Keynote Talk

Head-up Interaction: Can we break our addiction to the screen and keyboard?

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Abstract

Mobile user interfaces are commonly based on techniques developed for desktop computers in the 1970s, often including buttons, sliders, windows and progress bars. These can be hard to use on the move, which then limits the way we use our devices and the applications on them. This talk will look at the possibility of moving away from these kinds of interactions to ones more suited to mobile devices and their dynamic contexts of use where users need to be able to look where they are going, carry shopping bags and hold on to children. Multimodal (gestural, audio and haptic) interactions provide us new ways to use our devices that can be eyes and hands free, and allow users to interact in a 'head up' way. These new interactions will facilitate new services, applications and devices that fit better into our daily lives and allow us to do a whole host of new things.

Brewster will discuss some of the work being done on input using gestures done with fingers, wrist and head, along with work on output using non-speech audio, 3D sound and tactile displays in applications such as for mobile devices such as text entry, camera phone user interfaces and navigation. He will also discuss some of the issues of social acceptability of these new interfaces.

Categories & Subject Descriptors: H.5.2 User Interfaces

General Terms: Human factors, Design, Algorithms.

Bio

Stephen Brewster has been a professor of human-computer interaction in the department of computing science at the University of Glasgow since 2001. He was an EPSRC Advanced Research Fellow from 2003-2008. His research focuses on multimodal human computer interaction, or using multiple sensory modalities (particularly hearing, touch and smell) to create richer interactions between human and computer. His work has a strong experimental focus, applying perceptual research to practical situations. He has shown that novel use of multimodality can significantly improve usability in a wide range of situations, for mobile users, visually-impaired people, older users and in medical applications.

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