iPoint 3D - Using fingers as a remote control

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The »iPoint 3D« allows people to communicate with a 3-D display through simple gestures. © Fraunhofer HHI

(PhysOrg.com) -- The 'iPoint 3D' allows people to communicate with a 3-D display through simple gestures - without touching it and without 3-D glasses or a data glove. What until now has only been seen in science fiction films will be presented at CeBIT from March 3-8 by experts from the Fraunhofer Institute for Telecommunications, Heinrich-Hertz-Institut, HHI.

The heart of iPoint 3D is a recognition device, not much larger than a keyboard, that can be suspended from the ceiling above the user or

integrated in a coffee table. Its two built-in cameras detect hands and fingers in real time and transmit the information to a computer,« says Paul Chojecki, a research scientist at the HHI, explaining the technology.

The system responds instantly, as soon as someone in front of the screen moves their hands. No physical contact or special markers are involved. The small device is equipped with two FireWire cameras - inexpensive, off-the-shelf video cameras that are easy to install.

In addition to its obvious appeal to video gamers, iPoint 3D can also be useful in a living room or office, or even in a hospital operating room, or as part of an interactive information system.

"Since the interaction is entirely contactless, the system is ideal for scenarios where contact between the user and the system is not possible or not allowed, such as in an operating room," Chojecki says. The HHI invention can thus be used not only to control a display but also as a means of controlling other devices or appliances. Someone kneading pastry in the kitchen, whose hands are covered in dough, can turn down the boiling potatoes by waving a finger without leaving sticky marks on the stove. In an office, for example, an architect can peruse the latest set of construction drawings and view them from all angles by gesture control. The finger is the remote control of the future.

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