



Self Orchestrating Community
ambiEnT IntelligEnce Spaces

SOCIETIES



The vision of SOCIETIES is to develop a complete, integrated Community Smart Space (CSS), which extends pervasive systems beyond the individual to dynamic communities of users. CSSs will embrace on-line community services, such as Social Networking in order to offer new and powerful ways of working, communicating and socialising.

At a glance

Project title:

SOCIETIES – Self Orchestrating Community
ambiEnT IntelligEnce Spaces (IP)

Project coordinator:

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(GR), LAKE Communications (IE), IBM Haifa
Research Lab (IL), Institut Telecom (FR),
AMITEC (GR), Telecom Italia (IT), Trialog
(FR), SINTEF (NO), NEC Europe Ltd. (DE),
German Aerospace Centre (DE), SETCCE
(SI), Portugal Telecom (PT)

Duration:

October 2010 to March 2014 (42 months)

Total cost: €15.8M (€10.6M funded)

Programme: ICT-2009.1.2 - "Internet
of Services, Software and Virtualisation"

Further information:

www.ict-SOCIETIES.eu

SOCIETIES – where Pervasive meets Social

SOCIETIES will radically improve the utility and scope of future Internet services by merging social computing and pervasive computing through the design, implementation and evaluation of an open scalable service architecture and platform for self-orchestrating Community Smart Spaces.

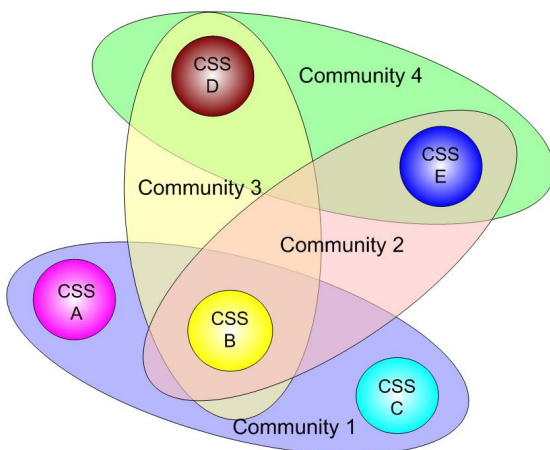
SOCIETIES Objectives

The goal of SOCIETIES will be achieved through four key objectives:

- To facilitate the creation, organisation, management and communication of communities via Community Smart Spaces, where pervasive computing is integrated with social computing communities;
- To provide an enhanced user experience for both individuals and entire user communities, based on proactive smart space behaviour and dynamic sharing of community resources across geographic boundaries;
- To design and prototype a robust open and scalable system for self-orchestrating Community Smart Spaces;
- To evaluate, through strong involvement of end-users, the usefulness and acceptance of the developed CSS software via three user trials with the following groups:

- **Enterprise Users:** Enterprise communities play an important role in bringing together people, goods and services within global markets, local ecosystems or large organisations. The CSS concept will bridge the gap between smart IT systems and established enterprise community activities.
- **Students:** Students adapt easily to new technology, and since communication and social networking play an integral role in their lives, they are most likely to adopt CSSs, using them in ways both foreseen and unforeseen.
- **Disaster Relief Experts:** The ability to rapidly form a disaster management community from all the closely located relief teams can help save lives, property, and the environment.

CSS Interaction



CSSs are the building blocks for enabling pervasive computing in social communities. CSSs constitute the bridge between a user's context (devices, sensors, etc.) and his/her social community. A CSS may represent a user, an organisation or an entity within a set of communities and enable the exchange of services, information and resources.

CSS Benefits

- Shared resources with other community members in a seamless unobtrusive manner. Thus CSSs will provide the means by which users of pervasive systems can come together to co-operate, socialise and share their communal resources. The resource sharing facilities will address cases of multiple requests for the same resource at the same time. CSSs will support sharing of resources owned by community members as well as by publicly available resources.
- The support of multiple techniques for the discovery of relationships and behaviours within communities. This will involve the extraction of preferences, habits, intentions,

context and usage of resources. It will enable learning of relevant information for groups of users who are members of the same community, and from this will automatically derive default sets of preferences, policies and behaviours, which will be particularly valuable to new community members.

- The orchestration of multiple communities to which an owner belongs, maintaining a registry of super- and sub- communities in community hierarchies along with policies on information disclosure and service access to members of other related communities.
- The proactive exchange of information on the situation, interests and resources of community members. As significant amounts of information may need to be exchanged, the CSS will also ensure that only relevant information is delivered to each member. To this end proactive context-aware and utility-based information propagation will be supported.
- The intelligent use of information learnt from monitoring communities and the exchanges between their members. This can be used to support the proactive discovery, configuration, adaptation, control and sharing of services and resources.
- Intelligent conflict resolution among the members of a community based on mediation and negotiation.
- The support of ad-hoc communication at both intra- and inter- community levels, across heterogeneous networks and device platforms.

SOCIETIES Impact

A prelude to the future Internet, SOCIETIES integrates IT, telecoms, media features and services at a personal and community level, accelerating the transition to the envisioned converged platforms and environments.

By providing a more competitive environment, the SOCIETIES architecture will integrate the spheres of pervasive systems, social networking and context-aware service adaptation.

By lowering barriers for service providers, SOCIETIES will provide a semantically rich, machine computable Service Model that will allow the developer to focus on service behaviour and high level concepts rather than cumbersome technical details.