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Technologies**EVEREST IST-2002-001858****D11*****First report on the evaluation of RRM/CRRM algorithms*****Contractual Date of Delivery to the CEC: 31.10.2004****Actual Date of Delivery to the CEC: 12.11.2004****Editor: Oriol Sallent (UPC)****Author(s): see list****Participant(s): UPC, KCL, PTIN, TID, TEL, TI****Workpackage: WP3****Est. person months: 40****Security: PU****Nature: Report****Version: 001****Total number of pages: 261****Abstract:**

This deliverable provides a definition, description and initial evaluation of a first version of the RRM/CRRM algorithms. The evaluations have been carried out by means of simulations using the first version of the developed simulators, whose capabilities are reported in D07.

Keyword list: UTRAN, GERAN, WLAN, heterogeneous networks, RRM, CRRM

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EXECUTIVE SUMMARY

The scope of this document is to describe and present an initial evaluation of a first version of the RRM/CRRM algorithms leading to an optimised utilisation of scarcely available radio resources for the support of mixed services within heterogeneous networks. The evaluations have been carried out by means of simulations using the first version of the developed simulators, whose capabilities are reported in D07.

Initially, more emphasis has been placed on RRM for different RATs, since these are the pillars for the efficient development of common strategies. In particular, UTRAN, GERAN and WLAN have been covered, UTRAN being more extensively treated because of the larger number of dimensions involved (i.e. frequency, time, code and also power) in the radio resource management problem. With some RRM issues already explored, CRRM mechanisms have already been targeted and are envisaged to be strengthened in the future work.

After an introduction in Section 1, Section 2 is devoted to RRM mechanisms and considerations for UMTS. Section 3 covers RRM for GERAN, while Section 4 is devoted to WLAN. Then, Section 5 presents the overall vision of the CRRM problem as well as some initial evaluations. Finally, Section 6 summarises the conclusions about the document.

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