

## Touch Control: Not Only for Mobile Devices

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Researchers at Disney Research and Carnegie Mellon University believe touching is good--creating Touché, a system embedding touch-based controls in objects such as doorknobs, seats and tables.



Touché uses Swept Frequency Capacitive Sensing (SFCS), a technology derived from modern smartphone touchscreens. It recognises a wide range of different gestures, with each gesture (tapping, pinching, grasping) having different "capacitive profile" to trigger different functions.

The technology appears fairly simple to implement-- it uses a single electrode connected (even via Bluetooth) to a processor, and needs no metallic surfaces to operate. It even detects gestures through water.

A proof of concept video shows a number of interesting concept designs, including a smart doorknob with different functions (such as showing messages or automatically locking up) depending on how one touches it and a sofa dimming the lights when one reclines on it for a length of time.

However our favourite concept is a system teaching children how to eat cereal, complete with cutlery detection and alarming noises.

The researchers say gesture classification accuracies range at 99%, and are already achievable with current technology. Guess SFCS technology will find use sooner, rather than later?

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