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All About Digital Books!



Presented by:
Annette Cerreta and Tara Bakken
of the PACER Simon Technology Center
July 16, 2009

Webinar Information

This webinar will be archived on PACER.org/pacerwebinars and will contain links to resource materials relevant to each session.

*Archived webinars will be made available on the PACER website
1 - 2 weeks following the date of the original training.

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Today's Session

- Intro to PACER
- Digital Books Overview
- E-books and Audio Books: Where to find, how to play
- Considerations for selecting digital books and players
- The Law and Accessible Instructional Materials

PACER Center

- Not-for-profit organization
- Serving parents of children with disabilities
- Primarily staffed by parents of children with disabilities
- Over 30 different programs
- www.pacer.org



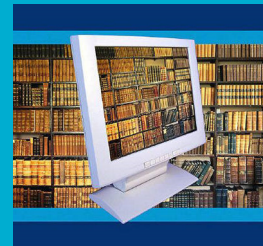
Simon Technology Center Services



- Assistive Technology Information and Referral
- Simon Technology Center Library & A.T. Finder
 - www.pacer.org/stc/atfinder
- Free Assistive Technology Consultations
- Free workshops
- In-service trainings



Digital Books



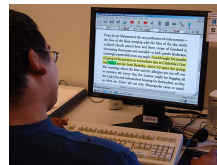
What are Digital Books?

- Digital books are the digital media equivalent of conventional printed books.



Digital Book Media Formats

- **E-Books (electronic books)**
 - Visible e-text on screen



- **Audio Books**
 - No text available
 - Played with audio players
 - Example: books in MP3 or CD format



The Benefits of Digital Books for Students with Disabilities

Students with Visual Impairments

- Digital text can be converted to refreshable Braille or Braille print
- Text and images can be enlarged; color and contrast can be modified
- Text can be spoken aloud with text-to-speech software
- Digital audio books have no electronic text to be read, feature human narration



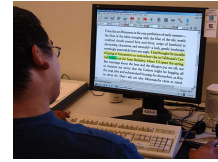
Students with Motor Impairments

- Digital text or audio books can be easier to manipulate than standard print books.
- Digital books are compact and easy to transport in comparison to traditional print books.
- They can be accessed via computers and assistive technology.



Students with Learning/Reading Disabilities

- Text and graphics can be edited and modified
- Text can be spoken out loud with text-to-speech software
- Can be paired with other reading supports, such as built-in dictionaries, homonym support, inserted notes, etc.
- Digital audio books don't require text to be read – have the benefit of human narration



Research on Text-to-Speech combined with Digital Text

Text-to-Speech technology combined with digital E-text may :

- **Enhance** reading performance: **speed and endurance**
- Improve reading **comprehension**
- Impede comprehension for learners with only mild reading impairments
- Provide higher degree of **independence** with reading
- **Each technology must be considered relative to the needs and abilities of the specific individual, task, and setting.**

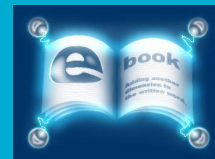
Sources:

Reading Machines for Students with LD - GreatSchools.net

Summary of the Iowa Text Reader 2006-2007 Longitudinal Study

http://www.kurzweil3000.com/files/Iowa_Text_Reader_Study_Report.pdf

E-Books



Where Do I Find E-Books?

And what are all those different files?

Where to Find E-Books

- **On the Internet**
 - Some books you pay for by book or subscription
 - Some are free
 - Some are available only for students with print-related disabilities.
 - Some are downloadable.
 - Some you read on the Internet.



⇒ See the Resources for Digital Literature handout
(<http://www.pacer.org/publications/stc.asp> : Presentation Handouts)

Where to Find E-books

Another Option:

- **Scan the print book** into the computer using a scanner.
- It can be a slow process.
- Need a scanner and scanning OCR software.



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Free E-Text Books On the Internet

- **Project Gutenberg**
 - www.gutenberg.net
 - Nearly 30,000 free e-books
 - Viewable Online
 - Most books are not copyrighted, some are
- **Open Library**
 - <http://openlibrary.org>
 - Over 1,060,000 books with full text
 - Scanned full text available online or some as downloadable PDF



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Free E-Text Books On the Internet

- **NetLibrary**
 - www.netlibrary.org
 - Over 190,000 materials
 - Viewable online or downloadable
 - Provides accessibility features
 - Also have Audiobooks available to loan (MP3 player compatible, NOT iPod compatible)
- **Public Libraries**
 - Hennepin County Library
 - <http://www.hclib.org>



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E-Books You Buy



- **Amazon e-books**
 - www.amazon.com
 - Kindle format, must have Kindle reader
- **Digital Books Index**
 - <http://digitalbookindex.com/about.htm>
 - Over 145,000 books available
 - Some free, some at cost
 - Free login to access library
- **School eBook Library**
 - <http://schoollibrary.com/Main.htm>
 - Over 500,000 PDF eBooks and eDocuments
 - Some free, some at cost
 - Annual membership fee

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E-Books for Students with Print Disabilities

Bookshare.org

- Must have a certified print disability
- Books are current and many under copyright
- Many textbooks and other instructional materials are available
- Available in format called "DAISY" that is designed for easier access students with disabilities
- Membership is free to U.S. Students with qualifying disability
- Organizational, school, and individual memberships available
- Membership includes free book playing software that reads the text out loud



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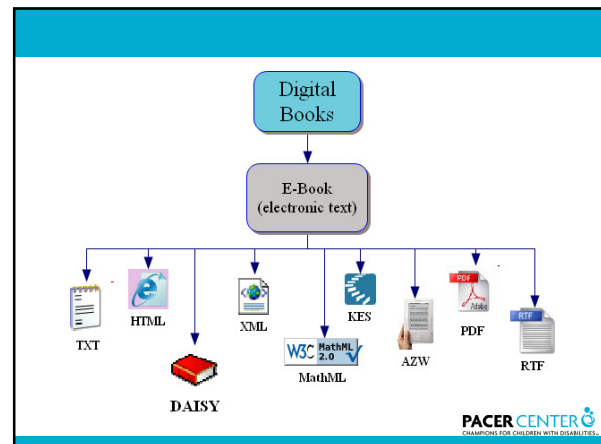
Bookshare Student Eligibility Guidelines

Disability	Qualified/Not Qualified	Examples of Certifying Professionals
Visual Impairment (VI), such as blind or low vision	Qualified	A family doctor, ophthalmologist, optometrist, Teacher of the Visually Impaired, Special Education teacher, Certification from the National Library Service
Physical Disability (PD) which affects one's ability to read print, such as inability to hold a book or turn pages	Qualified	A family doctor or other medical professional, physical therapist, resource specialist, Special Education teacher
Learning or Reading Disability	Students with a severe enough disability, and a professional certifying that the disability has a physical basis	A neurologist, psychiatrist, learning disability specialist, Special Education teacher, school psychologist, or clinical psychologist with a background in learning disabilities
Autism Emotional disabilities ADHD ESL and ELL	Not qualified, unless accompanied by a visual or physical disability, or a qualified reading disability that has a physical basis	Examples above

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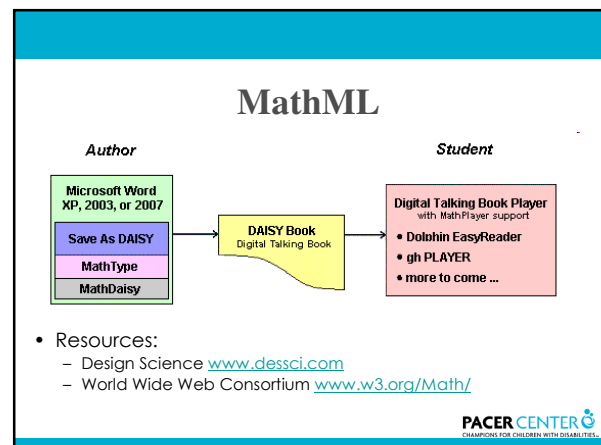
E-Books for Students with Print Disabilities

- **Accessible Book Collection**
 - www.accessiblebookcollection.org
 - Annual subscription fee
 - High interest; low reading level
 - Allows for various accessibility methods and program integration
 - Classroom Suite, Clicker 5, Boardmaker Plus! v6
- **National Library for the Blind and Physically Handicapped (NLS)**
 - www.loc.gov/nls/
 - Free membership for those with qualifying print disability
 - National network of libraries
 - Book/material formats: Braille, audio, large print



MathML

- **Mathematical Markup Language**
 - An application of XML
 - Allows mathematical notation and figures to be spoken and navigated properly according to the designed structure and content
- **Software to author and play MathML**
 - Authoring Tools: Microsoft Word, MathType, MathDaisy & Save As DAISY
 - Players: gh PLAYER -OR- Dolphin EasyReader
- **Resources:**
 - Design Science www.dessci.com
 - World Wide Web Consortium www.w3.org/Math/



- **Resources:**
 - Design Science www.dessci.com
 - World Wide Web Consortium www.w3.org/Math/


DAISY File Structure

- **DAISY: Digital Accessible Information System**
- Allows navigation access of a digital book similar to a printed book
 - Place bookmarks
 - Navigate by page number
 - Navigate by chapter
 - Navigate by section



DAISY Files


- To play DAISY files (text or audio) you must have a DAISY player
- Where to find DAISY structured files:
 - Electronic text: www.Bookshare.org
 - Audio files: www.rfbd.org



Software for Playing E-Books

Software for Playing E-Books on Your Computer

- **Text Reading Programs:**
 - Speak e-text out loud using computer voice
- **Scan & Read Programs:**
 - Convert printed text into digital text using scanner, scanning (OCR) software.
 - These programs also speak text out loud and offer additional study aids, such as graphical organizers, built in dictionaries



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Text Reading Programs

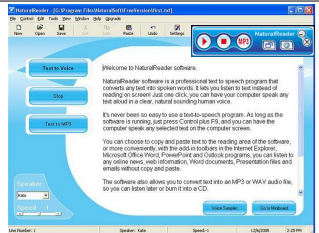
- Most are affordable (\$100 or less)
- Read a variety of file formats
- Some read Internet pages and e-mail
- Some read DAISY books
- Some can convert text to audio (MP3)
- Don't have the ability to scan print documents

Examples:

- TextAloud; (\$30 and up) <http://www.nextup.com>
- Natural Reader; (\$50) <http://www.naturalreaders.com>
- Victor Reader Soft <http://www.humanware.com>
- gh Player <http://www.gh-accessibility.com/>
- Ghostreader <http://www.assistiveware.com>

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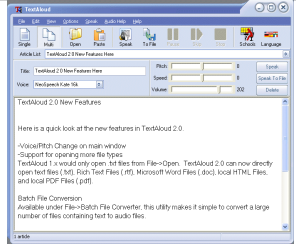
Text Reading Programs



Natural Reader; (\$50-300)
<http://www.naturalreaders.com>

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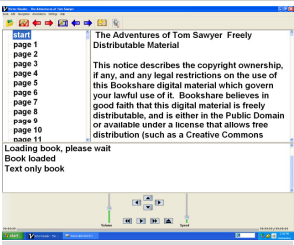
Text Reading Programs



TextAloud; (\$30-150+)
<http://www.nextup.com>

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Text Reading Programs

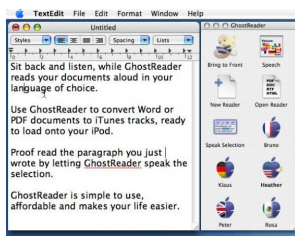


Victor Reader Soft;
www.humanware.com

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Text Reading Program for Mac: ConvenienceWare Ghost Reader

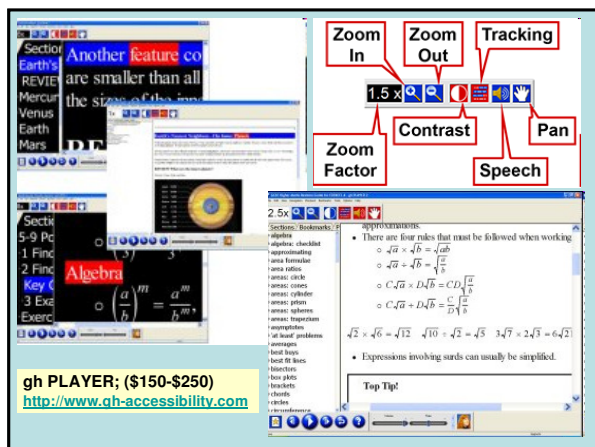
- Mac only text reader
- Listen to text in language of choice
- Export iTunes
 - Convert electronic text to an audio file
- \$39.95 (one language)
- High quality voices
- Text highlighting
- Point and read feature
- www.assistiveware.com



gh PLAYER

- Standard & Premium editions (\$150 & \$250)
<http://www.gh-accessibility.com/>
- Digital book player supports:
 - NIMAS
 - Plain Text (.txt)
 - DAISY 2.02
 - ANSI-NISO (Z39.86-2002)
 - DAISY/NISO 2005 (Z36.86-2005)
 - MathML

The gh PLAYER™ fully supports MathML.



Scan and Read Software Programs

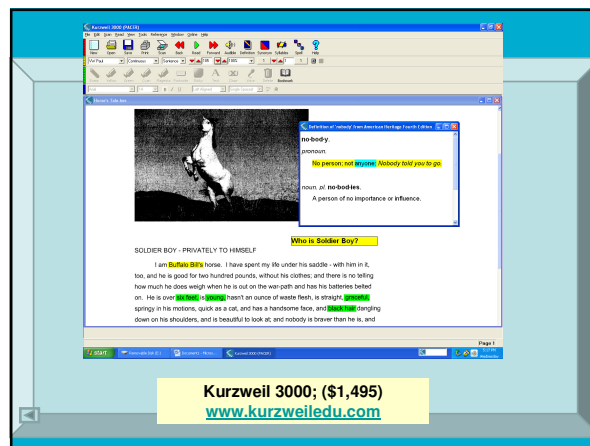
In general:

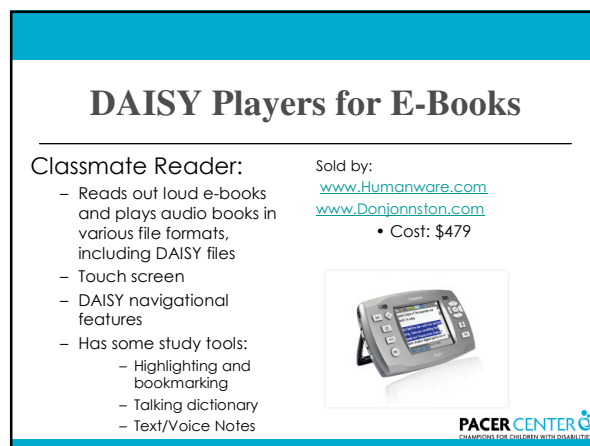
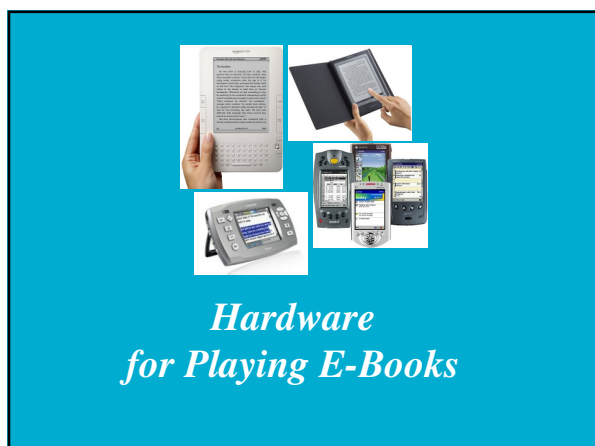
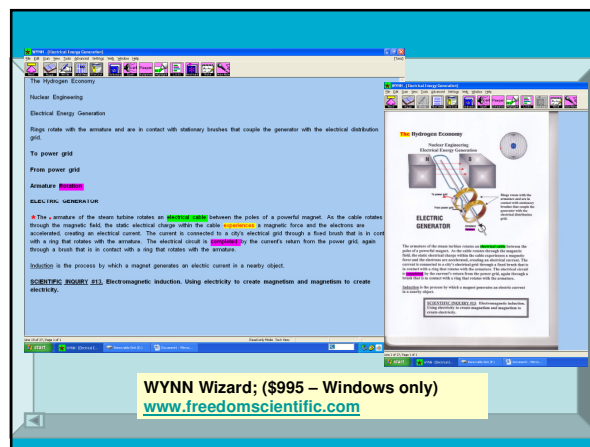
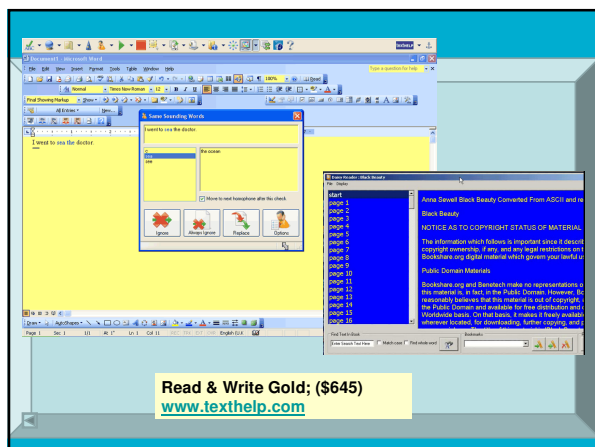
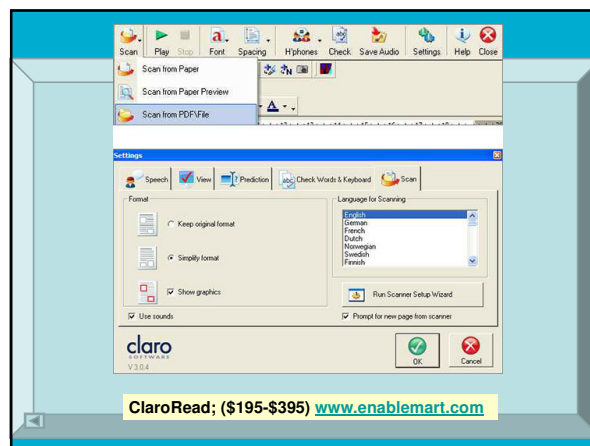
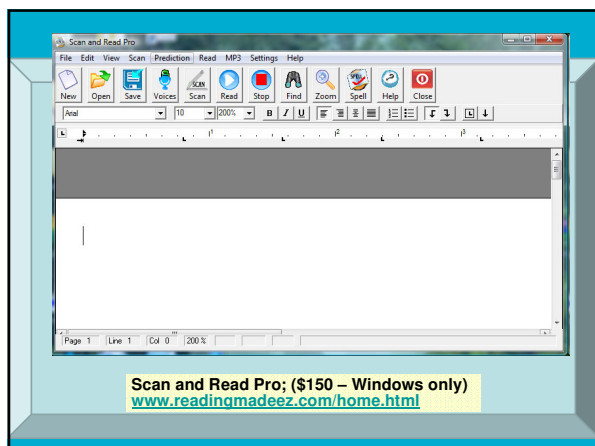
- Scan print materials into the program
- Read most any e-text format, many read DAISY
- Usually include study tools - highlighting, voice notes, sticky notes, bookmarking, annotation extraction, talking dictionary and spell check, graphic organizers, homonym support, etc.
- Include talking word processor and word prediction
- General cost between \$300-1500



Scan and Read Programs

- Scan and Read Pro; (\$150 – Windows only)
www.readingmadeez.com/home.html
- WYNN Wizard; (\$995 – Windows only)
www.freedomscientific.com
- ClaroRead; (\$195-\$395)
www.enablemart.com
- Kurzweil 3000; (\$1,495)
www.kurzweilledu.com
- Read & Write Gold; (\$645)
www.texthelp.com





ClassMate Reader; (\$479)
www.humanware.com

The new mobile solution to boost reading and learning independence.

Hardware for Playing E-books

Amazon Kindle 2:

- www.amazon.com/Kindle
- Reads Amazon's book format, MP3, and other file formats, not DAISY -Amazon will convert some other formats for you via email
- Text-to-speech if permitted by publisher
- Can download e-text or audio book files from Amazon
- Holds over 1,500 e-books
- Cost: \$299
- Wireless transfer of books

NTER WITH DISABILITIES

E-Book Hardware Applications

- **Smart Phone/PDA's**
 - Portable devices with the ability to display electronic text
- **Mobile DAISY Player; (\$125)**
 - Reads DAISY e-books aloud with Nokia built in text-to-speech (select models) or with Mobil Speak (\$295)
 - DAISY navigation functions
 - Compatible only with Symbian-based mobile phones
 - www.codefactory.es
- **Mobipocket Reader**
 - Free reading application
 - (Blackberry, Windows, Windows Mobile, Palm OS, Symbian)
 - www.mobipocket.com

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E-Book Hardware Applications

Apple iPhone/iTouch

- Reading Applications
 - **Bookshelf Reader**
 - www.iphonebookshelf.com
 - **Stanza Book Reader**
 - www.lexcycle.com

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E-Book Hardware Application

K-NFB Reader Mobile

- User takes a photo of the text to be read
- Reads aloud and displays most print documents
- Transfer text files to/from computer or Braille Notetaker
- Nokia N82 and 6220 model only
- ATT or T-Mobile
- Software price: \$995

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Digital Audio Books

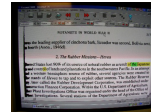


Where Do I Find Digital Audio Books?

And what are all those different files?

Where to Find Audio Books

- Internet
- Local Library
- Purchase
- Text to Audio conversion



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FREE Audio Books Online

- www.librivox.org
 - Audio files are available in downloadable mp3 or ogg files
 - Most audio books are in human narration; read by volunteers
 - Download methods:
 - Thrive weekly podcasts
 - Download entire book in zipped folder
 - Download entire book by subscribing in iTunes
- www.podibooks.com
 - Register to Podibooks then subscribe to a book
 - Books are delivered to your podcatcher (e.g. iTunes) according to your designated schedule
 - Click and listen for instant listening access and download of entire book
 - Most audio books are in human narration

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Audio Books Online For Purchase

- www.audible.com
 - Over 60,000 titles; narrated by human voice
 - Several membership plans available
 - Download then transferred to device (iPod or MP3)
 - Download complete book or subscribe to podcast
- www.amazon.com
 - Over 700,000 Titles
 - Formats: cassette, CD, MP3, Audible download
- iTunes
 - Search the online iTunes Store from within iTunes program
 - Audiobooks, Podcasts, iTunes U (free university lectures & more)

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RFB&D Audio Books

- **AudioPlus**
 - Books on CD and new download option
 - DAISY format
 - Enhanced navigation
 - Listener adjustable tone and speed
 - Need Special play device or software
- **AudioAccess**
 - www.rfb.org/audioaccess
 - Free one year membership for qualified students
<https://cushub.rfb.org/Registration>
 - Not in DAISY format; each book page is an individual audio file, packaged by chapter or unit
 - Download WMA-DRM file (only Windows compatible) to Windows Media Player using RFB&D Download Manager software (High Speed Internet recommended)
 - Need compatible media player -not iPod or Zune



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RFB&D Membership

- Person must have certified print disability
- Individual or institutional memberships available
- Different membership levels/costs
- For more information contact:

Membership Services: 800-221-4792

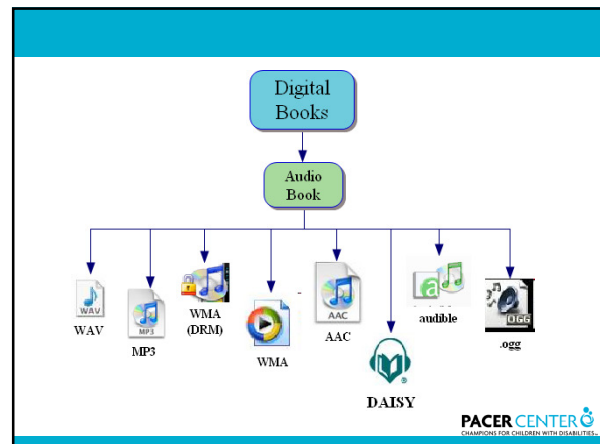
Website: www.rfb.org



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RFB&D Eligibility Guidelines

- "Anyone with a documented disability—including a visual impairment, learning disability or other physical disability which makes reading standard print difficult or impossible..." www.rfbd.org
- Professional certification requirements are very similar to Bookshare
- The best way to find out if your child or student qualifies, is to directly contact these authorized providers (Bookshare and RFB&D, etc.)

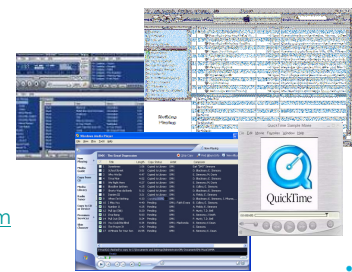


Software & Hardware for Playing Audio Books

Digital Media Software

- Windows Media Player
- iTunes
- QuickTime
- RealPlayer
- Winamp

– www.winamp.com



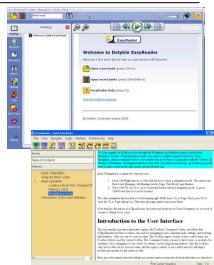
Software to Play DAISY Audio Books

DAISY software features:

- Navigate by book, page, phrase, chapter or section
- Place and go-to bookmarks
- Change playback speed
- Fast forward and reverse

(Programs listed below are also considered text readers)

- Victor Reader Soft; (\$79 from RFB&D) www.humanware.com
- gh Player; (\$250) www.gh-accessibility.com
- EasyReader (RFB&D version); (\$50) www.yourdolphin.com
- eClipse Reader; (\$85) www.eclipsereader.com/



Portable Players



Amazon Kindle 2; (\$359)

www.amazon.com/kindle

- Supports audio book files from Amazon (Audible) and MP3 files
- Does not support Daisy format

Mp3 player (\$25-\$400)

- Does not support Daisy format

iPod (\$50-\$400)

- Does not support Daisy format

Portable DAISY Players

- **Book Courier;** (\$379)
www.bookcourier.com
 - Supports e-books and audio books
 - Variable playback speed
 - DAISY navigation features & bookmarks
 - SD memory card stores books -Windows only
- **PLEXTALK Pocket;** (\$395)
www.plextalk.com
 - Supports e-books and audio books
 - SD memory card stores books -Windows only
 - DAISY navigation features & bookmarks
 - Variable playback speed
 - External speaker



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Portable DAISY Players

- **Milestone 311 DAISY;** (\$369)
www.bones.ch
 - Plays only audio books (DAISY & MP3)
 - SD memory card
 - DAISY navigation and bookmarks
 - Voice recorder



- **Telex Scholar Portable Player;** (\$199)
www.telex.com
 - Plays DAISY CDs and MP3 CD's
 - DAISY navigation and bookmarks
 - LCD screen displays disc details



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Portable DAISY Players



Provides audio supports for DAISY format

- **Victor Reader Classic;** (\$240)
www.humanware.com
 - Plays DAISY Books on CD
- **Victor Reader Stream;** (\$329)
www.humanware.com
 - Supports audio and e-books
- **ClassMate Reader;** (\$479)
www.humanware.com
 - Supports e-books with visual text display, and audio books

*See Comparison Chart for Talking Book Players

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**Victor Reader Stream;
(\$329)**
www.humanware.com

- Built in text-to-speech for e-books
- DAISY navigation features
- Go-to functions
- Bookmarking
- Voice notes
- Compatible with many different file types
- SD card memory



Considerations



Considerations for Digital Books

- Will the student access reading materials best through audio, visual, or visual paired with auditory supports?
- Is there a preferred type of audio support: human narration or synthesized speech (computer/electronic speech output)?
- Are navigation abilities an important feature to include for the student's reading and study needs?

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Considerations for Choosing Software/Players

- Does the user need the player to be portable?
- Does it need to be able to read text aloud?
- Would the user benefit from the additional study tools provided in certain programs?
- Does the student need to scan print material into the device or program?

Considerations for Choosing Software/Players

- What type of operating system (Mac or PC) does the student use and is it compatible with the software and/or hardware?
- What book formats (i.e. DIASY, html, etc.) is the student using and is the player compatible with these formats?
- What type of voices does the program use? Are they appealing to the student?

The Law and Accessible Instructional Materials



The Reauthorization of IDEA 2004

- When IDEA (Individuals with Disabilities Act) was reauthorized in 2004, a provision was added requiring state and local education agencies to ensure that print textbooks and core related instructional materials were provided to students with **print disabilities in specialized formats in a timely manner**.
 - 34 Code of Federal Regulations Section 300.172

Definitions

- **Specialized Formats**
 - Braille
 - E-text
 - Audio
 - Large Print
- **Timely Manner**
 - Each state is required to define this. Generally means "at the same time" as other students receive their print materials.
 - <http://nimas.cast.org/about/regulations/excerpts-07-2006>

The Reauthorization of IDEA 2004

- This provision was added because many students with disabilities were not receiving instructional materials in accessible formats in a timely manner:
 - No standard process for schools to obtain accessible formats from publishers.
 - Publishers had no technical standards to follow for provision of accessible formats to schools.
 - Publishers had copyright protection concerns.

IDEA 2004 and NIMAS

- The law also established the **National Instructional Materials Accessibility Standard (NIMAS)** and the **National Instructional Materials Accessibility Center (NIMAC)**.



What is NIMAS?

- NIMAS** is a technical standard used by publishers to produce source files that can be used to create specialized formats (Braille, audio, e-text, or large print).
- NIMAS files are not “student ready” files. They must be **converted** into specialized formats for student use.

What is the NIMAC?

- The NIMAC is a repository for NIMAS files located at the American Printing House for the Blind.
- The NIMAC receives the NIMAS files from the textbook publishers and then distributes them to participating state and local education agencies and other authorized providers.
- Each state can decide whether to coordinate with the NIMAC. If the state chooses not to, the state is still responsible for providing accessible print materials to students who require them.

Is my child/student eligible for specialized formats produced from NIMAS files?

- To qualify for NIMAS-sourced instructional materials, students must qualify as a student with a disability under IDEA 2004
- IDEA states that access to NIMAS files is to benefit blind or other persons with **print disabilities** in elementary schools and secondary schools.

Definitions

• Print Disability

IDEA 2004, PART D, SEC. 674. (e)

(3)(A) BLIND OR OTHER PERSONS WITH PRINT DISABILITIES—The term ‘blind or other persons with print disabilities’ means **children served under this Act and who may qualify in accordance with the Act entitled ‘An Act to provide books for the adult blind’**, approved March 3, 1931 (2 U.S.C. 135a; 46 Stat. 1487) to receive books and other publications produced in specialized formats.

Definitions

Essentially, this includes students who cannot use typical print based materials due to:

- Blindness or vision impairment
- Physical Impairment
- Reading disability resulting from organic dysfunction.
- Disability must be certified by a “competent authority.”
- In the case of reading disability resulting from organic dysfunction, competent authority must be a doctor of medicine.

OSEP NIMAS Regulations Summary

- http://nimas.cast.org/about/regulations/osep_summary
- See footnote 2

Copyright Law Exception

- The NIMAS-qualification process ensures that students meet copyright law exception requirements.
- **1996 Chafee Amendment, PL 104-197**
 - The Chafee Amendment is an exemption to U.S. copyright law (section 121) that allows the government or an authorized entity to provide blind or other persons with disabilities accessible formats (Braille, audio, digital text, large print) of print materials that are still under copyright.
 - <http://www.loc.gov/nls/reference/factsheets/copyright.html>

If your student doesn't qualify for books from the NIMAC...

Other options:

- Bookshare, RFBID, and other providers of accessibly formatted learning materials.
 - Qualification process may be somewhat different than IDEA 2004 requirements for NIMAS-based materials.
 - Still need to have a certified print disability to qualify for copyright exemption status.
- Accessible format created by the school
- Free or fee-based (commercial) resources

Language for the IEP

- State and local education agencies are encouraged to include language relating to a student's need for accessible, alternate-format versions of print instructional materials in the IEP
- For suggested language, refer to:
http://nimas.cast.org/about/resources/accessible_iep

More questions about NIMAS?

- If you have questions about how your state is working with NIMAS, you may want to contact your NIMAS state contact. A list of these individuals can be found at:
http://nimas.cast.org/about/resources/nimas_nimac_contacts.html

Resources on NIMAS

- NIMAS at Cast
 - www.nimas.cast.org
- NIMAC
 - www.nimac.us
 - Very useful information that is easy to understand.
- LD Online article
 - www.ldonline.org/article/16308



Thank you for attending!

Please complete the evaluation form you will receive shortly.