SMS
Simple Mobile Services

Information Society

Specific Technical Accomplishments/Products

MEM (Mobile Electronic Memo)
MEMs are electronic notes containing information about a location, a person, a service, or a Web site. Users can automatically capture MEMs from the environment or from other services, store them for future use, share them with other users and send them as input to other services and applications.

MOVE (Mobile Open & Very Easy)
The MOVE client is a browser for mobile services running on mobile terminals. MOVE allows users to instantaneously access services that match their preferences and current context. Other features include outdoor and indoor navigation, MEM management, information services and (on Windows Mobile phones) the ability to directly interact with the SIM. MOVE runs on Java 2 Micro Edition (CLDC) on Symbian and Windows Mobile phones.

SIM-based Security and Privacy
Simple Mobile Services will only be successful if users trust them. To guarantee security and privacy, the project uses *Smart Card Web Server* (SCWS) technology to access the security features offered by the (U)-SIM. The solution has been implemented on real-life SIMs, which will be tested in trials on the University of Roma "Tor Vergata" campus and at Athens International Airport.

Service Authoring Wizard
The Service Authoring Wizard (SAW) is a web application that allows users with little or no technical experience to configure, deploy and manage their own Simple Mobile Services. Its main characteristic is extreme simplicity of use.

SMILE-JS
SMILE (Simple Middleware Independent LayEr) is an abstraction layer between the application and the underlying middleware platform, provided as a set of JAVA APIs.
SMILE-JS (Json over SIP) is a "binding" of SMILE that runs on a broad range of Mobile Devices (J2ME MIDP2.0/CLDC1.1). Coding of messages is based on JavaScript Object Notation (JSON). Messages are transported by using the SIP protocol.

Project Trials

The effectiveness and user acceptability of SMS will be tested in two pilot trials at Athens International Airport and on the campus of University of Roma "Tor Vergata".

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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.

The SMS project has created innovative tools addressing the specific needs of mobile users and making it easier for individuals and small businesses to become users and providers of Simple Mobile Services (SMS).

Motivation

Mobile services have not matched the success of the Web, yet. 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).

Main Achievements of the Project

- Specification of requirements for a new class of Simple Mobile Services (SMS), meeting the specific needs of mobile users.
- Introduction of MEMs: electronic notes containing information about a location, a person, a service, or a Web site.
- Development of an open source client for mobile devices (MOVE), that simplifies access to mobile services.
- Development of an open source, web-based tool, allowing individuals and organizations to create, deploy and manage their own SMS.
- Deployment of Simple Mobile Services in real-life environments.

At a Glance

Simple Mobile Services

http://www.ist-sms.org/

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A new service concept

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 few exceptions they fail to address the **specific** needs of mobile users. And even when they do, many mobile users are **unaware that they exist**, **find them hard to use** and are **unwilling to trust them**. To address this problem, the SMS proposal focuses on **simplicity.**

Simple to find

Simple Mobile Services are easy to find. Each service target specific environments of interest to specific classes of mobile user performing specific activities. This means that SMS are simple to find. When services target specific physical locations, it is possible to advertise their availability with posters, signs, leaflets and electronic displays. The MOVE client software helps users to find services; MEMs make it easy for them to swap information about the services that are available

Simple to use

SMS are easy to use. They are 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). The MOVE application and the MEMs make it easy to use services and greatly reduce the need to manually input data.

Simple to trust

SMS are trust-worthy, providing end-to-end standards-based mechanisms for positive user identification, authentication, and data encryption. SMS exploits the security provided by the SIM card to offer a general solution for problems that would otherwise have to rely on ad hoc proprietary software. The SMS project has designed and produced real SIMs with innovative security features and will use these SIMs during the trials.

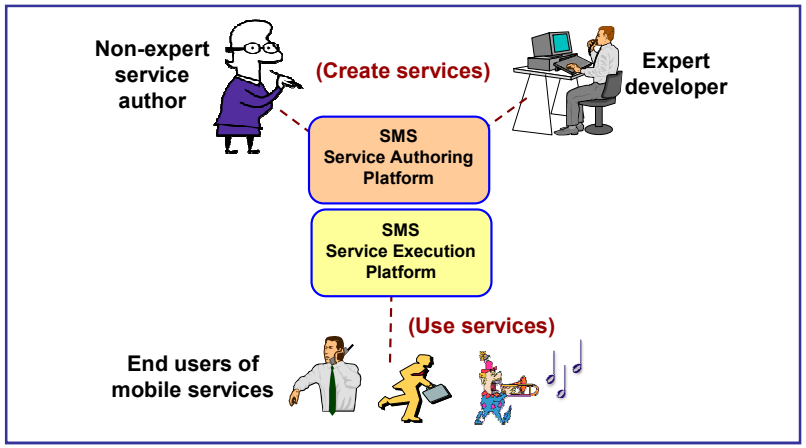
Simple to set-up

SMS are easy to set-up. The SMS project has designed and implemented a Simple Authoring Wizard and a set of advanced authoring tools. The Simple Authoring Wizard helps individuals, SMEs, NGOs and local government departments to become providers of mobile services, by easing the service creation process.

Screenshots from the MOVE application

Technical Approach

The SMS project designed and implemented a "**Service Execution Platform**" and a "**Service Authoring Platform**", based on an open source development model.



The "Service Authoring Platform" supports both expert developers and non-expert service authors: expert programmers can create SMS services by using specialized approaches and tools designed by the project (e.g. Java code libraries / Hecl scripts, a XUL-like GUI framework for building services, an interface definition language called IDlight); non-expert authors can create and configure services by using a web-based "**Simple Authoring Wizard**.

The Service Execution Platform has a modular, component-based architecture, using a "Service Oriented Approach" for component interaction. SMS exploits the open source middleware "**SMILE-JS**", which relies on SIP for transport and JSON for data serialization. The approach adopted supports NAT traversal and security features. The Service Execution Platform has been implemented using **MOVE**, an open source application based on J2ME.