

**A new facility at Dundee University**  
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*Interfaces*, **67** (2006) (Eds. L. Cowen), *British HCI Group*, pp.20. ISSN: 1351 119X,

A brand new purpose designed facility for Applied Computing (soon to become the School of Computing) at Dundee University, includes the Queen Mother Research Centre for information technology to support older and disabled people. With over thirty researchers, this large interdisciplinary group, includes creative designers, therapists, nurses, linguists, school teachers as well as computer engineers and psychologists. There is a focus on "mutual inspiration" as a research paradigm - that is users and designers working together in a creative mode.

We already have over 200 older and disabled people who work with us developing and evaluating our ideas and systems, and, to accommodate them, the new building includes a "User Centre" (with funding from the Matthew Trust) dedicated to these users, both for social occasions (it adjacent to coffee facilities) and for informally and formally working with current IT systems and prototypes from our research.

The Centre also includes a fully equipped steeply raked 50 seater studio theatre specifically for interactive theatrical performances (funded by the Wolfson and Leng Trusts). This is designed specifically to facilitate interaction between the designers and users (unlike the traditional two way mirror usability laboratory), and allows the whole of the design team to be part of the experience. When simulations of real environments are required, the theatre metaphor will encourage "suspension of disbelief" in the users and the audience.

The Theatre is designed to support our research into the use of theatre in HCI research. We are particularly interested in Boal's "Forum Theatre" which encourages dialogue between the actors and the audience. We have worked closely with the Foxtrot Theatre in Education Company, who have substantial experience of using Forum Theatre, and their Artistic Director has now become the Leverhulme Artist in Residence in Applied Computing at Dundee.

Forum Theatre involves initial research by a script writer (who talks to users and researchers) and then produces short theatrical pieces or scenarios. These address the important design issues needing to be discussed within a narrative style and with the humour, emotional content and tension essential to good drama. The play/scenario is performed by professional actors to an audience of users and/or designers. The play is followed by a facilitated discussion between the audience and the actors (who stay in role).

We have used this technique for requirements gathering for home monitoring systems and interactive television systems, and for raising designers' awareness of the challenges technology can present to older people. It has been found to be a very powerful way of encouraging audience discussion, and has generated many new insights and ideas. It is also extremely effective in keeping the group focused (a particular challenge with older people).

This type of theatre encourages dialogue between protagonists in the audience (e.g. designers and users); everyone's views are respected, and the actor/user is engaged in a creative activity not just being monitored. We intend to use the theatre both with professional actors and real users depending upon the particular requirements of the research. Although some

circumstances require real users, script writers and actors have been trained as professional observers of human behavior, with a focus on converting such behavior into interesting engaging stories, and know when to exaggerate for effect, and how to articulate feeling in such a way that it communicates effectively to the audience. A further advantage of using actors is that the ego of the actor/user is not involved, nor is the actor dominated by their own emotional baggage, as can happen with "real users". A well briefed actor can thus replace users in usability testing when it is not appropriate to use "real users", or where this technique could provide additional data.

We are in the relative early stages of our developing the techniques of live theatre and wish to encourage full and frank discussion on the pros and cons of using theatre. As part of this exploration, a significantly fully version of these thoughts will be the focus of two presentations at CHI 2006 in Montreal:

Newell, A.F, Gregor P, Alm N. HCI for older and disabled people in the Queen Mother Research Centre at Dundee University..(2006) CHI 2006 Research Overview.

Newell, A., Morgan, M., Carmichael, A., Gregor P.(2006) Theatre as an intermediary between users and HCI designers CHI 2006 Experience Report.

An example of using theatre to raise awareness of the challenges technology has for older people, the UTOPIA Trilogy can be found at:  
<http://www.computing.dundee.ac.uk/projects/UTOPIA>



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