

## Case Study:

# Content Goes Mobile with Telefónica Móviles España

### The Organization

Telefónica Móviles España is one of the world's premier mobile carriers and the leader in the Spanish and Portuguese-speaking markets, with operations in 15 countries and more than 88 million customers worldwide (at the end of September 2005). Telefónica Móviles España serves the Spanish speaking nations in the parent company's markets and offers a full range of services and applications using the latest mobile technologies including UMTS. Telefónica Móviles España has more than 19.6 million customers. Telefónica Móviles shares are quoted on the Spanish markets and New York Stock Exchange, under the ticker symbol TEM. Movistar is the commercial brand for all the companies of the Telefónica Móviles Group around the world, except in Morocco and Brazil.

### Application

Business-to-Consumer, Consumer-to-Consumer

### Challenge

Telefónica Móviles sought a way to provide mobile content services in a privacy friendly way, reduce mobile spam, and drive adoption of services overall. They also wanted to use federated pseudonyms rather than phone numbers for service access.

### Solutions Partner

Symlabs ([www.symlabs.com](http://www.symlabs.com) <<http://www.symlabs.com>> ) is a privately held company specializing in identity management infrastructure, directories and messaging. Symlabs provide consulting services and also offers products including Directory Extender and Symlabs Federated Identity Access Manager. Symlabs has been actively contributing to the Liberty Alliance <http://www.projectliberty.org> since 2002, and Symlabs' employees have played a pivotal role in several of the Project Liberty specifications, namely the PP-SP profile. Symlabs customers include major carriers, financial institutions and Fortune 1000 companies such as IBM, Vodafone and Schlumberger. Strategic partners include Sun Microsystems, IBM, Oracle and Computer Associates.

“Symlabs has a long history of building services that carriers offer to consumers. Through our participation in the Liberty Alliance, mobile operators came to us to help them tackle the privacy problems involved with mobile content messaging. By contributing an editor resource for the standardization of ID-MM7, Symlabs was able to offer a full solution – the Symlabs Federated Identity Access Manager – very early in the process. This led to a practical trial in October 2005 and now our solution has reached general market availability.”

Sampo Kellomaki  
Chief Architect, Symlabs

## Why the Liberty Alliance

Both Telefónica Móviles and Symlabs chose to work with the Liberty Alliance for the following key reasons:

- Liberty Alliance specifications are open.
- The specifications are market-driven.
- There's no vendor lock-in. The need for proprietary implementations was eliminated.
- Liberty provides a distributed federated model and enables Circles of Trust.
- Security is appropriately addressed.

## Privacy Over the Mobile Networks

Telefónica was drawn to Symlabs' Liberty-based federated solution because federated mobile identity offers an elegant way to address the privacy concerns that the mobile content services precipitate. "A very private and sensitive piece of subscriber information – the phone number – is protected by this solution," said Jeffrey M. Zukowski, Director of Marketing, Symlabs. "This helps increase subscribers' trust in value-added services, leading to an increase in usage, thereby driving up revenue per user."

By using federated identifiers, which are different for each user-service interaction, collusion or unauthorized information gathering by the service providers can be prevented. What's more, the Liberty ID Web Services Framework allows a federated identifier to be used in lieu of the phone number, thus avoiding all the issues that sharing a phone number with a weakly trusted party would create, e.g., SPAM. This is akin to the "use once" credit card numbers that the payment industry has touted as a solution to e-commerce, however the federated mobile messaging solution is fully automated and the end user need not be aware of the technology.

## Push, Pull, Chat, Gaming and More: Opening up Services to Consumers

Liberty-enabled capabilities provide Telefonica with the means to engage and delight their customers in new ways through:

**Mobile content sales:** ring tones and wall papers

**Mobile multimedia content:** may require a high degree of privacy

**Mobile-based interaction:** interactive TV shows and games

**Voting with mobile phone:** (e.g., TV show asks audience to vote by sending messages to a short code)

**Social networking applications:** bar finder, community awareness, friend finder and chat (instant messaging gateway)

**Mediated communication:** (e.g., between divorced parties for benefit of common children, while respecting court mandated restrictions on approach)

**UMS notifications:** voice/email/fax, "I'm Away" multimedia announcement, push-type information services: location-based weather and traffic, sports, jokes

**Pull-type information services:** stock quote request etc.

**Push-reply-type services:** opinion polls, quiz games

**List servers:** public or private message boards, MMS Publisher, chat

With all services, the user's consent is always mandated. Person-to-person messaging applies strict permissions enforcement. The user is in control of the link with all the third party service providers and can terminate the relationship with any of them, effectively barring that third party from contacting the user in the future.

## Liberty Enables Identity-based Messaging Over a Mobile Network.

Improving user friendliness was also a key driver for Telefónica Móviles. In this new environment, it's simply easier for all parties to transact business. Subscribers are assured that their privacy rights are not infringed upon. At Telefónica, a composition of several Liberty-enabled services is used to allow third parties to provide subscribers with a coherent service experience. The handset database is used to tailor content to the subscriber. The content is requested and delivered using an identity-based messaging service over a mobile network. The solution demonstrates a modular and extensible architecture that allows mobile operators to provide services in a privacy friendly way while working with third party content providers

This solution also enables content providers to leverage technology on a massive scale. For example, imagine being able to alert football fans by MMS video that their favorite team has scored a goal – as it happens – without fear of being spammed. Applications like this are enabled by this new service.

### **ID-MM7 in Action**

Telefónica is deploying ID-MM7, a protocol developed and promoted by the Liberty Alliance, driven by major mobile operators such as Vodafone and Telefónica Móviles, to standardize identity-based Web services interfaces to mobile messaging.

The ID-MM7 specification adds significant value to existing Web services. MM7 has long been used by operators for relaying MMS and SMS traffic. ID-MM7 enables an entirely new business model wherein the content providers know their subscribers only pseudonymously - providing the capability to thwart spam, identity theft, and fraud.

The mobile industry has started to apply Web services technologies to expose and integrate the value it holds in the mobile domain, thereby providing an opportunity to lower integration costs between operators and content partners. ID-MM7 provides subscribers the security from risks such as fraud, spam and identity theft that would otherwise impede their acceptance of these new services. The ID-MM7 specification is currently a work in progress inside the services track of the Liberty Alliance. It is targeted for achieving its final status in Q1 2006.

How does this actually work in practice? The trick is to use Liberty protocols for issuing anonymous identities and then use the Symlabs Identity Management Framework to map these anonymous identifiers back to actionable data - for instance, the phone number for sending the short message. All this takes place without exposing data to the intermediary, in this case, the fan club operator.

The same identifier is used to invoke other Liberty-based services for the subscriber (the handset database query using ID-DAP in this case).

The ID-DAP specification is a work in progress that will enable the lookup of information regarding a Liberty pseudonym in a secure way.

### **Symlabs is First to Market**

The Liberty Alliance, driven by major mobile operators such as Vodafone and Telefónica Móviles, fast-tracked the effort to standardize identity-based Web services interfaces to mobile messaging. This effort has, in turn, produced impressive results in a fairly short period of time.

Telefónica Móviles and Symlabs demonstrated the first handset model-aware end-to-end system utilizing multiple Web services interfaces during Liberty Education Days in Tokyo and Singapore. General availability of the SLIM messaging server was announced first week of February, 2006.

“We wanted to demonstrate a real-world application of the ID-MM7 messaging specification, and not only have we achieved that goal - the enthusiastic reception by the crowds in Singapore and Japan further shows its commercial potential,” said Antonio Navarro, CEO, Symlabs.

### **Definition of Terms**

**Circle of Trust** (n) 1. a trusted group of identity and service providers who share linked identities and have pertinent agreements in place 2. where an individual or a business inputs a password once and minimal necessary credentials are shared among the Circle of Trust’s members 3. a step strongly linked to federation, where multiple entities are involved, and there are business, policy and technical relationships in place 4. also known as “trust circle”

**Federation** (n) 1. an association comprising of any number of service providers or organizations 2. a model based upon trust in which user identities and security are individually managed and distributed by the service providers or member organizations 3. where the individual organization is responsible for vouching for the identity of its own users and the users are able to transparently interact with other trusted partners based on this first authentication 4. resembles the credit card model in that vendors accept an individual’s ability to pay and then that ability is authenticated/verified through a single location

**ID-DAP** (n) 1. a well known protocol for looking up information. ID-DAP enables an entirely new business model wherein an application can access information about a principal known only by their federation pseudonym

**Identity** (n) 1. the most basic element in a high value relationship 2. the individual characteristics by which a person, business, business partner, government agency or other entity is recognized or known

**Identity Provider (IDP)** (n) 1. a service that authenticates identity; often a trusted party such as a bank, mobile operator, or an Internet Service Provider (ISP)

**ID-MM7** (n) 1. MM7 is a specification that has been long used by operators for relaying MMS and SMS traffic. ID-MM7 enables an entirely new business model wherein the content providers know their subscribers only pseudonymously – thus providing unprecedented ability to thwart spam, identity theft and fraud

### Benefits to Service Providers

- Improved customer experience
- Increased revenue
- Increased usage as a result of end-customers enhanced sense of trust
- Reduced administration for all parties
- Re-use of the same interface for all mobile operators

### Benefits to Consumers / Subscribers / End-users

- Content providers know their subscribers only pseudonymously
- Affords unprecedented protection against spam, identity theft and fraud
- Ensures that service providers cannot share the subscriber's identity
- Ensures that access control can be applied per service providers
- Provides the ability to deliver a wide variety of content efficiently and securely to subscribers

### Benefits to Mobile Operators

- Increased revenue
- Increased trust by subscribers
- COTS software available, avoiding vendor lock-in

### Benefits for Mobile Content Aggregators

- New value-added business
- Better audit trails reduce management cost
- "Arms length" relationships with new business can be maintained
- Standardized solution allows the content aggregator to have the same interface towards all operators

### Definition of Terms

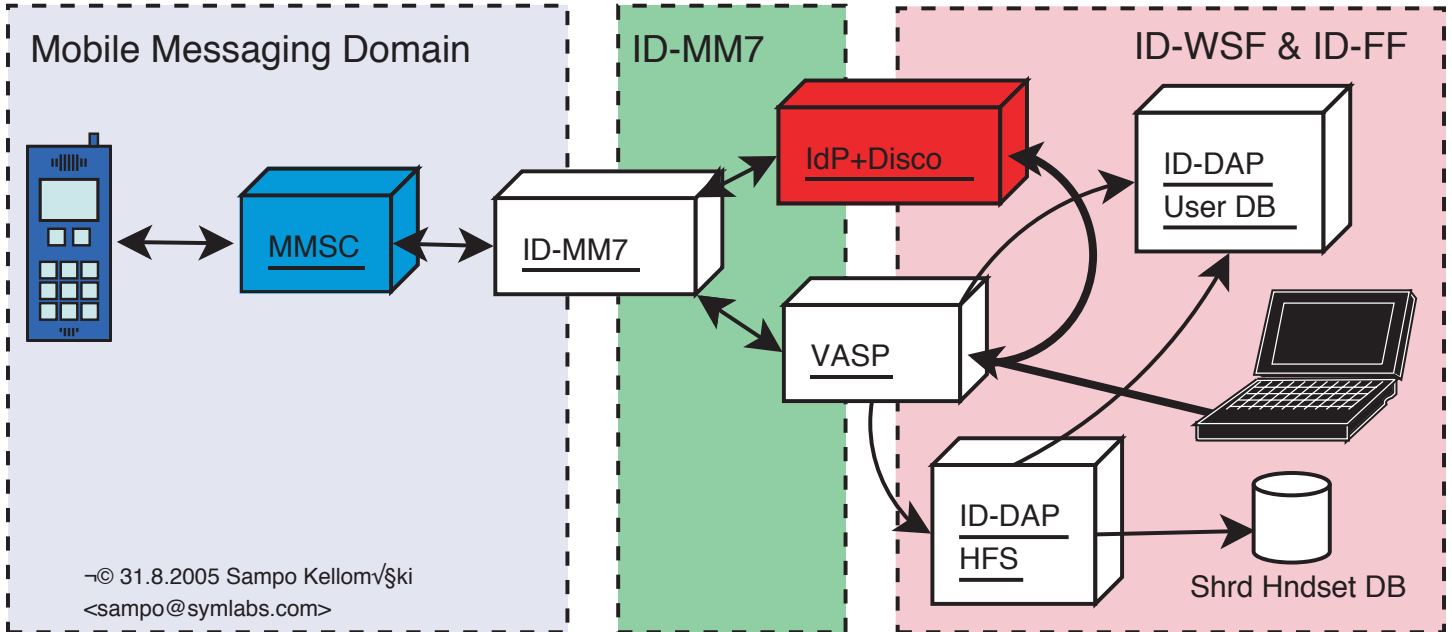
**MM7** (n) 1. a protocol standardized by the 3GPP to allow the delivery and submission of messages between valued-added Service Providers and mobile operators

**Mobile Web Services** (n). 1. where Web Services technologies expose and integrate the value it holds in the mobile domain 2. an opportunity to lower integration costs between operators and content partners

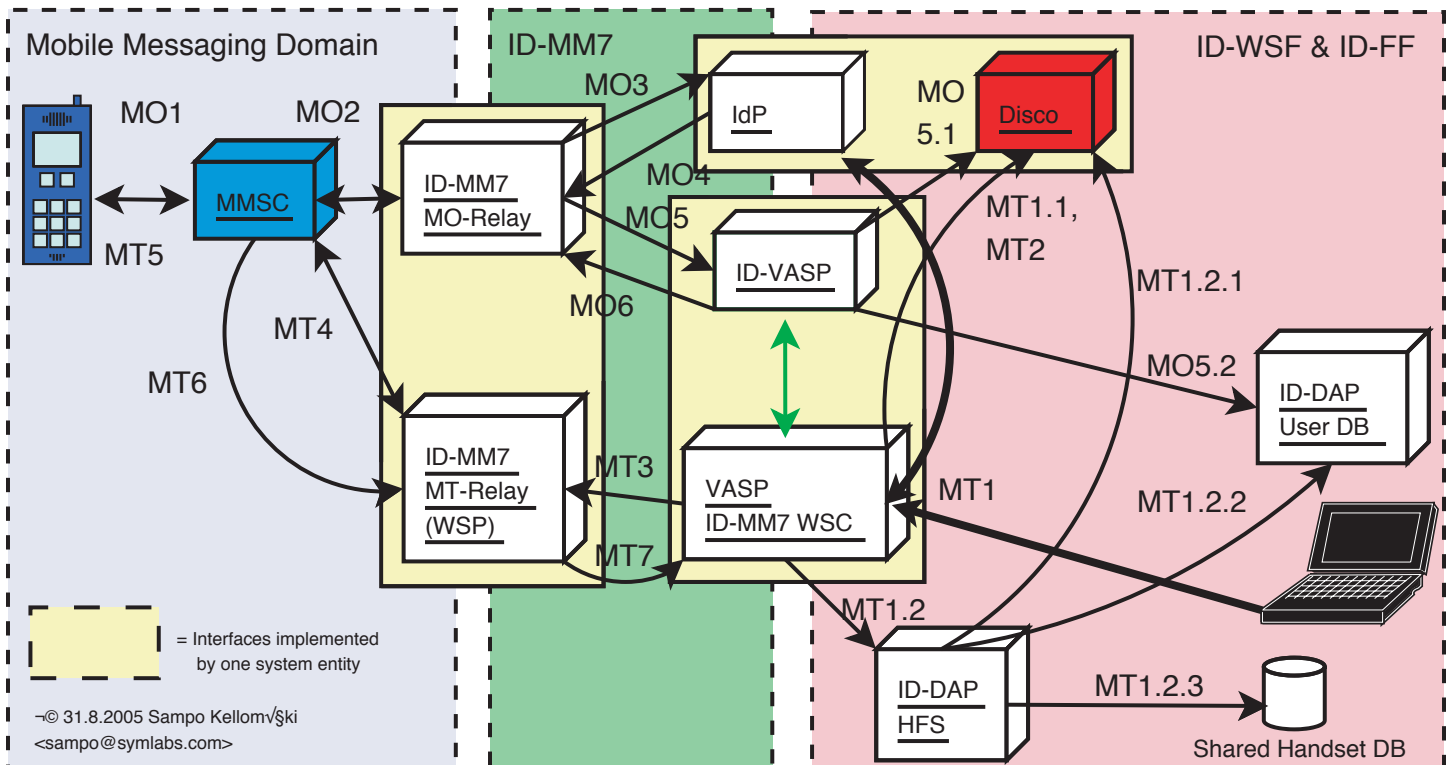
**Service Provider (SP)** (n) 1. a federation partner that provides services to an end user; service providers typically do not authenticate users but instead request authentication decisions from an identity provider

**Single Sign-on** (n) 1. having the capability of accessing an online system once and having that authentication honored by other system entities, often service providers 2. sometimes called SSO

## Architecture Overview



## Detailed Architecture



### About the Liberty Alliance

The Liberty Alliance Project ([www.projectliberty.org](http://www.projectliberty.org)) is a global alliance of companies, nonprofit and government organizations developing open standards and business, policy, and privacy guidelines for federated network identity. Federated identity offers businesses, governments, employees and consumers a more convenient and secure way to control identity information, and is a key component in driving the use of e-commerce, personalized data services and identity-based Web services. Liberty specifications are deployed worldwide by organizations that include American Express, AOL, BIPAC, General Motors, Fidelity Investments, France Telecom, Nokia, NTT, and Sun Microsystems. Membership is open to all commercial and noncommercial organizations. A full list of Liberty Alliance members, as well as information about how to become a member, is available at [www.projectliberty.org](http://www.projectliberty.org).