Special Issue on Ambient Assisted Living

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Some of the authors of this publication are also working on these related projects:

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http://cognitive-village.de/ View project

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Special Issue on Ambient Assisted Living

Ambient Assisted Living comprehends ICT design activities by research and industry that aim to improve the lives of elderly. These activities range from efforts to increase the autonomy, self-confidence and mobility of elderly, to support maintaining their health and functional capability up to studies how to support families, caregivers and care organizations i.e. to support maintaining the multifunctional network around the individual (cf. Ambient Assisted Living Association).

The terming of Ambient Assisted Living is still young. After about four years of preparation, in September 2007 the AAL Joint Association was founded by 14 member organizations in Brussels. One year later, in summer 2008, the Ambient Assisted Living Joint Programme (AAL JP) was started as a funding activity by 23 participating European partner countries. The whole initiative aims to create better conditions of life for the elderly and to strengthen the industrial opportunities in Europe through the use of information and communication technology (ICT).

Since then, a focused call has been published every year, starting with the first call "ICT based solutions for Prevention and Management of Chronic Conditions of Elderly People" in 2008, followed by „ICT based solutions for Advancement of Social Interaction of Elderly People" (2009), „ICT-based Solutions for Advancement of Older Persons' Independence and Participation in the Self-Serve Society" (2010) and „ICT based solutions for Advancement of Older Persons' Mobility" (2011). Since 2008 more than 100 acrossnational projects have been supported by AAL JP – involving small and medium enterprises (SME), research bodies and end user organizations from at least three European countries.

Notwithstanding their specific foci, the aims of these projects can be roughly grouped and described as (cf. AAL JP website):

- Fostering the emergence of innovative ICT-based products, services and systems for ageing well at home, in the community, and at work.
- Creating a critical mass of research, development and innovation at EU level in technologies and services for ageing well in the information society.
- Improving conditions for industrial exploitation by providing a coherent European framework for developing common approaches and facilitating the localization and adaptation of common solutions which are compatible with varying social preferences and regulatory aspects at national or regional level across Europe.

Despite the challenging visions in the AAL field, we would point at one somewhat underrepresented aspect in recent AAL research. This is the integration of socio-technical perspectives, which have evolved in the research fields of CSCW (Computer Supported Cooperative Work) or HCI (Human Computer Interaction). A recent critique of some of the AAL visions is provided by CSCW researchers Fitzpatrick & Ellingsen (2012):

"Other CSCW lessons on how far systems can be automated and where the 'intelligence' balance lies also suggest some caution around emerging home automation and ambient assisted living (AAL) systems; here the current rhetoric suggests that these AAL systems will be able to routinely and correctly infer activities of daily living for older people whereas CSCW research suggests that there might be much more subtle and complex issues entailed in how these should be interpreted and by whom."

The special issue at hand wishes to bridge in that sense AAL visions and CSCW and HCI research focusing stronger on the subtle and complex issues in elderly peoples' everyday lifes – which in turn – affect technology acceptance and with this successful adoption processes. It contains results of several acrossnational projects and thus contributes to the state of the art of Ambient Assisted Living.

The six papers accepted for this special issue give both overviews over existing approaches of AAL projects and their results as well as deep insights into specific research questions and theoretical aspects.

In their paper "Tell Me Another Story, Granpa! Requirements for Sharing Lived Lives Online" **Federico Cabitza and Carla Simone** investigate the requirements for a technology helping elderly to share their memories with acquaintances in terms of narratives.

Michael Prilla and Thomas Herrmann provide in their article "Designing AAL as socio-technical systems: Selfregulated support for everyday life" an empirical study upon the development, implementation and evaluation of an innovative digital pen technology to support aging at home.

Martin Burkhard and Michael Koch present the "Social Interaction Screen" – an approach to make social networking services accessible for elderly people and thus strengthening social ties between elderly people and their families and friends.

Hilda Tellioğlu, Lisa Ehrenstrasser and Wolfgang Spreicer discuss the „Multimodality in Design of Tangible Systems" for elderly. They define six categories of multimodality and integrate these in their design processes and design artifacts to how user interaction has been established, especially when multimodality is central.

In their paper "Living Labs as a Research Methodology for Ambient Assisted Living Technology, **Asarnusch Rashid, Christian Reichelt, Natalie Röll and Tom Zentek** present their experiences and results from a multi-year process of designing, implementing and evolving a Living Lab as a research and innovation instrument.

The paper of **Steffen Budweg, Myriam Lewkowicz, Claudia Müller and Sandra Schering** is called "Fostering Social Interaction in AAL: Methodological reflections on the coupling of real household Living Lab and Smart-Home ap-

proaches". The authors discuss their experiences from applying a mixed-method approach to develop and evaluate a Social TV system.

AAL is a diverse field with researchers and approaches from various disciplines and perspectives including design, engineering, ergonomics, information technology, health, humanities, communication studies and social sciences. The synopsis of these six papers shows the diversity and interdisciplinary of the AAL domain. In addition, most of them take a user-centered perspective from a CSCW and HCI tradition. This is not by accident. In our perception, CSCW and HCI have made many important theoretical and practical contributions that should not be ignored by AAL researchers. Rather experiences from these fields should carefully be evaluated when creating new AAL projects to guarantee the transfer of existing knowledge in the future.

Acknowledgements

References

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