C.S.C. LIM, D.M. FROHLICH, A. AHMED. ***The challenge of designing for diversity in older users.*** *Gerontechnology 2012;11(2):297;* doi:10.4017/gt.2012.11.02.483.00 **Purpose** The older population is not a homogenous group and show significant diversity in constitution, capabilities, and experience[1,2]. In order for new and emerging digital technologies to be inclusive, it is crucial to encompass this diversity and employ a design process that is sensitive to it. Current approaches to inclusive design tend to seek one design for all, focusing on users who are least engaged with digital technology[3]. In this paper we outline an alternative approach to inclusive design based on co-design with both digitally engaged and unengaged user groups. In our study, as part of a multi-disciplinary group in the New Dynamics of Ageing (UK) funded collaborative research project, older people from different walks of life were invited to four different themed workshops called 'sandpits' to explore current and emerging technologies in a playful and creative context to help them envisage the potential implications these technologies can have in their lives as well as to identify key issues and user requirements for further development. This paper will discuss the outcome from three of those sandpits. The themes explored in these three sandpits were (i) custom computers for older people; (ii) supporting Identity and memory in later life; and (iii) social connections with new technology. **Method** A total of 66 older people participated in the three sandpits conducted between 2009 and 2010. Separated into PC and non-PC users groups, they were involved in discussions and shown open ambiguous envisionments that responded to the themes through hands-on demonstration, role-play or dramatic enactment of their use. Broadly taking into account the role of technology generations effects[4], the envisionments were modeled and presented as appliances, incorporating forms of products and interactions that older people are familiar with to encourage inclusion. The older participants were then involved in the redesign of these envisionments through a collaborative design process. **Results & Discussion** The design responses from older PC and non-PC user groups revealed a difference in the type of embodiment they want for internet-enabled applications. Both groups redesigned the concepts based on their experience, interests, familiarity with the technology they have and its associated infrastructure or lack thereof. In general, non-PC user groups preferred the appliance nature of the envisionments, and incorporated the functions they were interested in performing, such as capturing spoken stories, sharing photographs, chatting over TV programmes, etc into these appliances. By contrast, PC owners questioned the need for separate appliances and often re-designed them as PC applications or internet services with emphasis placed on modality and compatibility with their existing infrastructure. The paper will discuss the difficulty and challenge of bridging the gap between the diversity of technology and its users.

References

1. Damodaran L, Olphert CW. Sustaining IT use by older people to promote autonomy and independence. Proceedings of International Society for Gerontechnology, 7th World Conference, Vancouver; 2010; pp 96-97
2. Keith S. Diversity in age: the challenges of reaching the 'hard to reach'. Proceedings of UNITECH 2010: International Conference on Universal Technology, Oslo; 2010; pp 34-45
3. Clarkson PJ, Coleman R, Keates S, Lebbon C, editors. Inclusive Design: design for the whole population. London: Springer-Verlag; 2003
4. Lim CSC. Designing inclusive ICT products for older users: taking into account the technology generation effect. Journal of Engineering Design 2010;21(2):189-206; doi:10.1080/09544820903317001

Keywords: inclusive design, diversity, familiarity, technology generations, collaborative design
Affiliation: University of Surrey, Guildford, UK; *E:* s.lim@surrey.ac.uk
Full paper: No