Special Needs Tech
News

EDITOR'S CORNER

Listserv Grows

The Assistive Technology Canada Listserv is a discussion group to assist educators and others who have an interest in learning about special needs technology.

Since initiating this group six months ago, I have received a number of encouraging emails from group members who appreciate the information and exchange of ideas through this forum.

The assistive technology (AT) industry continues to grow and develop innovative products to meet the needs of all learners. Students cannot benefit from enabling technology unless educators and parents are aware that products exist to help students work around their areas of disability. This is an important area for teachers to learn more about. An on-line discussion group provides valuable support for all of us who want to help all of our students to reach their potential.

The ATCanada Listserv welcomes all participants. We currently have members from across Canada, the US and beyond. New members are welcome.

Please feel free to make complete copies of this publication to share with others.

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ASSISTIVE TECH EDUCATIONAL CONSULTING

PROVIDING CLIENT-FOCUSED INFORMATION AND TRAINING ON SPECIAL NEEDS TECHNOLOGY. SPECIALIST IN COMPUTER APPLICATIONS FOR LEARNING DISABILITIES AND LOW VISION

Join the ATCanada Listserv

The ATCanada Listserv was initiated on Dec. 30, 2001. Educators and members of the public may join this free discussion group to learn about or exchange information on assistive technology issues. Join at: **http://ca.groups.yahoo.com/group/ATCanada** or **http://ca.geocities.com/janethopkinsbc/**

INSIDE

Mouse Tracks

Closing The Gap
www.closingthegap.com

One of the best Internet resources for information on technology in special education is the **Closing The Gap** web site. The information on this site is updated regularly so educators can find the "latest and greatest" products available to help individuals with special needs.

Product information is provided in the on-line Resource Directory. A print version of the Resource Directory is also published annually and may be purchased through the web site.

Closing the Gap publishes a bi-monthly subscription newspaper that includes articles about technology products, applications and issues.

Closing The Gap connects people interested in special education technology through interactive on-line discussion forums. Anyone can share ideas with the knowledgeable moderators hosting these topics.

Technology Donations For Schools

Lotus International Philanthropy Program

On September 1, 1998, the Lotus Philanthropy program at Lotus Development Corporation merged with Corporate Community Relations at IBM. This arrangement has enhanced the richness and diversity of programs offered, and further distinguished Lotus and IBM in the area of civic consciousness and corporate social responsibility.

As part of IBM, the resources of Lotus help support the focus on K-12 education, as well as workforce development and diversity, through leading-edge technology-based solutions for nonprofit organizations and educational institutions worldwide.

Information and application forms for the IBM / Lotus product donation program can be found at this link:

www.lotus.com/lotus/philanthropy.nsf

CORPORATE PROFILE
MADENTEC

Alberta AT Company

The assistive technology (AT) industry is comprised of many innovative companies worldwide developing a diverse range of products to meet the needs of people with disabilities. One of the most fascinating Canadian companies in this industry is Edmonton-based Madentec Ltd.

Access Technologies

Madentec distributes the ***NEMO*** hands free environmental control unit, and develops and manufactures computer access hardware (***Tracker One***, ***Tracker 2000***, ***WISP 2000***), software (***Screen Doors 2000***, ***Magic Cursor 2000***, ***Telepathic 2000***) and accessory items. These products enable individuals who do not have the use of their hands to independently operate a computer, surf the Internet, play games, control household electronic devices, make their own phone calls, and operate devices in the home such as TVs, VCRs, and DVDs. Details on the features of these enabling products can be found on Madentec's web site at **www.madentec.com**

Working Together

Over the last few years, Madentec has successfully teamed up with Microsoft to provide accessibility innovations in computing as well as recreation. Microsoft has licensed Madentec's on-screen keyboard, ***Screen Doors***, as an accessory for its Windows operating systems. This provides disabled computer users who cannot access a standard keyboard with another text input option. The on-screen keyboard can be controlled by a mouse alternative such Madentec's *Tracker 2000* or *Tracker One*, a touch window, or trackball. In addition to providing improved access to computing, Madentec products have also been breaking new ground on North American golf courses.

Making History

In August of 2000, Madentec's *Tracker 2000* and Microsoft's Links LS golf software were paired up to create a virtual interface for people with quadriplegia to participate in a history-making golf tournament. For the first time able-bodied and disabled golfers teamed up in the Real Abilities Golf Tournament on the actual course at Pelican Hill Golf Club in Newport Beach. Additional information about this remarkable event can be reviewed at **www.madentec.com**

Tracker's Capabilities

In January, I attended the Assistive Technology Industry Association (ATIA) Conference 2002 in Orlando where I met Randy Marsden, Madentec CEO. Randy and Hank Torres, a Madentec associate from Texas, presented a session demonstrating the capabilities of *Tracker 2000* and a chance for those of us attending to work with ***Magic Cursor*** and ***Screen Doors*** software. This was an opportunity to observe and appreciate the visual simplicity of ***Tracker's*** design. The unobtrusive features of the ***Tracker*** hardware and companion devices are in marked contrast to the functional power of these products. Hank's ability to effortlessly play solitaire on the computer while using only head movements clearly showed the amazing support provided by this technology.

Recent Accomplishments

At the California State University Northridge (CSUN) Technology and Persons with Disabilities 2002 Conference held in Los Angeles this March, Madentec arrived with two exciting announcements. Madentec unveiled a new version of *Tracker* called *Tracker One*. *Tracker One* provides the same hands-free computer access as *Tracker 2000*, but is now available to consumers at a lower price. *Tracker One* is USB powered so that it can run directly from the USB port of a laptop or desktop computer. It was also announced that Madentec has become the new home for another computer access product line called *Discover*. The *Discover* product line had been developed and supported by Don Johnston Inc. of Volo, Illinois. Madentec has taken over both of these roles. However, both companies plan to work cooperatively, through their complementary areas of product expertise, for the further development of accessibility options for people who are disabled.

Influences and Impact

In April, I asked Randy Marsden to respond to a few questions about the influence of AT and his perspective as the vice president of the Assistive Technology Industry Association.

Do you have a personal reason for wanting to work in the AT industry?
When I was in grade school, a friend of mine was injured in a gymnastics accident. When I got into university I did a student project to help him communicate. I've been in the industry ever since.

What impact do your products / services have on the lives of your customers?
We get people back into life. We get people to work and we get people to play. When I get email or phone calls from parents whose children are in school because of our products or adults who can

work, or even run their own business, I know that the impact is farther reaching than the individual user. Our products affect their families as well.

What future influence is this industry likely to have on the field of education?
As I mentioned earlier, children are in school because of our assistive technology. And not just in a special needs school; they are in mainstream schools that can cater to the needs of these special children because the industry has made communication and learning accessible to the kids.

CORPORATE KUDOS
MathType 5.0
Design Science, Inc.

I'm not a math scholar so don't expect me to explain what all the complicated symbols mean in those senior high and college math textbooks. I'm quite prepared to leave the job of teaching and deciphering the esoteric language of complex equations to the people with the training and aptitude for the subject. However, as an educator, I fully appreciate the potential learning benefits and opportunities that can be created when course content is married to the expansive powers of technology, especially the World Wide Web. Countless educators have discovered that computer technology can add new dimensions to how and where learning occurs. Web-based core and supplementary course materials are widely utilized by educators and students to extend the learning process beyond the walls of the classroom.

MathType 5.0 software, developed by *Design Science* in Long Beach, CA, is a product that enables educators and other professionals to produce sophisticated mathematical and

scientific documents in electronic form. In addition to this capability, *MathType 5.0* is a valuable tool to assist students and others with disabilities compose math and science expressions through computer access technologies.

Design Science Products Provide Solutions

The standard Windows math authoring software, *Equation Editor*, is bundled with Microsoft Office software. This program, also developed by *Design Science*, has been licensed to Microsoft and Corel. *Equation Editor* is not automatically installed when the MS Office setup is run and must be installed manually as it is not part of the default installation process.

The *Design Science* product *MathType 5.0*, released in October 2001, is the professional upgrade to the *Equation Editor* in Microsoft Office. As well as supporting the electronic delivery of mathematical content, both of these products are enabling tools for individuals with disabilities who must depend on computer input for math and science expression. For example, a quadriplegic student unable to communicate math and science concepts in written form is able to participate through computer access technologies such as a head pointer device with switch control. Using these assistive technologies with *MathType 5.0* would allow this student to independently carry out math and science calculations. Others with less severe disabilities such as fine motor control problems that interfere with writing and legibility may also benefit from access to this software. *MathType 5.0* is regarded as a valuable authoring tool for disabled students who wish to further their studies in math and science.

The Challenge of ElectronicMath

From a computer programming perspective, text-based course content can be easily delivered by electronic means while retaining the desired formatting on the computer screen. Electronic text can be readily designed to create interactive and dynamic forms of learning. However, presenting mathematical language with its complexity of symbols, numbers, text and unusual alignments in a consistent, interactive and accessible electronic format has been a far more difficult achievement for computer programmers.

The technical problems associated with putting math on the Web have been the concern of some topnotch brains focused on exploiting the potential of the Internet for scientific communication on a global scale. In 1994, the World Wide Web Consortium (W3C), the standards body for the Web, got started on developing an effective framework for Math on the Web. The many facets of this problem required cooperative efforts to develop the desired support for mathematical notation on the Web. Over the years new math rendering technologies such as improved HTML layout and advanced browser capabilities brought about improvements in the delivery of Math on the Web.

MathType Helps Put Math on the Web

MathType 5.0 provides support to create equations in TeX and MathML, the XML-based standard for publishing math on the Web. Most importantly, the new *MathPage™* technology of Version 5.0 smoothly converts Microsoft Word documents into good-looking Web pages. *MathType 5.0* provides the flexibility to save equations as GIF images, EPS and WMF files. The exclusive *Euclid Math Font Set* gives text and mathematical notation a consistent, industry-standard TeX/LaTeX computer modern look. These are some of the built-in capabilities that make this software an indispensable tool for webmasters working with technical documents.

Other Features of MathType

MathType 5.0 is an equation editing software package that has a collection of over 500 symbols and templates to assist computer users. The customizable equation toolbar facilitates efficient organization. Colour options are available along with the ability to create keyboarding shortcuts. Automatic equation numbering and referencing are available in MS Word. The *MathZoom™ technology* is a built in accessibility feature that enlarges an equation when it is clicked, making it much easier to see small accents, superscripts, and subscripts. Additional product features are listed in the *MathType 5.0* and *Equation Editor* comparison chart available at **http://www.dessci.com/features/win/mt_vs_ee.stm**

For individuals working, studying or instructing in the fields of math and science*, MathType 5.0* is an equation authoring software package capable of taking math and science concepts as well as students with special needs beyond the restrictive limitations of the pencil and paper environment. To learn more about *MathType 5.0* and other products developed by Design *Science*, visit their web site at **www.dessci.com**

> **This article has also appeared on AbilityHub.com**

Tactile Vision Inc. of Oakville, Ontario has some interesting products and services: Raised prints for the blind (both tactile graphics and Braille), greeting cards, calendars, children's books and educational tools. They have a tactile atlas of Canada, maps of the rest of the world and US states. They produce raised prints of designs supplied by customers as well as tactile / low vision customized mapping for school campuses or other facilities. Their website is **www.tactilevisioninc.com**

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