

**TSG-RAN Meeting #22
Maui, USA, 09-12 December 2003**

RP-030712

Title: Rel-5 CR186 to 25.212, Rel-5 CR339 to 25.214 and Rel-5 CR121 to 25.222 on
Alignment of "soft channel bits " terminology with 25.306 (Qualcomm Europe)

Source: QUALCOMM Europe

Agenda item: 7.2.6

Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Version-New	Doc-2nd-Level	Workitem	WG
25.212	186	-	Rel-5	Alignment of "soft channel bits " terminology with 25.306	F	5.6.0	5.7.0	-	HSDPA-Phys	
25.214	339	-	Rel-5	Alignment of "soft channel bits " terminology with 25.306	F	5.6.0	5.7.0	-	HSDPA-Phys	
25.222	121	-	Rel-5	Alignment of "soft channel bits " terminology with 25.306	F	5.5.0	5.6.0	-	HSDPA-Phys	

CR-Form-v7
CHANGE REQUEST
25.212 CR 186 # rev - # Current version: 5.6.0

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

Title:	# Alignment of "soft channel bits" terminology with 25.306		
Source:	# QUALCOMM Europe		
Work item code:	# HSDPA-Phys Date: # 09/12/2003		
Category:	# F Release: # Rel-5		
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Reason for change:	# Alignment of terminology across 3GPP documentation
Summary of change:	# Replaces "soft bits" with "soft channel bits"
Consequences if not approved:	# Possible confusion as to whether these two terms mean refer to the same information.

Clauses affected:	# 4.5.4.2												
Other specs affected:	<table style="border: none;"> <tr> <td style="border: none; text-align: center;">#</td> <td style="border: none; text-align: center;">#</td> <td style="border: none;">Other core specifications</td> <td style="border: none; text-align: center;">#</td> </tr> <tr> <td style="border: none; text-align: center;">#</td> <td style="border: none; text-align: center;">#</td> <td style="border: none;">Test specifications</td> <td style="border: none; text-align: center;">#</td> </tr> <tr> <td style="border: none; text-align: center;">#</td> <td style="border: none; text-align: center;">#</td> <td style="border: none;">O&M Specifications</td> <td style="border: none; text-align: center;">#</td> </tr> </table>	#	#	Other core specifications	#	#	#	Test specifications	#	#	#	O&M Specifications	#
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Other comments:	#												

How to create CRs using this form:

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4.5.4.2 HARQ First Rate Matching Stage

HARQ first stage rate matching for the HS-DSCH transport channel shall be done with the general method described in 4.2.7.2.2.3 above with the following specific parameters.

The maximum number of soft channel bits available in the virtual IR buffer is N_{IR} which is signalled from higher layers for each HARQ process. The number of coded bits in a TTI before rate matching is N^{TTI} this is deduced from information signalled from higher layers and parameters signalled on the HS-SCCH for each TTI. Note that HARQ processing and physical layer storage occurs independently for each HARQ process currently active.

If N_{IR} is greater than or equal to N^{TTI} (i.e. all coded bits of the corresponding TTI can be stored) the first rate matching stage shall be transparent. This can, for example, be achieved by setting $e_{minus} = 0$. Note that no repetition is performed.

If N_{IR} is smaller than N^{TTI} the parity bit streams are punctured as in 4.2.7.2.2.3 above by setting the rate matching parameter $\Delta N_{il}^{TTI} = N_{IR} - N^{TTI}$ where the subscripts i and l refer to transport channel and transport format in the referenced sub-clause. Note the negative value is expected when the rate matching implements puncturing. Bits selected for puncturing which appear as δ in the algorithm in 4.2.7 above shall be discarded and not counted in the totals for the streams through the virtual IR buffer.

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CHANGE REQUEST	
# 25.214 CR 339 #	# rev - # 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:	# Alignment of "soft channel bits" terminology with 25.306		
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6A.2 Channel quality indicator (CQI) definition

Based on an unrestricted observation interval, the UE shall report the highest tabulated CQI value for which a single HS-DSCH sub-frame formatted with the transport block size, number of HS-PDSCH codes and modulation corresponding to the reported or lower CQI value could be received in a 3-slot reference period ending 1 slot before the start of the first slot in which the reported CQI value is transmitted and for which the transport block error probability would not exceed 0.1. Depending on the UE category as defined in [10], either Table 7A, 7B, 7C, 7D, or 7E should be used.

For the purpose of CQI reporting, the UE shall assume a total received HS-PDSCH power of

$$P_{HSPDSCH} = P_{CPICH} + \Gamma + \Delta \text{ in dB,}$$

where the total received power is evenly distributed among the HS-PDSCH codes of the reported CQI value, the measurement power offset Γ is signaled by higher layers and the reference power adjustment Δ is given by Table 7A, 7B, 7C, 7D, or 7E depending on the UE category.

- Further, UE shall assume the number of soft channel bits available in the virtual IR buffer (N_R), and redundancy and constellation version parameter (X_{RV}) as given by Table 7A, 7B, 7C, 7D, or 7E depending on the UE category. If higher layer signaling informs the UE that for the radio link from the serving HS-DSCH cell it may use a S-CPICH as a phase reference and the P-CPICH is not a valid phase reference, P_{CPICH} is the received power of the S-CPICH used by the UE, otherwise P_{CPICH} is the received power of the P-CPICH. If closed loop transmit diversity is used for the radio link from the serving HS-DSCH cell, P_{CPICH} denotes the power of the combined received CPICH from both transmit antennas, determined as if error-free transmitter weights had been applied to the CPICH, where those weights are determined as described in sub-clause 7.2. If STTD is used, P_{CPICH} denotes the combined CPICH power received from each transmit antenna and if no transmit diversity is used P_{CPICH} denotes the power received from the non diversity antenna.

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25.222 CR 121 # rev - # Current version: 5.5.0

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