

TSG-RAN Working Group 3 meeting #6
Sophia-Antipolis, France, 23 - 27 August 1999

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Agenda Item: 26

Source: TSG RAN WG3

Title: Liaison Statement on the usage of the Physical channel BER as UL Quality estimate in the UL DCH Frame Protocol on lub/lur

To: TSG RAN WG1, TSG RAN WG4, TSG RAN WG2

Since several meetings TSG RAN WG3 has included an "UL quality estimate" parameter in every UL DCH data frame on the lub and lur interfaces.

The UL quality estimate parameter is intended to be used for mainly two purposes:

1. First, the parameter can be used by the macro diversity combination (MDC) unit in DRNC and SRNC, to select a transport block when all transport blocks show an incorrect CRC.
2. Second, the UL outer loop power control algorithm, which adjusts the SIR target of each DCH, needs a fast quality estimate to guarantee the quality of service and at the same time utilize a minimum of the radio resources. In order to detect when a DCH has "too good quality", a quality estimate is needed that is not only based on FER since that would take too long time to get a good accuracy when there are only few frame errors.

During RAN 3 #6 in Nice, it was decided to use the physical channel BER measurement for the UL quality estimate unless proven unsuitable. Although not described in detail, this measurement was already indicated as a node-B measurement in WG2 documentation (TS 25.302 / v.2.4.0 / 9.2.4).

Since this parameter has to be included in every UL DCH frame, it is important that the value can be determined relatively easy.

WG3 would kindly like to request R1, R2 and R4 to ensure that the physical channel BER is defined such that it is suitable for the described application.

In addition WG3 has the following question: Currently WG3 has planned a field of 6 bits for transporting the UL quality estimate in the DCH FP. Is this sufficient or should a larger field size be reserved ?