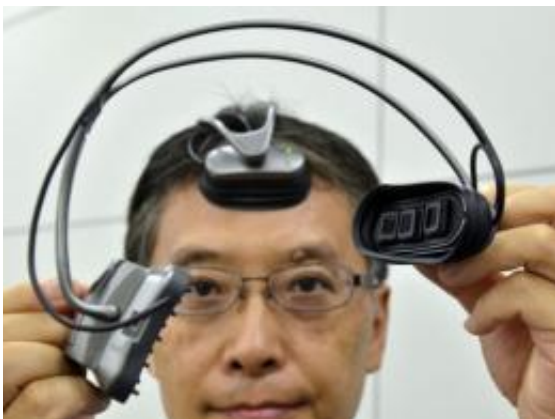


Hitachi unveils headset to study brain activity

September 14 2011



Hitachi engineer Takeshi Ogino displays a portable 'brain-machine' interface' equipped with an optical sensor in a headset to measure prefrontal bloodstream, at the company's headquarters in Tokyo on September 14. A Japanese research team have unveiled a headset they say can measure activity in the brain and could be used to improve performance in the classroom or on the sports field.

A Japanese research team on Wednesday unveiled a headset they say can measure activity in the brain and could be used to improve performance in the classroom or on the sports field.

Engineers from Hitachi working with university scientists say the lightweight headset will accurately measure minute changes in the amount of blood in the brain -- a key indicator of how hard the organ is working.

They said numerous wireless devices could be run simultaneously, with the data displayed on a screen in real time, allowing researchers to monitor the performance of up to 20 people, or a whole sporting team, at once.

The Japanese electronics giant said it currently has no plans for a commercial launch of the equipment, which uses near-infrared light to detect the amount of blood in the brain.

Scientists studying [cognitive performance](#) have previously had to use highly artificial environments, such as laying people in a dark tube and keeping their heads still, said Ryuta Kawashima, head of the research team.

But the newly developed gear will allow them to take measurements in real-life situations where [human brains](#) are interacting in complicated social situations, said Kawashima, of Tohoku University.

"One of my dreams is to help individuals better perform in society," said Kawashima, the scientist behind the smash-hit "[Brain Training](#)" games on Nintendo consoles.

Exploring the [brain activity](#) of, for example, football players to determine under which conditions they perform well could also help improve whole team performance, Kawashima said.

Kawashima is also looking at how the kit could be used in classrooms.

"Studying brain activity when humans are concentrating or getting an idea is expected to help trainee teachers to get feedback from pupils and improve their teaching abilities," Kawashima said.

(c) 2011 AFP

Citation: Hitachi unveils headset to study brain activity (2011, September 14) retrieved 24 April 2024 from <https://phys.org/news/2011-09-hitachi-unveils-headset-brain.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.