

Assessing the efficacy of a touch screen overlay as a selection device for typical GUI targets

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Abstract

In this paper we investigate the efficacy of a touch screen overlay compared to a mouse, when selecting typical graphical user interface (GUI) items in a desktop information system. A series of tests were completed involving multi-directional point and select tasks, and the results for both devices compared. The results showed that the touch screen overlay was not suitable for selecting GUI targets smaller than 4 mm. The touch screen overlay was slower and had a higher error rate than the mouse, but there was no significant difference in throughput. Testers rated the mouse easier to use and to make accurate selections, while the touch screen overlay resulted in greater arm, wrist and finger fatigue. These results suggest that a touch screen overlay is not a practical selection device for desktop interfaces with small GUI targets.

Key words: Touch screen overlay, Mouse, Selection device, Fitts' Law, Performance evaluation, GUI item

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