

# Moving Beyond Talking Heads to Shared Experiences: The Future of Personal Video Communication

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## 1. INTRODUCTION

The use of video communication systems has rapidly proliferated over the last several years for personal and family communication given the availability of free video chat software such as Skype or Google Chat [1][5][8]. With this has come a design paradigm for video communication dominated by "talking heads." By this we mean that the common usage of video chat systems is often thought of as two people talking where each sees the other's face and not much more. Yet video chat systems of the future are likely to be much more than this where they begin to connect people in new and interesting ways to support the sharing of everyday experiences. Imagine, for example, video systems that allow family and close friends to participate in holiday meals, attend significant events (weddings, births, memorials), cook together, watch a movie together, etc. These experiences may involve more than two people and many different kinds of devices, including mobile devices that move along with activities on the go. The future is ripe for exploration.

Research has begun to explore such opportunities. Studies of existing video chat systems like Skype have shown that family members often share or view activities rather than just converse while they are connected [1][5][8]. For example, grandparents might watch their grandchildren play over Skype [1][5]. Long-distance partners have even been found to leave video chat systems going over extended periods of time to create a shared sense of intimacy [12].

New video communication systems have also been designed to directly support the sharing of everyday activities. For example, the Family Window [6] and Family Portals [7] are media spaces designed for the home where always-on video (displayed in a digital frame) connects two or more households. Family members can see each other and even participate in shared activities over distance such as meals, get-togethers, and children's activities [6][7]. A mobile family media space called Peek-A-Boo extends this experience to mobile devices [13]. Similar in nature, the Share Table is a media space that allows children in divorced families to interact and play games with their remote parents [16].

Nokia Research has designed a number of video-based prototypes that extend the ways in which grandparents and grandchildren can connect and share reading activities over distance. For example, Family Story Play is a physical book with an embedded video chat display for distance-reading [14]. Story Visit extends this experience to the web to again support connected reading [15]. People In Books places the video feeds of children and remote grandparents within a storybook to create an additional level of immersion [2].

Microsoft Research has also explored new paradigms for video-based communications focused on connecting children for rich, social play. Video PlayDate allowed children to participate in free

play over distance using a variety of display options (e.g., large displays, table displays, laptops) [17]. Building on this idea, PixIO allows children to share physical and digital objects on any surface over distance [3]. This allows them to engage in additional play activities, now involving toys and other items. VideoPlay moves beyond playing to allow children to asynchronously share video messages with their friends [4].

These systems are certainly only the beginning. Moreover, they represent only part of the continued efforts that researchers and designers are taking to explore new paradigms for personal video communications that go beyond talking heads. We plan to discuss these explorations and more as a part of this workshop.

## 2. OBJECTIVE

The objective of this workshop is to bring together researchers, designers, and practitioners who are studying or designing personal video communications technologies. We want to explore the future of such technologies as they move beyond the current design paradigm of "talking heads." We want to build community around this topical area, brainstorm what the next generation of video communication tools might look like and encompass, and understand the value in moving the field to video communication systems that allow people to share everyday experiences over distance. We also expect the workshop to lead to an article for Interactions magazine or Communications of the ACM, or, potentially, a special journal issue.

This workshop is also meant to build on past workshops organized by one or more of the members of the current organizational team. Past workshops included a "Designing for Families" workshop at CSCW 2008 [9], a Special Interest Group workshop at CHI 2009 [10], and a workshop at GROUP 2010 on "Connecting Families" [11].

## 3. INTENDED PARTICIPANTS

Intended workshop participants include academics, industrial researchers, designers, software developers and other practitioners who actively work in the area of video-mediated communication in the domestic realm. Suggested topics within this space include, but are not limited to:

- connecting grandparents and grandchildren
- supporting long distance relationships
- connecting traveling parents with their family
- virtually hanging out with friends
- infrastructure and technological issues with video communication
- mobile-based video communication
- various cultural uses of video communication systems

We see this workshop as an opportunity to develop the research community on personal video communications across academic

and industrial players. We also seek participation by representatives from the major industrial players in this space beyond the workshop organizers. This includes additional representatives from Cisco, Apple, Nokia, Microsoft, Google, etc.

#### 4. WORKSHOP DESCRIPTION

Workshop participants will be selected based on refereed submissions. We will solicit two to four page position papers (CHI archival format) and expect to accept 15-20 participants.

Authors will be asked to direct their paper at describing their area of research as it relates to video-mediated communication along with the future direction they see research in this space taking.

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, though we may be able to accommodate a small number of special requests for multiple authors to attend.

The workshop will be a full day with the following tentative workshop schedule:

**1. Introduction:** Workshop organizers will introduce themselves and present the workshop goals and schedules to attendees.

**2. Early Morning Session:** Attendees will participate in a "speed dating"-like activity where they will pair up with other workshop participants to describe their research. After approximately two to three minutes, participants will rotate to a new workshop participant and describe their research again. Once complete, participants will have briefly met with and discussed their research with the majority of attendees.

**2. Late Morning Session:** Attendees will break into pairs and participate in an ideation activity to explore the future of personal video communications. The exact details of this activity will be planned closer to the workshop; however, the following details provide a sample of such an activity:

First, pairs of participants will have approximately 15 minutes to decide on a series of short questions that they would like to ask people about the future of video communications. These will focus on exploring what "beyond talking heads" might mean for "everyday people." Second, they will leave the workshop venue and go through either the resort or local community where they will solicit feedback to their questions. After a designated time duration, participants will return to the workshop venue.

**3. Lunch:** Attendees will join the group for a common lunch such that they can informally socialize with other workshop participants about their research.

**4. Early Afternoon Session:** Attendees will break into subgroups and discuss the responses that they received from their ideation activity in the morning session. This will be used to generate discussion points for the final session.

**5. Late Afternoon Session:** Attendees will come together and the organizers will lead a discussion around the themes that were identified in the preceding discussions. They will also discuss possibilities for follow-on work and collaborations.

#### 5. RESOURCES

We will require a digital projector, power strips and associated electricity, and Internet connectivity. We would also strongly prefer a Sunday workshop, if this is possible.

#### 6. ORGANIZER BIOGRAPHIES

**Carman Neustaedter** is an Assistant Professor in the School of Interactive Arts + Technology at Simon Fraser University, Canada. His research is in design, human-computer interaction, and domestic computing. Here he focuses on the design and use of technologies for connecting people who are separated by distance or time. This includes design for promoting family connectedness, support for workplace collaboration, and bringing people together through pervasive games. A large portion of his research over the last several years has focused on video-based communication for families. To learn more about his research group, the Connections Lab, visit <http://clab.iat.sfu.ca>

**Erick Oduor** is a PhD student in the School of Interactive Arts + Technology at Simon Fraser University, Canada. He is investigating the idea of using technology in rural developing country settings such as Kenya that are faced with limited technological infrastructure. However, mobile phone usage in Kenyan communities is widespread and provides an avenue for families that are located in the village with an opportunity to connect with remotely located relatives who live in large cities away from the village. Erick is interested in the design and integration of video applications with mobile phones to support the design of a village media space.

**Gina Venolia** is a senior researcher with Microsoft Research in the neXus group. Her research focuses on understanding how knowledge flows among people and building systems to make it flow more freely. Her current projects focus on real-time and asynchronous video communication.

**Tejinder Judge** is a User Experience Researcher at Google. Her research focuses on understanding communication needs and practices in social contexts such as family gatherings. She also designs social technologies based on these communication needs and practices. She currently conducts research on Google+. She received her PhD at Virginia Tech where her dissertation focused on the design and evaluation of domestic media spaces for connecting families across distance.

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