

Intelligent distribution of demanding services and applications to mobile thin client devices

MobiThin – driven by a strong consortium focused on thin client computing - will develop an end-to-end solution, and address all important blockers for the wide adoption of wireless thin client computing paradigm.

At A Glance: *MobiThin*

Intelligent distribution of demanding services and applications to mobile thin client devices



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Duration: 01/2008 – 06/2010

Total Cost: € 5,053,646

EC Contribution: € 3, 253, 150

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Main Objectives

The **MobiThin** project aims at designing, realizing and evaluating a networked infrastructure to offer the thin client service to mobile users in a wide range of wireless networking contexts. The project will address all important blockers for the wide adoption of the wireless thin client computing paradigm. These include technological (wireless medium optimization, dedicated video codec research to minimize client side (de)coding complexity, software/middleware oriented solutions), architectural and techno-economic (business roles, stakeholders and business models) issues. In addition to making substantial scientific and technological progress in these areas, the project will demonstrate an integrated solution for the wireless thin client scenario.

The MobiThin objective is to allow intelligent and flexible distribution of applications, services and content to mobile users in a wireless WAN setting, mirroring the successes achieved with wired thin client solutions

MobiThin: the challenges

To achieve this goal, **MobiThin** will address a set of scientific and technological challenges

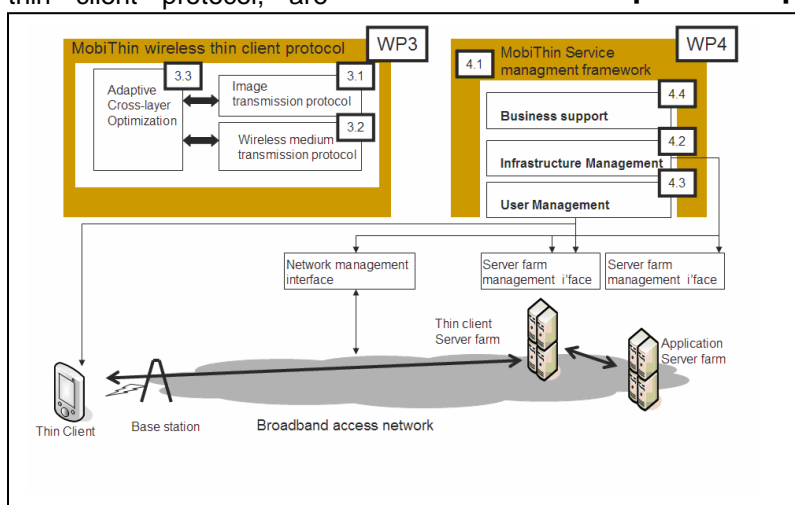
- **Development of an adaptive thin client protocol,**
- **Development of an adaptive wireless protocol,**
- **Development of an adaptive image transmission protocol,**
- **Development of a service and resource management framework,**
- **Identification of suitable business models,**
- **Architecture validation,**
- **Standardization**

Technical Approach

WP1 "Project management" ensures efficient project management, including interfacing to the European Commission.

WP2 "System architecture and business modelling": Setting out the overall **MobiThin** architecture is the main objective of this WP, together with assessing the mutual impact of different architectures and business models.

WP3 "Technological component development": The main technological building blocks, targeted at a cross layer based optimization of the thin client protocol, are investigated, designed and realized in this work package. Building blocks include: wireless transmission protocol, thin client protocol, image transmission protocol. These protocols will interact with the applications through interface specifications set out in WP2.



WP4 "Service management framework" aims at translating the management related components of the system architecture developed in WP2 into a service management framework. Important building blocks here are proper (e.g. delay constrained, observing load balancing targets) server selection, interaction with the network infrastructure, application profiling, mobility support, resilience support.

WP5 "Experimental validation" is concerned with the validation of the overall **MobiThin** system (validation of individual parts will be done in the activities of the relevant workpackages). This validation will be done by both simulation and emulation, as well as through well-selected lab trials. To this end, a simulation framework will be built, allowing early feedback on the functionality, scalability and robustness of the **MobiThin** system. In order to allow validation of applications running on the **MobiThin** system, an emulation will be carried out, also serving as a show case for the project.

WP6 "Dissemination of results" will give the project results the proper visibility through dissemination actions (conferences, concertation meetings, standardization efforts,..).

Key Issues

MobiThin will address all important blockers for the wide adoption of wireless thin client computing paradigm including architecture and technology issues (wireless medium optimization, dedicated video codec and user pattern research, software/middleware, performance and energy saving oriented solutions), as well as economic ones (business roles and models).

Expected Impact

MobiThin project aims at one single technological breakthrough: thin client protocols on mobile networks. Removing this technological barrier can prove to be of immense impact in a connected mobile world.

This impact will reinforce European industrial leadership, and open up new business opportunities. More specifically, the project claims the following impacts:

- World leadership in a new generation of media technologies providing significantly higher performances in terms of intelligence, scalability, flexibility, speed, capacity, ease of use and cost.
- New and sustainable market opportunities based on converged business models between content, telecom, broadcast and consumer electronics industries. Reinforced European position vis-à-vis global interoperability and standardisation initiatives.

Europe has a solid basis in all necessary technological areas of expertise, and **MobiThin** will use this combined experience to develop the next generation mobile thin client infrastructure.