Relative Confusion

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Background

Theatrical techniques have the power to capture people’s attention, change attitudes and convey information in an engaging and powerful manner, and can therefore provide a very useful educational resource. In particular, the School of Computing at Dundee University has been examining the use of professional theatre, in the form of both live theatre and video, within HCI research for a number of years [1,5]. This format has been used to raise awareness of Design for All issues with both IT students and designers of new technology, through facilitating discussion on the challenges faced by older people [8].

The first video production created as part of this work was the UTOPIA Trilogy [11], which stemmed from research on the UTOPIA project (Usable Technology for Older People: Inclusive and Appropriate) [3]. This consisted of three vignettes, which examined older people’s experiences with different kinds of ICT equipment. These were:

1) “Peter and Jane buy a webcam”, 2) “Experience with Email”, and 3) “Sandy’s mobile adventure”.

Formal evaluation of the UTOPIA Trilogy with both students and professional designers showed that it significantly changed the attitudes of the audience to the characteristics of older people, and to the challenges presented to them by new technologies [2].

The School of Computing has also used live theatre as part of Requirements Gathering exercises for novel technologies designed for older people [4,7,10] and for awareness raising at international conferences [6,9].

Relative Confusion

Following on from this work, the video “Relative Confusion” was designed particularly for use in educational environments. It examines the following scenario:

When Jack and Tommy decided to surprise their sister Maureen with a digital TV system, the one thing they didn’t reckon with was the minefield of bewildering new technology they were about to enter. One thing it won’t be is… ‘A PIECE OF CAKE’..

This video shows a range of challenges provided by new technology to naïve users, especially older ones, and illustrates the results of long-term research into these challenges. It is best viewed as an entity, presenting a complete storyline and giving context to the range of issues faced by older users. However, after showing the video, educators can jump to specific parts of the DVD to initiate discussion on particular issues or to convey specific messages concerning the technological challenges faced particularly by older people.

A wide range of discussion points are illustrated in the video, and can provide starters for further discussion and exploration of the issues with students. These include:

- Users’ ability to learn and their memory for new control methods
- The effects of poor eyesight and manual dexterity
- The interaction of poor eyesight and memory
- The primacy of learned conventions
- Modal errors and the effect of cognitive load
- Loss of control due to complex interaction techniques
- The consequences of jargon
• Knowledge of other requirements and functionality
• The ease (or otherwise) of installation
• The usability of manuals
• Complex interaction methods
• Interface design, labelling and colour coding
• Backwards compatibility
• The rate of learning new functionality
• Standardisation of interaction metaphors and methods
• Interface design, undo methods and operational anxiety
• Intergenerational differences

This video has been used with a range of university students, from whom it has received positive evaluations, and an indication of changed attitudes.

The presentation
The workshop session will involve a showing of the video, “Relative Confusion”, followed by a discussion on the value and use of professional theatre within computing education and training.

Obtaining Relative Confusion
“Relative Confusion” can be obtained from:
Prof. Alan Newell, School of Computing, University of Dundee, DD1 4HN (afn@computing.dundee.ac.uk), for a charge of £10 to cover costs of copying and postage.

References

Further Information
Further data about the physical, sensory and cognitive effects of ageing can be found in A. Carmichael (1999). Style guide for the design of interactive television services for elderly viewers. Kings Worthy Court, Winchester. http://www.computing.dundee.ac.uk/projects/utopia/publications/
Other information on designing for older users is available on Dundee University’s web site - http://www.computing.dundee.ac.uk, and the UTOPIA (Usable Technology for Older People: Inclusive and Appropriate) web site: http://www.computing.dundee.ac.uk/projects/UTOPIA/