ITEA 2

INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT

Project Results

Personalised and interactive TV experience

Advanced multimedia applications and services in distributed environments

Unique individual experiences possible

The WellCom project enables creation, delivery and management of advanced personalised and interactive multimedia applications and services in a distributed home environment and on-the-move. End-users obtain easy and seamless access to interactive and personalised TV services and TV-related applications on various terminals. The project also provides new types of group involvement, making the TV experience really interactive and enabling cross-platform participation. As a result, WellCom enhances the TV experience for the user and opens up innovative revenue models for operators and for service and content providers.

Broadcast TV faces many challenges and must evolve to continue as a major medium for marketing and entertainment. The way users consume TV has changed with 18- to 26-year olds spending increasing time online – leading to an inevitable decline in revenue for broadcast business models that rely on advertising.

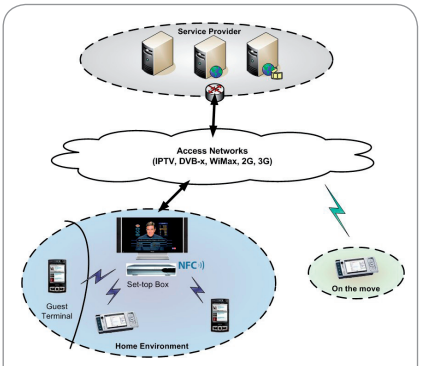
At the same time, the quantity and choice of TV content is ever increasing, making it more difficult for content providers to reach users and for users to find the content they want. Moreover, only a limited number of users can handle the complexity of the equipment and services now on offer.

ENCOURAGING ACTIVE INVOLVEMENT

WellCom offers new TV experiences that allow consumers to be actively involved in a two-way dialogue to request specific personalised content based on their preferences while also being able to exchange information within their local and remote communities. The project has developed a rich environment for the creation of new TV services to take fully advantage of interactivity and personalisation for enriching the user's experience.

The technologies include:

- TV sets used as community equipment for displaying or sharing the same content within a defined group of users;
- User terminals in the home environment to ease interactions with TV content through a set-top box (STB) and deliver personalised services directly to the user's terminal;
- Near field communication (NFC) and Bluetooth technologies combined with an 'easy-pairing' mechanism that makes easier user connections to interactive programs and social applications. This also allows a clear identification of who is in front of the TV – essential for a user-centred or community-based TV experience; and
- Accesses to legacy networks for delivery of enriched contents, services and applications.



WellCom technical environment

WellCom
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Partners

Activa Multimedia
Alcatel-Lucent
Expway
FTA-Inverto Digital Labs
Henri Tudor
InOut TV
NXP Semiconductors
Pace
Prewise
SES Astra
Telefonica I+D
Telenor
TF1
UNIK
University of Evry

Countries involved

Finland
France
Luxembourg
Norway
Spain

Project start

April 2007

Project end

October 2009

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EASY USER PERSONALISATION

One major result is a generic set of components allowing easy personalisation of the user experience. The personalisation layer consists of:

- A user profiling engine that learns from user consumption to collect user preferences;
- A community profiling engine that collects social and presence information related to user activities to build community profiles that reflect group preferences;
- A user privacy manager that allows users to define their own privacy policies – a mandatory step for personalisation; and
- A semantic recommender that uses a rich ontology-based semantic model to find contents that best match individual or community preferences.

This personalisation layer is fully integrated within the underlining service delivery platform on which the execution of end-user services relies. As the other components implemented in the scope of the project, the latter also pushes part of the personalisation logic as close as possible to the end-user to distribute processing power in order to ease the scalability of the system, retrieve more precise traces and offer users a better control on their privacy.

An external application programming interface federates these distributed enablers and offers TV programme/service providers a set of generic methods for integrating personalisation easily within their business logic.

BUILDING HIGHER USER LOYALTY

WellCom generates high social impact as it transfers the traditional 'passive' TV consumption into a rich interactive experience. The personalised interactivity opens up the possibility of group experience of TV content. For example, users can take part themselves in a broadcast TV quiz (like the 'Who wants to be a millionaire' TV game), or compete with friends. Other types of application have been envisaged like betting in real time on a soccer match.

The overall results ensure high business impact by increasing user loyalty, allowing greater attractiveness in advertising and service offers. WellCom supports an open business model that extends the TV environment into a universal IP-service interface. Services and advertisements can be tailored to user needs thanks to the advanced personalisation layer. Targeted advertisements on mobile phones allow service providers to tap into new revenue streams, using 'pay per click' advertising revenue models.

Major project outcomes

DISSEMINATION

- 21 conference or journal papers
- Participation to 13 trade fairs (SERI, NAB, CTIA, Movilforum, ITEA Symposium, ICT, IBC, MWG)

DEMONSTRATIONS

Implementation of 4 innovative scenarios:

- Who Wants to be a Millionaire?
- Football betting game
- Interactive Quizz Game over DVB-H
- Shopping assistant, at home and out-of-home

EXPLOITATION

Several exploitation activities / plans at the level of:

- Content providers
- Hardware & technology provider
- Service providers

On-going discussion with business divisions for transferring results

STANDARDISATION

- Participation in standardisation bodies (DVB, CBMS, IPI, OMA, BT-SIG, DLNA, IETF, Broadband Forum, Wireless Research Forum)

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ITEA 2 – Information Technology for European Advancement – is Europe's premier co-operative R&D programme driving pre-competitive research on embedded and distributed software-intensive systems and services. As a EUREKA strategic Cluster, we support co-ordinated national funding submissions and provide the link between those who provide finance, technology and software engineering. Our aim is to mobilise a total of 20,000 person-years over the full eight-year period of our programme from 2006 to 2013.

ITEA 2-labelled projects are industry-driven initiatives building vital middleware and preparing standards to lay the foundations for the next generation of products, systems, appliances and services. Our programme results in real product innovation that boosts European competitiveness in a wide range of industries. Specifically, we play a key role in crucial application domains where software dominates, such as aerospace, automotive, consumer electronics, healthcare/medical systems and telecommunications.

ITEA 2 projects involve complementary R&D from at least two companies in two countries. We issue annual Calls for Projects, evaluate projects and help bring research partners together. Our projects are open to partners from large industrial companies and small and medium-sized enterprises (SMEs) as well as public research institutes and universities.

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October 2009