



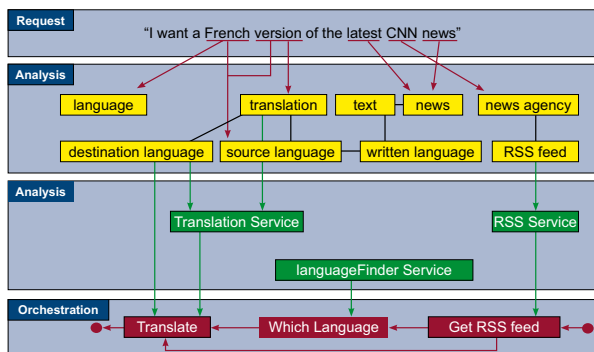
## PROJECT RESULTS

# A world of mobile user-centred services

### Making it easy to create, share and use mobile services

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**Results of S4ALL make it possible to create and share mobile user-centred services more easily than web pages. The main outcomes of the services-for-all project are a service-creation process based on natural language and icons, and its associated service-execution environment.**



From the original natural-language request to the final composed and served service

It is easy to write, deploy and share Internet pages. The worldwide web is currently used as a front-end for accessing business-specific e-services such as banking, road traffic information, news feeds and weather forecasts that can be used as basic bricks to build more complex customised services. The results gained in S4ALL enable this Internet success story to be repeated with mobile services as a means to ease inter-personal communication and facilitate everyday life by enabling the whole community to create, share and access personalised services.

Creation of a new service is made simple, thanks to natural-language interfaces and graphical tools involving manipulation of icons

representing existing services: anyone can create and customise his own mobile personalised service. An enhanced middleware layer makes it possible to implement service-oriented architecture (SOA) mechanisms, improved by semantic service publishing and discovery, and fast and automatic deployment of components. Through this layer, anyone can host and manage his own services on a personal computer (PC) or a mobile terminal.

**Simplifying service availability**  
The new technologies embedded in S4ALL help build a world where services are made available to any citizen, anywhere, at any time and in any condition:

- **Service-creation and customisation tools** make it possible to build personal services from basic existing services using a service-creation process made as simple as possible: anyone can express his needs through a natural-language request or by interconnecting icons in a graphical interface to create customised, user-centred, mobile services that precisely fit the user's requirements;
- **Description and publication of services** via service ontologies – structured dictionaries for a given purpose or domain – facilitates non-ambiguous and more accurate discovery and composition of services that exactly fit user expectations. The use of semantic information through ontologies enables natural-language processing and enhances service publishing, discovery and orchestration;

## S4ALL (ITEA 04025)

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### Partners

- Alcatel-Lucent
- Bull
- Capricode
- Fraunhofer Fokus
- Helsinki Institute for Information Technology
- INRIA
- mCentric
- Nokia
- ObjectWeb
- Odonata
- Schneider Electric
- Thales Communications
- Université Joseph Fourier
- Universidad Politécnica de Madrid
- University of Kassel
- Vodafone

### Countries involved

- Finland
- France
- Germany
- Spain

### Start of the project

July 2005

### End of the project

June 2007



## PROJECT RESULTS

- **Dedicated infrastructure** hosts, runs and makes novel services created by individuals available to others – family, friends or customers. Such infrastructures, generally operated by professionals, are now operable by the man in the street for hosting his home-made services. These user-created services can interoperate easily with professional services and take advantage of their features, such as scalability, performance and availability; and
  - The new middleware layer, including a powerful **service-execution environment**, mainly based on open-source components, enables faster service deployment, reduced time to market and multi-targeted service execution, while also supporting user mobility and seamless service delivery.
- Business-oriented applications**  
Several concrete products prototypes illustrate the relevance and benefits brought by S4ALL. Thanks to improved middleware technologies, service-creation environments and numerous supported functions such as semantic publishing and discovery, automatic orchestration and deployment, a number of different business-oriented services – or ‘vertical’ applications – have been developed:
- **Person-to-person communication:** mCentric development of completely new applications taking advantage of the functionality offered by the project – for example communities ‘killer applications’, such as the Whizzer peer-to-peer (P2P) mass-market instant messaging service (IMS) launched in March 2007, which already had 3,362 registered users by June 2007;
  - **Setting up a personal and customised service environment:** development of a product allowing an end user using a handset to request a new service and configure it as well as updating the device if needed – for example initiating a voice-over-Internet (VoIP) service;
  - **Power distribution:** use of S4ALL for developing energy-oriented e services (Schneider Electric Real-Life), and use of the main outputs of the project: sensors – alarms delivered in P2P services;
  - **Telecommunications:** Alcatel-Lucent development of services using and embedding results from S4ALL’s semantics: ‘Correlated ID’ for personal information discovery; and ‘Semantic Orchestration Studio’, an integrated tool for semantic service creation. New applications and services built with this tool were disseminated inside Alcatel-Lucent business divisions, through Internet- and telecommunications-based use cases; and
  - **Industry:** integration of an IMS telecommunications platform and an industrial platform (Schneider); use of a P2P platform to receive industrial alarms; and further commercial value through the use of the P2P platform to advertise (mCentric).

### Major project outcomes

#### Dissemination

- More than 45 publications
- Nine presentations at conferences/fairs

#### Exploitation

- 14 new products within partners’ departments
- 20 new services of which 15 are intended for internal use

#### Standardisation

- Five contributions to standardisation bodies: OASIS WS-CAF & BPEL4WS, JOnAS certification, OMA DM standard and JCP J2EE Expert Group

#### Patents

- Eight patent applications filed
- Four patent applications in preparation

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