Discover Michael Nash

Michael Nash's life was radically changed because his mother saw the broadcast of the 5th Annual Discover Awards for Technological Innovation in August 1994.

Michael was born in Cape Cod Hospital in October 1981 with spastic quadriplegic cerebral palsy. Michael has no voluntary movement below the neck and can not speak. Until Michael was twelve years old, he was diagnosed as having the intelligence of a three-month-old. He was placed in a day program for the severely disabled. Then, Michael's educational goal was to look up for 'Yes' and down for 'No'. His family and aide believed that Michael had normal intelligence but they had no way to show it. Michael sometimes would become unresponsive and withdraw from the world.

The 1994 awards ceremony was broadcast on the Disney Channel. Kathy, Michael's mother, happened to catch the two-minute spot on EagleEyes and called Boston College the next day, very excited.

Michael eventually came in to try out the system, and he took to it immediately. He showed that he knew letters and colors and much more.

Michael was taken out of the special program and placed into the public school system. Today he is a regular member of the Marshfield High School student body, doing his homework on the EagleEyes system in his home.

Contact Information

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www.bc.edu/eagleeyes

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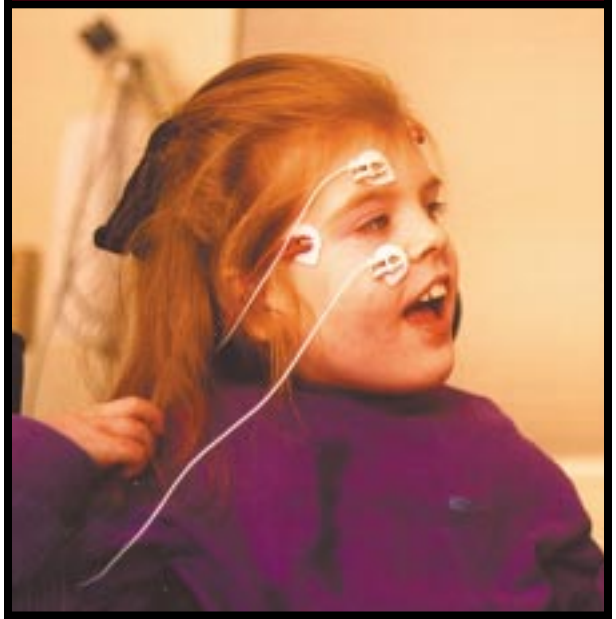
discover



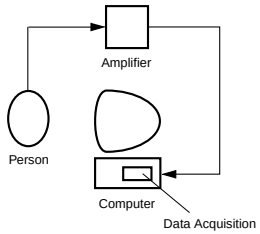
EagleEyes

BOSTON COLLEGE

The EagleEyes System

what is EagleEyes?

EagleEyes is a technology developed at Boston College that allows the user to move the cursor on the screen of a Windows or Macintosh computer by moving his or her eyes or head.



how does it work?

Basically, the cursor follows the location that the user is looking at on the screen. The eyes replace the mouse. Selection is made by looking at a small area of the screen for a short period of time, which causes a mouse click. Usable with any commercial software, EagleEyes is a general mouse replacement that is based on measuring a user's EOG or electro-oculographic potential. The EOG is a small electrical potential which indicates the position of the eye relative to the head. Surface electrodes are placed on the user's head, above and below one eye, and on each side of the head to the left and right of the eyes. The five electrodes are connected to an electrophysiological amplifier which is connected to a computer. A program in the computer translates the signals received from the electrodes into the position of the cursor on the screen. When the user moves his or her eyes, the cursor moves.

The EagleEyes Project

what is our goal?

We are trying to use the EagleEyes system to facilitate communication and learning primarily with individuals who have congenital severe special needs. We also work with adventitiously disabled individuals when no other methods are successful.

These individuals are most often non-verbal, paralysed, and at most have a "Yes/No" method of communicating with those around them.

what have we accomplished?

Over the past four years, we have been teaching students attending the Boston College Campus School along with other children and young adults from the Greater Boston area using the technology. These individuals are able to "eye paint" (create "finger paintings"

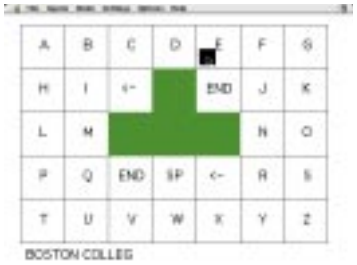
An EagleEyes "eye painting".

by moving their eyes) and run educational, entertainment, and communications software just by moving their eyes. Some students have learned to spell.

We are currently engaged in conducting more formal assessment and study of the system as an educational and instructional tool.

We have established satellite facilities; two in Massachusetts and one in Connecticut. Five students now have EagleEyes systems in their homes.

Schools and other facilities can inquire about setting up an EagleEyes system by contacting Dr. Philip Dimattia.



An EagleEyes message board.

how can I or my child participate?

We are eager to reach as many individuals who would benefit from the use of the system. If you think your child might benefit from EagleEyes, or you yourself are interested, please contact Dr. Philip Dimattia to discuss the referral and to make arrangements.

Susan Manzon, our EagleEyes classroom teacher at the Boston College Campus School, would conduct several assessment and evaluation sessions at our site to introduce the user to the system and determine its appropriateness. There are no charges for initial trials of the system.

EagleEyes was a finalist in the 5th Annual DISCOVER Awards for Technological Innovation!

Rick Hoyt playing music using The Axe™ and EagleEyes.