

L. DE VALK, S. KRUITWAGEN, M.M. BEKKER, N.A. ROMERO, J. STURM. *Activator: Playful persuasion to support older adults' social and physical activities*. *Gerontechnology* 2010;9(2):257; doi:10.4017/igt.2010.09.02.240.00

Purpose We describe the first design outcomes of the project Independent Living¹. During initial requirements analysis it became clear that a strong need existed for a design that motivates and supports older adults in their everyday life with regard to both social and physical activities. We assume that providing the motivation to be socially and physically active will contribute to their sense of well-being, based on the definition of quality of life as proposed by Hirsch et al². Designs exist to either persuade people to social interaction (e.g. digital family portrait³) or to physical activity (e.g. virtual fitness coaches⁴). Our design intends to persuade older adults to both social and physical activities, using these activities as mutual motivators. This falls within the goals of prevention and engagement and the life domains of health, self-esteem and work/leisure in the area of gerontechnology⁵. **Method** Within this project we have focused on older adults living in a specific care home in The Netherlands, either on one of the floors in the main building or in an apartment nearby the care home. Within this context we have conducted several interviews and focus groups in two different care homes. Several concepts were developed and presented to the older adults and caregivers (total of 7 subjects). Initial concepts were experienced to be too abstract; older adults had difficulties in understanding the link between the concept and the intended purpose of communicating activities and providing self-awareness. Therefore, to make its purpose more explicit, the final design includes a familiar element, namely a leaflet that is currently used in care homes to communicate activities to its residents. This final concept is called Activator and consists of a sensor-actuator network (for the whole care home) and a personal device (per user: Figure 1). The sensor-actuator network includes mobile (personal) and fixed sensors that measure activities and behaviour occurring in the care home. Data from these sensors is communicated back to the older adults via the personal device. Each user obtains information about her personal performance (both social and physical). The personal device is also used to indicate upcoming activities. The device can suggest activities based on the user's past performance. When an activity is due, the lamp is turned on to attract attention and the user can accept or reject the invitation. Activator combines two aspects that influence social and physical activity of older adults: self-awareness (personal monitoring) and social/group awareness (events/activities). Activator is a familiar and easy-to-use design with playful elements, triggering the curiosity of the older adults to become more active. The next step in the design research process is to verify the usability of the working prototype and whether the design influences the social and physical activities of the older adults.

References

1. www.idemployee.id.tue.nl/m.m.bekker/research.htm#_Playful_Persuasion_for_1; retrieved January 2010
2. Hirsch T, Forlizzi J, Hyder E, Goetz J, Stroback J, Kurtz C. The ELDer Project: Social, Emotional, and Environmental Factors in the Design of ElderCare Technologies. In Proceedings of the Conference on Universal Usability, 2000; pp 72-79; doi:10.1145/355460.355476
3. Mynatt ED, Rowan J, Craighill S, Jacobs A. Digital family portraits: supporting peace of mind for extended family members. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, 2001; pp 333-340; doi:10.1145/365024.365126
4. Jsselsteijn WA, Kort YAW de, Westerink J, Jager M de, Bonants R. Virtual fitness: stimulating exercise behavior through media technology. *Presence: Teleoperators and Virtual Environments* 2006;15(6):688-698
5. Bouma H, Fozard JL, Bronswijk JEMH van. Gerontechnology as a field of endeavour, *Gerontechnology* 2009;8(2):68-75

Keywords: independent living, persuasion, social and physical activity
Address: Eindhoven University of Technology, Faculty of Industrial Design, Netherlands; E: m.m.bekker@tue.nl.

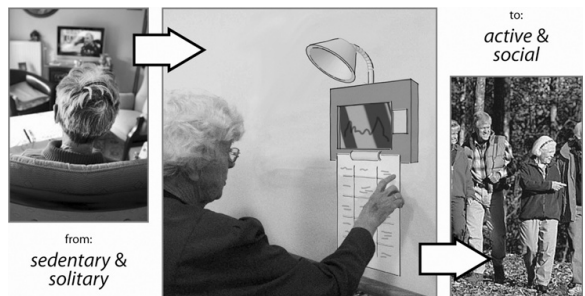


Figure 1. Scenario describing Activator (middle picture)