

Agenda item: 8.10.4
Title: Status Report for SI on Uplink enhancements for UTRA TDD
Source: Rapporteur

Status Report for SI for TSG RAN

Study Item Name: Uplink enhancements for UTRA TDD

SOURCE: Rapporteur Marian Rudolf/InterDigital **TSG:** RAN **WG:** 1

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Ref. to SI sheet: ftp://ftp.3gpp.org/tsg_ran/TSG_RAN/Work_Item_sheets/

Progress Report since the last TSG (for all involved WGs):

During RAN1#38 5 contributions overall were submitted and discussed on R6 TDD UL Enhancements. There were 3 text proposals and 2 contributions for discussion only. The two contributions R1-040847, "Impact of Downlink Signalling for EUCH in LCRTDD" and R1-040846, "Geometry Distribution for LCRTDD" discussing design of the downlink signalling for TDD Enhanced", were noted.

Three contributions that were presented and discussed included text proposals: R1-040991, "Intra-frame Code Hopping for EU-TDD and Text Proposal for 25.804", R1-040992, "HARQ Performance for TDD Enhanced Uplink and Text Proposal for 25.804" and R1-041035, "Power Control for TDD Enhanced Uplink and Text Proposal for 25.804. All three were approved.

Current candidate techniques for potential enhancements now described in the TR are:

- Hybrid ARQ
- Node-B controlled scheduling (rate scheduling, physical resource scheduling)\
- Physical layer enhancements
 - o Intra-frame Code Hopping
 - o Power control scheme

List of Completed elements (for complex work items):

- Description of reference techniques in earlier Releases
- Description of Hybrid ARQ and Node - B controlled scheduling as candidate techniques for potential enhancements
- Proposed transport channel structure

- Description of proposed physical layer enhancement techniques
- Evaluation of proposed physical layer enhancements
- HARQ performance evaluation

List of open issues:

- Compatibility of some of the enhancements with the existing system
- Interaction of some of the enhancement techniques
- Complexity analysis of some of the enhancements
- Impacts on higher layers
- Feasibility study conclusion and recommendations for work item

Estimates of the level of completion (when possible): 65 %

SI completion date: RAN #26 (December 2004)

References to WG's internal documentation and/or TRs:

R1-041041, "3GPP TR 25.804 V0.3.0 (2004-08) Feasibility Study on Uplink Enhancements for UTRA TDD; (Release 6)"