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## VIRTUAL HAPTICS SYSTEM LETS USERS FEEL WITHOUT TOUCHING

 WORK & LIFESTYLE

**Ultrahaptics is a virtual interface which enables users to experience 'phantom' tactile sensations in mid-air with their bare hands.**

Developments in virtual and augmented reality have so far primarily focused on users' visual experiences, but a new system called **Ultrahaptics** could shift the focus from virtual sight to virtual touch. Developed by researchers from the University of Bristol, the system enables users to experience 'phantom' tactile sensations in mid-air with their bare hands.

Ultrahaptics uses ultrasound to project a force field from a 16 x 16 inch grid of transducers. The user places their hands above the device to interact with the tactile interface, which sends air pressure waves upwards, gently vibrating the skin of their hand to create feeling. There are 64 ultrasonic, focused transducers and the possible tactile feedback sensations are practically endless.



The technology was premiered at CES 2015, paired with Leap Motion's gesture control, enabling users to feel virtual sensations such as popping bubbles while watching their hand complete the actions in virtual space. Ultrahaptics has obvious potential for enhancing gaming and entertainment and researchers at the University of Sussex are already using the capacity of Ultrahaptics' simulated touch to evoke emotions with its [SenseX](#) project. What are the most exciting potential uses for this system?

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