# Virtual reality: Avatars help amputees control their prosthetics

People who have had amputations can control a virtual avatar using their imagination alone, thanks to a system that uses a brain scanner. Brain-computer interfaces, which translate neuron activity into computer signals, have been advancing rapidly, raising hopes that such technology can help people overcome disabilities such as paralysis or lost limbs. Ori Cohen at IDC Herzliya, in Israel, and colleagues have developed a system that uses an fMRI brain scanner to read the brain signals associated with imagining a movement.

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[Researchers] recruited three volunteers who had had an arm removed between 18 months and two years earlier, and four people who have not had an amputation. While lying in the fMRI scanner, the volunteers were shown an avatar on a screen with a path ahead of it, and instructed to move the avatar along this path by imagining moving their feet to move forward, or their hands to turn left or right. The people who had had arm amputations were able to do this just as well with their missing hand as they were with their intact hand.

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Cohen thinks that a new technology called functional near infrared spectroscopy will make it possible to read the same brain signals with portable devices. This may lead to new ways for people who have had limbs removed to control prosthetic devices.

**The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: Amputees control avatar by imagining moving their missing limbs**