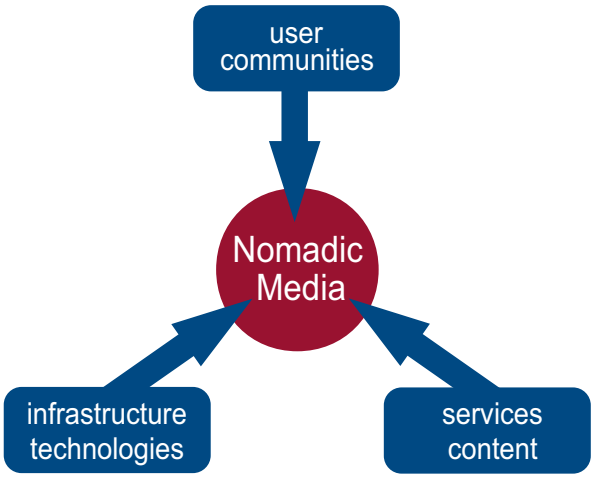
ITEA
INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT

PROJECT RESULTS

Interactive access on the move

to personalised entertainment, information and healthcare

Nomadic Media developed solutions that allow consumers to enjoy multimedia content and employ interactive services at the times and in the places they prefer, using devices that best suit their circumstances. Proof-of-concept demonstrations were carried out in airport, home and networked healthcare scenarios. More efficient user-interface development solutions were also elaborated.



Nomadic Media worked at the intersection

The vision that computers will 'disappear' into the way we live is fast being realised. There is an extraordinary growth in consumer use of broadband to access network-delivered content and interactive services in a variety of ways using various devices. In addition, new media concepts are emerging as novel ways of using media evolve such as the personalised scheduling of broadcast programmes (podcasting), the emergence of 'citizen' journalists and personal publishing websites.

'Proof-of-concept' demonstrations

In Nomadic Media, the challenge was to understand how technologies might evolve. The project applied a usage-centred design strategy starting with four key scenarios. These envisioned how people might apply media in more flexible and personalised ways than general today. The scenarios were translated into 'proof-of-concept' demonstrations, with users participating in the development and evaluation of two of the scenarios – 'the airport' and 'connected home' – using story boards and simulations. The demonstrations were working systems incorporating key technology solutions explored during the project. All technologies used were considered as commercially feasible for the 2006 to 2009 timeframe.

- ***The airport*** *– situation-dependent services (Nokia, SysOpen Digia, Euskaltel, Atos-Origin, VTT)*
  This showed how local services could be readily adapted to individual needs once the local presence of a personal device was detected. It featured three friends arriving at an airport. Their arrival was automatically detected and a personalised web page created showing their flight details. This page was adapted on-line to suit the capabilities of their devices. Personal information could also be published on local public displays, in this case a virtual meeting point, and personal devices used to control applications on public displays – this enabled interaction with other travellers, here by playing

NOMADIC MEDIA (ITEA 02019)

Partners
Atos-Origin
Cefriel
Cybelius Software
Euskaltel
Nokia
Philips Electronics Belgium
Philips Electronics Netherlands
SysOpen Digia
University of Oulu
University Paderborn
Vodafone Omnitel
VTT

Countries involved
Belgium
Finland
Germany
Italy
The Netherlands
Spain

Start of the project
July 2003

End of the project
November 2005

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a game. It also showed how services could be 'pushed' to particular individuals at a specific location within the building, e.g. flight boarding calls shown on public screens near them.

- ***Connected home*** *– sharing content on the move and at home (Philips, VTT)*
  This showed how the friends could share content – here images and music – in enjoyable and flexible ways that blended into their social setting. In the first case, the friends visit a city where all three enjoyed listening to music from one portable server simultaneously on their own private earphones as they wandered about. One friend was also able to retrieve additional content instantly from his private collection at home. In the second case, the friends met at home later to share photos. They could immediately merge images from individual collections on a variety of devices into one show using a shared device, and subsequently copy photos back to their own devices. In both cases, various interactive techniques – such as gesture and voice – were demonstrated for device control that embedded user-interface (UI) dialogues in more natural forms of human expression than typical today.

- ***Networked healthcare***
  – use of secure services from remote locations (Atos-Origin, CEFRIEL, Vodafone, Euskaltel)
  This showed access to specialised services using sensitive personal data from a variety of locations. The focus was on networked healthcare. One friend was able to get priority access to his doctor for an urgent condition when both were remote from their normal living and working locations, and both were using portable devices. The doctor could call up the patient's records, search and obtain specialist diagnostic support, arrange for an examination in the patient's locality and authorise a new prescription. The patient got notification of the appointment and subsequently received electronic authorisation to collect the prescription from a local pharmacy.

In addition, SysOpen Digia and VTT worked on an improved user-interface description language (UIDL). The goal was a more efficient development solution based on a newly created OpenUIXML language, a task model driven authoring tool and context-aware run-time support. Following the project, SysOpen Digia is developing the UIDL application for commercial implementation.

Major project outcomes

Dissemination
- User-Centred Design Guidelines for Methods and Tools published
- 26 papers accepted/published
- Article in Philips Password magazine
- Web services – contribution to ITEA position paper
- One conference poster published
- Seven workshops and presentations organised
- Three master theses completed

Exploitation
- Multi-user publishing environment (MUPE) open source – situation-awareness technology components and demo applications published under NOKOS (Nokia open source) license
- Potential commercial implementation of UIDL

Standardisation
Contributions to:
- Universal Plug and Play (UPnP) remote UI – Philips Research NL
- Web Service model ontology (WSMO) – CEFRIEL

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