TSG-RAN Working Group1 meeting #9   *TSGR1#9(99)k24*
Dresden, Germany, Nov 30-Dec 3, 1999

Agenda Item:

Source: Panasonic

Title: TS 25.214 CR 032 Rev1 Description of Variable Rate Packet
                     Transmission

Document for: Approval

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Summary:

The concept of Variable Rate Packet Transmission was presented and approved by WG1 and
WG2 in the past. Since this is mainly a higher layer procedure it has not yet been described in
WG1 specification.

For details please refer to TSGR1#3(99)153 and TR 25.922 Radio Resource Management
Strategies section 10.1 Variable Rate Packet Transmission. Additional information incl.
system level simulation results can also be found in the annex of TR 25.922.

In the attached CR you can find the text describing the physical layer procedure to support
Variable Rate Packet Transmission.

CHANGE REQUEST

Please see embedded help file at the bottom of this
page for instructions on how to fill in this form correctly.

25.214 CR	**032rev1**	Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑   *↑ CR number as allocated by MCC support team*

For submission to:	WG1#9	for approval	**X**	strategic		*(for SMG*
list expected approval meeting # here		for information		non-strategic		*use only)*
↑						

Form: CR cover sheet, version 2 for 3GPP and SMG   The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: (U)SIM ☐   ME **X**   UTRAN / Radio **X**   Core Network ☐
(at least one should be marked with an X)

Source:	Panasonic		**Date:**	26 Nov 1999

Subject:	Variable Rate Packet Transmission

Work item:	TS25.214

Category:	F	Correction		**Release:**	Phase 2	
	A	Corresponds to a correction in an earlier release			Release 96	
(only one category	B	Addition of feature			Release 97	
shall be marked	C	Functional modification of feature	**X**		Release 98	
with an X)	D	Editorial modification			Release 99	**X**
					Release 00	

Reason for change:	The general procedure of Variable Rate Packet Transmission is not yet described in WG1 specification.

Clauses affected:	

Other specs affected:	Other 3G core specifications		→ List of CRs:	
	Other GSM core specifications		→ List of CRs:	
	MS test specifications		→ List of CRs:	
	BSS test specifications		→ List of CRs:	
	O&M specifications		→ List of CRs:	

Other comments:	

Finally, the UE begins transmitting the data on the DPDCH after the period. The procedure for starting the uplink DPCCH transmission will be similar to Section 7.3.4.1

7.1.3   Resumption of DCH for Downlink or Uplink Packet Data Transfer

The synchronization of the DCH technique may be used to resume a DCH/DCH+DSCH connection that has been dropped for a short period.. This is applicable for packet data transfer using DSCH or uplink DPDCH or bi-directional data transfer using DSCH/Uplink DPDCH. Figure 5 shows the case where the DCH has been discontinued based on an inactivity timer T_E.   The UTRAN, upon detecting data in the queue, may resume the DCH operation provided the period T_E has not elapsed. Typically T_E is set to 1000msec.

7.2 Variable Rate Packet Transmission

This procedure prevents the use of unnecessarily high transmit power during adverse fading conditions in order to maintain a certain information transmission rate while avoiding excessive interference. The rate is reduced below the average rate when the required transmitted power rises over the set threshold and the rate is increased above the average rate when fading conditions allow this to happen with power lower than the set threshold.

Variable rate packet transmission may be invoked by higher layer for up- and downlink packet data transfer on the DCH and CPCH.

7.2.1 Downlink packet transmission

An upper and lower power threshold is set for the Code Transmission Power measurement by the network using higher layer signalling (RRC).
The physical layer indicates to the higher layer (MAC) if the Code Transmission Power is higher than the upper Code Transmission Power threshold or is below the lower Code Transmission Power threshold.

7.2.2 Uplink packet transmission

An upper and lower power threshold is set for the UE Transmission power measurement by higher layer signalling (RRC). The upper threshold will correspond to the terminal power class or the maximum allowed uplink transmit power if constrains are set by the network.
The physical layer indicates to the higher layer (MAC) if the UE transmission power is higher than the upper UE Transmitted power threshold or is below the lower UE transmission power threshold.