

FastTap: A New Fast Way to do Command Selection on Handheld Surfaces

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Touch-based UIs often do not provide any shortcut mechanisms for rapid command selection. As a result, command selection on tablets often requires slow traversal of menus. We developed a new selection technique for multi-touch tablets, called FastTap, that uses thumb-and-finger touches to

show and choose from a spatially-stable grid-based overlay interface. FastTap allows novices to view and inspect the full interface, but once item locations are learned, FastTap allows people to select commands with a single quick thumb-and-finger tap. The interface helps users develop expertise, since the motor actions carried out as a novice rehearse the expert behavior.

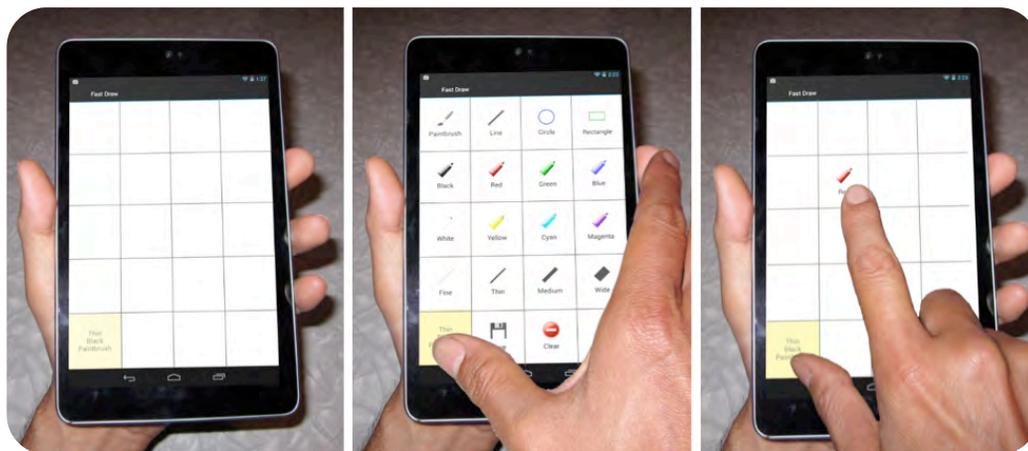
A controlled study showed that FastTap was significantly faster (by 33% per selection overall) than marking menus,

both for novices and experts, and without reduction in accuracy or subjective preference.

Our work introduces a new and efficient selection mechanism that supports rapid command execution on touch tablets, for both novices and experts.

Paper and video: <http://hci.usask.ca/publications/view.php?id=341>

If you'd like to try out FastTap on your Android device, please email gutwin@cs.usask.ca



The left image shows the default state of the FastTap interface (the gridlines have been enhanced for visibility).

The center image shows the FastTap grid overlay after touching the activation button.

The right image shows a selection using a two-finger tap (with the thumb and forefinger), without waiting for the overlay.

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- **OneSpace: Shared Visual Scenes for Active Freeplay**

Paper highlights from two SurfNet researchers, at the ACM CHI Conference on Human Factors in Computing Systems, 2014.

OneSpace: Shared Visual Scenes for Active Freeplay

Maayan Cohen (OCAD), Kody Dillman (UCalgary), Haley MacLeod (UCalgary - now UIllinois), Seth Hunter (MIT), Tony Tang (UCalgary)

The main idea that is captured by the OneSpace system is that video-conferencing for kids sucks because most video conferencing systems are built for a “talking-heads”-style interaction. For kids (say aged 5-10), the focus on “talking” sucks. In OneSpace, the idea is that you transport both people (as their whole bodies) into “another place” altogether, and allow them to play in a shared visual scene. This allows them to play with their whole bodies, enacting scenes with their partners, who are also represented by their bodies.

We are of course not the first to design video conferencing systems for kids, but I think our work really drives home the point that for kids to be engaged in a video conferencing session, they need to: (a) be “physically” (as in their bodies) involved, and (b) be really engaged with their partners. The point about bodies and toys in a visual scene

has been made before, but merging the two remote sites into one is something that has not been explored in the context of “kid play” before.

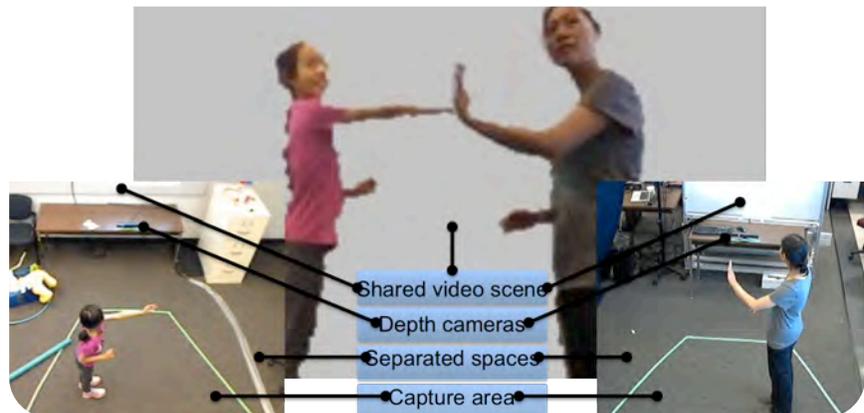
In this work, we designed a study where we watched kids (and kid-parent pairs) play — for a while using OneSpace and for a while using a standard video-conferencing environment (like Skype)... 10 minutes each. Then, we examined the nature of the play that was happening. Major conclusions: in OneSpace, kids are more engaged in ‘bodily’ play, and far more engaged with the person on the remote side. We also did some post-

study interviews where we asked kids about their experiences using the systems.

Blog Post: <http://ricelab.cpsc.ucalgary.ca/blog/?p=8>

Video: <http://hcritang.org/papers/2014-chi2014-freeplay-in-onespace.mov>

Paper link: <http://ricelab.cpsc.ucalgary.ca/pmwiki.php/Publications/HomePage?action=bibentry&bibfile=pubs.bib&bibre f=cohen2014onespace>



SurfNet News / MARK YOUR CALENDARS:

Our last SurfNet Annual Workshop will be held at the University of Calgary from October 7-10, 2014, along with our Industry Open House scheduled for Thursday, October 9th (with a new open format, and exciting demos! Not to be missed!). More details will be posted on our website in the months to come.

New dates for Canada 3.0 are October 28-30, 2014. More information here: <http://canada30.ca>