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**D23**

***Final Report***

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**Abstract:**

This deliverable constitutes the final report of the project IST-4-027567 AROMA. After its successful completion, the project presents this document that firstly summarizes the context, goal and the approach objective of the project. Then it presents a concise summary of the major goals and results, as well as highlights the most valuable lessons derived from the project work. A list of deliverables and publications is included in the annex.

For more detailed technical results please consider the public deliverables, available at <http://www.aroma-ist.upc.edu>

**Keyword list: Co-operation with other Projects, Concertation Activities**

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**EXECUTIVE SUMMARY**

This report summarises the main achievements of the AROMA Project, an IST research and technological development project carried out between January 2006 and December 2007 by Universitat Politècnica de Catalunya (UPC); King's College London (KCL); Portugal Telecom Inovação (PTIN); Telecom Italia Lab (TILAB); Telefónica Investigación y Desarrollo (TID), TeliaSonera (TEL); Instituto Tecnico Superior-Technical University of Lisbon (IST-TUL).

The most important technical achievements of the project cover many different aspects related to Radio Resource and QoS Management and Common Radio Resource Management (CRRM) including both wireless and wired part. Different algorithms related to Admission Control, Congestion Control as well as on Packet Scheduling procedures have been proposed and evaluated for the envisaged Radio Access Technologies. Moreover issues related to the end-to-end QoS architecture have been also studied and evaluated. Besides the technical evolutions, some economic analyses have been carried out too in order to provide some guideline methodology for the estimation of the potential economic impacts of the main investigated solutions.

The Performance evaluation of the proposed QoS architecture and RRM/CRRM techniques was completed by means of a set of laboratory tests carried out using a real time testbed (Demonstrator) developed in the project. This Demonstrator is a SW/HW flexible tool, which provides a realistic real time emulation of an evolved B3G radio access system able to manage multimedia IP based applications. Finally, significant dissemination policy, based on publications on high quality magazines and conferences, was carried out. Moreover, several standards contributions were also generated and presented to the pertinent 3GPP technical committees.