



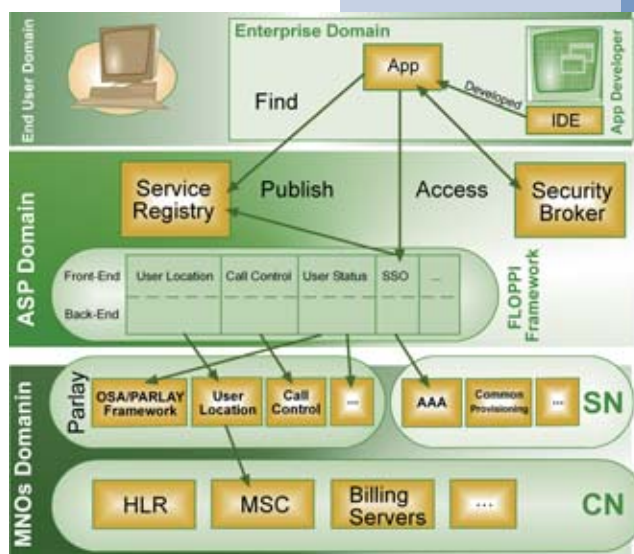
## Development System for Mobile Services

**The main objective of the DESYME project is to build an open development and run-time environment in order to allow small and medium-sized enterprises (SMEs) to develop and implement networked and distributed mobile systems and services. This is based on an integrated development environment (IDE) and a common framework (interoperable middleware) located at an application service provider (ASP), using service enablers provided by one or several mobile network operators (MNO).**

In the current scenario there are two main obstacles: ASPs and MNOs launch services which target a wide audience, making it difficult to customize such services for specific requirements. Specific developments are not available for SMEs, due to the high investment and specialized knowledge required. SMEs suffer from the complexity of negotiations with operators concerning security, billing, and other issues.

### Main focus

The goal of DESYME is to cover the existing gap between the potential of services over mobile networks and user needs. It shall enable users to design mobile services to suit their requirements in an easy way. The concept under this project is an open development and run-time environment that enables SMEs to design, develop, validate and execute services over mobile networks.



## DESYME

Project ID: CP1-042

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Completion date: 31 December 2006

### Partners

AGH - University of Science and Technology, Poland

Altec, Greece

Amena, Spain

Cellact, Israel

Ericsson Spain, Spain

Gdansk University of Technology, Poland

ICCS-NTUA - Institute for communication and computer systems-National Technical University of Athens, Greece

Soluziona Telecomunicaciones, Spain

Actimage, Luxemburg

### Co-ordinator

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### Project web site

[www.celtic-initiative.org/projects/desyme](http://www.celtic-initiative.org/projects/desyme)

## Approach

The activities that will be carried out in the project to achieve the objectives can be classified in the following categories: User Requirements, System Development, Field Trial, Test and Evaluation and Dissemination and Exploitation.

The first key objective is to produce a detailed architecture of the DESYME future implementation, within user, ASP and MNO domains. This architecture will take into account DESYME's targeted user profile and the predicted user behaviour.

The next step is to translate the technical specifications into functional software modules. The final result will provide the targeted functionality: graphical and intuitive IDE at the user domain, reliable communication between the IDE and the framework front end, and between back end and MNO domain.

Then we will validate the DESYME system in a controlled and realistic scenario. For this purpose, DESYME will be integrated in the three different domains: user, ASP and MNO. An agreement shall be signed among the partners to determine, in which partners domains the trial is going to be conducted finally.

Information related to the performance and results of the field trial will be collected, both from a technical point of view and from a user point of view. Technical results will

be checked with the final technical specifications and usability results against user requirements defined in system design.

We will disseminate the knowledge obtained from the project results to interested groups and individuals outside the consortium. Thus, we will enable and facilitate the adoption of the project results by commercial consortium members, and other European companies. Another activity is to identify which contributions and achievements of the project can be included in the investigated standards. In this context, we will participate in the relevant international forums and standardization activities.

## Main results

The project will conduct research on a common development platform composed of a framework, an IDE and a web service architecture that facilitates the development of mobile applications and fosters the use of mobile services provided by MNOs. This main results could be split into the following ones:

• To develop a Framework that will provide access to Network Services located within MNOs. The framework will be flexible and modular, allowing ASPs to add new service capabilities from several MNOs in an easy way.

• To develop an IDE: comprised of APIs and a graphical interface to ease the

development of applications in an easy way. The IDE delivered by the project will be developed using Java Beans.

• Web Service Architecture: this architecture will put in communication the framework's front end and customer applications developed using the IDE provided by the project.

• Relevant contribution to the fast development and adoption of services over mobile networks (2G, 2,5G, 3G) and other networks, such as WiFi, and Bluetooth.

## Impact

The potential monetary benefits for European MNOs lie in the ability to expand their customer base and to offer new value-added services to their existing customers. The potential benefits for the European software industry are even larger, as the area of mobile applications is one where Europe can leap ahead of the rest of the world (especially the US) and establish a leading position. This will help the European software industry not only in revenues, but also in confidence.

SMEs could be deeply impacted by the results of this project. Nowadays, only major companies, like network operators or big suppliers, are prepared for this complex development environment. With the DESYME solution, this environment becomes simpler, so SMEs can access a new potential market with lower costs than today. We should not forget that SMEs are the basis of the European economy.

Not only the mass users would benefit, but also some parts of the population that require services with special features. Today, there are not services developed and oriented for small user segments, because the revenues would be low. But if development costs decreased, the small sectors of the market could become attractive for the companies.

The project will also have an impact on standardization by contributing to architectural issues of the service environment. More specifically, the project will make contributions to the Open Mobile Alliance (OMA), OASIS and Parlay/3GPP. In addition, DESYME will contribute to international journals and conferences, organize workshops, and design a web site for dissemination of project results.

## About CELTIC

CELTIC is a European research and development programme designed to strengthen Europe's competitiveness in telecommunications through short and medium term collaborative R&D projects. CELTIC is the only European R&D programme fully dedicated to end-to-end telecommunication solutions.

**Timeframe:** 5 years, from 2004 to 2008

**Cluster budget:** in the range of 1 billion euro, shared between governments and private participants

**Participants:** small, medium and large companies from the telecommunications industry, universities, research institutes, and local authorities from 33 countries

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