TSG RAN Meeting #21 **RP-030447**
Frankfurt, Germany, 16 - 19 September 2003

Title **CRs (Rel-5 only) to TS 25.423, TS 25.427 and TS 25.433 on Coordination with RRC about the TFS of DL DCH for HS-DSCH**
Source **TSG RAN WG3**
Agenda Item **7.4.6**

RAN3 Tdoc	Spec	curr. Vers.	new Vers.	REL	CR	Rev	Cat	Title	Work item
R3-031216	25.423	5.6.0	5.7.0	REL-5	860	2	F	Coordination with RRC about the TFS of DL DCH for HS-DSCH	HSDPA-IubIur
R3-031217	25.433	5.5.0	5.6.0	REL-5	890	2	F	Coordination with RRC about the TFS of DL DCH for HS-DSCH	HSDPA-IubIur
R3-031218	25.427	5.1.0	5.2.0	REL-5	089	1	F	Coordination with RRC about the TFS of DL DCH for HS-DSCH	HSDPA-IubIur

3GPP TSG-RAN3 Meeting #37 ***R3-031216***
Budapest, Hungary, 25th – 29th August 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.423** **CR** **860** ⌘ **rev** **2** ⌘ Current version: **5.6.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Coordination with RRC about the TFS of DL DCH for HS-DSCH
Source:	⌘	RAN3
Work item code:	⌘	HSDPA-IuBIur
Date:	⌘	25/08/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
F *(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 one 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)*
Rel-6 *(Release 6)*

Reason for change: ⌘ There is an inconsistency about establishing HS-DSCH between TS25.423 and TS25.331.
Please see R3-031036.

Summary of change: ⌘

Rev.2
- "Downlink DCH only" of the Unidirectional DCH Indicator IE shall only be used by TDD.
- Editorial errors of ENUMRATED description are corrected.

Rev.1
The indicator, which indicates DL or UL DCH isn't set up, is added in the TFS IE. When the Node B receives this indicator, the Node B shall ignore the TFS of DL or UL DCH.

Rev.0
1. The number of TFI's is set only one for the meaningless TFS of DL DCH.
2. The number of transport blocks is set to "0".

Impact Analysis:

Impact assessment towards the previous version of the specification (same release):

This CR has [isolated impact] with the previous version of the specification (same release) because it might affect implementations supporting HSDPA.

This CR has an impact under [function] point of view.
The impact [can] be considered isolated because the change affects [one] [system function] namely HSDPA.

Consequences if not approved:	⌘	If this CR is not approved, the inconsistency between TS25.423 and TS25.331 will still remain.

Clauses affected:	⌘	8.3.1.2, new 9.2.1.xx, 9.2.2.4A, 9.2.3.2A, 9.3.4, 9.3.6			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘ CR890r2 on TS25.433 v5.5.0 CR089r1 on TS25.427 v5.1.0
affected:			**X**	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:

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

8.3.1 Radio Link Setup

8.3.1.1 General

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

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

8.3.1.2 Successful Operation

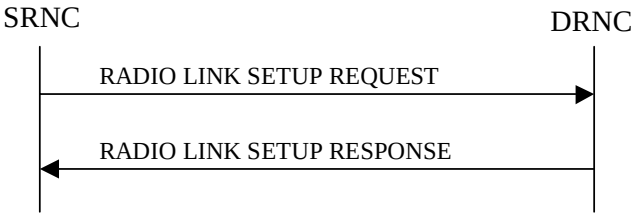

Figure 5: Radio Link Setup procedure: Successful Operation

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

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

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

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

Transport Channels Handling:

DCH(s):

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

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

If the *DCH Specific Info* IE includes the *Unidirectional DCH Indicator* IE set to "Uplink DCH only", the DRNS shall ignore the *Transport Format Set* IE for the downlink for this DCH. As a consequence this DCH is not included as a part of the downlink CCTrCH.

[TDD - If the *DCH Specific Info* IE includes the *Unidirectional DCH Indicator* IE set to "Downlink DCH only", the DRNS shall ignore the *Transport Format Set* IE for the uplink for this DCH. As a consequence this DCH is not included as a part of the uplink CCTrCH.]

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

<not affected part is omitted>

9.2.1.xx Unidirectional DCH Indicator

The *Unidirectional DCH Indicator* IE indicates that the DCH is unidirectional.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Unidirectional DCH Indicator			ENUMERATED (Downlink DCH only, Uplink DCH only)	Downlink DCH only shall only be used by TDD.

<affected part is omitted>

9.2.2.4A DCH FDD Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DCH FDD Information		*1..<maxnoofDCHs>*			–	
>Payload CRC Presence Indicator	M		9.2.1.42		–	
>UL FP Mode	M		9.2.1.67		–	
>ToAWS	M		9.2.1.58		–	
>ToAWE	M		9.2.1.57		–	
>DCH Specific Info		*1..<maxnoofDCHs>*			–	
>>DCH ID	M		9.2.1.16		–	
>>TrCH Source Statistics Descriptor	M		9.2.1.65		–	
>>Transport Format Set	M		9.2.1.64	For the UL.	–	
>>Transport Format Set	M		9.2.1.64	For the DL.	–	
>>BLER	M		9.2.1.4	For the UL.	–	
>>BLER	M		9.2.1.4	For the DL.	–	
>>Allocation/Retention Priority	M		9.2.1.1		–	
>>Frame Handling Priority	M		9.2.1.29		–	
>>QE-Selector	M		9.2.1.46A		–	
>>DRAC control	M		9.2.2.13		–	
>>Guaranteed Rate Information	O		9.2.1.30M		YES	ignore
>>Traffic Class	M		9.2.1.58A		YES	ignore
>>Unidirectional DCH Indicator	O		9.2.1.xx		YES	ignore

<not affected part is omitted>

9.2.3.2A DCH TDD Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DCH Information		*1..<maxnoofDCHs>*			–	
>Payload CRC Presence Indicator	M		9.2.1.42		–	
>UL FP Mode	M		9.2.1.67		–	
>ToAWS	M		9.2.1.58		–	
>ToAWE	M		9.2.1.57		–	
>DCH Specific Info		*1..<maxnoofDCHs>*			–	
>>DCH ID	M		9.2.1.16		–	
>>CCTrCH ID	M		9.2.3.2	UL CCTrCH in which the DCH is mapped	–	
>>CCTrCH ID	M		9.2.3.2	DL CCTrCH in which the DCH is mapped	–	
>>TrCH Source Statistics Descriptor	M		9.2.1.65		–	
>>Transport Format Set	M		9.2.1.64	For the UL.	–	
>>Transport Format Set	M		9.2.1.64	For the DL.	–	
>>BLER	M		9.2.1.4	For the UL.	–	
>>BLER	M		9.2.1.4	For the DL.	–	
>>Allocation/Retention Priority	M		9.2.1.1		–	
>>Frame Handling Priority	M		9.2.1.29		–	
>>QE-Selector	C-CoorDCH		9.2.1.46A		–	
>>Guaranteed Rate Information	O		9.2.1.30M		YES	ignore
>>Traffic Class	M		9.2.1.58A		YES	ignore
>>Unidirectional DCH Indicator	O		9.2.1.xx		YES	ignore

<not affected part is omitted>

9.3.4 Information Element Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxCodeNumComp-1,
    maxNrOfFACHs,
    maxFACHCountPlus1,
    maxIBSEG,
    maxNoOfDSCHs,
```

<not affected part is omitted>

```
    id-Maximum-DL-Power-TimeslotLCR-InformationItem,
    id-Minimum-DL-Power-TimeslotLCR-InformationItem,
    id-HS-SICH-Reception-Quality,
    id-HS-SICH-Reception-Quality-Measurement-Value,
    id-ExtendedGSMCellIndividualOffset,
    id-Unidirectional-DCH-Indicator
FROM RNSAP-Constants
```

<not affected part is omitted>

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

DCH-FDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator        PayloadCRC-PresenceIndicator,
    ul-FP-Mode                          UL-FP-Mode,
    toAWS                               ToAWS,
    toAWE                               ToAWE,
    dCH-SpecificInformationList         DCH-Specific-FDD-InformationList,
    iE-Extensions                       ProtocolExtensionContainer { {DCH-FDD-InformationItem-
ExtIEs} } OPTIONAL,
    ...
}

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

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

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

DCH-FDD-SpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Guaranteed-Rate-Information     CRITICALITY ignore  EXTENSION Guaranteed-Rate-
Information     PRESENCE optional   }|
    { ID id-TrafficClass        CRITICALITY ignore  EXTENSION TrafficClass  PRESENCE mandatory}|
    { ID id-Unidirectional-DCH-Indicator        CRITICALITY ignore  EXTENSION Unidirectional-DCH-
Indicator       PRESENCE optional   },
    ...
}

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

DCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem

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

DCH-InformationResponseItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Allowed-Rate-Information        CRITICALITY ignore  EXTENSION Allowed-Rate-Information
        PRESENCE optional   },
    ...
}
```

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

DCH-TDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator        PayloadCRC-PresenceIndicator,
    ul-FP-Mode                          UL-FP-Mode,
    toAWS                               ToAWS,
    toAWE                               ToAWE,
    dCH-SpecificInformationList         DCH-Specific-TDD-InformationList,
    iE-Extensions                       ProtocolExtensionContainer { {DCH-TDD-InformationItem-
ExtIEs} } OPTIONAL,
    ...
}

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

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

DCH-Specific-TDD-Item ::=   SEQUENCE {
    dCH-ID                              DCH-ID,
    ul-cCTrCH-ID                        CCTrCH-ID, -- UL CCTrCH in which the DCH is mapped
    dl-cCTrCH-ID                        CCTrCH-ID, -- DL CCTrCH in which the DCH is mapped
    trCH-SrcStatisticsDescr             TrCH-SrcStatisticsDescr,
    ul-transportFormatSet               TransportFormatSet,
    dl-transportFormatSet               TransportFormatSet,
    ul-BLER                             BLER,
    dl-BLER                             BLER,
    allocationRetentionPriority         AllocationRetentionPriority,
    frameHandlingPriority               FrameHandlingPriority,
    qE-Selector                         QE-Selector         OPTIONAL,
    -- This IE shall be present if DCH is part of set of Co-ordinated DCHs
    iE-Extensions                       ProtocolExtensionContainer { {DCH-Specific-TDD-Item-ExtIEs}
} OPTIONAL,
    ...
}

DCH-Specific-TDD-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Guaranteed-Rate-Information     CRITICALITY ignore  EXTENSION Guaranteed-Rate-
Information     PRESENCE optional   }|
    { ID id-TrafficClass        CRITICALITY ignore  EXTENSION TrafficClass  PRESENCE mandatory}|
    { ID id-Unidirectional-DCH-Indicator        CRITICALITY ignore  EXTENSION Unidirectional-DCH-
Indicator       PRESENCE optional   },
    ...
}
```

<not affected part is omitted>

```
UL-TimeslotISCP         ::= INTEGER (0..127)
-- According to mapping in [14]

Unidirectional-DCH-Indicator    ::= ENUMERATED {
    downlink-DCH-only,
    uplink-DCH-only
}

URA-ID                  ::= INTEGER (0..65535)
```

<not affected part is omitted>

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
```

<not affected part is omitted>

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

id-AllowedQueuingTime                                          ProtocolIE-ID ::= 4
id-Allowed-Rate-Information                                    ProtocolIE-ID ::= 42
id-AntennaColocationIndicator                                  ProtocolIE-ID ::= 309
id-BindingID                                                   ProtocolIE-ID ::= 5
```

<not affected part is omitted>

```
id-Maximum-DL-Power-TimeslotLCR-InformationItem                ProtocolIE-ID ::= 510
id-Minimum-DL-Power-TimeslotLCR-InformationItem                ProtocolIE-ID ::= 511
id-TDD-Support-8PSK                                            ProtocolIE-ID ::= 512
id-TDD-maxNrDLPhysicalchannels                                 ProtocolIE-ID ::= 513
id-ExtendedGSMCellIndividualOffset                             ProtocolIE-ID ::= 514
id-Unidirectional-DCH-Indicator                                ProtocolIE-ID ::= 526
```

3GPP TSG-RAN3 Meeting #37 ***R3-031218***
Budapest, Hungary, 25th – 29th August 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.427** **CR** **089** ⌘ **rev** **1** ⌘ Current version: **5.1.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Coordination with RRC about the TFS of DL DCH for HS-DSCH
Source:	⌘	RAN3
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Date:	⌘	25/08/2003
Category:	⌘	**F**
Release:	⌘	Rel-5

Use one of the following categories:
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2 *(GSM Phase 2)*
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R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*

Reason for change:	⌘	In R3-031216 and R3-031217, new IE, which is Unidirectional DCH Indicator, is added in TS25.423 and TS25.433. So the DCH Frame Protocol procedures in TS25.427 need to be clarified.
Summary of change:	⌘	Rev.2 - Editorial errors of the coversheet are corrected. Rev.1 The phrase "included in the CCTrCH" is inserted. Impact Analysis: Impact assessment towards the previous version of the specification (same release): This CR has [isolated impact] with the previous version of the specification (same release) because it might affect implementations supporting HSDPA. This CR has an impact under [function] point of view. The impact [can] be considered isolated because the change affects [one] [system function] namely HSDPA.
Consequences if not approved:	⌘	If this CR is not approved, the ambiguity will still remain.

Clauses affected:	⌘	5.1.2			
Other specs	⌘	Y: X / N:	Other core specifications	⌘	CR860r2 on TS25.423v5.6.0 CR890r2 on TS25.433v5.5.0

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

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5.1.2 Downlink

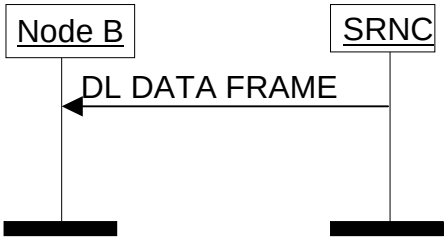

Figure 2: Downlink Data Transfer procedure

The Node B shall only consider a transport bearer synchronised after it has received at least one DL DATA FRAME on this transport bearer before LTOA [5].

The Node B shall consider the DL user plane of a certain RL synchronised once all transport bearers established to carry DCH DL DATA FRAMEs included in the CCTrCH for this RL are considered as synchronised. Once synchronised, the Node B shall assume the DL user plane for this Radio Link stays synchronised as long as the Radio Link exists, even if transport bearers are added (see 5.10.2), replaced (see subclause 5.10.1), or removed. When a RL established through the Radio Link Addition procedure [4] [6] is combined with a RL whose DL user plane is considered as synchronised, the Node B shall consider the DL user plane of this newly established RL as synchronised.

[FDD - The Node B shall transmit on the DL DPDCH(s) of a certain RL only when the DL user plane of this RL is considered synchronised.]

[TDD – The Node B shall transmit special bursts on the DL DPCH as per [11], until the DL user plane is considered synchronised].

When the DL user plane is considered synchronised and the Node B does not receive a valid DL DATA FRAME in a TTI, it assumes that there is no data to be transmitted in that TTI for this transport channel, and shall act as one of the following cases:

- [TDD – If the Node B receives no valid DL DATA FRAMEs for any transport channel assigned to a UE it shall assume DTX and transmit special bursts as per [11]].
- If the Node B is aware of a TFI value corresponding to zero bits for this transport channel, this TFI is assumed. If the TFS contains both a TFI corresponding to "TB length equal to 0 bits" and a TFI corresponding to "number of TB equal to 0", the Node B shall assume the TFI corresponding to "number of TB equal to 0". When combining the TFI's of the different transport channels, a valid TFCI might result and in this case data shall be transmitted on Uu.

- If the Node B is not aware of a TFI value corresponding to zero bits for this transport channel or if combining the TFI corresponding to zero bits with other TFI's, results in an unknown TFI combination, the handling as described in the following paragraph shall be applied.

At each radio frame, the Node B shall build the TFCI value of each CCTrCH, according to the TFI of the DCH data frames multiplexed on this CCTrCH and scheduled for that frame. [FDD - In case the Node B receives an unknown combination of TFIs from the DL DATA FRAMEs, it shall transmit only the DPCCH without TFCI bits.] [TDD - In case the Node B receives an unknown combination of DCH DL DATA FRAMEs, it shall apply DTX, i.e. suspend transmission on the corresponding DPCHs.]

3GPP TSG-RAN3 Meeting #37 ***R3-031217***
Budapest, Hungary, 25th – 29th August 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.433** **CR** **890** ⌘**rev** **2** ⌘ Current version: **5.5.0** ⌘

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Summary of change: ⌘

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Rev.1
The indicator, which indicates DL or UL DCH isn't set up, is added in the TFS IE. When the Node B receives this indicator, the Node B shall ignore the TFS of DL or UL DCH.

Rev.0
1. The number of TFI's is set only one for the meaningless TFS of DL DCH.
2. The number of transport blocks is set to "0".

Impact Analysis:

Impact assessment towards the previous version of the specification (same release):

This CR has [isolated impact] with the previous version of the specification (same release) because it might affect implementations supporting HSDPA.

This CR has an impact under [function] point of view.
The impact [can] be considered isolated because the change affects [one] [system function] namely HSDPA.

Consequences if not approved:	⌘	If this CR is not approved, the inconsistency between TS25.433 and TS25.331 will still remain.

Clauses affected:	⌘	8.2.17.2, new 9.2.1.xx, 9.2.2.4D, 9.2.3.4C, 9.3.4, 9.3.6			
		Y	**N**		
Other specs affected:	⌘	**X**		Other core specifications	⌘ CR860r2 on TS25.423 v5.6.0 CR089r1 on TS25.427 v5.1.0
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.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://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 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.

8.2.17 Radio Link Setup

8.2.17.1 General

This procedure is used for establishing the necessary resources for a new Node B Communication Context in the Node B.

[FDD - The Radio Link Setup procedure is used to establish one or more radio links. The procedure establishes one or more DCHs on all radio links, and in addition, it can include the establishment of one or more DSCHs or an HS-DSCH on one radio link.]

[TDD - The Radio Link Setup procedure is used to establish one radio link including one or more transport channels. The transport channels can be a mix of DCHs, DSCHs, and USCHs, or DCHs and an HS-DSCH, including also combinations where one or more transport channel types are not present.]

8.2.17.2 Successful Operation

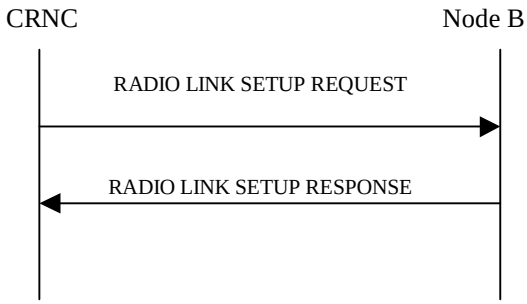

Figure 24: Radio Link Setup procedure, Successful Operation

The procedure is initiated with a RADIO LINK SETUP REQUEST message sent from the CRNC to the Node B using the Node B Control Port.

Upon reception of the RADIO LINK SETUP REQUEST message, the Node B shall reserve necessary resources and configure the new Radio Link(s) according to the parameters given in the message.

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

Transport Channels Handling:

DCH(s):

[TDD - If the *DCH Information* IE is present, the Node B shall configure the new DCH(s) 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 Node B shall treat the DCHs in the *DCH Information* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.

If the *DCH Specific Info* IE includes the *Unidirectional DCH Indicator* IE set to "Uplink DCH only", the Node B shall ignore the *Transport Format Set* IE for the downlink for this DCH. As a consequence this DCH is not included as a part of the downlink CCTrCH.

[TDD - If the *DCH Specific Info* IE includes the *Unidirectional DCH Indicator* IE set to "Downlink DCH only", the Node B shall ignore the *Transport Format Set* IE for the uplink for this DCH. As a consequence this DCH is not included as a part of the uplink CCTrCH.]

[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. [16]. If the *QE-Selector* IE is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [16].]

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. [16]. [FDD - If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE, ref. [16]. If all DCHs have *QE-Selector* IE set to "non-selected", the Physical channel BER shall be used for the QE, ref. [16]].

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

The Node B 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 in the configuration.

The Node B 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 in the configuration.

The received *Frame Handling Priority* IE specified for each Transport Channel should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new RL(s) has been activated.

[FDD - The *Diversity Control Field* IE indicates for each RL (except the first RL in the message) whether the Node B shall combine the concerned RL or not.

- If the *Diversity Control Field* IE is set to"May", the Node B shall decide for either of the alternatives.
- If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other RL.
- If the *Diversity Control Field* IE is set to "Must not", the Node B shall not combine the RL with any other existing RL.

Diversity combining is applied to Dedicated Transport Channels (DCH), i.e. it is not applied to the DSCHs. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.]

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

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

[TDD - The Node B shall include in the *DCH Information Response* IE in the RADIO LINK SETUP RESPONSE message the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DCH of this RL.]

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

<not affected part is omitted>

9.2.1.xx Unidirectional DCH Indicator

The *Unidirectional DCH Indicator* IE indicates that the DCH is unidirectional.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Unidirectional DCH Indicator			ENUMERATED (Downlink DCH only, Uplink DCH only)	Downlink DCH only shall only be used by TDD.

<affected part is omitted>

9.2.2.4D DCH FDD Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DCH FDD Information		*1..<maxnoofDCHs>*			–	
>Payload CRC Presence Indicator	M		9.2.1.49		–	
>UL FP Mode	M		9.2.1.66		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	
>DCH Specific Info		*1..<maxnoofDCHs>*			–	
>>DCH ID	M		9.2.1.20		–	
>>Transport Format Set	M		9.2.1.59	For UL	–	
>>Transport Format Set	M		9.2.1.59	For DL	–	
>>Allocation/Retention Priority	M		9.2.1.1A		–	
>>Frame Handling Priority	M		9.2.1.30		–	
>>QE-Selector	M		9.2.1.50A		–	
>>Unidirectional DCH Indicator	O		9.2.1.xx		YES	ignore

Range Bound	Explanation
maxnoofDCHs	Maximum number of DCHs for one UE

<not affected part is omitted>

9.2.3.4C DCH TDD Information

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DCH TDD Information		*1..<maxnoofDCHs>*			–	
>Payload CRC Presence Indicator	M		9.2.1.49		–	
>UL FP Mode	M		9.2.1.66		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	
>DCH Specific Info		*1..<maxnoofDCHs>*			–	
>>DCH ID	M		9.2.1.20		–	
>>CCTrCH ID	M		9.2.3.3	UL CCTrCH in which the DCH is mapped	–	
>>CCTrCH ID	M		9.2.3.3	DL CCTrCH in which the DCH is mapped	–	
>>Transport Format Set	M		9.2.1.59	For UL	–	
>>Transport Format Set	M		9.2.1.59	For DL	–	
>>Allocation/Retention Priority	M		9.2.1.1A		–	
>>Frame Handling Priority	M		9.2.1.30		–	
>>QE-Selector	C-CoorDCH		9.2.1.50A		–	
>>Unidirectional DCH Indicator	O		9.2.1.xx		YES	ignore

Condition	Explanation
CoorDCH	The IE shall be present if this DCH is part of a set of coordinated DCHs (number of instances of the *DCH Specific Info* IE is greater than 1).

Range Bound	Explanation
maxnoofDCHs	Maximum number of DCHs for one UE

<not affected part is omitted>

9.3.4 Information Elements Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxNrOfRLs,
```

```
    maxNrOfTFCs,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTFs,
```

<not affected part is omitted>

```
    id-TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmission,
    id-HS-DSCHRequiredPower,
    id-HS-DSCHProvidedBitRate,
    id-HS-DSCHRequiredPowerValue,
    id-HS-DSCHProvidedBitRateValue,
    id-Unidirectional-DCH-Indicator
FROM NBAP-Constants

    Criticality,
    ProcedureID,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM NBAP-CommonDataTypes
```

<not affected part is omitted>

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

DCH-FDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator        PayloadCRC-PresenceIndicator,
    ul-FP-Mode                          UL-FP-Mode,
    toAWS                               ToAWS,
    toAWE                               ToAWE,
    dCH-SpecificInformationList         DCH-Specific-FDD-InformationList,
    iE-Extensions                       ProtocolExtensionContainer { { DCH-FDD-InformationItem-
ExtIEs} }   OPTIONAL,
    ...
}

DCH-FDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

DCH-Specific-FDD-Item ::=   SEQUENCE {
    dCH-ID                              DCH-ID,
    ul-TransportFormatSet               TransportFormatSet,
    dl-TransportFormatSet               TransportFormatSet,
    allocationRetentionPriority         AllocationRetentionPriority,
    frameHandlingPriority               FrameHandlingPriority,
    qE-Selector                         QE-Selector,
    iE-Extensions                       ProtocolExtensionContainer { { DCH-Specific-FDD-Item-ExtIEs}
}   OPTIONAL,
    ...
}

DCH-Specific-FDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-Unidirectional-DCH-Indicator        CRITICALITY ignore  EXTENSION Unidirectional-DCH-
Indicator       PRESENCE optional   },
    ...
}

DCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem

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

DCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

```
DCH-TDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator        PayloadCRC-PresenceIndicator,
    ul-FP-Mode                          UL-FP-Mode,
    toAWS                               ToAWS,
    toAWE                               ToAWE,
    dCH-SpecificInformationList         DCH-Specific-TDD-InformationList,
    iE-Extensions                           ProtocolExtensionContainer { { DCH-TDD-InformationItem-
ExtIEs} }       OPTIONAL,
    ...
}

DCH-TDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

DCH-Specific-TDD-Item ::=   SEQUENCE {
    dCH-ID                                  DCH-ID,
    ul-CCTrCH-ID                            CCTrCH-ID,
    dl-CCTrCH-ID                            CCTrCH-ID,
    ul-TransportFormatSet                   TransportFormatSet,
    dl-TransportFormatSet                   TransportFormatSet,
    allocationRetentionPriority             AllocationRetentionPriority,
    frameHandlingPriority                   FrameHandlingPriority,
    qE-Selector                             QE-Selector                     OPTIONAL,
    -- This IE shall be present if DCH is part of set of Coordinated DCHs
    iE-Extensions                           ProtocolExtensionContainer { { DCH-Specific-TDD-Item-
ExtIEs} }       OPTIONAL,
    ...
}

DCH-Specific-TDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-Unidirectional-DCH-Indicator        CRITICALITY ignore  EXTENSION Unidirectional-DCH-
Indicator       PRESENCE optional   },
    ...
}
```

<not affected part is omitted>

```
UL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unidirectional-DCH-Indicator    ::= ENUMERATED {
    downlink-DCH-only,
    uplink-DCH-only
}

USCH-Information ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationItem
```

<not affected part is omitted>

9.3.6 Constant Definitions

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

NBAP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-Constants (4)}

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN
```

<not affected part is omitted>

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

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

id-AICH-Information                                              ProtocolIE-ID ::= 0
id-AICH-InformationItem-ResourceStatusInd                        ProtocolIE-ID ::= 1
id-BCH-Information                                               ProtocolIE-ID ::= 7
id-BCH-InformationItem-ResourceStatusInd                         ProtocolIE-ID ::= 8
```

<not affected part is omitted>

```
id-HS-SICH-Reception-Quality                                     ProtocolIE-ID ::= 588
id-HS-SICH-Reception-Quality-Measurement-Value                   ProtocolIE-ID ::= 589
id-HSSICH-Info-DM-Rprt                                           ProtocolIE-ID ::= 590
id-HSSICH-Info-DM-Rqst                                           ProtocolIE-ID ::= 591
id-HSSICH-Info-DM-Rsp                                            ProtocolIE-ID ::= 592
id-Unidirectional-DCH-Indicator                                  ProtocolIE-ID ::= 602

END
```