

# Workshop on Computer Mediated Social Offline Interactions (SOFTec 2012)

**Nemanja Memarovic,**  
**Marc Langheinrich**  
University of Lugano,  
Switzerland  
{nemanja.memarovic,  
marc.langheinrich}@usi.ch

**Vassilis Kostakos**  
University of Oulu,  
Finland  
vassilis@ee.oulu.fi

**Geraldine Fitzpatrick**  
Vienna University of  
Technology, Austria  
geraldine.fitzpatrick@  
tuwien.ac.at

**Elaine M. Huang**  
University of Zurich,  
Switzerland  
huang@ifi.uzh.ch

## ABSTRACT

The proliferation of social networking sites and mobile technology allows us to check on our friends and family, follow what experts in our field think, or simply ‘check-in’ online. While in many ways advantageous, the ability to be constantly connected is significantly affecting our *offline interaction behavior*. People sharing a table today might ignore each other for stretches at a time in order to interact with far-away friends through mobile technology instead. The goal of this workshop is to examine how we can build technologies that *promote offline interactions*. We plan to discuss how offline interactions can be spurred within different social groups and different settings through currently available devices and technologies. We also plan to explore how such technologies can be built and used for different types of offline engagement (e.g., playful vs. serious). The workshop aims to establish a community interested in computer mediated offline interaction.

## Author Keywords

Offline interaction, social interaction, ubiquitous computing.

## ACM Classification Keywords

H.4.3. Communications Applications; H.5.2. [User Interfaces]: User-centered design; H.5.3. [Group and Organization Interfaces]: Theory and Models; J.4. [Social and behavioral sciences]: Sociology

## General Terms

Design, Human Factors.

## INTRODUCTION

The proliferation of mobile devices and social networking sites allows people to check what friends and acquaintances are up to, follow personal reports of technology experts from the latest brand name gadget release event, or check where friends are in real-time. With 5.6 billion people

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee.

*UbiComp '12*, Sep 5 – Sep 8, 2012, Pittsburgh, USA.

Copyright 2012 ACM 978-1-4503-1224-0/12/09...\$10.00

owning a mobile device [3], 483 million people checking out what their friends are doing every day [1], and 340 million tweets daily [6], people are truly living in the age of “perpetual contact” [5].

Although this ubiquitous connectedness most certainly has its benefits, in some ways it has begun to have a negative impact on people’s *social offline interaction*. Instances of this are shown in Figure 1, where people are interacting with their mobile devices, but not with each other.



**Figure 1 – Illustrative examples of how ubiquitous connectedness can harm offline interaction in a) home (image taken from [bit.ly/PG1RDH](http://bit.ly/PG1RDH)) and b) public (from [bit.ly/HdVII3](http://bit.ly/HdVII3))**

Our proposed workshop would investigate how we can use technology to nurture *social offline interaction*, i.e., SOFTec, thus better reflecting Weiser’s vision of technology weaving itself into ‘the fabric of everyday life’ [12].

## RELATED WORK

Much of the work on spurring offline interaction consists of studies on social networking sites [7, 11], mobile technology [1, 4], and public displays [8, 9, 10] and their potential for stimulating offline interaction.

Recent work on user behavior on social networks has also looked into the overlap of offline and online contacts [11] and the influence of offline interaction on online behavior [7]. On the one hand Subrahmanyam et al. [11] report that keeping in touch with the people one encounters in offline life is one of the main reasons for using social networking sites. However, Matzat reports that offline socializing greatly influences online behavior by reducing the need for online social interaction. Both studies motivate the need for *offline interaction*: most online interactions come from the need to socialize with offline contacts.

While ubiquitous connectedness can lead to the state of absent presence [4], recent work has looked into leveraging

mobile technology to create opportunities for serendipitous offline interaction between strangers and friends by displaying a user profile of a nearby person on a mobile device [5]. While mobile phones show the potential of stimulating peer-to-peer offline interaction, large displays show the potential of stimulating spontaneous interaction between bigger groups in working environments [8] as well as public and semi-public settings [9, 10].

## **THEMES**

In order to tackle the challenges associated with SOFTec, we propose the following themes.

### **Identifying the technology**

The potential candidate technologies for stimulating SOFTec would be social networks, mobile devices, and large displays. However these are not the only possibilities.

- Enabling technologies, software architectures, and protocols for SOFTec.
- Mobile devices, large displays, social networking services, bio- and sensor-based networks as singular or mesh technologies for SOFTec.
- Novel applications for mobile devices, large displays, and social networking services that would spur offline interaction.
- Content distribution mechanisms that work across different devices and stimulate SOFTec.
- Interaction concepts and metaphors for SOFTec.
- Frameworks and toolkits for enabling SOFTec technologies.

### **Settings: Public, Work, Home**

As people move throughout the day they encounter different settings, namely, home, work, and public space.

- Identifying SOFTec technologies that would work within and across public, work, and home settings.
- Novel SOFTec applications for mobile devices, large displays, social networking services, and sensor-based networks that would work within these settings.
- Identifying challenges for SOFTec technologies within public, work, and home settings.

### **Supporting interaction between different social groups**

As people change settings through the day, people around them also change. Hence, they are often surrounded either by strangers or acquaintances, in pairs or bigger groups.

- SOFTec interfaces and interaction metaphors for stranger-crowds, couples, and groups.
- Using mobile phones, social network data, large displays, and bio- and sensor-based networks to sense situations that require SOFTec.
- Personalizing SOFTec interfaces for known groups.

## **Entertainment vs. serious engagement**

Different people and settings require different types of social engagement.

- SOFTec content, interfaces, and interaction metaphors for entertainment.
- SOFTec content, interfaces, and interaction metaphors for serious engagement.
- Games as an example of SOFTec technology for entertaining and serious engagement.

### **Identifying additional opportunities**

Envisioned additional challenges for SOFTec would include:

- Experience and service design for SOFTec.
- Tools for measuring and assessing the impact of SOFTec technology.

## **WORKSHOP GOALS**

The goal of the workshop is to jump start a community that will focus on building technology that nurtures social offline interaction, i.e., SOFTec.

## **REFERENCES**

1. Eagle, N., and Pentland, A. Social serendipity: Mobilizing social software. In *IEEE Pervasive Computing*, 4, 2 (2005), 28-34.
2. Facebook, <http://bit.ly/yXqEHC>
3. Gartner, <http://bit.ly/qHCz1Q>
4. Gergen, K.J. The challenge of absent presence. In *Perpetual Contact: Mobile Communication, Private Talk, Public Performance*, Cambridge University Press (2002), 227-241.
5. Katz, J. E., and Aakhus, M. (Eds.). *Perpetual Contact: Mobile Communication, Private Talk, Public Performance*. Cambridge University Press (2002).
6. Mashable, <http://on.mash.to/GF1RgL>
7. Matzat, U. Reducing Problems of Sociability in Online Communities. *American Behavioral Scientist* 53, 8 (2010), 1170-1193.
8. McCarthy, J.F., Costa, T.J., and Liongosari, E.S. UniCast, OutCast & GroupCast. In *Proc. of UbiComp 2001*, Springer-Verlag, 332-345.
9. Memarovic, N., Elhart, I., and Langheinrich M. FunSquare: First experiences with autopoiesic content. In *Proc. of MUM 2011*, ACM (2011), 175-184.
10. Peltonen, P. et al. "It's Mine, Don't Touch!". In *Proc. of CHI 2008*, ACM Press (2008), 1285-1294.
11. Subrahmanyam, K., Reich, S.M., Waechter, N. and Espinoza, G. Online and offline social networks: Use of social networking sites by emerging adults. *Applied Developmental Psychology*, 29, 6, Elsevier (2008).
12. Weiser, M. The computer for the 21<sup>st</sup> century. *Scientific American* 265, 3 (1991), 94-104.