

## **First International Workshop on “Social Implications of Ubiquitous Computing” (UbiSoc-2005)**

Portland, OR, 4<sup>th</sup> April 2005

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The First International Workshop on “Social Implications of Ubiquitous Computing” (UbiSoc-2005) was held on Monday, April 4, 2005, at the ACM SIGCHI Conference “Human Factors in Computing Systems 2005” (CHI 2005) in Portland, Oregon, USA. It was kindly supported by the CONVIVIO Network of Excellence as a “joint workshop” activity. This CONVIVIO sponsorship enabled us to invite two high-profile speakers, Dr. Khai Truong (Georgia Tech, USA) and Dr. Dr. Norbert A. Streitz (Fraunhofer IPSI, Germany), who effectively set the frame for the activities of the day. Furthermore, the CONVIVIO support allowed for providing both lunch and a social dinner to the participants, thus contributing to getting to know each other more quickly and to continue discussing relevant topics in a friendly and socially stimulating atmosphere.

The UbiSoc-2005 workshop was one of the first events to specifically address the implications of ubiquitous computing technology on people that will live in the smart environments of the future and have to deal with their different aspects. While ubiquitous computing environments at a large scale are only beginning to emerge, it is crucial for the designers of such systems to take into account the potential social impact of their developments already today. In order to facilitate a people-centred design with benefits for real people in mind, the traditional technology-driven approach to ubiquitous computing must be shifted towards a more human-centred perspective addressing both technical and social design issues. Consequently, the workshop propagated an interdisciplinary approach with organizers and attendees coming both from social and technical fields. We had two primary goals when planning the workshop: 1.) To provide an overview of the activities, views, and approaches of designing socially beneficial ubicomp systems and 2.) To identify and discuss critical issues that are relevant for the realization of socially sustainable ubiquitous computing systems.

To gain an overview over the latest developments, we dedicated the first half of the day to the presentation of submitted position papers. After posting the call for participation to a wide range of mailing lists and several related websites, we received 22 high quality paper submissions from which we accepted 12 papers for presentation at the workshop. All papers are accessible from the UbiSoc homepage. They revolve around various topics relevant to CONVIVIO such as the design of smart homes or the effects of ubicomp on social goods and are highly suggested readings for CONVIVIO members.

During the sponsored lunch we started finding and discussing relevant topics for the afternoon subgroup work. Three groups were formed and elaborated on the topics of 1) location awareness, 2) the design of ubicomp systems with a social vs. an individual focus, and 3) the notion of phatic technologies. The results are also available on the UbiSoc website.

Many issues were brought up in the papers and group work sessions, some of which I had not previously thought about are briefly described below:

The transition from individual to group centred application design is a fundamental precondition to enhance the quality of life in a social context. John C. Tang, who led the breakout group on design with an individual or social focus, shared examples from the TiVo system, which for simplicity treats all users of a TV as a family, grouping together any input to be shared by all users of the TV. For instance, an English-speaking TiVo user was baffled about why TiVo kept recommending Spanish-speaking programs, until concluding that his Spanish-speaking house cleaner uses the TV while working in the home. To overcome such a problem of group usage, individuals must at least be recognized by any computing application used in a group context. This alone, however, is not enough, as social roles also play an important part even in today’s technological environments. Today, role context is encoded in the way we socially provide contact information to other people. We provide a work phone number, a home phone number, and perhaps a cell phone number in order to suggest the appropriateness of interactions for each

number, even if they all get routed to the same device. Similarly, we often have several different email addresses that we selectively use in ways that appeal to different role contexts. This approach essentially turns individuals into a collective of different roles, so that even designing for the individual can have social implications.

In addition to (individual) roles, being aware of status relationships within a social group can be important contextual information as well. Even the family dog is very discerning about the power relationships within a family (knows who to go to for certain requests and who to listen to in the end). The challenge here is to build in this kind of discernment of roles and relationships in ubicomp technology and how it reacts to different people, especially if there are conflicting requests. And these conflicting requests do come up in groups of real human beings.

These and many other design relevant topics were discussed at the workshop or presented in the submitted papers.

Gathering from the remarks at the CONVIVIO sponsored dinner concluding the workshop and the emails exchanged with some of the participants afterwards, the event was a success both in terms of meeting other people interested in the design of socially supportive ubicomp technologies and in terms of bringing up important issues that stimulate future research. Please have a look at the workshop homepage and peruse some of the available research papers. We believe that human-centred approaches to the design of new technologies are absolutely essential and thus look forward to be part of similar events in the future.