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Bulletins in Education and Assistive Technology (EagleEyes Project Newsletter)

School of the Divine Child, Cork, Ireland

The School of the Divine Child in Cork recently became the center for Camera Mouse assessment and training for the Republic of Ireland under the sponsorship of the Special Education Support Service (www.sess.ie).

During a program on Autism in Educational Settings last year at the Irish Institute at Boston College, participants toured the Campus School at Boston College and learned about Camera Mouse and EagleEyes.

In November, Maureen Gates, the EagleEyes teacher at the Campus School, traveled to Cork at the invitation of SESS to demonstrate Camera Mouse, to allow teachers and students to try Camera Mouse, and to train teachers on its use. Here is Maureen's account of her visit:

"The training included one-to-one hands-on use of the system by the teaching staff at the school. Mary, the computer teacher, received special intense instruction so that she might be in a position to take over ownership of the program. Then five students were selected for assessment and inclusion into the program.



Maureen demonstrating Camera Mouse



Maureen showing Patrick how to use Camera Mouse

"Each child was able to accomplish measurable amounts of success using the system. One young boy, Edward, was immediately able to select educational sites and to obtain the necessary information he needed. Then he was able to take and pass the test at the end of the selected site.

"Another student, Patrick, was not able to participate in much, if any, of the physical activities that went on at the school. He was able to use the Camera Mouse to play Football and other activities on the computer. The more able-bodied students were standing by the door watching Patrick and felt left out. They all wanted a try. At the end of the week, I gave out Eagle pins to the students selected to help out with the program. At a goodbye ceremony, when Patrick received his pin, he said it was the proudest day of his life."

The School of the Divine Child has decided to put Camera Mouse in each of its classrooms.

When the next batch of EagleEyes systems is available, the plan is for Maureen to go back to Cork to allow students who can move only their eyes to try it out.

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An EagleEyes Engagement

We recently learned that Sharif Tai and Gaby Ghafari are engaged to be married. Both were actively involved in EagleEyes as Boston College students. They kindly agreed to an interview.

Please tell us about your time at Boston College.

Gaby: I graduated in 2004 with a degree in Psychology and a minor in Photography.

Sharif: I graduated in 2003 with a degree in Computer Science.

How did you become involved with EagleEves?

Gaby: I knew I wanted to work at the Campus School when I first visited BC. I began volunteering with EagleEyes midway through my freshman year and worked as an undergraduate research assistant starting in my junior year.

Sharif: I took a Computer Science class freshman year with Professor Gips and he talked about the EagleEyes project. It sounded very interesting, so I started to go to the Campus School to work as a research assistant with the professor. I continued to work there throughout my time at BC. My senior year, I completed my thesis by creating applications the EagleEyes students could use to play games and interact with each other over the Internet.

What do you remember most about EagleEyes?

The students and their families.

How did the two of you meet?

We met each other while working with Matt Galligan (an EagleEyes student) and his mother, Cindi. At the time we were working with Marialice Curran, the EagleEyes teacher at the Campus School.

What have you been doing since you graduated?

Gaby: I have since taught high school chemistry and sixth grade science, and I am currently working on a Masters in Public Health at Boston University and will graduate this May.

Sharif: I have been working for a software /consulting company developing speech recognition systems.



Sharif and Gaby after Sharif graduated in 2003. The picture was taken by Sharif's sister, Tanya.

Please tell us about the proposal.

We got engaged on a frigid night in Boston after skating on the Frog Pond in the Common, following a nice dinner.

And your wedding plans?

Right now we're planning for a wedding this summer.

Anything else you would like to share?

We both have very fond memories of BC and EagleEyes. We really enjoyed our time with all of the students.

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We wish Gaby and Sharif only the best.



Passages

In the Summer 2007 issue we wrote an article about Josh and Jenn, his speech and language specialist at Radius Pediatric Health Care in Plymouth, MA. We are greatly saddened to report that Josh passed away suddenly. Josh was a devoted Camera Mouse pioneer, who used Camera Mouse for many educational pursuits. He is missed.

In the same email we learned that Jenn gave birth to a baby girl. Welcome, Samantha Rose!

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EagleEyes in Utah

The following was written by Sue Hirase, a consultant for the Utah Schools for the Deaf and Blind.

If you had entered Jordan Valley School in Midvale, Utah on September 29th, you would have seen a room full of special educators with blue electrodes on their faces trying to navigate the EagleEyes speech technology for severely multiple disabled children. You may have wondered, "What in the world are they doing?" Well, I can tell you. I had the privilege to be one of these educators and I would like to share my experience with you.

I am a consultant for the Utah Schools for the Deaf and Blind who works with families and teachers of students who face challenges in trying to find a way for their loved ones and students to communicate and express themselves without typical speech and language. Often these students have no controllable movement other than eye gaze or slight head control. EagleEyes allows these students to communicate with individuals in their environment. Although the program may take several tries to determine if it is appropriate for a specific student, doing so may provide the only experience the families of these individuals have to interact with them.

One father cheered as his daughter began to use the cursor to play the "Shoot the Aliens" game. At the same time, another family gathered around the computer to offer encouragement and instruction as their son and brother colored a picture of **his** own design.

Although every student may not be successful using EagleEyes, watching a mother cry because her son is finally given the opportunity to respond on his own is well worth all the hard work and effort required to produce such a response and fill such a need. I am eternally grateful for our sponsors, the Rodrick Earl Ross Foundation and the OFOA, for their hours of service to provide this experience to the deaf-blind children in the state of Utah.



Student Willy getting ready to use EagleEyes



Jacque LeRoy; Linda Eller; Rita Bouillon, Principal of Jordan Valley School; and Jake (new EE student)

OFOA Spring Fundraiser

The Opportunity Foundation of America will host their first annual Dinner and Silent Auction on Friday evening, March 7, 2008. The event will be held at the Grand America Hotel in downtown Salt Lake City, Utah. For more information, please visit www.ofoa.net. All funds will be used to support EagleEyes.



EagleEyes user Rochelle surrounded by friends

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EagleEyes Project

The following piece was written by Prof. James Gips, Director of the EagleEyes Project.

The purpose of the **EagleEyes Project** is to help people with severe physical disabilities develop and be educated to their fullest by enabling them to access the computer. We work with people, mainly children and young adults, who cannot speak and can move only their eyes or head.

The EagleEyes Project began at Boston College and involves a growing number of institutions and organizations. We aspire to live up to the core Boston College values of "Ever to Excel" and "Men and women for others."

The project is built around two access technologies:

EagleEyes allows a person to control the mouse pointer on a Windows computer by movement of the eyes. EagleEyes uses electrodes placed on the face to detect eye movements. Boston College has given the Opportunity Foundation of America, headquartered in Salt Lake City, the exclusive license to manufacture and distribute EagleEyes systems for use by people with disabilities. The systems now are manufactured by Sanmina, a major medical equipment manufacturer, for the cost of the components, and given away for free by the Opportunity Foundation to schools, facilities, and families who can make good use of the technology. As of this writing we are waiting for test units of our fourth version of EagleEyes. The Opportunity Foundation of America is holding a major fundraiser in March to raise money to manufacture. distribute, and support the next batch of EagleEyes systems. (See www.ofoa.net and www.eagleeyes.org.)

Camera Mouse allows a person to control the mouse pointer on a Windows computer just by movement of the head. Camera Mouse uses any commercial USB webcam placed on or below the computer monitor to track head movements. Since June 2007, Camera Mouse has been available for free download at www.cameramouse.org. In the month of December 2007 there were over 1,000 downloads of Camera Mouse. In January 2008, there

were over 2,500 downloads. The downloads are literally to all over the world (Australia to Zambia).

We also develop and provide software to be used with EagleEyes and Camera Mouse. For example, **Staggered Speech** is an onscreen keyboard communication program based on the spelling method developed by Rick Hoyt (www.teamhoyt.com) and his brother. The program is available for free download at www.staggeredspeech.org.

We try to weave academic research and publication with products, services, and actions that help real people in the here and now, to integrate and develop theory and practice. We try to aid in the education and formation of our students.

We welcome your involvement and thank you for your support.

Awards

da Vinci Award

The EagleEyes Project won a 2007 da Vinci Award (www.davinciawards.org) "honoring exceptional design and engineering achievements in accessibility and universal design that empowers people of all abilities."

Technology Award Laureate

The EagleEyes Project was named a 2006 Technology Award Laureate by the Tech Museum of Innovation in San Jose, California (see www.techawards.org). "The Tech Awards program inspires global engagement in applying technology to humanity's most pressing problems by recognizing the best of those who are utilizing innovative technology solutions to address the most urgent critical issues facing our planet. People all over the world are profoundly improving the human condition in the areas of education, equality, environment, health, and economic development through the use of technology. It is the goal of The Tech Awards to showcase their compelling stories and reward their brilliant accomplishments."

Please visit www.cameramouse.org to learn about Camera Mouse 2008 and to download a free copy. Prof. James Gips
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