

# Continental works on infrared for car multi-touch

December 23 2014, by Nancy Owano

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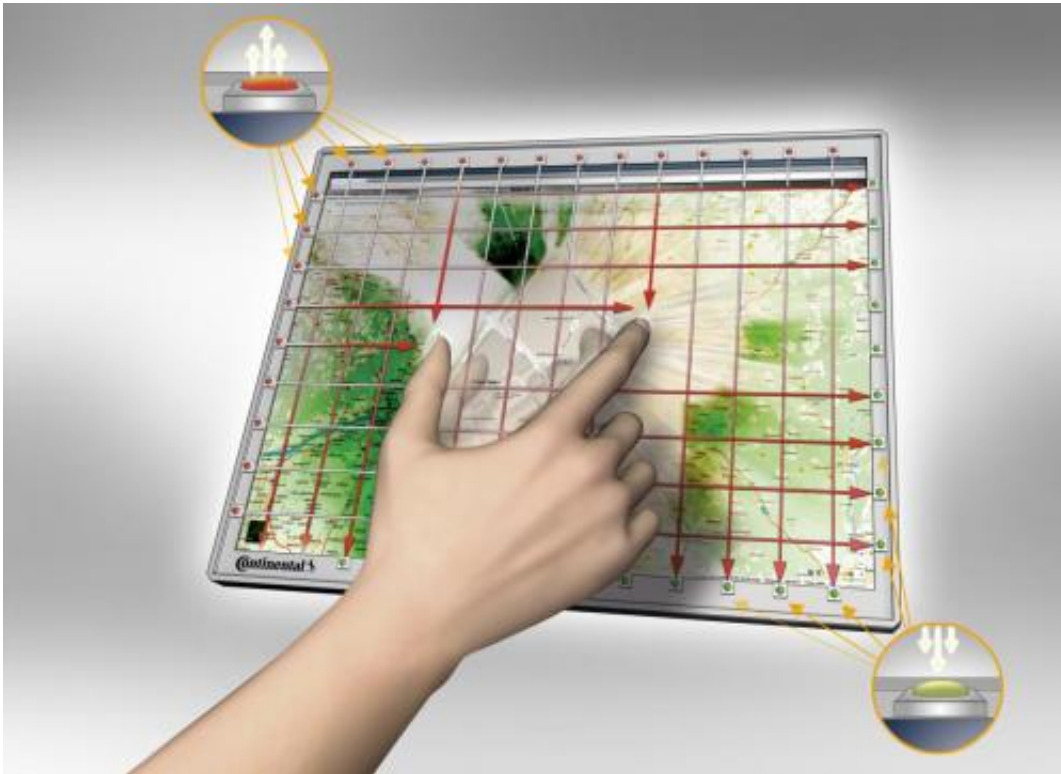
Used in ever-more electronic entertainment devices, multi-gesture recognition will enhance modern display and control systems in more and more vehicles.

Using infrared technology, gesture-control features might find their way into the "affordable" market segment. Automotive supplier Continental, with an eye on the future, is working on intelligent infrared technology for control designs—in "affordable" cars. Continental said the technology will be ready for series production in 2017. The company is out to show that multi-touch gesture features are not beyond the budgets of those who will limit themselves to small, affordable vehicles. Infrared

curtains can replace more expensive touch displays, said the company. With infrared curtains,

Continental developers will be able to promote a more economical alternative to touch sensitive capacitive displays. This would not be the first time that Continental has explored its technology. "Back in 2011, we showed that an infrared curtain can turn any surface in the car interior into a user interface," said Fook Wai Lee, display developer at Continental in Singapore. "We have now developed this technology to the point where it also recognizes typical multi-touch gestures as input." Swipe, zoom, pinch as you please move around selection menus or change a chosen section on a map.

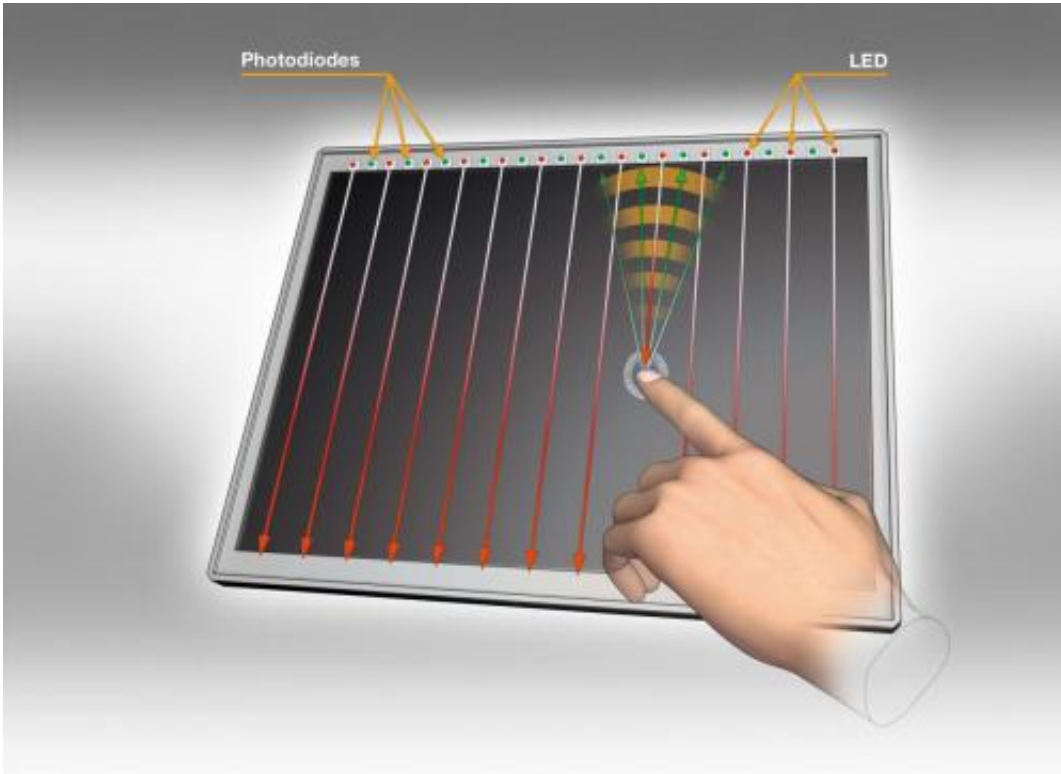
The curtain is built from an array of [infrared light](#) sources on the sides of the display. Ben Coxworth in *Gizmag* described how this looks and works: "The infrared curtain consists of a [square](#) frame with a series of LEDs along two adjacent sides, and a series of photodiodes along the other two. Each LED emits a beam of infrared light, which is picked up and converted into an electrical signal by the photodiode located in the corresponding spot on the opposite side of the frame." Dan Moren in *Popular Science* said this was in contrast to a traditional capacitive touchscreen, which relies on your [finger's](#) ability to conduct electricity. Instead, this technology uses a "curtain" of infrared LEDs as light sensors, finding the position of your fingers by seeing where the light is obscured. The electronics interprets the blocked light beams as the finger position.



With "infrared curtains," Continental developers are opting for an economical alternative to touch sensitive, so called capacitive displays.

Continental's infrared curtain can detect touch gestures of gloved fingers; no special gloves are required.

"The challenge is in the integration: our goal is an infrared light source that is sticking out only minimally over the display surface yet still recognizes all desired multi-touch gestures," said Lee.



A single LED bar allows one-finger operation with the help of the infrared curtain.



Continental offers Multi-Touch Gesture recognition already in series touchpad products.

**More information:** [Continental Coproration press release](#)

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