



RESIDENTIAL GATEWAYS AND INTEROPERABILITY

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Executive summary

The home environment is becoming one of the cornerstones of use of ICT (Information and Communications Technology). During the last years, research and development efforts in this area have been increasing at a high pace, so companies are now focusing on providing services to end users in order to return economic profits.

This is the work context for home gateways which are defined as devices able to manage different services (entertainment, communications, control, etc.), and to behave as gateways between Internet and the different home networks.

This document reviews available technology for building and deploying such services on these gateways, including access networks technologies, home networks technologies, user interaction interfaces, and hardware and software technologies on market. Also, a listing of standardization bodies has been incorporated. These elements allow services built-in; we have classified services into: security, control, energy management, entertainment, communications and health.

We have also compiled and discussed several business models for the exploitation of services over home gateways. For this purpose, we have taken into consideration the economical stakeholders and their technical, marketing and legal limitations.

Innovation seems to be a key element in the future development of home services market, and there are a solid patenting and scientific publication background activity around them, leaded by Asia-Pacific countries. For Europe, patents and publications stemmed from public research programs such as the VI Framework Programme (2002-2006) in the key action "Multimedia network systems and home gateways", the ITEA-EUREKA program including its ITEA Roadmap (which contains a specific roadmap for the home environment), and the OSMOSE, PASSEPARTOUT and OSIRIS projects, with Spanish participation and even leadership whose results are in the public domain.

Regarding next future service gateway implementation, we find strengths (the growth in entertainment and health sectors) and weaknesses (real estate market slows down, lack of interest from large companies, lack of specific legal measures, lack of integrated services offer). In general, the information allows being optimistic for medium term: for 2011 it is expected that home services have got a 50% of penetration.