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# Exploring Mobile Video Communication with Youth

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**Abstract**

While video communication tools have been around for decades, adoption into daily use has been slow. We believe that putting mobile devices that can capture and display video in the hands of youth that have grown up being comfortable with video can lead to some breakthroughs in its adoption. We describe some research prototypes and plans for a study that explore this area. VideoPal is a prototype for threaded video messaging we deployed among pre-teens. Experiences2Go is a prototype for using video to share experiences outside the home that we deployed with families including their kids. We are also planning a study on how teens use current mobile messaging and media sharing tools.

**Author Keywords**

Mobile video; youth

**ACM Classification Keywords**

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

**Introduction**

Ever since the PicturePhone was unveiled in 1970, people have been wondering why video communication technology has not come into widespread use. While recent consumer tools such as Skype, FaceTime, and

Google+ Hangouts have made it easy to video chat at home and even on mobile devices, video is still reserved for special occasions, or perhaps the weekly video chat with the grandparents.

We see a couple trends converging that could change the adoption of video. Firstly, mobile smartphones are now capable of capturing, playing, and sharing videos, all from a device that we mostly carry with us all the time. This makes the tools for generating and consuming video more accessible.

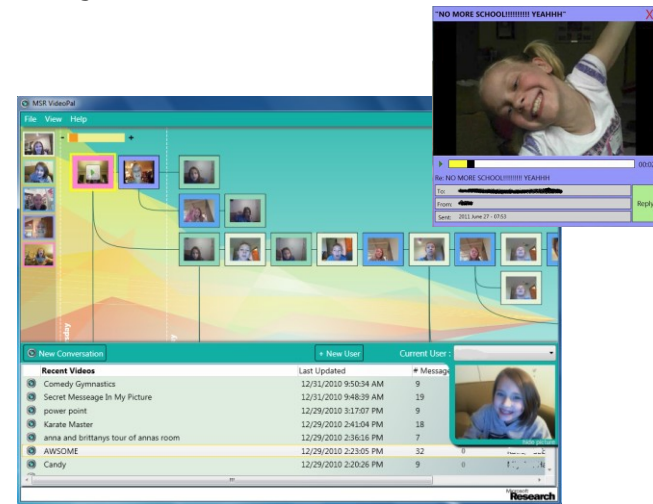
Secondly, mobile smartphones are getting into the hands of a younger generation that has grown up with a high comfort and literacy with video. The popularity of YouTube, Hulu, Skype and the like, even on mobile devices, means that today's youth are familiar with working with video. Tools like Facebook Messenger, Vine, Instagram, and mobile messaging tools like Glide, WeChat, and KakaoTalk have even made it lightweight to capture and share video using a mobile device.

We have been exploring this space by developing and deploying video communication prototypes with youth and planning studies for understanding current youth practices with these tools.

### **VideoPal: Video Message Conversations**

VideoPal is a prototype we designed to encourage lightweight exchanges of asynchronous video messages. The UX provided a quick way to record, view, and respond to video messages. It was designed to keep replies to video messages together into a threaded conversation. Figure 1 shows what the VideoPal UI looked like for displaying these conversation threads.

In one study [1], we deployed VideoPal in a school setting between students near Seattle, Washington and Corfu, Greece in a "video pen pal" arrangement. Participants were recruited through contacts with the researchers at their respective locations. In another study [2], we deployed VideoPal over a Christmas break among a circle of friends in the Seattle area who frequently saw each other. Participants were recruited through friends of one of the researcher's own child.



**Figure 1.** VideoThreads threads video messages together into conversations. An example video message is also shown.

We were struck with how quickly the kids felt comfortable exchanging video messages. Especially in the second study, among an established circle of friends with strong relationships, there was very quick uptake. The set of six girls sent 197 video messages to each other within the first 24 hours. We were also struck by how the thread of video messages felt more like a conversation. Responses to messages were

immediate and conversational, as if they were talking face-to-face, even though they were communicating remotely and asynchronously. Figure 1 shows an example video message shared in that study.

Besides conversations, the girls used video to show objects or activities to each other and play together. Video was great for showing or demonstrating actions, and expressing emotions and reactions.

They did have challenges learning how to frame the video correctly, especially for activities that were tricky to fit within camera view. And it was hard to show all the things they wanted, since VideoPal was running on laptops that were bulky to carry around and aim at activities of interest. The kids were enthusiastic about VideoPal, both in their survey responses, and in their continued use of it beyond the initial school break.

### **Experiences2Go: Sharing Outside the Home**

Experiences2Go (E2G) is a prototype designed to enable families to share experiences together outside the home. While consumer video chat tools have become commonplace at home for weekly calls with remote relatives, many family activities happen outside the home. Kids' sports events or birthday parties often occur in special venues or even outdoors. E2G was designed as a mobile device that could be brought to wherever the activity occurred and connect (over 3G) to enable a synchronous video call to share the experience together.

E2G consisted of a camcorder with a zoom lens (for viewing activities that could be far off, such as sporting events) with a tablet for showing the remote participant. Networking technology enabled connecting

over 3G and all the equipment was mounted on a tripod to allow it to be self-standing.



**Figure 2:** The Experiences2Go prototype combined a camcorder with a tablet used to show the remote person. E2G is shown at a family birthday party at a fish hatchery.

We deployed the E2G prototype into families by recruiting one family member, and giving them the choice of what activity to share and which remote person with whom to share the experience. The researchers brought E2G to the site of the activity and got it working, then receded into the background to observe how the activity unfolded. E2G was compared with using an iPad as a commercially available device that offered similar capabilities.

In E2G, we made an explicit design choice to provide a visual representation for the remote participant. We expected that this would allow the kids to interact with the remote person, which often occurred (as shown in Figure 2). It also helped us see the other stakeholders involved in the activity and how they interacted with the remote person. E2G also afforded interaction between the local operator and the remote person,

which often alternated between conversation about the activity and other social chit chat afforded by their social relationship. E2G also enabled interaction between the remote person and other bystanders, as if the remote person were actually there, as opposed to invisibly present through a phone conversation.

While most of the activities involved activities with elementary aged kids, one family included a local dad sharing his daughter's high school track meet with the mom viewing from home. This was the only family that mentioned concern about whether participating in the study would draw undue attention to the teen's sports activity. This reaction raises the potential concern with teens about sensitivities in how the use of technology may be perceived, especially by their peers.

While the participants enjoyed using E2G, they commented that it was inconvenient to move around, especially for activities that involved keeping up with kids. While the iPad was more mobile, it was problematic to hold the entire time. Also, getting loud enough audio to interact with the remote person while not overwhelming the local participants was a problem.

### **Study: Teens' Use of Mobile Messaging**

By the time of the workshop, we will have also completed a study of how teens currently use mobile messaging apps. Our plan is to interview how teens use apps such as WhatsApp, Vine, and WeChat. These tools enable asynchronous and near-synchronous forms of communication across multiple media (text, emoticons, stickers, audio, and video).

We will interview them in pairs that use these tools to correspond with each other, both so we can hear about

the activity from both sides, and to try to provide a more comfortable social environment with their peers. We will especially be probing for how they use these tools, when they decide to use text vs. pictures vs. video, and what concerns and fears they have about using these tools. We will comment on some of the methodological challenges of doing lab studies with teens and how we worked through them.

### **Participating in the Workshop**

We would like to participate in the workshop, both to share our experiences in deploying prototypes with youth as case studies, and to learn from others' experiences, especially in observing, interviewing, and learning from teens' activities. We see teens as a key demographic in promoting adoption of video technologies, and expect to focus more of our future work on designing and developing technologies to support their interaction.

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