TECH-NJ 2009

Assistive Technology for People with Disabilities

The College of New Jersey, School of Education
Department of Special Education, Language and Literacy Volume 20

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Alternate Format Center for New Jersey Colleges

The New Jersey Alternate Format Center, a project of the Adaptive Technology Center for New Jersey Colleges, was established to provide college students who have eligible disabilities timely access to textbooks in alternate formats. College students who are enrolled in New Jersey colleges and whose disabilities prevent them from accessing printed materials may use the services of the center. Obtaining accessible textbooks will help these students complete their academic work at the same time and in the same fashion as their peers.

Differences Between K-12 and Higher Education

The most recent reauthorization of IDEA (2004) recognized a national problem. Many students who have disabilities that interfere with reading and/or comprehending text were not being provided with access to their textbooks in a timely fashion. This lack of access added a serious obstacle to students' full participation in learning activities and interfered with their academic success. To address this problem, IDEA 2004 added a provision that requires publishers of K-12 textbooks to provide source files of new K-12 textbooks to the newly-established National Instructional Materials Access Center (NIMAC). The source files must follow a particular standard called the National Instructional Materials Accessibility Standard (NIMAS). When the NIMAC is fully functioning, state and local education agencies will be able to request textbook files from the NIMAC and convert them to alternate-format versions of textbooks for their students.

In higher education, however, no such requirement exists. College students who are blind, have learning disabilities, or have physical disabilities that prevent them from holding a book or turning pages, have to scramble to find accessible books. Some students are able to borrow some titles from Recording for the Blind and Dyslexic (RFB&D) or the American Printing House for the Blind. Some titles are available from Bookshare.org, Project Gutenberg, or other Internet sites. Occasionally a publisher will provide an electronic version of a textbook. Some students use a scan/read program such as *WYNN* or *Kurzweil 3000* to scan their books and read them aloud. This is easily done for a few pages of reading material, but the process is extremely time consuming for entire books.

A Solution for NJ College Students

With funding from the New Jersey Commission on Higher Education, the Adaptive Technology Center for New Jersey Colleges embarked on a pilot project last year and developed the New Jersey Alternate Format Center. Using a high-speed scanner that automatically feeds the pages and scans both sides of a page at once, center staff are able to convert print to electronic files quickly. They then edit the electronic files for accuracy, organize and label pictures, charts and graphs, and then convert the files to student-ready files in the specific format requested by the student. Six different file types can be created at the center.

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TECH-NJ is written by students, staff and faculty in the Department of Special Education, Language and Literacy at The College of New Jersey. It is designed to support professionals, parents, and computer-users in their efforts to use technology to improve our schools and to enhance the lives of people with disabilities. In order to facilitate local networking, emphasis is placed on resources and innovative practices in and around the New Jersey region.

TECH-NJ is supported by the School of Education and the Department of Special Education, Language and Literacy at The College of New Jersey, and the New Jersey Commission on Higher Education Special Needs Grant Program.

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T E C H - N J 2009

Assistive Technology for People with Disabilities
Volume 20

EDITORIAL

What's new in assistive technology? This 2009 issue of **TECH-NJ** highlights two of the latest developments: 1) improved access to books in alternate formats for students whose disabilities prevent them from reading or understanding printed text; and 2) portable solutions for a variety of applications.

Alternate Formats: Four articles in this **TECH-NJ** issue focus on alternate formats. In the cover story, which is on the New Jersey Alternate Format Center at The College of New Jersey, alternate formats are explained, as are the devices and software needed to access them. The User Profile describes how providing textbooks in alternate formats makes a real difference in the life of Dylan Brown, a 10-year-old boy at Somerdale Park School. This topic is also addressed in updates on Bookshare.org, the largest – and now free – provider of books in alternate formats, and Recording for the Blind and Dyslexic (RFB&D), which has recently completed its conversion from books-on-tape to several types of digital recordings. Readers will want to take note of these resources so that their students with print disabilities can gain access to the curriculum.

Portable Solutions: A quick glance at the new products featured in this issue of **TECH-NJ** reveals that small and lightweight are the qualities in demand these days. No one wants to schlep around a 20 lb. video magnifier anymore, now that miniaturization has become affordable. And why pay thousands of dollars for a separate scan/read device when a new gadget is available that combines scan/read technology with a commercial cell phone? (See page 15 for details on the *kReader Mobile*.) In a similar vein, software publishers are beginning to provide their programs in formats other than CDs. Some are issuing flash drive versions of their programs that will work on any compatible computer without installation. This new development should help students who need specialized applications like screen magnification on more than one computer, and should also resolve installation problems that result from the need for schools to protect their networks. Crick Software has opted to provide its new *WriteOnline* program as a web-based subscription. Among the advantages of this arrangement is that students can access the program from any computer that has an Internet connection, whether it is in a classroom, in the library, or at home. We expect that in the coming year more assistive technology producers will offer these kind of portable formats, thus enabling greater access to assistive technology for students with disabilities.

A. G. D.

USER PROFILE

Alternate Format Provides Access to Curriculum for Elementary School Student

by Marge Walsh, MS, OT

Like most ten-year-old boys, Dylan Brown speaks a different language with his tech savvy peers, complete with sound effects and animation. He blasts through asteroids hurling through space on his laptop. He talks of DragonFable, dual discs, high scores, next levels, and the release dates for the newest Sony PlayStation games. Currently a fifth grader, he zips through the halls of Somerdale Park

Elementary School driving his Permobil power chair. His mobility is significantly compromised due to contractures from his physical disability, but he can maneuver his chair skillfully and "stop on a dime" with the use of a small cork ball that he controls with lip and chin movements.

The bell rings, recess is over and it's time to get back to class. Mrs. Butler, Dylan's teacher, tells the class it's time to take out their math books. With a few clicks of the mouse, Dylan is on page 55 ready to work. Here is a good place to begin the story.

A New Kid in Town

For the team at Somerdale Park School our journey with Dylan began the summer before third grade when he arrived with his parents to tour the school. Dylan had been diagnosed with congenital arthrogryposis shortly after he was born and had undergone multiple surgeries and rehabilitative procedures. Also arriving with Dylan that summer day were a Touch Turner page-turner, Lackey chair, Winsford feeder, and a variety of mouth sticks with different attachments. Although the school district had purchased these necessary items, none of them had come with instructions or guidelines. The team tried to implement the IEP that had been provided by the previous district, but our efforts were not successful. The 40-pound page-turner rarely worked correctly, often turning many pages at once or jamming up completely. Dylan had to rely on his support person, Mrs. Branigan, to retrieve his books, set them up, put the mouth stick in his mouth, locate and turn pages, and then catch him up with the teacher's directions which he usually had missed as they readied him for the work.

In third and fourth grade, as the demands of writing, editing, and revising daily papers increased and became more time consuming, Dylan began to slip behind his peers. The constant "catch up" placed undue demands upon him. Once one problem was addressed and solved, another immediately presented itself. The team tried providing him with the classroom's desktop computer, but the setup required him to face the wall with his back to his peers and the teacher. In addition, Dylan could copy only eight words per minute when using a mouth stick, page holder, and the assistance of his support person.

Increased Classroom Demands Require Technology Update

After my first occupational therapy session with Dylan I emailed his parents and learned that at home he used a *SmartNav*, a hands-free mouse (NaturalPoint) for gaming and mouse control. By positioning the mouse under his right big toe or a jellybean switch (AbleNet) by his hand he could word process or play video games on the computer. This seemed to be a much better solution than the mouth stick he was struggling with at school. Now all we had to do was find a computer new enough to run the *SmartNav*.

Several phone calls later, I was on my way to the local Educational Training and Technology Center where I was able to borrow a laptop with Windows XP installed. Finally, I had the opportunity to put in place all the technology I had been learning about over the years. After a few weeks of exploring the technology through a trial and error approach, we ordered a Dell Inspiron 1510 laptop, *SmartNav*, and a HP 4150 all-in-one scanner. Dylan quickly learned how to use the on-screen keyboard with his *SmartNav* and progressed to typing 20 words per minute.

SmartNav Hands-free Mouse with On-screen Keyboard

Dylan wears the *SmartNav* reflective dot on his forehead, the *SmartNav* camera is mounted in the fold of the laptop between the screen and keyboard, and the mouse is secured with a custom splint to his right footrest. After moving his head to place the cursor on the desired letter on the on-screen keyboard, he selects it by right clicking with the big toe of his right foot. His speed improved with the use of macros and *WordQ* (QuillSoft) word prediction software.

The on-screen keyboard that Dylan accesses using the *SmartNav* hands-free mouse.

The scanner allowed us to scan individual pages for homework and save them to a jump drive or memory stick that went back and forth from school to home.

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Dylan Brown

(continued from page 3)

An extra set of books was provided for home use to reduce the need to transport them, and all software being used at school was provided for his home computer.

Scanning was the easy part, converting the text to OCR to allow Dylan to input

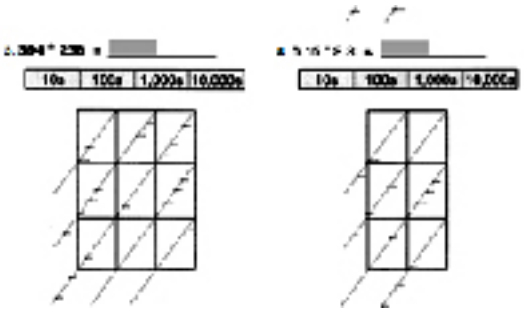
Scanning was the easy part, converting the text to OCR to allow Dylan to input text was another story.

text was another story. Tom Caine of Tom Caine and Associates provided a trial copy of *TestTalker* (Freedom Scientific Learning Systems Group) which enabled us to insert text boxes on the scanned pages into which Dylan would type. For papers that required simple responses, like a fill-in-the-blanks, this system worked wonderfully. However, complicated pages required a time consuming process of setting up the page, cropping out unnecessary graphics, adding text boxes, and keeping the integrity of the paper so that it remained meaningful.

Math Presents a "Problem"

For a few weeks it was relatively smooth sailing, until *Everyday Math* created a storm! *Everyday Math* requires lattices, using compasses, and 100 count blocks. Making these accessible to Dylan presented new challenges. I tried speaking with the regional and national contacts of every textbook series that my district used. Some of the books were out of print and some were older versions and were not yet available through the National Instructional Materials Access Center (NIMAC). I tried everything and everyone to obtain electronic versions of the books. I consulted with some of the best minds in technology, software developers, etc., but we were still at a stand still. When I spoke with the representative from *Everyday Math* he stated that he could provide an alternate format of the text on CD. However it turned out to be in html format, and the files lacked the grids, graphs, and lattices necessary for understanding this unique method of math instruction. I continued to search for solutions, reviewing presentations from Closing the Gap and RESNA conferences, blogs, and listservs. Along the way I found Bookshare.org. But the biggest find was an article in the **TECH-NJ 2008** newsletter that mentioned a pilot project that involved the scanning of textbooks.

I immediately contacted Amy Dell, director of the Adaptive Technology Center for New Jersey Colleges, offering Dylan's textbook, workbooks and other materials for the project to use as practice. The project was in its early exploratory/problem-solving phase at that time and needed materials to test their procedures, so the staff agreed to try to solve Dylan's access issues. Over the summer of 2008 the Adaptive Technology Center team of Tammy Cordwell, Allison Schauer and Rana Smith worked their magic. We had numerous discussions to determine what was required of the district based on Dylan's IEP, and the Center's staff was able to come up with a reasonable accommodation for him.



A sample *Everyday Math* worksheet that was scanned, converted into alternative format, and edited to allow Dylan to enter answers independently.

They provided Dylan with a CD containing scanned and edited copies of each book used in his fifth grade class. The contents of each book, journal and workbook, including math, science, social studies, and language arts, were placed in individual folders and organized by themes or chapters. Dylan is now able to access any schoolwork or reading assignment as they have all been downloaded onto the hard drives of both his laptop and home computers.

All of the books, journals, and workbooks that Dylan uses in fifth grade were scanned and edited. The electronic files were organized by themes or chapters. Dylan is now able to access any schoolwork or reading assignment on both his laptop and home computers.

Back to page 55

So now let's step back into the classroom and watch Dylan "open his book." What a difference technology makes! Dylan maneuvers himself up to his desk where his Dell laptop is waiting open and ready for him to access. His support person, Jaime Lupinetti, has placed the charged laptop in a ready position with the memory stick in place. Dylan opens his first screen, revealing folders with each book that had been scanned. He uses his *SmartNav* system to place the cursor and select the math folder; with one click he is now "in the book;" a few more clicks with the mouse scrolls him to page 55, another click and he is superimposing a protractor over the scanned page and measuring the angle using *SmartBoard* technology tools. Looking around we can see that some of his peers are still searching in their desks for the books while Dylan is waiting, ready to learn!

Marge Walsh is an occupational therapist in the Somerdale School District in New Jersey.

AltFormat Center for NJ Colleges

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Available File Types

- **DAISY**: DAISY stands for Digital Accessible Information SYstem. DAISY books produced by the New Jersey Alternate Format Center offer full text and synchronized audio with a synthesized voice. DAISY books are easily navigated and can be searched by chapter, word, bookmark, or section heading. They can be played on a computer using specialized software programs or on portable DAISY-compatible playback devices.

- **MP3**: This is an audio-only format that can be played on a portable device that plays MP3 files or on a computer with software that plays MP3 files. These files are not searchable. Usually a book in MP3 format will have a separate MP3 file for each chapter.

- **Text File**: A text file can be searched easily and retains formatting. Tables and charts are displayed as in original text. This file can be read by screen reading programs and text-to-speech programs, and can be displayed on portable devices such as a PDA.

- **PDF Files:** These files are scanned as text but cannot be edited. They can be opened with Adobe Acrobat Reader. A text-to-speech program is needed to read the files aloud.

- **Large Print:** Documents in larger font sizes can be created using the styles and colors requested by a student who has a visual impairment. Images are placed appropriately in the document, and page numbers are assigned consistent with those of the original document.

- **BRF (Braille Format):** BRF files can be opened and read by a Braille device such as a BrailleNote. These files may need further editing to be embossed and read as a hard copy.

The chart below lists the kinds of alternate formats that can be created, the corresponding file format, and the device needed to access the file.

To solve the problem of distributing the alternate format files to students around the state, the center launched a website: www.njaltformat.org. Students who have followed the process below will be provided with a user name and password to log in to this secure website. They will then be able to download the alternate format files.

How Does the NJ AltFormat Center Work?

1. A New Jersey college student must first contact the Disability Support Office at the New Jersey college or university s/he is attending. This should be done at least eight weeks before the alternate format is needed.

2. The Disability Support Office or the student checks Bookshare.org, Recording for the Blind and Dyslexic (RFB&D), the Internet Public Library, Project Gutenberg, and the textbook publisher to determine if the book is already available in alternative format.

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Alternate Format	File Types	Playback Device
Electronic text	.doc (*MS Word*) .txt (plain text) .kes (Kurzweil) .wyn (WYNN)	computer with text-to-speech computer with *Kurzweil* computer with *WYNN*
DAISY (navigable)	text (Bookshare) synchronized audio and text (NJ AltFormat Center)	*ClassMate Reader* computer with *Dolphin EasyReader*
MP3 (not navigable)	audio	MP3 players
Large print	.doc	computer with *Microsoft Word*
Braille format	.brf	computer or notetaker with refreshable Braille display

Available Alternate Formats and Playback Options

AltFormat Center for NJ Colleges

(continued from page 5)

3. The Disability Support Office sends a College AltFormat Agreement by mail, email or fax.

4. The student sends a Student AltFormat Agreement by mail, email or fax.

5. The staff of the NJ AltFormat Center work with the student's Disability Support Office to determine the appropriate alternate format.

6. The Disability Support Office provides a copy of the book to be scanned to the New Jersey AltFormat Center. The book must be in excellent condition to ensure accuracy of converted files. The cover and binding will be removed from the book in order for it to be fed through the high-speed scanner.

7. The book will be scanned, edited, and converted to the appropriate file format by NJ AltFormat Center staff. This process might take two weeks or more depending on the nature of the text and/or the demands for the Center's services.

8. When the conversion is complete, the student will receive a username and password to log-in to the secure website (www.njaltformat.org/login.html) to download the file(s).

9. If requested, the original book will be comb-bound and returned to the student.

10. After downloading the file(s), the student can access the book in one of several ways, depending on the file format. (See chart on page 5.)

For Additional Information:
www.njaltformat.org

The Adaptive Technology Center for New Jersey Colleges at The College of New Jersey

Funded by the New Jersey Commission on Higher Education's Special Needs Grant Program, the Adaptive Technology Center for New Jersey Colleges provides access to appropriate technology tools to New Jersey college students who have disabilities. The center disseminates information on assistive technology, operates an adaptive technology lending program, and provides outreach and training to faculty, staff and students at New Jersey colleges and universities.

The Adaptive Technology Center for New Jersey Colleges is one of several regional centers supported by the Commission on Higher Education. The other centers, located at selected community colleges and four-year colleges around the state, focus on best practices for college students who are deaf/hard of hearing or who have learning disabilities. Go to http://www.state.nj.us/highereducation/grants/special_needs.htm for a complete list of all the regional centers.

Resources from http://adaptivetech.tcnj.edu

- Links to all New Jersey Special Needs Regional Centers
- Downloadable copy of the *2009 NJ Higher Education Disability Support Directory*
- Information about the Equipment Lending Program for NJ college students with disabilities
- Assistive Technology Resource Sheets:

  Accessible Web Page Design Guidelines
  Assistive Technology Tools for Transition from High School to College
  Converting Electronic Text into Audio Format
  Electronic Text Internet Sites
  Internet Resources to Support Students with Disabilities Through the Use of Technology
  Technology Tools for Students with Learning Disabilities
  Technology Tools for Students Who are Blind or Visually Impaired
  Technology Tools for Students Who are Deaf or Hard of Hearing
  Using What You Have: Customization Features in MS Word for Windows 2007 for Students who Struggle with Reading and Writing

- Online copies of **TECH-NJ**
- Information about the New Jersey AltFormat Center
- Product support information for assistive technology products commonly used by college students with disabilities
- Links to useful assistive technology websites.

Text Messaging and Video Relay: Innovative Communication Options

by Kimberly A. Ahrens

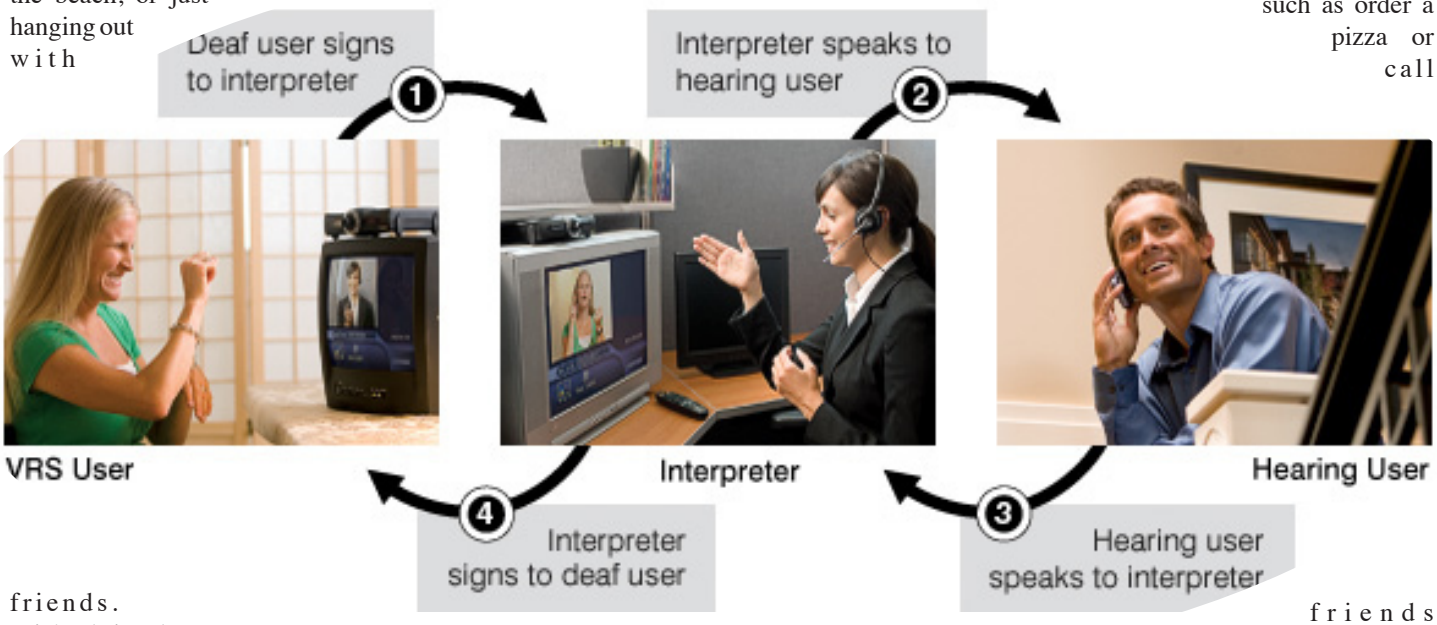
Michael Lawson was diagnosed with bilateral sensorineural hearing loss at 16 months of age. Living close to the Jersey shore all his life, he loves to be home over the summer so he can take advantage of its proximity to the water. He loves going to the boardwalk, running on the beach, or just hanging out with friends. Michael is also an avid soccer player. He played four years of varsity soccer while attending the National Technical Institute for the Deaf at the Rochester Institute of Technology pursing his BS in Social Work. He has traveled all over the world playing soccer for the USA Deaf Soccer Team, and the team recently participated in the first ever Deaf World Cup tournament in Patras, Greece. During his world travels, he went bungee jumping and loves showing a video of his jumps to anyone who will watch.

Michael's primary means of communication is American Sign Language (ASL). When he is not in the presence of another sign language user or when he wants to communicate with someone at a distance, he has found two kinds of technology to be indispensable: a cellphone called the T-Mobile Sidekick (www.sidekick.com/family.aspx) and a video phone.

T-Mobile Sidekick for Texting and SIPRelay

When he is on the go, Michael relies on his T-Mobile Sidekick. With its full QWERTY keyboard and 2.6 inch display, he can easily send and receive text messages, just like any cell phone user.

The added advantage for Michael is that he can use text messaging to communicate with a hearing person if he is in a situation without a sign language interpreter, such as at a restaurant, in a store, or any other public place. Additionally, the Sidekick can use a Sorenson (www.sorensonvrs.com) program called SIPRelay (www.siprelay.com/what_is.aspx) which is a free download that acts as a middleman between Michael and a hearing person. Michael connects to the SIPRelay server on his Sidekick, types a text message and the phone number of the person he want to reach, and an operator calls the number and reads the message. Michael uses this method to do things such as order a pizza or call friends or family.



The T-Mobile Sidekick with full QWERTY keyboard and 2.6" display.

VP-200 Video Phone with Video Relay Service

A second piece of technology that Michael uses is a video phone called the VP-200 which works with the Sorenson Video Relay Service (SRVS). This service offers similar, but better, services than the SIPRelay. The SVRS connects to a regular television set and uses a high-speed internet connection to relay video. Michael uses the VP-200 to connect to a sign language interpreter who then translates his signs orally over the phone for the intended hearing person. This is especially helpful for Michael when he is at home and wants to communicate with a hearing person without texting. Additionally, Michael can contact

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Bookshare.org Update

Bookshare is the world's largest accessible online library for people with print disabilities. The Bookshare library provides qualified members legal access to more than 43,000 books and 150 periodicals that can be converted to Braille, large print or synthetic speech. People with print disabilities include readers who are blind, or have impaired vision, learning disabilities or a physical disability that prevents them from reading a traditional printed book. To meet the requirements of copyright law and Bookshare's agreements with publishers and authors, Bookshare members must provide proof of a qualifying print disability. The Bookshare library is located at www.bookshare.org.

Originally created in 2002 by a community of volunteers, Bookshare is operated by Benetech, a nonprofit technology company based in Palo Alto, California. In 2007, the Office of Special Education Programs (OSEP) at the U.S. Department of Education awarded Bookshare $32 million over five years to expand the availability of accessible digital books and the software for reading those books. This funding gives all qualified disabled students in the U.S., regardless of age, access to the library without charge. Bookshare members who are not students pay a $25 set-up fee and a $50 annual subscription for unlimited access.

Funding from the U.S. Department of Education gives all qualified disabled students in the U.S., regardless of age, access to the Bookshare library without charge.

Since the OSEP award, hundreds of schools have signed up their qualified students for Bookshare, and many parents have registered their disabled children for individual Bookshare memberships. The Bookshare staff works with state education agencies and schools to get digital books to students in a timely manner. Bookshare is now adding 1,000 books and textbooks a month to its collection and expects to offer 100,000 new educational books and serve hundreds of thousands of users by 2012.

Bookshare's digital texts allow readers to easily navigate to specific pages or search for an individual word. Accessible textbooks offered by Bookshare help students with print disabilities keep up with their classmates and study independently. The collection also includes a wide range of general fiction, nonfiction, children's literature, educational books and bestsellers.

The New Bookshare Library

In 2008, Bookshare completely rebuilt its online library of accessible books and expanded its collection of textbooks. Bookshare has now relaunched with state-of-the-art web technology that simplifies the reading experience. Improvements in accessibility and ease of use now make it easier for individuals to get the books they need quickly. The new Bookshare library implements many of the current best practices for website accessibility and puts most features of the library within two or three clicks. New accessibility features include enhanced navigation, membership management and account sign-up tools, streamlined search, and additional options for Braille readers.

Accessibility Improvements

- **Heading Level Navigation:** All website pages are structured with headings and subheadings to make it easier for people using ebook readers to navigate from section to section. Ebook readers are software tools that read text on the screen in a synthesized voice.

- **Skip-to-Main-Content Link:** Each page has a "Skip to Main Content" link for ebook readers, allowing members to skip all the navigation links at the top of the page and go straight to the content. Pressing the Tab key takes Bookshare members straight to the main content, and pressing Enter prompts the ebook reader to begin reading the content.

The new Bookshare library implements current best practices for website accessibility and puts most features of the library within two or three mouse clicks.

- **Improved Navigation:** The new library uses drop down menus for the main navigation, eliminating long lists of links. These drop down menus are recognized as headings by ebook readers, allowing members to easily navigate from heading to heading, and through sections of content. Those using the *Jaws* screen reader can press the "3" key to go to each content area, and the down arrow to move through the subsections in that area. .

- **Built-in Support for People with Low Vision:** New page design allows members to zoom in or out on a page with all items on the page scaling accordingly, even images. Members with low vision can enlarge the font and images to a size that is comfortable and still maintain the integrity of the page and its contents.

- **Customization of Braille Line Length:** When Bookshare members download a book in BRF (digital Braille) format, they can now vary the number of characters on a line to match the display on their Braille device. Members can go to My Account, select the Preferences tab and set the line length. This setting will remain in place for all books downloaded until members change it. Customizable line lengths also help with production of embossed Braille.

- **Tables Used Only for Tabular Data:** Tables are not used for page layout, but only for data that is best understood in columns and rows.

Enhanced Search Features

The new Bookshare library offers several ways to search for books. Searching for

a book or periodical now requires just two clicks. New search features include:

- **Quick Search:** This streamlined search page is much simpler and easier to use and works well with ebook readers: -There is no top navigation or header to skip over to reach the content. -Search results are displayed in a simple Google-like format that offers quick access to the download links and the book information. -Members can bookmark the search page and come back to it whenever they want to find a book quickly.

- **Standard Search:** Members can type a title or author in the search field at the top of any page on the Bookshare website. Results are displayed as a table or a list and can be sorted by title or author. Members can also narrow their search with the "Relevant Authors" field, which displays the authors who appear most often in the results.

- **Advanced Search:** Members can click Advanced Search for a full-fledged search page that allows them to search by title, author, ISBN, book type, international availability, book quality and/or language. Members can sort and filter the results and display them in a table or list view.

Improved Book Quality

Bookshare is committed to maintaining the highest quality in its library of accessible books and actively solicits quality reports from members, including teachers and students. The Bookshare staff is in the process of rescanning all books that do not meet the "Excellent" quality criterion of 99.9% character accuracy or above. If members find a book with significant errors or one which does not match the quality label, they can submit a quality report by using the "Report book quality issue" link on the specific book information page. Bookshare will fix errors as quickly as possible and replace the book in the library. NIMAC-sourced textbooks will be completed within a week. Educational and general reading books will be fixed as soon as possible.

Unzip Instead of Unpack

Bookshare has upgraded its compression/encryption technology to use standard Zip compression. This simplifies the process of downloading books. Users no longer have to download and install the Unpack Tool.

New DAISY Reader Software

Bookshare now offers two complimentary software applications known as ebook readers that read text in synthetic speech for members with visual impairments and learning disabilities.

- *Victor Reader Soft Bookshare Edition*. This new and improved ebook reader from HumanWare is easier to use and includes more functionality. It is designed for people who are blind or have low vision. If members use Firefox as their web browser, they can open books directly with *Victor Reader Soft Bookshare Edition* as they download them.

- *READ:OutLoud Bookshare Edition*. The new version of this DAISY reader from Don Johnston is designed specifically for people with learning disabilities and features word spotlighting, eHighlighters, a browser, an online dictionary, reading guides and note-taking capability. Once members have downloaded a book, they can open it directly from within *READ:OutLoud Bookshare Edition*.

Bookshare and NIMAC Partner to Ease Electronic Textbook Access for K-12

There is a simple new NIMAC process that enables Bookshare to provide NIMAC books to students in a week or less at no cost.

Registration Process

NIMAC state coordinators need to complete a coordination agreement that names Bookshare as one of their Authorized Users (AU) at the NIMAC. The form is available online at the NIMAC's website at www.nimac.us/2009_NIMAC_COORD.DOC.

When NIMAC receives the paperwork naming Bookshare as an AU, information will be sent to all educators in the requestor's jurisdiction who are Bookshare members, as well as appropriate personnel in all districts, regardless of Bookshare membership.

Requesting Books

When a K-12 student needs a book:

1. Any public school staff person (including classroom teachers, special educators and librarians) can send an email to nimacrequest@bookshare.org requesting the book after confirming that it's in the NIMAC at: http://nimac.us. Bookshare needs to know the title, author, publisher and/or ISBN number.
2. If it is in the NIMAC, Bookshare will download the book, convert it into accessible digital text formats (DAISY and BRF) within a week, and let the requestor know the book is in Bookshare.
3. The requestor logs into their Bookshare account and downloads the book for a qualified student with an IEP. Two different accessible software packages that read the books are also available free for download.

TRAINING RESOURCES

Atomic Learning: Web-Based Technology Training

by Rana M. Smith

Atomic Learning is a unique resource for accessing training on a wide range of software programs. This web-based system allows users to watch tutorials from any computer on which they have access to the Internet, 24 hours a day. The short and informative training videos range in length from one to three minutes. They can be used by people who would like their software questions answered immediately, as well as by individuals who are interested in increasing their technical skills. The videos are concise, yet detailed enough to give users quick and accurate answers to their software questions.

The *Atomic Learning* videos are organized into two collections: the Technology Skills Collection and the Assistive Technology Collection. Both include show-and-tell tutorials on a variety of levels. For example, for computer novices the Technology Skills Collection offers how-to videos on how to copy and paste in *Microsoft Word* or how to use the SuperGrouper tool in *Kidspiration*. More advanced computer users can find tutorials on web-authoring programs such as *Contribute*, *Flash*, and *Dreamweaver* (all by Adobe) and on technology-based activities such as podcasting, video editing, and *Google Earth*. A section on School Productivity offers training on educational applications such as interactive white boards (SmartBoard or Promethean ACTIV), grading programs, *Geometer's Sketchpad*, and *Inspiration*.

Assistive Technology Collection

The Assistive Technology Collection focuses on accessibility features on both Macintosh and Windows platforms, assistive devices such as the *ClassMate Reader*, *IntelliKeys* and the *Neo* notetaker, and specialized software such as *BoardMaker*, *Co:Writer*, *Dragon Naturally Speaking*, *Kurzweil 3000*, and *WYNN*.

All *Atomic Learning* videos are correlated with the National Educational Technology Standards (NETS) developed by the International Society for Technology Education (ISTE) and are aligned to individual state standards. The site has an easy to use search tool that allows users to search for videos according to either or both of these standards. The search tool also makes it very easy to search for the videos that are most closely related to your software questions.

B. Documents & Notes		Key #	Length
1.	Creating files using the Freedom Import Printer	71909	1:27
2.	Adding Voice notes	71910	1:58
3.	Adding Text notes	71911	1:14
4.	Printing Text notes	71930	0:56
5.	Inserting & deleting page breaks	71912	1:06
6.	Moving & deleting pages	71913	1:15
7.	Renumbering pages	71914	1:01
8.	Creating bookmarks	71915	1:26
9.	Creating a new document using bookmarks	71916	0:50
10.	Creating a vocabulary list using bookmarks	71967	1:01
11.	Highlighting text	71917	1:17
12.	Creating a new document using highlights	71918	1:27
13.	Setting Print options & printing	71919	0:54
14.	Changing the line & word spacing	71923	0:52
15.	Creating an outline	71926	2:05
16.	Using spell check in your document	71928	1:41
17.	Changing a document's color settings	71965	1:20
18.	Cutting, copying & pasting text	71966	1:10

Some of the many short training videos offered for WYNN 5.1

Atomic Learning also offers a training package that is a complete online training system. The Atomic Training package provides users with an environment in which they can upload their own digital resources and have access to all the *Atomic Learning* video tutorials. The training tool is customizable to fit the needs of each organization and includes a tracking tool, which can be used to monitor which digital resources have been accessed, and by which user.

The Atomic Learning training videos provide an alternative to professional development programs and a valuable resource for teachers working to strengthen their technology skills.

Additional Resources for Teachers

As a former technology teacher involved with staff development training, I can definitely see the usefulness of this convenient and flexible online learning tool. It is an interesting alternative or addition to any professional development program and a valuable resource for teachers working to strengthen their technology skills. Educators will be particularly interested in the Lesson Accelerators, which are specific plans and tools teachers need to incorporate technology into their curriculum. The Project Activity Guides that accompany the Lesson Accelerators provide step-by-step directions on how to infuse technology into a lesson, and each project guide includes a rubric for assessment. Another strength is that every video tutorial has closed captioning for the deaf/hard of hearing. The company's regularly published e-newsletter includes commonly asked questions and upcoming release dates of new video tutorials.

Subscription Information

Access to *Atomic Learning's* video collection is by subscription. A "department" license to one collection, for example, grants access for one year to 600 full-time equivalent faculty and students for $800; both video collections would be $1,500. An individual license to both collections is $149.95/year. Purchasing multiple subscriptions to either collection substantially lowers the cost. Free demo video tutorials are available on their website.

Atomic Learning Assistive Technology Collection Tutorial Directory

Specialized Applications
- Boardmaker Plus 6
- ClassMate Reader
- Co:Writer SOLO
- Dragon Naturally Speaking 10
- Intellitools Classroom Suite 4
- JAWS (coming soon)
- Kurzweil 3000
- Low-cost text readers
- Overboard 2
- Overlay Maker 3
- Read & Write Gold 8
- Read:Outloud SOLO
- SOLO Teacher Central
- SpeakQ 2
- TheraSimplicity
- WordQ 2
- Writer's Companion
- Writing with Symbols 2000
- WYNN 5.1

Accessibility Features
- Acrobat 8
- Acrobat Professional 9
- Office Suite
- Mac OSX 10.4 (Tiger)
- Mac OSX 10.5 (Leopard)
- Windows XP & Vista

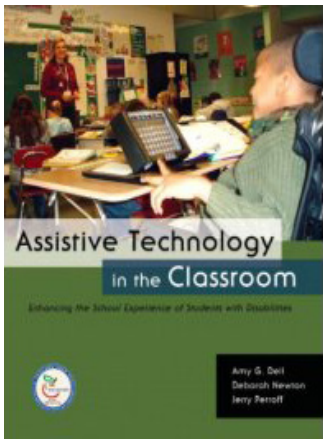
Educational Applications
- ActivPrimary
- Activstudio Professional
- Clicker 5
- Google SketchUp
- ImageBlender 3
- Inspiration
- Kid Pix Deluxe
- Kidspiration
- MediaBlender
- mimio
- SMART Board Notebook

Devices
- IntelliKeys USB Keyboard
- DynaVox
- Neo

See www.AtomicLearning.com for complete listings.

Assistive Technology in the Classroom: Enhancing the School Experiences of Students with Disabilities

Amy G. Dell, Jerry G. Petroff, and Deborah A. Newton
Pearson/Merrill/Prentice Hall



Written by faculty from The College of New Jersey and Southern Connecticut State University, this book explains how assistive technology can be used to enhance the teaching and learning of students with disabilities. Section I -- Benefits of Computer Use in Special Education – presents descriptions of technology-based solutions to the obstacles students with disabilities face in reading, writing, communication and mastering academic skills. Section II -- Access to Computers -- focuses on how to provide access to computers for students with a wide variety of disabilities. Accessibility features built in to both Windows and Macintosh platforms are presented, as are specialized assistive technology devices and software. Issues in decision-making and the selection of access methods are emphasized.

Section III highlights augmentative communication in schools. It covers the selection and design of students' augmentative communication systems, low-tech approaches to teaching early communication and emergent literacy, and the teacher's role in integrating augmentative communication into the classroom. In Section IV -- Making It Happen – the emphasis is on the implementation of assistive technology in P-12 schools and in the transition from high school to college or adult life.

Each chapter of the book concludes with a list of web sites that provide up-to-date information on specific product names, vendors, and important resources. The book is available from Amazon.com.

National Educational Technology Standards (NETS)

The International Society for Technology in Education (ISTE) has released the next generation of National Educational Technology Standards for Teachers (NETS•T). NETS•T 2008 focus on "using technology to learn and teach" and serve as a guide for teachers as they design, implement, and assess learning experiences that engage students and improve learning. The standards are organized into five categories:

1. Facilitate and Inspire Student Learning and Creativity
2. Design and Develop Digital-Age Learning Experiences and Assessment
3. Model Digital-Age Work and Learning
4. Promote and Model Digital Citizenship and Responsibility
5. Engage in Professional Growth and Leadership

While all the standards are important, two in particular stand out for their consideration of students with disabilities. Included under Standard 2 is the expectation that "all teachers customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources." Standard 4 articulates "all teachers address the diverse needs of all learners by using learner-centered strategies and providing equitable access to appropriate digital tools and resources." For a complete list of all the NETS for Teachers, as well the 2007 NETS for Students and a draft of the 2009 NETS for Administrators, go to http://www.iste.org/NETS.

Technology Options for the Deaf

(continued from page 7)

someone directly without the relay service if the person also has a VP-200. In this arrangement, both parties sign to each other and can see the other's signing. If a person has a laptop with a webcam, they can also be contacted directly. The video relay technology makes it possible for deaf people to communicate just as immediately as hearing people do on a telephone.

Michael prefers using the VP-200 whenever possible. Unlike using a TTY or his Sidekick, communication using this system is immediate and he can speak in his own language. When using the SVRS, there is no cost to him for using the translator, nor are there restrictions on how long he can use the service. The service is available to Michael 24 hours a day, and he can use the service to place emergency phone calls. He has found the translators to be friendly and helpful, which makes using the service that much better.

Everything Michael needs in order to use this device is on a remote. The remote has buttons and arrows to help him navigate through the screens on the device, including altering the angle of the device, as well as a zoom. Using the remote, Michael can also access his missed calls and his SignMail (as opposed to VoiceMail). Hearing contacts can leave a message for Michael using the SVRS and the interpreter, while friends who are deaf can leave their own signed video message.

Screen Layout

Using the remote, Michael can filter through the different options. On the main screen, there are options to visit "Call History," "Contacts," or "Settings." There is also an option to choose VP calling or SVRS calling. From these three main options, Michael can filter through the options to add contacts, make a phone call, change call settings, and more.

The screen changes as different parts of the device are activated. For example, if Michael receives a call from his girlfriend, a box appears that provides Michael with her name, phone number, and whether he wants to accept the call or let it be busy. Furthermore, as soon as Michael answers the call, an option appears that allows him to choose if he wants to hang up the call.

When on a call, the monitor shows two different videos at the same time. The first video displayed is that of the person being contacted, whether that is someone using VP or SVRS. In the opposite corner, a second video is displayed of Michael that shows him how he is being received by the person connected with him. This is important because it helps Michael check the room lighting and his position in front of the camera.

What makes this system so effective is that it is a video relay service as opposed to a typed relay service. Since Michael's primary language is American Sign Language (ASL), he can communicate with people more efficiently through his own language. Michael explained how this use of technology allows people who are deaf or hard of hearing to experience all the benefits of technology while still embracing Deaf culture. For these reasons he highly recommends the Sorenson Video Relay Service with the VP-200 to people who are deaf or hard of hearing. At the time of this writing, Sorenson Communications will provide a free VP-200 to people who meet the following criteria: 1) are deaf or hard-of-hearing, 2) use sign language, and 3) already have a high-speed Internet connection.

Kimberly A. Ahrens is graduating in May, 2009 from The College of New Jersey's 5-year program with an M.A.T. in Special Education.

Grace's Law Assists Children who Use Hearing Aids

Beginning April 1, 2009 New Jersey state law requires all health insurers to cover the cost of hearing aids for children 15 years old and younger. The coverage must provide up to $1,000 per hearing aid and must be provided every 24 months. Grace's Law was named after Grace Gleba, a nine year old girl from Washington Township (Warren County) who has used hearing aids since she was three months old. She and her mother, Jeanine, had lobbied forcefully for the law's passage.

New Jersey Unit of RFB&D's Learning Through Listening Educational Outreach Center

The New Jersey Unit of Recording for the Blind & Dyslexic's (RFB&D) Learning Through Listening Educational Outreach Center serves students with visual, learning or other physical disabilities. The program provides assistance and information to individuals, schools and teachers throughout New Jersey about RFB&D's services and how best to use it's resources. An RFB&D membership provides access to the Learning Through Listening® Library of more than 98,000 titles. Additionally, RFB&D's reference librarians can search the collections to tell members what titles are available in specific subject areas.

RFB&D offers two membership options: Individual Memberships are available to anyone who is unable to effectively read due to a vision impairment, physical disability or specific learning disability. The Institutional Membership program is designed to meet the growing demand of schools who need a convenient and flexible method of providing educational accommodations for their students with qualifying disabilities. Individual memberships are appropriate for students who can independently select and order their own books. Institutional Memberships are for schools that order books for multiple students. Institutional Membership and individual memberships work well when used together. For example, a school can use its Institutional Membership to order the standard curriculum for its students, while each student may have his or her own membership to borrow reading materials which supplement the curriculum.

If you are a New Jersey teacher or administrator who needs additional support with book orders, contact the New Jersey Unit Educational Outreach Center: 609-750-0595. www.rfbdnj.org

NEW PRODUCTS

WriteOnline Provides Supported Writing Access

WriteOnline from Crick Software is a new word processing with built-in writing support that works on any computer platform. The product is sold by subscription, based on the number of users, to schools and colleges. Students can log on to the program anytime, anywhere with their assigned password. They simply log on at Crick's www.Learning-Grids.com website, click the Launch button, and the program is available. As part of the subscription, students receive personal online folders, and they can save documents to them or to their own computers.

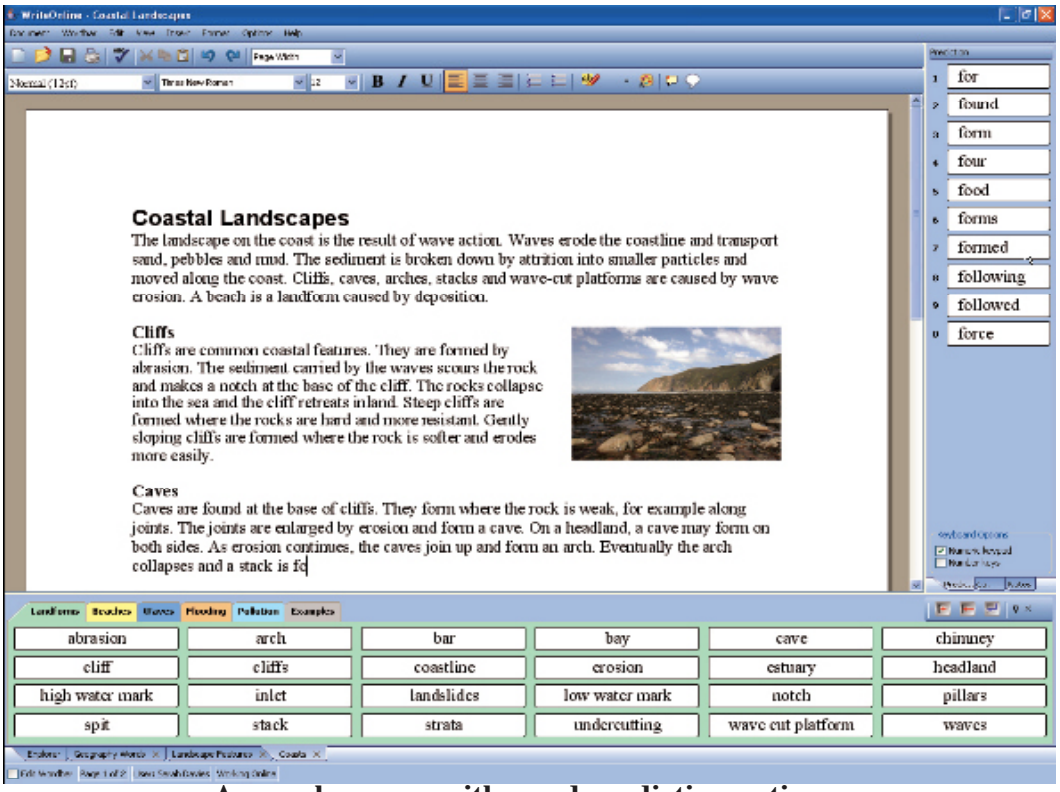
Once *WriteOnline* is loaded onto a computer, the computer stores it temporarily for three days. A shortcut is created on the desktop and it can be launched from there without internet access provided the user logged into the program within the last three days. While the program is running, it uses the computer's power and is independent of the internet. Student preferences are saved automatically.

Speech Options

Speech feedback is a powerful editing tool in a writing program. Some students may recognize errors when they hear what they wrote, that they may not catch in a visual edit. Options include reading selected text only or reading sentences automatically when the student enter a "stop" character such as a period or a question mark. For students who need more auditory feedback, word by word, or letter by letter read back options can be selected.

Word Prediction

Wordflow™ technology predicts contextually as students type, suggesting words that fit the context of their writing. Predicted words can be entered into the document by a mouse click or by selecting the corresponding number on the keyboard. Students may choose to hear the word before selecting. Teachers can set the predictor to one of four levels and create customized levels. The word prediction dictionary can be customized with special vocabulary or names.



A sample screen with word prediction options on the side and wordbar selections below.

Wordbar® for Vocabulary Expansion

Writing tasks can be supported for all students by giving them point-and-click access to specific words and phrases for their current writing task. Wordbars can be chosen from ready-made lists or they can be customized.

Wordbars can also help structure different writing genres. Teachers can create and store paragraph starters and supporting vocabulary for student access.

Document Analysis

WriteOnline's document analysis tool gives teachers insight into each student's writing process, including a complete history of the time spent on the document. Teachers can see all the sections of pasted text to prevent plagiarism, plus an analysis of spelling errors to help them target areas for student improvement.

Accessibility

Crick Software incorporates Universal Design in all their products, and all users can access *WriteOnline*. There are settings for users with low vision, an on-screen keyboard for students using switch access and scanning for switch users.

WriteOnline provides a wide range of supports for students and teachers. Its interface is easy to use and customize. For more information on system requirements and pricing plans visit www.cricksoft.com/uk/writeonline.

Video Magnifiers from Optelec

ClearNote Portable

The *ClearNote Portable* is a collapsible video magnification workstation with a flexible camera head that enables users to magnify materials both close-up and at a distance. It collapses into a small package and weighs only 3.90 ounces, making it easy to transport. The *ClearNote* connects to any desktop or laptop computer via the USB port and can also be connected to a VGA monitor. The built-in camera zooms to 18X with auto focus and rotates nearly 360 degrees. The viewing modes include color, black and white, reverse, and picture-in-picture. Other handy features include left/right hand use and 5-6 hours of light and battery life. The *ClearNote* provides a convenient magnification solution for students with low vision who need to see both the blackboard and reading materials.

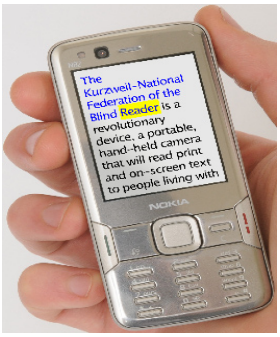
FarView

Optelec's *FarView* provides a very lightweight, hand-held reading solution. Weighing only 10.2 ounces with a 4.3 inch viewing screen, the *FarView* fits easily in a backpack or a briefcase. At a distance, users can capture information from whiteboards, read street signs, view airline information at airports, or select from menus at fast food restaurants. Up close it provides a convenient solution for reading documents or books. Users can zoom images from 2x to 42x, scroll, alternate among six viewing modes, and store up to 100 images on the device. The *FarView* can be connected to a computer or a VGA monitor.

For more information on these an other video magnifiers from Optelec visit their website at www.optelec.com.

Readers from Kurzweil - National Federation of the Blind (knfb)

kReader Mobile

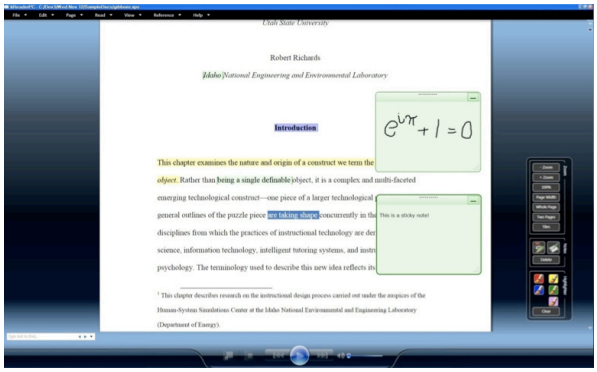


kReader Mobile software from knfb Reading Technology, Inc. runs on the Nokia N82 multifunction cell phone. It allows users to snap a picture of virtually any document, such as mail, receipts, handouts, and memos. Built-in character recognition software, in conjunction with high quality text-to-speech, will read the contents of the document aloud. At the same time, the text can be displayed on the phone's screen, and each word can be highlighted as it is spoken. Reading speed and voices are adjustable, and users can choose to have the text read by sentence, work or character. An added bonus allows users to select reading in other languages, and translation between languages is available. The screen rotates for portrait or landscape viewing.

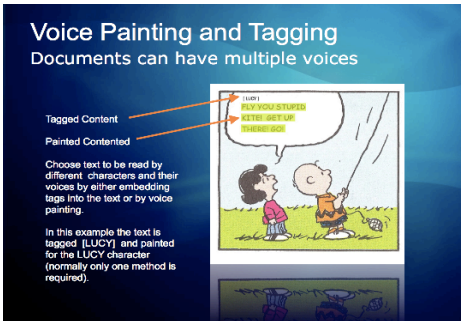
Documents and images can be saved and transferred between the phone and a computer. All regular phone features are operational and the Nokia N82 has the ability to run GPS programs, access to PDF files, voice recording and music files.

For more information on knfb Technology products, visit their website at www.knfbreading.com.

kReader PC



kReader PC runs on Windows XP or Vista operating systems, giving users text to speech access. The program provides an uncluttered interface with a natural book-like display of reading materials. Content displayed in 3D book format features realistic animated pageturning – engaging the student and enhancing the user's experience. Text can be highlighted and read aloud in high quality text to speech. Word study tools such as dictionary, thesaurus, translation, internet search and other features provide more detailed study of words or phrases that are not clear.



Students can use *kReader PC* to create multimedia content with Voice Painting which encourages students to create documents with multiple speaking characters.

kReader PC and *kReader Mobile* are compatible, making on-the-go file transfer between phone and computer easy.

iZoom 3.0 Screen Magnifier & Reader

The *iZoom 3.0* Screen Magnifier & Reader from Issist is a unique portable solution for those who need screen magnification and screen reading capabilities. The *iZoom 3.0* USB flash drive works on any Windows compatible computer. The software does not require installation, therefore, no administrator privileges are required. Simply plug it into the computer's USB port and the program will start.

iZoom's SmartAlign technology eliminates the need to scroll over text that extends beyond the screen. User's settings are saved on the USB drive so it does not have to be reconfigured on every new machine. Other purchasing options including a network version, stand alone version, and monthly subscriptions. For more information go to www.issist1.com.

New Accessibility Features Anticipated in Windows 7

Both Windows-based and Macintosh computers have several features built into their operating systems that make it possible for users with disabilities to access computers. Detailed explanations for activating these features can be found on Microsoft and Apple's websites:

Microsoft: http://www.microsoft.com/enable/
Apple: http://www.apple.com/accessibility/

In early 2010 Microsoft is expected to release its newest version of Windows, currently called Windows 7. According to Microsoft presentations at recent national assistive technology conferences (ATIA and CSUN), Windows 7 will improve the accessibility of computers by offering the following new features:

- **On-Screen Keyboard**: Windows 7's on-screen keyboard will be resizable, meaning users can choose to make it bigger and/or change its shape. It will also include basic word prediction to help users enter text more quickly. These improvements will especially help people who operate computers with hands-free mice or by single-switch scanning.

- **Magnifier**: The magnification feature in Windows 7 will offer a choice of modes -- full-screen mode and lens mode. Full-screen mode will increase the size of everything on the screen at once. Windows 7 will include a "context animation" that will zoom out to show the user where the work area is relative to the whole screen, and then will zoom back in. Lens mode will allow a user to zoom in on one particular part of the screen, such as a link or an unfamiliar name. The lens can be re-sized very wide and short for magnifying a document line by line.

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