

Scientists have found a way to 'characterize' directly on the human brain with electrical stimulation

This method does not affect the human eyes and optic nerve.

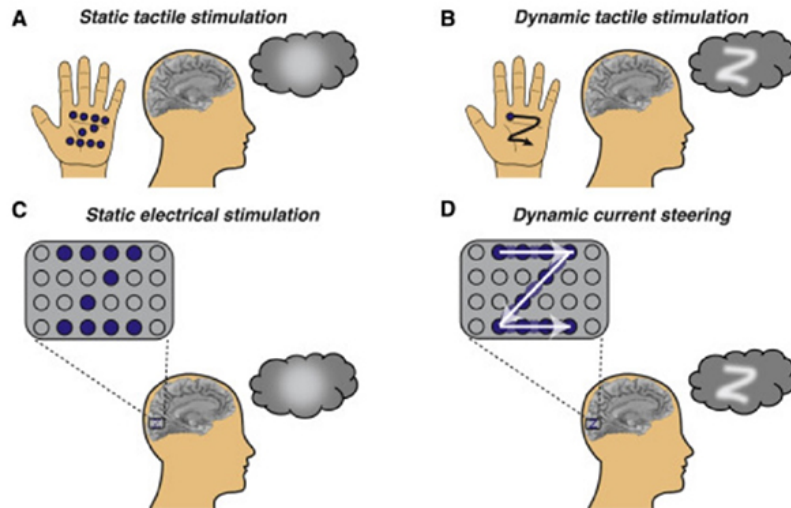
Recently, a team of researchers from the University of California at Los Angeles (UCLA) and Baylor have successfully developed a method of depicting symbols - including letters and shapes - directly on your child's brain. people using electromagnetic stimulation. This method, if successfully implemented in practice, can be a lifesaver for the visually impaired, enabling them to easily imagine and feel the surroundings, or read the written words on documents through data. Data is transmitted to the brain in the form of electromagnetic stimulation.

This method does not affect the eyes and optic nerve at all. Instead, it uses electrical impulses to stimulate the implanted electrodes in 'visual cortex', an area located behind the brain responsible for analyzing images obtained from the outside. It works through dynamic stimulation, meaning that instead of sending the stimulus in the shape of a complete letter, the researchers will map the letter directly on the brain in real time.

The following video shows the test participant receiving an input signal via an implant in the cerebral cortex, then interpreting exactly what is received by drawing it on the screen in front of them.

Basically, this is like playing a word game (or drawing pictures) on the back of the person in front, then asking this person to accurately describe the information he feels from the back, however The accuracy will be much greater. Instead of forcing all electrodes to send information in a shape, for example, a complete U, the system activates the electrodes sequentially so that the recipient can easily identify the information being transmitted. .

The researchers tested the system on two visually impaired and four normal people. The results showed that test participants often felt the information transmitted in their minds with an accuracy of 80 to 93%. Best of all, these people correctly answered up to 86 questions per minute. This level of fast and reliable information delivery can bring about a revolution in the ability to transmit information to the blind.



"Draw" characters with electrical impulses

Imagine sensors connected in public spaces that can issue alerts to visually impaired people about directions, or dangerous obstacles. Currently, the technology is 'stuck' in the experimental phase due to the need for implantation of tiny signal receiver devices in the cerebral cortex. To be practical, it will have to pass extremely rigorous tests. However the outlook is still great!

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