

Designing for Families

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Abstract:

In recent years there has been renewed interest in designing technology for families that spans the range from supporting coordination to entertainment. Families present designers with collaborative configurations distinctly different from those in the work place. In this workshop we seek to bring together people in the CSCW community focusing on technologies for families to share their research and build a sense of community among designers and researchers interested in this area. During the workshop, we will learn from each other by discussing different approaches researchers have taken in working with families and discuss methodological and design challenges for studying and designing technologies for families.

Proposal:

Motivation and Themes: The field of CSCW has gradually evolved and broadened its focus to include a variety of new contexts and groups beyond those in the workplace. One active area of research is the design of technology to support families. Researchers have sought to: understand family routines and develop a theoretical design foundation (e.g., Crabtree et al., 2003, Taylor and Swan, 2005), design novel technologies to support family activities (e.g., Neustaedter and Brush, 2006), and evaluate these technologies for their ability to empower families in their everyday routines (e.g., Rowan and Mynatt, 2003). This research is certainly widespread and encompasses many application spaces (e.g., calendaring, messaging, note taking) and specific contexts (e.g., mobile situations, use within the home). The challenge with having such a broad space of research is that there tends to be little common ground in which researchers and designers can understand how various studies and applications compare methodologically and in context. There even exists a challenge in understanding just what people mean by the term *family*.

We seek to bring together people focusing on technology for families to discuss methodological and design challenges for studying and designing in this area. The workshop will focus on identifying and comparing:

- definitions of “family” and characteristics of family groups that may differentiate them from other groups
- methodological techniques for gathering design requirements
- methods for collecting and analyzing study data
- techniques for creating novel designs
- evaluation methodologies for testing cultural appropriation of technologies

We encourage participants who have previously studied family routines as a precursor to technology design, those who have designed technologies for families, or those who have evaluated such technologies to apply for this workshop. We seek a range of perspectives from various family application areas and contexts, for example:

- Communication technology
- Health services
- Coordination applications
- Connectedness and presence applications
- Memory support tools
- Monitoring and security
- Games or other entertainment applications
- And many others

Workshop Activities and Goals: The goal of this one-day workshop will be to synthesize the various methodological tools people have used in their research and identify challenges with these methods and potential solutions. During the morning, a select set of workshop participants will make short presentations (5-7 minute) to the group describing the application space of their work, the methodological choices they made, the challenges they see going forward in the design space, and proposed solutions to these challenges. The goal of each presentation should be to foster questions and discussion among other participants. In the afternoon workshop participants will synthesize topic areas that emerge through morning presentations and discussion to generate 3-4 research challenges with concrete research agendas. We will structure the afternoon around breakout groups of 4-5 participants each that focus on a specific topic and report back to the group. We plan for the workshop to be highly interactive.

Selecting Workshop Participants: Workshop participants will be selected based on refereed submissions. We will solicit 2-4 page position papers (CSCW format) and expect to accept 15-20 participants. Authors are asked to direct their paper at identifying the context of their own research, the methodological tools they have used, and the challenges and successes with these tools. We also ask that authors include short biographies for each of the position paper's authors. We expect that only one author for each paper will participate in the workshop.

Submissions will be evaluated based on their relevance to the topic area of the workshop, originality, and its ability to bring a unique perspective to the discussions in the workshop. We also seek to include participants from a variety of backgrounds (e.g., designers, ethnographers, computer scientists, etc). The workshop organizers and external experts in the field will review all submissions prior to the conference.

Workshop Proceedings: Accepted position papers will be made available on a workshop web page where all participants will have access to them.

The Organizers:

Carman Neustaedter – Kodak Research Labs

Carman Neustaedter is a research scientist at Kodak Research Labs in the Multimedia Systems group. His main research interests are in human-computer interaction with special interests in computer-supported cooperative work, ubiquitous computing, and domestic computing. In these areas, he seeks to understand the socio-technical factors of ubiquitous technology design to support the everyday social practices of individuals and groups. Recent projects include the design and evaluation of a digital family calendar as part of his PhD research, the design of a context-aware home video conferencing system, the design of a distributed home-messaging system, and numerous ethnographies surrounding the use of digital and print photos in the home and the organization of family communication information. He has published on designing for families in Ubicomp, CHI, Graphics Interface, and DIS. Carman holds a PhD in computer science from the University of Calgary, Canada. *Contact him at carman.neustaedter@kodak.com*



A.J. Brush – Microsoft Research

A.J. Brush works at Microsoft Research as a researcher in the VIBE group. Her main research interest is human-computer interaction with a focus on CSCW and ubiquitous computing. She enjoys investigating how technology can help people and groups with everyday problems. She has built and deployed LINC, an inkable digital family calendar, and is in the process of conducting research on sharing information between extended families with the SPARCS (Sharing Photos and Relevant Calendar Stuff) prototype. She has published on technology for the home in the Ubicomp, CHI and Graphics Interface conferences and helped to organize and run the 'Designs for Home Life' SIG at CHI 2005. A.J. has served on program committees for conferences including Pervasive, UbiComp, CSCW, CHI Notes, and is currently the VP for Membership and Communications for ACM SIGCHI. *Contact her at ajbrush@microsoft.com*



David W. McDonald – University of Washington

David's current research is focused on technology and media use in the home and collaborative issues in large-scale peer production systems. He previously co-organized the "IT@Home: Unraveling Complexities of Networked Devices in the Home" workshop at CHI 2006. He has published research on collaborative authoring, recommendation systems, organizational memory, and public use of large screen displays. His research interests span Computer-Supported Cooperative Work (CSCW) and Human-Computer Interaction (HCI). David earned his Ph.D. in Information and Computer Science at the University of California, Irvine. At UC Irvine he was part of the Computing, Organizations, Policy and Society (CORPS) group. David has worked at FX Palo Alto Laboratory in the Personal and Mobile technology group and at AT&T Labs. *Contact him at dwmc@u.washington.edu*



References:

Crabtree, A., Rodden, T., Hemmings, T., and Benford, S., (2003) **Finding a Place for UbiComp in the Home**, *Proceedings of the Fifth International Conference on Ubiquitous Computing (UbiComp 2003)*, Springer-Verlag, pp. 208-226

Neustaedter, C., and Brush, A.J., (2006) **“LINC-ing” the Family: The Participatory Design of an Inkable Family Calendar**, *Proceedings of the ACM Conference on Computer-Human Interaction (CHI 2006)*, ACM Press, pp. 141-150.

Rowan, J., and Mynatt, E., (2005) **Digital Family Portrait Field Trial: Support for Aging in Place**, *Proceedings of the Conference on Computer-Human Interaction (CHI 2005)*, ACM Press, pp. 521-530.

Taylor, A., and Swan, L., (2005) **Artful Systems in the Home**, *Proceedings of the Conference on Computer-Human Interaction (CHI 2005)*, ACM Press, pp. 641-650