

TSG RAN Meeting #20
Hämeenlinna, Finland, 3 - 6 June, 2003

RP-030336

Title CR (Rel-5 only) to TS 25.423 and 25.433 on Clarification for the handling of the HS-DSCH
Source TSG RAN WG3
Agenda Item 7.3.6

RAN3 Tdoc	Spec	curr. Vers.	new Vers.	REL	CR	Rev	Cat	Title	Work item
R3-030811	25.423	5.5.0	5.6.0	REL-5	837	1	F	Clarification for the handling of the HS-DSCH	HSDPA-lublur
R3-030812	25.433	5.4.0	5.5.0	REL-5	856	1	F	Clarification for the handling of the HS-DSCH	HSDPA-lublur

CHANGE REQUEST

⌘ **25.423 CR 837** ⌘ rev **1** ⌘ Current version: **5.5.0** ⌘

For [HELP](#) on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Clarification for the handling of the HS-DSCH		
Source:	⌘ RAN WG3		
Work item code:	⌘ HSDPA-lublur	Date:	⌘ 19/05/2003
Category:	⌘ F	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ In the current RNSAP, since the SRNC functional behaviour is left unspecified, a few mechanisms are allowed to handle the HS-DSCH, e.g. <ul style="list-style-type: none"> - The SRNC sends the HS-DSCH related IEs to all cells included in an active set. - The SRNC sends the HS-DSCH related IEs to only the relevant cell where the HS-DSCH is established or released. <p>Therefore, if the behaviour of the DRNS is not clearly specified, an inter-operability problem might happen, e.g.</p> <ol style="list-style-type: none"> 1. The SRNC sends HS-DSCH related IEs to all cells included in an active set and believes that the DRNS stores the received HS-DSCH related IEs. 2. However, the DRNS ignores HS-DSCH related IEs when the HS-DSCH is not established in the DRNS. 3. When the HS-DSCH is moved to the DRNS, the SRNC sends the minimum IEs to the DRNS since the SRNC believes that the DRNS already has received another IEs which are necessary to establish the HS-DSCH. <p>In the above case, the serving HS-DSCH cell change will fail.</p>
Summary of change:	⌘ <u>Rev.1</u> The proposed text is rephrased.
	⌘ <u>Rev.0</u> This CR proposes to specify the behaviour of the DRNS as follows.
	⌘ <u>HS-DSCH is established on the cell controlled by the DRNS</u> <ul style="list-style-type: none"> - The DRNS adds/modifies/deletes the indicated HS-DSCH resources to/from the radio link.

HS-DSCH is NOT established on the cell controlled by the DRNS

- The DRNS stores the configuration of the indicated HS-DSCH related IEs until all radio links belonging to the DRNS are deleted.
- The DRNS always updates the configuration of the HS-DSCH related IEs when receiving *HS-DSCH To Add* IE or *HS-DSCH To Modify* IE or *HS-DSCH To Delete* IE.

Consequences if not approved:

⌘ If this CR is not approved, HS-DSCH handling might not work in the multi-vendor environment.

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 [protocol & functional] point of view.

The impact [can] be considered isolated because the change affects [one] [system function] namely HSDPA.

Clauses affected:

⌘ 8.3.4.2

Other specs affected:

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<input type="checkbox"/>	<input checked="" type="checkbox"/>

Other core specifications
Test specifications
O&M Specifications

⌘ CR856r1 on TS25.433v5.4.0

Other comments:

⌘

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/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.
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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.

Radio Link(s) related to one UE-UTRAN connection within a DRNS.

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

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

8.3.4.2 Successful Operation

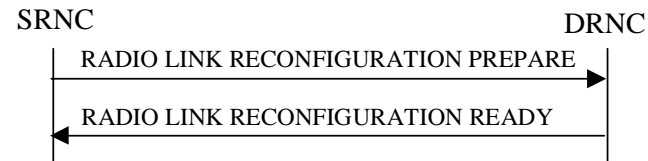


Figure 10: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

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

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

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

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

<partly omitted>

HS-DSCH Information Addition/Modification/Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *HS-DSCH Information To Modify*, *HS-DSCH Information To Add* or *HS-DSCH Information to Delete* IEs, then the DRNS shall use this information to add/modify/delete the indicated HS-DSCH resources to/from the radio link when the radio link on which the HS-PDSCH is mapped is in the DRNS. Otherwise, the DRNS shall update the configuration of the HS-DSCH according to the received any HS-DSCH Information To Modify, HS-DSCH Information To Add or HS-DSCH Information to Delete IEs. DRNS shall store the latest HS-DSCH configuration until the UE context is deleted.

If the RADIO LINK RECONFIGURATION PREPARE message includes an *HS-DSCH Information to Delete* IE requesting the deletion of all HS-DSCH resources for the UE Context, then the DRNC shall release the HS-DSCH-RNTI allocated to the UE Context, if there was one.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-PDSCH RL ID* IE and there is a HS-DSCH existing in the UE Context after reconfiguration, then:

- If a reset of the MAC-hs is not required the DRNC shall include the *MAC-hs Reset Indicator IE* in the RADIO LINK RECONFIGURATION READY message.
- [FDD – If the indicated HS-PDSCH RL ID is in the DRNS and is different from previous one, then the DRNC shall include the *Measurement Power Offset IE* in the *HS-DSCH Information Response IE* in the RADIO LINK RECONFIGURATION READY message.]

If the RADIO LINK RECONFIGURATION PREPARE message includes any *HS-DSCH Information To Add IE* or *HS-DSCH Information To Modify IE*, then the DRNS may use the *Traffic Class IE* to determine the transport bearer characteristics to apply between DRNC and Node B for the related MAC-d flows.

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *CQI Feedback Cycle k IE*, the *CQI Repetition Factor IE*, the *ACK-NACK ~~Repetition~~ Repetition Factor IE*, the *ACK Power Offset IE*, the *NACK Power Offset IE* or the *CQI Power Offset IE* in the *HS-DSCH Information To Modify IE*, then the DRNS shall use the indicated CQI Feedback Cycle k value, the CQI Repetition Factor or the ACK-NACK Repetition Factor, ACK Power Offset, the NACK Power Offset or the CQI Power Offset in the new configuration.]

[FDD – If the *HS-SCCH Power Offset IE* is included in the *HS-DSCH Information To Add IE* or *HS-DSCH Information To Modify IE*, the DRNS may use this value to determine the HS-SCCH power. If there are multiple HS-SCCHs assigned for one UE then the same power offset is applied to each of the HS-SCCH channel.]

If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-hs Window Size IE* in the *HS-DSCH Information To Modify IE*, then the DRNS shall use the indicated MAC-hs window size value in the new configuration.

The DRNC shall include the *HS-DSCH Initial Capacity Allocation IE* in the RADIO LINK RECONFIGURATION READY message for each MAC-d flow, if the DRNS allows the SRNC to start transmission of MAC-d PDUs before the DRNS has allocated capacity on user plane as described in [32].

<partly omitted>

General

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

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Layer Address IE* and *Binding ID IE* in the *DSCHs To Modify*, *DSCHs To Add*, [TDD - *USCHs To Modify*, *USCHs To Add*], *HS-DSCH To Modify*, *HS-DSCH To Add* or in the *RL Specific DCH Information IEs*, the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for any Transport Channel or HS-DSCH MAC-d flow being added, or any Transport Channel or HS-DSCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator IE*.

The DRNC shall include [in the RADIO LINK RECONFIGURATION READY message](#) the *Transport Layer Address IE* and the *Binding ID IE* ~~in the *DCH Information Response IE*~~ for any Transport Channel or HS-DSCH MAC-d flow being added, or any Transport Channel or HS-DSCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator IE*. In the case of a set of co-ordinated

CHANGE REQUEST

⌘ **25.433 CR 856** ⌘ rev **1** ⌘ Current version: **5.4.0** ⌘

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Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Clarification for the handling of the HS-DSCH		
Source:	⌘ RAN WG3		
Work item code:	⌘ HSDPA-lublur	Date:	⌘ 19/05/2003
Category:	⌘ F	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
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			Rel-5 (Release 5)
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Summary of change:	⌘ <u>Rev.1</u> The proposed text is rephrased.
	⌘ <u>Rev.0</u> This CR proposes to specify the behaviour of the Node B as follows.
	⌘ <u>HS-DSCH is established on the cell controlled by the Node B</u> <ul style="list-style-type: none"> - The Node B adds/modifies/deletes the indicated HS-DSCH resources to/from the radio link.

HS-DSCH is NOT established on the cell controlled by the Node B

- The Node B stores the configuration of the indicated HS-DSCH related IEs until all radio links belonging to the Node B are deleted.
- The Node B always updates the configuration of the HS-DSCH related IEs when receiving *HS-DSCH To Add* IE or *HS-DSCH To Modify* IE or *HS-DSCH To Delete* IE.

Consequences if not approved:

⌘ If this CR is not approved, HS-DSCH handling might not work in the multi-vendor environment.

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 [protocol & functional] point of view.

The impact [can] be considered isolated because the change affects [one] [system function] namely HSDPA.

Clauses affected:

⌘ 8.3.2.2

Other specs affected:

	Y	N
⌘	X	
		X
		X

Other core specifications
Test specifications
O&M Specifications

⌘ CR837r1 on TS25.423v5.5.0

Other comments:

⌘

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Radio Link(s) related to one Node B Communication Context.

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

8.3.2.2 Successful Operation

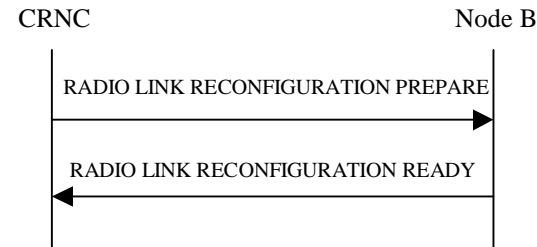


Figure 30: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the CRNC by sending the RADIO LINK RECONFIGURATION PREPARE message to the Node B. The message shall use the Communication Control Port assigned for this Node B Communication Context.

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

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

<partly omitted>

HS-DSCH Addition/Modification/Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *HS-DSCH To Add* IE or *HS-DSCH To Modify* IE or *HS-DSCH To Delete* IE, then the Node B shall use this information to add/modify/delete the indicated HS-DSCH channel to/from the radio link [when the radio link on which the HS-PDSCH is mapped is in the Node B. Otherwise, the Node B shall update the configuration of the HS-DSCH according to the received any *HS-DSCH Information To Modify*, *HS-DSCH Information To Add* or *HS-DSCH Information to Delete* IEs. Node B shall store the latest HS-DSCH configuration until the Node B Communication Context is deleted.](#)

[FDD – If the *HS-SCCH Power Offset* IE is included in the *HS-DSCH Information To Add* IE or *HS-DSCH Information To Modify* IE, the Node B may use this value to determine the HS-SCCH power. The HS-SCCH Power Offset should be applied for any HS-SCCH transmission to this UE.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *CQI Feedback Cycle k* IE, the *CQI Repetition Factor* IE, the *ACK-NACK Repetition Factor* IE, the *ACK Power Offset* IE, the *NACK Power Offset* IE or the *CQI Power Offset* IE in the *HS-DSCH Information To Modify* IE, then the DRNS shall use the indicated CQI Feedback Cycle k value, the CQI Repetition Factor or the ACK-NACK Repetition Factor, ACK

.f the RADIO LINK RECONFIGURATION PREPARE message includes an *HS DSCH To Delete* IE requesting the deletion of certain HS-DSCH resources for the Node B Communication Context, the Node B shall remove the indicated HS-DSCH in the new configuration.

The Node B shall include the *HS-DSCH Initial Capacity Allocation* IE in the RADIO LINK RECONFIGURATION READY message for each MAC-d flow, if the Node B allows the CRNC to start transmission of MAC-d PDUs before the Node B has allocated capacity on user plane as described in [24].

If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-hs Window Size* IE in the *HS-DSCH Information To Modify* IE, then the Node B shall use the indicated MAC-hs window size value in the new configuration.

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes *Measurement Power Offset* IE in the *HS-DSCH To Add* IE or the *HS-DSCH To Modify* IE, then the Node B shall use the measurement power offset as described in [10] subclause 6A.2.]

If the RADIO LINK RECONFIGURATION PREPARE message includes the *MAC-hs Guaranteed Bit Rate* IE in the *HS-DSCH Information To Add* IE or *HS-DSCH Information To Modify* IE, the Node B shall use this information to optimise MAC-hs scheduling decisions.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *T1* IE in the *HS-DSCH Information To Modify* IE, then the Node B shall use the indicated T1 value in the new configuration.

General

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Layer Address* IE and *Binding ID* IEs in the *DSCHs To Modify*, *DSCHs To Add*, [TDD - *USCHs To Modify*, *USCHs To Add*], *HS-DSCH To Modify*, *HS-DSCH To Add* or in the *RL Specific DCH Information* IEs, the Node B may use the transport layer address and the binding identifier received from the CRNC when establishing a transport bearer for any Transport Channel or HS-DSCH MAC-d flow being added, or any Transport Channel or HS-DSCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE.

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

The Node B shall include in the RADIO LINK RECONFIGURATION READY message the *Transport Layer Address* IE and the *Binding ID* IE for any Transport Channel or HS-DSCH MAC-d flow being added or any Transport Channel or HS-DSCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE.

In the case of a set of co-ordinated DCHs requiring a new transport bearer on the Iub interface, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included only for one of the DCH in the set of co-ordinated DCHs.

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