Mind Over Matter: Brain Waves Guide a Cursor’s Path

Biomedical Engineers Create Devices That Turn Thoughts Into Action and Could Help the Paralyzed Move Their Limbs

By RICK WARRICK
Washington Post Staff Writer

Hamel is one of four people whose electroencephalographic (EEG) signals generated by neurons in the brain were used to control a cursor on a computer screen. By looking at the screen, he was able to move the cursor from one target to another.

It’s All in the Head

Scientists are developing “mind-reading” systems that allow people to control computers with their thoughts, and may someday help the disabled perform mechanical or other tasks.

The cursor appears on the screen. If the cursor hits the target... Target appears on the screen.

A 15-year-old boy who was paralyzed for two years after a car accident is able to control a computer using his thoughts. The cursor appears on the screen and moves in response to brain waves.

Scientists have developed a system that allows people to control computers with their thoughts. The system is called a “brain-computer interface.”

The system is based on the idea that the brain can control movements of the body, even when the body is paralyzed. The system uses electrodes to detect brain activity, and sends that information to a computer, which then controls the computer cursor.

The system has been tested on a number of people, including a 15-year-old boy who is paralyzed from the neck down. The boy is able to control a computer using his thoughts, and can move a cursor on the screen.

The system has also been tested on people who are paralyzed due to spinal cord injuries, multiple sclerosis, and other conditions. The system has been shown to be effective in controlling computer cursors, and may one day be used to help people with disabilities perform tasks such as typing, writing, and controlling a wheelchair.

The system is not yet perfect, and there are some limitations to its use. For example, it can be difficult to detect brain activity in people who are very tired or who have a lot of noise in their environment. However, the system is improving rapidly, and it may one day be used to help people with disabilities live more independent lives.

The system is currently being tested by researchers at the University of Kentucky and the University of Pittsburgh. The researchers hope to eventually develop a system that can be used in real-world settings, such as hospitals and offices.

For more information, please visit the website of the University of Kentucky: http://www.uky.edu.