



Textile Interfaces

Scalable UIs on Everyday Objects

To Do & Notice

Sliders:

- Push a button and select a given value on a slider as fast as possible.
- Start touching a slider without looking, then try to determine your position while moving as little as you can.

Icons:

- Identify the icons in each box just by touching.



What's Going On?

Beneath each textile UI element, a microcontroller senses capacitive touch input. For our user studies, we fabricated both sliders and icons using different height profiles: flat, raised, and recessed. For icons, we also differentiated between outlined and filled shapes.



So What?

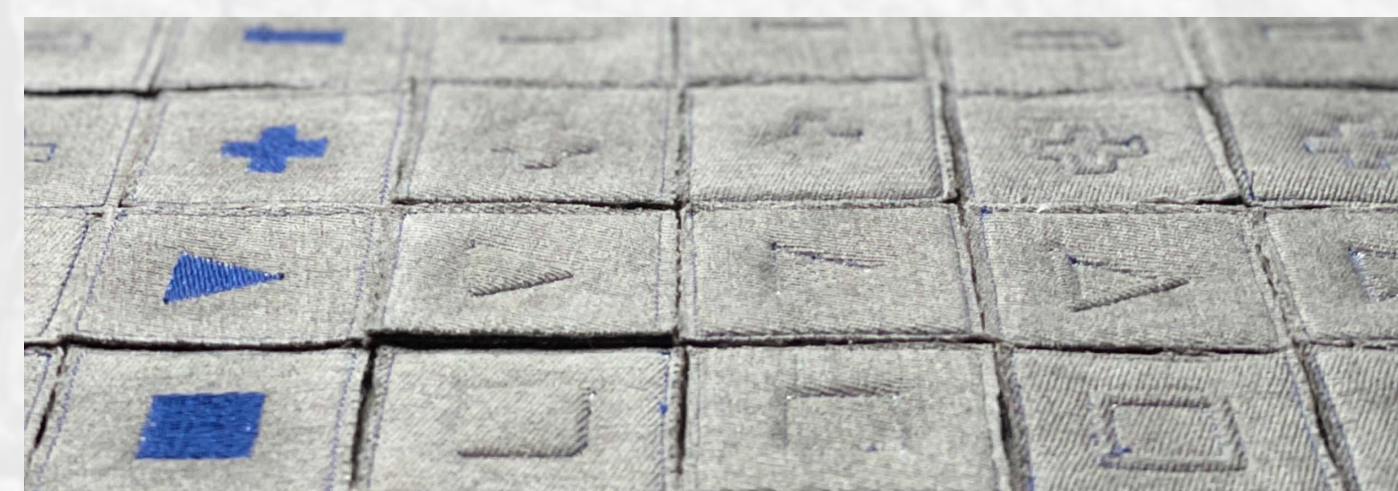
Textile interfaces can make great unobtrusive smart home controls. But how should they be designed—especially when users operate them without looking? From experiments like these, we derived design guidelines for textile sliders and icons that can also be used eyes-free. Some results surprised us: For example, some shapes are easily confused via touch even though they look very different.



Publications



CHI '22: Textile Sliders



CHI '23: Textile Icons



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