# TSG-RAN Meeting #26 VOULIAGMENI, GREECE, December 8—10 2004

Agenda Item: 7.1

Source: ITU-R Ad Hoc Contact Person

Title: Updated information on the Roadmap

Document for: Approval

### [ITU Member]<sup>1</sup>

#### UPDATED INFORMATION ON THE ROADMAP

This contribution contains updated information on the Roadmap for IMT-2000 CDMA DS and IMT-2000 CDMA TDD, with reference to the main technical areas under investigation within 3GPP TSG RAN.

# • Radio Interface Improvements

It includes:

- o *UMTS 2.6 GHz (FDD)*
- o UMTS 2.6 GHz (TDD)
- o UMTS 900 MHz.
- o Improved Receiver Performance Requirements for HSDPA
- o UE Antenna Performance Evaluation Method and Requirements
- Multiple Input Multiple Output antennas (MIMO)
- RAN improvements

It includes:

- o RAB support enhancement
- o Optimisation of downlink channelisation code utilisation
- Optimisation of channelisation code utilisation for TDD
- o HS-DPCCH ACK/NACK Enhancement
- Enhancement of the support of network sharing in the UTRAN
- 7.68Mcps TDD option
- UE Positioning

It includes:

- Inclusion of Uplink TDOA UE positioning method in the UTRAN specifications
- Uplink enhancements for UTRA TDD

<sup>1</sup> This contribution was developed in 3GPP TSG RAN.

#### • UTRA and UTRAN Evolution

It includes:

- o Related to the radio-interface physical layer (downlink and uplink):
  - e.g. means to support flexible transmission bandwidth up to 20 MHz, introduction of new transmission schemes and advanced multi-antenna technologies
- o Related to the radio interface layer 2 and 3:
  - e.g. signaling optimization
- o Related to the UTRAN architecture:
  - identify the most optimum UTRAN network architecture and functional split between RAN network nodes, not precluding considerations on the functional split between UTRAN and CN (SA2 experts should be invited to the latter topic)
- o RF-related issues

The most updated and complete list of all technical areas currently addressed within 3GPP, together with a description of the current status of the activities, can be found on the 3GPP web site <a href="www.3gpp.org">www.3gpp.org</a>

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- Improved Receiver Performance Requirements for HSDPA
- O UE Antenna Performance Evaluation Method and Requirements

OImprovements of inter frequency and inter system measurements

OImproved Receiver Performance Requirements for HSDPA

- Multiple Input Multiple Output antennas (MIMO)
- RAN improvements

It includes:

- o RAB support enhancement
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ORAB support enhancement

ORRM optimizations for Iur and Iub

ORemote Control of Electrical Tilting Antennas

- •Multimedia Broadcast/Multicast Service (MBMS)
- Enhancement of the support of network sharing in the UTRAN

<sup>&</sup>lt;sup>1</sup> This contribution was developed in 3GPP TSG RAN.

### • 7.68Mcps TDD option

# • UE Positioning

It includes:

- <u>Inclusion of Uplink TDOA UE positioning method in the UTRAN</u> <u>specificationsA GPS minimum performance specification</u>
- Uplink enhancements for UTRA TDD
- UTRA and UTRAN Evolution

It includes:

- o Related to the radio-interface physical layer (downlink and uplink):
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