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Target Scenarios specification: vision at project stage 1

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Abstract:

This deliverable selects some scenarios of interest (in terms of cellular structure, propagation and user-mobility models, Radio Access Technology considered, etc…), identifies the key parameters of the assumed services; defines the QoS parameters required of each for the services (e.g. packet delay, jitters, losses, etc) and maps these services onto bearer services

Keyword list: Scenarios, Mobility and Propagation models, Layouts, Traffic Characterization, Traffic mix, QoS parameters

DISCLAIMER

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EXECUTIVE SUMMARY

The scope of this document is to define and characterize the target scenarios to be addressed during the first year of the EVEREST project, focusing on those parameters that are relevant for the Radio Resource and QoS management for cellular heterogeneous networks. The heterogeneous network comprises 2G and 3G cellular systems as well as wireless local area networks (WLANs).

The scenarios are mainly based on the requirements and visions of the four operators in the project, and they are described by four main items, which are considered most relevant for RRM strategies within cellular heterogeneous networks. The vision encompasses a heterogeneous network and users with multimode mobile terminals in the time frame of 2009-2010.

After a short introduction, the document gives in section 2 an overview of the scenarios that will be used within EVEREST. Section 3 presents the reference QoS architecture assumed, which is well aligned with the work carried out in 3GPP and IEEE 802.11. Section 4 addresses to the service characterization, including some figures about the offered traffic predictions and traffic loads measurements. In section 5 the main characteristics of the four environments to be assumed in EVEREST: Dense Urban; Urban; Suburban and Indoor “Hot Spot”, are described including user mobility and user density models as well as Radio Access Network (RAN) infrastructure deployment. The characterization of the Radio Access Technologies (RAT) is done in section 6, whereas the description of the final selected scenarios, considering both theoretical and realistic, is done in section 7. Finally section 8 contains a brief conclusion about the document.

To conclude this executive summary, it is not worthless to indicate that the selected scenarios and the corresponding evaluation procedures are compliant with 3GPP specifications in order to facilitate the impact of the project result in 3GPP.

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