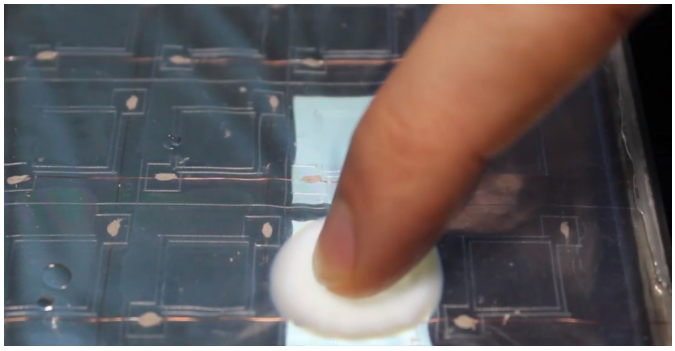
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Researchers at the Technische Universität Berlin propose a means to add temporary tactile buttons to a touchscreens-- the GelTouch, a display with a layer of gel that hardens with the application of heat.



GelTouch uses a heat-responsive hydrogel. The gel is fluid and transparent at room temperature, but turns stuff and opaque when heated above 32°C. A layer of conductive indium tin oxide (ITO) heats discrete areas of the display via electric current, turning the gel solid to create any number of button layouts.

A 7-inch prototype shows a grid of buttons, a slider and a 1-finger joystick buttons, all usable with applications such as a phone dialler and simple games. Buttons disappear once heat is removed.

However the technology has a number of problems-- first off it turns areas of the screen white and opaque. Second, the screen takes around 2 seconds to harden, and the same amount of time to soften up. And lastly the gel requires constant power to maintain a hard state.

Still, as seen with the likes of the Tactus Phorm iPad accessory, at least some customers want the advantages of both touchscreens and tactile buttons. Thus GelTouch should find future applications once refined further.

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