K. SHANKAR , L. HUBER. L.J. CAMP, K. CAINE, K. CONNELLY. ***Finding the older user in home-based computing studies.*** *Gerontechnology 2012;11(2):305;* doi:10.4017/gt.2012.11.02.545.00 **Purpose** In this paper, we turn our attention to the mutual construction of aging and technology and the processes by which older adult users frame, adopt, adapt, and resist pervasive technology in the home[1-3]. We present results from a four-year study on in-home ubiquitous computing, for aging in place. **Method** We engaged in a series of five studies to develop an elder-sensitive privacy framework. In the first three studies, we used a series of two focus groups and a survey. Through repeated analyses of the data, four overarching constructs emerged as a privacy framework relevant to older adults and home-based ubiquitous technologies: usefulness of the device, data granularity, sensitivity of activity being recorded, and data recipient. This framework informed the development of a suite of prototypes to enable information control of home-based ubicomp by older adults and their family/informal caregivers. After an initial series of focus group evaluations with older adults in which they examined and critiqued these prototypes, we altered, rejected, or stabilized them. Still emphasizing end-user control of privacy, we created a touch screen control panel that would give the end user the ability to examine, control, and block the transmission of presence, motion, and related data generated by the prototypes. Using either a suite of prototypes with control panel, a suite of prototypes without control panel, or a "control group" that received a smart phone and a paper calendar, we implemented a six-week in-situ study of use in the homes of six elders *(Figure 1)*. We collected brief daily interviews, in-depth weekly interviews, and quantitative information on use and non-use of the prototypes and the control panel we had designed through which the research participants could interact with and manage the prototypes. **Results & Discussion** First, we critically examine our own design assumptions and our construction of a framework of risk and privacy in home-based computing. This framework reflected, and was shaped by, our views of aging in the home and the nature of privacy[1-3]. Our framings were challenged by the ways in which the older adults worked around our technologies and how they perceived privacy, but the framework continues to inform prototype design. Providing end-user control of privacy resulted in improved acceptance of prototypes by study participants. Lastly, we explore the users' framings of privacy (and how they shifted over the course the project). Perceived utility by elders and their caregivers was found to be the most important construct in the framework. We conclude by discussing the contributions of these findings to designing for values.

References

1. Forsythe DE. New bottles, old wine: hidden cultural assumptions in a computerized explanation system for migraine sufferers. Medical Anthropology Quarterly 1996;10(4):551-574; doi:10.1525/maq.1996.10.4.02a00100
2. Oudshoorn N, Rommes E, Stienstra M. Configuring the user as everybody: gender and design cultures in information and communication technologies. Science, Technology, and Human Values 2004;29(1):30-63; doi:10.1177/0162243903259190
3. Oudshoorn N, Pinch T. How Users Matter: The Co-Construction of Users and Technologies. Cambridge: The MIT Press; 2003

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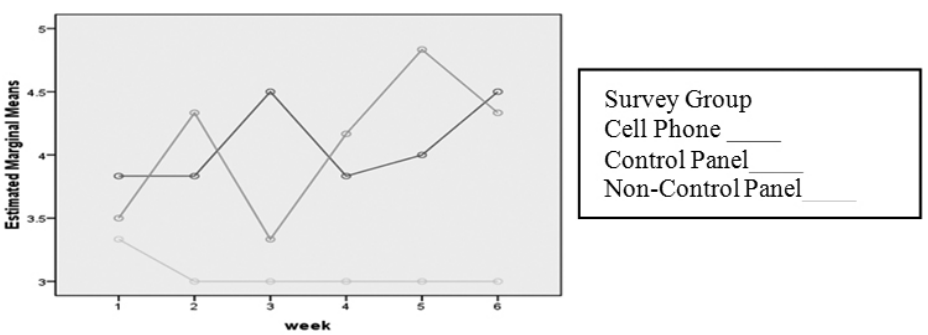

Figure 1. Results of the six week use of the control panel