



### Highlights

The aim of SAFIR is to give conversational access to services for:

- Professional Users (firemen, ambulance, government, ...)
- Citizens
- Occasional Users (like tourists or people looking for help)
- Commercial Users (hotels, shopping chains, etc.)

**Professional** users will be equipped with mobile voice enabled devices which allow them to execute their job in a hands-free and eyes-free manner.

For the **Citizen**, the access to databases, applications and services will be managed through a voice enabled remote control device that will use a Set-Top Box connected to a TV set for interaction.

**Occasional** users can get access to applications like City Guide on a handheld device or on the TV set in their hotel room equipped with a Set-Top Box.

**Commercial users** can provide a kiosk-like service for their customers and visitors, using similar technologies like the citizens in their homes.

### The Problem

Professional users very often need relevant information in the field, while access to this information is difficult if not impossible. Most of the time, they have to get access to remote databases and traditional interfaces are not available or not adequate to provide this access. Also, they have to update information, to make the content of the database more reliable.

Citizens, on the other side, have the need to access e-government services provided by their cities, regional or national governments. Today, in most western countries, we see that on average about one third of the families have PC's, Internet access and in most cases, even have access to broadband services. But even then, PC-based access to e-government services is not very convenient for most of the citizens due to complicated user interfaces. Also, the downside of this observation is that about two thirds of the families have no possibility at all to participate in the e-society and have no access to e-government offerings.

### The Solution

A consortium is created, bringing together 18 European partners from eight European countries and one Chinese partner to develop an SDK (Service Development Kit), offering the programming model and toolkit to enable Conversational Access to a variety of databases and applications, containing vital data for Professional users as well as for Citizens.

The targeted users of the SDK are the application developers who can enhance existing e-government applications with SAFIR voice enablement technology.

For Professional Users, the SDK can be deployed on the most appropriate wearable devices available, to enable them to stay "on the go" in contact with the backend applications containing the relevant data for the job. This equipment may at any time be augmented by head-mounted devices and other input/output devices to optimize the way they operate.

Citizens Users will have access to e-government services through their TV, equipped with a Set-top box, which offers capabilities of having bi-directional voice communication with backend systems and applications, offered by the government and other service providers, who are accredited by the government. Access to critical or personal data can be controlled by biometric access control systems, like fingerprint, voice profile or e-ID smartcards.

### The Benefits

The SAFIR SDK is developed to provide a standardized voice enablement for e-government services across the European Union's countries.

SAFIR will allow the Professional users to get at any time and any place access to the most relevant data needed to execute their job in the most accurate way.

Certainly in critical situations or disasters, like earthquakes, fire or terrorist attacks, rapid access to up-to-date information can save many lives.

Also, these Professional users can update databases to avoid that colleagues in similar situations later on will again suffer from inaccuracy of data.

SAFIR will offer to all citizens, and in particular to the IT-illiterate ones, the opportunity to participate in the e-society. The service content can vary from basic information to form-based interactive applications and even to more advanced services.



Service examples are:

- **Information:**  
"Where can I find event information?" – "Whom should I contact for cadastral register changes?"
- **Interactive Applications:**  
Tax declaration, building construction authorisation.
- **Advanced Services:**  
Guidance and navigation applications to help identifying appropriate citizen services through a central user interface.

Based on that same SAFIR SDK, the Chinese Consortium Partner, CapInfo, develops a City-Guide for Beijing, which has the ambition to remove the barrier between languages and provide services to city visitors. A first implementation of the City-Guide is under development to be rolled out at the Beijing 2008 Olympic Games.

### Conclusion

SAFIR offers a very powerful natural and therefore convenient user interface to all kind of databases, applications and services in such a way, that all Citizens can become part of the e-society and that Professional Users can become more effective in their day-to-day job. SAFIR is a good example of well spent EU funds to improve living quality and to narrow the Digital Divide across the European Union.

### IBM Contacts:

- Jacques De Kegel Belgium  
[jacques\\_dekegel@be.ibm.com](mailto:jacques_dekegel@be.ibm.com)
- Ralf Baral Germany  
[rbaral@de.ibm.com](mailto:rbaral@de.ibm.com)
- Christian Schiller Germany  
[christian.schiller@de.ibm.com](mailto:christian.schiller@de.ibm.com)
- Jan Sedivy Czech Rep  
[R.jan\\_sedivy@cz.ibm.com](mailto:R.jan_sedivy@cz.ibm.com)
- Yi Min Gan China  
[ganyimin@cn.ibm.com](mailto:ganyimin@cn.ibm.com)

<http://www.safir-fp6.org>

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