

## Company unveils haptic EMP feedback keyboard at CES

January 9 2013, by Bob Yirka

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(Phys.org)—San Francisco based Strategic Polymers has unveiled new haptic technology the company has developed at this year's Computer and Electronics Show (CES) in Las Vegas. At a press conference, CEO Christophe Ramstein told those in attendance that his company has developed superthin electro mechanical polymers (EMPs) for use in smartphones and tablet computers.

EMPs are a type of plastic that changes shape slightly when given an electric charge. A single piece, can for example, be made to distend and be held in that position for as long as the charge lasts. It can also be made to vibrate by turning a charge on and off very rapidly, and because

of that, it can also serve as a form of speaker capable of broadcasting music. At [CES](#), Strategic Polymers showed off what it calls "The Awake" a [Bluetooth](#) enabled keyboard that employs EMPs to provide feedback to the person typing.

The keyboard doesn't mimic the feel of a real [keyboard](#), in the sense that the plastic doesn't move down when touched then spring back up when released – instead, Ramstein explained, it offers a very small vibration. Each key is wired separately and vibrates just a little bit when pressed – enough to let the person typing know that the key is feeling their request and is sending it for processing. The advantage over traditional keyboards is that the Awake is much thinner and lighter. And it's better than virtual keyboards, Ramstein added, because with those you can't feel anything happen when you press a key.

The company also showed off another use of its technology in the form of embedded plates on the back of a [smartphone](#). By placing two of them on the back of a phone, Ramstein explained, manufacturers could provide a new kind of feedback for their users. One example, he said, would be to allow for directional control for mapping applications. Because there are two plates, users would feel a vibration on the left or right, indicating a left or right turn, without the user ever having to look at their phone – a safer approach. Also demoed for the audience was a single piece of EMP material that was capable of playing a guitar solo.

Strategic Polymers isn't in the business of selling electronics to consumers; its demonstration was aimed at alerting consumers to what its products can do so that they will demand them from Samsung, Apple, Microsoft, etc. Because of that consumers won't be seeing phones or tablets with the new technology until those that actually make them become convinced that consumers really want it.

**More information:** [www.strategicpolymers.com/](http://www.strategicpolymers.com/)

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