



INNOVATION REPORT

Facilitating a single European mobile services area



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The traditional sector of mobile commerce has growth of just 15% but other application areas like m-ticketing, remittance and retail purchase have expected growth rates of more than 100%. For these application areas in the 'real world', trusted mobile services are required. The main objective of Single European Mobile Services Area (SEMOSA) was to provide an open innovation platform and tools for the creation of mobile applications that support technologies such as Near Field Communication (NFC), seamless integration of multiple secure domains and interoperability of services such as payments at the European level.

Project framework

The ITEA 2 SEMOSA project was geared to responding to the needs of users, developers and third parties. For example, the end-user that wants to use and combine mobile services of different ecosystems to be able to use a new service without having to register, to car-pool in a foreign city, to pay for everything when on vacation, and not to have to do any cash currency exchange transactions.

So a simple SEMOSA architecture was developed that included a web-based SEMOSA Model Driven Development tool mock-up (with a domain-specific language editor) to design SEMOSA based applications. In addition, four basic profile types were defined and a SEMOSA library created including the SEMOSA API (the set of abstract and interface objects and classes, for both the core and the customer profiles) and the SEMOSA Library Core (which implements the basics of the SEMOSA API). Finally, a reusable reference architecture aimed not only to accelerate time to market for mobile applications but also targeted solutions that are simple, low-cost, appropriate and easily replicable for trusted mobile services.

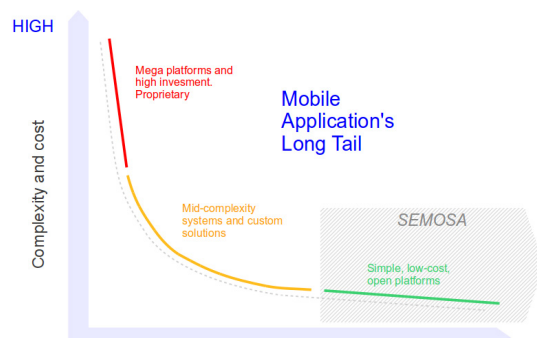
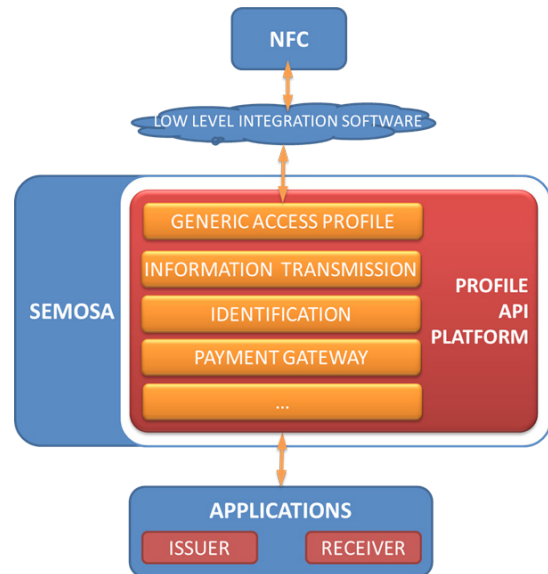
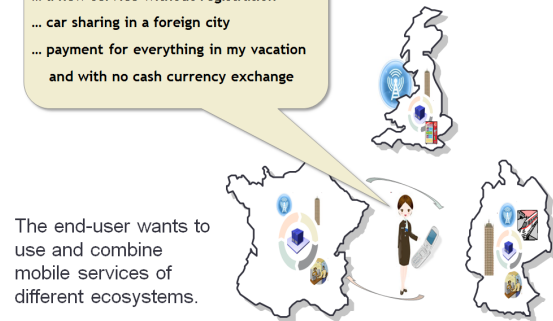
Open platform

SEMOSA focused on allowing the applications to connect and interact with trusted services like a payment application or a mobile ID transparent of the ecosystem. Then by connecting the ecosystems themselves, other mobile services are able to

SEMOSA General Overview

I want to use easily...
 ... a new service without registration
 ... car sharing in a foreign city
 ... payment for everything in my vacation and with no cash currency exchange

Here it is shown on the example of three national ecosystems



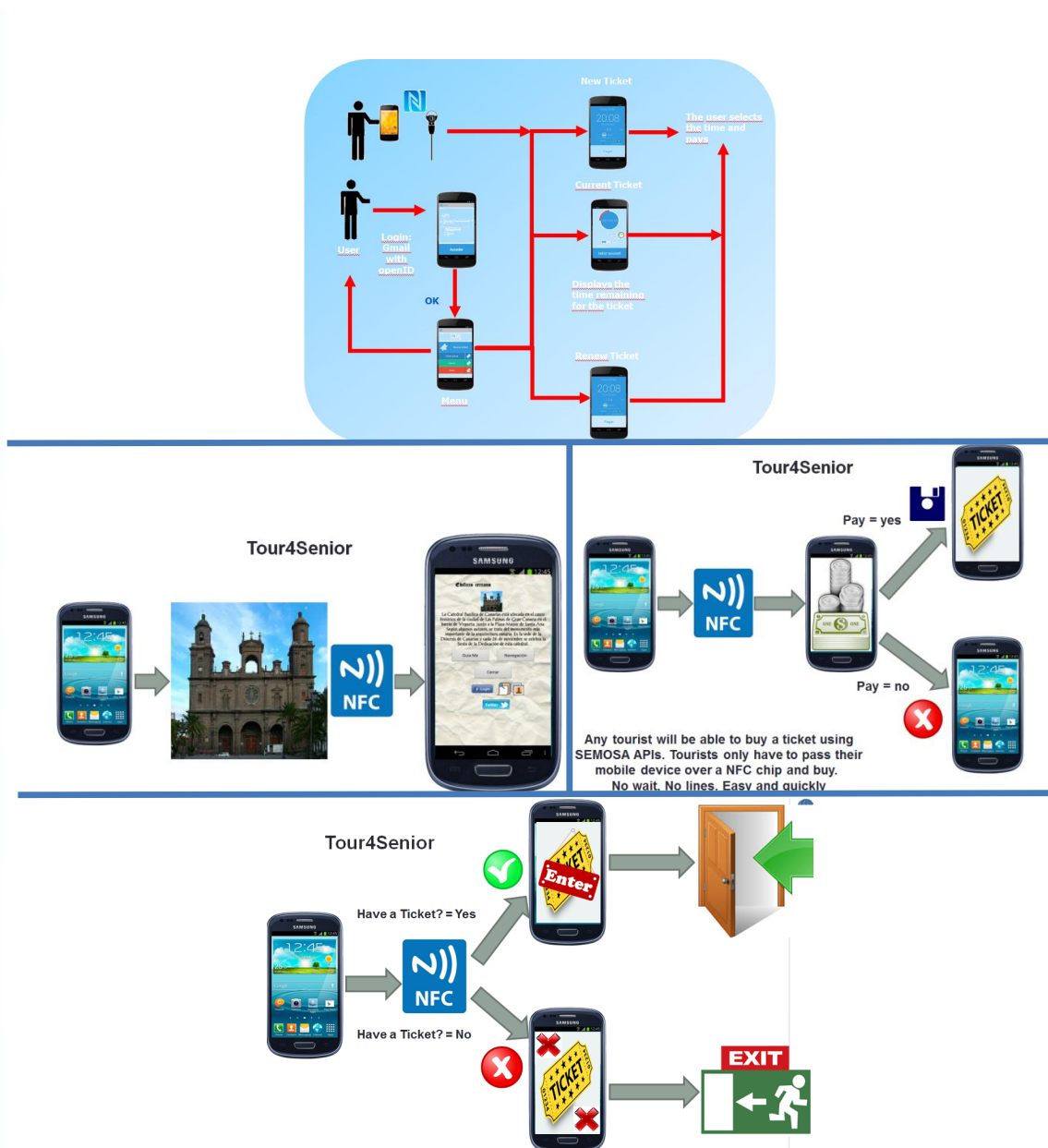


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connect with the trusted service and use its functionality. This required an open platform application programming interface, or API, so that companies can use them for the development of applications and services independently as well as contribute to enriching the mobile services landscape. But since there are no standards on how entities talk with each other, SEMOSA defined common interfaces of how ASPs can be connected to related services and entities, incorporating some of the interfaces and protocols in the open platform API and others to third parties to develop SEMOSA-compliant components. With payment the key trusted service for the broad acceptance of SEMOSA, they focused particularly on this. A second key trusted service was mobile ID since user authentication of some sort is required by many applications.

Innovation

The project's major innovations derived from the combination of a domain-driven architectural approach with an integrated open platform, something that will have a significant impact on businesses, operators and developers, helping to position the platform globally. Another major innovation is an innovation framework for a more globally competent European market whereby mobile applications can take advantage of existing standards and initiatives and link these benefits for mobile software development with universal access to operator services. For developers, mobile applications and services will be easier to implement and for service consumers those mobile applications and services will be more trustworthy and of higher quality. Service providers will benefit from being able to provide their capabilities as plug-in.





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Demonstration ...

Among the demonstrations was m-ticketing – the SEMOSA SIRSP profile – that enables tourists to get access to any event using SEMOSA services if the tourist has previously bought the ticket using the application. This is very simple and only requires the tourist to pass the smartphone over an NFC reader for access. No wait, no queues. Easy and quick. Using the SEMOSA SIRSP profile the user can use the purchased virtual ticket, in this case a museum ticket, to access the museum.

... and standardisation

Among the contributions made by SEMOSA to standardisation is documentation developed by Telefónica I + D along with the four main European operators (Vodafone, Deutsche Telekom, Telecom Italia, Orange) which is evolving into a new venture with the GSMA joining two Korean operators: SKT and KT. This new project, GSMA Mobile NFC FTP, is primarily aimed at accelerating the commercial launch of interoperable services based on NFC SIM cards. SEMOSA has also contributed to legacy contactless specifications (ISO/IEC), NFC specifications (ISO/IEC), specifications for the connection of a secure (or non-secure) element to the contactless front-end (CLF) or NFC Controller (ETSI TS, ISO/IEC) and to the updated NFC Handset APIs & Requirements (Version 3.0). This latter provides handset manufacturers with a common set of requirements of mobile NFC for the NFC to be interoperable in different European countries and defines the architecture of the application required to meet the safety requirements of NFC use cases and APIs for different operating systems.

Exploitation prospects

Vector, one of the consultancy leaders in the Spanish IT Market, is integrating SEMOSA results into its solution for identifying users/customers from the Mobile domain, such as Parques Reunidos, which wants to enable its customers to buy online a 'Speedy Pass' that can help them bypass a queue. Previous versions of the business model ran up against logic and design problems but SEMOSA can help not only correct these issues but also place Parques Reunidos one step ahead of its competitors. Another development sees an e-Vending proposal for McDonald's enable customers to perform pre-order using NFC technology. McDonald's is currently evaluating this business proposal.

Answare will use the results of SEMOSA to develop TourKhana, an application focused on the Tourism and Leisure sectors, to empower the tourist assets of locations and cities by providing an immersive tool for visitors. Not only will this encourage the participation of citizens and visitors in collaborative environments but will also contribute to the development of local and regional businesses by inviting them to participate in the initiative. This puts a powerful promotional tool within the reach of local and regional private businesses, first at local level and then at global level through the social network.

More information:

www.semosa.org