Utilising the Simplicity of Touch to Enable Older People Review Their SenseCam Images Independently

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Fig 1. Microsoft SenseCam

SenseCam & Reviewing the Day

SenseCam is a passively capturing wearable camera, worn via a lanyard around the neck, which takes an average of almost 2,000 images per day.

Why SenseCam?

- Discrete wearable camera with on-board electronic sensors
- Supports episodic memory for cognitively impaired (Berry et al., 2007, 2009)
- Lifelogging is a novel experience particularly for older people

A) Evaluating Existing SenseCam Browsers

Three older participants evaluated two SenseCam browsers: Factors identified as important were:

Ease of Use
- touch-screen, no scrolling, generic language, help option

Quality of Experience
- Images displayed at moderate slideshow speed
- Users given control - Delete, Labelling & Calendar functions

Display of Information
- Consistent design and layout
- Feedback provided through highlighting & auditory tone

Size of Information
- Large text & image size
- High colour contrast

Fig 2. DCU event segmentation browser

Fig 3. Microsoft SenseCam browser

B)

Fig 4. Our touch-screen SenseCam browser

Evaluation of Browser

We placed a touch-screen computer with the installed application in the homes of **3 non-computer literate older participants** for **2 weeks**. Participants were asked to:
- Wear the SenseCam everyday
- Upload their photos

Measures used were:
- Pre-trial questionnaire
- Automatic recoding of user's interactions
- Post-trial questionnaire

Fig 5. The main screen of our browser with thumbnails of additional screens

C)

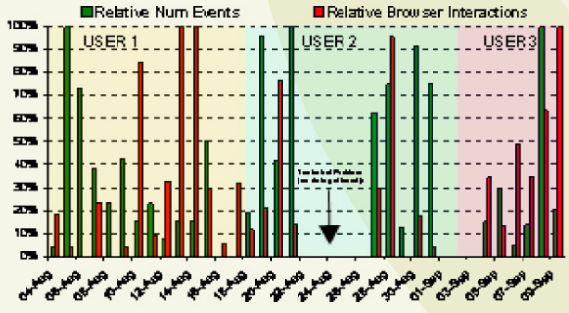

Fig 6. Usage patterns of the SenseCam and our browser by study participants

Findings from the Evaluation

Particpants accessed the browser at least **once a day** and spent **15 minutes to 1 hour** interacting with it, altogether collecting **5 weeks** worth of SenseCam data, corresponding to **27, 212 images**. Findings included:

- Participants enjoyed the **novel experience** of reviewing their day
- Participants developed a **pattern of use**
- Our participants found the browser to be **easy to use**, to view their images and interact with various features of the browser
- The **confidence** of our participants towards the technology increased

Contributions

A) An **evaluation** of two existing SenseCam browsers
B) The **design** of a new touch-screen SenseCam browser
C) The **evaluation of the new SenseCam browser** through a longitudinal field study with older users