

Proposal for the Second Workshop on Pervasive Image Capture and Sharing

Mirjana Spasojevic

Yahoo! Mobile
Yahoo! Inc.
701 First Avenue
Sunnyvale, CA 94089 USA
mirjana@yahoo-inc.com

Mizuko Ito

Annenberg Center for
Communication
University of Southern California
734 West Adams Boulevard
Los Angeles, CA 90089-7725 USA
mito@itofisher.com

Nancy Van House

University of California,
Berkeley
School of Information
Management and Systems
102 South Hall #4600
Berkeley, CA 94720-4600 USA
vanhouse@sims.berkeley.edu

Ilpo Koskinen

School of Design,
Industrial Design
University of Art and Design Helsinki
Hameentie 135 C
00560 Helsinki, Finland
ikoskine@uiah.fi

Fumitoshi Kato

Keio University
Faculty of Environmental Information
5322 Endo, Fujisawa
Kanagawa 252-8520 Japan
fk@sfc.keio.ac.jp

ABSTRACT

Portable digital cameras continue to enable prolific photo capturing in a variety of settings and to inspire digital photo sharing via an extensive repertoire of mechanisms and modalities, including exchange of physical prints, sharing of digital copies via email, web pages and blogs, or simply showing images on the imaging devices during face-to-face encounters. Camera phones expand sharing activities further through MMS (multimedia messaging), email from phones, and transfer via IR or Bluetooth between phones. All these functions, embedded in a device that is always close at hand, are creating opportunities for *pervasive image capture and sharing*.

This second workshop on “Pervasive Image Capture and Sharing: New Social Practices and Implications for Technology” [14] will continue ongoing discussions among a multi-disciplinary group of researchers around this emerging phenomena. The goal is to examine new technical developments and social practices, and to understand implications for further research, including design and development of new devices, applications and services.

THEME

The camera phones and compact portable digital cameras continue to spread as ever-present, pervasive imaging devices. The list of mechanism for immediate sharing includes MMS (multimedia messaging) between phones, sending images via email from the phone, posting images to blogs and webpages directly from the phone, transferring images via IR or Bluetooth between phones, and showing

others images on a handheld screen during face-to-face encounters. Over the last few years, images from camera phones have started to appear in regular media, as a proof of a public event that took place, in addition to already providing an intimate record of daily moments.

According to the recent predictions by InfoTrends[2], by the year 2010, 87% of all phones shipped worldwide will have a camera. Of those, many will capture multi-pixel images, be augmented with zoom and flash, and ultimately create images that are not only acceptable for viewing on the phone but also on larger displays or in a printed form. In addition, the total number of images captured on camera phones will reach 228 billion, exceeding the number of photos taken on digital still cameras and film cameras combined.

The new social practices that are currently under development, have been observed and analyzed by researchers from different disciplines and in different cultural settings [3,4,5,6,7,8,9,10,11,12,15]. Last year we organized a workshop on “Pervasive Image Capture and Sharing: New Social Practices and Implications for Technology” (PICS 2005) with a goal of creating a venue for researchers to have an open discussion on the topic [14]. The success and the lessons of this first workshop are motivating us to organize the workshop again this year.

REPORT FROM THE FIRST PICS WORKSHOP

The first PICS workshop was held at the Ubicomp 2005 in Tokyo on September 11, 2005. The workshop attracted a

multi-disciplinary group of 23 researchers from academia and industry, and coming from Europe, Asia, North and South America. The questions posed to the workshop attendees covered the following broad areas on inquiry:

- What happens when image capture and sharing becomes an integral part of everyday life?
- What social practices exist today and what new practices are likely to develop?
- What are the implications for technology?
- What are the possible implications for social relationships and for practical activity?

The workshop attendees utilized the Open Space [1,13] method of self organizing to create a schedule with three sets of parallel sessions for discussions and brainstorming. The topics that were discussed in those sessions were:

Privacy. How can we design mobile media systems and applications that have effective privacy mechanism, interfaces and practices? What should be the access control mechanisms for widely shared pictures?

Creativity. What is the relationship between camera phones and new ways of picture taking that enable creativity in digital imaging? What are the ways in which mobile imaging informs or makes complex narrative, and influences aesthetic/expressive practices?

Effortless image sharing, like in a game of ping-pong. How can image capturing and sharing enable effortless two-way communication patterns, much like in a game of ping-pong ?

Barriers. What are the existing barriers to widespread pervasive image capturing and sharing? How is the heterogeneity of image capturing and sharing systems affecting different types of use?

Social Science Methods and Design. What methods for socio-technical analysis and design are best suited to studying and building large scale mobile media systems and applications? How to study mobile media in the near future through combining technology and social science methodologies for field studies? How to best study cross-cultural issues, share the findings and amplify existing differences?

Metadata. What is the impact and long-term effect of public image sharing, such as those enabled by moblogging and Flickr models? Will metadata be relevant? Will it reveal too much about the people and events? How much automatic image annotation and context capture is being foreseen in future use?

Groups. What are the novel ways of picture sharing that involve social groups? How does such image sharing affect social practices and identity of people who communicate via images? Will it allow for a more dynamic expression of identity in digital environments, where people can represent

themselves through a hybrid of images, sound bytes, logos and music clips?

These topics and questions were discussed in smaller groups of 6-12 participants. The attendees reflected on the discussions in the 10min period after each session and captured their notes. At the end of the workshop all of the notes were collected as a joint record.

GOALS FOR THE SECOND PICS WORKSHOP

In this second workshop we aim to continue discussions among this diverse group of researches and practitioners. Our goal is to continue examining technical developments and social practices, and to understand implications for further research.

The second workshop is design to be highly interactive and cover the following aspects:

- **Short presentations.** Introductory presentations lasting no more than 2min will be given by all attendees at the beginning of the day.
- **Field exercise.** In order to stimulate thinking from the users' point of view, we will provide to all attendees phones with some of the recently released mobile photo applications like ZoneTag [15] to use in a mobile outdoor scenario.
- **Design exercise.** Based on the photos captured during the field exercise, the attendees will have an opportunity to be design a mobile photo application. The design will be carried out using low fidelity methods (pen and paper).
- **Open format discussion.** The attendees will have an opportunity to propose topics and hold discussions in smaller groups.
- **Joint discussion.** At the end of the day all participants will take part in the joint discussion with the goal of defining several most important research topics and questions for future study.
- **Workshop blog.** In order to capture questions, comments and reflections, as well as to stimulate discussion before an after the workshop, a joint workshop blog (workspace) will be set up for all attendees.

PROCESS AND PARTICIPANTS

The number of participants will be limited to 25 people, selected based on their submission and reviewed by the organizers. Participants are asked to submit a position paper describing their interest and experience in this field (about 2-3 pages in the SIGCHI conference publication format). The organizing committee will select participants based on these extended abstracts.

Deadline for submission..... June 16, 2006

Announcement of acceptance.....July 24, 2006

FORMAT AND PRELIMINARY SCHEDULE

The preliminary timetable for the workshop is:

09:00-09:15	Welcome, setting the context and introduction of the daily schedule
09:15-10:00	Individual Short Presentations
10:00-12:00	Field session
12:00-1:30	Lunch break
1:30-3:00	Report from the field sessions and a design exercise
3:00-3:15	Break
3:15-4:15	Open space discussions
4:15-5:00	Joint discussion on future directions
5:00-5:15	Wrap-up

WORKSHOP OUTCOME

The workshop proceedings will be put together from all position papers. The workshop proceedings will be published as a technical report or an edited collection of papers and made available via the web. In addition, a report of the workshop may be published in a major journal.

ACTIVITIES BEFORE THE WORKSHOP

The call for participations will be distributed via the Ubicomp 2006 publicity channels. Additionally, the call will be announced in newsgroups and mailing lists related to the subject. The position papers selected from participants will be published on the workshop website prior to the workshop. In addition, a workshop blog will be set up in the weeks leading to the workshop in order to introduce attendees to each other and initiate the conversations.

ORGANIZERS

In recognition of the differences in camera phone and other mobile device technology and practices in different regions and among different cultures, our organizing committee represents a range of perspectives; we will strive to attract an equally diverse set of participants.

Mirjana Spasojevic is a Senior Design Researcher at the Yahoo! Mobile Business Unit. Her research focus is on design and deployments of mobile and ubiquitous computing technologies. She has recently conducted an ethnographic study of the US camera phone use as part of

HP Labs US/UK investigation into emerging behaviors of camera phone users. At Yahoo! she is conducting a global mobile study evaluating needs of mobile phone users in several countries, including North America, Europe and Asia.

Mizuko Ito is a cultural anthropologist of technology use, focusing on children and youth’s changing relationships to media and communications and is a Research Scientist at the Annenberg Center for Communication at the University of Southern California. She is co-editor of, *Personal, Portable, Pedestrian: Mobile Phones in Japanese Life*, <http://www.itofisher.com/mito>.

Nancy Van House is Professor in the School of Information Management and Systems at the University of California, Berkeley. Her research relates to the use of information and information artifacts. She is currently studying the social uses of personal photography with an emphasis on understanding the emerging uses of cameraphones and digital image sharing.

Ilpo Koskinen is a sociologist who works as a professor of industrial design in Helsinki. One of his research interests is the use and design of mobile technology and mobile multimedia. His book *Mobile Image* (Helsinki: IT Press, 2002), written with Esko Kurvinen and Turo-Kimmo Lehtonen, focused on taking and sending photographs with mobile phones. He has continued to work on pervasive image capture and sharing since then, typically focusing on design.

Fumitoshi Kato is an associate professor at the Faculty of Environmental Information, Keio University, Japan. His research interests include: communication theory, socio-cultural impacts of new technologies, qualitative research methods, and experiential learning theory and practice. He is a faculty member of “Keitai (a mobile phone, in Japanese) Laboratory” at Keio University, where interdisciplinary studies and research programs on socio-cultural impacts of mobile phones are conducted. He is especially interested in the use of camera functions on mobile phones in the context of our day-to-day communication. Recently, he co-edited a book, “Gaming, simulations, and society: Research scope and perspective” (Springer-Verlag, 2004).

REFERENCES

1. A Brief User’s Guide to Open Space Technology. http://www.openspaceworld.com/users_guide.htm
2. Infotrends. Mobile Imaging Study. January, 2006. <http://www.capv.com/home/InfoTrends/reports.html> <http://www.infotrends-rgi.com/home/Press/itPress/2006/1.18.2006.html>
3. Ito, M., and Okabe, D., “Camera phones changing the definition of picture-worthy” *Japan Media Review* (2003).

4. Ito, M., Okabe, D. and Matsuda, M. *Personal, Portable, Pedestrian: Mobile Phones in Japanese Life*, Cambridge: MIT Press, 2005.
5. Kato, F. Seeing the “Seeing” of Others: Conducting a Field Study with Mobile Phones/Mobile Cameras. *Communications in the 21st Century- The Mobile Information Society*, Apr, 2005, Budapest.
6. Kato, F. A microanalytic study of the use of "community-moblog" among collaborative project members. Prepared for Organizational Learning and Knowledge, 6th International Conference, Italy, June, 2005.
7. Koskinen, I., Kurvinen E., & Lehtonen, T. (2002). *Mobile Image*. Finland: Edita.
8. Kindberg, T. The Ubiquitous Camera: Still Promising More Than it Delivers. *Vodafone Receiver*. March 2006
9. Kindberg, T., Spasojevic, M., Fleck, R., Sellen, A. The Ubiquitous Camera: An In-depth Study of Camera Phone Use. *IEEE Pervasive Computing*, special issue on The Smart Phone, Apr-Jun 2005.
10. Kindberg, T., Spasojevic, M., Fleck, R., Sellen, A. I Saw This and Thought of You: Some Social Uses of Camera Phones. *Proc. of CHI 2005*.
11. O'Hara, K., Black, A., Lipson, M. *Everyday Practices with Mobile Video Telephony*. HP Labs Technical Report. HPL-2006-13
12. Okabe, D. (2004). Emergent social practices, situations and relations through everyday camera phone use. *International Conference on Mobile Communication and Social Change*, Seoul, Korea .
13. Open Space Technology Wiki. <http://www.globalchicago.net/wiki/wiki.cgi?OpenSpaceTech>
14. First Workshop on “Pervasive Image Capture and Sharing: New Social Practices and Implications for Technology” (PICS), UbiComp 2005. <http://www.spasojevic.org/pics>
15. Van House, N. et al. The Uses of Personal Networked Digital Imaging: An Empirical Study of Cameraphone Photos and Sharing. *Procs. CHI 2005*.
16. ZoneTag. <http://zonetag.research.yahoo.com/zonetag/>