

Agenda Item: 7.1
Source: ITU-R Ad Hoc Contact Person
Title: Proposed Initial submission for 'complete' update of UTRA FDD and TDD in Rev. 6 of Rec. ITU-R M.1457
Document for: Approval

[ITU Member]¹

INITIAL SUBMISSION OF UPDATED MATERIAL ON IMT-2000 CDMA DS
AND IMT-2000 CDMA TDD

This contribution contains an initial submission of updated material on IMT-2000 CDMA DS and IMT-2000 CDMA TDD.

The list below contains the main technical areas currently under prime responsibility of 3GPP TSG RAN that are likely to be part of the proposed submission toward Revision 6 of Recommendation ITU-R M.1457. This is indeed living material: the most updated list of all technical areas under investigation within 3GPP, together with a description of the current status of the activities, can be found on the 3GPP web site www.3gpp.org. This information is put forward to ITU-R WP 8F in order to facilitate discussion in ITU-R WP 8F, taking into account the objective of convergence between radio interfaces. The activities described in the following may therefore continue beyond the deadline for inclusion in Rev. 6 of Rec. M.1457, thus not necessarily being submitted for incorporation in Rev. 6 of Rec. M.1457.

- Radio Interface improvements
The objective for this feature is to ensure that mechanisms are provided to allow enhancement of the radio interface in a backward compatible manner. It is best understood by examining the more important component building blocks:
 - UMTS 2.6 GHz (FDD)
 - UMTS 2.6 GHz (TDD)
 - UMTS 900 MHz
 - Improved Receiver Performance Requirements for HSDPA
 - UE Antenna Performance Evaluation Method and Requirements

- RAN improvements
This work item intends to introduce new mechanisms allowing improvements on all aspects dealing with the radio network subsystem internal interfaces, as well as the interface towards the core network. This includes transport of user

¹ This contribution was developed in 3GPP TSG RAN.

and signalling plane as well as protocols over all interfaces of the radio network subsystem. It is best understood by examining the more important component building blocks:

- RAB support enhancement
 - Optimisation of downlink channelisation code utilisation
 - Optimisation of channelisation code utilisation for TDD
 - HS-DPCCH ACK/NACK Enhancement
- Enhancement of the support of network sharing in the UTRAN
 - 7.68Mcps TDD option
The technical objective of the work item is the specification of a 7.68Mcps TDD option within the 3GPP standards.

In line with the update procedure for revisions of Recommendation ITU-R M.1457 (8/LCCE/95), additional technical information will be submitted at the next meetings of ITU-R WP8F. In line with 8/LCCE/95, it is also anticipated that the following material will be submitted by October, 3rd, 2005, as needed:

- Modifications to Sections 5.1.1 and 5.3.1
- Update of Sections 5.1.2 & 5.3.2
- Modifications to the GCS
- Summary and rationale of the proposed update
- Self-evaluation of the proposed update against the evaluation criteria
- Self-declaration that the proposed amendments are self-consistent between Section 5.1.1, Section 5.1.2, and the GCS, as well as between Section 5.3.1, Section 5.3.2, and the GCS.

SDOs participating in 3GPP will submit by the same date (3rd October 2005) the Letters of conveyance to ITU-R SG8 Counsellor; they will also submit by 31st May 2006 the certifications of reference and transposition as well as the final references (hyperlinks to updated SDO deliverables).

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- Radio Interface improvements
The objective for this feature is to ensure that mechanisms are provided to allow enhancement of the radio interface in a backward compatible manner. It is best understood by examining the more important component building blocks:
 - UMTS 2.6 GHz (FDD)
 - UMTS 2.6 GHz (TDD)
 - UMTS 900 MHz
 - —
 - ~~Improvement of inter-frequency and inter-system measurement~~
 - Improved Receiver Performance Requirements for HSDPA
 - UE Antenna Performance Evaluation Method and Requirements
- RAN improvements

¹ This contribution was developed in 3GPP TSG RAN.

This work item intends to introduce new mechanisms allowing improvements on all aspects dealing with the radio network subsystem internal interfaces, as well as the interface towards the core network. This includes transport of user and signalling plane as well as protocols over all interfaces of the radio network subsystem. It is best understood by examining the more important component building blocks:

- RAB support enhancement
- Optimisation of downlink channelisation code utilisation
- Optimisation of channelisation code utilisation for TDD
- HS-DPCCH ACK/NACK Enhancement

● ~~Introduction of the MBMS~~

~~Multicast/Broadcast are services that already exist in some form. For example, cell broadcast for text messages within GSM and IP multicast services in the internet. Both Multicast and Broadcast solutions should offer potentially large savings in network resource usage.~~

● Enhancement of the support of network sharing in the UTRAN

● 7.68Mcps TDD option

The technical objective of the work item is the specification of a 7.68Mcps TDD option within the 3GPP standards.

● ~~Multiple Input Multiple Output Antennas (MIMO)~~

~~The purpose of this work item is to improve system capacity and spectral efficiency by increasing the data throughput in the downlink within the existing 5 MHz carrier. This can be achieved by means of deploying multiple antennas at both UE and Node B side. The technical objective of this work item is the integration of MIMO functionality in UTRA, both FDD and TDD.~~

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