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Simulation tools: final version capabilities and features

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Abstract:

This deliverable provides a brief description of the AROMA simulation tools set capabilities, at a project final stage, being an update of Deliverable D06, where initial descriptions were provided. Since D06 was issued, the project has kept 7 simulators unchanged, 5 others were upgraded, and 4 others were newly developed. The document is an overview of the main functional blocks, inputs, models and algorithms and simulation strategies of the simulation tools that were either upgraded or newly developed. The whole set of tools are complementary, in a project framework context, each of them being more focused on a given topic; therefore, the whole set provides and covers a wide range of RRM/CRRM models, algorithms, services, network strategies and architectures.

Keyword list: Wireless Heterogeneous Simulation tools, GERAN, UTRAN, WLAN.

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EXECUTIVE SUMMARY

This deliverable provides an updated version of the simulators developed and used in the AROMA project. This document is an update of D06, "Simulation tools: inherited features and newly implemented capabilities" where the AROMA latest work, concerning simulators development, is summarized.

The document is an overview of the main functional blocks, inputs, models and algorithms and simulation strategies of the simulation tools that were either upgraded or newly developed. In general terms, each simulator functional block was developed and tested according to D04 "Quality Assurance Plan".

The whole set of developed tools are complementary among them. Therefore, AROMA has an extensive set of simulators adequately covering all areas of the project. In fact, the set of developed simulators covers a wide range of networks layers, radio access networks and services. Even if the technology is common, each simulator has a particular focus, being difficult to identify repeated work. In summary, the document synthesizes the main characteristics of the 5 upgraded simulators as well as of the 4 newly developed. Other 7 simulators have been kept unchanged.