TSG-RAN Working Group 1 meeting No. 16
October 10 – 13, Pusan, Korea

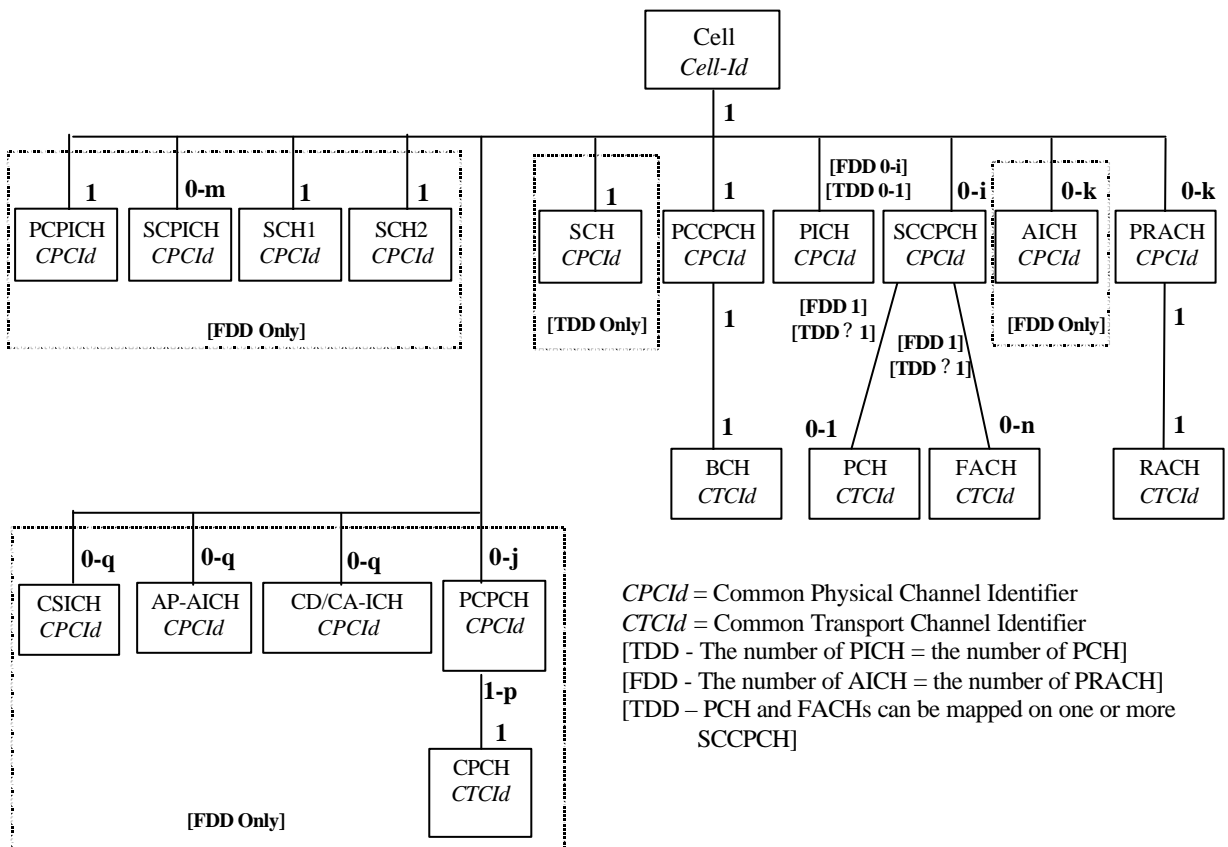## *TSGR1-00-1176*

Source :	**TSG RAN WG3 Iub/Iur SWG**
Title:	**Proposed liaison on: FDD RACH/PRACH modelling**
To:	**TSG RAN WG2**
CC:	**TSG RAN WG1**
Contact person:	**Gert-Jan van Lieshout (emngvli@emn.ericsson.se)**

The specification 25.211, section 5.2.2.1, states "The Physical Random Access Channel (PRACH) is used to carry the RACH". This seems to indicate that there is one RACH transport channel mapped to the PRACH.

This is currently also reflected in the WG3 specifications, e.g. in the common resource model in 25.430 (see right of picture):

CPCId = Common Physical Channel Identifier
CTCId = Common Transport Channel Identifier
[TDD - The number of PICH = the number of PCH]
[FDD - The number of AICH = the number of PRACH]
[TDD – PCH and FACHs can be mapped on one or more SCCPCH]

So far, for FDD a transport channel has 1 TFS and a physical channel has 1 TFCS. On the Iub/Iur interfaces, normally one transport channel is transported on one transport bearer and the TFI is used to uniquely denote the number and size of the contained TBs in an Iub frame.

WG3 has become aware of several additions made to the PRACH/RACH modelling in WG2 e.g. related to Access Service Classes and PRACH partitioning. However currently it is unclear to WG3 what the impact of these additions are for the WG3 specifications.

WG3 would kindly like to ask WG2 to clarify the current situation around PRACH/RACH and the possible consequences for the Iub information transport.

Preferably the reply should answer questions like:

- what is a PRACH: e.g. can different PRACH's use the same scrambling code and subchannel, but different pre-amble signatures, or are all used subchannels/signatures on one scrambling code always belonging to the same PRACH ?

- does WG2 consider the PRACH to transport one RACH transport channel or is e.g. each PRACH partition carrying a RACH transport channel ?

- Up to what extend should the Node B be aware of the detailed settings of the PRACH/RACH; e.g. should the Node-B be aware of the Access Service Class associated to different parts of the PRACH. Note that the Node B will normally not be aware of the information it broadcasts.

From RAN3 point of view it is important that the current approach on Iub, in which on one transport bearer the TFI can uniquely indicate the number and size of TBs received from a UE, can be maintained. Although not supported today, WG3 could e.g. extend the current approach by allowing the establishment of several transport bearers for one PRACH e.g. per PRACH partition.