MobilePost

In this brief I identify issues of time and distance observed within my own family. I propose a new communication technology called MobilePost that facilitates live image-based asynchronous communication and provides ephemeral presence of remote individuals.

Problem

The increasing global self-relocation of American family members for the pursuits of higher education and work disrupt the family model as a socially united geographically centralized network. More and more Americans in their 30s and younger have upset this tradition of family by relocating themselves for individual pursuits which previously remained regional (education, work, family). Time and distance are slowly increasing the social divide between remote family members who are familiar with current communication technologies are those who remain local and are technologically illiterate.

For some individuals, this divide is offset through easily accessible, predominantly desktop-based, communication technologies: Skype, video chat, email, VoIP, and picture/video/text messaging. The successful use of these technologies is contingent on the user’s access to appropriate hardware and software.

Innovators and early adopters of communication technologies are more likely to have a familiarity with the previously listed technologies because their desktop computers are the most prevalent tools used to facilitate daily social, educational, and commercial practices with local and remote communities. People who are not familiar with or are without access to these technologies can easily be excluded from important contact with friends and family.

Mobile devices are more accessible for many members of the general American population. Even with readily accessible tools that support synchronous dialog between two or more users, the moment may not be appropriate for synchronous communication or the user may not want to talk, instant message, or text message. How can the availability of mobile devices provide a means for users to participate in a dialog with members of their social networks?

Conversation/Inspiration

I have three aunts between the ages of 60 and 75 that are late adopters to most new communication technologies. All three aunts have lived their lives in a geographically small community with family and friends, where conversation and communication was usually face to face.

During conversations with my aunts they often recall the last time we spoke or were in the same physical space. Temporal distance is a far more intense experience than geographical distance for some members of my family.

The majority of strong ties outside of my aunts’ immediate geographical locations are ‘the kids’ (now in the mid 20s to early 30s) and a few scattered ‘adult’ family members. In recent conversations with my aunts (one sequentially following the other) I noticed that each aunt identified individual family members by name, asked me how they where doing, even though I was removed from their immediate geography. My aunts do not want to speak on a phone for extended periods of time with each family member; this requires too much effort, is not physically enjoyable, and most of all, they prefer to interact with friends
and family face to face. I was asked about various family members because my aunts were interested in what people were doing and wanted to remain current without dedicated conversation.

All three of these aunts eventually adopt ‘new’ technologies into their routines, though usually minimally; each aunt owns a mobile phone for emergencies rather than casual use -- I always receive calls from their land-lines. The mobile phone is a physically limiting experience for my elder aunts because the features are not designed to accommodate some audiences: screens and keypad buttons are small enough that reading and writing text on a mobile device can be a challenge for some users with poor vision. An unfamiliarity with the navigation of a digital environments (folders, hierarchy, drop-down menus) can lead to an overwhelming and frustrating experience. Despite these inconveniences, mobile phone technology remains in their lives.

Solution Background

I often participate in mobile-mobile image-based communication exchanges with remote friends. On a recent trip to Chicago I forwarded an image of the skyline to my friend Hillary who is from Chicago and currently residing in New York City. Within a few minutes of my image being sent, Hillary returned an image of the Brooklyn Bridge as she was walking on it to work in Lower Manhattan from Brooklyn. Upon receipt of the image I selected the option ‘Save as Wallpaper’ and maintained the image as my current wallpaper until a new image was sent to me.

Mobile devices are increasingly more prominent in the everyday/everywhere immediate landscape. People who may not own a personal desktop computer may have a mobile phone/device. Mobile devices are immediate and portable; laptops, although portable, are not convenient or discrete in all locations (subway cars, walking, in a car, outside during inclement weather, etc.).

MobilePost uses the conveniences of mobile devices (presence, immediacy, size, accessibility) to help mediate awareness of remote individuals through a simple unique interface designed to distribute images to a user’s social network and display images from members of the same network(s) automatically as the user’s current wallpaper. MobilePost is designed to accommodate all users from early adopters to laggers without discrimination.

Automatic image updating reminds the user of their ‘connection’ they share with similar users of a distributed population, conjoined by a social theme.

![Figure 1: Map of a MobilePost network](image)
**Solution Design**

Current technology supports the exchange of images as pic messages from one mobile device to many mobile devices or email accounts. When an image is received on a mobile device the user must open the image, save the image, and manually enable it as wallpaper or store it in an image library.

*MobilePost* surrenders user-side control of updating their device’s wallpaper to the members of the user’s social network(s).

*MobilePost* enables image-based peripheral awareness of the daily activities and events of individual members of a social Group(s) by organizing a network of mobile interfaces into a live shared social space for image and video display.

A *MobilePost* Group is initiated when a user downloads and installs the *MobilePost* application to their device; once installed, a user can create Groups (Family, Friends, Work, etc.) (figure 1) or join an established Group. Potential users can be invited to join a Group by any current member of a particular Group. Users can belong to multiple Groups (Friends and Work). *MobilePost* requires a minimum of two users to facilitate communication.

In the menu prompt following the live capture of an image or the selection of a previously captured image from a user’s device’s image library, a user selects the *MobilePost* send option and then assigns one or more *MobilePost* Groups (Family, Friends, Work, etc.) to the image they want to forward-on.

Once an image is forwarded from a user to a Group(s) (Family, Friends, Work, etc.), each of the recipients’ mobile interfaces’ wallpaper will be automatically updated to display the received image as the device’s wallpaper. The received image will remain as the current wallpaper until the next *MobilePost* is made.

*MobilePost* initially disrupts the user when notifying them of a new incoming *MobilePost*; adapting the same notifications as incoming text/media messages and emails; a ringtone, vibration, or blinking LED. After the user acknowledges receipt of the message (opening the phone if it is a clam shell) the image is enabled as the current screen wallpaper until a new message is received. *MobilePost* images are stored in the general image library. Using an alert system already familiar to the user, allows *MobilePost* to integrate seamlessly into the already present infrastructure by not requiring the user to learn an new task.
Figure 2: A. Missed MobilePosts B. Toggling between image and hidden text field using Send key + any numbered key.

*MobilePost* includes an optional text field that will be hidden from the main display when the image is posted; pressing any of the numbered keypad buttons and the send key will temporarily toggle between the displayed image and the text field (figure 2). The text field will function as a small byline annotating the visual content if needed. A photo of a skyline may need the host city to be identified for some recipients not familiar with the city, i.e. ‘In Chicago with dad!’

Multiple *MobilePost* groups facilitate informal means of quality control; explicit and stupid party images may be appropriate for one’s Friends Group, but not their Family. Users can temporarily unsubscribe from a Group without the Group being notified of this change.

*MobilePost* does not explicitly demand an immediate obligatory response from a receiver.

**Scenario Background**

Aunty Anne has lived in Cranston, Rhode Island since her birth where she is an active member of the local Armenian community. Toni is an aunt living in Connecticut, her sister Kate lives in Rhode Island, and her son Eric and his wife Leigh recently returned from living in Rhode Island to live in Chicago after having their first child. I am living in Champaign, Illinois while attending the University of Illinois Urbana-Champaign.

Family back in Rhode Island miss their access to the baby while I miss home-cooked Armenian food. Usually Aunty Anne will call when she makes some of my favorite dishes “to know that I [Aunty Anne] am thinking about you [me].” Every year the Armenian Church my family belongs to hosts an annual bazaar where Aunty Anne and her friends cook an impressive amount of food.

Eric and Leigh have a large web-based repository of images of the baby for the family to access. Aunty Anne, Toni, and Kate all have access to a web-enabled computer within their homes but hardly use the
computer. All the aunts are aware of Eric and Leigh’s collection but are not comfortable enough using a computer, accessing the web, and then using the internet. One of the reasons for this hesitation to engage with the photo database is the desktops they have are slow with old monitors that are not ideal for image viewing.

Scenario Narrative

Eric and Leigh establish a Group titled ‘Baby pics’ and invite friends and family to join the group. Eric, Leigh, and the Aunts, are also part of a Group titled ‘Family’ initiated prior to the formation of ‘Baby pics’. Eric and Leigh will be able to forward photos of the baby directly to waiting remote family members eager to see images of the baby.

My proximity to Eric and Leigh, along with my lack of interest in being inundated with baby pictures, will motivate me to unsubscribe from the Baby pics Group. I can choose to participate in the Baby pic network at a later date by enabling it as an activate channel in the MobilePost preferences.

In Cranston, while Aunty Anne is preparing Sunday’s meal, she forwards images of Yalanchi (my favorite), Cheese Boereg, Taboule, Yougurt, etc. to the Family group as a reminder to the family (local and remote) of her Sunday afternoon meal. This gesture is a way to include remote members in a family tradition that is specific to geographical location. I contribute to the Family network by offering images of me in the lab, visiting Eric and Leigh, or pictures of Chicago; images that help my family identify my environment, one most of them have never visited or spent an extended period of time in.

Many family members carry small school portrait sized pictures of family members in their purses and wallets. MobilePost extends this practice through screen size.

MobilePost is a flexible tool that facilitates asynchronous (near synchronous at times) image-based communication. The language users develop with the tool will be specific for each person and social group, allowing for infinite configurations of content and communication. The actual image quality may not be as important as user or Group-specific social and cultural cues embedded in the image.

While I am a part of the Family and Baby pic groups, I also have a third Group titled Friends comprised of college friends. Strong relationships are formed during many undergraduate educations, following graduation close friends can be distributed around the world for work and grad school which may strengthen or weaken ties over time. A collective of friends may invent playful MobilePost games to participate in a group activity and remain present despite distance and time.

One person in the Friends Group will take a picture of their immediate environment and submit it to the Friends Group; members of the Group respond with images of their current environment.

Building on an earlier example; I submit an image of Chicago’s skyline, Hillary submits the Brooklyn Bridge, Bhavjot submits Central Square, and Eric submits an image from a Rio.

Frequency of use will also be user and Group-specific. One member may submit too many images and give an impression that they want a response. When MobilePost responses are made out of a sense of obligation, the desire for the tool may quickly fade.

Summary

MobilePost establishes a means for asynchronous communication and ephemeral presence to help mediated time and distance amongst members of user-defined social networks.

MobilePost content is self-produced media, users distributes an image they made. The lighting may not be correct, composition can be improved, and some of the subject is cropped; these deficiencies embed an organic component into a mechanical emotionless tech object. Imperfections in the images contribute to the human-emotional component of a MobilePost experience.
MobilePost is a user-centric tool designed to facilitate an awareness of remote presence through image-based communication. How images are to be used, the rules that govern what content is or is not appropriate for a specific social network, the frequency of image exchanges, and many more issues are all negotiated by members of various social networks.

Related Technologies

The following technologies, along with my current research,

Twitter asks its users the simple question “What are you doing?”. Answers are displayed in a forum that resembles a one pane community IM conversation or party-line. Twitter’s interaction produces, for the passive reader, a time-based linear montage of break point updates from participating members of the Twitter community. Four users paying closer attention, you can begin to detect daily rhythms and patterns of dedicated users.

Twitter is fun way to ‘people watch’, to return in and out of the interface throughout the day. As a communication tool I find the volume of user participation a distraction and at times unable to follow certain trends or Twitter conversations.

http://twitter.com/
http://iconfactory.com/software/twitterrific

Communicating More than Nothing allows one user (mobile) to reveal their geographical location to a second user (stationary) through a picture frame that has a finite set of predefined images that correspond to specific GPS coordinates. When the mobile user moves from one predefined area to another, an image in the picture frame changes accordingly to convey remote presence. The images are designed to summarize specific geographical regions commonly occupied for extended periods of time by the remote user.

Communicating More than Nothing is a unique solution for ephemeral asynchronous single-sided communication between users, MobilePost engages the potential of a dialog supported through the continuous mobility between all users.


Intimate Objects was designed to convey intimacy between geographically remote partners over distance and time through a minimal UI. A dot appears in the user’s computers toolbar along the top of their screen. When the user clicks on the dot it causes the circle to become red and slowly the opacity value begins to decrease causing a fading effect. Subsequent clicks of the dot renew the intense red.

The crux of Intimate Objects is to generate presence between two lovers in remote spaces; if one user repeatedly clicks the circle while the other user is passive a sense of imbalance may begin to manifest in the more aggressive user. If the more aggressive user may cause their partner to engage in with the tool out of a sense of obligation which immediately disrupts any mediated intimacy.

Kaye, J., Levitt, M., Nevins, J., Golden, J., Schmidt, V., Communicating Intimacy One Bit at a Time. In proceedings of CHI 2005