Intimate Visual Co-Presence

Mizuko Ito
Annenberg Center for Communication
University of Southern California
734 West Adams Boulevard
Los Angeles, CA 90007
mito@annenberg.edu

ABSTRACT

Photo sharing via handheld devices has unique limitations and affordances that differ from paper-based sharing and PC-based archive and moblog sites. Based on studies of camphone use in Japan, this paper suggests an emergent visual sharing modality that is uniquely suited to the handheld space. Intimate visual co-presence involves the sharing of an ongoing stream of viewpoint-specific photos with a handful of close friends or with an intimate other. The focus is on co-presence and viewpoint sharing rather than communication, publication, or archiving.

General Terms

Design, Human Factors, Theory.

Keywords

Camera phones, moblogs, communication, intimacy

1. INTRODUCTION

With the widespread adoption of camera phones, users and technology designers have been experimenting with different ways of sharing images and integrating them into everyday social interactions. Current practices of remote mobile image sharing tend to cluster around two types of uses: uploads to moblog and photo sharing sites, and personal MMS or email between handhelds. Yet social practices and technologies for handheld image sharing are still highly unstable, and modalities of sharing are likely to evolve considerably in the coming years.

Based on our research on camphone use Japan, as well as reviews of related research, this position paper suggests an emergent visual sharing modality—intimate visual co-presence—that is keyed to the personal, pervasive, and intimate nature of social connections via handheld devices [3]. Although this form of visual sharing is not fully supported by current technologies and mobile services, research on existing camphone use, development of new mobile photo sharing services, as well as results of an experimental trial we conducted on mobile photo sharing, indicate that intimate visual co-presence can fill an important social niche. Although this form of visual sharing is not likely to be as visible or popular as archiving, publication, and more functional, expressive, and communicative visual sharing, it deserves attention as a form of visual co-presence that is specific to the space of ubiquitous handheld devices.

Limits to Visual Communication

Our research on camphone use has demonstrated that while people may snap a steady stream of photos with their camphones, most people only email photos that are in some way personally "newsworthy" [8]. Perhaps more accurately, users sending MMS strive to frame visual information in their everyday life as something interesting and worth sending. As Koskinen describes in similar work in Finland, "senders have to *make* drama out of the banalities of everyday life" He describes how senders embed interest arousers and response-prompting actions in text accompanying sent images [6]. We have found similar actions when people send photos between camphones in Japan.

This threshold for mobile picture sending differs in some important ways from the threshold for communication we have observed with text messaging [4]. In the case of text messaging, we found that many messages are exchanged for the purpose of maintaining lightweight contact and co-presence, and don't perform an explicit communication function. Between friends and intimates who one is in regular touch with, text messages do not need to be interesting or newsworthy to be worth sending. People will frequently exchange messages with presence information such as "I'm tired," "Going to bed," "Just finished watching a great TV show." We have called this mode of text sharing "ambient virtual co-presence" [4].

When we observe these same frequent texters using camphones, we find that they are much more selective about sending visual information, and feel that it is more intrusive and possibly narcissistic to send photos. Unlike text, which is regularly sent between friends, photos tend to be restricted to an even more intimate circle of family or lovers. In their study of camphone use in the US, Kindberg et al. also note that for affective sharing, the majority of photos are not sent immediately via MMS, but rather shared off the handheld screen when physically co-present. [5]

Towards Visual Co-Presence

In contrast, however, to the direct communication modality of MMS/email, many users are turning to online photo sharing sites such as yapeus, flickr, buzznet, photo bucket, or textamerica where they upload a wide range of photos that are not necessarily of immediate interest to a specific viewer. Photographers can upload their photos in real time, but their friends, family, or general audiences can view them at a time that is convenient to them. This "pull" modality of image viewing differs from email in that it doesn't demand the same threshold of timeliness or newsworthy-ness on the part of the sender. This type of visual sharing invites more frequent image transmission, and allows ambient monitoring of the visual stream of others. In some cases, this kind of visual sharing can represent a kind of ambient co-presence similar to what people have constructed via lightweight text messaging, but where people share their visual viewpoint on their everyday life.

In many ways, this move toward pervasive visual access to others is reminiscent of earlier experiments in designing media spaces such as Xerox PARC's Jupiter system [7] or the media space linking PARC and EuroPARC [1,2]. Media space experiments were widespread in the mid to late nineties. These systems

involved creating persistent video portals or bullpens between distributed workers. Rather than being communication-specific videoconferences, they provided open connections, ongoing side-by-side background awareness of colleagues—in other words, a sense of co-presence. More recently av ichat and other consumer applications have made media space-like capabilities widely available.

While both photo sharing sites and media spaces provide opportunities for ongoing visual access to others, neither of these systems are optimized for the more pervasive, lightweight, and intimate connections that dominate in the handheld device space. Media spaces are tied to PCs and workplace environments. Photo sharing sites tend to be optimized for viewing on a PC, and are portals to vast amounts of archived visual information, tagged or categorized in ways that allow easy browsing and searching of large numbers of photos. They haven't been optimized for pervasive, lightweight viewing of a the content of restricted others from a small screen.

Recently, however, photo sharing sites are supporting clients for handhelds and privacy features that enable users to create intimate groups, the small-scale communication clusters that are central to mobile communication [4]. There has not been any published research on private group communication on photo sharing sites, or the use of mobile clients for these sites, so the specific uses of these services is still largely unknown.

While speculative, in this position paper, I would like to extrapolate from this technology design trend and an experimental photo sharing field study we conducted in Fall 2003, to suggest that photo sharing via handheld devices is beginning to support a new form of social awareness of intimate visual co-presence.

2. ALWAYS-ON VISUAL SHARING

In 2003, we conducted a study of camera phone usage that extended our prior studies of mobile text and voice to the capture and sharing of photos [8]. During the same period, we also conducted a field trial of photo sharing where we provided 5 college students in a shared peer group with handsets with which they could capture and upload photos to a private moblog. The moblog could also be viewed from the mobile phone. The couples in the trial had the option of uploading to a moblog shared only with their significant other, or to the moblog of the peer group. The trial ran for two weeks. The experimental trial enabled us to get around users' cost concerns since we covered the carrier costs. In addition, we were providing them with a sharing system that was based on a pull rather than a push model of viewing. We expected that both of these factors would encourage a higher volume of photo sharing then we were seeing via mobile email.

As expected, the system did encourage users to share many more pictures than they were sharing over email. Participants uploaded, on average, about 5 photos a day, with heavy users uploading up to 20. They adopted the system for a variety of different purposes than mirrored what we saw with MMS use and moblog use. Users uploaded photos for their own personal archive and viewing pleasure, shared photos with text captions inviting responses from peers, and uploaded what they felt where interesting or newsworthy images. What I would like to focus on here, however, is couple visual sharing that focused on building a sense of co-presence, rather than explicit communication.

Couple Co-Presence

Our sample included two boyfriend/girlfriend pairs. Among these couples we found a pattern of visual sharing that differed somewhat from how images were shared between peers. Like the peer group, couples also enjoyed sharing special and extraordinary visual information. But we also found that they posted images much more frequently, and that they were more likely to post very mundane photos that conveyed ambient visual information rather than explicit communication. These photos were not particularly newsworthy or framed as "interesting" (in Koskinen's terms). These are the kinds of photos that I see as resembling the ongoing lightweight co-presence that we found couples maintaining via the exchange of text sweet nothings. The addition of visual information adds a new dimension.

This sequence of 4 photos (Figure 1)was taken between 11am and 12:10pm during a school festival where the two were in separate places. The photos have been snapped casually, and do not have any particular newsworthy element or element of interest that is called forth with a text annotation. The titles of the photos were straightforward: "Rehearsal," "Snack Booth," "Opening," "Break Room." There is no urgency to the sharing, but if her boyfriend cares to check up on what she is up to, he can get a sense of her current state. In her interview, she says: "I uploaded the photos just to show him where I am. This information about what I am looking at right now felt like a kind of conversation."

Figure 1: A four-photo sequence from couple moblog, taken during a school festival

Among the peer group, we also found photos being sent that had ambient information about location and viewpoint, but these were sent sporadically. By contrast, with couples, we often found sequences of photos sent to the couple moblog while one of them was out and about, making location and activity visible to their intimate other. The author of the sequence below (Figure 2) explains: "I wanted my partner to know what I am doing. It's not really worth sending text to explicitly communicate this, but with this system he can look when he feels like it. I had this feeling that I wanted him to know what I was up to at that time." She doesn't want to intrude by emailing a photo or text messaging, but she still wants to share moments of her everyday life while they are apart.

Figure 2: A Sequence of shots uploaded to a couple moblog during a night out drinking with friends

In contrast to the more news-oriented entries in the peer moblog, the couple moblog was dominated by these sequences of shots that were framed casually, with apparently little forethought as to the quality or interest-value of the photo.

3. INTIMATE VISUAL CO-PRESENCE

The relational outcome of these ongoing intimate exchanges of visual information is that couples have an ambient, shared visual context that they are jointly aware of even when they are physically apart. Even though the exchange may not be conducted in real time, the sense of engaging in joint side-by-side (though remote) activity is maintained through these exchanges. These couples had a prior practice of using text to maintain this ongoing contact. Once the visual stream enters this shared virtual space, it can lessen the volume of text exchange. One of the couples noted that text messages of the "what are you up to?" variety decreased during the trial period. The photos were uploaded with enough frequency that they could get a general feel for where the other was and what they were attending to.

Both sets of couples assumed that since the photos were being sent to their private site, intended for just one other viewer, their partner would view the photos. Further, because the moblog could be viewed with a mobile phone, they assumed that their partner would be viewing it relatively frequently, if not immediately. The moblog thus became a site of shared knowledge, a part of their shared reference of what they experienced "together." One of the participants commented that they could assume a certain level of shared context. "You don't have to ask, 'Where were you on Sunday,' but instead, it was like you were 'together" already then, and could start the conversation by saying 'So how did things go?'" Referring to an entry from a bowling alley, another participant noted that "I knew the reason she didn't answer the phone the other day was because she was bowling."

The experience of these two sets of couples points to the compelling nature of intimate visual co-presence as it is supported by photo sharing on a mobile phone. The current convergence of different kinds of photo sharing services and camera phones seems to indicate that this kind of social experience will likely become more accessible to users in settings with widespread camphones and mobile Internet access. Just as text messaging created new kinds of modalities for co-presence and communication, we can expect that pervasive photo sharing will lead to a new set of social practices that differ from what we have seen in the PC Internet space and the mobile texting space. I suggest that intimate visual co-presence may be one of these new social modalities.

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