



Panel on Research Agenda in Service Front Ends

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Introducing myself...

Experiences

- Currently working in Concept Reply as Software Architect and Project Manager
- Ten years experience in Motorola where I participated in the international working group on Intelligent User Interfaces and contributed to the definition and development of a Context Aware Reference Architecture
- Phd and research activities in speech recognition at Politecnico di Torino and Bell Labs



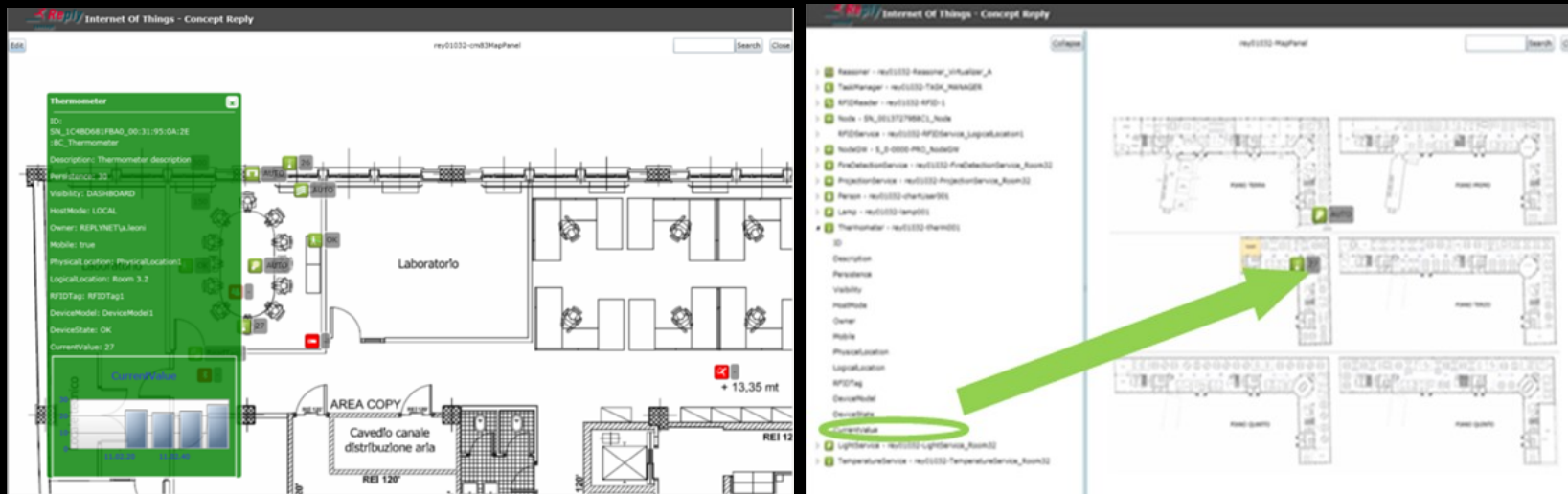
Skills

- Design and development of system architectures and software specifications.
- Definition of product technical and functional features.
- Strong competences and interest on user interface.
- Team coordination and technical leadership.



HI Reply

- Research Development Project run by Concept Reply in collaboration with Universities and Research Institutes
- IoT platform to enable an ecosystem of connected people, objects and network services.
- Silverlight Dashboard to:
 - monitor in real time service status and properties , show historical data graph
 - visualize services on a logic or geographic map and deep zoom to the desired detail level
 - drag and drop new services from a tree-view menu to a physical location
 - feature personalization based on different user profiles



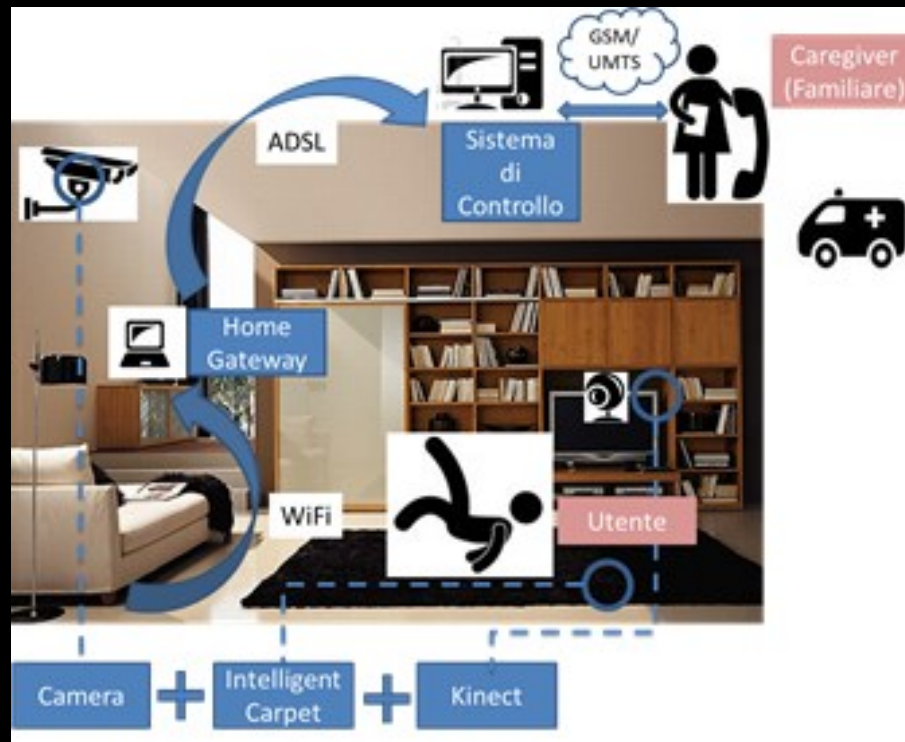
HI Life

- Verticalization of the Hi Reply platform for the Health and Wellness market.
- HI Life gathers the physical data provided by a network of heterogeneous environmental and biomedical sensors and present them through a reflective surface with which the user interacts via a touchscreen interface.



FaPre

- Research project funded by Regione Piemonte, coordinated by Concept Reply in collaboration with R&D and industrial partners.
- Home-based infrastructure for the elderly that allow the monitoring and prevention of falls using Internet of Things-based technology.
- Attention to Accessibility and Acceptance for target users.
- Sensors used are:
 - Intelligent carpet
 - Camera
 - Kinect
- A web application on the caregiver mobile phone alerts him/her about potential risk situations and allow to monitor the situation in real time.



Relevant research topics:

Model Based interfaces for Web of Things

- Thousands of interconnected objects that can act as input and output devices impose unforeseen challenges for the user interface mapping into the real world.
- The front-ends should support dynamic configuration of the user interface based on the user's physical environment and current needs.
- The model should be able to:
 - Describe the interactive components of smart devices rather than providing an explicit, concrete encoding of an appropriate type of user interface or its appearance.
 - Describe distributed processing across multiple devices and manage synchronization.
 - Allow automatic integration of different smart devices components in a user interface based on task being performed.



Relevant research topics:

Cloud-based data mashup and visualization services

- Visualization service, which is both data and computing intensive, should run on cloud and be accessible from a wide range of terminals, including mobile and not require the installation of local tools.
- Shift from a user-centered design process to participatory experiences.
- Front-ends should wrap traditional services and resources tailoring them to the needs of end users and allowing easy configuration.
- End users, even without programming skills, should be able to easily integrate front-ends and create composite applications.

Accessible User Interfaces

- Inclusive design of user interface with special attention to the needs of elderly and disabled people.
- The user interfaces should be able to dynamically adapt to the user current abilities and situation and the configuration should be easy and intuitive.

