

# Project Achievements



## Full Experience Extended Living @ Home

Feel@Home aims at the mass market adoption of Digital Home advanced audio-visual networked services enabled by a breakthrough in the "Extended Home" concept.

The project developed an open architecture based on de facto standards, with the required hardware and software components, integrated and tested in different European countries.

### Main focus

Feel@Home ensures the management of the digital content, the automatic Home Area Network management, and the handling of multi-user service offerings. Moreover, it provides a new interaction paradigm enabling seamless, personalised and context-aware service delivery, to various types of user devices from any user location, based on such available technologies as UPnP/DLNA.

To link Digital Homes through the Internet and enable the access to the different services from the outside in a dependable manner, the project develops a framework for end-to-end Quality of Service (QoS)

and security. Feel@Home ensures a reliable and seamless user authentication and a trustworthy experience for both consumers and service providers of Digital Home services.

The project studied the market aspects and business models so as to foster a take-up of the innovation in commercial solutions.

### Approach

**Feel@Home** implements advanced services to the Extended Digital Home users that are willing to share their multimedia content, to network with other users in the web and to supersede the actual digital experience with high quality content services.

- ◆ User-centric media and experience sharing: sharing among people, and not among devices.
- ◆ Advanced content services, combining content from multiple users and sources, which is adapting the content to the users needs, and not just to the requirements of the user device.



## feel@home

Project ID: CP5-008

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Closure date: 30 November 2010

### Partners:

Creativ'IT, Spain

CNRS, Centre National de la Recherche Scientifique, France

Energy Sistem Soyntec, Spain

France Telecom R&D, France

GET-INT Groupe des Ecoles et Télécommunications (Evry), France

Ikerlan, Spain

Nokia Research Center, Finland

Novomok Ltd., Finland

Telefónica I+D, Spain

University of Malaga, Spain

### Co-ordinator:

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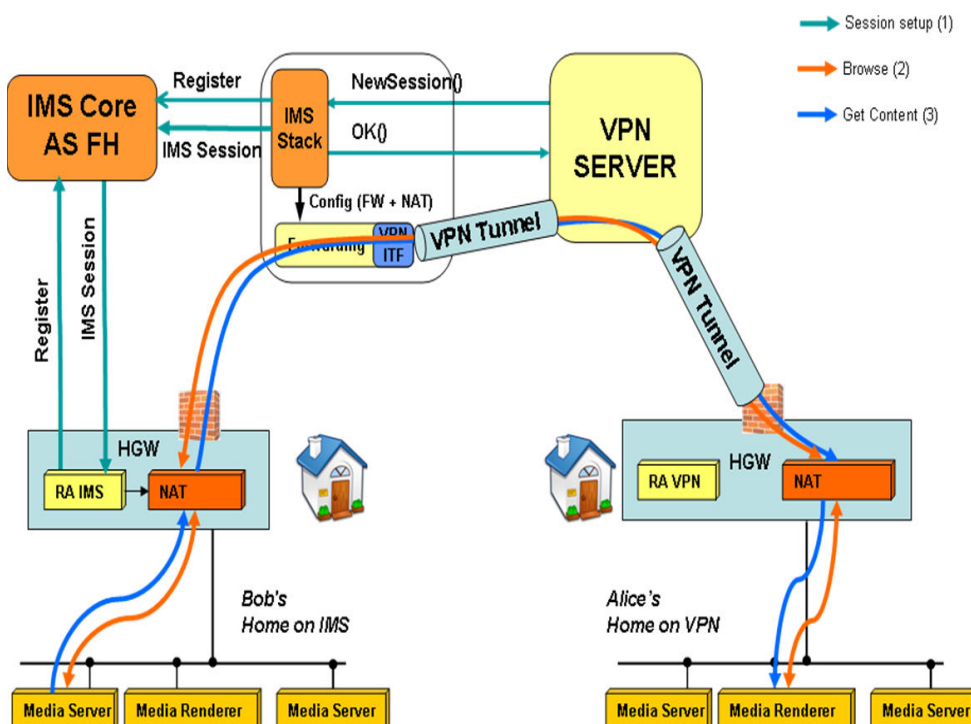
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### Project Websites

[www.celticplus.eu/projects/celtic-projects/call5/FEEL@HOME/feelhome-default.asp](http://www.celticplus.eu/projects/celtic-projects/call5/FEEL@HOME/feelhome-default.asp)

[www.feelathome-celtic.eu/](http://www.feelathome-celtic.eu/)



- ◆ High definition video conferencing for home (QoS at home).
- ◆ Disruptive mass media distribution mechanisms to the home.
- ◆ The total home life control concept (Super controller) which helps users to manage their home devices.

The framework developed hides the technology and complexity for the daily use of the services, from the users. This is realized by shifting the user environment in the Extended Digital Home concept. In such concept, the user devices and mobile services are integrated in a single environment automatically adjusted to the user context (typically UPnP-based), depending on several variables:

- ◆ Profile data including the different roles, contexts, environment, locations, available time, mood, interest -and knowledge level
- ◆ Handling of the multi-user and multi-device characteristics
- ◆ Home-to-home immersive experience of content browsing and rendition

## Main results

The main results achieved by the project are:

- ◆ web-to-home, home-to-home, device-to-home network connectivity, dependable and scalable (content may be rendered in a browser, in a local UPnP media renderer or during a mobile conversation)

- ◆ a user experience compatible with nowadays' standards (UPnP/DLNA) and devices
- ◆ a truly interoperable architecture authorizing different technical implementations (VPN-based, IMS-based), mutually compatible over common ontologies, offering multi-operator business perspectives
- ◆ end-to-end Quality of Service (i.e. when session parameters are negotiable end-to-end), with still spectacular best-effort usage modes (e.g. upstream content streaming over ADSL)
- ◆ a light and efficient security architecture based on both network-based and device-embedded functions protecting the home gateway's public interface, while avoiding data flow bottlenecks/scalability issues
- ◆ Context Management and Personalization components improving contacts/sharing rights management, ambient intelligence in a visited environment and extending the perimeter of impacted services (e.g. in domotics)

In order to be able to achieve the Quality of Service required by this analysis, Feel@Home enhances the QoS inside the Community network, when applicable, by measuring and analyzing the following issues:

- ◆ Characterization of the traffic, prioritization of the different flows and identification of the Classes of Services.

- ◆ Connection Admission Control algorithms to limit the QoS traffic inside the Home Networks and ensure that QoS is guaranteed in the Access and Core Network.
- ◆ Configuration of the available QoS mechanisms in the network elements

The integration of these QoS mechanisms with the QoS mechanisms available in the access and core network is one outcome of the project.

## Impact

The Digital Home has long been promised and is now only just beginning to see the light of day through several standardisation efforts (e.g HGI, OSGI, DLNA, etc.) and research oriented work performed notably in Europe on the IST Framework programmes 5 and 6.

Nevertheless, there is an incredible amount of solutions in the market today which are not compatible with each other and cannot be integrated in a smooth fashion. The user has to be bound somehow to a given provider in order to have an integrated solution in the market today.

Feel@Home has developed the following actions to push forward Broadband penetration in Europe:

1. Increase and improve the offer of services for Basic Households (not only internet and PC based services); the true value has to reside on the fact of being connected to others. Better user interaction and service personalisation are to be enriched and provided.
2. Increase the Broadband Value by ensuring security and privacy, by introducing group services (Home-grid services), by implementing and facilitating technologies that will foster a real networking convergence and by increasing and guaranteeing the Quality of the services and communications.
3. To implement and offer advanced services to the Advanced Digital Households willing to share their content and play with other users through the web. This will allow the transition from the present digital experience to the use of high quality contents.

## About Celtic

Celtic is a European research and development programme, designed 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.

**Timeframe:** 8 years, from 2004 to 2011

**Clusterbudget:** in the range of 1 billion euro, shared between governments and private participants

**Participants:** small, medium and large companies from telecommunications industry, universities, research institutes, and local authorities from all 35 Eureka countries.

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