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Ask the STC

PACER Simon Technology Center

COMPUTER Monitor

Organizations Provide Low-cost Computers to Families

By Katrina Weibel, Assistive Technology Specialist

For a child with a disability, having a computer in the home offers several benefits, such as being able to do homework more independently. Technology changes rapidly, however, and families can find it challenging to keep up with the latest computers and software. Fortunately, two organizations provide affordable computers to Minnesota children or adults with disabilities.

Minnesota Computers for Schools (MCFS) – Special Kids

This program provides low-cost refurbished desktop or laptop computers to Minnesota students who are frequently absent from school or have a disability. To participate, a student must submit a referral letter from his or her school and complete the MCFS application form. Once the application is approved, MCFS contacts the family and requests payment for the computer. The computer is shipped to the family's local school, typically within a week of receiving payment, and the family may then take the computer home. Information on how to use the computer is included.

MCFS's computers include Pentium III desktops and laptops running Windows 2000. A software package including Open Office is available. Depending on grant funding and

Having a Home Computer Makes

For some students, having learning disabilities can make school difficult. When one middle-school student contacted PACER's Simon Technology Center (STC) to learn about options that could make school easier, STC staff referred her to Minnesota Computers for Schools. The girl received her low-cost computer this past summer and now has increased confidence.

"Before, our daughter used to spend hours writing out her homework by hand only to have it be illegible for others to read," says her father. "Now, with the computer, she can type her homework and is doing much better in school."

a Difference

the student's location, prices range from \$50 to \$250. If available, modems and printers also may be included. For more information visit www.mncfs.org or call 651-779-2816.

Computers Go Round

This program, associated with United Cerebral Palsy of Central Minnesota, refurbishes used computers donated by individuals and local businesses. Children and adults with disabilities can apply to receive a computer for work, school, or personal use.

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Learn and Have Fun at These Simon Technology Center Workshops

The Simon Technology Center offers free workshops for children, parents, and professionals. You can register for the following workshops by calling 952-838-9000 or visiting www.PACER.org/workshops. All are at PACER Center.

Creation Station: Celebrate Snow

Saturday, Dec. 15, 2007, 10 a.m. to noon

Children of all ages, with and without disabilities, can celebrate the winter season by making a snowperson out of terra cotta pots. Add a personal touch of style with a no-sew fleece scarf.

Technology for Girls: Messy Experiments

Tuesday, Jan. 8, 2008, 6 to 8 p.m.

Does an egg float or sink in water? Can a raisin really dance? Women IBM employees will help middle-school girls with disabilities explore such intriguing questions about science. Be ready to get messy!

Using Assistive Technology in the Classroom: The Student's Perspective

Tuesday, February 26, 2008 6 to 9 p.m.

Parents, professionals, and young adults are invited to learn first-hand how assistive technology can be applied to the curriculum! Four students will discuss and demonstrate how they use text-to-speech, speech-to-text, MP3 players, and more to facilitate reading and writing needs.

Low-cost Computers continued from page 1

Computers are Pentium III or better and run Windows 2000 Pro. Programs include Open Office, AVG antivirus, ewido spyware protection, and some games.

Applicants must have a documented disability, pay a \$150 packaging fee, and pick up the computer and receive a basic training at the office location in St. Cloud. Computers Go



Internet Use for Education and Daily Life

Monday, March 31, 2008, 6 to 9 p.m.

The Internet offers children and youth with disabilities a way to be involved with others their own age and explore the world. This workshop will teach parents and professionals of children and youth with disabilities how to use a search engine; avoid unwanted sites; create a Web page; and successfully create and use a blog. It also includes suggestions for educational Web sites.

Technology for Girls: Forensics - Be a CSI

Tuesday, April 8, 2008, 6 to 8 p.m.

Middle-school girls with disabilities are invited to put on lab coats and explore the science of forensics by fingerprinting, analyzing powders, making teeth impressions, and determining someone's height based on their shoe size. Women IBM employees will help girls test their CSI skills by analyzing data and solving a mock crime.

Round typically serves people living in Benton, Stearns, and Sherburne counties. Minnesotans with disabilities who live in other counties also may apply as long as they meet the above requirements and pay an additional \$50 fee to cover extra costs. For more information or an application, visit www.ucp.org/ucp_localsub.cfm/91/8389/8401 or call 320-253-0765.

Helpful Assistive Technology Resources

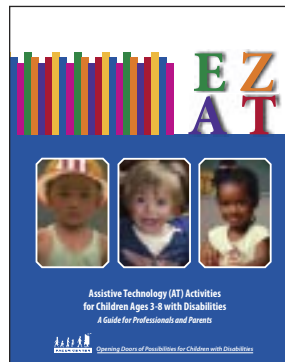
PACER's Simon Technology Center offers several resources for parents and professionals to learn about assistive technology for children and young adults with disabilities. The following items can be ordered by calling 952-838-9000 or visiting www.PACER.org/publications/stc.asp.

Assistive Technology: Making a Different World

This three-minute DVD of the Simon Technology Center shows how assistive technology can help children and adults with disabilities develop and use skills that lead to inclusion at school and in employment. 2005. \$5.

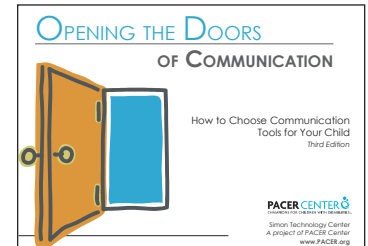
EZ AT Guide: Assistive Technology (AT) Activities for Children Ages 3 - 8 with Disabilities

EZ AT helps professionals and parents encourage AT use among children ages 3 to 8. This 60-page guide includes more than 40 entertaining activities that promote the use of AT in inclusive settings. EZ AT also includes information about popular assistive technology devices, disability organizations, and vendor resources. 2005. \$10.



Opening the Doors to Communication

This booklet describes communication tools for children. It covers a range of low-tech and high-tech devices, strategies for selecting and implementing communication devices, and a grid of products with descriptions, features, and manufacturers. Updated 2007. Free to download or \$3 if mailed.



Universally Designed Technology in Schools

This online training promotes inclusion and equitable access for students with different abilities. It covers electronic texts, multimedia accessibility, Web site usage, and the implementation of accessible technology in K-12 schools. It includes a five-minute video explaining the benefits of universal design. 2006. Online training and video are free at www.PACER.org/stc/udt. DVD version is \$15.

Search Tool — A.T. Finder

The A.T. Finder is an online catalog with thousands of library items available to STC Library members. The items are listed in easy-to-understand categories to help users quickly find the item or materials they seek. Categories and sub-categories are:

- **Communication** - Includes alternative and augmentative communication devices and software programs to encourage speech.
- **Computer Access** - Includes adaptive mice, alternative keyboards, interface methods, and switches.
- **Environmental Modifications** - Includes environmental control units for the home and daily living aids.
- **Learning/Cognitive** - Includes educational and curriculum-based items in the areas of early childhood (birth-6), math/problem solving, reading/language, science, social studies/geography, writing/utility tools, living skills, cause and effect, and keyboarding.



- **Recreation** - Includes activity-based programs and devices focusing on art, music, arcade games, and toys.

The A.T. Finder also allows users to search using a keyword or based on specialization including blind or low vision, hearing impairments, switch and touch-window users, and multiple languages.

Assistive Technology Accommodations for Statewide Testing

By Annette Cerreta, Assistive Technology Specialist

Statewide education testing helps schools and families determine how well students have met essential academic standards. All students in K-12 public schools must participate in statewide testing.

Most students can partake in statewide assessments under standard testing conditions. Some students with disabilities, however, require accommodations to have equitable access to statewide tests.

who is easily distracted or additional time for a student who has dyslexia.

Selecting Appropriate Accommodations for Statewide Testing

The Individualized Education Program (IEP) or Section 504 Plan team is responsible for determining which testing accommodations are needed by a student who receives special education services. Accommodations should fit the student's particular learning style and needs and be routinely provided for the student during classroom instruction and assessments. Necessary accommodations should be written into a student's IEP or 504 Plan.

Assistive Technology as an Accommodation

Assistive technology (AT) is one type of accommodation provided to eligible students. It is defined by the Individuals with Disabilities Education Act (IDEA 2004) as "any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of a child with a disability."

What are Accommodations?

Accommodations are variations in test presentation, response, setting, and timing that allow students with disabilities to take the same test as other students. Testing accommodations do not change the content or validity of the test; they simply level the playing field for students who are unable to take tests under standard testing conditions.

Examples of testing accommodations include such things as a Braille version of a test for a student who is blind or a scribe for a student who is unable to write. Accommodations might also include a quiet testing room for a student

AT Accommodations May Include Many Devices



A trackball is an alternative mouse for students with motor skills difficulties.



A digital voice recorder can be used to record a student's test answers.



This customized keyboard is oversized and presents letters in alphabetical order instead of the standard keyboard layout.



A portable electronic magnifier enlarges text to help students who have visual impairments.

Meet McKenzie

AT accommodations for eligible students taking Minnesota statewide assessments may include such things as:

- AT hardware and software (i.e., alternative mice and keyboards or text-to-speech programs for computer-delivered tests)
- Braille note-taking devices
- Low-vision aids (i.e., a magnifying glass or an electronic magnifier)
- Tape or digital recorders
- Voice-activated computer
- Word prediction and spelling checkers under certain circumstances
- Word processors, computers, or similar computerized devices

Students who use AT for statewide testing should have experience using the technology routinely in the classroom setting and should be competent in its use. For more information about testing accommodations and assistive technology in Minnesota, contact:

Minnesota Department of Education

1500 Hwy. 36 W.

Roseville, MN 55113-4266

Phone: 651-582-8200

Web site: <http://education.state.mn.us/MDE>

You also may refer to the “Procedures Manual for Minnesota Assessments” online at http://education.state.mn.us/MDE/Accountability_Programs/Assessment_and_Testing/DAC_Corner/Policies_Procedures_Guidelines/index.html.

If you do not live in Minnesota, you can find information on AT and other accommodations for students by contacting your state’s department of education.

McKenzie Erickson, a recent graduate of Southwest High School in Minneapolis, has dyslexia. Her disability makes reading, writing, and spelling difficult for her. While in high school, McKenzie used a text-reading program to help her complete long reading assignments and take some of her tests. The program helped her focus on comprehension and the content of the text rather than on decoding the words. McKenzie also had other accommodations for school and test-taking, such as extended test time and math tests on tape.

McKenzie and her mother, Bette, had to advocate for her to receive these accommodations at school, and it paid off. She graduated with honors and was accepted at several colleges.

“It’s important that students recognize how the accommodations can make a difference in their academic performance and impact their future choices,” McKenzie says. “It takes patience and some extra work to advocate for the accommodations you need and to manage accommodation services, but it is worth it.”

McKenzie had to overcome embarrassment at needing accommodations and sometimes had to deal with teasing about them. Because her disability wasn’t visible, some classmates didn’t understand why she would need an accommodation.

Bette Erickson notes that to advocate effectively, parents need to know about their child’s rights to an education under the federal Individuals with Disabilities Education Act (IDEA 2004). She also suggests that parents provide educators with clear documentation of the child’s disability and data that shows that accommodations are necessary.



Both McKenzie and her mother add that in recent years, schools and colleges have become more open to offering testing accommodations for students with disabilities. McKenzie, for example, was able to take a college entrance exam with the test provided on tape, extended test time, and permission to write directly on the test instead of on a separate form. The year before, she had requested permission

to use a spell checker, but her request was denied. The testing company later notified her that its policy had changed and told her that she could retake the test with a spell checker if she chose to do so.

iCommunicator™: Video Sign Language Increases Comprehension for Students with Disabilities

By Meghan Kunz, Assistive Technology Specialist

Children who are deaf, hard of hearing, have a speech impairment, or have reading and writing disabilities often have trouble learning to read, write, and communicate. The challenges these children face can affect their literacy development. The iCommunicator™ by Interactive Solutions, Inc., promotes two-way communication and can increase comprehension of text and spoken words.

Designed for Windows computers, this software program can help students increase literacy skills and communicate more effectively and independently at home, school, and the community. The iCommunicator™ features a multisensory approach. Using visual prompts, it helps children increase the rate at which they comprehend speech and improve their reading and language skills.

How It Works

The iCommunicator™ can be used in the classroom or in daily interactions to compensate for a hearing or speech difficulty, or to provide auditory feedback while reading or

writing. It provides real-time captioning in three formats: speech to text, text to computer-generated speech, and text and voice to video sign language.

Speech to Text

iCommunicator™ uses Dragon NaturallySpeaking®, a voice-recognition technology, to instantly convert speech to text on the user's computer screen. Thanks to a special microphone that minimizes distracting background noises, the voice of the person who is speaking is translated into text on the user's computer screen. The user can then read the message or save it for later use.

Text to Computer-generated Speech

For students who cannot speak or whose articulation is not easily understood, the iCommunicator™ can act as their voice and help them to communicate independently. With the text to computer-generated speech component, the student can ask or answer questions independently by typing into the computer's keyboard and hitting the speak key.

Outside of school, the program can be used for everyday communication interactions. The software saves preprogrammed, quick-fire messages for easy retrieval and fast communication. The text to computer-generated speech can also be used for students who need additional auditory feedback when reading or writing. Any message, either spoken or typed, can be read aloud to the user. This feature can help students self-correct their work while writing or provide assistance in comprehending notes or a message.

Text and Voice to Video Sign Language

For students who use sign language as a primary means of communication, the text and voice to video sign language component can be useful. The person who wants to communi-

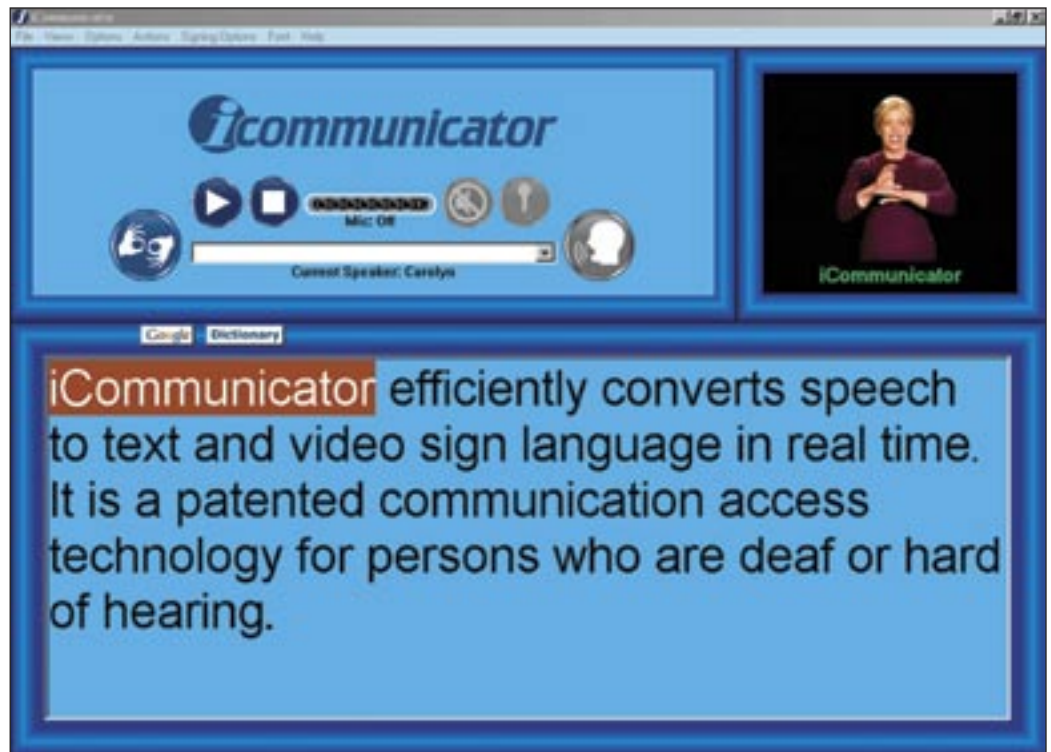


cate with the student speaks into a microphone, and the message is automatically converted to both text and video sign language on the student's computer screen. The user can replay the message in sign language, text, or both formats. When reading through text from either an incoming message or another application, the student can highlight a word and have it signed.

Features of the Program

iCommunicator™ can be customized to fit the user's preferences. For example, the user could have the program convert the teacher's speech to video sign language only, text only, or both video sign language and text. The program offers a choice of male or female voice; all speech parameters, including pitch and speed, can be adjusted. The program includes a Y-cable so users who are hard of hearing can directly connect peripheral hearing devices such as hearing aids, FM systems, and cochlear implant processors to the computer for easy listening. For users who have vision impairments, the background color, font color, font size, font style, size, and placement of signing window can all be customized.

The iCommunicator's™ video sign language component uses American Sign Language in declarative sentence structure (subject + verb + object) to improve the relationship between spoken, written, and signed words. As the speaker enters a spoken or typed message, the program immediately translates it to video sign language. The program recognizes



Pictured above is a scene from the computer software program iCommunicator. This program offers speech to text, text to computer-generated speech, and text or speech to video sign language.

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more than 30,000 words; words that are not recognized are finger spelled. If the user reads an unfamiliar word, he or she can highlight the term and have it signed or look the word up in the built-in dictionary or thesaurus. To further enhance comprehension, users working on the Internet or in e-mail, word processing documents, or other software programs can highlight sections, select the iText tool, and have the text read aloud, signed, or saved as text for later reference.

The iCommunicator™ can be an ideal tool for the classroom. Incoming messages can be displayed simultaneously on multiple computers, as long as they all have a valid software license.

Information about the iCommunicator™ and other software and tools for assistive technology are available as part of the Simon Technology Center's software library.

Contact the Simon Technology Center at:

952-838-9000 or stc@PACER.org.

Product information about the iCommunicator™ is available at www.mycommunicator.com.

Do You Have Technology Questions? Ask Us!

In 2006, the Simon Technology Center (STC) answered more than 3,600 phone calls and e-mails from parents, students, and professionals. If you have questions on assistive technology (AT) for individuals with disabilities, contact the STC's team of AT specialists at 952-838-9000 or stc@PACER.org. It's free!



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CHAMPIONS FOR CHILDREN WITH DISABILITIES™

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