GCRI INTERVIEW

Prof. Gesche Joost

Professor for Design Research, Head of Design Research Lab, Berlin University of the Arts; Germany's Digital Champion for the European Commission

What are the focus areas of the Design Research Lab?

I am working on new modes of interacting with computers, such as using wearable technologies and embodied interaction. My aim is to bridge the gap between new technologies and people in their everyday life environments and to make these interactions with technology playful, joyful, and useful. Therefore, my research also focuses on the gender and diversity aspects of technological development, i.e. how do we include people with different needs in an increasingly digital society? We work with people with dementia, the elderly, women and families as well as the blind and deaf to discover how technologies might assist them in their lives.

Please describe one or two of your current projects.

One current project is called the Mobile Lorm Glove, which my PhD candidate Tom Bieling initiated. We are working on a communication glove for deaf-blind people who face severe difficulties communicating with other people. Currently, test subjects are using a special finger alphabet called "Lorm" and have to spell out their sentences by touching the other person's hand. But this requires the other person to stand right next to the deaf-blind person and that individual also has to understand Lorm. We found a solution for this: by wearing the communication glove, a person can now easily write e-mails or receive text messages directly on his or her own hand. A Bluetooth module translates the messages to mobile phones and vice versa. Therefore, deaf-blind people can talk to everybody using this piece of technology and this makes their lives much easier.

Based on your findings from the "Gender Inspired Technology" project, what are the differences in the needs and/or desires of men and women with regards to ICT?

Our aim was to include female perspectives in the development of new technologies as they are often not well represented. Therefore, we had participatory design sessions with women between the ages of 14 and 65 to learn about their perspectives on mobile communication. They came up with their own ideas on how to design new solutions by addressing the social aspects of mobile communication. Many clearly articulated a need for a time away from technology when they are not at all reachable via phone. But at the same time, many felt obliged to never turn off their phones as there could be an emergency with family or friends. To overcome

this dilemma, they had the idea to filter calls and messages based on their importance and to let only close friends and family get through. This was one example where we learned that we not only have to address issues of technology, such as better displays or more data storage, but also to better address social communication issues that are part of our everyday lives.

What is your vision for the future for human-machine interaction?

I am very interested in new forms and materials of human-machine communication, e.g. wearable technologies. Today, it is quite easy to integrate sensors and microcontrollers into any garment. They can be triggered by apps on a smart phone. Using this setup, we developed an emergency jacket for stroke patients – if you need help, you just have to pull your sleeve tightly. This triggers a call for help on your smart phone. This is a good solution for people like the elderly to easily interact with technology rather than having to push tiny buttons on a display.

As the digital expert on Peer Steinbrück's (SPD) personal advisory board, how do you suggest promoting digital change in Germany?

Just recently I was appointed as the "Digital Champion" for Germany to work with the EU Commission on its Digital Agenda. Therefore, I have a new perspective on digital change, namely to harmonize the German and European vision of our digital society. A big issue on both levels is overcoming the digital divide and getting everyone on board to participate in today's digital society by seizing opportunities. Children, the elderly, the disabled, or people with poor technical skills have to be included in this joint vision; they should not be left out. We also have to engage much more in digital education by promoting skills, such as coding, at our schools. We have to make the digital society accessible to all people – and this has to be addressed collectively on a German and on a European level.