

Designing for Inter/Generational Communities

Proceedings of the 3rd International Workshop "Fostering Social Interactions in the Ageing Society", COOP Conference 2012

Steffen Budweg
University Duisburg-Essen, Germany
steffen.budweg@uni-due.de

Claudia Müller
University of Siegen, Germany
claudia.mueller@uni-siegen.de

Myriam Lewkowicz
Troyes University of Technology, France
myriam.lewkowicz@utt.fr

Abstract. Demographic change has stimulated ICT development and research in different fields, such as CSCW, HCI, or the AAL (Ambient Assisted Living) domain. Enabling 'aging at home' has become a main target in many nations due to economic challenges and demographic changes. 'Aging at home' is situated in a tension between keeping ones' autonomy and social inclusion. This strong socio-cultural embedding of relationships in higher ages contoured by individual and societal norms and values require socio-technical and user-oriented research approaches common in e.g. the CSCW community. However, due to the extremely heterogeneous target group in terms of technology affinity and acceptance as well as individual needs and conducts of life, it is time to reconsider common research methodologies, technological solutions and research paradigms. The workshop aimed at exploring technology design research, focusing on the particular

needs according to technology use and access in the field of home-based social media. The workshop therefore aimed at bringing together researchers and professionals in the field of ICT for the aging society to outline a roadmap for future ICT research on fostering social interactions for an aging society.

1 Theme of the Workshop

Ageing in place is increasingly emphasized as a preferable alternative to institutional care. Although it offers the potential of both practical and psychosocial benefits, the reality of remaining in the community in later life can be problematic. The tension between autonomy and social inclusion is an important issue for each human being, however balancing this boundary gets harder in higher ages due to physical, mental and social changes in the process of aging. Holding relationships or creating new social interactions for elderly people is strongly contoured by individual and societal norms and values. A primary concern for this population is the loss of companionship, which can contribute to isolation, depression, and decreased socialization. The best weapon against senior isolation is family contact and generational social interaction, but this is made difficult by living arrangements. Thus, new opportunities exist for domestic technologies to support socially oriented activities for older people, their families and peers. This clearly points to an opportunity for socio-technological and user-centered solutions to support independent living for seniors. However, due to the extremely heterogeneous target group in terms of technology affinity and acceptance and individual needs and conducts of life, there is a need to reflect our recent methodological tool boxes, aimed technical solutions, and research paradigms.

In terms of lacking appropriate research paradigms, we face the shift of ICT from the office to home environments. The extension of the origin CSCW research domain of office work towards other domains, such as the home, benefits from a stock of concepts and foci in CSCW research, such as the design for context and social awareness (e.g. Crabtree 2003). There is also a range of CSCW research in the application domain of the home with different foci, such as home care (e.g. Palen and Aaløkke 2006, Mamykina et al. 2004) and family life activities and coordination in the home (Crabtree and Rodden 2004). However, the occupation with the new research domains beyond the workplace reveals the need for acknowledging the unique demands of domestic technology appropriation and use. Rather than designing for efficiency and utilitarian pursuits, home technologies aiming at fostering sociability, inclusion and social awareness need to take into account different underlying design aspects, like designing for recreational or ludic experiences (Gaver 2006). Besides, the perspective on the social every-day life of the elderly, their social interactions, and related ICT

support is – in contrast to its relevance – a relatively new research issue. This stresses the importance of ethnography-based and participatory design methods for informing domestic ICT design, which will be able to address the specificities and needs of every-day life and especially social wellbeing of the elderly, based on interaction, coordination and collaboration between actors of the elderlyes' networks, such as neighbors, friends, peers, remote family members, care providers, etc.

Supporting every-day activities within home-environments also reveals some of the challenges and opportunities for approaches to social-technical design and evaluation that focus on the longer-term aspects of innovation, appropriation and use in real-life settings, such as Living Labs (Niitamo et al. 2006; Budweg et al. 2011). Living Lab approaches have also proven to be successful to include people with low technology affinity into the design process. New technologies can be tried out in real conditions, and by this possible ways of integration of ICT in the every-day structure and the individual socio-cultural environments get transparent and discussable between user groups, researchers, and industry. To open up ethical issues around home IT for the elderly is another important benefit of the Living Lab methodology (www.openlivinglabs.eu; www.ami-communities.eu; Hlauschek et al. 2009).

In terms of artefacts and technologies, the workshop aimed at gathering research on systems fostering social interactions for aging at home from a wide variety, such as Social/ Interactive TV (Rice and Alm 2007), also concerned with the design of innovative input devices for elderly persons. Here, the bandwidth is from easy-to-use remote controls over intelligent furniture to other interactive devices in the home, such as interactive picture frames. Another branch of ICT are social media for social support (Caplan & Turner 2007; Barnes & Duck, 2007), such as online communities with special focus on social support for the elderly (Tixier et al. 2010) and social technologies supporting awareness as well as other technologies such as smart environments, playful interaction technologies as well as games supporting social interaction.

2 Dimensions of Designing for Inter/Generational Communities

Researchers from France, Germany, Italy, and Slovenia took part in the third international workshop on *Fostering Social Interactions in the Ageing Society* with special focus on *Designing for Inter/Generational Communities* which was held in conjunction with the *10th International Conference on the Design of Cooperative Systems (COOP 2012)* on May 29th 2012 in Marseille, France. Several dimensions of designing for inter/generational communities were discussed, such as:

- What are successful approaches for the analysis and design of systems fostering social interactions in an ageing society, such as Social TV systems, SmartHomes and SmartFurnitures?
- What do we learn from ethnographic studies on people at home in an ageing society?
- Can approaches to playful experiences and games for elderly or in inter-generational environments be helpful?
- What is important when doing research on the design and the evaluation of awareness support and on the appropriation within communities and home environments?
- What are good examples of Living Lab and real-life, longitudinal oriented approaches to designing and evaluating social systems?

3 Perspectives on Designing for Inter/Generational Communities

Seven presentations discussing various aspects in respect to inter/generational communities and approaches to ICT design were held by workshop participants. The results of each research project are being collected here either in form of a research paper or a position paper.

Federico Cabitza and Carla Simone highlight in their paper *Online Lifebooks: Narrations of lived lives to foster inter-generation exchange* the problem of socially imposed stereotypes of elderly people which often guide our thinking in design. With their application “Lifebook” the authors aim at the promotion of the creation, sharing and co-construction of life-centered narratives which stress elderly peoples’ competences and potentials for content production in intergenerational interactions.

Dominic Depner reflects in his position paper *(Non-)Normative Freedom and Technologically Mediated Well-Being* dedicated goals of AAL research and development of fostering freedom and autonomy for elderly people. He pinpoints to the need for a critical stance in setting-up respective normative design goals.

Christian Parra co-authored the paper *What’s Up: Fostering Intergenerational Social Interactions* of *Marco Dianti, Christian Parra, Fabio Casati and Antonella de Angelli*. The paper presents an evaluation study of an innovative approach to a social interaction platform which aims at being usable and accessible to the oldest group of users by providing a simple user interface.

Johanna Meurer and Rainer Wieching reflect in their paper *Motivating elderly people to use fall preventive exercise training games at home: Are community based ICT features always a good choice?* experiences from a participatory design study. They highlight practice perspectives of seniors and reflect on how to

integrate them into a design approach for a training system for fall prevention and detection.

Cornelius Neufeldt and *Claudia Müller* accomplished a participatory design study in a residential home. Their study *Social Interaction through Participatory Design in a Residential Care Home* points at challenges in requirements analysis and support of adoption processes of a large screen display for different stakeholders, such as the residents, the staff and relatives.

Patrícia Silveira, Florian Daniel, Fabio Casati, Eva van het Reve and *Eling D. de Bruin* present a study on social and motivational aspects of elderly peoples' physical training for fall prevention. In the paper *ActiveLifestyle: an application to help elderly stay physically and socially active* they reflect the challenges of motivating elderly to exercise autonomously at home and provide a virtual community solution which helps people to adhere to their training plan by means of social motivational instruments.

Emilija Stojmenova, Tomaž Žohar and *Dejan Dinevski* discuss in their paper *User-Centred Design for Elderly Patients with Low Digital Literacy* a user-centered design approach to e-Health services for elderly people. They propose a modification of conventional UCD methods to the needs of people with only low or none experiences with ICT which helps researchers in carrying out user studies.

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