

Simple Mobile Services, SMS

The SMS project will create innovative tools addressing the specific needs of mobile users and making it easier for individuals and small businesses to become providers of Simple Mobile Services (SMS). If mobile services are to repeat the success of the Web they have to be simple to find, simple to use, simple to trust and simple to set up. These are our design goals for SMS.

At a Glance: SMS

Full Title

Simple Mobile Services

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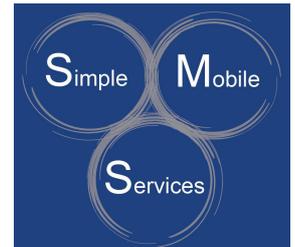
Project funding (EC/total): 2.8 M€

Further Information

- **IST Research: Software and Services**
DG Information Society & Media
Unit: Software Technologies
- **Europe's Information Society: Thematic Portal:**
http://europa.eu.int/information_society/

Motivation

Mobile services have not matched the success of the Web. There are many reasons: users cannot find the services they need, many services are difficult to use, users do not trust them, services are difficult to design and deploy (especially for "small" service providers, e.g. SMEs, local government departments, NGOs, individuals).



A new service concept

The SMS project has three strategic objectives. First, the project proposes to specify requirements for a **new class of services**, meeting the **specific needs of mobile users**. We call these services **Simple Mobile Services (SMS)**. Second, it will develop a **software engineering methodology** and a **set of tools**, based on **open standards**, allowing individuals and organizations to develop, deploy and manage their own SMS. Third, as proof of concept, it will **develop and deploy** a number of SMS in real-life environments. To achieve these goals, it is necessary to address the limitations of current services.

The World Wide Web offers a practically infinite range of **universal services**. But these services mainly target users working from fixed locations (the home, the office). With a few exceptions they fail to address the **specific** needs of mobile users. Even when they do, many mobile users are **unaware that they exist, find them hard to use** and are **unwilling to trust them**. Providers do not invest in services for which there is **little demand**. Current mobile services do not satisfy users' need for rapid results, in "minimal attention situations". To address this problem, the SMS proposal focuses on **simplicity**.

Mobile Services have to be simple to find, simple to use, simple to trust and simple to set up

i) Simple to find

Unlike current universal services, each Simple Mobile Service will have a **scope**: it will target **specific environments** of interest to **specific classes of mobile user** performing **specific activities**. This means that SMS will be simple to find. Instead of "Googling" for services, users will choose from a small set of services appropriate to the activities and environment that currently interest them.



When services target specific physical locations, it will be possible to advertise their availability with posters, signs, leaflets and electronic displays. Precise targeting of services to specific users and environments will make SMS attractive for advertisers.

ii) Simple to use

SMS will be **easy to use**. Authentication and configuration will be automatic. User interfaces and content will be automatically adapted to the characteristics of the terminal. Services will maintain the same basic logic as users move between environments and networks, even though the resources (sub-services/content) used to provide the service are dynamically discovered and exploited. Like the services provided by the Web, **SMS** will provide technology and operator-independent end-to-end connectivity. SMS will be terminal and network independent, working with a broad range of mobile devices (e.g. PDAs, smartphones, Laptops) and network infrastructures (e.g. UMTS, Wi-Fi).

iii) Simple to trust

SMS will be **trust-worthy**, providing end-to-end standards-based mechanisms for positive user identification, authentication, and data encryption (both on terminals and during transmission). Security and privacy characteristics will be designed to take account of key provider and end-user requirements, including ease-of-use and the need to understand the implications of specific security options.

iv) Simple to set-up

Last, but not least, SMS will be **easy to set-up**. The SMS project will develop and use standards and standards-based tools. These will be no more complex than current Web authoring tools. As a result of this approach, SMS will be an **empowering technology**: the methodology and tools developed by the project will allow individuals, SMEs, NGOs and local government departments to compete with larger organizations as providers of mobile services.

Barriers to be removed

The key technologies required for SMS are

already in place. The main obstacles are not technology but the lack of standards and standards-based tools – and more important still – the absence of the millions of small providers who have driven the Internet explosion.

Technical Approach

The tools and software engineering practices created by the project will be the equivalent of the basic tools and standards underlying the “universal services” provided by the World Wide Web: Web clients, Web servers, HTML, HTTP etc. The project intends them to serve the same purpose, giving rise to a virtuous cycle in which a rapidly expanding service offering encourages rapid growth of the user population and a growing user population provides incentives for new services. The tools created by the project will be integrated and prototyped in a **service platform**, independent of specific technologies and complete with a Web interface and service authoring tools.

i) The legacy from the Simplicity project

The IST Simplicity Project developed tools and architectures enabling users to customize devices and services with minimal effort (<http://www.ist-simplicity.org/>). To this end, Simplicity provides each user with a personalized profile, stored in a so called Simplicity Device (either a physical device or a virtual device accessible over the Internet). Ideally, a user who plugs the Simplicity Device into a terminal gains transparent access to a personalized environment. The results of the Simplicity project will be exploited by SMS, especially to simplify the fruition of services.

ii) Validation and trials

A key objective of SMS is to investigate users needs, and verify that they are satisfied by the SMS platform. To this end, SMS will develop user scenarios and business models for deployment of SMS. The effectiveness and user acceptability of SMS will be tested in two pilot trials at the Athens International Airport and at the campus of University of Roma II. In both demonstrators, end-users will be provided with terminals combined with Simplicity Devices. Local service providers will design services targeting these users.

Trials at the Athens International Airport and at the campus of University of Roma II

