

TSG RAN Meeting #28
Quebec, Canada, 1 - 3 June 2005

RP-050242

Title CRs (Rel-5 category F, Rel-6 category F) to TS 25.214 for HS-DPCCH transmissions on discarding HS-SCCH
Source TSG RAN WG1
Agenda Item 7.2.5

RAN WG Tdoc	Spec	CR	Rev	Rel	Cat	Current Version	Subject	Work item	Remarks
R1-050532	25.214	393	1	Rel-5	F	5.10.0	HS-DPCCH transmissions on discarding HS-SCCH	TEI	
R1-050532	25.214	394	1	Rel-6	F	6.5.0	HS-DPCCH transmissions on discarding HS-SCCH	TEI	

CHANGE REQUEST

⌘ **25.214 CR 393** ⌘ rev **1** ⌘ Current version: **5.10.0** ⌘

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:	⌘ HS-DPCCH transmissions on discarding HS-SCCH		
Source:	⌘ RAN WG1		
Work item code:	⌘ TEI	Date:	⌘ 06/05/2005
Category:	⌘ F	Release:	⌘ Rel-5
	<i>Use <u>one</u> of the following categories:</i> 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 .		<i>Use <u>one</u> of the following releases:</i> Ph2 (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) Rel-7 (Release 7)

Reason for change:	⌘ The assumption that the UE will not transmit ACK or NACK on HS-DPCCH if the HS-SCCH is discarded is not specified.
Summary of change:	⌘ It is specified that the UE will not transmit ACK or NACK on HS-DPCCH if the HS-SCCH is discarded. It is also specified that the UE discards the HS-SCCH information if the HS-SCCH CRC fails.
Consequences if not approved:	⌘ The Node B would be unable to determine whether the UE had stored HS-PDSCH information in its soft buffer.

Clauses affected:	⌘ 6A.1.1						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications Test specifications O&M Specifications	⌘
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
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.

6A HS-DSCH-related procedures

6A.1 General procedure

Scheduling and transport format selection is controlled by the MAC-hs sublayer in the Node B [9].

The following physical layer parameters are signalled to the UE and the Node B from higher layers:

- 1) HS-SCCH set to be monitored
- 2) Repetition factor of ACK/NACK: $N_{\text{acknack_transmit}}$
- 3) Channel Quality Indicator (CQI) feedback cycle k .
- 4) Repetition factor of CQI: $N_{\text{cqi_transmit}}$
- 5) Measurement power offset Γ

6A.1.1 UE procedure for receiving HS-DSCH

If the UE did not detect consistent control information intended for this UE on any of the HS-SCCHs in the HS-SCCH set in the immediately preceding subframe, the UE shall monitor all HS-SCCHs in the HS-SCCH set. The maximum size of the HS-SCCH set is 4.

If the UE did detect consistent control information intended for this UE in the immediately preceding subframe, it is sufficient to only monitor the same HS-SCCH used in the immediately preceding subframe.

When the UE monitors HS-SCCHs, the UE shall only consider the control information to be consistent

if decoded 'channelization-code-set information' is lower than or equal to 'maximum number of HS-DSCH codes received' in its UE capability and

if the decoded modulation scheme is valid in terms of its UE capability.

If a UE detects that one of the monitored HS-SCCHs carries consistent control information intended for this UE, the UE shall start receiving the HS-PDSCHs indicated by this control information.

The transport block size information shall be derived from the signaled TFRI value as defined in [9]. If the 'Hybrid-ARQ process information' is not included in the set configured by upper layers, the UE shall discard the information received on this HS-SCCH and on the HS-PDSCHs. [Further, if the HS-SCCH CRC fails, the UE shall discard the information received on this HS-SCCH and on the HS-PDSCHs.](#)

The UE shall transmit the ACK/NACK information received from MAC-hs in the slot allocated to the HARQ-ACK in the corresponding HS-DPCCH sub-frame as defined in [1]. When $N_{\text{acknack_transmit}}$ is greater than one, the UE shall:

repeat the transmission of the ACK/NACK information over the next ($N_{\text{acknack_transmit}}-1$) consecutive HS-DPCCH sub-frames, in the slots allocated to the HARQ-ACK as defined in [1] and

not attempt to receive nor decode transport blocks from the HS-PDSCH in HS-DSCH sub-frames corresponding to HS-DPCCH sub-frames in which the ACK/NACK information transmission is repeated.

If consistent control information is not detected on any of the HS-SCCHs in the HS-SCCH set, [or if the information received on HS-SCCH is discarded](#), neither ACK, nor NACK, shall be transmitted in the corresponding HS-DPCCH subframe.

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.214 CR 394** ⌘ rev **1** ⌘ Current version: **6.5.0** ⌘

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

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Source:	⌘ RAN WG1		
Work item code:	⌘ TEI	Date:	⌘ 06/05/2005
Category:	⌘ F	Release:	⌘ Rel-6
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Reason for change:	⌘ The assumption that the UE will not transmit ACK or NACK on HS-DPCCH if the HS-SCCH is discarded is not specified.
Summary of change:	⌘ It is specified that the UE will not transmit ACK, NACK or PRE on HS-DPCCH if the HS-SCCH is discarded. It is also specified that the UE discards the HS-SCCH information if the HS-SCCH CRC fails.
Consequences if not approved:	⌘ The Node B would be unable to determine whether the UE had stored HS-PDSCH information in its soft buffer.

Clauses affected:	⌘ 6A.1.1						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
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Other comments:	⌘						

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- 4) Repetition factor of CQI: $N_{\text{cqi_transmit}}$
- 5) Measurement power offset Γ
- 6) Status of preamble/postamble transmission: $\text{HARQ_preamble_mode}$

6A.1.1 UE procedure for receiving HS-DSCH

In this sub-clause, sub-frame n on the HS-SCCHs refers to the sub-frame which is associated with sub-frame n on the HS-PDSCH as defined in [1], and sub-frame n on the HS-DPCCH refers to the sub-frame which is related to sub-frame n on the HS-PDSCH as defined in [1].

If the UE did not detect consistent control information intended for this UE on any of the HS-SCCHs in the HS-SCCH set in the immediately preceding subframe $n - 1$, the UE shall in sub-frame n monitor all HS-SCCHs in the HS-SCCH set. The maximum size of the HS-SCCH set is 4.

If the UE did detect consistent control information intended for this UE in the immediately preceding subframe $n - 1$, it is sufficient in sub-frame n to only monitor the same HS-SCCH used in the immediately preceding subframe $n - 1$.

When the UE monitors HS-SCCHs, the UE shall only consider the control information to be consistent

if decoded 'channelization-code-set information' is lower than or equal to 'maximum number of HS-DSCH codes received' in its UE capability and

if the decoded modulation scheme is valid in terms of its UE capability.

If a UE detects that one of the monitored HS-SCCHs in sub-frame n carries consistent control information intended for this UE, the UE shall start receiving the HS-PDSCHs indicated by this control information, and, if $\text{HARQ_preamble_mode} = 1$ [and the information received on HS-SCCH is not discarded](#), the UE shall:

transmit a HARQ Preamble (PRE) in the slot allocated to HARQ-ACK in HS-DPCCH sub-frame $n - 1$, unless an ACK or NACK is to be transmitted in sub-frame $n - 1$ as a result of an HS-DSCH transmission earlier than sub-frame n on the HS-PDSCH, and

if $N_{\text{acknack_transmit}} > 1$, the UE shall transmit a HARQ Preamble in the slot allocated to HARQ-ACK in HS-DPCCH sub-frame $n - 2$, unless an ACK or NACK is to be transmitted in sub-frame $n - 2$ as a result of an HS-DSCH transmission earlier than sub-frame n on the HS-PDSCH.

The transport block size information shall be derived from the signaled TFRI value as defined in [9]. If the 'Hybrid-ARQ process information' is not included in the set configured by upper layers, the UE shall discard the information received on this HS-SCCH and on the HS-PDSCHs. [Further, if the HS-SCCH CRC fails, the UE shall discard the information received on this HS-SCCH and on the HS-PDSCHs.](#)

The UE shall transmit the ACK/NACK information received from MAC-hs in the slot allocated to the HARQ-ACK in the corresponding HS-DPCCH sub-frame as defined in [1]. When $N_{\text{acknack_transmit}}$ is greater than one, the UE shall:

repeat the transmission of the ACK/NACK information over the next ($N_{acknack_transmit}-1$) consecutive HS-DPCCH sub-frames, in the slots allocated to the HARQ-ACK as defined in [1] and

not attempt to receive nor decode transport blocks from the HS-PDSCH in HS-DSCH sub-frames corresponding to HS-DPCCH sub-frames in which the ACK/NACK information transmission is repeated.

If ACK or NACK is transmitted in HS-DPCCH sub-frame n , and HARQ_preamble_mode = 1 and $UE\ InterTTI \leq N_{acknack_transmit}$, then the UE shall:

transmit a HARQ Postamble (POST) in the slot allocated to HARQ-ACK in HS-DPCCH subframe $n + 2*N_{acknack_transmit} - 1$, unless ACK, NACK, or PRE is to be transmitted in this subframe, and

if $N_{acknack_transmit} > 1$, transmit a HARQ Postamble (POST) in the slot allocated to HARQ-ACK in HS-DPCCH subframe $n + 2*N_{acknack_transmit} - 2$, unless an ACK, NACK or PRE is to be transmitted in this subframe.

If consistent control information is not detected on any of the HS-SCCHs in the HS-SCCH set, [or if the information received on HS-SCCH is discarded](#), DTX shall be used on the HS-DPCCH in the corresponding HS-DPCCH subframe unless PRE or POST are transmitted as described above.