

TSG-RAN Meeting #27
Tokyo, Japan
March 9th – 11th, 2005

RP- 050019

Agenda item: 9.3.2
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

E-mail address rapporteur: marian.rudolf@interdigital.com

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):

Since last TSG RAN plenary, one TSG RAN WG1 #40 meeting and one TSG RAN WG2#46 meeting were held in Scottsdale, Arizona, USA, 14th - 18th of February 2005

During RAN WG1#40 3 contributions overall were submitted and discussed on R6 TDD UL Enhancements. There was 1 contribution submitted at RAN WG2#46. All contributions contained text proposals and all were approved.

The higher order modulation techniques, 8-PSK, was proposed in R1-050160 - "8-PSK for TDD Enhanced Uplink and text proposal for TR25.804". A text proposal, evaluating performance, complexity, and compatibility with earlier releases, of Node -B scheduling was submitted in R1-050190, "Text proposal on Node-B scheduling for TR 25.904". The conclusions of the SI and the recommendation were in R1-050162, "Draft Text on Conclusions and Recommendations for the TDD Enhanced Uplink SI".

RAN2 input for the transport channel structure, layer 2/3 and radio network protocol architecture aspects was submitted in R2-050316, "Feasibility Study on Uplink Enhancements for UTRA TDD".

The candidate techniques for potential enhancements described in the TR are,

- Node-B controlled scheduling (rate scheduling, physical resource scheduling)
- Node-B controlled physical resource scheduling
- Hybrid ARQ
- Higher order modulation (including 8-PSK at a minimum)
- Intra-frame code hopping (for 3.84Mcps TDD, 1.28Mcps TDD FFS)

- Open – Loop- Assisted TPC Power Control

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
- Compatibility of the enhancements with the existing system
- Interaction of the enhancement techniques
- Simulation results of the enhancement techniques
- Interaction of the enhancement
- Simulation
- Complexity analysis of the enhancements
- Feasibility study conclusion and recommendations for work item

Estimates of the level of completion: 100 %

SI completion date: RAN #27 (March, 2005)

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

RP-050116, "3GPP TR 25.804 V2.0.0 (2005-02), Feasibility Study on Uplink Enhancements for UTRA TDD; (Release 6)"