

Emergent Tap Feedback Android Keyboard

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1 Abstract

On physical keyboards, users primarily get feedback via their sense of touch by feeling the edge of keys or the travel of a key press. Touch screen keyboards give no such feedback and current feedback mechanisms are currently extremely limited. Research has shown that by showing a dot of where a user's last tap was on the keyboard their accuracy can improve but at a serious cost in typing speed as the user looks at the dots. VisKey takes a different approach where more subtle and advanced visualisation mechanisms are employed with the aim to provide more informative feedback so that users can improve their accuracy without a reduction in their typing speed. The four visualisation mechanisms produced for VisKey were: a Dot visualisation, a Heat-Map visualisation, a Shiny-Key visualisation, and a Key-Warp visualisation.

Through a series of formal user studies employing the Heat-Map visualisation, VisKey was shown to have little to no effect on user typing accuracy but crucially, it did not reduce the speed at which users typed showing the great potential for future advanced visual feedback mechanisms. This project will display the results of these studies, suggestions for future work, and the process in how these visual feedback mechanisms were developed.

