CELTIC
Telecommunication Solutions
www.celtic-initiative.org

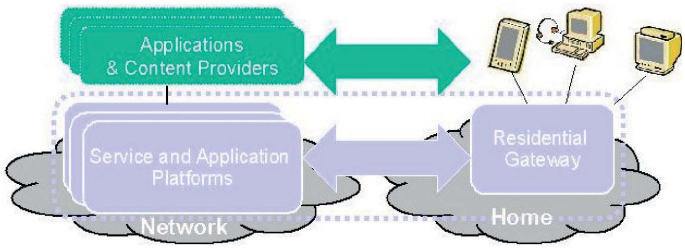
Enabling Community Communications-Platforms and Applications

The EnComPAs project enabled the creation of a system and converged residential services suite, unifying infrastructure (advanced service provisioning, standard based TR69 and OSGi) and socio-cultural approaches (Co-design processes). By distributing services throughout the home (fast and shared Internet access, multimedia content, remote control and access, home automation, and home security/safety), it aimed at supporting the communication needs of the many social communities in which each member of the household takes part (school, colleagues, hobbies, friends, family…).

Main focus

The mission of the EnComPas project was to create an open pan-European initiative to speed up the deployment of new networked products and applications at home and the growth of the EU Economy in these areas (e.g. consumer electronics, telecom services, white/ brown appliances, etc.). Therefore, different actions were taken at the technical dimension (e.g. application/ service provisioning platforms) and at the user dimension (e.g. by user experiences, field trials).

The used architecture is represented in the figure below:



EnComPas general architecture

One of the goals of the project was to set up the needed infrastructure for the deployment, operation and support of the new products and services for the connected home, building an end-to-end platform that allows, easily and efficiently, the inclusion of content and service providers along with large numbers of end users. This platform follows a layered approach: network management, service provisioning (by service aggregator) and multimedia content provider management (by application server platform). This approach also included the user side, integrating the routing and services gateway with the different home networks.

encompas

EnComPAs

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Partners

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Androme, Belgium

Elisa Corporation, Finland

France Telecom R&D, France

Ikerlan, Spain

Katholieke Universiteit Leuven, Belgium

Nokia, Finland

Telvent, Spain

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www.celtic-initiative.org/projects/encompas

Approach

The main challenges of the Encompas project were to tackle the complexity at platform and service level domains. To address these issues effectively, expertise in both social and technical areas could be provided by the EnComPas project thus assuring its successful results.

The EnComPas project adopted a phased co-design approach that included both a design philosophy and practical working methods, aiming to produce a system architecture and a tool repertoire to enable the users to experiment in new ways of using the tools for regular, convenient, interesting and sustainable practices.

Due to the increasing overall network complexity the end-to-end service delivery might experience deployment problems. The approach here was to provide a complete home management platform that supports heterogeneous home equipment. The system was implemented through a standard based residential gateway, as key home based interconnection and integration device. This platform followed a layered approach taking care of network, service level, multimedia applications and content management.

Achieved results

The project set up an end-to-end provisioning system for a large variety of applications and services including additional aspects as customization, mobility support or quality of experience. The main features were:

- Remote home network management, including the configuration of the homes devices. For this component, the implementation was done following the DSL Forum specification and some Text Reports (TR) received input from the project. Moreover, HGI (Home Gateway Initiative) recommendations were influenced, as EnComPas results were presented in this forum.
- Implementation of the service aggregator model, which supports multiple service providers. For this component, the implementation was done following the OSGi and HGI recommendations. As these forums did not cover all the aspects envisaged by EnComPas, the project sent feedback to them.
- Home networks development: A first step to integrate multiple devices and flows were done. A common view of the integrated home networks was provided and presented to the HGI.

The following applications were developed within the project

- Kori – Social Media Organiser
- Family Blog
- Home automation & surveillance
- Home watching & telemetry
- 3D Virtual Interactive Communities
- MyOwnTV / Lommel TV

Concerning testing and interoperability, EnComPas built the first step of an integrated test-bed that allows services and platform interoperations tests at the European level. Some follow up initiatives are necessary to continue this activity.

The user experiences and field trial provided very valuable feedback about user reactions over the services and systems developed within this project.

Impact

One of the main success factors of the EnComPas were the integration of the results in the commercial portfolio of the participants in order to reach the needed critical mass of users, applications, service providers, and contents for European homes for the generation of new revenue streams, enabling Europeans companies to take a leadership position.

Some of the developed components built the ground for new commercial products as the MyOwnTV application or for internal provisioning systems as the Service Aggregator Platform. In other cases, the work done in EnComPas opened new development and research lines as the Kori applications, whose application code will be used internally to develop new applications or the home network platform, which was the basis to introduce new functionalities to traditional network management platforms, home watching & telemetry or 3D Virtual Interactive Communities.

The interactions between professional experts of different backgrounds also led to innovations in the area of project development and some partners are even considering the introduction of the phased co-design approach in their own development processes.

Finally, the cross check of the platforms and applications at European level by means of the integration and deployment of them in test labs, in existing demonstrators and in pre-commercial experiences (field trials) was a very valuable source of information for the partners to assure technical and user acceptance and to study the related operational and business aspects. Therefore, EnComPas experience will benefit future commercial deployments of the involved partners.

About CELTIC

Celtic is a European research and development programme, established as Eureka cluster, to strengthen Europe's competitiveness in telecommunications through short and medium term collaborative R&D projects. Celtic is currently the only European R&D programme fully dedicated to end-to-end telecommunication solutions. Launched in November 2003, Celtic (Cooperation for a sustained European Leadership in Telecommunications) was founded and has been supported by major European telecommunication players, both vendors and operators. Celtic fills the gap between public R&D programmes not specifically focused on telecoms and short-term R&D efforts by the telecoms industry

Timeframe: 8 years, from 2004 to 2011

Total budget: in the range of 1 billion euro, shared between governments and private participants

Participants: companies from the telecommunications industry (small, medium and large), universities, research institutes, and local authorities from all 35 Eureka countries may participate in Celtic projects.

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