

Can „Touch“ Get Annoying?

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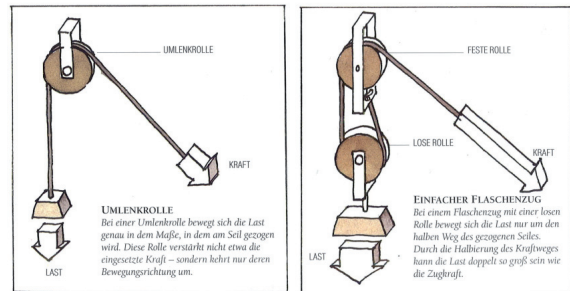
Motivation

While touch interaction with tabletops is now widely accepted as a very natural and intuitive form of input, only little research has been carried out to understand whether and how it might interfere with our natural ways of gestural communication. This poster presents a study that aims at understanding the importance of touching physical and virtual artifacts during discussion or collaboration around a table. Furthermore, it focuses on how users compensate for conflicts between non-interactivity and interactivity created by unintended touch interaction when using a multi-touch enabled tabletop. Our goal is to better understand when touch input creates such conflicts between the interactivity of a surface and our familiar ways of pointing or gesturing

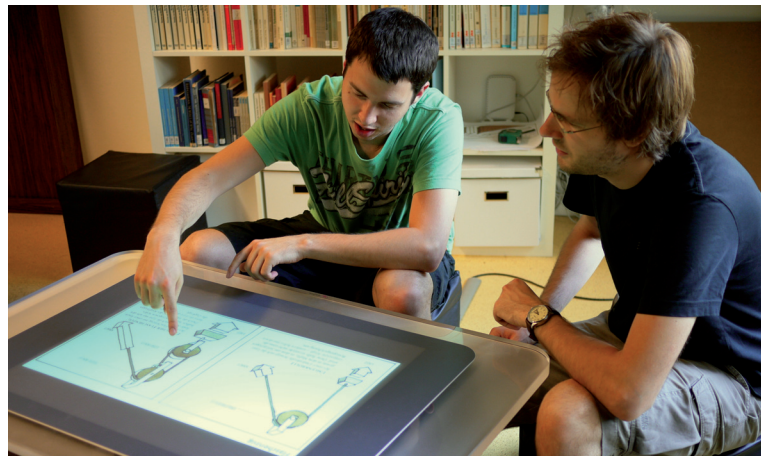
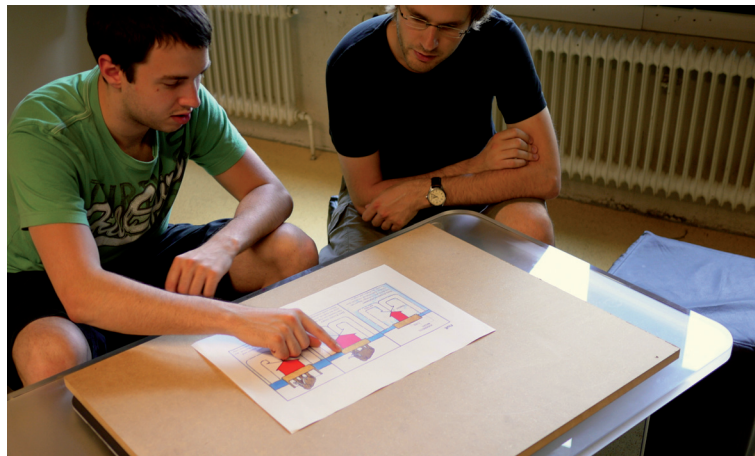
Study Overview

We asked 11 participants to explain illustrations of technical and physical mechanisms on paper and on a MS Surface multi-touch table. During the Surface condition, each „touch“ led to a non-destructive yet annoying and unwanted zoom-out animation. This allowed us to observe compensation strategies for touching the surface.

Flaschenzug



A pulley as an example task, which participants had to explain during the experiment.



Key Results

Touch is essential

During the paper condition, 50% of all gestures included physical touches for pointing at parts of the artifact. Touch was an essential part of the explanation process in a natural paper-based environment.

Affordance vs. Touch-phobia?

Interestingly, four out of eleven participants did not touch the tabletop at all, although all of them heavily relied on touch gestures during the paper condition and had not yet experienced an unintended zoom-out.

Compensation strategies

- Hovering

Instead of touching the Surface, some left their fingers hovering at a very small height above the display.

- Up in the air

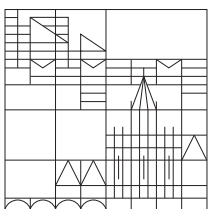
Another strategy was to relocate the simulation gestures well above the Surface and to use the air space above it.

- No pointing

four users simply did not use any pointing gestures at all to avoid touching the Surface.

- Repeated failure

P5 entirely failed at adapting to touch-sensitivity. She kept touching the tabletop unintentionally during the whole experiment, so 29% of all her gestures were unintended touch input.



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