The eu-DOMAIN project
IST-2003-004420

D9.1 Project presentation

Project funded by the European Union

Summary

The specific aim of the eEurope 2005 action plan is to “stimulate secure services, applications and content based on a widely available broadband infrastructure”. The realization of this vision is today still obstructed by a huge variety of proprietary systems not being able to communicate across platforms and users struggling to make systems from different manufacturers operate together. This is especially true when services are needed outside fixed workspaces like homes, offices or factories.

An estimated 12 million Europeans travel everyday across Europe to do their work outside their normal workspace. eu-DOMAIN will dramatically improve their ability to deliver quality services, optimise their professional work, increase the competitiveness and visibility of their host organisations and generally improve the quality of life for Europe’s citizens.

eu-DOMAIN will develop a new, innovative European Ambient Intelligence service platform for automatic, context sensitive offering and contracting of mobile web services across heterogeneous networks.

The eu-DOMAIN service platform will not only connect people, and content but also buildings, devices and machines in an interoperable network and so contribute to the first structured Ambient Intelligence middle-layer widely available.

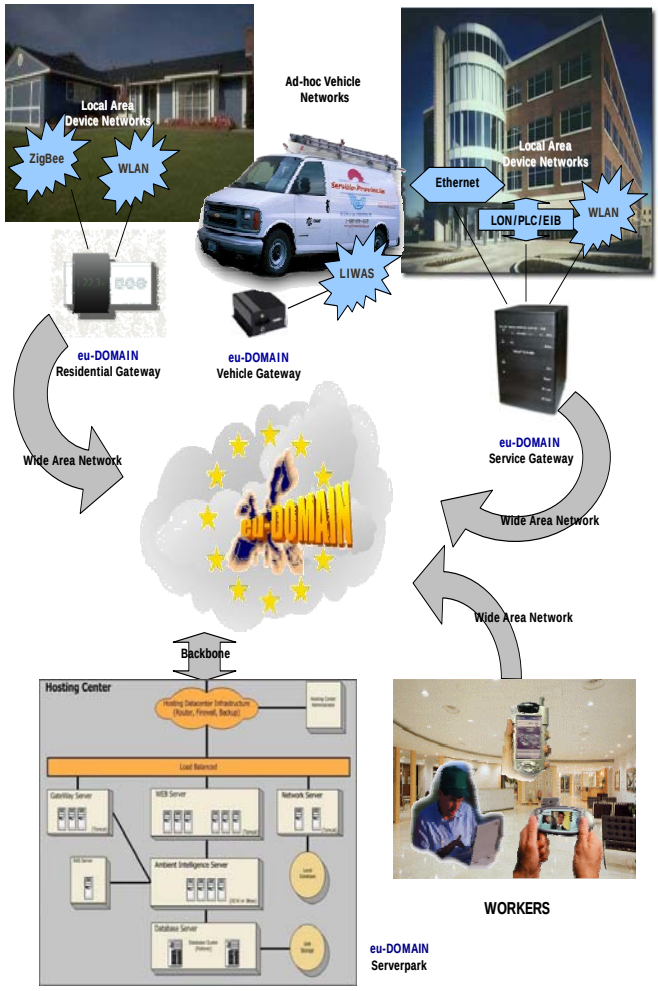
eu-DOMAIN will enable a mobile worker to access their 'virtual user profile' wherever they need to work, intelligently accessing the services and devices they need. It will allow content providers to offer advanced 'augmented reality' services to such users, creating new ways of collaborative working.

Aim and Objectives

eu-DOMAIN is a part-funded research project under the EC's IST Framework 6 Programme (project IST-2003-004420). It commenced in June 2004 and will run for three years.

The eu-DOMAIN project aims to interconnect people, devices, buildings and information content in an open, flexible, intelligent network. Its vision is to develop and deploy a service platform that:

- Integrates mobile users with intelligent surroundings
- Connects people, machines and devices, vehicles and content repositories
- Offers seamless delivery-on-demand of services
- Supports new methods of collaborative working in Europe.



The overall objective of the eu-DOMAIN project is to define, develop, prototype and validate a mobile Ambient Intelligence services platform in real user applications in four steps which are to:

- Identify requirements and opportunities for intelligence support and innovative services relevant to Europe’s 12 million mobile workers.

- Develop ambient intelligence services provided on a platform with distributed intelligence pools based on fixed and mobile broadband networks.
- Deploy a limited scope of mobile user services on the platform to validate potential business opportunities in the real-world and support these with convincing business cases.
- Support the move to the first eu-DOMAIN ambient intelligence service network in Europe for commercial exploitation.

Specifically, the goals of the eu-DOMAIN project are:

User Goals:
Identify innovative industrial and healthcare business scenarios and deploy these for the validation of eu-Domain
Validate the functional and economic feasibility of the services in the users' business environment, including analysis of cost/benefit and total-cost-of-ownership
Assess the potential usage of the eu-DOMAIN platform in other business domains as a precursor to future commercial roll-out
Business Goals:
Develop suitable business models based on value creation and value nets.
Identifying new business opportunities in particular for SME's.
Build a critical mass for the commercial exploitation of eu-DOMAIN.
Technological Goals:
Build a wide-area ambient intelligence service platform using convergent networks that: - assures automatic roaming across heterogeneous networks to provide interoperable services. - supports self-configuring devices, which automatically download interface drivers, protocol structures and user interfaces from various manufactures - Uses a 3-tier multilevel hierarchical client/server structure as distributed intelligence pools for distributing intelligence to the appropriate level in the network
Confirm the full set of technical components that need to be integrated to provide the eu-DOMAIN platform and source these components both from the project's technology partners and from appropriate off the shelf products.
Validate the technical performance of the platform to ensure that it fully supports the identified business objectives at acceptable performance and security levels.

Approach

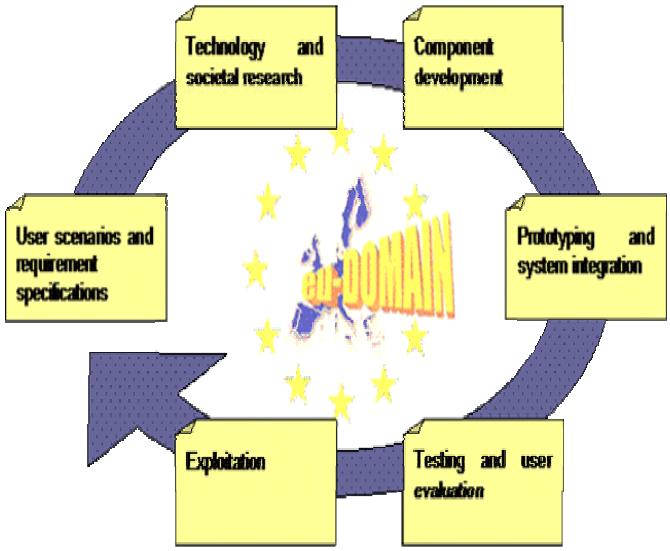
eu-Domain will realise its vision by developing a working example of 'Ambient Intelligence' infrastructure, combining state-of-the-art communications, decision support, semantic web and location-based technologies.

It will pave the way for the commercial deployment of eu-DOMAIN through the development of realistic business models for users and service providers.

The business models will be based on the concept of value-nets and dynamic value constellation and emphasis will be placed on identifying value creation and new business opportunities for SME's.

The project's work is divided into five phases covering:

- Project coordination processes
- Research and development,
- Prototyping and system integration
- User testing and uptake
- Dissemination and exploitation.



Eventually the eu-DOMAIN platform will be deployable in a broad range of industrial, government, healthcare and other citizen centred applications. eu-DOMAIN will prove the feasibility of this in a practical way by developing and evaluating demonstrators under two business scenarios:

In the field of industrial pumps the focus is '***Serving your every need!***':

Serving your every need!

In a world where customers are the primary driving force in shaping product characteristics, features and use of pumps, combined with the existence of a sophisticated communication infrastructure, i.e. the eu-DOMAIN, the basic product function of a pump will shift from simply moving water (or fluids) to be an integral, maybe even a crucial part, of the customer's solution. The value created by the "ambient intelligence" functionality of the pump becomes a major part of the customers overall value creation. The pumps are "serving you – wherever you are – whatever you do – whenever you want it".

In the field of Healthcare the focus is '***Patients as customers!***':

Patients as customers!

The healthcare system is multi-faceted. A large amount of new methods, devices and medication are available from various service providers, each of them offering their services to an informed patient - sometimes in competition; sometimes in cooperation. The patient chooses the providers that are most suited to her/his needs.

Expected Results

- The identification of requirements and innovative opportunities for Ambient Intelligence support and innovative services to the industrial business arena and to the healthcare arena.
- Developed ambient intelligence service platform
- Ambient Intelligence services provided on platform with distributed intelligence pools based on fixed and mobile broadband networks.
- Deployed mobile user services on the platform to validate potential business opportunities
- User and technically validated services, and supporting business cases for further service deployment in user business area
- Assessment of eu-Domain deployment in other business domains and supporting business scenarios
- Initiating the first eu-DOMAIN ambient intelligence service network in Europe for commercial exploitation.

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Eu-DOMAIN Consortium Partners

Partic. Role*	Participant name	Country	
CO	C International Ltd.	UK	CIL is a leading European management consultancy in the field of business improvement. Based in the UK but operating throughout Europe it has a substantial reputation for supporting a wide range of different types of organisation to introduce more effective and efficient ways of working.
CR	Innova S.p.A.	IT	Innova S.p.A is a private consulting company specialised in Technology Transfer and Valorisation services. Established in 1993 in Italy it has now branches in France, Luxembourg, Portugal, and in the U.S. (California).
CR	In-JeT ApS	DK	In-JeT is a renowned management consultancy firm based in Copenhagen, Denmark. It supports both large and small organisations with effective tools for technology assessments, defining technology strategies, developing business cases and bringing new technology to the market.
CR	University of Aarhus	DK	The Department of Computer Science at the Faculty of Science, University of Aarhus, Denmark is one of the major departments of computer science in Denmark: Founded in 1971, it currently has approximately 550 students (500 undergraduates/M.Sc., 50 Ph.D.) and roughly 200 employees incl. Ph.D. students
CR	Foundation for Research and Technology – Hellas	GR	Hellas (ICS-FORTH) has an established tradition of internationally acknowledged excellence in conducting basic and applied research. It is a pioneering contributor towards the deployment of Information Society Technologies in Greece and plays a leading role in worldwide efforts towards the development of an Information Society accessible and acceptable by all citizens.
CR	CNet Svenska AB	SE	Cnet is a world-leading developer of XML-software for semantic web services providing their customers with scalable, robust and usable products based on technology such as XML, RDF and web services. Many of the first XML-based applications Sweden have been built by CNet.
CR	T-connect s.r.l.	IT	T-connect is engaged in research and development of wireless applications on third generation platforms (UMTS/WLAN) for mobile communications services. They have had a long involvement in European and national R&D projects.
CR	Software AG Belgium SA	BE	Software AG was founded 1969 to become one of the world's first hardware-independent software vendors. It is a major supplier of enterprise software for electronic business, Web services, content management, business integration and enterprise transaction processing. In recent years Software AG has focused its R&D activities on products and solutions that support the XML standard and it is the leader in XML technology and solutions.
CR	Telefónica I+D	ES	TID is the research and development arm of Telefónica Spain. It is a leader in a range of technical services such as broadband, intelligent network, data communications, narrow band ISDN, speech technology and public use telecommunications. Its hardware and software integration groups have significant expertise in a range of current and developing technologies. TID has participated in a number of European research projects.
CR	Grundfos Management A/S	DK	Grundfos manufactures pumps for heating, air-conditioning, pressure boosting and wastewater systems. An annual production of app. 10 million pump units makes Grundfos one of the world's leading pump manufacturers. Grundfos pumps are used to provide water for human consumption, for irrigation of fields and watering of animals, for industrial processes, heating and cooling of buildings or wastewater discharge.
CR	Eastern Birmingham Primary Care Trust	UK	Eastern Birmingham Primary Care Trust serves 252,000 people in the east of Birmingham, UK. It is a diverse and vibrant community with 128 family doctors working in 60 Practices supported by over 500 Practice staff. There are 59 Pharmacies, 28 dental Practices and 28 opticians. EBPCT have one of the largest commissioning roles of any PCT in the UK with an annual budget of some £237m to purchase hospital and community services for the Eastern Birmingham community.

*CO = Coordinator CR - Contractor