TSG-RAN Meeting #25 **RP-040369**
Palm Springs, USA, 07-09 April 2004 **Agenda item 7.3.5**

Source: **Nokia**

Title: **Removal of the DCCH mapping on HS-DSCH: CRs on 25.301, 25.308 and 25.331 (Rel-5, Rel-6)**

The following CRs are in RP-040369:

Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Version-New	Workitem	Doc-2nd-Level
25.301	070	1	Rel-5	Removal of DCCH mapping on HS-DSCH	F	5.2.0	5.3.0	HSDPA-L23	R2-041884
25.308	009	1	Rel-5	Application of HS-DSCH to signalling radio bearers, correction to MAC-hs entity and correction to a response message from UE	F	5.5.0	5.6.0	HSDPA-L23	R2-041882
25.308	010	1	Rel-6	Correction to MAC-hs entity and correction to a response message from UE	F	6.1.0	6.2.0	HSDPA-L23	R2-041912
25.331	2424	1	Rel-5	Removal of SRB mapping on HS-DSCH	F	5.9.0	5.10.0	HSDPA-L23	R2-041885

3GPP TSG-RAN2 Meeting #43 **Tdoc ⌘ R2-041884**
Prague, Czech Republic, 16-20 August 2004

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CHANGE REQUEST

⌘ **25.301** **CR** **070** ⌘ **rev** **1** ⌘ Current version: **5.2.0** ⌘

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Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Removal of DCCH mapping on HS-DSCH
Source:	⌘	Nokia
Work item code:	⌘	HSDPA-L23
Date:	⌘	8/9/2004
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:	⌘	The section 5.3.5.19 mentions DCCH mapped to the HS-DSCH. However it ~~it~~ is found out ~~thought~~ in RAN2 that mapping DCCH on HS-DSCH is not working in all cases in Release 5 of the FDD mode and there is no real requirement for the UE to support that mapping in Release 5.
Summary of change:	⌘	The section 5.3.5.19 is done TDD specific, thus this mapping option is removed from FDD.~~removed~~.
Consequences if not approved:	⌘	Inconsistency and incorrectness would remain in the specification. **Impact on test specifications:** No impact.

Clauses affected:	⌘	5.3.5.19			
Other specs affected:	⌘	**Y**	**N**		
			X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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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.

5.3.5.19 Data flow for DCCH mapped to HS-DSCH (TDD only)

For DCCH, both unacknowledged and acknowledged transmission mode on RLC is employed. A MAC header is mandatory when the DCCH is mapped to the HS-DSCH, i.e. the data flow in figure 9a is applicable.

5.3.5.20 Data flow for DTCH (non-transparent RLC) mapped to HS-DSCH

Mapping to DSCH implies a DTCH with acknowledged or unacknowledged transmission on RLC. A MAC header is mandatory when the DCCH is mapped to the HS-DSCH, i.e. the data flow in figure 9a is applicable.

3GPP TSG-RAN2 Meeting #43 ***Tdoc ⌘ R2-041882***
Prague, Czech Republic, 16-20 August 2004

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CHANGE REQUEST

⌘ **25.308** **CR** **009** ⌘ **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 [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Application of HS-DSCH to signalling radio bearers, correction to MAC-hs entity and correction to a response message from UE
Source:	⌘	Nokia
Work item code:	⌘	HSDPA-L23
Date:	⌘	8/9/2004
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)*
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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:	⌘	1. In subclause 5.2.2.1 it is stated that DCCH can be mapped to the DCH or the HS-DSCH. However, it ~~thought~~ found out in RAN2 that mapping DCCH on HS-DSCH is not working in all cases in Release 5 of the FDD mode and there is no real requirement for the UE to support that mapping in Release 5. 2. In section 9.4 there is an error in a statement regarding a flag for MAC-hs reset (i.e. “MAC-hs reset indicator). There MAC-sh is incorrectly mentioned instead of MAC-hs. 3. In section 9.5 TRANSPORT CHANNEL RECONFIGURATION is erroneously mentioned as a response message from UE to network.
Summary of change:	⌘	1. The sentence is made TDD specific, thus this mapping option is removed from FDD. 2. and 3. The above items are corrected in each section.
Consequences if not approved:	⌘	Inconsistency and incorrectness would remain in the specification. **Impact on test specifications:** No impact.
Clauses affected:	⌘	Clause 4 (Figure 5.2.2.1), Subclauses 9.4 and 9.5.

		Y	N			
Other specs affected:	⌘		X	Other core specifications	⌘	
			X	Test specifications		
			X	O&M Specifications		
Other comments:	⌘					

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4 Background and Introduction

High Speed Downlink Packet Access is based on techniques such as adaptive modulation and hybrid ARQ to achieve high throughput, reduce delay and achieve high peak rates.

It relies on a new type of transport channel, the HS-DSCH, which is terminated in the Node B. HS-DSCH is applicable only to PS domain RABs.

5.2.2.1 FDD Downlink Physical layer Model

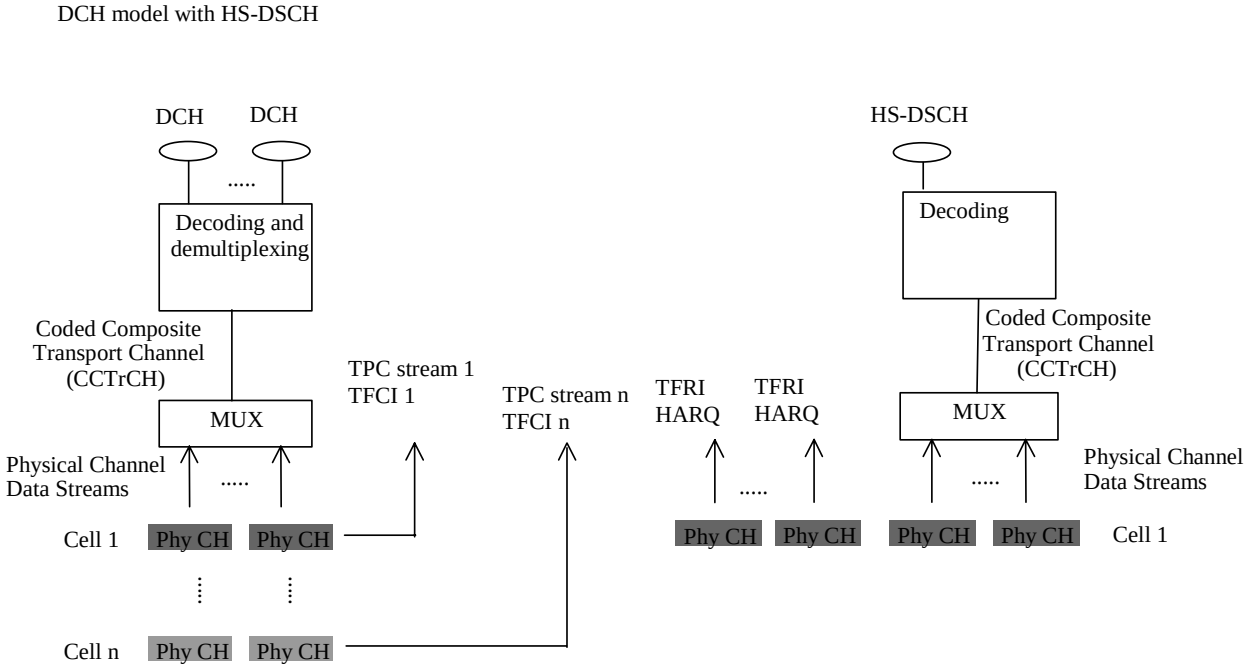

Figure 5.2.2.1-1: Model of the UE's Downlink physical layer - HS-PDSCH with associated DPCH. HS-PDSCH is transmitted from cell 1 in this figure

The basic downlink channel configuration consists of one or several HS-PDSCHs along with an associated DPCH combined with a number of separate shared physical control channels, HS-SCCHs. The set of shared physical control channels allocated to the UE at a given time is called an HS-SCCH set. The UTRAN may use more than one HS-SCCH set in one given cell. There is a fixed time offset between the start of the HS-SCCH information and the start of the corresponding HS-PDSCH subframe.

The UE is provided one HS-SCCH set on HS-PDSCH configuration/re-configuration via RRC signalling.

The number of HS-SCCHs in a HS-SCCH set as seen from the UE's point-of-view can range from a minimum of one HS-SCCH to a maximum of four HS-SCCHs. The UE shall monitor continuously all the HS-SCCHs in the allocated set.

A two-step signalling approach is used for indicating which UE has been scheduled and for signalling the necessary information required for the UE to decode the HS-PDSCHs.

For each HS-DSCH TTI, each Shared Control Channel (HS-SCCH) carries HS-DSCH-related downlink signalling for one UE. The following information is carried on the HS-SCCH:

- Transport Format and Resource Indicator (TFRI):
  The TFRI includes information about the dynamic part of the HS-DSCH transport format, including transport block set size and modulation scheme. The TFRI also includes information about the set of physical channels (channelisation codes) onto which HS-DSCH is mapped in the corresponding HS-DSCH TTI.

- Hybrid-ARQ-related Information (HARQ information):
  This includes the HARQ protocol related information for the corresponding HS-DSCH TTI (subclause 7.1.2.1) and information about the redundancy version.

The HS-SCCH carries a UE identity (via a UE-specific CRC) that identifies the UE for which it is carrying the information necessary for decoding the HS-PDSCH.

The HS-PDSCH channelisation codes that are used in a given cell are not sent to the UE using RRC signalling. The HS-SCCH signals the set of HS-PDSCH channelisation codes which are allocated to a UE for a given TTI.

The first part of the HS-SCCH contains the channelisation code set and the modulation scheme for the HS-DSCH allocation with the second part containing the transport block size and H-ARQ related information. One CRC is calculated over both parts and the UE id, and attached to the HS-SCCH information.

In case of HS-DSCH transmission to the same UE in consecutive HS-DSCH TTIs, the same HS-SCCH should be used for the corresponding associated downlink signalling.

The upper layer signalling on the DCCH can be mapped to the DCH mapped to the associated DPCH, or in case of TDD, to the HS-DSCH.

[The HS-DSCH carries a UE identity that identifies the UE so that erroneous delivery of MAC-PDUs to MAC-d is avoided.]

9.4 Inter-Node B synchronised serving HS-DSCH cell change during hard handover

Figure 9.4-1 illustrates a synchronised inter-Node B serving HS-DSCH cell change in combination with hard handover. The reconfiguration is performed in two steps within UTRAN. On the radio interface only a single RRC procedure is used.

Here we assume the UE transmits a MEASUREMENT REPORT message containing intra-frequency measurement results, triggered by the event 1D "change of best cell". The SRNC determines the need for hard handover based on received measurement reports and/or load control algorithms (measurements may be performed in compressed mode for FDD).

In the first step, the SRNC establishes a new radio link in the target Node B. In the second step this newly created radio link is prepared for a synchronised reconfiguration to be executed at a given activation time indicated in the CPHY-RL-Commit-REQ primitive. After the first step, the target Node B starts transmission and reception on dedicated channels. At the indicated activation time, transmission of HS-DSCH is started in the target HS-DSCH Node B and stopped in the source HS-DSCH Node B.

The SRNC then sends a TRANSPORT CHANNEL RECONFIGURATION message on the old configuration. This message indicates the configuration after handover, both for DCH and HS-DSCH. The TRANSPORT CHANNEL RECONFIGURATION message includes a flag indicating that the MAC-~~sh~~ hs entity in the UE shall be reset. The message also includes an update of transport channel related parameters for the HS-DSCH in the target HS-DSCH cell.

The UE terminates transmission and reception on the old radio link at the activation time indicated in the TRANSPORT CHANNEL RECONFIGURATION message, and configures its physical layer to begin reception on the new radio link. After L1 synchronisation has been established, the UE sends a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message. The SRNC then terminates reception and transmission on the old radio link for dedicated channels and releases all resources allocated to the considered UE.

Note that in this inter-Node B handover example, RLC for transmission/reception on HS-DSCH is stopped at both the UTRAN and UE sides prior to reconfiguration and continued when the reconfiguration is completed. It is furthermore assumed in this example that the TRANSPORT CHANNEL RECONFIGURATION message indicates to the UE that the MAC-hs entity should be reset and a status report for each RLC entity associated with the HS-DSCH should be generated. A reset of the UE MAC-hs entity triggers the delivery of the content in the re-ordering buffer to higher layers.

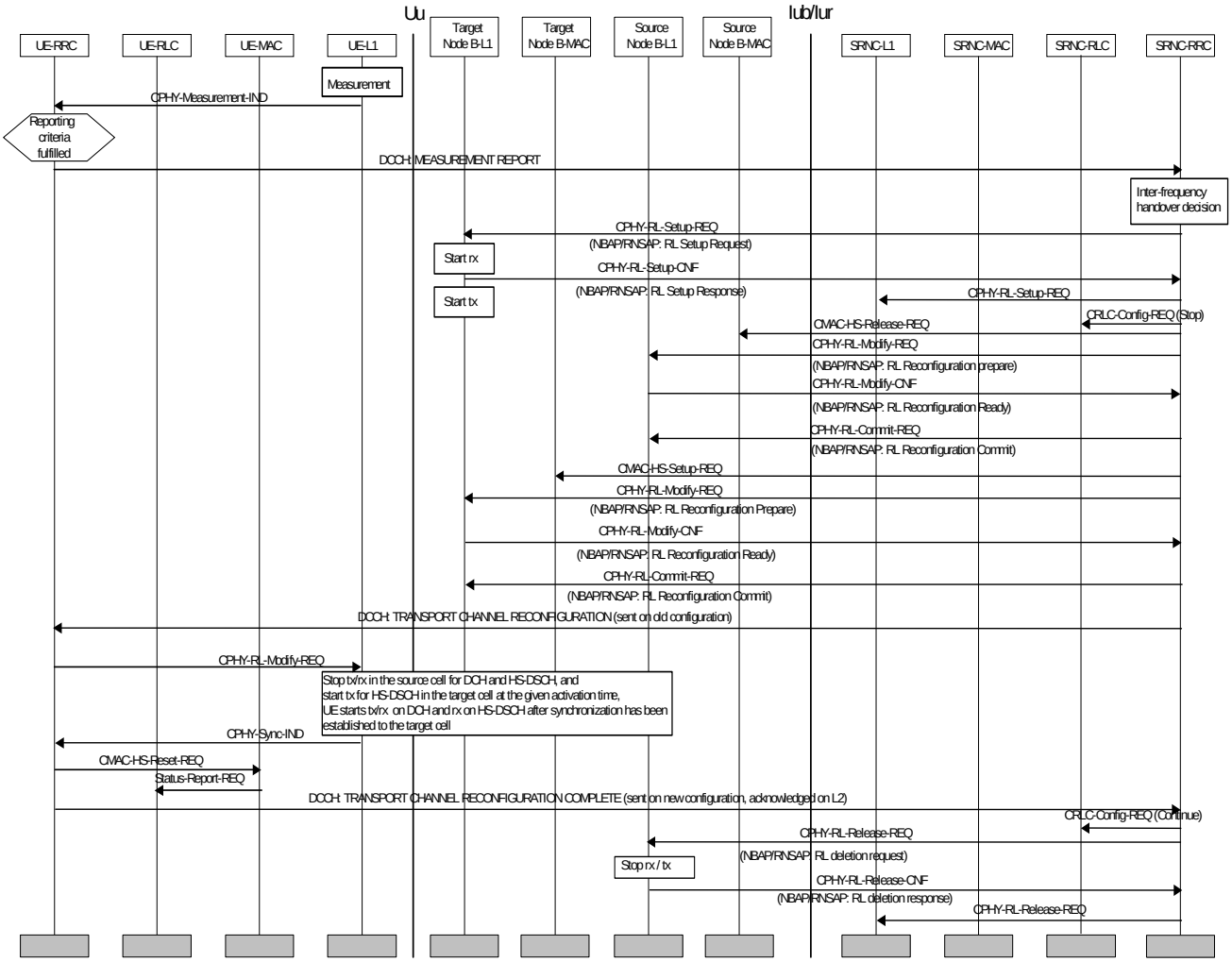

Figure 9.4-1: Inter-Node B synchronised serving HS-DSCH cell change during hard handover

9.5 Inter-Node B synchronised serving HS-DSCH cell change after active set update (radio link addition)

Figure 9.5-1 illustrates an inter-Node B serving HS-DSCH cell change performed subsequent to an active set update. In this example it is assumed that a new radio link is added which belongs to a target Node B different from the source Node B. The cell which is added to the active set is assumed to become the serving HS-DSCH cell in the second step. This combined procedure is comprised of an ordinary Active Set Update procedure in the first step and a synchronised serving HS-DSCH cell change in the second step.

We assume the UE transmits a MEASUREMENT REPORT message containing intra-frequency measurement results. The SRNC determines the need for the combined radio link addition and serving HS-DSCH cell change based on received measurement reports and/or load control algorithms (measurements may be performed in compressed mode for FDD).

As the first step, the SRNC establishes the new radio link in the target Node B for the dedicated physical channels and transmits an ACTIVE SET UPDATE message to the UE. The ACTIVE SET UPDATE message includes the necessary information for establishment of the dedicated physical channels in the added radio link (but not the HS-PDSCH). When the UE has added the new radio link it returns an ACTIVE SET UPDATE COMPLETE message.

The SRNC will now carry on with the next step of the procedure, which is the serving HS-DSCH cell change. The target HS-DSCH cell is the newly added radio link, so far only including dedicated physical channels. For the

synchronised serving HS-DSCH cell change, both the source and target Node Bs are first prepared for execution of the handover at the activation time indicated with CPHY-RL-Commit-REQ primitive.

The SRNC then sends a TRANSPORT CHANNEL RECONFIGURATION message, which indicates the target HS-DSCH cell and the activation time to the UE. The message may also include a configuration of transport channel related parameters for the target HS-DSCH cell, including an indication to reset the MAC-hs entity and a status report for each RLC entity associated with the HS-DSCH should be generated.

Since source and target HS-DSCH cell are controlled by different Node Bs, MAC-hs in source and target Node B need to be released and setup, respectively, which is assumed to be done with CMAC-HS-Release-REQ and CMAC-HS-Setup-REQ primitives. These MAC-hs control primitives are assumed to be carried on the same NBAP/RNSAP messages, which carry the CPHY-RL-Reconfig-REQ primitives. Execution of release and setup of MAC-hs entities shall also be performed at the indicated activation time.

When the UE has completed the serving HS-DSCH cell change it returns a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message to the network.

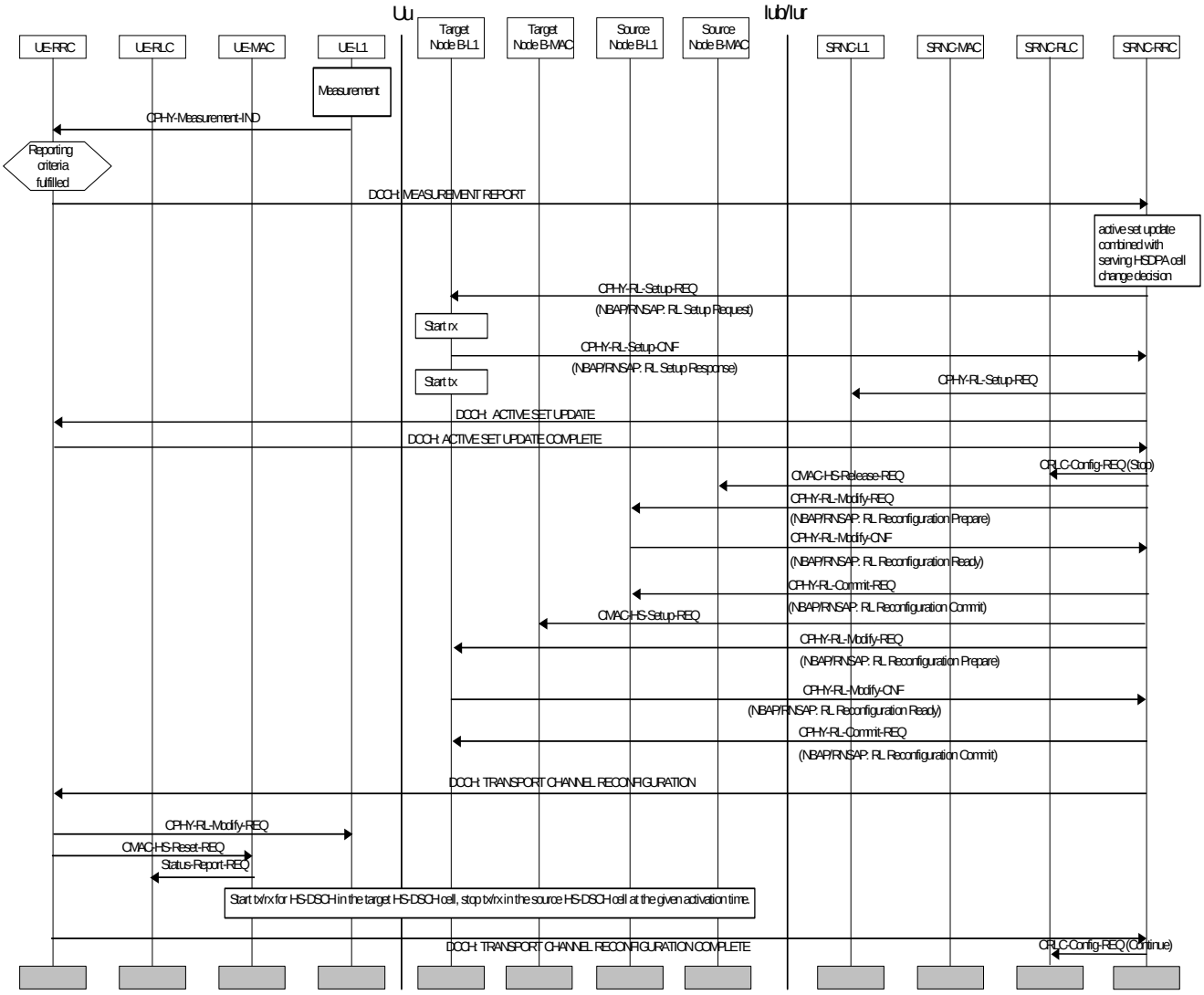

Figure 9.5-1: Inter-Node B synchronised serving HS-DSCH cell change after active set update

3GPP TSG-RAN2 Meeting #43
Prague, Czech Republic, 16-20 August 2004

Tdoc ⌘ R2-041912

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CHANGE REQUEST

⌘ **25.308** **CR** **010** ⌘ **rev** **1** ⌘ Current version: **6.1.0** ⌘

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Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Correction to MAC-hs entity and correction to a response message from UE
Source:	⌘	RAN WG2
Work item code:	⌘	HSDPA-L23
Date:	⌘	26/Aug/2004
Category:	⌘	**F**
Release:	⌘	Rel-6

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:	⌘	1. In section 9.4 there is an error in a statement regarding a flag for MAC-hs reset (i.e. “MAC-hs reset indicator). There MAC-sh is incorrectly mentioned instead of MAC-hs. 2. In section 9.5 TRANSPORT CHANNEL RECONFIGURATION is erroneously mentioned as a response message from UE to network.
Summary of change:	⌘	The above items are corrected in each section.
Consequences if not approved:	⌘	Inconsistency and incorrectness would remain in the specification. **Impact on test specifications:** No impact.

Clauses affected:	⌘	9.4, 9.5

Other specs affected: ⌘	Y	N	
		X	Other core specifications
		X	Test specifications
		X	O&M Specifications

⌘

Other comments:	⌘	

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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.

9.4 Inter-Node B synchronised serving HS-DSCH cell change during hard handover

Figure 9.4-1 illustrates a synchronised inter-Node B serving HS-DSCH cell change in combination with hard handover. The reconfiguration is performed in two steps within UTRAN. On the radio interface only a single RRC procedure is used.

Here we assume the UE transmits a MEASUREMENT REPORT message containing intra-frequency measurement results, triggered by the event 1D "change of best cell". The SRNC determines the need for hard handover based on received measurement reports and/or load control algorithms (measurements may be performed in compressed mode for FDD).

In the first step, the SRNC establishes a new radio link in the target Node B. In the second step this newly created radio link is prepared for a synchronised reconfiguration to be executed at a given activation time indicated in the CPHY-RL-Commit-REQ primitive. After the first step, the target Node B starts transmission and reception on dedicated channels. At the indicated activation time, transmission of HS-DSCH is started in the target HS-DSCH Node B and stopped in the source HS-DSCH Node B.

The SRNC then sends a TRANSPORT CHANNEL RECONFIGURATION message on the old configuration. This message indicates the configuration after handover, both for DCH and HS-DSCH. The TRANSPORT CHANNEL RECONFIGURATION message includes a flag indicating that the MAC-~~sh~~ hs entity in the UE shall be reset. The message also includes an update of transport channel related parameters for the HS-DSCH in the target HS-DSCH cell.

The UE terminates transmission and reception on the old radio link at the activation time indicated in the TRANSPORT CHANNEL RECONFIGURATION message, and configures its physical layer to begin reception on the new radio link. After L1 synchronisation has been established, the UE sends a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message. The SRNC then terminates reception and transmission on the old radio link for dedicated channels and releases all resources allocated to the considered UE.

Note that in this inter-Node B handover example, RLC for transmission/reception on HS-DSCH is stopped at both the UTRAN and UE sides prior to reconfiguration and continued when the reconfiguration is completed. It is furthermore assumed in this example that the TRANSPORT CHANNEL RECONFIGURATION message indicates to the UE that the MAC-hs entity should be reset and a status report for each RLC entity associated with the HS-DSCH should be generated. A reset of the UE MAC-hs entity triggers the delivery of the content in the re-ordering buffer to higher layers.

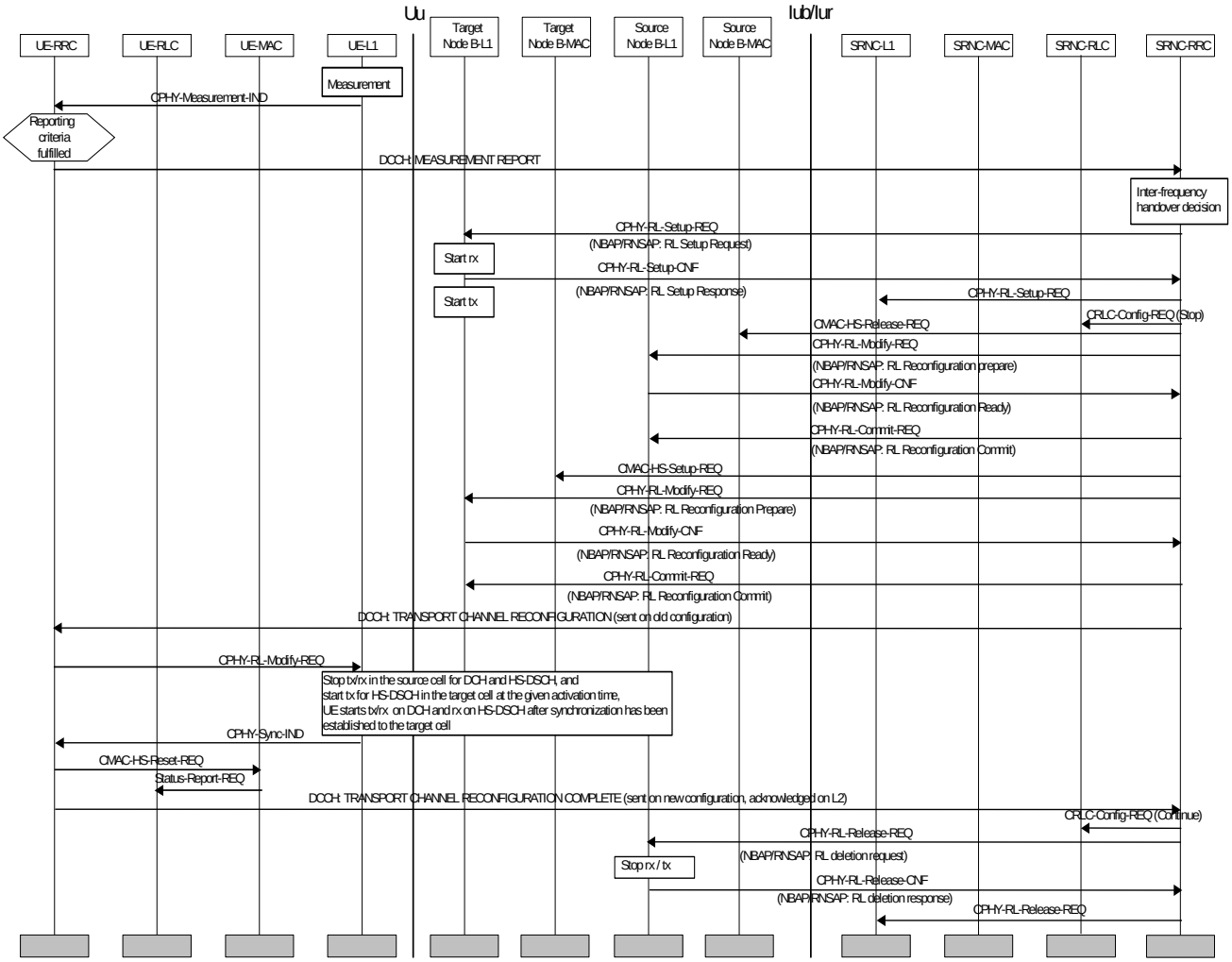

Figure 9.4-1: Inter-Node B synchronised serving HS-DSCH cell change during hard handover

9.5 Inter-Node B synchronised serving HS-DSCH cell change after active set update (radio link addition)

Figure 9.5-1 illustrates an inter-Node B serving HS-DSCH cell change performed subsequent to an active set update. In this example it is assumed that a new radio link is added which belongs to a target Node B different from the source Node B. The cell which is added to the active set is assumed to become the serving HS-DSCH cell in the second step. This combined procedure is comprised of an ordinary Active Set Update procedure in the first step and a synchronised serving HS-DSCH cell change in the second step.

We assume the UE transmits a MEASUREMENT REPORT message containing intra-frequency measurement results. The SRNC determines the need for the combined radio link addition and serving HS-DSCH cell change based on received measurement reports and/or load control algorithms (measurements may be performed in compressed mode for FDD).

As the first step, the SRNC establishes the new radio link in the target Node B for the dedicated physical channels and transmits an ACTIVE SET UPDATE message to the UE. The ACTIVE SET UPDATE message includes the necessary information for establishment of the dedicated physical channels in the added radio link (but not the HS-PDSCH). When the UE has added the new radio link it returns an ACTIVE SET UPDATE COMPLETE message.

The SRNC will now carry on with the next step of the procedure, which is the serving HS-DSCH cell change. The target HS-DSCH cell is the newly added radio link, so far only including dedicated physical channels. For the

synchronised serving HS-DSCH cell change, both the source and target Node Bs are first prepared for execution of the handover at the activation time indicated with CPHY-RL-Commit-REQ primitive.

The SRNC then sends a TRANSPORT CHANNEL RECONFIGURATION message, which indicates the target HS-DSCH cell and the activation time to the UE. The message may also include a configuration of transport channel related parameters for the target HS-DSCH cell, including an indication to reset the MAC-hs entity and a status report for each RLC entity associated with the HS-DSCH should be generated.

Since source and target HS-DSCH cell are controlled by different Node Bs, MAC-hs in source and target Node B need to be released and setup, respectively, which is assumed to be done with CMAC-HS-Release-REQ and CMAC-HS-Setup-REQ primitives. These MAC-hs control primitives are assumed to be carried on the same NBAP/RNSAP messages, which carry the CPHY-RL-Reconfig-REQ primitives. Execution of release and setup of MAC-hs entities shall also be performed at the indicated activation time.

When the UE has completed the serving HS-DSCH cell change it returns a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message to the network.

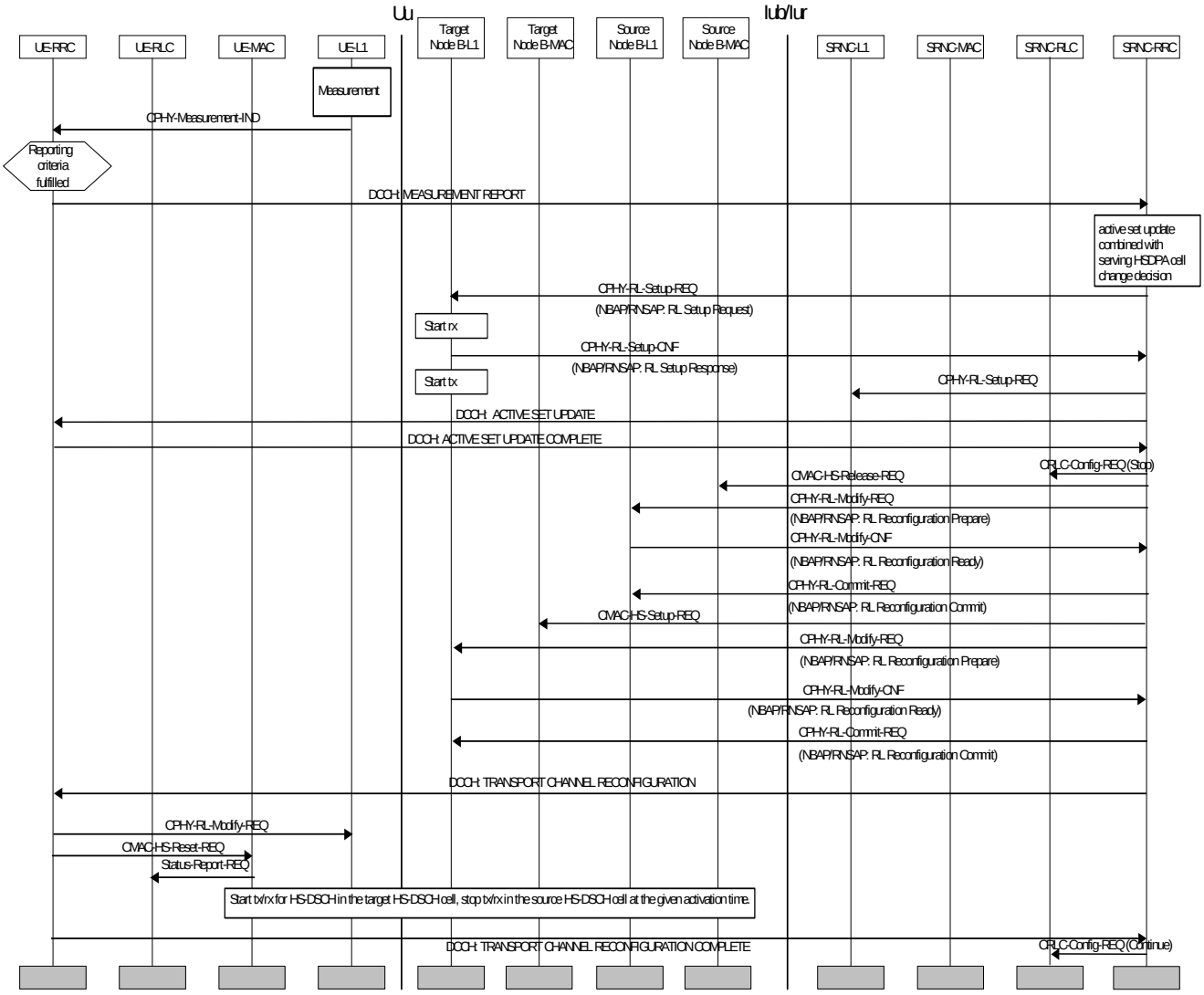

Figure 9.5-1: Inter-Node B synchronised serving HS-DSCH cell change after active set update

3GPP TSG-RAN2 Meeting #43
Prague, Czech Republic, 16-20 August 2004

Tdoc ⌘ R2-041885

CR-Form-v7

CHANGE REQUEST

⌘ **25.331** **CR** **2424** ⌘ **rev** **1** ⌘ Current version: **5.9.0** ⌘

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Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Removal of SRB mapping on HS-DSCH
Source:	⌘	Nokia
Work item code:	⌘	HSDPA-L23
Date:	⌘	8/9/2004
Category:	⌘	**F**
Release:	⌘	Rel-5

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

Reason for change:	⌘	It is ~~thought~~ found out in RAN2 that mapping DCCH on HS-DSCH is not working in all cases in Release 5 of the FDD mode and there is no real requirement for the UE to support the mapping of SRB on HS-DSCH in Release 5.
Summary of change:	⌘	It is stated in section 8.6.4.8 that in FDD the UTRAN should not map signalling radio bearers on the HS-DSCH and the UE behaviour is not specified otherwise.
Consequences if not approved:	⌘	Inconsistency and incorrectness would remain in the specification. **Impact on test specifications:** No impact.

Clauses affected:	⌘	8.6.4.8

Other specs affected: ⌘	Y	N	
		X	Other core specifications
		X	Test specifications
		X	O&M Specifications

⌘

Other comments: ⌘

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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.

8.6.4.8 RB mapping info

If the IE "RB mapping info" is included, the UE shall:

1> for each multiplexing option of the RB:

2> if a multiplexing option that maps a logical channel corresponding to a TM-RLC entity onto RACH, CPCH, FACH or DSCH or HS-DSCH is included:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if the multiplexing option realises the radio bearer on the uplink (resp. on the downlink) using two logical channels with different values of the IE "Uplink transport channel type" (resp. of the IE "Downlink transport channel type"):

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if that RB is using TM and the IE "Segmentation indication" is set to TRUE and, based on the multiplexing configuration resulting from this message, the logical channel corresponding to it is mapped onto the same transport channel as another logical channel:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if the transport channel considered in that multiplexing option is different from RACH and if that RB is using AM and the set of RLC sizes applicable to the uplink logical channel transferring data PDUs has more than one element not equal to zero:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> if that RB is using UM or TM and the multiplexing option realises it using two logical channels:

3> set the variable INVALID_CONFIGURATION to TRUE.

2> for each logical channel in that multiplexing option:

3> if the value of the IE "RLC size list" is set to "Explicit list":

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and the value (index) of any IE "RLC size index" in the IE "Explicit list" does not correspond to an "RLC size" in the IE transport format set of that transport channel given in the message; or

4> if the transport channel this logical channel is mapped on in this multiplexing option is different from RACH, and if a "Transport format set" for that transport channel is not included in the same message, and the value (index) of any IE "RLC size index" in the IE "Explicit list" does not correspond to an "RLC size" in the stored transport format set of that transport channel; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and the value of any IE "Logical channel list" in the transport format set is not set to "Configured"; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is not included in the same message, and the value of any IE "Logical channel list" in the stored transport format set of that transport channel is not set to "Configured":

5> set the variable INVALID_CONFIGURATION to TRUE.

3> if the value of the IE "RLC size list" is set to "All":

4> if the transport channel this logical channel is mapped on is RACH; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and the value of any IE "Logical channel list" in the transport format set is not set to "Configured"; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is not included in the same message, and the value of any IE "Logical channel list" in the stored transport format set of that transport channel is not set to "Configured":

5> set the variable INVALID_CONFIGURATION to TRUE.

3> if the value of the IE "RLC size list" is set to "Configured":

4> if the transport channel this logical channel is mapped on is RACH; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is included in the same message, and for none of the RLC sizes defined for that transport channel in the "Transport format set", the "Logical Channel List" is set to "All" or given as an "Explicit List" which contains this logical channel; or

4> if a "Transport format set" for the transport channel this logical channel is mapped on in this multiplexing option is not included in the same message, and for none of the RLC sizes defined in the transport format set stored for that transport channel, the "Logical Channel List" is set to "All" or given as an "Explicit List" which contains this logical channel:

5> set the variable INVALID_CONFIGURATION to TRUE.

1> if, as a result of the message this IE is included in, several radio bearers can be mapped onto the same transport channel, and the IE "Logical Channel Identity" was not included in the RB mapping info of any of those radio bearers for a multiplexing option on that transport channel or the same "Logical Channel Identity" was used more than once in the RB mapping info of those radio bearers for the multiplexing options on that transport channel:

2> set the variable INVALID_CONFIGURATION to TRUE.

1> if the "RB mapping info" is considered as valid according to the rules above:

2> delete all previously stored multiplexing options for that radio bearer;

2> store each new multiplexing option for that radio bearer;

2> perform the actions as specified in subclause 8.5.21.

1> if the IE "Uplink transport channel type" is set to the value "RACH":

2> in FDD:

3> refer the IE "RLC size index" to the RACH Transport Format Set of the first PRACH received in the IE "PRACH system information list" received in System Information Block 5 or System Information Block 6.

2> in TDD:

3> use the first Transport Format of the PRACH of the IE "PRACH system information list" at the position equal to the value in the IE "RLC size index".

In case IE "RLC info" includes IE "Downlink RLC mode" ("DL RLC logical channel info" is mandatory present) but IE "Number of downlink RLC logical channels" is absent in the corresponding IE "RB mapping info", the parameter values are exactly the same as for the corresponding UL logical channels. In case two multiplexing options are specified for the UL, the first options shall be used as default for the DL. As regards the IE "Channel type", the following rule should be applied to derive the DL channel type from the UL channel included in the IE:

Channel used in UL	DL channel type implied by "same as"
DCH	DCH
RACH	FACH
CPCH	FACH
USCH	DSCH

If ciphering is applied, UTRAN should not map Transparent Mode RBs of different CN domains on the same transport channel and it should not map transparent mode SRBs and RBs onto the same transport channel. In such cases the UE behaviour is not specified.

In FDD, ~~T~~the UTRAN should not map signalling radio bearers on the HS-DSCH. In such case the UE behavour is unspecified in this version of the specification.