Agenda item: AH 99

Source: Ericsson

Title: Discussion paper on UE capabilities

Document for: Discussion

There is still different understanding about some of the UE capability definitions. This discussion paper refers to some issues raised in R2-002317 (attached to TSGR1#17(00)1416).

The parameters "Maximum total number of transport blocks received within TTIs that end within the same 10 ms interval" and "Maximum total number of transport blocks transmitted within TTIs that start at the same time" relate to processing requirements for CRC in downlink and uplink respectively. The CRC processing happens immediately after reception and before transmission. This is reflected in the current parameter definition. The change of parameter definitions for the "Maximum sum of number of bits of all … transport blocks being received/transmitted at an arbitrary time instant" parameters had been motivated by memory requirements which is related to overlapping TTIs as explained in R1-001122. As the CRC processing is not related to overlapping TTIs, the definition should not be changed.

The parameters the "Maximum sum of number of bits of all … transport blocks being received/transmitted at an arbitrary time instant" had been changed according to R1-001122 to reflect the memory requirement. The exact meaning of the parameter definition is explained in the text. Changing those definitions according to R2-002317 is not recommended because of two reasons: First the formulation "can be" instead of "being" and the addition of "from/in TTI's intersected by" does not enhance the understanding of the parameter. The problem of indicating that the definition should include also bits to be received in the future was solved by using the terminology "being received/transmitted at an arbitrary time instant" and was agreed in the R1#15 meeting. The second reason is that changing the parameter definitions in 25.926 requires also changing the corresponding IEs in 25.331 which would only be possible next year and be approved in March 2001. If the 25.926 changes are approved in December 2000 by RAN then there would be a mismatch between 25.926 and 25.331 regarding Release 99 specifications. So changes to the parameter definitions should only be done to correct errors.

The proposal to change the parameter definitions for "convolutionally/turbo coded transport blocks" into "convolutionally/turbo coded transport channels" is not recommended for the following reasons: First it seems more appropriate to talk about "coded transport blocks" instead of "coded transport channels". Second as transport blocks is the data unit on transport channels (according to definitions in 25.302) it is obvious that transport blocks are the data units before channel coding, i.e. at the L1/L2 interface. Finally the same argumentation about changing parameter definitions as above applies.

The explanations on "TTIs intersected by a time instant " including the figures are not necessary as a time instant can only be either in radio frame #N or #N+1. Also the figure showing 2 CCTrCH on UL can be misleading as this configuration is not supported in Release 99 (even taking into account the note).