

# Japan firm showcases 'touchable' 3D technology

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A journalist tries to use "3D-Haptics Technology", at a press preview in Tsukuba, suburban Tokyo on September 1, 2014

Technology that generates touchable 3D imagery was unveiled in Japan Monday, with its developers saying users could pull and push objects that are not really there.

Know-how that could improve a gaming experience, or allow someone to

physically shape objects that exist only on a computer, will soon be available to buy, said Miraisens, a high-tech firm based outside Tokyo.

"Touching is an important part of [human communication](#) but [virtual reality](#) has until now been lacking it," its chief executive Natsuo Koda told a press conference.

"This [technology](#) will give you a sense that you can touch objects in the 3D world," said Koda, a former Sony researcher on virtual reality.

It works by fooling the brain, blending the images the eye is seeing with different patterns of vibration created by a small device on the fingertip, said Norio Nakamura, the inventor of "3D-Haptics Technology" and [chief technical officer](#) at the firm.

In one demonstration of a prototype head-mounted display, the company showed how the user can feel resistance from virtual buttons that he or she is pushing.

Miraisens is a spin-off of the National Institute of Advanced Industrial Science and Technology based in the city of Tsukuba east of Tokyo.

Billing the technology as a world first, the company says it wants to commercialise it through applications in electronics and the services industry.



Japan's high-tech venture Miraisens CEO Natsuo Koda demonstrates "3D-Haptics Technology" at a press preview in Tsukuba, suburban Tokyo, on September 1, 2014

The system can be built into devices in the shape of coins, sticks or pens, amongst others.

Company officials said they could foresee a number of ways of using the technology.

For example, if built into a game controller, it could be used to give a sense of resistance in response to certain actions within the game, they said.



Japan's high-tech venture Miraisens CEO Natsuo Koda demonstrates "3D-Haptics technology", at a press preview in Tsukuba, suburban Tokyo on September 1, 2014

It could also be used to make up complicated data that could be fed into a 3D printer, allowing a child to make a virtual dinosaur model and then watch it come into existence.

Other applications could include help for doctors carrying out surgery remotely, or navigation assistance in canes used by [visually impaired people](#).

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