

**TSG-RAN#12**  
**Stockholm, Sweden, 12-15 June, 2001**

**RP-010328**

**Agenda item:**

**Source:** Rapporteur, RAN WG2

**Title:** Status Report to RAN#12 of Work item "High Speed Downlink Packet Access" and "High Speed Downlink Packet Access - Layer 2&3 aspects".

**Document for:** approval

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This is the rapporteur's report on the progress made so far in RAN on the Work Item "High Speed Downlink Packet Access" and in RAN WG2 on "High Speed Downlink Packet Access - Layer 2 and 3 aspects". RAN WG2 leads both these Work items. Also included is the progress in RAN WG1 and RAN WG3.

Two joint RAN WG1 and RAN WG2 AdHoc meetings were held on HSDPA. The first meeting was held on April 5-6, 2001 in Sophia Antipolis, France followed by a one-day meeting on May 24, 2001 at Busan, Korea. Both these two meetings and the individual RAN WG1 and RAN WG2 meetings have resulted in substantial progress on HSDPA. TR 25.855 has been created capturing all the working assumptions and the outstanding issues between the two groups. TR 25.855 also contains a list of the open issues that need to be addressed.

The first joint meeting resulted in the following:

1. Agreement on the protocol model for HSDPA with very few outstanding issues.
2. Agreement on the requirements for the evaluation of the techniques for HSDPA.
3. Discussion on the signaling approach for HSDPA.
4. Agreement on most of the HS-DSCH transport channel attributes.
5. Agreement on the MAC architecture
6. Agreement on the requirements and comparison criteria for HARQ protocols
7. Discussion on various signaling parameters for HS-DSCH
8. Creation of the first version of the TR 25.855.

The second joint meeting was held in Busan after RAN WG1 and WG2 had an opportunity to address the respective working group issues first in separate meetings. This meeting resulted in the following:

1. Substantial progress on the signaling approach with all proposals now on the table. Also there was agreement on the range of the bits required for the signaling. This enables further independent progress in RAN WG1 and RAN WG2 on the issue of mapping of logical channels and final downlink channel configurations.
2. Very good progress on the issue of achieving commonality in the TDD and FDD approaches in signaling.
3. Further progress on the issue of transport channel attributes and physical channel characteristics.

**RAN WG2**

~~Progress on HSDPA - Layer 2 and 3 Aspects: In RAN WG2#20 and WG2#21 sufficient time was spent to~~  
address most of the contributions on HSDPA in spite of the continued focus on R99. The focus of RAN WG2 as it relates to HSDPA has been on the HARQ protocol. A number of proposals have been put forth for discussion covering all the possibilities. It is expected that the following meetings will see progress in choosing one approach for the HARQ protocol.

### **RAN WG1**

RAN WG1 continues to make substantial progress on issues related to the physical layer. A large number of contributions (over 45) encompassing all subjects - simulation assumptions, simulation results, physical layer structure, UE complexity, advanced receiver proposals have been discussed. Still to be discussed among other subjects are the following - Link Level Simulations with HARQ (Chase Combining), Receiver Studies, TDD Processing and Buffering Complexity, ARQ details and Turbo coder operation with bit/symbol level combining. Also to be decided are outstanding issues on transport channel characteristics such as TTI length.

### **RAN WG3**

RAN WG3 has initiated discussion on HSDPA Iub/Iur aspects with initial contributions on the requirements for evaluating proposals and the UTRAN model. A joint meeting between RAN WG2 and RAN WG3 is planned during their meeting in August in Finland.