

Motivation for new work item proposal on Downlink Enhancements for UMTS

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Background and Motivation

- SI on Downlink enhancements for UMTS is proposed to be completed at RAN#68 (TR 25.706)
- The number of connections for WCDMA users and the average user data rate have continued to increase in the past years and will further increase in the coming years, which requires WCDMA to evolve further from both uplink and downlink perspective.
- The “Study on Downlink enhancements for UMTS” concluded that enhancements of the following RAN2-related aspects are beneficial
 - RRC signalling reduction
 - SRB coverage over HSPA enhancement
 - Optimization from IDLE to CONNECTED

Proposed WI Objectives

- Mechanisms for downlink signalling performance enhancements (RAN2)
 - (1) Enhanced signalling on RRC parameters configuration. Identified solution is the solution of retrievable configuration
 - (2) Seamless URA_PCH state transition to CELL_FACH. Identified solution is the solution of the URA-wide RNTI
 - (3) Mechanism on extending RNTI spaces so that more UEs can be configured in CELL_PCH, URA_PCH and CELL_FACH state. Identified solution is extended RNTI
 - (4) Optimization from IDLE to CONNECTED state. Identified solution is the solution of E-DCH acquisition/release indication (RAN3)
 - (5) State transition enhancements. Identified solutions include: (to be reconsidered in RAN#70)
 - solution of MAC layer handshake
 - solution of MAC layer handshake with network control
 - solution of RRC layer handshake
 - (6) Improved RRC synchronized procedures. Identified solutions include: (to be reconsidered in RAN#70)
 - solution of MAC layer handshake
 - solution of RRC layer handshake
- Mechanism on SRB coverage over HSPA enhancements. Identified solution is the solution of improved HARQ retransmission (RAN2)