TSG-RAN meeting # 20 **RP-030354**
Hämeenlinna, Finland, 3rd to 6th June, 2003

Agenda item: 7.2.5 WG2 Approval of independent CRs to Release 5

Source: Panasonic

Title: Comment to 25.321CR173r1 UE procedure for TB Size signaling

Document for: Discussion

1. Introduction

In this document, we point out inconsistency between recent agreed RAN2 CR and RAN1 specification. Recent agreed CR is 25.321CR173r1 UE procedure for TB Size signalling.

We propose to postpone to agree 25.321CR173r1 and to be checked in RAN1 WG.

2. Inconsistency between RAN1 and RAN2

In 25.321CR173r1, following procedure was agreed in last RAN2 on Hybrid ARQ UE side operation.

The UE shall:

- *if the New Data Indicator has been incremented compared to the value in the previous received transmission in this HARQ process or this is the first received transmission in the HARQ process:*
  - *discard the data currently in the soft buffer for this HARQ process. .*
  - *if the Transport Block Size index value is equal to 111111 (FDD only):*
    - *the UE may store the received data;*
    - *generate a negative acknowledgement (NACK) of the data in this HARQ process;*

In above procedure, it is described that UE may store the received data when the transport block size index value is 111111 and New Data Indicator has been incremented. Here it should be noted that the **UE does not know transport block size in this transmission**.

In 25.212, HARQ functionality is described. The two stage rate matching shown in following figure coordinates the number of bits in each stage.

The first rate matching stage matches the number of input bits to the virtual IR buffer, information about which is provided by higher layers. The second rate matching stage matches the number of bits after first rate matching stage to the number of physical channel bits available in the HS-PDSCH set in the TTI.

Our understanding is RAN1's virtual IR buffer and RAN2's soft buffer is equivalent.

To process second rate matching, the number of systematic bits is required. The number of systematic bits is known by transport block size. Therefore, UE cannot process second rate matching when the transport block size index value is 111111 and New Data Indicator has been incremented. It looks RAN1's virtual IR buffer and RAN2's soft buffer is NOT equivalent.

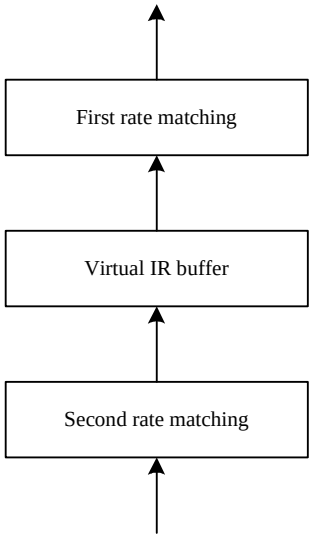

Figure of hybrid ARQ functionality in RAN1

3. Conclusion

In this document, we pointed out inconsistency between recent agreed RAN2 CR and RAN1 specification on HSDPA HARQ process. We propose to postpone agreeing 25.321CR173r1 in this RAN plenary. This issue should be checked by RAN WG1 until next RAN plenary.

Reference

[1] R2-031388, UE procedure for TB Size signaling, Lucent Technologies, RAN2#36

[2] TS25.212