the tabular format) on level 3 below IE K in the structure shown in the figure B.3 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment
IE Criticality	ignore	Criticality for IE on the reported level, i.e. level 2.
	and	
	<u>notify</u>	
<u>IE ID</u>	<u>id-K</u>	IE ID from the reported level, i.e. level 2.
Repetition	<u>3</u>	Repetition number on the reported level, i.e. level 2.
Number	_	
Type of Error	<u>not</u>	
	underst	
	ood	
Message Structur	e, first repe	etition
>IE ID	id-C	IE ID from the lowest level above the reported level, i.e. level 1.

Note 4. The IE L on level 3 cannot be reported individually included in the *Message Structure* IE since it has no criticality of its own.



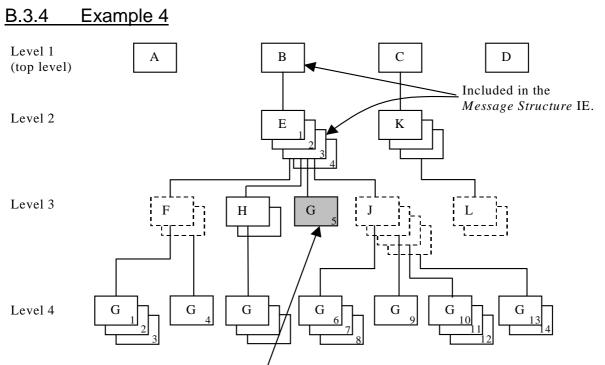
- Included in the Information Element Criticality Diagnostics IE: a) IE ID IE
- b) Repetition Number IE

Figure B.4: Example of a received RNSAP message containing a not comprehended IE

If there is an error within the instance marked as grey in the IE G in the IE H shown in the figure B.4 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment					
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 4.					
IE ID	id-G	E ID from the reported level, i.e. level 4.					
Repetition	<u>2</u>	Repetition number on the reported level, i.e. level 4.					
<u>Number</u>							
Type of Error	<u>not</u>						
	underst						
	<u>ood</u>						
Message Structur	e, first repe	etition					
<u>>IE ID</u>	id-B	IE ID from level 1.					
Message Structur	e, second	<u>repetition</u>					
<u>>IE ID</u>	<u>id-E</u>	IE ID from level 2.					
>Repetition	<u>3</u>	Repetition number from level 2.					
Number							
Message Structur	e, third rep	<u>etition</u>					
<u>>IE ID</u>	id-H	IE ID from the lowest level above the reported level, i.e. level 3.					
>Repetition	1	Repetition number from the lowest level above the reported level, i.e. level 3.					
Number							

Note 5. The repetition number of level 4 indicates the number of repetitions of IE G received up to the detected erroneous repetition, counted below the same instance of the previous level with assigned criticality (instance 1 of IE H on level 3).



Included in the Information Element Criticality Diagnostics IE: a) IE ID IE

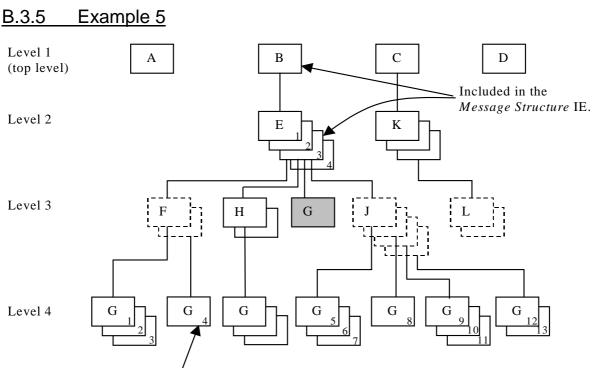
b) Repetition Number IE

Figure B.5: Example of a received RNSAP message containing a not comprehended IE

If there is an error within the instance marked as grey in the IE G in the IE E shown in the figure B.5 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment					
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 3.					
IE ID	id-G	IE ID from the reported level, i.e. level 3.					
Repetition	<u>5</u>	Repetition number on the reported level, i.e. level 3.					
Number		(Since the IE E (level 2) is the lowest level included in the Message Structure IE this is					
		the fifth occurrence of IE G within the IE E (level 2).					
Type of Error	<u>not</u>						
	<u>underst</u>						
	ood						
Message Structu	ire, first rep	etition					
<u>>IE ID</u>	<u>id-B</u>	IE ID from level 1.					
Message Structu	ire, second	<u>repetition</u>					
<u>>IE ID</u>	<u>id-E</u>	IE ID from the lowest level above the reported level, i.e. level 2.					
>Repetition	<u>3</u>	Repetition number from the lowest level above the reported level, i.e. level 2.					
Number							

Note 6. The repetition number of the reported IE indicates the number of repetitions of IE G received up to the detected erroneous repetition, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).



Included in the Information Element Criticality Diagnostics IE: a) IE ID IE

b) Repetition Number IE

Figure B.6: Example of a received RNSAP message with a missing IE

If the instance marked as grey in the IE G in the IE E shown in the figure B.6 above, is missing this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	<u>Comment</u>					
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 3.					
IE ID	id-G	E ID from the reported level, i.e. level 3.					
Repetition Number	4	Repetition number up to the missing IE on the reported level, i.e. level 3. (Since the IE E (level 2) is the lowest level included in the Message Structure IE there have been four occurrences of IE G within the IE E (level 2) up to the missing occurrence.					
Type of Error	missing						
Message Structur	e, first repe	etition					
<u>>IE ID</u>	id-B	IE ID from level 1.					
Message Structur	re, second	repetition					
<u>>IE ID</u>	<u>id-E</u>	IE ID from the lowest level above the reported level, i.e. level 2.					
>Repetition Number	<u>3</u>	Repetition number from the lowest level above the reported level, i.e. level 2.					

Note 7. The repetition number of the reported IE indicates the number of repetitions of IE G received up to but not including the missing occurrence, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).

B.4 ASN.1 of EXAMPLE MESSAGE

ExampleMessage ::= SEQUENCE {	
ProtocolIEs ProtocolIE-Container {{ExampleMessage- ProtocolExtensions ProtocolExtensionContainer {{ExampleMessage-	
····	<u> </u>
1	
ExampleMessage-IEs RNSAP-PROTOCOL-IES ::= {	
{ ID id-A CRITICALITY reject TYPE A PRESENCE mandatory} { ID id-B CRITICALITY reject TYPE B PRESENCE mandatory}	
{ ID id-C CRITICALITY reject TYPE C PRESENCE mandatory}	
<pre>[ID id-D CRITICALITY reject TYPE D PRESENCE mandatory] , </pre>	
B ::= SEQUENCE {	
eE-List, iE-Extensions ProtocolExtensionContainer { {B-ExtIEs} } OPTIO	NAL,
<u></u>	
B-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {	
E-List ::= SEQUENCE (SIZE (1maxE)) OF ProtocolIE-Single-Container {	{E-IEs} }
E-IES RNSAP-PROTOCOL-IES ::= {	
{ ID id-E CRITICALITY ignore TYPE E PRESENCE mandatory }	
E ::= SEQUENCE {	
<u>f F-List,</u> h H-List,	
g G-List1,	
j J-List, iE-Extensions ProtocolExtensionContainer { {E-ExtIEs} } OPTION	NAL,
$\frac{\ldots}{}$	
E-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {	
F-List ::= SEQUENCE (SIZE (1maxF)) OF F	
F ::= SEQUENCE {	
g G-List2 OPTIONAL, iE-Extensions ProtocolExtensionContainer { {F-ExtIEs} } OPTIO	JT A T
iE-Extensions ProtocolExtensionContainer { {F-ExtIEs} } OPTION	
F-ExtIES RNSAP-PROTOCOL-EXTENSION ::= {	
}	
G-List2 ::= SEQUENCE (SIZE (13,)) OF ProtocolIE-Single-Container	c ∫ ∫C2_IEc]]
<u>G2-IES RNSAP-PROTOCOL-IES ::= {</u> { ID id-G CRITICALITY ignore TYPE G PRESENCE mandatory }	
H-List ::= SEQUENCE (SIZE (1maxH)) OF ProtocolIE-Single-Container {	{H-IEs} }
H-IES RNSAP-PROTOCOL-IES ::= {	
{ ID id-H CRITICALITY ignore TYPE H PRESENCE mandatory } }	
H ::= SEQUENCE { g G-List3 OPTIONAL,	
iE-Extensions ProtocolExtensionContainer { {H-Ex	<pre>ktles} } OPTIONAL,</pre>
H-Extles RNSAP-PROTOCOL-EXTENSION ::= {	
ſ	

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G-List3 ::= SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { G3-IEs} } G3-IES RNSAP-PROTOCOL-IES ::= { { ID id-G CRITICALITY not ify TYPE G PRESENCE mandatory } G-List1 ::= ProtocolIE-Single-Container { {G1-IEs} } G1-IES RNSAP-PROTOCOL-IES ::= { { ID id-G CRITICALITY reject TYPE G PRESENCE mandatory } J-List ::= SEQUENCE (SIZE (1..maxJ)) OF J J ::= SEQUENCE { g G-List4 OPTIONAL, iE-Extensions ProtocolExtensionContainer { {J-ExtIEs} } OPTIONAL, g } RNSAP-PROTOCOL-EXTENSION ::= { J-ExtIEs • • • } G-List4 := SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { [G4-IEs} } G4-IES RNSAP-PROTOCOL-IES ::= { { ID id-G CRITICALITY reject TYPE G PRESENCE mandatory } } $C ::= SEQUENCE \{$ k K-List, iE-Extensions ProtocolExtensionContainer { {C-ExtIEs} } OPTIONAL, . . . } C-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { • • • } K-List ::= SEQUENCE (SIZE (1..maxK)) OF ProtocolIE-Single-Container { {K-IEs} } K-IES RNSAP-PROTOCOL-IES ::= { { ID id-K CRITICALITY notify TYPE K PRESENCE mandatory } } K ::= SEQUENCE { L-List, ٦ iE-Extensions ProtocolExtensionContainer { {K-ExtIEs} } OPTIONAL, . . . } K-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { • • • } L-List ::= SEQUENCE (SIZE (1..maxL)) OF L L ::= SEQUENCE {
 m
 M
 OPTIONAL,

 iE-Extensions
 ProtocolExtensionContainer { {L-ExtIEs} }
 OPTIONAL,
 m • • • } L-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { ... } ExampleMessage-Extensions RNSAP-PROTOCOL-EXTENSION ::= { . . . }

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

R3-011863

	CHANGE REQUEST										
ж	25.4	123	CR	341	ж	rev	<mark>2</mark> ^ж	Current ve	rsion:	4.0.0	ж
For <u>HELP</u>	' on us	sing this f	form, see	bottom of t	this pag	e or lo	ook at t	he pop-up te	kt ovei	r the X syr	mbols.
Proposed cha	ange a	ffects:	¥ (U)S		ME/UE	F	Radio A	Access Netwo	ork <mark>X</mark>	Core Ne	etwork
Title:	ж	Correct	ions and	introductior	<mark>n of an a</mark>	appen	dix for	usage of Crit	icality	Diagnostic	cs IE
Source:	ж	R-WG3									
Work item cod	de: ೫	TEI						Date:	<mark>⊯ 20</mark>	01-05-16	
Category:	ж	Α						Release:	⊯ <mark>R</mark> E	EL-4	
		F (e A (c B (/ C (F D (E Detailed e	ssential co correspond Addition of Functional Editorial mo	ts to a correct feature), modification pdification) ns of the abo	ction in a of featu	re)		2	(GS) (Rel (Rel (Rel (Rel (Rel	ollowing rele M Phase 2) ease 1996) ease 1997) ease 1998) ease 1999) ease 4) ease 5)	
Reason for ch Summary of c	-	un Als un e: 米 Ty	derstood so the usa derstand. pe of Erro	or a missin age of Critic An informa	ng IE. Th cality Di ative an to the C	his ne iagnos inex is Critica	eds to stics IE s thus a lity Dia	needs to be	made nd an	easier to	e
		• • • R1:	The sen and Mea One figu One exa The Typ Diagnos multiple The ma Cause I main rea Construe as well (Ignore The value has bee The value has bee	ssage Strue ure per exa ample on "r be of Error I stics IE in the causes to in reason for E, but the r ason my be cted Messa (cause="Ab and Notify) ue range for en changed ue range for en changed	he Repu cture IE mple has missing IE has to the critic the inclor report reason report reason re age)") bo stract S "). or the Re from (1 pocated b	have ave be IE" ha been a cality I usion ting C may b sing IE sut still Syntax epetiti 1256) epetiti	been i een incl as beer added i Diagnos of the 0 riticalit e differ c (cause there i c Error on Nur to (0 on Nur to (1	uded in the A included in the n the Informa stics IE to allo Criticality Diag y Diagnostics ent for differe e="Abstract S may be a not (Reject)" or "A nber IE in the 255,). nber IE in the 256,).	Append he Ap tion E ow the gnostic can b ent rep Syntax under Abstra <i>Critic</i>	dix. pendix. lement Crit reporting cs IE. be indicate orted IEs. Error (Fal- stood IE re ct Syntax ality Diagr sage Struct	iticality of d by the E.g the sely eported Error hostics IE ture IE
		Rep	petition Nu	umber IE in	the Cri	iticality	/ Diagr	the extensio ostics IE and change, as it	the N	lessage S	tructure

	syntax (decoder) error if this IE is received by a node of an version which did not implemented this change. As an outcome one correction in ASN.1+removal of ellipsis from the repetition number were performed.
Consequences if not approved:	 It will not be possible to know what type of error that is reported, making it difficult to take appropriate actions. The proposed change is not backwards compatible due to: The changes done to the value range for Repetition Number. The introduction of the possibility to report missing IEs, thus making received information ambiguous for a receiver implemented according to Criticality Diagnostics without this possibility.
Clauses affected:	# 9.2.1.13, 9.2.1.39A, 9.3.4, 9.3.6 and Appendix B (new)
Other specs	X Other core specifications X 25.413 V3.5.0, CR276 25.413 V4.0.0, CR277 25.413 V4.0.0, CR277

Other specs #	Х	Other core specifications	ж	25.413 V3.5.0, CR276
-				25.413 V4.0.0, CR277
				25.419 V3.4.0, CR035
				25.419 V4.0.0, CR036
				25.423 V3.5.0, CR340
				25.433 V3.5.0, CR389
				25.433 V4.0.0, CR390
affected:		Test specifications		
		O&M Specifications		
Other comments · ¥				

How to create CRs using this form:

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

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

9.2.1.13 Criticality Diagnostics

For further details on how to use the Criticality Diagnostics IE, see Annex B.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Procedure ID		01		Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error
>Procedure Code	М		INTEGER (0255)	
>Ddmode	М		ENUMERAT ED (FDD, TDD, Common)	Common = common to FDD and TDD.
Triggering Message	0		ENUMERAT ED(initiating message, successful outcome, unsuccessful outcome, outcome,	The Triggering Message is used only if the Criticality Diagnostics is part of Error Indication.
Procedure Criticality	0		ENUMERAT ED(reject, ignore, notify)	This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure). The value 'ignore' shall never be used.
Transaction ID	0		Transaction ID	
Information Element Criticality Diagnostics		0 <maxnoof errors></maxnoof 		
>IE Criticality	М		ENUMERAT ED(reject, ignore, notify)	The IE Criticality is used for reporting the criticality of the triggering IE. The value 'Ignore" shall never be used.
>IE ld	М		INTEGER (065535)	The IE Id of the not understood or missing IE as defined in the ASN.1 part of the specification.
>Repetition Number	0		INTEGER (<u>0</u> 425 <u>5</u> 6)	The Repetition Number IE gives • in case of a not understood IE: The number of occurrences of the reported IE up to and including the not understood occurrence • in case of a missing IE: The number of occurrences up to but not including the missing occurrence. • in case of a missing IE: The number of occurrences up to but not including the missing occurrence. Note: All the counted occurrences of the reported IE must have the same topdown hierachical message structure of IEs with assigned criticality above them. The repetition number of the not understood IE within the bottom most repetition level identified by the message

			structure IE, if applicable
>Message Structure	0	9.2.1.39A	The Message Structure IE describes the structure where the not understood or missing IE was detected. This IE is included if the not
			understood IE is not the top level of the message.
≥Type of Error	M	ENUMERAT ED(not understood, missing,)	

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

9.2.1.39A Message Structure

The *Message Structure* IE gives information for each level with assigned criticality in an hierachical message structure from top level down to the lowest level above the reported level for the occured error (reported in the *Information Element Criticality Diagnostics* IE).

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message structure		1 to <maxnoofle vels></maxnoofle 		The first repetition of the Message Structure IE corresponds to the top level of the message. The last repetition of the Message Structure IE corresponds to the level above the reported level for the occured error of the message.Informatio n given per level with assigned criticality in an hierachical message structure. Given from top level down to the level above the reported level for the occured error (reported in the Information Element Criticality Diagenagia IE)	GLOBAL	ignore
>IE ID	M		INTEGER (065535)	Diagnostics IE). The IE ID of this level's IE containing the not understood or missing IE.	-	
>Repetition Number	0		INTEGER (1256)	The Repetition Number IE gives, if applicable, the number of occurrences of this level's reported IE up to and including the occurrence containing the not understood or missing IE.	-	
				Note: All the counted occurrences of the reported IE must have the same topdown hierachical message structure of IEs with assigned criticality above them.The repetition number of this level's reported IE, if applicable		

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

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-TypeOfError FROM RNSAP-Constants Criticality, ProcedureID, ProtocolIE-ID, TransactionID, TriggeringMessage FROM RNSAP-CommonDataTypes ProtocolIE-Single-Container{}, ProtocolExtensionContainer{}, RNSAP-PROTOCOL-IES, RNSAP-PROTOCOL-EXTENSION FROM RNSAP-Containers; -- A Active-Pattern-Sequence-Information ::= SEQUENCE { cMConfigurationChangeCFN CFN, transmission-Gap-Pattern-Sequence-Status Transmission-Gap-Pattern-Sequence-Status-List OPTIONAL, iE-Extensions ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs } } OPTIONAL, . . . Active-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { . . . } AdjustmentPeriod ::= INTEGER(1..256) -- Unit Frame AllocationRetentionPriority ::= SEQUENCE { PriorityLevel, priorityLevel pre-emptionCapability Pre-emptionCapability, pre-emptionVulnerability Pre-emptionVulnerability, ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs} } OPTIONAL, iE-Extensions . . . ļ AllocationRetentionPriority-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { . . .

```
}
Allowed-Rate-Information ::= SEQUENCE {
    allowed-UL-Rate
                           Allowed-Rate OPTIONAL,
    allowed-DL-Rate
                           Allowed-Rate OPTIONAL,
                           ProtocolExtensionContainer { {Allowed-Rate-Information-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
}
Allowed-Rate-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Allowed-Rate
                      ::= INTEGER (1..maxNrOfTFs)
AllowedOueuingTime
                         ::= INTEGER (1..60)
-- seconds
AlphaValue
                 ::= INTEGER (0..8)
-- Actual value = Alpha / 8
-- B
BadSatellites ::= SEQUENCE {
    badSatelliteInformation
                                SEQUENCE (SIZE (1..maxNoSat) OF
        SEOUENCE
           badSAT-ID
                                       SAT-ID,
           iE-Extensions
                                       ProtocolExtensionContainer { { BadSatelliteInformation-ExtIEs } }
                                                                                                             OPTIONAL,
            . . .
       },
                                ProtocolExtensionContainer { { BadSatellites-ExtIEs } }
    iE-Extensions
                                                                                           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
```

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```
Release 4
```

```
Block-STTD-Indicator
                        ::= ENUMERATED {
    active,
    inactive
}
BSIC ::= SEOUENCE {
    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,
                        CauseTransport,
    transport
    protocol
                        CauseProtocol,
    misc
                        CauseMisc,
    . . .
CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    . . .
CauseProtocol ::= ENUMERATED {
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    message-not-compatible-with-receiver-state,
    semantic-error,
    unspecified,
    abstract-syntax-error-falsely-constructed-message,
    . . .
}
CauseRadioNetwork ::= ENUMERATED {
```

}

unknown-C-ID. cell-not-available. power-level-not-supported, ul-scrambling-code-already-in-use, dl-radio-resources-not-available, ul-radio-resources-not-available, measurement-not-supported-for-the-object, combining-resources-not-available, combining-not-supported, reconfiguration-not-allowed, requested-configuration-not-supported, synchronisation-failure, requested-tx-diversity-mode-not-supported, measurement-temporaily-not-available, unspecified, invalid-CM-settings, reconfiguration-CFN-not-elapsed, number-of-DL-codes-not-supported, dedicated-transport-channel-type-not-supported, dl-shared-channel-type-not-supported, ul-shared-channel-type-not-supported, common-transport-channel-type-not-supported, ul-spreading-factor-not-supported, dl-spreading-factor-not-supported, cm-not-supported, transaction-not-supported-by-destination-node-b, rl-already-activated-or-alocated, . . . , number-of-UL-codes-not-supported, 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 SEOUENCE { PLMN-ID, pLMN-ID

```
lac
                        LAC,
        iE-Extensions
                                 ProtocolExtensionContainer { {LAI-ExtIEs} } OPTIONAL,
        . . .
    },
                    CI,
    сI
                            ProtocolExtensionContainer { {CGI-ExtIEs} } OPTIONAL
    iE-Extensions
LAI-EXTIES RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
CGI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
ChannelCodingType ::= ENUMERATED {
    no-coding,
    convolutional-coding,
    turbo-coding,
    . . .
ļ
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-observerd-time-difference,
    load,
    transmitted-carrier-power,
    received-total-wide-band-power,
    uplink-timeslot-iscp,
    . . .
CommonMeasurementValue ::= CHOICE {
    tUTRANGPSMeasurementValueInformation
                                             TUTRANGPSMeasurementValueInformation,
    sFNSFNMeasurementValueInformation
                                             SFNSFNMeasurementValueInformation,
    loadValue
                                         LoadValue,
    transmittedCarrierPowerValue
                                         INTEGER(0..100),
    receivedTotalWideBandPowerValue
                                         INTEGER(0..621),
    uplinkTimeslotISCPValue
                                         UL-Timeslot-ISCP,
    . . .
CommonMeasurementValueInformation ::= CHOICE {
    measurementAvailable
                                 CommonMeasurementAvailable,
    measurementnotAvailable
                                NULL
ļ
CommonMeasurementAvailable::= SEOUENCE {
    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,
```

```
ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
CriticalityDiagnostics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
    SEQUENCE {
       iECriticality
                                Criticality,
        iE-ID
                                ProtocolIE-ID,
        repetitionNumber
                                RepetitionNumber0
                                                        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 } | -
   ID id-TypeOfError
                                CRITICALITY ignore
                                                        EXTENSION TypeOfError
                                                                                         PRESENCE mandatory },
    . . .
MessageStructure ::= SEQUENCE (SIZE (1..maxNrOfLevels)) OF
    SEQUENCE {
        iE-ID
                                ProtocolIE-ID,
        repetitionNumber
                                RepetitionNumber1
                                                         OPTIONAL,
                                ProtocolExtensionContainer { {MessageStructure-ExtIEs} } OPTIONAL,
       iE-Extensions
        . . .
MessageStructure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
   ****
          LOTS OF UNAFFECTED ASN.1 DESCRIPTION FROM SECTION 9.3.4 NOT SHOWN
                                                                                              ****
RepetitionPeriod ::= ENUMERATED {
   v1,
    v2,
    v4,
    v8,
    v16,
    v32,
    v64
RepetitionNumber0 ::= INTEGER (01..2556)
```

```
RepetitionNumber1 ::= INTEGER (1..256)
```

**** LOTS OF UNAFFECTED ASN.1 DESCRIPTION FROM SECTION 9.3.4 NOT SHOWN ****

TxDiversityIndicator true, false	$::=$ ENUMERATED {
}	
TypeOfError ::= ENUMER. not-understood,	ATED {
missing,	
<u></u>	

-- U

**** LOTS OF UNAFFECTED ASN.1 DESCRIPTION FROM SECTION 9.3.4 NOT SHOWN ****

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-synchronisedRadioLinkReconfiguration	Preparation ProcedureCode ::=	=
id-unSynchronisedRadioLinkReconfigurati	on ProcedureCode ::=	=
id-uplinkSignallingTransfer	ProcedureCode ::=	=
id-commonMeasurementFailure	ProcedureCode ::=	=
id-commonMeasurementInitiation	ProcedureCode ::=	=
id-commonMeasurementReporting	ProcedureCode ::=	=
id-commonMeasurementTermination	ProcedureCode ::=	=
id-informationExchangeFailure	ProcedureCode ::=	=
id-informationExchangeInitiation	ProcedureCode ::=	=
id-informationReporting	ProcedureCode ::=	=
id-informationExchangeTermination	ProcedureCode ::=	=

************************************	*****	
Lists		
***********************************	****	
^^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^ ^		
maxCodeNumComp-1	INTEGER ::= 255	
maxRateMatching	INTEGER ::= 256	
maxNoCodeGroups	INTEGER ::= 256	
maxNoOfDSCHs	INTEGER ::= 10	
maxNoOfDSCHsLCR	INTEGER ::= 10	
maxNoOfBB	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	
maxNr0fMACcshSDU-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	
maxNCinURA-1	INTEGER := 15	
maxTTI-Count	INTEGER ::= 4	
maxTTFC	INTEGER ::= 16777215	
maxNrOfNeighbouringRNCs	INTEGER := 10	
maxNrOfFDDNeighboursPerRNC	INTEGER := 256	
maxNrOfGSMNeighboursPerRNC	INTEGER := 256	
maxNrOfTDDNeighboursPerRNC	INTEGER := 256	
MAANT OF IDDINETAIDOUT SPELKINC	INIEGER ··- 200	

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 maxNrOfMeasNO	Cell - 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-Conges		ProtocolIE-ID ::= 38
id-DL-CCTrCH-InformationAddItem-RL-Re		ProtocolIE-ID ::= 44
id-DL-CCTrCH-InformationListIE-RL-Rec	-	ProtocolIE-ID ::= 45
id-DL-CCTrCH-InformationDeleteItem-R	-	ProtocolIE-ID ::= 46
id-DL-CCTrCH-InformationItem-RL-Setu	-	ProtocolIE-ID ::= 47
id-DL-CCTrCH-InformationListIE-PhyChl	-	ProtocolIE-ID ::= 48
id-DL-CCTrCH-InformationListIE-RL-Ado	ditionRspTDD	ProtocolIE-ID ::= 49

id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD id-DL-CCTrCH-InformationDeleteList-RL-ReconfRgstTDD id-DL-CCTrCH-InformationList-RL-SetupRgstTDD id-FDD-DL-CodeInformation id-DL-DPCH-Information-RL-ReconfPrepFDD id-DL-DPCH-Information-RL-SetupRgstFDD id-DL-DPCH-Information-RL-ReconfRgstFDD id-DL-DPCH-InformationItem-PhyChReconfRqstTDD id-DL-DPCH-InformationItem-RL-AdditionRspTDD id-DL-DPCH-InformationItem-RL-SetupRspTDD id-DLReferencePower id-DLReferencePowerList-DL-PC-Rast id-DL-ReferencePowerInformation-DL-PC-Rost id-DPC-Mode id-DRXCycleLengthCoefficient id-DedicatedMeasurementObjectType-DM-Rprt id-DedicatedMeasurementObjectType-DM-Rgst id-DedicatedMeasurementObjectType-DM-Rsp id-DedicatedMeasurementType id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD id-Guaranteed-Rate-Information 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-AdditionRgstTDD id-RL-Information-RL-DeletionRgst id-RL-Information-RL-FailureInd id-RL-Information-RL-ReconfPrepFDD id-RL-Information-RL-RestoreInd id-RL-Information-RL-SetupRgstFDD id-RL-Information-RL-SetupRgstTDD id-RL-InformationItem-RL-CongestInd id-RL-InformationItem-DM-Rprt id-RL-InformationItem-DM-Rgst id-RL-InformationItem-DM-Rsp id-RL-InformationItem-RL-PreemptRequiredInd id-RL-InformationItem-RL-SetupRgstFDD

id-RL-InformationItem-RL-SetupRqstFl id-RL-InformationList-RL-CongestInd ProtocolIE-ID ::= 50 ProtocolIE-ID ::= 51 ProtocolIE-ID ::= 52 ProtocolIE-ID ::= 53 ProtocolIE-ID ::= 54 ProtocolIE-ID ::= 59 ProtocolIE-ID ::= 60 ProtocolIE-ID ::= 61 ProtocolIE-ID ::= 62 ProtocolIE-ID ::= 63 ProtocolIE-ID ::= 64 ProtocolIE-ID ::= 67 ProtocolIE-ID ::= 68 ProtocolIE-ID ::= 69 ProtocolIE-ID ::= 12 ProtocolIE-ID ::= 70 ProtocolIE-ID ::= 71 ProtocolIE-ID ::= 72 ProtocolIE-ID ::= 73 ProtocolIE-ID ::= 74 ProtocolIE-ID ::= 82 ProtocolIE-ID ::= 83 ProtocolIE-ID ::= 41 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 ::= 55 ProtocolIE-ID ::= 120 ProtocolIE-ID ::= 121 ProtocolIE-ID ::= 122 ProtocolIE-ID ::= 2

ProtocolIE-ID ::= 123

ProtocolIE-ID ::= 56

id-RL-InformationList-RL-AdditionRqstFDD id-RL-InformationList-RL-DeletionRgst id-RL-InformationList-RL-PreemptRequiredInd id-RL-InformationList-RL-ReconfPrepFDD id-RL-InformationResponse-RL-AdditionRspTDD id-RL-InformationResponse-RL-ReconfReadvTDD id-RL-InformationResponse-RL-SetupRspTDD id-RL-InformationResponseItem-RL-AdditionRspFDD id-RL-InformationResponseItem-RL-ReconfReadyFDD id-RL-InformationResponseItem-RL-ReconfRspFDD id-RL-InformationResponseItem-RL-SetupRspFDD id-RL-InformationResponseList-RL-AdditionRspFDD id-RL-InformationResponseList-RL-ReconfReadyFDD id-RL-InformationResponseList-RL-ReconfRspFDD id-RL-InformationResponse-RL-ReconfRspTDD id-RL-InformationResponseList-RL-SetupRspFDD id-RL-ReconfigurationFailure-RL-ReconfFail id-RL-Set-InformationItem-DM-Rprt id-RL-Set-InformationItem-DM-Rgst id-RL-Set-InformationItem-DM-Rsp id-RL-Set-Information-RL-FailureInd id-RL-Set-Information-RL-RestoreInd id-ReportCharacteristics id-Reporting-Object-RL-FailureInd id-Reporting-Object-RL-RestoreInd id-S-RNTI id-SAI id-SRNC-TD id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD id-TransportBearerID id-TransportBearerRequestIndicator id-TransportLayerAddress id-TypeOfError id-UC-ID id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD id-UL-CCTrCH-InformationItem-RL-SetupRgstTDD id-UL-CCTrCH-InformationList-RL-SetupRgstTDD id-UL-CCTrCH-InformationListIE-PhvChReconfRgstTDD id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD id-UL-CCTrCH-InformationListIE-RL-ReconfReadvTDD id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD id-UL-DPCH-Information-RL-ReconfPrepFDD id-UL-DPCH-Information-RL-ReconfRostFDD id-UL-DPCH-Information-RL-SetupRqstFDD id-UL-DPCH-InformationItem-PhyChReconfRgstTDD

id-UL-DPCH-InformationItem-RL-AdditionRspTDD

id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD

id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD

id-UL-DPCH-InformationItem-RL-SetupRspTDD

id-UL-SIRTarget

id-URA-Information

ProtocolIE-ID ::= 124

ProtocolIE-ID ::= 125

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

ProtocolIE-ID ::= 146

ProtocolIE-ID ::= 147 ProtocolIE-ID ::= 152

ProtocolIE-ID ::= 153

ProtocolIE-ID ::= 154

ProtocolIE-ID ::= 155

ProtocolIE-ID ::= 156

ProtocolIE-ID ::= 157

ProtocolIE-ID ::= 159

ProtocolIE-ID ::= 160

ProtocolIE-ID ::= 163

ProtocolIE-ID ::= 164

ProtocolIE-ID ::= 165

ProtocolIE-ID ::= 140

ProtocolIE-ID ::= 166

ProtocolIE-ID ::= 167

ProtocolIE-ID ::= 169

ProtocolIE-ID ::= 171 ProtocolIE-ID ::= 172

ProtocolIE-ID ::= 173

ProtocolIE-ID ::= 174 ProtocolIE-ID ::= 175

ProtocolIE-ID ::= 176

ProtocolIE-ID ::= 177

ProtocolIE-ID ::= 178

ProtocolIE-ID ::= 179

ProtocolIE-ID ::= 180

ProtocolIE-ID ::= 181

ProtocolIE-ID ::= 182

ProtocolIE-ID ::= 183

ProtocolIE-ID ::= 184

ProtocolIE-ID ::= 185

ProtocolIE-ID ::= 188

ProtocolIE-ID ::= 1

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-ReconfRgstTDD id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadvTDD id-DL-DPCH-InformationModifvListIE-RL-ReconfReadvTDD id-DSCHs-to-Add-TDD id-DSCHs-to-Add-FDD id-DSCH-DeleteList-RL-ReconfPrepTDD id-DSCH-Delete-RL-ReconfPrepFDD id-DSCH-FDD-Information

id-DSCH-InformationListIE-RL-AdditionRspTDD id-DSCH-InformationListIEs-RL-SetupRspTDD id-DSCH-TDD-Information id-DSCH-FDD-InformationResponse id-DSCH-Information-RL-SetupRgstFDD id-DSCH-ModifyList-RL-ReconfPrepTDD id-DSCH-Modify-RL-ReconfPrepFDD

id-DSCHsToBeAddedOrModified-FDD id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD id-EnhancedDSCHPC id-EnhancedDSCHPCIndicator id-GA-Cell id-GA-CellAdditionalShapes

id-SSDT-CellIDforEDSCHPC 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-ReconfRgstTDD 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

ProtocolIE-ID ::= 189 ProtocolIE-ID ::= 190 ProtocolIE-ID ::= 193 ProtocolIE-ID ::= 194 ProtocolIE-ID ::= 197 ProtocolIE-ID ::= 198 ProtocolIE-ID ::= 199 ProtocolIE-ID ::= 200 ProtocolIE-ID ::= 201 ProtocolIE-ID ::= 205 ProtocolIE-ID ::= 206 ProtocolIE-ID ::= 207 ProtocolIE-ID ::= 208 ProtocolIE-ID ::= 209 ProtocolIE-ID ::= 210 ProtocolIE-ID ::= 212 ProtocolIE-ID ::= 213 ProtocolIE-ID ::= 214 ProtocolIE-ID ::= 215 ProtocolIE-ID ::= 216 ProtocolIE-ID ::= 217 ProtocolIE-ID ::= 218 ProtocolIE-ID ::= 219 ProtocolIE-ID ::= 220 ProtocolIE-ID ::= 221 ProtocolIE-ID ::= 222 ProtocolIE-ID ::= 223 ProtocolIE-ID ::= 226 ProtocolIE-ID ::= 227 ProtocolIE-ID ::= 228 ProtocolIE-ID ::= 229 ProtocolIE-ID ::= 230 ProtocolIE-ID ::= 29 ProtocolIE-ID ::= 34 ProtocolIE-ID ::= 232 ProtocolIE-ID ::= 3 ProtocolIE-ID ::= 35 ProtocolIE-ID ::= 255 ProtocolIE-ID ::= 256 ProtocolIE-ID ::= 257 ProtocolIE-ID ::= 258 ProtocolIE-ID ::= 259 ProtocolIE-ID ::= 260 ProtocolIE-ID ::= 261 ProtocolIE-ID ::= 262 ProtocolIE-ID ::= 263 ProtocolIE-ID ::= 264 ProtocolIE-ID ::= 265 ProtocolIE-ID ::= 266 ProtocolIE-ID ::= 267 ProtocolIE-ID ::= 268 ProtocolIE-ID ::= 269 ProtocolIE-ID ::= 270

id-USCH-Information id-USCH-ModifyList-RL-ReconfPrepTDD id-USCHToBeAddedOrModifiedList-RL-ReconfReadvTDD id-DL-Physical-Channel-Information-RL-SetupRqstTDD id-UL-Physical-Channel-Information-RL-SetupRgstTDD id-ClosedLoopModel-SupportIndicator id-ClosedLoopMode2-SupportIndicator id-STTD-SupportIndicator id-CFNReportingIndicator id-CNOriginatedPage-PagingRgst id-InnerLoopDLPCStatus id-PropagationDelay id-RxTimingDeviationForTA id-timeSlot-ISCP id-CCTrCH-InformationItem-RL-FailureInd id-CCTrCH-InformationItem-RL-RestoreInd id-CommonMeasurementAccuracy id-CommonMeasurementObjectType-CM-Rprt id-CommonMeasurementObjectType-CM-Rqst id-CommonMeasurementObjectType-CM-Rsp id-CommonMeasurementType id-SFN id-SFNReportingIndicator id-SFNReportingIndicator id-InformationExchangeID id-InformationExchangeObjectType-InfEx-Rprt id-InformationExchangeObjectType-InfEx-Rgst id-InformationExchangeObjectType-InfEx-Rsp id-InformationReportCharacteristics id-InformationType 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-AdditionRgstTDD id-RL-LCR-InformationResponse-RL-AdditionRspTDD id-UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD id-UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD id-DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD id-DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD id-DSCH-LCR-InformationListIEs-RL-AdditionRspTDD id-USCH-LCR-InformationListIEs-RL-AdditionRspTDD id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD id-UL-TimeslotLCR-InformationList-RL-ReconfReadyTDD id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadvTDD id-DL-TimeslotLCR-InformationList-RL-ReconfReadvTDD id-UL-TimeslotLCR-InformationList-PhyChReconfRqstTDD

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ProtocolIE-ID	::=	271
ProtocolIE-ID	::=	272
ProtocolIE-ID	::=	273
ProtocolIE-ID	::=	274
ProtocolIE-ID	::=	275
ProtocolIE-ID	::=	276
ProtocolIE-ID	::=	277
ProtocolIE-ID	::=	279
ProtocolIE-ID	::=	14
ProtocolIE-ID	::=	23
ProtocolIE-ID	::=	24
ProtocolIE-ID ProtocolIE-ID	::=	24 25
ProtocolIE-ID		36
ProtocolIE-ID	::=	37
ProtocolIE-ID	::=	15
ProtocolIE-ID	::=	16
ProtocolIE-ID	::=	280
ProtocolIE-ID	::=	281
ProtocolIE-ID	::=	282
ProtocolIE-ID	::=	283
ProtocolIE-ID	::=	284
ProtocolIE-ID	::=	285
ProtocolIE-ID	::=	286
ProtocolIE-ID	::=	286
ProtocolIE-ID	::=	287
ProtocolIE-ID	::=	288
ProtocolIE-ID	::=	289
ProtocolIE-ID	::=	290
ProtocolIE-ID	::=	291
ProtocolIE-ID	::=	292
protocolIE-ID	::=	58
ProtocolIE-ID	::=	65
ProtocolIE-ID	::=	66
ProtocolIE-ID	::=	75
ProtocolIE-ID	::=	76
ProtocolIE-ID	::=	77
ProtocolIE-ID	::=	78
ProtocolIE-ID	::=	79
ProtocolIE-ID	::=	80
ProtocolIE-ID	::=	81
ProtocolIE-ID	::=	86
ProtocolIE-ID	::=	87
ProtocolIE-ID	::=	88
ProtocolIE-ID	::=	89
ProtocolIE-ID ProtocolIE-ID	::=	89 94
ProtocolIE-ID	::=	96 07
ProtocolIE-ID		97
ProtocolIE-ID	::=	98
ProtocolIE-ID	::=	99
ProtocolIE-ID	::=	100
ProtocolIE-ID	::=	101
ProtocolIE-ID	::=	104
ProtocolIE-ID	::=	105

id-DL-TimeslotLCR-InformationList-PhyChReconfRqstTDD id-timeSlot-ISCP-LCR-List-DL-PC-Rqst-TDD id-TSTD-Support-Indicator-RL-SetupRqstTDD

END

ProtocolIE-ID ::= 106 ProtocolIE-ID ::= 138 ProtocolIE-ID ::= 139

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<u>Annex B (informative)</u> Guidelines for Usage of the Criticality Diagnostics IE

B.1 EXAMPLE MESSAGE Layout

Assume the following message format:

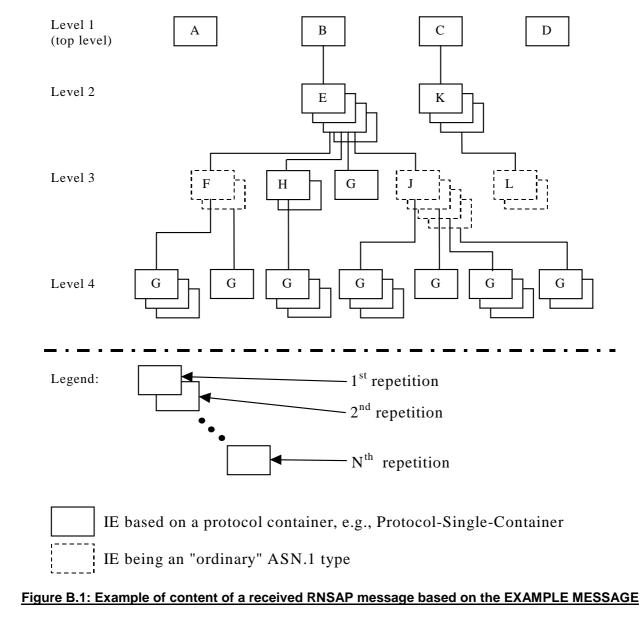
IE/Group Name	Presence	<u>Range</u>	IE type and	Semantics description	<u>Criticality</u>	Assigned Criticality
			referenc e			
Message Type	M				YES	reject
Transaction ID	M				11	
A	M				YES	reject
B	M				YES	<u>reject</u>
<u>>E</u>		<u>1<maxe></maxe></u>			EACH	ignore
>>F		<u>1<maxf></maxf></u>			• 1	
<u>>>>G</u>		<u>03,</u>			EACH	ignore
<u>>>H</u>		<u>1<maxh></maxh></u>			EACH	ignore
<u>>>>G</u>		<u>03,</u>			<u>EACH</u>	ignore and notify
<u>>>G</u>	М				YES	reject
<u>>>J</u>		<u>1<maxj></maxj></u>			-	
<u>>>>G</u>		<u>03,</u>			EACH	reject
<u>C</u>	M				YES	reject
<u>>K</u>		<u>1<maxk></maxk></u>			EACH	ignore and notify
<u>>>L</u>		1 <maxl></maxl>			-	
<u>>>>M</u>	<u>0</u>				<u>-</u>	
<u>D</u>	M				YES	<u>reject</u>

Note 1.The IEs F, J, and L do not have assigned criticality. The IEs F, J, and L are consequently realised as the
ASN.1 type SEQUENCE OF of "ordinary" ASN.1 type, e.g. INTEGER. On the other hand, the repeatable
IEs with assigned criticality are realised as the ASN.1 type SEQUENCE OF of an IE object, e.g.
ProtocolIE-Single-Container.

For the corresponding ASN.1 layout, see subclause B.4.

B.2 Example on a Received EXAMPLE MESSAGE

Assume further more that a received message based on the above tabular format is according to the figure below.



B.3 Content of Criticality Diagnostics

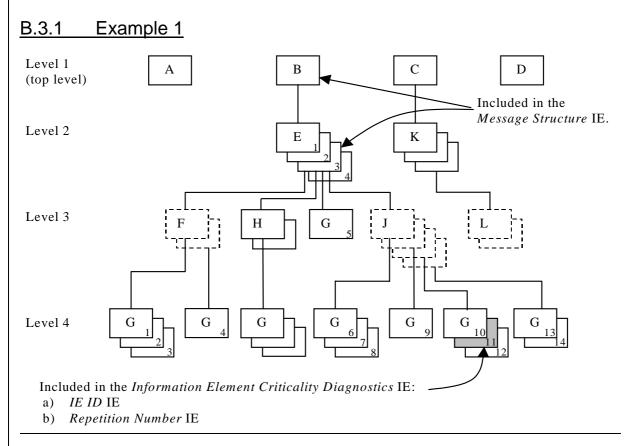


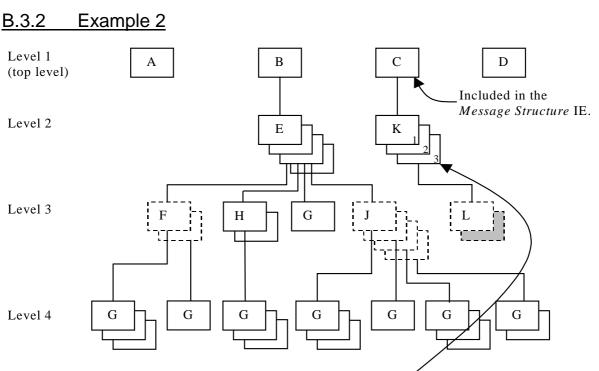
Figure B.2: Example of a received RNSAP message containing a not comprehended IE

If there is an error within the instance marked as grey in the IE G in the IE J shown in the figure B.2 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	<u>Comment</u>
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 4.
<u>IE ID</u>	id-G	IE ID from the reported level, i.e. level 4.
Repetition	<u>11</u>	Repetition number on the reported level, i.e. level 4.
Number		(Since the IE E (level 2) is the lowest level included in the Message Structure IE this is
		the eleventh occurrence of IE G within the IE E (level 2).
Type of Error	<u>not</u>	
	<u>underst</u>	
	ood	
Message Structur	e, first repe	etition
<u>>IE ID</u>	id-B	IE ID from level 1.
Message Structur	e, second	repetition
<u>>IE ID</u>	<u>id-E</u>	IE ID from the lowest level above the reported level, i.e. level 2.
>Repetition	3	Repetition number from the lowest level above the reported level, i.e. level 2.
Number		

Note 2. The IE J on level 3 cannot be included in the *Message Structure* IE since they have no criticality of their <u>own.</u>

Note 3. The repetition number of the reported IE indicates the number of repetitions of IE G received up to the detected erroneous repetition, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).



Included in the Information Element Criticality Diagnostics IE: a) IE ID IE

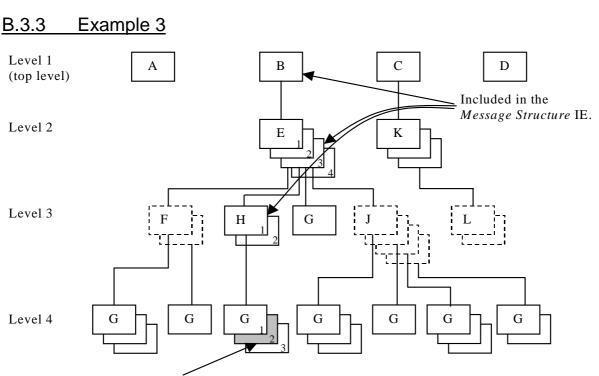
b) Repetition Number IE

Figure B.3: Example of a received RNSAP message containing a not comprehended IE

If there is an error within the second instance (marked as grey) in the sequence (IE L in the tabular format) on level 3 below IE K in the structure shown in the figure B.3 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment
IE Criticality	<u>ignore</u>	Criticality for IE on the reported level, i.e. level 2.
	<u>and</u> notify	
IE ID	<u>id-K</u>	IE ID from the reported level, i.e. level 2.
Repetition	3	Repetition number on the reported level, i.e. level 2.
Number		
Type of Error	<u>not</u>	
	underst	
	ood	
Message Structu	re, <i>first rep</i> e	etition
<u>>IE ID</u>	id-C	IE ID from the lowest level above the reported level, i.e. level 1.
	ood re, first repe	

Note 4. The IE L on level 3 cannot be reported individually included in the *Message Structure* IE since it has no criticality of its own.



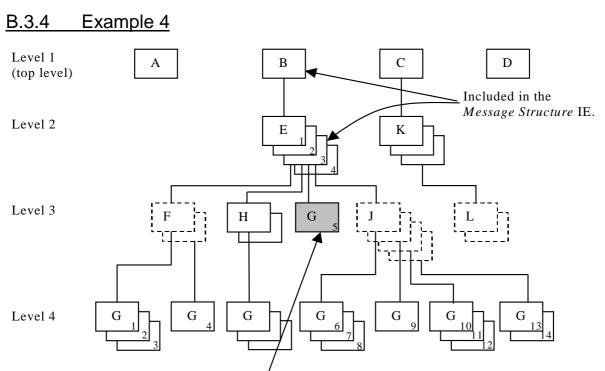
- Included in the *Information Element Criticality Diagnostics* IE: a) *IE ID* IE
- b) Repetition Number IE

Figure B.4: Example of a received RNSAP message containing a not comprehended IE

If there is an error within the instance marked as grey in the IE G in the IE H shown in the figure B.4 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 4.
IE ID	id-G	IE ID from the reported level, i.e. level 4.
Repetition	2	Repetition number on the reported level, i.e. level 4.
Number		
Type of Error	not	
	underst	
	<u>ood</u>	
Message Structur	<u>e, first repe</u>	etition
<u>>IE ID</u>	<u>id-B</u>	IE ID from level 1.
Message Structur	e, second	<u>repetition</u>
<u>>IE ID</u>	<u>id-E</u>	IE ID from level 2.
>Repetition	<u>3</u>	Repetition number from level 2.
Number		
Message Structur	e, third rep	<u>etition</u>
<u>>IE ID</u>	<u>id-H</u>	IE ID from the lowest level above the reported level, i.e. level 3.
>Repetition	<u>1</u>	Repetition number from the lowest level above the reported level, i.e. level 3.
Number		

Note 5. The repetition number of level 4 indicates the number of repetitions of IE G received up to the detected erroneous repetition, counted below the same instance of the previous level with assigned criticality (instance 1 of IE H on level 3).



Included in the Information Element Criticality Diagnostics IE: a) IE ID IE

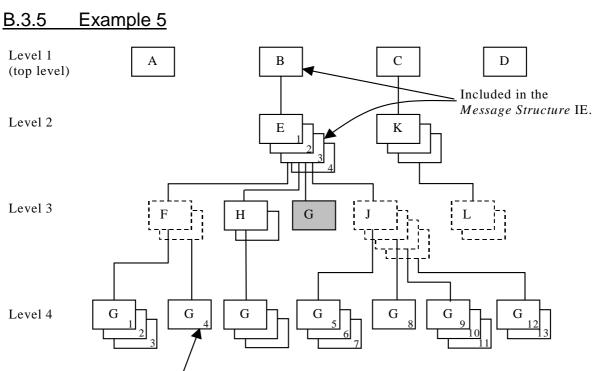
b) Repetition Number IE

Figure B.5: Example of a received RNSAP message containing a not comprehended IE

If there is an error within the instance marked as grey in the IE G in the IE E shown in the figure B.5 above, this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	Comment
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 3.
IE ID	id-G	IE ID from the reported level, i.e. level 3.
Repetition	<u>5</u>	Repetition number on the reported level, i.e. level 3.
Number		(Since the IE E (level 2) is the lowest level included in the Message Structure IE this is
		the fifth occurrence of IE G within the IE E (level 2).
Type of Error	<u>not</u>	
	<u>underst</u>	
	ood	
Message Structu	ire, first rep	etition
<u>>IE ID</u>	<u>id-B</u>	IE ID from level 1.
Message Structu	ire, second	<u>repetition</u>
<u>>IE ID</u>	<u>id-E</u>	IE ID from the lowest level above the reported level, i.e. level 2.
>Repetition	<u>3</u>	Repetition number from the lowest level above the reported level, i.e. level 2.
Number		

Note 6. The repetition number of the reported IE indicates the number of repetitions of IE G received up to the detected erroneous repetition, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).



Included in the Information Element Criticality Diagnostics IE: a) IE ID IE

b) Repetition Number IE

Figure B.6: Example of a received RNSAP message with a missing IE

If the instance marked as grey in the IE G in the IE E shown in the figure B.6 above, is missing this will be reported within the *Information Element Criticality Diagnostics* IE within the *Criticality Diagnostics* IE as follows:

IE name	Value	<u>Comment</u>				
IE Criticality	reject	Criticality for IE on the reported level, i.e. level 3.				
IE ID	id-G	IE ID from the reported level, i.e. level 3.				
Repetition Number	4	Repetition number up to the missing IE on the reported level, i.e. level 3. (Since the IE E (level 2) is the lowest level included in the <i>Message Structure</i> IE there have been four occurrences of IE G within the IE E (level 2) up to the missing occurrence.				
Type of Error	missing					
Message Structur	Message Structure, first repetition					
<u>>IE ID</u>	<u>id-B</u>	IE ID from level 1.				
Message Structur	Message Structure, second repetition					
<u>>IE ID</u>	<u>id-E</u>	IE ID from the lowest level above the reported level, i.e. level 2.				
>Repetition Number	<u>3</u>	Repetition number from the lowest level above the reported level, i.e. level 2.				

Note 7. The repetition number of the reported IE indicates the number of repetitions of IE G received up to but not including the missing occurrence, counting all occurrences of the IE G below the same instance of the previous level with assigned criticality (instance 3 of IE E on level 2).

B.4 ASN.1 of EXAMPLE MESSAGE

ExampleMessage :	:= SEQUENCE {			
ProtocolIEs	ProtocolIE-0		{{ExampleMessage-IEs}}, {{ExampleMessage-Extensions}}	OPTIONAL,
	ISTONS PIOLOCOIEXCE	ensioncontainei	{{ExampleMessage=Excensions}}	OPTIONAL,
}				
	Es RNSAP-PROTOCOL-II			
	<u>CRITICALITY reject</u> CRITICALITY reject			
{ ID id-C (CRITICALITY reject	TYPE C PRESENCE	mandatory}	
{ ID id-D (CRITICALITY reject	TYPE D PRESENCE	: mandatory} ,	
}				
B ::= SEQUENCE {				
e iE-Extension:	<u> </u>	onContainer { {B-	<pre>ExtIEs} } OPTIONAL,</pre>	
····				
<u>}</u>				
B-ExtIEs RNSAP-P	ROTOCOL-EXTENSION ::	:= {		
$\frac{\ldots}{1}$				
E-List ::= SEQUE	NCE (SIZE (1maxE)) OF ProtocolIE-S	Single-Container { {E-IEs} }	
E-IES RNSAP-PROT	CRITICALITY ignore	TYPE E PRESENCE	mandatory }	
<u>}</u>				
E ::= SEQUENCE {				
fh	<u> </u>			
g	G-List1,			
j iE-Extension:	<u>J-List,</u> s ProtocolExtensio	onContainer { {E-	ExtIEs} } OPTIONAL,	
····				
1				
E-ExtIEs RNSAP-PI	ROTOCOL-EXTENSION ::	<u>:= {</u>		
}				
F-List ::= SEQUE	NCE (SIZE (1maxF))) OF F		
F ::= SEQUENCE {				
	G-List2 OPTIONAL			
iE-Extension:	3 ProtocolExtensio	onContainer { {F-	ExtIEs} } OPTIONAL,	
<u>}</u>				
F-ExtIEs RNSA	P-PROTOCOL-EXTENSION	N ::= {		
<u>···</u>				
1				
<u>G-List2</u> ::= SEQU	ENCE (SIZE (13,)) OF Protocoll	E-Single-Container { {G2-IEs} }	<u>}</u>
G2-IES RNSAP-PRO				
{ ID id-G (CRITICALITY ignore	TYPE G PRESENCE	: mandatory }	
H-List ::= SEOUE	NCE (SIZE (1maxH))) OF ProtocolIE-S	Single-Container { {H-IEs} }	
		,		
H-IES RNSAP-PROTO	CRITICALITY ignore	TYPE H PRESENCE	mandatory }	
}			<u> </u>	
<u>H</u> ::= SEQUENCE {				
g iE-Extension:	G-List3 OPTIONAI		onContainer { {H-ExtIEs} } OPTIC)NAL.
<u></u>				<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>
<u>}</u>				
H-ExtIEs RNSAP-P	ROTOCOL-EXTENSION ::	:= {		
}				

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G-List3 ::= SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { G3-IEs} } G3-IES RNSAP-PROTOCOL-IES ::= { { ID id-G CRITICALITY not ify TYPE G PRESENCE mandatory } G-List1 ::= ProtocolIE-Single-Container { {G1-IEs} } G1-IES RNSAP-PROTOCOL-IES ::= { { ID id-G CRITICALITY reject TYPE G PRESENCE mandatory } J-List ::= SEQUENCE (SIZE (1..maxJ)) OF J J ::= SEQUENCE { g G-List4 OPTIONAL, iE-Extensions ProtocolExtensionContainer { {J-ExtIEs} } OPTIONAL, g } RNSAP-PROTOCOL-EXTENSION ::= { J-ExtIEs • • • } G-List4 := SEQUENCE (SIZE (1..3, ...)) OF ProtocolIE-Single-Container { [G4-IEs} } G4-IES RNSAP-PROTOCOL-IES ::= { { ID id-G CRITICALITY reject TYPE G PRESENCE mandatory } } $C ::= SEQUENCE \{$ k K-List, iE-Extensions ProtocolExtensionContainer { {C-ExtIEs} } OPTIONAL, . . . } C-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { • • • } K-List ::= SEQUENCE (SIZE (1..maxK)) OF ProtocolIE-Single-Container { {K-IEs} } K-IES RNSAP-PROTOCOL-IES ::= { { ID id-K CRITICALITY notify TYPE K PRESENCE mandatory } } K ::= SEQUENCE { L-List, ٦ iE-Extensions ProtocolExtensionContainer { {K-ExtIEs} } OPTIONAL, . . . } K-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { • • • } L-List ::= SEQUENCE (SIZE (1..maxL)) OF L L ::= SEQUENCE {
 m
 M
 OPTIONAL,

 iE-Extensions
 ProtocolExtensionContainer { {L-ExtIEs} }
 OPTIONAL,
 m . . . } L-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { ... } ExampleMessage-Extensions RNSAP-PROTOCOL-EXTENSION ::= { . . . }

		-														CR-Form-v3
CHANGE REQUEST									CR-Form-V3							
[#] 25.423			CR	342	2	ж	rev	-	ж	Curren	it vers	sion:	3.5	.0	ж	
For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.										nbols.						
Proposed change affects: # (U)SIM ME/UE Radio Access Network X Core Network										twork						
Title:	ж	Erro	<mark>or Indic</mark>	cation fo	r report	ting of	ⁱ logi	<mark>cal e</mark>	rror							
Source:	ж	R-W	/G3													
Work item cod	de: #	TEI									Da	ite: ೫	200	0 <mark>1-04-</mark>	23	
Category:	ж	F									Relea	se:	R9	9		
	Use one of the following categories:Use one of the following releases:F (essential correction)2A (corresponds to a correction in an earlier release)R96B (Addition of feature),R97C (Functional modification of feature)R98D (Editorial modification)R99D tetailed explanations of the above categories canREL-4be found in 3GPP TR 21.900.REL-5								eases:							
Reason for ch	ange:	: #	INDI Tran	CATION	l messa ID IE w	age, th ithin th	ne Pr ne C	rocec ritica	dure I lity D	D IE iagn	ostics IE	iggeri	ng Me	essage	e IE :	RROR and the order to
Summary of c	Summary of change: # Text in clause 10.4 is updated in order to clarify that the Procedure ID IE, the Triggering Message IE and the Transaction ID IE within the Criticality Diagnostics IE must be included in order to identify the message containing the logical error.															
Consequence not approved:	Consequences if ot approved: # It will not be clear which information to include in ERROR INDICATION when reporting a logical error, which may lead to different implementations. Additional information: The proposed change is backwards compatible.							vhen								
			0.0.1	10 10			_									
Clauses affect	ted:	Ж	9.2.1	.13, 10.	4											
Other specs affected:		ж	Te	her cor st spec &M Spe	ification	IS	ns	ж	25.	423	CR343	REL	-4			

How to create CRs using this form:

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Other comments:

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

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

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

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

9.2.1.13 Criticality Diagnostics

The *Criticality Diagnostics* IE is sent by an RNC when parts of a received message have not been comprehended or were missing, or if the message contained logical errors. When applicable, it contains information about which IEs that were not comprehended or were missing.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Procedure ID		01		Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error
>Procedure Code	Μ		INTEGER (0255)	
>Ddmode	M		ENUMERAT ED (FDD, TDD, Common)	Common = common to FDD and TDD.
Triggering Message	0		ENUMERAT ED(initiating message, successful outcome, unsuccessful outcome, outcome)	The Triggering Message is used only if the Criticality Diagnostics is part of Error Indication.
Procedure Criticality	0		ENUMERAT ED(reject, ignore, notify)	This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure). The value 'ignore' shall never be used.
Transaction ID	0		Transaction ID	
Information Element Criticality Diagnostics		0 <maxnoof errors></maxnoof 		
>IE Criticality	M		ENUMERAT ED(reject, ignore, notify)	The IE Criticality is used for reporting the criticality of the triggering IE. The value 'Ignore" shall never be used.
>IE ld	Μ		INTEGER (065535)	The IE Id of the not understood or missing IE as defined in the ASN.1 part of the specification.
>Repetition Number	0		INTEGER (1256)	The repetition number of the not understood IE within the bottom most repetition level identified by the message structure IE, if applicable
>Message Structure	0		9.2.1.39A	

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

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. The *Procedure ID* IE, the *Triggering Message* IE and the *Transaction ID* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

Where the logical error exists in a response message of a class 1 procedure, 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. <u>The *Procedure ID* IE</u>, the *Triggering Message* IE and the *Transaction ID* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

3GPP TSG-RAN WG3 Meeting #20 Beijing, China, April 2nd – April 6th, 2001

CR-Form-v3 CHANGE REQUEST ж 25.423 CR 343 ж rev ж Current version: ж 4.0.0 For **HELP** on using this form, see bottom of this page or look at the pop-up text over the **#** symbols. ME/UE Radio Access Network X Core Network Proposed change affects: # (U)SIM Title: **#** Error Indication for reporting of logical error Source: 第 R-WG3 Work item code: # TEI Date: # 2001-04-23 Category: ЖА Release: # REL-4 Use one of the following categories: Use one 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) (Release 1999) R99 Detailed explanations of the above categories can REL-4 (Release 4) be found in 3GPP TR 21.900. REL-5 (Release 5) In clause 10.4 it is not clear that when reporting a logical error with the ERROR Reason for change: # INDICATION message, the Procedure ID IE, the Triggering Message IE and the Transaction ID IE within the Criticality Diagnostics IE must be included in order to identify the message containing the logical error. Summary of change: # Text in clause 10.4 is updated in order to clarify that the *Procedure ID* IE, the Triggering Message IE and the Transaction ID IE within the Criticality Diagnostics IE must be included in order to identify the message containing the logical error. It will not be clear which information to include in ERROR INDICATION when **Consequences** if Ж reporting a logical error, which may lead to different implementations. not approved: Additional information: The proposed change is backwards compatible. **#** 9.2.1.13, 10.4 Clauses affected: Other specs **X** Other core specifications # 25.423 CR342 R99 Test specifications affected: **O&M** Specifications

How to create CRs using this form:

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Other comments:

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

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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.

9.2.1.13 Criticality Diagnostics

The *Criticality Diagnostics* IE is sent by an RNC when parts of a received message have not been comprehended or were missing, or if the message contained logical errors. When applicable, it contains information about which IEs that were not comprehended or were missing.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Procedure ID		01		Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error
>Procedure Code	Μ		INTEGER (0255)	
>Ddmode	M		ENUMERAT ED (FDD, TDD, Common)	Common = common to FDD and TDD.
Triggering Message	0		ENUMERAT ED(initiating message, successful outcome, unsuccessful outcome, outcome)	The Triggering Message is used only if the Criticality Diagnostics is part of Error Indication.
Procedure Criticality	0		ENUMERAT ED(reject, ignore, notify)	This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure). The value 'ignore' shall never be used.
Transaction ID	0		Transaction ID	
Information Element Criticality Diagnostics		0 <maxnoof errors></maxnoof 		
>IE Criticality	М		ENUMERAT ED(reject, ignore, notify)	The IE Criticality is used for reporting the criticality of the triggering IE. The value 'Ignore" shall never be used.
>IE ld	M		INTEGER (065535)	The IE Id of the not understood or missing IE as defined in the ASN.1 part of the specification.
>Repetition Number	0		INTEGER (1256)	The repetition number of the not understood IE within the bottom most repetition level identified by the message structure IE, if applicable
>Message Structure	0		9.2.1.39A	

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

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. The *Procedure ID* IE, the *Triggering Message* IE and the *Transaction ID* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

Where the logical error exists in a response message of a class 1 procedure, 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. <u>The *Procedure ID* IE</u>, the *Triggering Message* IE and the *Transaction ID* IE within the *Criticality Diagnostics* IE shall then be included in order to identify the message containing the logical error.

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

CR-Form-v3 CHANGE REQUEST ж 25.423 CR 344 ₩ rev ж Current version: ж 3.5.0For **HELP** on using this form, see bottom of this page or look at the pop-up text over the **#** symbols. ME/UE Radio Access Network X Core Network Proposed change affects: # (U)SIM Clarification IEs order rule Title: Source: R-WG3 æ Work item code: ₩ May 2001 TEI Date: ೫ Category: жF Release: # R99 Use one of the following categories: Use one 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) (Release 1999) R99 Detailed explanations of the above categories can REL-4 (Release 4) be found in 3GPP TR 21.900. REL-5 (Release 5) Reason for change: # Introduction of new IEs in the extension containers results in different message contents in different specification versions. To ensure interoperability the receiving node shall be able to interprete correctly messages coming from nodes of higher specification versions. Therefore when determining the right order of the IEs the receiving node shall ignore IEs specified only in the higher specification version and consider only IEs of it's own specification version. Summary of change: # A clarification to consider only IEs specified in the specification version of the receiving node when determining the right order of the IEs has been added into chapter 'Handling of Unknown, Unforeseen and Erroneous Protocol Data'. # In case this CR is not approved there might be interoperability problems between Consequences if nodes of different specification versions. not approved: This change is backward compatible. Clauses affected. **# 1036**

Clauses affected:	њ 10.3.0					
Other specs	ж	Х	Other core specifications #	CR280 R99 TS 25.413,		
				CR281 Rel4 TS 25.413,		
				CR039 R99 TS 25.419,		
				CR040 Rel4 TS 25.419,		
				CR345 Rel4 TS 25.423,		
				CR393 R99 TS 25.433,		
				CR394 Rel4 TS 25.433.		

affected:	Test specifications O&M Specifications
Other comments:	ж

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.
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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.

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.

When determining the correct order only the IEs specified in the specification version used by the receiver shall be considered.

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

CR-Form-v3 CHANGE REQUEST ж Current version: 25.423 CR 345 ₩ rev ж ж 4.0.0 For **HELP** on using this form, see bottom of this page or look at the pop-up text over the **#** symbols. ME/UE Radio Access Network X Core Network Proposed change affects: # (U)SIM **%** Clarification IEs order rule Title: Source: R-WG3 æ Date: # May 2001 Work item code: # TEI Category: ж A Release: # REL-4 Use one of the following categories: Use one 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 REL-4 (Release 4) be found in 3GPP TR 21.900. REL-5 (Release 5) Reason for change: # Introduction of new IEs in the extension containers results in different message contents in different specification versions. To ensure interoperability the receiving node shall be able to interprete correctly messages coming from nodes of higher specification versions. Therefore when determining the right order of the IEs the receiving node shall ignore IEs specified only in the higher specification version and consider only IEs of it's own specification version. Summary of change: # A clarification to consider only IEs specified in the specification version of the receiving node when determining the right order of the IEs has been added into chapter 'Handling of Unknown, Unforeseen and Erroneous Protocol Data'. # In case this CR is not approved there might be interoperability problems between Consequences if nodes of different specification versions. not approved: This change is backward compatible. Clauses affected: **# 10.3.6** Other specs **X** Other core specifications # CR280 R99 TS 25.413, CR281 Rel4 TS 25.413,

> CR039 R99 TS 25.419, CR040 Rel4 TS 25.419,

51(0+01(0+1020.+10

CR344 R99 TS 25.423,

CR393 R99 TS 25.433,

CR394 Rel4 TS 25.433.

affected:	Test specifications O&M Specifications
Other comments:	ж

How to create CRs using this form:

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

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

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.

When determining the correct order only the IEs specified in the specification version used by the receiver shall be considered.

R3-011366

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

			CHANGE	REO	UEST		CR-Fc	orm-v3
H	25	.423 CR	346	₩ rev	- *	Current vers	^{ion:} 3.5.0 [#]	
For <u>HELP</u> on	using	this form, see	e bottom of this	s page or	look at the	e pop-up text	over the # symbols	s <i>.</i>
Proposed change	e affec	: ts:		/UE	Radio Ac	cess Network	X Core Networ	'k
Title:	₩ Mc	dification of I	Radio Link Set	up and R	adio Link	Addition proc	edure text	
		WG3						
Work item code:	₩ TE					Date:	May 2001	
Category:	₩ <mark>F</mark>					Release: ೫	R99	
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		Changes co	mpared to the	agreed C	R at RAN	3 #20:		
		message, the	DRNC shall ass dling to the beg	ign a new	D-RNTI fo	or this UE" is r	INK SETUP REQUE noved from the Radio is is not related to the)
Consequences if not approved:	ж	Backward of	ould not benefit compatibility: therefore the second secon	nis CR is			vith respect to the	
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Other comments:	: ж							

How to create CRs using this form:

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

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

8.3.1 Radio Link Setup

8.3.1.1 General

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

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

8.3.1.2 Successful Operation

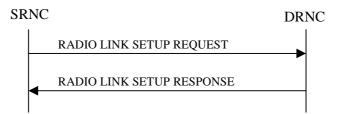


Figure 5: Radio Link Setup procedure: Successful Operation

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

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

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

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.

Transport Channels Handling:

DCH(s):

[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 <u>DCHs</u>.

[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 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.

<u>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.</u>

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

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

4

DSCH(s):

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

[TDD - USCH(s)]:

[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.]

Physical Channels Handling:

[FDD - Compressed Mode]:

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

[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 - DL Code Information]:

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

General:

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

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

Radio Link Handling:

Diversity Combination Control:

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

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[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-Transmit Diversity]:

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

[FDD – When *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].

DL Power Control:

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

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

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

[TDD - If the *Primary CCPCH RSCP* IE 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 – 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).]

[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]]

Neighbouring Cell Handling:

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.

General:

[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 *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.]

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.]

[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.]

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.

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.

[FDD - Radio Link Set Handling]:

[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 – 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 –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].

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 constrains when setting the initial DL TX power. The DRNS shall also include the configured DL TX power range defined by *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK SETUP RESPONSE message.]

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

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

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

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

[FDD The DRNS shall start the DL transmission using the indicated DL TX power level (if received) or the decided DL TX power level on each DL channelisation code of a RL until UL synchronisation is achieved 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.]

Response Message:

At the reception of the RADIO LINK SETUP REQUEST message, DRNS allocates <u>the</u> 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.]

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[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 Model 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.

8.3.2 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

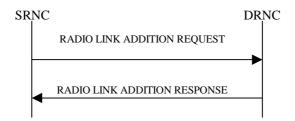


Figure 7: Radio Link Addition procedure: Successful Operation

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.

Transport Channel Handling:

DSCH:

[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.]

Physical Channels Handling:

[FDD-Compressed Mode]:

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Active Pattern Sequence* Information IE, the DRNS shall use the information to 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.]

[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]

[FDD-DL Code Information]:

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

General:

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

Radio Link Handling:

Diversity Combination Control:

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

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.

[FDD-Transmit Diversity]:

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

[FDD – If the cell in which the RL is being added is capable to provide Close loop Tx diversity, the DRNC shall 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.]

[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).]

DL Power Control:

[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).].

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.

DL Code Information:

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.

Neighbouring Cell Handling:

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 Model Support Indicator IE] of the UMTS neighbouring cell.

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

General:

[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.]

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.

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.

[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* <u>*CCPCH Info* IE for the FACH where the DRAC information is sent, for each Radio Link established in a cell</u> 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.]

[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.]

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[FDD-Radio Link Set Handling]:

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

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[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.]

[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].

[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.]

Response message:

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

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

The DRNC shall also provide the configured 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.

R3-011367

CR-Form-v3

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For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the **#** symbols.

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Reason for change: ₩	As an outcome of the RNSAP review during RAN3 #18, it was agreed that the Radio Link Setup and Radio Link Addition procedure text needs to have its layout improved by using subheadings.
	Changes compared to the agreed CR at RAN3 #20:
	- The paragraph "If no <i>D-RNTI</i> IE was included in the RADIO LINK SETUP REQUEST message, the DRNC shall assign a new D-RNTI for this UE" is moved from the Radio Link Set Handling to the beginning of the subclause 8.3.1.2 as this is not related to the Radio Link Set Handling.
	Additions due to the Rel-4 changes:
	- Handling of the <i>Guaranteed Rate Information</i> IE is placed under the Transport Channel Handling (DCH) subheading.
	- Handling of the <i>DPC Mode</i> IE is placed under the Radio Link Handling (DL Power Control)
	- Handling of the SSDT Cell Identity for EDSCHPC IE is placed under the Radio Link Handling (General)
	- Handling of the <i>Allowed UL Rate</i> IE and <i>Allowed DL Rate</i> IE (DCH rate control) are placed under the Radio Link Handling (General)
	- Handling of the <i>Cell GA Additional Shapes</i> IE is placed under the Radio Link Handling (General)
Summary of change: #	The Radio Link Setup and Radio Link Addition procedure text layouts are modified by using subheadings.

Consequences if not approved:	ж	RNSAP would not benefit from this layout improvement. Backward compatibility: this CR is backward compatible with respect to the previous version of RNSAP.							
Clauses affected:	ж	8.3.1 and 8.3.2							
Other specs affected:	ж	X Other core specifications							
		Test specifications O&M Specifications							
Other comments:	ж								

How to create CRs using this form:

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

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

8.3.1 Radio Link Setup

8.3.1.1 General

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

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

8.3.1.2 Successful Operation

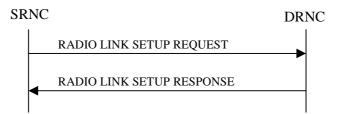


Figure 5: Radio Link Setup procedure: Successful Operation

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

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

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

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.

Transport Channels Handling:

DCH(s):

[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 <u>DCHs</u>.

[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 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.

<u>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.</u>

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

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

If the *DCH 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* <u>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.
 </u>
- 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* <u>Specific Info IE</u> 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.

DSCH(s):

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

[TDD - USCH(s)]:

[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.]

Physical Channels Handling:

[FDD - Compressed Mode]:

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

[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 - DL Code Information]:

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

General:

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

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

Radio Link Handling:

Diversity Combination Control:

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

[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-Transmit Diversity]:

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

[FDD – When *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].

DL Power Control:

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

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

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

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

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

Neighbouring Cell Handling:

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.

General:

[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 *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.]

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.]

[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.]

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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.

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.

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 - Radio Link Set Handling]:

[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 – 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 –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].

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.]

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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 constrains when setting the initial DL TX power. The DRNS shall also include the configured DL TX power range defined by *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK SETUP RESPONSE message.]

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

[TDD If the *Primary CCPCH RSCP* IE and/or the [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.]

Response Message:

At the reception of the RADIO LINK SETUP REQUEST message, DRNS allocates <u>the</u> 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 Serambling 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.]

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[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.]

<u>[FDD</u> 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 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 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.]

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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

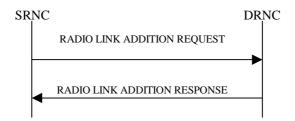


Figure 7: Radio Link Addition procedure: Successful Operation

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.

Transport Channel Handling:

DSCH:

[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.]

Physical Channels Handling:

[FDD-Compressed Mode]:

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Active Pattern Sequence* Information IE, the DRNS shall use the information to 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.]

[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.]

[FDD-DL Code Information]:

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[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 I*", the second to "*PhCH number* 2", and so on until the *p*th to "*PhCH number p*".]

General:

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

Radio Link Handling:

Diversity Combination Control:

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

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.

[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.

[FDD-Transmit Diversity]:

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

[FDD – If the cell in which the RL is being added is capable to provide Close loop Tx diversity, the DRNC shall 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.]

[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).]

DL Power Control:

[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 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 ADDITION REQUEST message, DPC mode 0 shall be applied (see ref. [10]).]

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.

DL Code Information:

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.

Neighbouring Cell Handling:

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.

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.

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

General:

[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.]

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.

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.

[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* <u>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.]</u>

[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-Radio Link Set Handling]:

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

[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].

_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.]

Response message:

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.]

<u>In the case of combining an RL with existing RL(s) the DRNC shall indicate in the RADIO LINK ADDITION</u> 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 Model Support Indicator IE, and Closed Loop Mode2 Support Indicator IE] of the UMTS neighbouring cell.

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

The DRNC shall also provide the configured 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.

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[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.

CHANGE REQUEST						
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For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the <i>x</i> symbols.						
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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:

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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.

8.3.10 Radio Link Restoration

8.3.10.1 General

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

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

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

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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.

8.3.10 Radio Link Restoration

8.3.10.1 General

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

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

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

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

CR-Form-v3 **CHANGE REQUEST** ж 25.423 CR 350 ₩ rev ж Current version: ж 3.5.0 For **HELP** on using this form, see bottom of this page or look at the pop-up text over the **#** symbols. (U)SIM ME/UE Radio Access Network X Core Network Proposed change affects: # Title: **#** Measurement reporting clarification Source: 第 R-WG3 Work item code: # TEI Date: # May 2001 Category: ж F Release: # R99 Use one of the following categories: Use one 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) (Release 1999) R99 Detailed explanations of the above categories can REL-4 (Release 4) be found in 3GPP TR 21.900. REL-5 (Release 5) Reason for change: # The triggering of the measurement reporting is described in the procedure text of measurement initiation procedure. To further clarify the reporting triggering of the different measurement events this CR proposes to include additional pictures where f.ex. repeated events are shown. Summary of change: # A new annex has been added to further clarify the measurement reporting triggering. Updates according to the comments of RAN3 #20: The Report A and Report B and periodic reports have been indicated in the Event E and Event F reporting figures. R1: For events E and F, 'conditions are met' was replaced by 'conditions have been met' and quotation marks were added. R2: a clarification was added in the procedure text regarding the reporting for events C and D. # The current description may cause misinterpretations and problems in multivendor Consequences if not approved: networks. This change is backward compatible. # 8.3.11.2, Annex B Clauses affected: **X** Other core specifications # CR351 (25.423) Rel4 Other specs CR399 (25.433) R99 CR400 (25.433) Rel4

affected:	Test specifications O&M Specifications
Other comments:	X

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.
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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.

8.3.11 Dedicated Measurement Initiation

8.3.11.1 General

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

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

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

8.3.11.2 Successful Operation

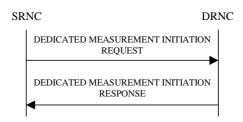


Figure 20: Dedicated Measurement Initiation procedure, Successful Operation

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

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

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

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

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

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

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

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

Report characteristics

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

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

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

If the *Report Characteristics* IE is set to 'Event A', the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event B', the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event C', the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises by an amount greater than the requested threshold within the requested time. <u>After having reported this type of event, the next C event reporting for the same measurement cannot be initiated before the rising/falling time has elapsed since the previous event reporting.</u>

If the *Report Characteristics* IE is set to 'Event D', the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls by an amount greater than the requested threshold within the requested time. After having reported this type of event, the next D event reporting for the same measurement cannot be initiated before the rising/falling time has elapsed since the previous event reporting.

If the *Report Characteristics* IE is set to 'Event E', the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' 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 DRNS shall also initiate the Dedicated 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 DRNS shall initiate the Dedicated Measurement Reporting any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the DRNS shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

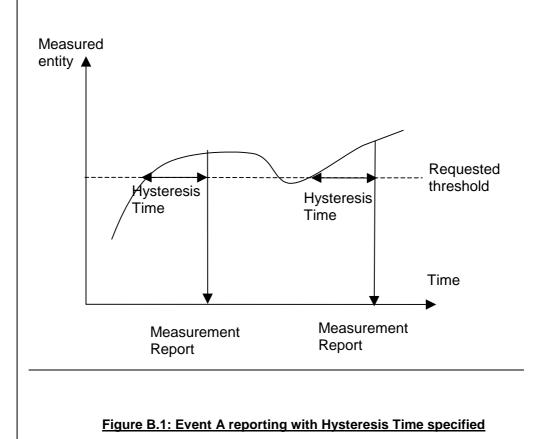
If the *Report Characteristics* IE is set to 'Event F', the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided the DRNS shall also initiate the Dedicated 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 DRNS shall initiate the Dedicated Measurement Reporting any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the DRNS shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

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

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

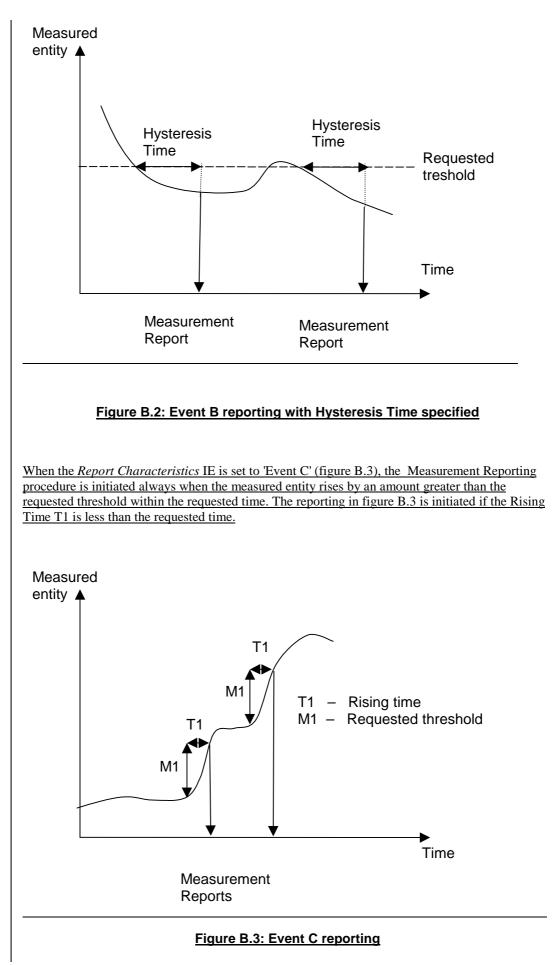
<u>Annex B (informative):</u> Measurement reporting

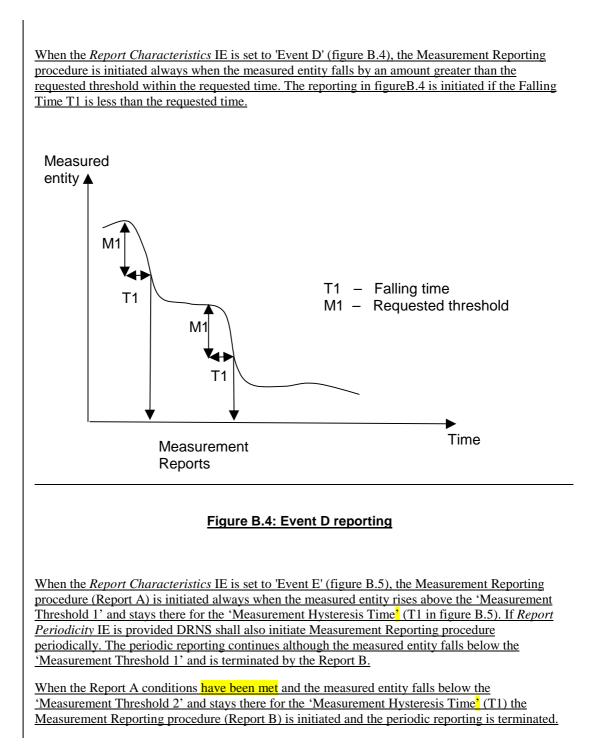
When the *Report Characteristics* IE is set to 'Event A' (figure B.1), the Measurement Reporting procedure is initiated when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the value zero shall be used for the hysteresis time.

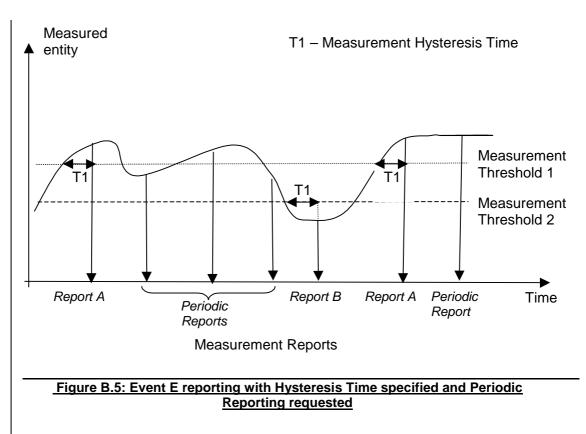


When the *Report Characteristics* IE is set to 'Event B' (figure B.2), the Measurement Reporting procedure is initiated when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the value zero shall be used for the

hysteresis time.

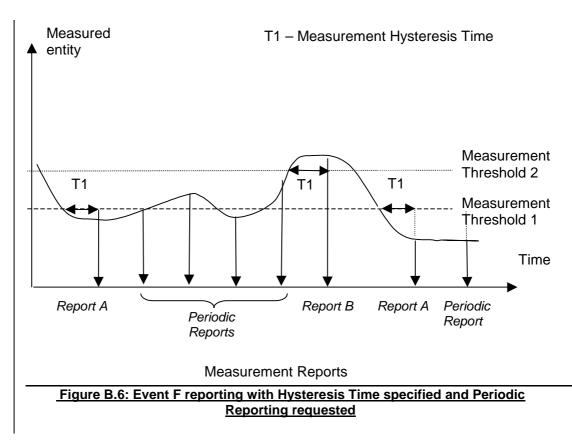






When the *Report Characteristics* IE is set to 'Event F' (figure B.6), the Measurement Reporting procedure (Report A) is initiated always when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (T1 in figure B.6). If *Report Periodicity* IE is provided DRNS shall also initiate Measurement Reporting procedure periodically. The periodic reporting continues although the measured entity rises above the 'Measurement Threshold 1' and is terminated by the Report B.

<u>When the Report A conditions have been met</u> and the measured entity rises above the <u>'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time'</u> (T1) the <u>Measurement Reporting procedure (Report B) is initiated and the periodic reporting is terminated.</u>



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

CR-Form-v3 **CHANGE REQUEST** ж 25.423 CR 351 ₩ rev ж Current version: ж 4.0.0 For **HELP** on using this form, see bottom of this page or look at the pop-up text over the **#** symbols. (U)SIM ME/UE Radio Access Network X Core Network Proposed change affects: # Title: **#** Measurement reporting clarification Source: 第 R-WG3 Work item code: # TEI Date: # May 2001 Category: ж A Release: # REL-4 Use one of the following categories: Use one 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) (Release 1999) R99 Detailed explanations of the above categories can REL-4 (Release 4) be found in 3GPP TR 21.900. REL-5 (Release 5) Reason for change: # The triggering of the measurement reporting is described in the procedure text of measurement initiation procedure. To further clarify the reporting triggering of the different measurement events this CR proposes to include additional pictures where f.ex. repeated events are shown. Summary of change: # A new annex has been added to further clarify the measurement reporting triggering. Updates according to the comments of RAN3 #20: The Report A and Report B and periodic reports have been indicated in the Event E and Event F reporting figures. R1: For events E and F, 'conditions are met' was replaced by 'conditions have been met' and quotation marks were added. R2: a clarification was added in the procedure text regarding the reporting for events C and D. # The current description may cause misinterpretations and problems in multivendor Consequences if not approved: networks. This change is backward compatible. # 8.3.11.2, 8.5.2, Annex B Clauses affected: **X** Other core specifications # CR350 (25.423) R99 Other specs CR399 (25.433) R99

CR400 (25.433) Rel4

Release 4	
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affected:	Test specifications O&M Specifications
Other comments:	X

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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.

8.3.11 Dedicated Measurement Initiation

8.3.11.1 General

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

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

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

8.3.11.2 Successful Operation

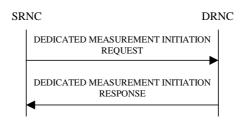


Figure 20: Dedicated Measurement Initiation procedure, Successful Operation

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

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

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

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

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

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

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

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

Report characteristics

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

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

Release 4

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

If the *Report Characteristics* IE is set to 'Event A', the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event B', the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event C', the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises by an amount greater than the requested threshold within the requested time. <u>After having reported this type of event, the next C event reporting for the same measurement cannot be initiated before the rising/falling time has elapsed since the previous event reporting.</u>

If the *Report Characteristics* IE is set to 'Event D', the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls by an amount greater than the requested threshold within the requested time. After having reported this type of event, the next D event reporting for the same measurement cannot be initiated before the rising/falling time has elapsed since the previous event reporting.

If the *Report Characteristics* IE is set to 'Event E', the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' 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 DRNS shall also initiate the Dedicated 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 DRNS shall initiate the Dedicated Measurement Reporting any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the DRNS shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to 'Event F', the DRNS shall initiate the Dedicated Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided the DRNS shall also initiate the Dedicated 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 DRNS shall initiate the Dedicated Measurement Reporting any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the DRNS shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

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

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

5

8.5.2 Common Measurement Initiation

8.5.2.1 General

This procedure is used by an RNC to request the initiation of measurements of common resources to another RNC. The requesting RNC is referred to as RNC_1 and the RNC to which the request is sent is referred to as RNC_2 .

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

8.5.2.2 Successful Operation

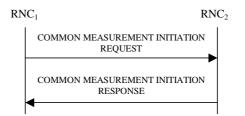


Figure 30A: Common Measurement Initiation procedure, Successful Operation

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. See also Annex B.

If the *Report Characteristics* IE is set to 'On-Demand', the RNC₂ shall report the result of the requested measurement immediately.

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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 RNC_2 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 RNC_2 shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event B', the RNC_2 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 RNC_2 shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event C', the RNC_2 shall initiate a Measurement Reporting procedure when the measured entity rises more than the requested threshold within the requested time. After having reported this type of event, the next C event reporting for the same measurement cannot be initiated before the rising/falling time has elapsed since the previous event reporting.

If the *Report Characteristics* IE is set to 'Event D', the RNC_2 shall initiate a Measurement Reporting procedure when the measured entity falls more than the requested threshold within the requested time. After having reported this type of event, the next D event reporting for the same measurement cannot be initiated before the rising/falling time has elapsed since the previous event reporting.

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 Hysteresis Time' is provided, the RNC₂ shall use the value zero as hysteresis times for both Report A and Report B.

<u>Annex B (informative):</u> Measurement reporting

When the *Report Characteristics* IE is set to 'Event A' (figure B.1), the Measurement Reporting procedure is initiated when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the value zero shall be used for the hysteresis time.

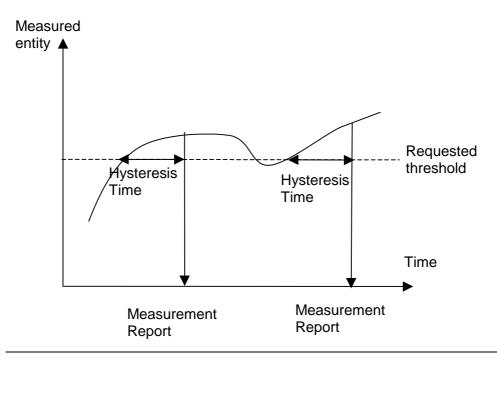
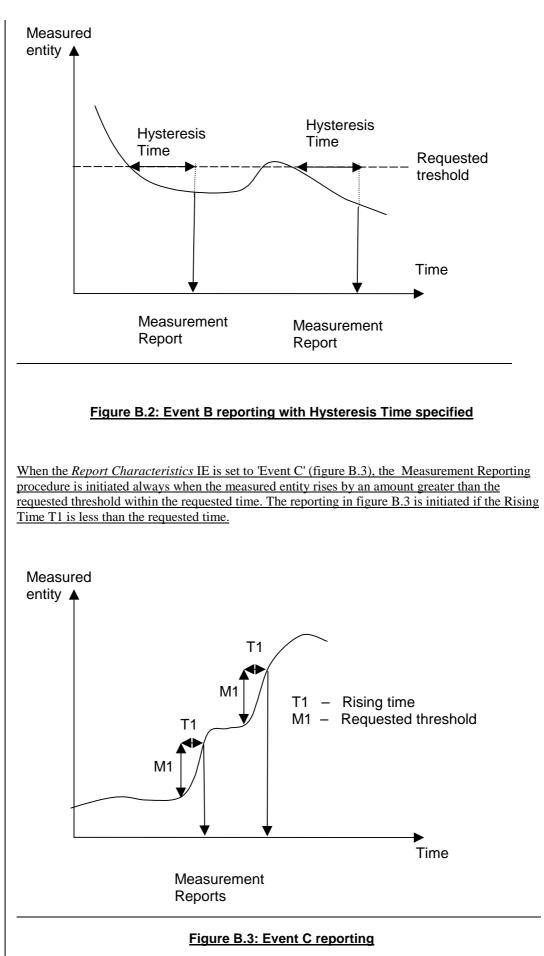
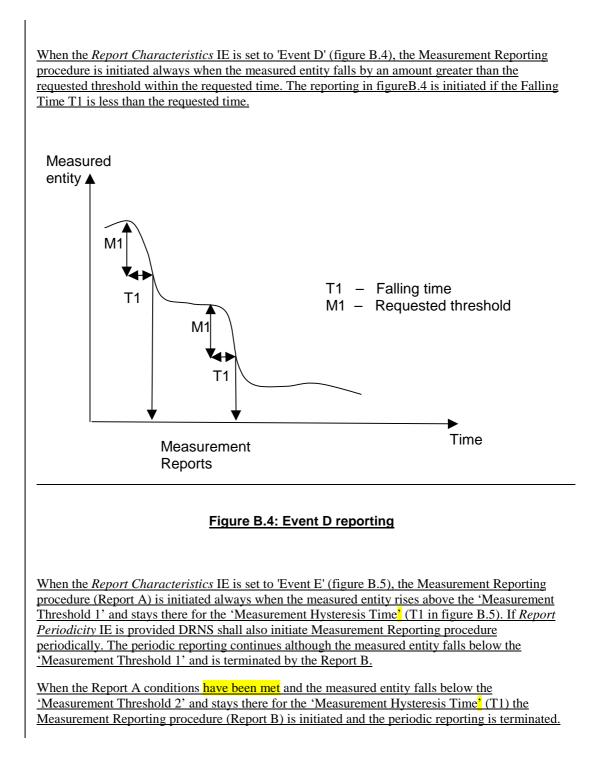
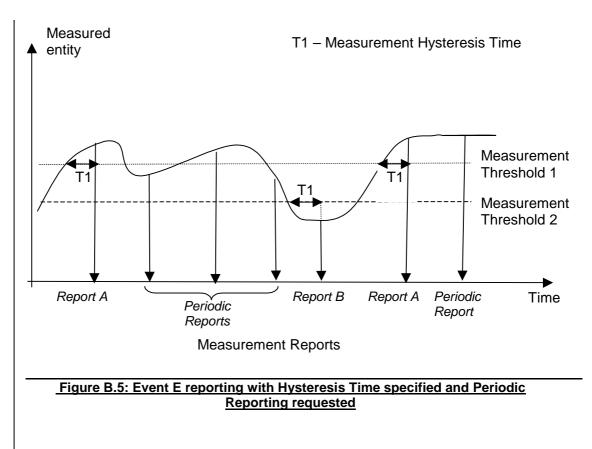


Figure B.1: Event A reporting with Hysteresis Time specified

When the *Report Characteristics* IE is set to 'Event B' (figure B.2), the Measurement Reporting procedure is initiated when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the value zero shall be used for the hysteresis time.

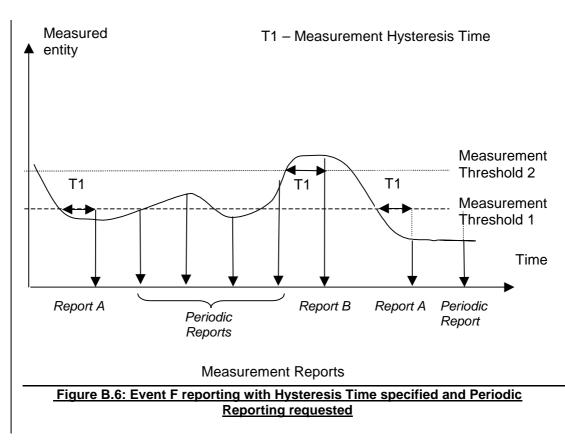






When the *Report Characteristics* IE is set to 'Event F' (figure B.6), the Measurement Reporting procedure (Report A) is initiated always when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (T1 in figure B.6). If *Report Periodicity* IE is provided DRNS shall also initiate Measurement Reporting procedure periodically. The periodic reporting continues although the measured entity rises above the 'Measurement Threshold 1' and is terminated by the Report B.

<u>When the Report A conditions have been met</u> and the measured entity rises above the <u>'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time'</u> (T1) <u>Measurement Reporting procedure (Report B) is initiated and the periodic reporting is terminated.</u>



CR-Form-v3						
ж	25.423 CR 352 # rev - # Current version: 3.5.0 #					
For <u>HELP</u> 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 X Core Network						
Title: ೫	Clarification of Handling of the CM Configuration Change CFN IE					
Source: ೫	R-WG3					
Work item code: ℜ	Date:					
Category: ೫	F Release: # R99					
	Use one of the following categories:Use one 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 canREL-4(Release 4)Defound in 3GPP TR 21.900.REL-5(Release 5)					
Reason for change: # In the current RNSAP specification the handling of the IEs TGCFN in RL Setup and RL Addition effectively block management of the active set (RLs) during the period when compressed mode is being activated, deactivated, or pattern sequences are restarted. This is due to the requirement on all the TGCFNs being passed CFNs. Further more, this requirement effectively reduce the tolerance on signalling delay variation.						
Summary of change	 This CR corrects the Compressed Mode Control function such that the <i>CM</i> <i>Configuration Change CFN</i> IE shall be a passed CFN and the TGCFNs shall be CFNs following within one CFN cycle of the <i>CM Configuration Change CFN</i> IE in the following messages: RADIO LINK SETUP REQUEST RADIO LINK ADDITION REQUEST Changes since R3 #20: The semantics of the <i>CM Configuration Change CFN</i> IE in chapter 9.2.2.A has been removed completely to avoid confusion. This since the <i>CM</i> <i>Configuration Change CFN</i> IE may refer to the time for a) starting new patterns only, b) stopping old patterns only, or c) both starting new patterns and stopping old patterns at the "same time". 					
Consequences if not approved:	 If this CR is not approved the above-described error will remain in the specification. Backward compatibility: This CR is backward compatible for all functions of RNSAP but the Compressed Mode Control Function (which is corrected) with the previous version of RNSAP. Further more, no backward compatible solution to the above-described error have been identified. 					

Clauses affected: # 8.3.1.2, 8.3.2.2, and 9.2.2.A.

Other specs	ж	X Other core specifications #	TS 25.423 CR353 (Rel. 4)		
			TS 25.433 CR401 (Rel. '99)		
			TS 25.433 CR402 (Rel. 4)		
affected:		Test specifications			
		O&M Specifications			
Other comments:	ж	If CR346 is approved, the changed/new paragraphs in chapters 8.3.1.2 and			
		8.3.2.2 shall be placed under the sub-heading Compressed Mode in accordance			
		with CR346.			

ī.

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.

8.3.1.2 Successful Operation

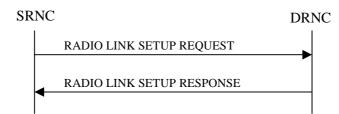


Figure 5: Radio Link Setup procedure: Successful Operation

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 constrains when setting the initial DL TX power. The DRNS shall also include the configured DL TX power range defined by *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK SETUP RESPONSE message.]

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

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

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

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

[FDD – The DRNS shall start the DL transmission using the indicated DL TX power level (if received) or the decided DL TX power level on each DL channelisation code of a RL until UL synchronisation is achieved 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 <u>use the information to immediately</u>-activate the indicated Transmission Gap Pattern Sequences(s) in the new RL.÷ The received *CM Configuration Change CFN* IE for each sequence the *TGCFN* refers to latest passed CFN with that value. The DRNS shall treat the received *TGCFN* IEs as follows:]

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

[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

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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.

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[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 <u>the</u> *UARFCN* IE, the *Cell Parameter ID* IE, the *Sync Case* IE, the *SCH Time Slot* IE, the *Block STTD Indicator* <u>IE</u>, 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.

8.3.2.2 Successful Operation

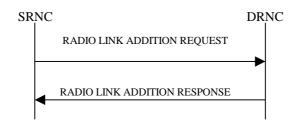


Figure 7: Radio Link Addition procedure: Successful Operation

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 the indicated (all ongoing) Transmission Gap Pattern Sequence(s) also in the new RL. The received *CM Configuration Change CFN* IE For each sequence the *TGCFN* refers to the latest passed CFN with that value. The DRNS shall treat the received *TGCFN* IEs as follows:]

- [FDD If any received *TGCFN* IE has the same value as the received *CM Configuration Change CFN* IE, the DRNS shall consider the concerning Transmission Gap Pattern Sequence as activated at that CFN.]
- [FDD If any received TGCFN IE does not have the same value as the received CM Configuration Change CFN IE but the first CFN after the CM Configuration Change CFN with a value equal to the TGCFN IE has already passed, the DRNS shall consider the concerning Transmission Gap Pattern Sequence as activated at that CFN.]

 <u>FDD - For all other Transmission Gap Pattern Sequences included in the Active Pattern Sequence Information</u> <u>IE, the DRNS shall activate each Transmission Gap Pattern Sequence at the first CFN after the CM</u> Configuration Change CFN with a value equal to the *TGCFN* IE for the Transmission Gap Pattern Sequence.]

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<u>FDD -</u> If <u>the Active Pattern Sequence Information</u> 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 Model Support Indicator* IE, and *Closed Loop Mode2 Support Indicator* IE] of the UMTS neighbouring cell.

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

The DRNC shall also provide the configured 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.

9.2.2.A Active Pattern Sequence Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CM Configuration Change CFN	М		CFN 9.2.1.9	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></maxtgps>		If the group is not present, none of the pattern sequences are activated.
>TGPSI Identifier	Μ		INTEGER(1. . <maxtgps >)</maxtgps 	Establish a reference to the compressed mode pattern sequence. Up to <maxaps> simultaneous compressed mode pattern sequences can be activated.</maxaps>
>TGPRC	M		INTEGER(0. .63)	The number of transmission gap patterns within the Transmission Gap Pattern Sequence. 0=Infinity.
>TGCFN	М		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.

CHANGE REQUEST						CR-Form-v3							
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Clauses affected: # 8.3.1.2, 8.3.2.2, and 9.2.2.A.

Other specs affected:	ж	Test specifications	TS 25.423 CR352 (Rel. '99) TS 25.433 CR401 (Rel. '99) TS 25.433 CR402 (Rel. 4)
Other comments:	Ħ		/new paragraphs in chapters 8.3.1.2 and ub-heading Compressed Mode in accordance

How to create CRs using this form:

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

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

8.3.1.2 Successful Operation

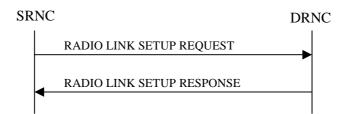


Figure 5: Radio Link Setup procedure: Successful Operation

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 constrains when setting the initial DL TX power. The DRNS shall also include the configured DL TX power range defined by *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK SETUP RESPONSE message.]

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

[TDD - If the *Primary CCPCH RSCP* IE and/or the [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 use the information to immediately activate the indicated Transmission Gap Pattern Sequences(s) in the new RL.÷ The received *CM Configuration Change CFN* IE for each sequence the *TGCFN* refers to latest passed CFN with that value. The DRNS shall treat the received *TGCFN* IEs as follows:]

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

[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 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 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* <u>IE</u>, 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.

8.3.2.2 Successful Operation

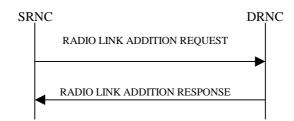


Figure 7: Radio Link Addition procedure: Successful Operation

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 [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* 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 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 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 the indicated (all ongoing) Transmission Gap Pattern Sequence(s) also in the new RL. The received *CM Configuration Change CFN* IE For each sequence the *TGCFN* refers to the latest passed CFN with that value. The DRNS shall treat the received *TGCFN* IEs as follows:]

- [FDD - If any received *TGCFN* IE has the same value as the received *CM Configuration Change CFN* IE, the DRNS shall consider the concerning Transmission Gap Pattern Sequence as activated at that CFN.]

- [FDD - If any received TGCFN IE does not have the same value as the received CM Configuration Change CFN IE but the first CFN after the CM Configuration Change CFN with a value equal to the TGCFN IE has already passed, the DRNS shall consider the concerning Transmission Gap Pattern Sequence as activated at that CFN.]

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 <u>FDD - For all other Transmission Gap Pattern Sequences included in the Active Pattern Sequence Information</u> <u>IE, the DRNS shall activate each Transmission Gap Pattern Sequence at the first CFN after the CM</u> Configuration Change CFN with a value equal to the *TGCFN* IE for the Transmission Gap Pattern Sequence.]

<u>FDD - If the 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.]</u>

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.

[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

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.

9.2.2.A Active Pattern Sequence Information

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

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CM Configuration Change CFN	М		CFN 9.2.1.9	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></maxtgps>		If the group is not present, none of the pattern sequences are activated.
>TGPSI Identifier	М		INTEGER(1. . <maxtgps >)</maxtgps 	Establish a reference to the compressed mode pattern sequence. Up to <maxaps> simultaneous compressed mode pattern sequences can be activated.</maxaps>
>TGPRC	M		INTEGER(0. .63)	The number of transmission gap patterns within the Transmission Gap Pattern Sequence. 0=Infinity.
>TGCFN	М		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.

R3-011382

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

CHANGE REQUEST					
[#] 25.423	CR 354 [#] rev _ [#] Current version: 3.5.0 [#]				
For <u>HELP</u> on using	this form, see bottom of this page or look at the pop-up text over the $#$ symbols.				
Proposed change affec	ts: # (U)SIM ME/UE Radio Access Network X Core Network				
Title: ೫ Co	rrection to the UMTS neighbouring cell handling.				
Source: # R-	NG3				
Work item code: ೫ <mark>⊤</mark> Е	Date: #				
Category: ж F	Release: # R99				
Deta	oneof the following categories:Use oneof 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)billed explanations of the above categories canREL-4(Release 4)bund in 3GPP TR 21.900.REL-5(Release 5)				
Reason for change: ℜ	 The <i>TX Diversity Indicator</i> IE has been indicated to be optional in the <i>Neighbouring FDD Cell Information</i> IE for the UMTS neighbouring cells controlled by other RNCs in the Radio Link Setup and Addition procedure text. However, the <i>TX Diversity Indicator</i> IE is mandatory. Editorial changes to the procedure text: Handling of the mandatory IEs was removed. 				
Summary of change: ¥	 Handling of the <i>TX Diversity Indicator</i> IE in the Radio Link Setup and Addition procedure text was removed. Editorial changes to the procedure text: Handling of the mandatory IEs was removed. 				
Consequences if % not approved:	If this CR is not approved this erroneous description will remain in the specification. Backward compatibility:				
	This CR is backward compatible.				
Clauses affected: #	8.3.1.2 and 8.3.2.2				
Other specs ℜ affected:	XOther core specifications#CR355 Rel-4, CR346 R99Test specifications0&M Specifications				
Other comments: ೫					

How to create CRs using this form:

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

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

8.3.1 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

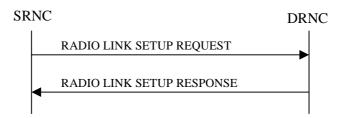


Figure 5: Radio Link Setup procedure: Successful Operation

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 constrains when setting the initial DL TX power. The DRNS shall also include the configured DL TX power range defined by *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK SETUP RESPONSE message.]

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

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

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

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

[FDD – The DRNS shall start the DL transmission using the indicated DL TX power level (if received) or the decided DL TX power level on each DL channelisation code of a RL until UL synchronisation is achieved 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 UMTS neighbouring cell(s) to the cell in which a Radio Link was established then:

 <u>The DRNC shall include the Neighbouring FDD Cell Information IE and/or Neighbouring TDD Cell Information IE</u> in the Neighbouring UMTS Cell Information IE for each neighbouring FDD cell and/or TDD cell respectively. In addition, if the information is available, the DRNC shall include the Frame Offset IE, Primary CPICH Power IE, Cell Individual Offset IE, STTD Support Indicator IE, Closed Loop Model Support Indicator IE and Closed Loop

<u>Mode2 Support Indicator IE in the Neighbouring FDD Cell Information IE</u>, and the Frame Offset IE, Cell <u>Individual Offset IE</u>, DPCH Constant Value IE and the PCCPCH Power IE in the Neighbouring TDD Cell <u>Information IE</u>.

 If a UMTS neighbouring cell is not controlled by the same DRNC, the DRNC shall also include the CN PS Domain Identifier IE and/or CN CS Domain Identifier IE which are the identifiers of the CN nodes connected to the RNC controlling the UMTS neighbouring cell.

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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 <u>the</u> *UARFCN* IE, the *Cell Parameter ID* IE, the *Sync Case* IE, the *SCH Time Slot* IE, the *Block STTD Indicator* <u>IE</u>, 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

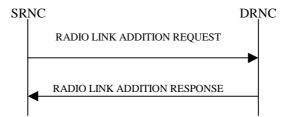


Figure 7: Radio Link Addition procedure: Successful Operation

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 Model Support Indicator IE, and Closed Loop Mode2 Support Indicator IE] of the UMTS neighbouring cell.

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

- The DRNC shall include the Neighbouring FDD Cell Information IE and/or Neighbouring TDD Cell Information IE in the Neighbouring UMTS Cell Information IE for each neighbouring FDD cell and/or TDD cell respectively. In addition, if the information is available, the DRNC shall include the Frame Offset IE, Primary CPICH Power IE,

Cell Individual Offset IE, STTD Support Indicator IE, Closed Loop Model Support Indicator IE and Closed Loop Mode2 Support Indicator IE in the Neighbouring FDD Cell Information IE, and the Frame Offset IE, Cell Individual Offset IE, DPCH Constant Value IE and the PCCPCH Power IE in the Neighbouring TDD Cell Information IE.

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 If a UMTS neighbouring cell is not controlled by the same DRNC, the DRNC shall also include the CN PS Domain Identifier IE and/or CN CS Domain Identifier IE which are the identifiers of the CN nodes connected to the RNC controlling the UMTS neighbouring cell.

If 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.

CHANGE REQUEST					
[#] 25.4	423 CR 355 # rev _ # Cu	rrent version: <mark>4.0.0</mark> [#]			
For <u>HELP</u> on us	sing this form, see bottom of this page or look at the po	op-up text over the 策 symbols.			
Proposed change a	affects: ¥ (U)SIM ME/UE Radio Acces	ss Network X Core Network			
Title: ¥	Correction to the UMTS neighbouring cell handling.				
Source: ¥	R-WG3				
Work item code: ℜ	TEI	Date: ₩ May 2001			
Category: #	A Re	elease: # 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	 * The TX Diversity Indicator IE has been indicated Neighbouring FDD Cell Information IE for the UN by other RNCs in the Radio Link Setup and Addit TX Diversity Indicator IE is mandatory. Editorial changes to the procedure text: Handlin removed. 	ITS neighbouring cells controlled tion procedure text. However, the			
Summary of chang	 Handling of the <i>TX Diversity Indicator</i> IE in the procedure text was removed. Editorial changes to the procedure text: Han removed. 				
Consequences if not approved:	 If this CR is not approved this erroneous description specification. Backward compatibility: This CR is backward compatible. 	otion will remain in the			
Clauses affected:	# 8.3.1.2 and 8.3.2.2				
Other specs affected:		9, CR347 Rel-4			
Other comments:	¥				

How to create CRs using this form:

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

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

8.3 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

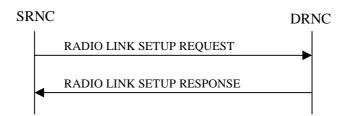


Figure 5: Radio Link Setup procedure: Successful Operation

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 constrains when setting the initial DL TX power. The DRNS shall also include the configured DL TX power range defined by *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK SETUP RESPONSE message.]

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

[TDD - If the *Primary CCPCH RSCP* IE and/or the [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 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 UMTS neighbouring cell(s) to the cell in which a Radio Link was established then:

- The DRNC shall include the Neighbouring FDD Cell Information IE and/or Neighbouring TDD Cell Information IE in the Neighbouring UMTS Cell Information IE for each neighbouring FDD cell and/or TDD cell respectively. In addition, if the information is available, the DRNC shall include the Frame Offset IE, Primary CPICH Power IE, Cell Individual Offset IE, STTD Support Indicator IE, Closed Loop Model Support Indicator IE and Closed Loop Mode2 Support Indicator IE in the Neighbouring FDD Cell Information IE, and the Frame Offset IE, Cell Individual Offset IE, DPCH Constant Value IE and the PCCPCH Power IE in the Neighbouring TDD Cell Information IE.
- If a UMTS neighbouring cell is not controlled by the same DRNC, the DRNC shall also include the CN PS Domain Identifier IE and/or CN CS Domain Identifier IE which are the identifiers of the CN nodes connected to the RNC controlling the UMTS neighbouring cell.

If 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 <u>the</u> *UARFCN* IE, the *Cell Parameter ID* IE, the *Sync Case* IE, the *SCH Time Slot* IE, the *Block STTD Indicator* <u>IE</u>, 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*

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

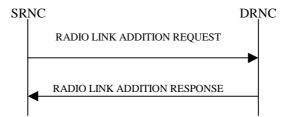


Figure 7: Radio Link Addition procedure: Successful Operation

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 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 [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* 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 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 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 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.

[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 Model Support Indicator* IE, and *Closed Loop Mode2 Support Indicator* IE] of the UMTS neighbouring cell.

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

- The DRNC shall include the Neighbouring FDD Cell Information IE and/or Neighbouring TDD Cell Information IE in the Neighbouring UMTS Cell Information IE for each neighbouring FDD cell and/or TDD cell respectively. In addition, if the information is available, the DRNC shall include the Frame Offset IE, Primary CPICH Power IE, Cell Individual Offset IE, STTD Support Indicator IE, Closed Loop Model Support Indicator IE and Closed Loop Mode2 Support Indicator IE in the Neighbouring FDD Cell Information IE, and the Frame Offset IE, Cell Individual Offset IE, DPCH Constant Value IE and the PCCPCH Power IE in the Neighbouring TDD Cell Information IE.
- If a UMTS neighbouring cell is not controlled by the same DRNC, the DRNC shall also include the CN PS Domain Identifier IE and/or CN CS Domain Identifier IE which are the identifiers of the CN nodes connected to the RNC controlling the UMTS neighbouring cell.

If 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 or *USCH 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.

CR-Form-v3 CHANGE REQUEST					
ж	25.423 CR 356 ^{# rev} - ^{# Cu}	rrent version: 3.5.0 [¥]			
For <mark>HELP</mark> on usi	ing this form, see bottom of this page or look at the po	op-up text over the X symbols.			
Proposed change af	fects: 業 (U)SIM ME/UE Radio Acces	s Network X Core Network			
Title: ¥	Clarification of Handling of the Initial DL Tx Power in	RL Addition			
Source: ೫	R-WG3				
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D	 Jse <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. 	Jse <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 the current RNSAP specification the handling RL Addition procedure is ambiguous in the case information is provided to the DRNS (Primary CL CCPCH RSCP and DL Time Slot ISCP in TDD). TX Power shall be set "accordingly to the power However, it is unclear that this refers to the power CPICH in FFD and the Primary CCPCH in TDD power).	where no measurement PICH Ec/No in FFD, Primary It is specified that the Initial DL used by the existing RLs". er level relative to the Primary			
Summary of change.	 # This CR clarifies that the DRNS shall a) set the Initial DL TX Power based on the point CPICH power used by the existing RLs in Fluctuation of the Initial DL TX Power based on the point CCPCH power used by the existing RL in TI 	DD. wer relative to the Primary			
Consequences if not approved:	# If this CR is not approved the above described u the specification.	Inclear description will remain in			
	Backward compatibility: This CR is backward compatible with the previou	us version of RNSAP.			
Clauses affected:	¥ 8.3.2.2				
Other specs affected:	XOther core specifications#TS 25.423Test specifications0&M Specifications	CR357 (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 <u>ftp://www.3gpp.org/specs/</u> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3.2.2 Successful Operation

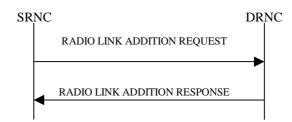


Figure 7: Radio Link Addition procedure: Successful Operation

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 <u>for an RL</u> in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power<u>for this RL</u>. If the *Primary CPICH Ec/No* IE is not present, the DRNS <u>sets shall set</u> the Initial DL TX Power<u>accordingly to based on</u> the power relative to the Primary CPICH 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 shall set the Initial DL TX Power accordingly to based on the power relative to the Primary CCPCH 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 Model Support Indicator* IE, and *Closed Loop Mode2 Support Indicator* IE] of the UMTS neighbouring cell.

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

The DRNC shall also provide the configured 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.

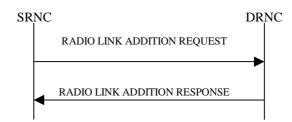
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Reason for change: S	In the current RNSAP specification the handling RL Addition procedure is ambiguous in the case information is provided to the DRNS (Primary CL CCPCH RSCP and DL Time Slot ISCP in TDD). TX Power shall be set "accordingly to the power However, it is unclear that this refers to the power CPICH in FFD and the Primary CCPCH in TDD power).	e where no measurement PICH Ec/No in FFD, Primary . It is specified that the Initial DL r used by the existing RLs". er level relative to the Primary
Summary of change: S	 This CR clarifies that the DRNS shall a) set the Initial DL TX Power based on the po CPICH power used by the existing RLs in F b) set the Initial DL TX Power based on the po CCPCH power used by the existing RL in T 	DD. wer relative to the Primary
Consequences if not approved:	If this CR is not approved the above described unter the specification.	unclear description will remain in
	Backward compatibility: This CR is backward compatible with the previou	us version of RNSAP.
Clauses affected:	₭ 8.3.2.2	
Other specs	XOther core specifications%TS 25.423Test specifications0&M Specifications0	CR356 (Rel. ´99)
Other comments:	¥	

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8.3.2.2 Successful Operation



3

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 <u>for an RL</u> in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power<u>for this RL</u>. If the *Primary CPICH Ec/No* IE is not present, the DRNS <u>sets shall set</u> the Initial DL TX Power<u>accordingly to based on</u> the power relative to the Primary CPICH 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 shall set the Initial DL TX Power accordingly to based on the power relative to the Primary CCPCH 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 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 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 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.

[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 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.

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.

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Other comments:	ж													

How to create CRs using this form:

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

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

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

9.1.4 RADIO LINK SETUP RESPONSE

9.1.4.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		_	· · ·
D-RNTI	0		9.2.1.24		YES	ignore
CN PS Domain Identifier	0		9.2.1.12		YES	ignore
CN CS Domain Identifier	0		9.2.1.11		YES	ignore
RL Information Response		1 <maxno ofRLs></maxno 			EACH	ignore
>RL ID	М		9.2.1.49		_	
>RL Set ID	М		9.2.2.35		_	
>URA Information	0		9.2.1.70B		_	
>SAI	М		9.2.1.52		-	
>Cell GAI	0		9.2.1.5A		-	
>UTRAN Access Point Position	0		9.2.1.70A		-	
>Received Total Wide Band Power	М		9.2.2.35A		-	
>Secondary CCPCH Info	0		9.2.2.37B		_	
>DL Code Information	М		FDD DL Code Information 9.2.2.14A		_	
>Diversity Indication	C- NotFirstRL		9.2.1.21		-	
>CHOICE Diversity Indication	М				-	
>>Combining					-	
>>>RL ID	М		9.2.1.49	Reference RL ID for the combining	-	
>>Non Combining or First RL					-	
>>>DCH Information Response	М		9.2.1.16A		—	
>SSDT Support Indicator	М		9.2.2.43		_	
>Maximum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>Minimum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>Closed Loop Timing Adjustment Mode	0		9.2.2.3A		-	
>Maximum Allowed UL Tx Power	М		9.2.1.35		-	
>Maximum DL TX Power	М		DL Power 9.2.2.10		-	
>Minimum DL TX Power	М		DL Power 9.2.2.10		-	
>Primary Scrambling Code	0		9.2.1.45		_	
>UL UARFCN	0		UARFCN 9.2.1.66	Corresponds to Nu in ref. [6]	_	
>DL UARFCN	0		UARFCN 9.2.1.66	Corresponds to Nd in ref. [6]	_	
>Primary CPICH Power	0		9.2.1.44		_	
>DSCH Information Response	0		DSCH FDD Information Response 9.2.2.13B		YES	ignore

Draft 3GPP TS 25.433 V 3.5.0 (2001-03) Release 1999 4 Assigned Criticality IE/Group Name IE type Criticality Presence Range Semantics description and reference >Neighbouring UMTS Cell 0 9.2.1.41A _ Information >Neighbouring GSM Cell Information 0 9.2.1.41C _YES ignore >PC Preamble Μ 9.2.2.27a _ >SRB Delay Uplink SIR Target Μ 9.2.2.39A _ Uplink SIR 9.2.1.69 0 YES ignore **Criticality Diagnostics** 9.2.1.13 YES ignore 0

9.1.4.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		_	
D-RNTI	0		9.2.1.24		YES	ignore
CN PS Domain Identifier	0		9.2.1.12		YES	ignore
CN CS Domain Identifier	0		9.2.1.11		YES	ignore
RL Information Response		1	0.2		YES	ignore
>RL ID	М	-	9.2.1.49			ignere
>URA Information	0		9.2.1.70B		_	
>SAI	M		9.2.1.52		_	
>Cell GAI	0		9.2.1.5A		_	
>UTRAN Access Point	0		9.2.1.70A		_	
Position	Ŭ		0.2.1.10/1			l
>UL Time Slot ISCP Info	М		9.2.3.13D		_	
>Maximum Uplink SIR	M		Uplink SIR		_	
	101		9.2.1.69			1
>Minimum Uplink SIR	М		Uplink SIR		_	
	101		9.2.1.69			l
>Maximum Allowed UL Tx	М		9.2.1.35			
Power			3.2.1.00		_	
>Maximum DL TX Power	Μ		DL Power			
			9.2.2.10		_	
>Minimum DL TX Power	M		DL Power			<u> </u>
	IVI		9.2.2.10		-	1
>UARFCN	0		UARFCN	Corresponds		<u> </u>
>UARFON	0		9.2.1.66	to Nt in ref.	—	l
			9.2.1.00			l
>Cell Parameter ID	0		9.2.1.8	[7]		<u> </u>
					_	
>Sync Case	0		9.2.1.54		_	
>SCH Time Slot	C-Case2		9.2.1.51		—	
>Block STTD Indicator	0		9.2.3.A		_	
>PCCPCH Power	0		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	М		9.2.3.7E		-	l
Configuration	-					
>Secondary CCPCH Info TDD	0		9.2.3.7B		-	
>UL CCTrCH Information		0 <maxno ofCCTrCH s></maxno 		For DCH	GLOBAL	ignore
>>CCTrCH ID	М		9.2.3.2		-	
>>UL DPCH Information	1	01	1		YES	ignore
>>>Repetition Period	М	1	9.2.3.7		_	
>>>Repetition Length	M		9.2.3.6		_	
>>>TDD DPCH Offset	M		9.2.3.8A		_	
>>UL Timeslot	M		9.2.3.13C		_	
Information						
>DL CCTrCH Information		0 <maxno< td=""><td></td><td>For DCH</td><td>GLOBAL</td><td>ignore</td></maxno<>		For DCH	GLOBAL	ignore
		ofCCTrCH s>				ignoro
>>CCTrCH ID	Μ		9.2.3.2		_	
>>DL DPCH Information		01			YES	ignore
>>>Repetition Period	М		9.2.3.7			
>>>Repetition Length	Μ		9.2.3.6		_	
>>>TDD DPCH Offset	M		9.2.3.8A		_	1
>>>DL Timeslot Information	M		9.2.3.2C			
>DCH Information Response	0		9.2.1.16A		YES	ignore
>DSCH Information	, Č	0	0.2.1.10/		GLOBAL	ignore
Response	1	<maxnoof< td=""><td>1</td><td></td><td>GLODAL</td><td>ignore</td></maxnoof<>	1		GLODAL	ignore

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

9.1.5 RADIO LINK SETUP FAILURE

9.1.5.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	Μ		9.2.1.59		_	
D-RNTI	0		9.2.1.24		YES	ignore
CN PS Domain Identifier	0		9.2.1.12		YES	ignore
CN CS Domain Identifier	0		9.2.1.11		YES	ignore
CHOICE Cause Level	M				YES	ignore
>General					_	ignere
>>Cause	М		9.2.1.5		_	
>RL Specific	101		0.2.1.0		_	
>>Unsuccessful RL		1 <maxn< td=""><td></td><td></td><td>EACH</td><td>Ignore</td></maxn<>			EACH	Ignore
Information Response		oofRLs>			LACIT	ignore
>>>RL ID	М	00ITLS>	9.2.1.49			
	M		9.2.1.49		_	
>>>Cause	IVI		9.2.1.5		-	
>>Successful RL		0 <maxno< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxno<>			EACH	ignore
Information Response		ofRLs-1>				
>>>RL ID	M	ļ	9.2.1.49		_	
>>>RL Set ID	М		9.2.2.35		-	
>>>URA Information	0		9.2.1.70B		_	
>>>SAI	М		9.2.1.52		_	
>>>Cell GAI	0		9.2.1.5A		_	
>>>UTRAN Access Point Position	0		9.2.1.70A		_	
>>>Received Total Wide Band Power	М		9.2.2.35A		-	
>>>Secondary CCPCH Info	0		9.2.2.37B		-	
>>>DL Code Information	M		FDD DL Code Information 9.2.2.14A		YES	ignore
>>>Diversity Indication	М		9.2.1.21			
>>>CHOICE Diversity	M		3.2.1.21			
Indication					_	
>>>>Combining	N.4		0.0.4.40	Deferre	-	
>>>>RL ID	M		9.2.1.49	Reference RL ID for the combining	_	
>>>Non Combining or First RL					_	
>>>>DCH Information Response	Μ		9.2.1.16A		_	
>>>SSDT Support Indicator	М		9.2.2.43		-	
>>>Maximum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>>>Minimum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>>>Closed Loop Timing Adjustment Mode	0		9.2.2.3A		-	
>>>Maximum Allowed UL Tx Power	М		9.2.1.35		-	
>>>Maximum DL TX Power	М		DL Power 9.2.2.10		-	
>>>Minimum DL TX Power	М		DL Power 9.2.2.10		-	
>>>DSCH Information Response	0		DSCH FDD Information Response 9.2.2.13B		YES	ignore

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

9.1.7 RADIO LINK ADDITION RESPONSE

9.1.7.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		_	
RL Information Response		1 <maxnoof RLs-1></maxnoof 	0.2		EACH	ignore
>RL ID	Μ		9.2.1.49		-	
>RL Set ID	Μ		9.2.2.35		-	
>URA Information	0		9.2.1.70B		-	
>SAI	Μ		9.2.1.52		-	
>Cell GAI	0		9.2.1.5A		-	
>UTRAN Access Point Position	0		9.2.1.70A		-	
>Received Total Wide Band Power	М		9.2.2.35A		-	
>Secondary CCPCH Info	0		9.2.2.37B		_	
>DL Code Information	M		FDD DL Code Information 9.2.2.14A		YES	ignore
>Diversity Indication	М		9.2.1.21		_	
>CHOICE Diversity Indication	М				-	
>>Combining				5 /	_	
>>>RL ID	М		9.2.1.49	Reference RL ID	-	
>>Non Combining					_	
>>>DCH Information Response	М		9.2.1.16A		-	
>SSDT Support Indicator	М		9.2.2.43		-	
>Minimum Uplink SIR	Μ		Uplink SIR		-	
			9.2.1.69			
>Maximum Uplink SIR	М		Uplink SIR		-	
			9.2.1.69			
>Closed Loop Timing Adjustment Mode	0		9.2.2.3A		-	
>Maximum Allowed UL Tx Power	M		9.2.1.35		—	
>Maximum DL TX Power	M		DL Power 9.2.2.10		-	
>Minimum DL TX Power	М		DL Power 9.2.2.10		-	
>Neighbouring UMTS Cell Information	0		9.2.1.41A		-	
>Neighbouring GSM Cell Information	0		9.2.1.41C		<u>_¥ES</u>	ignore
>PC Preamble	М		9.2.2.27a		_	
>SRB Delay	М		9.2.2.39A		_	
Criticality Diagnostics	0		9.2.1.13		YES	ignore

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

9.1.7.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		_	
RL Information Response		1			YES	ignore
>RL ID	М		9.2.1.49		_	ignere
>URA Information	0		9.2.1.70B		_	
>SAI	M		9.2.1.52		_	
>Cell GAI	0		9.2.1.52 9.2.1.5A			
>UTRAN Access Point	0		9.2.1.5A 9.2.1.70A		-	
Position	-				_	
>UL Time Slot ISCP Info	М		9.2.3.13D		-	
>Minimum Uplink SIR	М		Uplink SIR 9.2.1.69		_	
>Maximum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>Maximum Allowed UL Tx Power	М		9.2.1.35		-	
>Maximum DL TX Power	М		DL Power		_	
	1		9.2.2.10	-	+	
>Minimum DL TX Power	М		DL Power		-	
			9.2.2.10			
>Timing Advance Applied	М		9.2.3.12A		-	
>Alpha Value	М		9.2.3.a		_	<u> </u>
>UL PhysCH SF Variation	М		9.2.3.13B		—	
>Synchronisation Configuration	М		9.2.3.7E		-	
>Secondary CCPCH Info TDD	0		9.2.3.7B		_	
>UL CCTrCH Information		0 <maxnoof CCTrCHs></maxnoof 		For DCH	GLOBAL	ignore
>>CCTrCH ID	М		9.2.3.2		_	
>>UL DPCH Information		01			YES	ignore
>>>Repetition Period	М		9.2.3.7		_	
>>>Repetition Length	M		9.2.3.6			
	M					
>>>TDD DPCH Offset			9.2.3.8A		-	
>>>UL Timeslot Information	М		9.2.3.13C		_	
>DL CCTrCH Information		0 <maxnoof CCTrCHs></maxnoof 		For DCH	GLOBAL	ignore
>>CCTrCH ID	М		9.2.3.2		-	
>>DL DPCH		01			YES	ignore
Information		-				
>>>Repetition Period	М	1	9.2.3.7	1	_	
>>>Repetition Length	M		9.2.3.6		_	
>>>TDD DPCH Offset	M		9.2.3.8A			
>>>DL Timeslot	M		9.2.3.8A 9.2.3.2C			<u> </u>
	IVI		9.2.3.20		-	
Information >DCH Information		0.1				
	N4	01	0.0.4.04		-	
>>Diversity Indication	M		9.2.1.21	-	-	
>>CHOICE Diversity Indication	М				_	
>>>Combining					_	
>>>RL ID	М		9.2.1.49	Reference RL	-	
>>>Non Combining					_	
>>>>DCH Information	М		9.2.1.16A		-	
Response >DSCH Information		0			GLOBAL	ignore
Response		<maxnoof DSCHs></maxnoof 				
>>DSCH ID	М		9.2.1.26A		-	

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

9.1.8 RADIO LINK ADDITION FAILURE

9.1.8.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	М	ľ	9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		-	
CHOICE Cause Level	М				YES	ignore
>General					_	
>>Cause	М		9.2.1.5		_	
>RL Specific					_	
>>Unsuccessful RL Information Response		1 <maxnoof RLs-1></maxnoof 			EACH	ignore
>>>RL ID	М		9.2.1.49		_	
>>Cause	M		9.2.1.5		_	
>>Successful RL		0 <maxnoof< td=""><td>0.2.1.0</td><td></td><td>EACH</td><td>ignore</td></maxnoof<>	0.2.1.0		EACH	ignore
Information Response		RLs-2>	0.0.4.40		LAGIT	ignore
>>>RL ID	M		9.2.1.49		-	
>>>RL Set ID	M		9.2.2.35		-	
>>>URA Information	0		9.2.1.70B		_	
>>>SAI	М		9.2.1.52		-	
>>>Cell GAI	0		9.2.1.5A		-	
>>>UTRAN Access Point Position	0		9.2.1.70A		-	
>>>Received Total Wide Band Power	M		9.2.2.35A		-	
>>>Secondary CCPCH Info	0		9.2.2.37B		_	
>>>DL Code Information	M		FDD DL Code Information 9.2.2.14A		YES	ignore
>>>Diversity Indication	М		9.2.1.21		_	
>>>CHOICE Diversity Indication	M				-	
>>>Combining					_	
>>>>RL ID	М		9.2.1.49	Reference RL ID	_	
>>>Non Combining					_	
>>>>DCH Information Response	М		9.2.1.16A		-	
>>>SSDT Support Indicator	M		9.2.2.43		-	
>>>Minimum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>>>Maximum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>>>Closed Loop Timing Adjustment Mode	0		9.2.2.3A		-	
>>>Maximum Allowed UL Tx Power	М		9.2.1.35		_	
>>>Maximum DL TX Power	М		DL Power 9.2.2.10		-	
>>>Minimum DL TX Power	М		DL Power 9.2.2.10		-	
>>>Neighbouring UMTS Cell Information	0		9.2.1.41A		-	
>>>Neighbouring GSM Cell Information	0		9.2.1.41C		_YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

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.

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		14			P IS 25.433 V 3.5.0 (2001-0.		
IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality	
Neighbouring GSM Cell Information		1 <maxnoo fGSMneigh bours></maxnoo 			GLOBAL	<u>ignore</u>	
>CGI		1		Cell Global Identity as defined in ref. [1].	=		
>>LAI		1					
>>>PLMN-ID	M		OCTET STRING (3)	 digits 0 to 9, two digits per octet, each digit encoded 0000 to 1001, 1111 used as filler bit 4 to 1 of octet n encoding digit 2n-1 bit 8 to 5 of octet n encoding digit 2n The PLMN-ID consists of 3 digits from MCC followed by either a filler plus 2 digits from MNC (in case of 2 digit MNC) or 3 digits from MNC (in case of a 3 digit MNC). 			
>>>LAC	М		OCTET STRING (2)	0000 and FFFE not allowed	Ξ		
>>Cl	М		OCTET STRING (2)		=		
>Q-Offset Serving to Neighbour	М		INTEGER (-5050)		Ξ		
>Q-RxlevMin	Μ		INTEGER (-5813)	Range: -115 to -25 dBm, Step: 2 dB Actual value = (IE value * 2) + 1: -58: -115 dBm -57: -113 dBm -13: -25 dBm	Ξ		
>Maximum Allowed UL Tx Power	М		9.2.1.35		Ξ		
>BSIC		1		Base Station Identity Code as defined in ref. [1].	Ξ		
>>NCC	М		BIT	Network	_		

		STRING(3)	Colour Code.		
>>BCC	М	BIT STRING(3)	Base Station Colour Code.	П	
>BCCH ARFCN	М	INTEGER (01023)	BCCH Frequency as defined in ref. [29].	=	
>GSM Output Power	0	Value range??	Output Power level of the GSM cell as defined in ref. [29].	Ξ	

3GPP TSG- Working Group 3 Meeting #21 Busan, Korea, 21st – 25th May

ж	25.423 CR 359 # rev # Current version: 4.0.0 #								
For <u>HELP</u> on u	sing this form, see bottom of this page or look at the pop-up text over the X symbols.								
Proposed change	affects: # (U)SIM ME/UE Radio Access Network X Core Network								
Title: ೫	Alignment criticality setting of Neighbouring GSM Cell Information								
Source: अ	R-WG3								
Work item code: %	TEI Date: ೫ May 2001								
Category: ж	A Release: # REL-4								
	Use one of the following categories:Use one of the following releases:F (essential correction)2A (corresponds to a correction in an earlier release)R96B (Addition of feature),R97C (Functional modification of feature)R98D (Editorial modification)R99D tailed explanations of the above categories canREL-4be found in 3GPP TR 21.900.REL-5								
Reason for change	2: 第 Tabular format for Neighbouring GSM Cell Information shall be aligned with ASN.1.								
Summary of chang	re: # Criticality of Neighbouring GSM Cell Information was removed from chapter 9.1.xx and Criticality and Assigned Criticality columns were added to chapter 9.2.1.41C Neighbouring GSM Cell Information.								
Consequences if not approved:	 X Tabular format of Neighbouring GSM Cell Information is not aligned with ASN.1. Backward compatibility: This CR is backward compatible since ASN.1 is not changed. 								
Clauses affected:	% 9.1.4.1, 9.1.4.2, 9.1.7.1, 9.1.7.2, 9.1.8.1 and 9.2.1.41C								
Other specs affected:	% Other core specifications % Test specifications O&M Specifications								
Other comments:	ж ж								

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.

9.1.4 RADIO LINK SETUP RESPONSE

9.1.4.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		_	-
D-RNTI	0		9.2.1.24		YES	ignore
CN PS Domain Identifier	0		9.2.1.12		YES	ignore
CN CS Domain Identifier	0		9.2.1.11		YES	ignore
RL Information Response		1 <maxno ofRLs></maxno 			EACH	ignore
>RL ID	М		9.2.1.49		-	
>RL Set ID	М		9.2.2.35		-	
>URA Information	0		9.2.1.70B		-	
>SAI	Μ		9.2.1.52		-	
>Cell GAI	0		9.2.1.5A		-	
>UTRAN Access Point Position	0		9.2.1.70A		_	
>Received Total Wide Band Power	М		9.2.2.35A		_	
>Secondary CCPCH Info	0	1	9.2.2.37B		-	
>DL Code Information	М		FDD DL Code Information 9.2.2.14A		-	
>Diversity Indication	C- NotFirstRL		9.2.1.21		_	
>CHOICE Diversity Indication	M				_	
>>Combining					_	
>>>RL ID	М		9.2.1.49	Reference RL ID for the combining	_	
>>>DCH Information Response	0		9.2.1.16A		YES	ignore
>>Non Combining or First RL					_	
>>>DCH Information Response	М		9.2.1.16A		_	
>SSDT Support Indicator	М		9.2.2.43		_	
>Maximum Uplink SIR	M		Uplink SIR 9.2.1.69		_	
>Minimum Uplink SIR	М		Uplink SIR 9.2.1.69		_	
>Closed Loop Timing Adjustment Mode	0		9.2.2.3A		_	
>Maximum Allowed UL Tx Power	М		9.2.1.35		-	
>Maximum DL TX Power	М		DL Power 9.2.2.10		-	
>Minimum DL TX Power	М		DL Power 9.2.2.10		-	
>Primary Scrambling Code	0		9.2.1.45		-	
>UL UARFCN	0		UARFCN 9.2.1.66	Corresponds to Nu in ref. [6]	_	
>DL UARFCN	0		UARFCN 9.2.1.66	Corresponds to Nd in ref. [6]	-	
>Primary CPICH Power	0		9.2.1.44		-	
>DSCH Information Response	0		DSCH FDD Information		YES	ignore

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IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
			Response 9.2.2.13B			
>Neighbouring UMTS Cell Information	0		9.2.1.41A		-	
>Neighbouring GSM Cell Information	0		9.2.1.41C		<u>-Yes</u>	ignore
>PC Preamble	М		9.2.2.27a		_	
>SRB Delay	М		9.2.2.39A		_	
>Cell GA Additional Shapes	0		9.2.1.5B		YES	ignore
Uplink SIR Target	0		Uplink SIR 9.2.1.69		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

9.1.4.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		_	
D-RNTI	0		9.2.1.24		YES	ignore
CN PS Domain Identifier	0		9.2.1.12		YES	ignore
CN CS Domain Identifier	0		9.2.1.11		YES	ignore
RL Information Response		01		Mandatory For 3.84Mcps TDD only	YES	ignore
>RL ID	М		9.2.1.49	-	_	
>URA Information	0		9.2.1.70B		_	
>SAI	М		9.2.1.52		-	
>Cell GAI	0	1	9.2.1.5A		-	
>UTRAN Access Point	0		9.2.1.70A		_	
Position	•		0.2			
>UL Time Slot ISCP Info	Μ		9.2.3.13D		_	
>Maximum Uplink SIR	M		Uplink SIR		_	
			9.2.1.69			
>Minimum Uplink SIR	М	1	Uplink SIR	1	_	1
		1	9.2.1.69			
>Maximum Allowed UL Tx	М	1	9.2.1.35	1	_	
Power		1	0.2.1.00			
>Maximum DL TX Power	М	1	DL Power		_	
			9.2.2.10			
>Minimum DL TX Power	М		DL Power		_	
			9.2.2.10			
>UARFCN	0		UARFCN 9.2.1.66	Corresponds to Nt in ref. [7]	_	
>Cell Parameter ID	0	1	9.2.1.8		-	
>Sync Case	0		9.2.1.54		_	
>SCH Time Slot	C-Case2		9.2.1.51		_	
>Block STTD Indicator	0		9.2.3.A		_	
>PCCPCH Power	Ō		9.2.1.43		_	
>Timing Advance Applied	M		9.2.3.12A		_	
>Alpha Value	M		9.2.3.a		_	
>UL PhysCH SF Variation	M		9.2.3.13B		_	
>Synchronisation	M		9.2.3.7E			
Configuration >Secondary CCPCH Info	0		9.2.3.7L			
TDD	U		0.2.011 B			
>UL CCTrCH Information		0 <maxno ofCCTrCH s></maxno 		For DCH	GLOBAL	ignore
>>CCTrCH ID	М		9.2.3.2		_	
>>UL DPCH Information		01		1	YES	ignore
>>>Repetition Period	М	1	9.2.3.7		-	
>>>Repetition Length	M	1	9.2.3.6		_	
>>>TDD DPCH Offset	M	1	9.2.3.8A		_	
>>>UL Timeslot	M	1	9.2.3.13C		_	
Information		1				
>DL CCTrCH Information		0 <maxno ofCCTrCH s></maxno 		For DCH	GLOBAL	ignore
>>CCTrCH ID	Μ		9.2.3.2		_	
>>DL DPCH Information		01	1		YES	ignore
>>>Repetition Period	М	1	9.2.3.7		_	
>>>Repetition Length	M	1	9.2.3.6		_	
>>>TDD DPCH Offset	M	1	9.2.3.8A		_	
>>>DL Timeslot Information	M		9.2.3.2C			
>DCH Information Response	0	1	9.2.1.16A	1	YES	ignore

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IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigne Criticalit
>DSCH Information		0			GLOBAL	ignore
Response		<maxnoof DSCHs></maxnoof 				0
>>DSCH ID	М	2001107	9.2.1.26A		-	
>>DSCH Flow Control	M		9.2.1.26B		_	
Information						
>>Binding ID	0		9.2.1.3		_	
>>Transport Layer Address	0		9.2.1.62		-	
>>Transport Format	М		9.2.3.13		-	
Management	-					
>USCH Information Response		0 <maxnoof USCHs></maxnoof 			GLOBAL	ignore
>>USCH ID	М	0001102	9.2.3.14		_	
>>Binding ID	0	1	9.2.1.3		_	
>>Transport Layer	0		9.2.1.62		_	
Address >>Transport Format	M		9.2.3.13			
Management	0		9.2.1.41A			
>Neighbouring UMTS Cell Information	-				-	
>Neighbouring GSM Cell Information	0		9.2.1.41C		<u>_¥ES</u>	ignore
>Cell GA Additional Shapes	0		9.2.1.5B		YES	ignore
RL Information Response LCR		01		Mandatory For 1.28Mcps TDD only	YES	ignore
>RL ID	М		9.2.1.49		_	
>URA Information	M		9.2.1.70B		_	
>SAI	М		9.2.1.52		_	
>Cell GAI	0		9.2.1.5A		_	
>UTRAN Access Point Position	0		9.2.1.70A		_	
>UL Time Slot ISCP Info LCR	М		9.2.3.13H		_	
>Maximum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>Minimum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>Maximum Allowed UL Tx Power	М		9.2.1.35		-	
>Maximum DL TX Power	М		DL Power 9.2.2.10		-	
>Minimum DL TX Power	М		DL Power 9.2.2.10		-	
>UL PhysCH SF Variation	М	+	9.2.3.13B		_	
>UL CCTrCH Information		0 <maxno ofCCTrCH sLCR></maxno 	0.2.0.100	For DCH	GLOBAL	ignore
>>CCTrCH ID	М		9.2.3.2		-	
>>UL DPCH Information LCR		01			YES	ignore
>>Repetition Period	М		9.2.3.7		-	
>>>Repetition Length	M		9.2.3.6		_	
>>>TDD DPCH Offset	М		9.2.3.8A		_	
>>>UL Timeslot Information LCR	М		9.2.3.x5		-	
>DL CCTrCH Information LCR		0 <maxno ofCCTrCH sLCR></maxno 		For DCH	GLOBAL	ignore
>>CCTrCH ID	М		9.2.3.2	1	_	
>>DL DPCH Information		01	0.2.0.2		YES	ignore
>>>Repetition Period	М	+	9.2.3.7	+		

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IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality		
>>>Repetition Length	М		9.2.3.6		-			
>>>TDD DPCH Offset	M		9.2.3.8A		_			
>>>DL Timeslot	M		9.2.3.2E					
Information LCR								
>>>TSTD Indicator	М		9.2.3.13E		-			
>DCH Information Response	0		9.2.1.16A		YES	ignore		
>DSCH Information		0			GLOBAL	ignore		
Response LCR		<maxnoof DSCHsLC R></maxnoof 				0		
>>DSCH ID	М		9.2.1.26A		-			
>>DSCH Flow Control Information	М		9.2.1.26B		-			
>>Binding ID	0		9.2.1.3		_			
>>Transport Layer Address	0		9.2.1.62		_			
>>Transport Format Management	М		9.2.3.13		-			
>USCH Information Response LCR		0 <maxnoof USCHsLC R></maxnoof 			GLOBAL	ignore		
>>USCH ID	Μ		9.2.3.14		-			
>>Binding ID	0		9.2.1.3		_			
>>Transport Layer Address	0		9.2.1.62		-			
>>Transport Format Management	М		9.2.3.13		-			
>Neighbouring UMTS Cell Information	0		9.2.1.41A		-			
>Neighbouring GSM Cell Information	0		9.2.1.41C		-			
Uplink SIR Target	М		Uplink SIR 9.2.1.69		YES	ignore		
Criticality Diagnostics	0		9.2.1.13		YES	ignore		

9.1.7 RADIO LINK ADDITION RESPONSE

9.1.7.1 FDD Message

IE/Group Name	Presence	Range	IE type and	Semantics description	Criticality	Assigned Criticality
			reference	description		Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		-	10,000
RL Information Response		1 <maxnoof RLs-1></maxnoof 			EACH	ignore
>RL ID	М		9.2.1.49		_	
>RL Set ID	М		9.2.2.35		_	
>URA Information	0		9.2.1.70B		_	
>SAI	М		9.2.1.52		_	
>Cell GAI	0		9.2.1.5A		_	
>UTRAN Access Point Position	0		9.2.1.70A		_	
>Received Total Wide Band Power	M		9.2.2.35A		_	
>Secondary CCPCH Info	0		9.2.2.37B		_	
>DL Code Information	М		FDD DL Code Information 9.2.2.14A		YES	Ignore
>Diversity Indication	М		9.2.1.21		_	
>CHOICE Diversity Indication	М				_	
>>Combining					_	
>>>RL ID	M		9.2.1.49	Reference RL ID	_	
>>>DCH Information Response	0		9.2.1.16A		YES	ignore
>>Non Combining					_	
>>>DCH Information Response	Μ		9.2.1.16A		_	
>SSDT Support Indicator	М		9.2.2.43		_	
>Minimum Uplink SIR	M		Uplink SIR 9.2.1.69		-	
>Maximum Uplink SIR	Μ		Uplink SIR 9.2.1.69		-	
>Closed Loop Timing Adjustment Mode	0		9.2.2.3A		-	
>Maximum Allowed UL Tx Power	М		9.2.1.35		-	
>Maximum DL TX Power	М		DL Power 9.2.2.10		-	
>Minimum DL TX Power	М		DL Power 9.2.2.10		-	
>Neighbouring UMTS Cell Information	0		9.2.1.41A		-	
>Neighbouring GSM Cell Information	0		9.2.1.41C		_YES	ignore
>PC Preamble	Μ		9.2.2.27a		_	
>SRB Delay	M		9.2.2.39A		-	
>Cell GA Additional Shapes	0		9.2.1.5B		YES	ignore
Criticality Diagnostics	0		9.2.1.13		YES	ignore

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

9.1.7.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	Μ		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		-	
RL Information Response		01		Mandatory For 3.84Mcps TDD only	YES	ignore
>RL ID	М		9.2.1.49		_	
>URA Information	0		9.2.1.70B		_	
>SAI	М		9.2.1.52		-	
>Cell GAI	0		9.2.1.5A		_	
>UTRAN Access Point Position	0		9.2.1.70A		-	
>UL Time Slot ISCP Info	М		9.2.3.13D		-	
>Minimum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>Maximum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>Maximum Allowed UL Tx Power	М		9.2.1.35		_	
>Maximum DL TX Power	М		DL Power 9.2.2.10		-	
>Minimum DL TX Power	М		DL Power 9.2.2.10		-	
>Timing Advance Applied	Μ		9.2.3.12A		-	
>Alpha Value	М		9.2.3.a		—	
>UL PhysCH SF Variation	М		9.2.3.13B		—	
>Synchronisation Configuration	М		9.2.3.7E		-	
>Secondary CCPCH Info TDD	0		9.2.3.7B		-	
>UL CCTrCH Information		0 <maxnoof CCTrCHs></maxnoof 		For DCH	GLOBAL	ignore
>>CCTrCH ID	Μ		9.2.3.2		-	
>>UL DPCH		01			YES	ignore
Information						
>>>Repetition Period	M		9.2.3.7		_	
>>>Repetition Length	Μ		9.2.3.6		-	
>>>TDD DPCH Offset	M		9.2.3.8A		_	
>>>UL Timeslot	М		9.2.3.13C		-	
Information				E 5011		
>DL CCTrCH Information		0 <maxnoof CCTrCHs></maxnoof 		For DCH	GLOBAL	ignore
>>CCTrCH ID	М	0.1	9.2.3.2		-	:
>>DL DPCH		01			YES	ignore
Information >>>Repetition Period	М		9.2.3.7			
>>>Repetition Period	M	+	9.2.3.7	+	_	
>>>TDD DPCH Offset	M	+	9.2.3.6 9.2.3.8A	+	-	
>>>DL Timeslot	M		9.2.3.8A 9.2.3.2C			
Information	141		0.2.0.20			
>DCH Information	1	01		1	_	
>>Diversity Indication	М		9.2.1.21	1	_	
>>CHOICE Diversity Indication	M				-	
>>>Combining					_	
>>>RL ID	М		9.2.1.49	Reference RL	-	
>>>>DCH	0	1	9.2.1.16A		YES	ignore
Information Response						
>>>Non Combining					_	
>>>>DCH	Μ		9.2.1.16A		_	
Information						

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IE/Group Name	Presence	Range	IE type	Semantics	Criticality	Assigne
			and	description	,	Criticalit
Response			Telefenee			
>DSCH Information		0			GLOBAL	ignore
Response		<maxnoof< td=""><td></td><td></td><td>OLODAL</td><td>ignore</td></maxnoof<>			OLODAL	ignore
>>DSCH ID	М	DSCHs>	9.2.1.26A		_	
>>Transport Format	M		9.2.3.13		_	
Management						
>>DSCH Flow Control Information	М		9.2.1.26B		-	
>>CHOICE Diversity Indication	0				-	
>>>Non Combining					_	
>>>>Binding ID	0		9.2.1.3		_	
>>>>Transport	0		9.2.1.62		_	
Layer Address	Ŭ		0.2.1.02			
>USCH Information Response		0 <maxnoof USCHs></maxnoof 			GLOBAL	ignore
>>USCH ID	М	0001102	9.2.3.14		_	
>>Transport Format Management	M		9.2.3.13		-	
>>CHOICE Diversity	0				-	
Indication >>>Non Combining	+				_	
	0		9.2.1.3			
>>>>Binding ID >>>>Transport	0		9.2.1.3		_	
Layer Address					_	
>Neighbouring UMTS Cell Information	0		9.2.1.41A		-	
>Neighbouring GSM Cell Information	0		9.2.1.41C		<u>-YES</u>	ignore
>Cell GA Additional Shapes	0		9.2.1.5B		YES	ignore
RL Information Response LCR		01		Mandatory For 1.28Mcps	YES	ignore
			0.0.4.40	TDD only		
>RL ID	M		9.2.1.49		-	
>URA Information	M		9.2.1.70B		_	
>SAI	M O		9.2.1.52		_	
>Cell GAI >UTRAN Access Point	0		9.2.1.5A 9.2.1.70A		_	
Position	_				_	
>UL Time Slot ISCP Info LCR	М		9.2.3.13H		_	
>Minimum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>Maximum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>Maximum Allowed UL Tx Power	М		9.2.1.35		-	
>Maximum DL TX Power	М		DL Power 9.2.2.10		-	
>Minimum DL TX Power	М		DL Power 9.2.2.10		-	
>UL PhysCH SF Variation	M		9.2.2.10 9.2.3.13B		_	
>UL CCTrCH Information		0 <maxnoof< td=""><td>0.2.0.100</td><td>For DCH</td><td>GLOBAL</td><td>ignore</td></maxnoof<>	0.2.0.100	For DCH	GLOBAL	ignore
LCR		CCTrCHsLC R>				ignore
>>CCTrCH ID	М		9.2.3.2		_	
>>UL DPCH		01			YES	ignore
Information LCR						
>>>Repetition Period	М		9.2.3.7		-	
>>>Repetition Length	М		9.2.3.6		—	
>>>TDD DPCH Offset	М		9.2.3.8A			

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IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality	
>>>UL Timeslot Information LCR	М		9.2.3.13G		_		
>DL CCTrCH Information LCR		0 <maxnoof CCTrCHsLC R></maxnoof 		For DCH	GLOBAL	ignore	
>>CCTrCH ID	М		9.2.3.2		_		
>>DL DPCH		01			YES	ignore	
Information LCR						-	
>>>Repetition Period	М		9.2.3.7		_		
>>>Repetition Length	М		9.2.3.6		-		
>>>TDD DPCH Offset	М		9.2.3.8A		-		
>>>DL Timeslot Information LCR	М		9.2.3.2E		-		
>>>TSTD Indicator	М		9.2.3.13E		_		
>DCH Information		01			YES	ignore	
>>Diversity Indication	M		9.2.2.7		_		
>>CHOICE Diversity	М				-		
Indication			-				
>>>Combining	M		0.0.4.40	Deference	_		
>>>>RL ID	М		9.2.1.49	Reference RL	-		
>>>Non Combining			0.0.4.404		_		
>>>>DCH Information Response	М		9.2.1.16A		_		
>DSCH Information		0			GLOBAL	ignore	
Response LCR		<pre><maxnoof dschslcr=""></maxnoof></pre>			OLODAL	ignore	
>>DSCH ID	Μ		9.2.1.26A		_		
>>Transport Format Management	M		9.2.3.13		-		
>>DSCH Flow Control Information	М		9.2.1.26B		-		
>>CHOICE Diversity Indication	0				-		
>>>Non Combining					_		
>>>Binding ID	0		9.2.1.3		_		
>>>>Transport Layer Address	0		9.2.1.62		-		
>USCH Information Response LCR		0 <maxnoof USCHsLCR</maxnoof 			GLOBAL	ignore	
>>USCH ID	М	>	9.2.3.14				
>>Transport Format Management	M		9.2.3.14		_		
>>CHOICE Diversity Indication	0				_		
>>>Non Combining					_		
>>>>BindingID	0	1	9.2.1.3		_		
>>>Transport Layer Address	0		9.2.1.62		-		
>Neighbouring UMTS Cell Information	0		9.2.1.41A		_		
>Neighbouring GSM Cell	0		9.2.1.41C		-		
Information							

9.1.8 RADIO LINK ADDITION FAILURE

9.1.8.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	М		9.2.1.40		YES	reject
Transaction ID	М		9.2.1.59		-	
CHOICE Cause Level	М				YES	ignore
>General					-	
>>Cause	М		9.2.1.5		_	
>RL Specific					_	
>>Unsuccessful RL Information Response		1 <maxnoof RLs-1></maxnoof 			EACH	ignore
>>>RL ID	Μ		9.2.1.49		-	
>>>Cause	М		9.2.1.5		_	
>>Successful RL Information Response		0 <maxnoof RLs-2></maxnoof 			EACH	ignore
>>>RL ID	М		9.2.1.49		_	
>>>RL Set ID	М		9.2.2.35		_	
>>>URA Information	0		9.2.1.70B		_	
>>>SAI	М		9.2.1.52		_	
>>>Cell GAI	0		9.2.1.5A		_	
>>>UTRAN Access Point Position	0		9.2.1.70A		-	
>>>Received Total Wide Band Power	М		9.2.2.35A		_	
>>>Secondary CCPCH Info	0		9.2.2.37B		_	
>>>DL Code Information	М		FDD DL Code Information 9.2.2.14A		YES	ignore
>>>Diversity Indication	М		9.2.1.21		_	
>>>CHOICE Diversity Indication	M		5.2.1.21		_	
>>>Combining					_	
>>>>RL ID	М		9.2.1.49	Reference RL ID	_	
>>>>DCH Information Response	0		9.2.1.16A		YES	ignore
>>>Non Combining					_	
>>>>DCH Information Response	М		9.2.1.16A		_	
>>>SSDT Support Indicator	M		9.2.2.43		-	
>>>Minimum Uplink SIR	M		Uplink SIR 9.2.1.69		-	
>>>Maximum Uplink SIR	М		Uplink SIR 9.2.1.69		-	
>>>Closed Loop Timing Adjustment Mode	0		9.2.2.3A		_	
>>>Maximum Allowed UL Tx Power	М		9.2.1.35		-	
>>>Maximum DL TX Power	М		DL Power 9.2.2.10		-	
>>>Minimum DL TX Power	М		DL Power 9.2.2.10		-	
>>>Neighbouring UMTS Cell Information	0		9.2.1.41A		-	
>>>Neighbouring GSM Cell Information	0		9.2.1.41C		_YES	ignore
>>>Cell GA Additional	0		9.2.1.5B		YES	ignore

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IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Shapes						
Criticality Diagnostics	0		9.2.1.13		YES	ignore

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.

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	IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Ì	Neighbouring GSM Cell Information		1 <maxno ofGSMnei ghbours></maxno 			<u>GLOBAL</u>	ignore
	>CGI		1		Cell Global Identity as defined in ref. [1].	Ш	
ļ	>>LAI		1			=	
	>>>PLMN-ID	Μ		OCTET STRING (3)	 digits 0 to 9, two digits per octet, each digit encoded 0000 to 1001, 1111 used as filler bit 4 to 1 of octet n encoding digit 2n-1 bit 8 to 5 of octet n encoding digit 2n The PLMN-ID consists of 3 	=	
				00151	digits from MCC followed by either -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -3 digits from MNC (in case of a 3 digit MNC).		
I	>>>LAC	Μ		OCTET STRING (2)	0000 and FFFE not allowed	П	
	>>Cl	M		OCTET STRING (2)		Ξ	
	>Q-Offset Serving to Neighbour	М		INTEGER (- 5050)		Ξ	
	>Q-RxlevMin	Μ		INTEGER (- 5813)	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	М		9.2.1.35		=	
	>BSIC		1		Base Station Identity Code as defined in ref. [1].	=	
	>>NCC	М		BIT STRING(3)	Network Colour Code.	П	
	>>BCC	M		BIT STRING(3)	Base Station Colour Code.	Ξ	
	>BCCH ARFCN	Μ		INTEGER	BCCH	_	

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		(01023)	Frequency as defined in ref. [29].		
>GSM Output Power	0	Value range??	Output Power level of the GSM cell as defined in ref. [29].	=	