S. BEN ALLOUCH, F. DEBOEVERIE, C. JASCHINSKI, H. AGHAJAN, W. PHILIPS. **Lessons learned from SONOPA (SOcial Networks for Older adults to Promote an Active life).** *Gerontechnology 2016;15(suppl):71s*; doi:10.4017/gt.2016.15.s.854.00 **Purpose** The study aimed to develop and test an Ambient Assisted Living (AAL) solution that combines state-of-the-art sensor technology with a social network environment and activity recognition and matchmaking techniques to empower elders to stay active, autonomous and socially connected and consequently support and unburden family caregivers. From a very early development phase both social scientists and engineers worked together to ensure a holistic approach to the development of the technology. **Method** To get a better insight into the needs, wishes and requirements of potential user groups, a qualitative approach was used to collect insights from older adults and their formal and informal caregivers from three European countries in each stage of the development process. Furthermore, the final SONOPA prototype[1] was installed and tested during a longitudinal field study in the homes of 8 users. These were four males and four females with ages ranging from 60 to 82 years (M=71.5±7.64 yrs) from the three target countries: United Kingdom, France and Belgium. For the development of the technology, very low-resolution (900-pixel) visual sensors and Passive InfraRed (PIR) sensors were used and installed in a couple of homes of elderly to enable the monitoring and the analysis of the in-home activities of the elderly. In our application, automated analysis of both in-home activities and social network activities were fused to enable personalized activities to the elderly in order to stimulate social and physical activity. Additionally, algorithms for behavioral change analysis on the sensor data followed the health status of the elderly, such as the detection of disturbed sleep patterns. **Results & Discussion** From the qualitative studies interesting findings arose such as elderly mentioning safety and mobility benefits and the increased peace of mind while privacy issues, the lack of human touch and an unfelt need for support, formed potential barriers towards adoption of AAL technologies. The insights from the primary (elderly) and secondary users (formal and informal caregivers) led to several design requirements which guided the development of SONOPA and can guide the future development of related AAL technologies: (i) Provide support for the caregiver without replacing human care; (ii) Provide maximal usability without limiting the content and the user's control; (iii) Empower not patronize the older adult; (iv) Provide assistance without taking away autonomy; (v) Provide peace of mind without overburdening the caregivers; (vi) Stimulate technology-mediated social connectedness without taking away the opportunity for face-to-face encounters; (vii) Provide a careful balance between safety benefits and privacy; and (viii) Think about what is technical necessary rather than what is technical possible to provide a product that is affordable. The in-pilot has led to interesting findings regarding the SONOPA technology. The system provides very accurate presence and activity monitoring results, presented to the users in a personal activity dashboard, accompanied by personal live newsfeed and an agenda application. The messages on the dashboard include personal recommendations which have the appropriate topic and which are sent at the right moment. Beside the dashboard interface, the social network interface is user-friendly and offers the possibility to chat with relatives and to follow topics of interest in a safe and feel-good environment. There remain some challenges which could not be tested appropriately in the pilot, such as the social matchmaking algorithm due to an underpopulated social network during testing. Also the recommendation engine could be improved in the future by connecting it to websites which provide information (e.g. events) of the local neighborhood.

Reference
1. www.smartsigns.nl/en/sonopa; retrieved October 7, 2016
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