HCI AND THE OLDER POPULATION

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ABSTRACT

This paper describes a workshop on technology and the older population which will discuss current work in computing for older people and look ahead at the key challenges that still need to be met in this area. In particular, much work is needed in the field of HCI, making technology useable by the older population. This subject is particularly important because the proportion of older people in developed countries is rapidly increasing. One of the key aims of this workshop is to draw together an often scattered research community and identify and discuss the issues and challenges in this area as a whole.

Keywords

Older people, social inclusion, disability, design.

1. TOPIC

The proportion of older people in developed countries is rapidly increasing. The UK 2001 census showed that for the first time there were more people over 60 than under 16 in the UK [2]. Unless more provision and support for this aging population is put in place, then both older people and society as a whole will suffer. There has therefore been an increasing amount of research into ways to support and include older people. A key promising avenue for doing this is through the use of technology.

In addition, the impact of the ageing population is not all negative. Many older people have substantial amounts of disposable income and are not adverse to using computers. The older population therefore offers a large potential market for computer-based technology.

However, the development of such technology must be done within the context of HCI. Technology for older people that is not useable by them is often next to useless.

HCI for the older population faces some particular challenges and issues. Older people often have different needs and wants when it comes to technology, requiring different types of applications and devices. Ageing is also often associated with changes in levels of sight, hearing, mobility and other abilities, which affect older people's use of technology and the ways in which interfaces need to be designed. In addition, older people often come from different backgrounds and levels of experience with technology than the designers and typical user groups. This will affect the assumptions users have about how technology is approached and used.

Although there is a significant amount of work within HCI for older people (e.g., [1]), there is currently no forum for researchers and practitioners to meet and discuss these and other related issues. This workshop aims to fill this gap, promoting discussion of HCI for the older population on a wider level and drawing together an often scattered research community.

This workshop builds on a previous workshop, "A New Research Agenda for Older Adults" held at HCI 2002 [1]. That meeting started to draw together an interested community but needs to be followed up if real discussion and dialogue are to be attained.

1.1 Application Areas

We are interested in discussing HCI for the older population within the context of the whole range of applications and devices for the older population, including but not exclusive to: mobile devices, desktop applications, the internet, smart homes, computer games, telemedicine and communications. We will solicit contributions on any of these topics, provided they address HCI issues in relation to older people.

1.2 Specific Themes

We will discuss some specific themes within HCI for older people. These themes have general applicability and cut across the specific application areas of the participants. The themes discussed will arise from the concerns of those attending, who will be canvassed for their opinions and concerns prior to the workshop. Some of the main questions that we currently hope to address are:

- In what areas of everyday life can technology help older people and in which of these are technological products currently lacking?

- What are the main barriers to technology use by older people and how can these be addressed?

- What requirements gathering, design and evaluation methods are suitable for use with older people and how can they be used most profitably?

- Are there underlying principles to designing good applications and interfaces for older people? How do we identify them?

- Can such principles be encapsulated in design guidelines or are other methods more appropriate?

2. PROCEDURE

2.1 Participation

We will ask those interested in attending the workshop to submit short papers (2 pages) on their work in this area so that these can be distributed at the meeting. Participation will be welcomed from academia, industry and charities working with the older population. Researchers from several universities, including Dundee, Napier, Abertay and Oxford Brookes are already interested. Mary Zajicek from Oxford Brookes has agreed to prepare and lead one of the discussion sessions.

2.2 Programme

The programme of the day will be as follows:

Keynote: Prof Andrew Monk has agreed to give a keynote talk of approximately 30 minuntes on the issues involved in designing technology for older people, based on his work on the use of technology to support elderly people in the home and setting the scene for the rest of the day.

Presentations: There will be a series of 10-14 short presentations (10 mins maximum) from paper authors, so that participants can get an overview of the work in the area. Paper authors will be offered a presentation, demo or poster slot (see below) based on the nature of their work.

Demo and Poster Session: The presentation session will be divided into two by an hour-long demo and poster session (subject to the availability of suitable facilities). We are keen for researchers and industrialists who have developed products and prototypes to show them to the rest of the group. A member of the older population will be on hand to provide feedback if requested.

Keynote 2: In order to provide an inside view of the user experience, a member of the older population will talk about his or her experiences with using computers and other technology and will answer questions from participants. Questions should be submitted in advance to give the speaker time to consider the answer. This will take about 30 minutes in total.

Discussion Posters: Participants will be given the chance to note their views and concerns on a set of posters, based on the issues raised in the papers and prepared in advance by the organisers and invited researchers. Each poster will describe an issue or situation and leave spaces for responses. This allows all participants to contribute to the discussion of each issue and encourages contributions from quieter members. It will take around an hour.

Discussion Groups: We will break into groups for about 45 minutes. Each group will be given one of the discussion posters and asked to further discuss the issues it describes.

Report Back: Each group will then report back, presenting a summary of its discussion and poster. This will be followed up by a time for discussion amongst the workshop attendees as a whole. We will try to extract the key points for further discussion and will focus on what work needs to be done in this area and on how to follow up the workshop. About 45 minutes will be allocated for this.

Application Area Groups: Before finishing, we will again break up into groups, this time based around the main application areas and fields within HCI for older people. This will be a brief informal session, in order to give participants a more focused opportunity to get to know others in their more immediate fields of work.

Wrap-up and social activity: The organisers will sum-up the findings of the day and then the group will go out for a social activity in the evening as a step towards building a community.

3. ORGANISERS

Dr Joy Goodman and Prof Stephen Brewster are both members of the Glasgow Interactive Systems Group, one of the biggest research groups in this area within the UK, and part of the SHEFC-funded UTOPIA project, which investigates the design and development of information and communication technology for older people. UTOPIA is led by Prof Newell at Dundee University, with Abertay and Napier universities as other partners.

Dr Joy Goodman is particularly interested in the design of handheld applications and mobile devices for older users. She is currently working on the design of a navigation aid to help older people with way-finding.

Prof Stephen Brewster has a strong interest in multimodal interaction using sound and touch. One strand of his work has been on designing interactive systems for blind and visually impaired people. Another focuses on the design and evaluation of mobile and wearable devices.

4. REFERENCES

[1] Brewster, S. and Zajicek, M. (eds.) A New Research Agenda for Older Adults. Workshop at BCS HCI 2002, London, UK, 2002.

[2] National Statistics Online. Census 2001. http://www.statistics.gov.uk/census2001/