

Summer 2004

# The B.E.A.T.

*Bulletins in Education and Assistive Technology*

## ► Inside this issue:

Northern Ireland	1
Getting What You Want	2
Recent Presentations	2
What EagleEyes Means to Us ...	3,4
Financial Cost Analysis	4

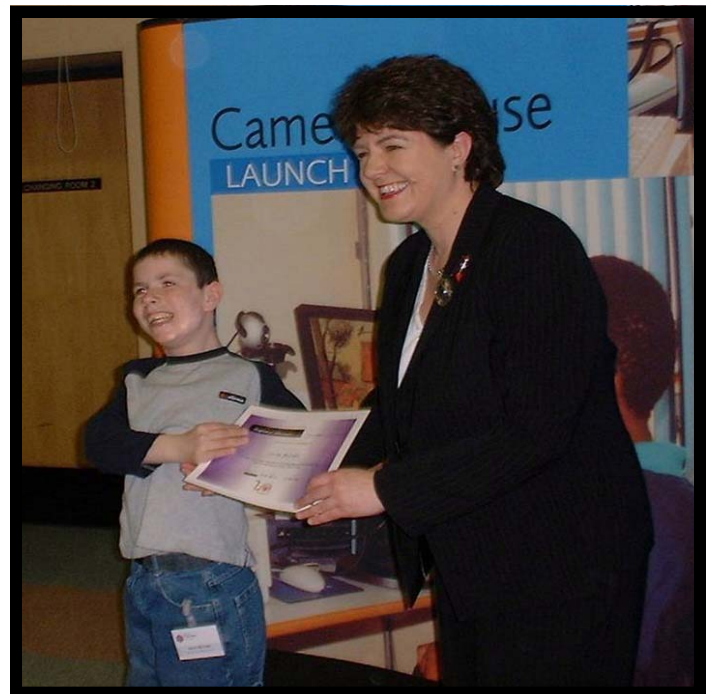
## Northern Ireland Embraces CameraMouse

*The B.E.A.T. welcomes guest writer Alan Nixon, who provides an update on events in Northern Ireland. Alan heads the Northern Ireland CameraMouse Steering Group.*

Much is happening these days in Northern Ireland with respect to Assistive Technology in education. Special Education in Northern Ireland has a long and distinguished history of innovation in Information Technology and special schools have often led the way in the use of computers for teaching and learning. CameraMouse is one of the latest initiatives in that tradition.

CameraMouse first made an appearance in Northern Ireland in Autumn 2002 when pupils in 6 special schools engaged in a pilot project, funded by the Northern Ireland Department of Education, to evaluate the software. Positive feedback from teachers resulted in an extension of the project in September 2003 to provide CameraMouse-equipped systems for 26 special schools. The project steering group devised and delivered initial training and support for the new schools. All the original pilot schools stayed involved and received an additional system as reward for their hard work.

The project was formally launched at Parkview School in Lisburn, County Antrim by the Minister for Education Jane Kennedy who presented the children with certificates to mark their achievement. She said that CameraMouse was "a valuable resource, not just for education but also for communication, enabling children with severe special needs to communicate, in some cases for the first time, with others and with their peers." The event was attended by members of the project steering group, teachers, pupils and their parents and was a day for celebrating success and looking to the future with optimism and anticipation.



*Jane Kennedy, Minister of Education, presents a certificate of achievement to Jason McCabe, a pupil at Sperrinview School Dungannon, County Tyrone. Jason was a student in the pilot CameraMouse program in Northern Ireland.*

Since receiving CameraMouse, the schools have learned much about how best to deploy it and which children benefit most from its use. For some, other solutions will be more appropriate but in many cases CameraMouse has proved to be a powerful tool for improving access to computers and thus to the curriculum. Feedback from teachers continues to be positive and reported benefits include increases in concentration span, self-confidence and posture as well as examples of children being enabled to demonstrate their capabilities more easily and more effectively. Assistive technology has an important role in opening up the world for people with disabilities. CameraMouse is making a valuable contribution to this.

## Getting What You Want

In learning any skill, one must master the basics before moving to advanced work. Learning to use EagleEyes or CameraMouse is no different. Students learn the basics of using assistive technology before moving on to more advanced academic work. With the help of teacher Maureen Gates, students in the Campus School work through a number of computer programs that teach them the basics of using EagleEyes or CameraMouse. Programs like the choice board teach students they can control outcomes with their movements. This is a particularly exciting realization for disabled children who have never been able to move anything in the physical world, no less cyberspace. Once students master using EagleEyes or CameraMouse to control the mouse pointer, they can begin their adventures in the academic world.

After warming up on Eye Painting or Shooting the Aliens games many students work with a choice board to select a preferred activity. This is often called the "I want board." (pictured below) The choice board illustrates how students learn to control the mouse pointer. Students can "click" on parts of the board by holding the mouse pointer over a



*Brian Mac in an EagleEyes session, learning to use his "I want" board.*

given section of the board. First, a student must hold the pointer on the green "I want" section. After activating the "I want" button, students must activate an activity by holding the pointer on the corresponding box. The student then gets to play whatever game is pictured or written in the box.

Initially, students are limited to two choices: one that the child enjoys and one that is less desirable. A limited offering allows students to easily understand they are controlling the outcome. After a while, the preferred activity is moved to a new location to ensure the student is understanding the relationship between selecting the box and the resulting activity. In this manner the child is empowered to take control of the mouse pointer, and the session. Eventually students develop reliable skills controlling the mouse pointer with programs like the choice boards. Students develop such facility using EagleEyes or CameraMouse until they are capable of using the technologies to participate in an educational context. Ultimately, the skills developed using choice boards allow students to communicate and participate in ways previously impossible.



*An example of an "I want" board. This board was made for Brian Mac (pictured above), who greatly enjoys the construction game.*

### Recent Presentations

At the invitation of the sponsoring organizations we recently gave presentations on the EagleEyes Project at the United Cerebral Palsy national conference in Boston in April and at the Families of Spinal Muscular Atrophy national workshop in Schaumburg, Illinois in June. After describing EagleEyes and CameraMouse and showing videos, we arrived at the best part: people came forward to use the technologies.

## What EagleEyes Means to Us ...

*The Families of Spinal Muscular Atrophy newsletter recently featured a mother's letter discussing her son's success in using EagleEyes. The letter was so inspiring, The B.E.A.T. decided to ask Patty Bottone about her son's experiences with EagleEyes.*

### **What is your son's illness? What kind of disabilities does John face?**

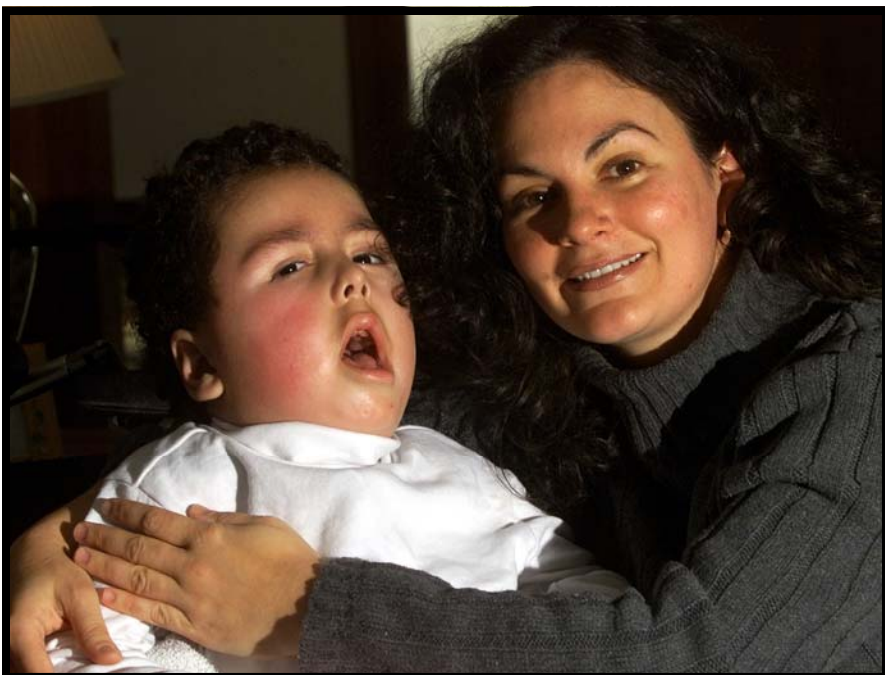
John has Spinal Muscular Atrophy Type 1 also known as Werdnig-Hoffman Disease. He is ventilator dependent, fed via G-tube, non-verbal and unable to move any part of his body other than a nod yes if he is sitting up in his wheelchair and his eyes. However he is extremely bright and very social.

### **How long has he had symptoms? When was he diagnosed?**

John exhibited symptoms of SMA from birth as far as my husband and I are concerned. He had trouble swallowing, sleeping, a sunken chest, and a weak cry as well as his legs always being in a frog position. We took John to a neurologist in NY and to our dismay were given the diagnosis of SMA Type I in about five minutes. John was four months old.

### **How did you first hear of EagleEyes? How long has John been using EagleEyes?**

I first heard of EagleEyes from a Physical Therapist who was coming to our house. She presented me with an article on Michael Nash and I was immediately thrilled by what I had read. It reminded me so much of how I often felt about John. So often I would get so discouraged and frustrated by how John was perceived by others just because he could not talk. People would see a child in a wheelchair who could not move, speak, eat, or communicate other than look up or down for yes and no. Most people did not even take the time to speak with John so that he could even give them a yes or no answer because they just assumed he was probably slow.



*Patty Bottone and her son John Bottone in 2001.  
(Special thanks to the Morristown Daily Record)*

What bothered me even more was how frustrated John must have been knowing so much and being so bright but not being able to show it and communicate it to others. So a year ago John tried EagleEyes at Boston College and all of us at the session were thrilled by how well John did. He was finally able to independently play a game, Shoot the Aliens, and show that he was very bright indeed in that he followed instructions and knew what exactly to do within minutes.

### **How did John integrate EagleEyes into his life?**

John's school district in Andover Township NJ just installed EagleEyes at school for John in April and he will eventually be learning his entire curriculum utilizing it. We also have a setup at home for John which was so generously donated to us from the parent of another EagleEyes user who had sadly passed away. Right now John is beating the computer playing Tic-Tac-Toe and mastering Shoot the Aliens. Next we will be teaching him to spell with the system and then to write sen-

*(Continued on page 4)*

## Financial Cost Analysis

When a student is trying EagleEyes or CameraMouse we often are asked by the school system, "How much money is this really going to cost us?" And rightly so. To begin to answer this question we recently looked in detail at the total education costs for two students, one who uses EagleEyes and one who uses CameraMouse. With the help of their local school systems we compiled all the year-by-year financial costs since they began using the technologies and best estimates of what the costs would have been had they not used the technologies. We found that for these two students the technologies more than paid for themselves financially. The paper can be downloaded at [www.cs.bc.edu/~gips/costs.pdf](http://www.cs.bc.edu/~gips/costs.pdf) or from [www.eagleeyes.org](http://www.eagleeyes.org).

### What EagleEyes Means to Us ...

*(Continued from page 3)*

tences and then eventually as stated before, he will be doing all of his second grade schoolwork next year using the system. Who knows what he will eventually be capable of accomplishing using EagleEyes! It has truly added so much to his life and ours and he gets so thrilled when he shows others how bright he is with the help of EagleEyes.

### How has EagleEyes changed John's life? Have you noticed a change in him?

EagleEyes has and will continue to be such a miracle in John's life and ours. For the first time ever John is able to complete a task independently and he will eventually be communicating independently and effectively something which I did not know if it would ever be possible. Not because of John not being bright enough but because up till now there was nothing available to John to allow him to do that. We are so happy for John as parents because we can only imagine how frustrated he has been all of these years being so smart and unable to communicate it to others or to even be able to complete a task independently.



*John Bottone using EagleEyes at home.*

### Has EagleEyes affected your life? the life of other family members?

All of our family members: John's two brothers, his dad, his grandparents and nurses and me are all overwhelmed with emotion every time John utilizes EagleEyes. We are so happy for him and for what it means for all of us to be able to communicate with him one day totally. And we know that day is not far off.



The B.E.A.T.  
EagleEyes Project  
460 Fulton Hall  
Boston College  
Chestnut Hill, MA  
02467-3808

617-552-3981  
[james.gips@bc.edu](mailto:james.gips@bc.edu)

For information on trying  
EagleEyes or Camera Mouse,  
please contact:



Dr. Philip DiMattia  
Director, Campus School  
Lynch School of Education  
Campion Hall  
Boston College  
Chestnut Hill, MA  
02467-3813

617-552-8424  
[dimattia@bc.edu](mailto:dimattia@bc.edu)