

Colaborative Development of Solutions for AAL (ColoSAAL)

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The purpose of the project is to facilitate the creation of ambient assisted living (AAL) systems for people with disabilities, which should be less intrusive, more flexible and adaptive to end users' needs, more quickly and less costly. This will be done by developing a collaborative environment for the multidisciplinary design and validation of simulations of AAL systems.

The working hypothesis is that collaboration of experts to define AAL solutions for people with disabilities is often difficult because the lack of a common language that would allow each one to state what is the problem and the solutions from their point of view. The interlingua that is proposed here is based on the use of simulations of the problem and solutions. The communication using these simulations as the main result, and the provision of participants' observations in terms of modifications and annotations on these simulations, would facilitate arriving to a consensus on the problem's definition and solutions.

The project will provide the following results: (1) A web-based collaborative P2P platform, with personalization features, that will facilitate the discussion and agreement of experts with different profiles. (2) Case studies that will illustrate the use of the platform for modelling disabilities that are related with neurodegenerative processes. (3) Modelling languages that are adapted to experts of different specialties, in order to formalize existing knowledge in AAL that is normally partially recorded. (4) A catalogue of typical behaviours of persons and simulation elements that can be reused. (5) Guidelines, collaboration recommendations, and examples for using the platform and visual methods for the creation and validation of new scenarios.

The research team is multi-disciplinary, with experts in computer science, sociology and nursing. There is also active participation of associations that are related with disabilities, such as Afadis and the Spanish Federation for Neuromuscular Diseases.

The project starts from promising results of previous projects, namely: SociAAL, where the concept of Virtual Living Lab has been developed, and P2Pvalue, an European project where UCM is responsible for the development of a P2P collaborative platform.

Software tools from this project will be distributed with open source license (GPL), which facilitates their validation as well as their extension. Results of the project will be published in international conferences and journals, and will be presented in standardization bodies and interest groups on AAL.

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