

OPEN - Open Pervasive Environments for migratory iNteractive Services



The objective of OPEN is to provide users with migratory interactive services, which enable users to change interaction platform and still continue their tasks through an interface adapted to the new context of use.

At a Glance

Project:

Open - Open Pervasive Environments for migratory iNteractive Services.

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Partners:

CNR-ISTI (Italy), Aalborg University (Denmark), Arcadia Design (Italy), NEC (United Kingdom), SAP AG (Germany), Vodafone Omnitel NV (Italy), Clausthal University of Technology (Germany).

Duration:

30 Months – February, 2008 – July, 2010

Total cost:

4.5 MEuro (with 2.8 MEuro EC Contribution)

Programme:

FP7-ICT-2007-1 - Objective 1.2

Further information:

Project website : <http://www.ict-open.eu/>

One important aspect of ubiquitous environments is to provide users with the possibility to freely move about and continue the interaction with the available applications through a variety of interactive devices (including cell phones, PDAs, desktop computers, digital television sets, intelligent watches). Indeed, in such environments one big potential source of frustration is that people have to start their session over again from the beginning at each interaction device change. Migratory interactive services can overcome this limitation and support continuous task performance. This implies that interactive applications be able to follow users and adapt to the changing context of use while preserving their state.

Application Impact

The OPEN project will apply and analyse the middleware solutions developed in example applications from two different domains (business applications and gaming), to demonstrate the feasibility of the approach, the limited effort required of application developers, and its ability to enable new application services. There are many applications that can benefit from migratory interactive services. In general, applications whose tasks require time to carry out (such as games, business applications) or applications that have some rigid deadline and thus need to be completed wherever the user is (e.g.: online auctions). Other applications that can benefit from this flexible reconfiguration support are those that have to provide users with continuous support throughout the day by means of different devices (for example, in the assisted living domain).



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Approach

The OPEN project provides integrated solutions able to address three aspects: device change, state persistence and content adaptation. This is obtained through a middleware able to consider and integrate various aspects: adapt and preserve the state of the software application parts dedicated to interacting with end users; support mechanisms for application logic reconfiguration; and identify suitably flexible mechanisms available in the underlying network layers. The resulting middleware is able to interoperate with existing technologies. Thus, OPEN aims to offer an intelligent infrastructure able to: deliver seamless and transparent support to users in carrying out their tasks when changing available devices, even in multi-user interactive applications; provide and coordinate reliable, dynamically changing/reconfiguring services; offer personalised user interaction by exploiting different interaction modalities and network technologies through an infrastructure able to provide the necessary context information (e.g. available devices, connectivity, users and related transformations for content adaptation).

Goals

The main objectives of this project are to:

- Offer seamless and transparent support to users in carrying out their tasks when changing devices as well as changing available services;
- Offer more natural and personalised

- Exploit the wide availability of network technology to offer more reliable services in the context of migration with dynamically changing devices and services;
- Propose a novel infrastructure in order to increase possible services and application scenarios in several contexts (services for citizen, business, games, new interactive and collaborative method in work or educational applications, and so on).

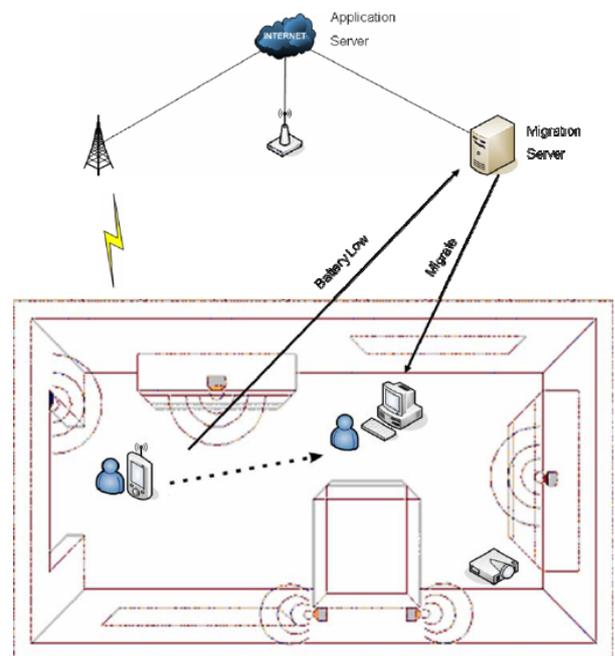


Figure 1 : Example of Migration Environment

For further information:

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interaction obtained by exploiting different interaction modalities supporting the mobile user;