Workshop around the interaction between the digital and the physical gathers researchers and students

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Why not toss information from one mobile unit to the other, or work on the same digital surface at the same time even though you are on different sides of the planet? What happens if we could use any surface as a display and our mobile phones as projectors? These were some of the questions discussed during a workshop with researchers, students and representatives from industry.

It might sound a bit like science fiction but for the participants of the workshop everything is already a reality, even if there is room for improvements. The workshop was about different aspects of the interaction between the digital and the physical such as Augmented reality, Multimodal UIs, Handhelds and Tabletops.

The workshop was led by Dr. Morten Fjeld from Chalmers together with the guest researchers Dr. Alex Olwal from MIT, USA, Dr. Andreas Kunz from ETH Zürich in Switzerland, Dr. Masanori Sugimoto from Tokyo University in Japan and Dr. Sriram Subramanian from Bristol University, UK.

Established cooperation

The international cooperation between the organizers of the workshop is based on well-established contacts between the universities in The Alliance for Global Sustainability - a partnership between the four technical universities Chalmers, MIT, ETH Zürich and the University of Tokyo with the intention to work for a sustainable future. And even if the focus of this week's workshop was not sustainability, the cooperation in its area is also well established.

- Chalmers and ETH Zürich has a long tradition of cooperation stretching years back around Human-Computer-Interaction and Tabletops, says Morten Fjeld.
- The cooperation entails several research projects and exchanges, adds Dr. Andreas
 Kunz from ETH and hints that new ones are being planned.

Experience, inspiration and feedback

The main purpose of the workshop has been to allow participating PhD and masterstudents to meet researchers and others from their own discipline to get feedback on research questions and ideas for thesis work as well as be inspired by more experienced colleagues. The PhD students are from several of Chalmers' departments, among these Applied IT and Architecture, but also from the university in Bergen, Norway. They have, together with the masterstudents from Chalmers and the participants from other universities and industry, filled the week with lectures, group work and discussions. The program has contained lectures on scientific methods, research communication and career planning.

Open lectures within visualization

Some of the lectures that have been part of the workshop have also been open to the public. Dr. Andreas Kunz's lecture was one of them and was largely about virtual collaborative environments where the participants physically are located at different places but interact on a shared work surface. Andreas Kunz stressed the importance of interaction between all senses in any type of cooperative situation

• Postures, gestures and facial expressions must also be transferred by the technology otherwise too much information gets lost, he explained.

Dr. Masanori Sugimotos introduced his open lecture with a brief presentation of the Japanese's relationship to their mobile phones before going on to present some of the research projects he has been involved in at Tokyo University where he has explored the possibility to toss information between mobile devices and between a mobile device and a printer. Dr. Sugimoto has also investigated what you can do if the mobile phone can work as a projector and any surface as a display.

BY: LINDA WINSTEDT