# Easier-to-hit 'targets' could help older people make the most of computers

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Older people could make better use of computers if icons, links and menu headings automatically grew bigger as the cursor moves towards them.

A new University of Reading study has shown that 'expanding targets' of this kind, which grow to twice their original size and provide a much larger area to click on, could deliver:

-- a 50%+ reduction in the number of mistakes older people make when using a computer mouse to 'point and click'

-- a 13% reduction in the time older people take to select a target

Although the potential advantages of expanding targets are well known in the computing research community, this study was the most comprehensive to date to focus specifically on their benefits for older people. Undertaken as part of the SPARC (Strategic Promotion of Ageing Research Capacity) initiative, the findings will be discussed at this year's BA Festival of Science in Liverpool. SPARC is supported by the Engineering and Physical Sciences Research Council (EPSRC) and the Biotechnology and Biological Sciences Research Council (BBSRC).

With age-related changes in their capabilities, many older people can find it extremely challenging to position a cursor accurately using a mouse. In some cases, this may even discourage some people from using computers altogether.

Automatically expanding targets could be introduced through simple changes to software products. They not only have the potential to make it simpler and quicker to use computers but could also play a role in encouraging wider use of computers among older people in general.

This could lead to a greater number of older people shopping and communicating online and accessing web-based information about healthcare services, for instance. It could boost their quality of life and enable continued independent living, especially if their ability to travel declines.

The University of Reading study involved 11 older people with an average age of just over 70. Recruited via Age Concern, these volunteers were asked to perform a series of 'point and click' exercises during a 40 minute test session, using a laptop computer and a standard computer mouse. This research studied situations where only one target expands at a time. Further investigations are ongoing to study how target expansion will work in situations where there are multiple targets on the computer screen.

"Using a computer mouse is fundamental to interacting with current computer interfaces", says Dr Faustina Hwang, who led the research. "The introduction of expanding targets could lead to substantial benefits because older people would feel more confident in their ability to control a mouse and cursor. A computer can be a real lifeline for an older person, particularly if they're living alone, and expanding targets could help them harness that potential."

One of Dr Hwang's PhD students is now investigating the specific difficulties older people experience when trying to double-click a computer mouse – an essential function in opening applications and other key computing functions.

Source: Engineering and Physical Sciences Research Council

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