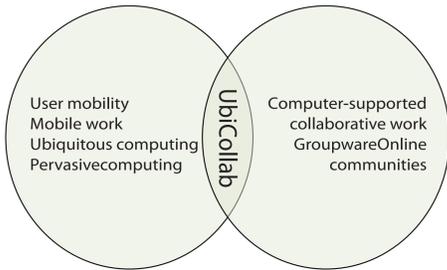


The UbiCollab Vision

Collaboration covers a central role in our life since is not just relegated to meeting rooms, but it comes with people on-the-way, both for work and leisure, during the whole lifetime. People need tools tailored for supporting their own cooperation process, as well as connects with third-party collaboration services. These tools are a valuable help for every person's life, from children to elderly and thus need human-native interaction mechanisms.

UbiCollab (Ubiquitous Collaboration) vision is about supporting a natural, context-aware collaboration in a wide arena of scenarios, using mobile and ubiquitous computing technologies. UbiCollab provides a platform that captures the commonality of collaborative applications and provide tools for building end-user applications for specific scenarios. Integration with physical environment where collaboration happens is a key aspect of our platform. UbiCollab is open-source, everyone can contribute!

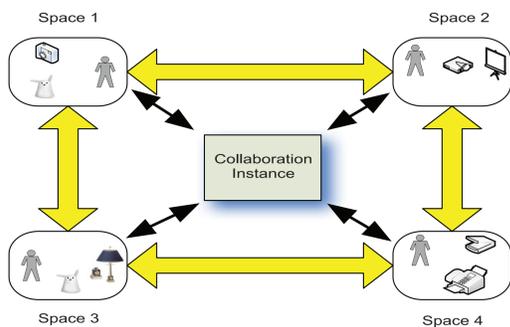


What's new?

- UbiCollab comes with a built-in Service Discovery module enabling a proactive user-interaction with generic devices over object tagging technologies.
- UbiCollab is extendible without extensive coding.
- UbiCollab is a generic, modular platform adaptable to dynamically support heterogeneous collaborative scenarios, e.g. improving collaboration in pervasive healthcare and elearning fields.
- UbiCollab is implemented based on the notion of human-grid.

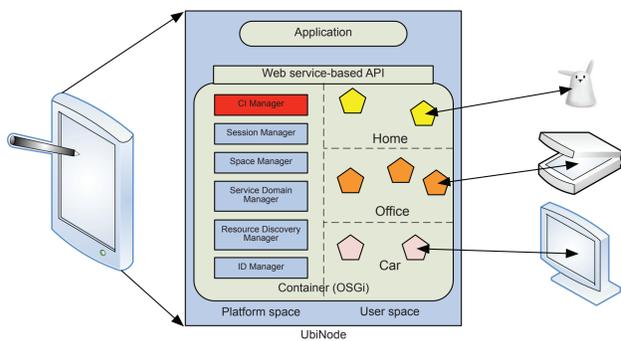
The Human-Grid

The concept of a human grid constitutes our vision of ubiquitous collaboration. A human grid denotes a collection of (geographically distributed) users and the resources each of them has available in their physical vicinity. The core part of a human grid is the collaboration instance (CI), which CI represents the collaboration intention of the users, and works as a shared context for collaboration. For instance, a CI can represent an activity, a social world, a locale, a cognitive system, or a setting.



The UbiNode

Users interact with the human grid through a UbiNode: a smartphone running an UbiCollab distribution, composed in independent platform modules, each of these implements a part of the UbiCollab functionality. A group of UbiNode user constitutes a UbiNetwork, an implementation of the human-grid.

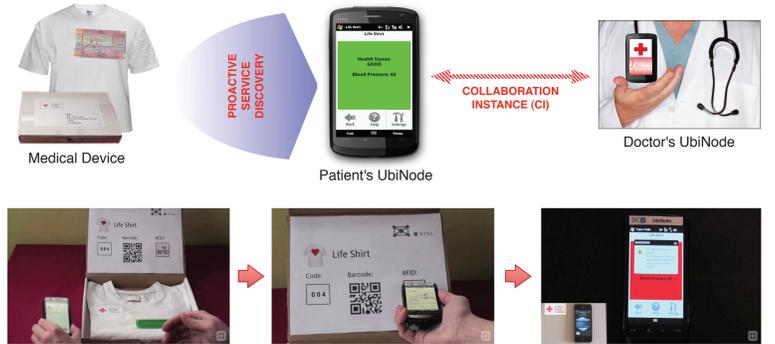


UbiCollab supports modules dynamic deployments via Proactive Service Discovery, which means that additional modules providing new platform features and interaction with third-party devices, that can be easily installed by the users and on-the-move.

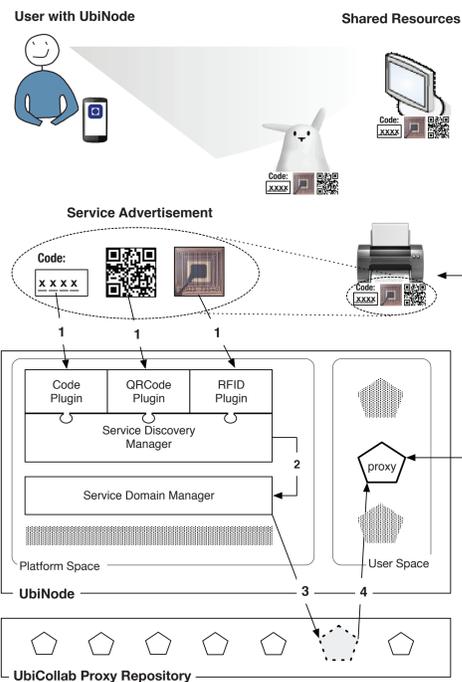
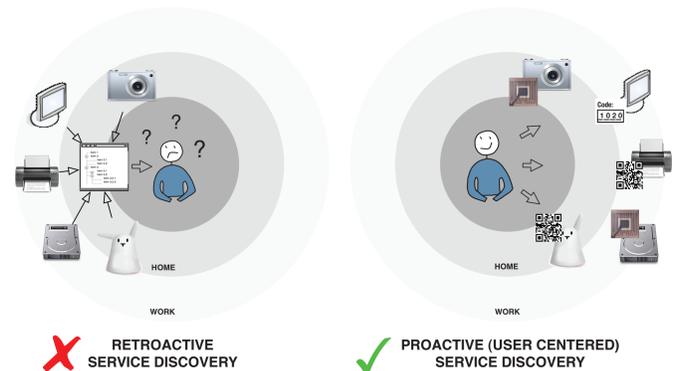
Scenario



Example of Scenario: Collaborative sharing of health records between patients and doctors.



Proactive Service Discovery



We move from retroactive discovery (which involves browsing a generic, not context-aware, list of discovered services) towards an user-centered approach based on physical tags. In UbiCollab third-party resources get labelled with physical tags, like RFID and QRcodes, becoming part of the human-grid as consequence of an user-initiated activity called Discovery Action (DA). Examples of DAs are: pointing the UbiNode to a RFID tag, taking a photo of a QRcode, saying a resource name. Users are thus led by the system in exploring the physical context in order to find the resource matching their needs. DAs are implemented in mutually discoverable plugins for the Service Discovery Module. As consequence of a DA a proxy module which implements the resource native communication protocol get installed in the UbiNode, allowing the user to interact with the just-discovered service.

Prototyping

