



Bookshare: Making Accessible Materials Available Worldwide

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Meeting:

148 — *e-Book technologies: global accessibility and information for all* — Libraries Serving Persons with Print Disabilities Section

Abstract:

Bookshare is the largest online library of accessible copyrighted materials for readers with print disabilities. In the last three years Bookshare has built a collection of over 30,000 books available throughout the world, serving people in 28 countries that span the globe. Developed and operated by Benetech, a non-profit using technology to serve unmet social needs, Bookshare International works with local partners to provide content in multiple languages to serve people with print disabilities. Bookshare is particularly focused on addressing the accessible “book famine” in developing countries and applies ongoing innovation to do so in a sustainable, effective manner.

2011 is a pivotal moment in the world of e-books. Amazon, Inc. announced that its sales of e-books had surpassed its sale of print books (hardbacks and paperbacks combined) in the first half of the year. In the world of accessible e-books, the EPUB3 standard is out for comment, bringing the benefits of the accessible DAISY structure into the mainstream publishing standard. And advocates, publishers and libraries throughout the world are involved in discussions at the World Intellectual Property Organization (WIPO) around a Treaty for Improved Access for Blind, Visually Impaired and other Reading Disabled Persons, which would help make accessible books more available to people all over the world.

But in 2011 and beyond, what are the affordable, available options for getting accessible content, especially in developing countries? One option, in an increasing number of countries, is Bookshare. Bookshare is the largest online library of accessible copyrighted materials for readers with print disabilities. In the last three years Bookshare has built a collection of over 30,000 books available around the world, serving people based in 28

countries that span the globe. We envision a day when Bookshare International is working with partners worldwide to offer affordable, accessible content and assistive technology to every person with a print disability, regardless of where they live.

This talk will cover:

- I. **Bookshare Overview**
- II. **Bookshare International**
- III. **Serving Developing Countries**

I. **Bookshare overview**

Bookshare was founded in 2002, when e-books were still a struggling subset of the publishing world. Jim Fruchterman founded Benetech to use the innovation and scale of technology to serve unmet social needs. After years of success creating and marketing the Arkenstone Reader, a leading accessible reading tool, Bookshare was developed as a place to share books that many people with print disabilities had scanned for their own reading needs. By using digital text, Bookshare was able to greatly increase the scalability and decrease the cost in comparison to traditional methods of serving people with print disabilities.

What is Bookshare?

 Bookshare is an online library of accessible content for readers with print disabilities.

 Accessible books as digital text over the Internet - not human narrated audio

- Over 140,000 members
- Over 10,000 schools and other organizations
- Over 100,000 titles + periodicals (available in the US)
- 2000+ books added every month

DAISY Text Flexible Format

Bookshare files work with:

 AT software that supports text-based files

 Many examples: JAWS, Kurzweil, etc.

 Two free ebook readers for members

Read:OutLoud from Don Johnston, Victor Reader Soft from Humanware

 AT hardware

 Braille displays

- 📖 Specialized DAISY players (that support text)
- 📖 Works with standard devices – as audio or through reading apps
 - 📖 Cell phones
 - 📖 MP3 players

Bookshare for Education

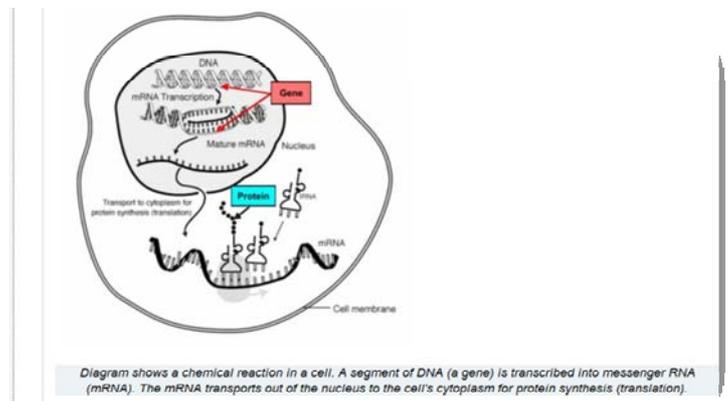
- 📖 In October 2007, Bookshare was awarded funding from the Department of Education, Office of Special Education Programs (OSEP) to:
 - Provide Bookshare content and services **FREE** to all U.S. qualified students with a print disability of any age
 - Expand the Bookshare collection
 - 📖 Focus on educational materials requested by teachers
 - 📖 Add textbooks from the national textbook repository and publishers

DIAGRAM: Digital Image And Graphic Resources for Accessible Materials Center

- 📖 Funded by US Dept of Education, Office of Special Education Programs (OSEP); began May 2010
- 📖 Partners: NCAM (WGBH) & DAISY
- 📖 Goal: Change field - accessible image & graphics
- 📖 Develop technologies, tools, practices and training

Progress:

- Standards
- Diagramcenter.org
- Tools

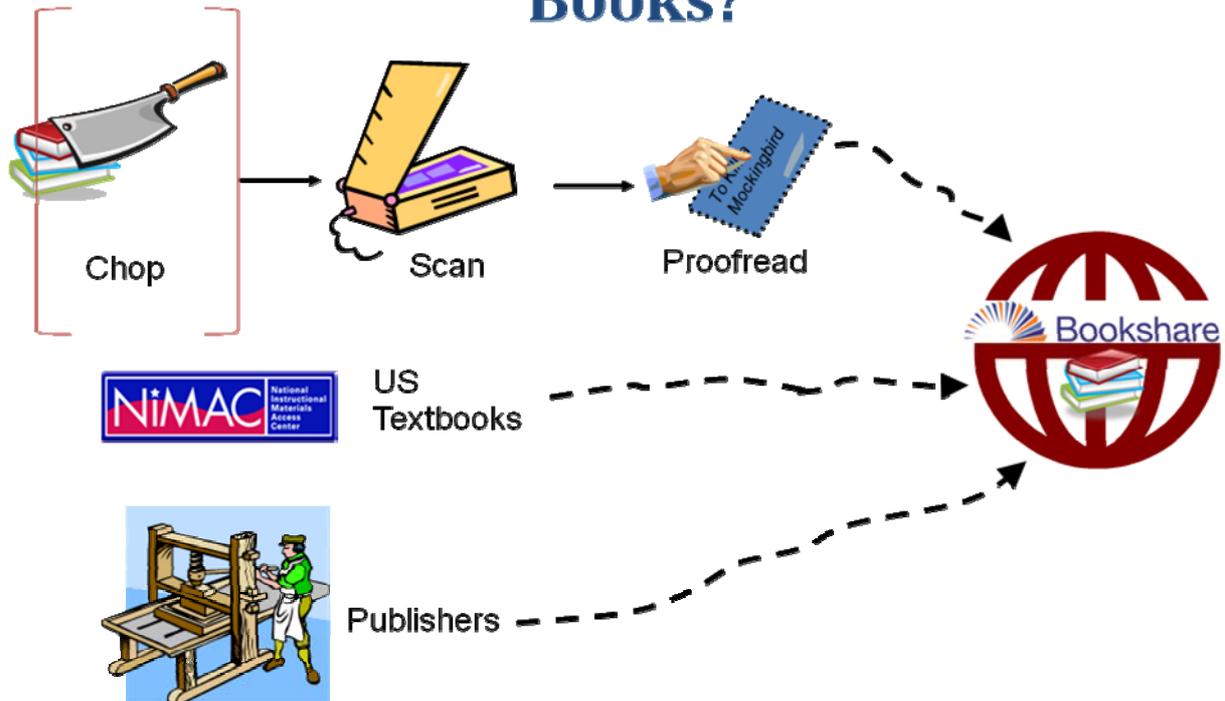


Bookshare Content

Today, Bookshare offers accessible books from a variety of sources and processing methods. Books are still regularly scanned by both volunteers and staff. We also get scanned books shared by University partners in the United States. All scanned books are obtained under a US copyright law exception, and thus are currently limited to use within the US unless we have received publisher permission to offer them to qualified members outside the US. Bookshare has been very successful in obtaining rights to offer books to an international audience, and typically now receives those books directly from the publisher, which is now our source for 2/3 of our books. In the US, we are also the largest user of the National

Instructional Materials Access Center (NIMAC), supplying textbooks to US primary and secondary students.

How Does Bookshare Get Digital Books?



Production Partners

Bookshare works with partners worldwide. We have agreements with over 130 publishers, most of whom allow us to share their books internationally, typically wherever they have rights. These publishers produce a wide variety of materials, from best sellers to academic works. We have signed a number of university presses, which is particularly beneficial for university students worldwide.

In addition to our volunteers, we also work with a number of outsourced vendors around the world who proof our scanned materials for us. We work with organizations who specialize in supplying employment for people in need. Our partners in India and Kenya employ people with disabilities, typically people who are deaf or hard of hearing. In all cases, our work is providing employment for under-privileged people in developing countries who obtain highly valued IT skills that can then lead to significant employment opportunities elsewhere in their communities.

130 Publishers Worldwide

- ☐ Cambridge Univ Press
- ☐ Encyclopedia Britannica
- ☐ Evan-Moor
- ☐ Hachette
- ☐ HarperCollins
- ☐ Harvard Univ Press
- ☐ John Wiley & Sons
- ☐ O'Reilly Media
- ☐ Random House

Scanners/Proof Readers

☐ Volunteers: US

☐ Outsourcers:

- ☐ India
- ☐ Laos
- ☐ Kenya

Employing people with disabilities, providing IT skills

☐ Staff: US



Proofreaders at work at Worth Trust in India.

Description: People working with scanned files on computers. Computer screen shows the scanned image of a book on one side and the version being proofread after optical character recognition on the other.

Bookshare International

The Bookshare mission involves serving people with print disabilities wherever they live. Technology allows a significant level of scalability, such that core services that benefit students in the US can also be used by a great number of people worldwide for relatively little additional cost. Additional funding supports operational and technical enhancements required to address international users more effectively, including local interest and multi-lingual content and capabilities. While anyone in the world can find Bookshare online at Bookshare.org, Bookshare International in its current form was launched in 2008, in India.

Bookshare has members in... 28 countries

-  United States
-  India
-  Australia
-  Denmark
-  Canada
-  South Africa
-  United Kingdom
-  Singapore
-  Netherlands
-  Kenya
-  Ghana
- 

Bookshare International focuses on three key components in order to offer the most beneficial and cost-effective services: ***partners, languages*** and ***content***.

Partners

Operating any service requires a clear understanding of the people being served and their specific needs. As a US-based organization focused on technology and operations, it's critical to work with local partners who are already serving the needs of people with print disabilities in a given country or region, thus Bookshare International's business model depends on critical partnerships with local libraries and other organizations. These local partners create awareness of Bookshare's services, provide a direct interface to obtain proof of disability, often provide billing or even payment for services, handle a first level of support and may also provide insights and connections to locally interesting content.

International Organizational Partners

- ¶¶¶ Australia: Vision Australia, Western Australia
- ¶¶¶ Denmark: NOTA
- ¶¶¶ Ghana: Ghana Society for the Blind
- ¶¶¶ India: 5 orgs including Daisy Forum of India
- ¶¶¶ Kenya: Thika school (Our Reading Spaces), ITAC
- ¶¶¶ Korea: Siloam Center for the Disabled
- ¶¶¶ Nigeria: Jada school for the disabled
- ¶¶¶ Norway: NLB
- ¶¶¶ Qatar: The Mada Center
- ¶¶¶ Singapore: Singapore Assn for Physically Disabled
- ¶¶¶ Sweden: TPB

Languages

The Bookshare collection has included a small percentage of books in Spanish, French and German for some time. One of our objectives for 2010 was to develop capabilities to process Hindi and Tamil and to begin to build a collection in these languages. We were successful in that effort, providing valuable content to members across India. “Adding a language” includes finding appropriate ways to process the books, determining whether quality optical character recognition (OCR) is available and finding reading tools that will work in that language.

In 2011, Bookshare is concentrating its language development efforts on at least one new language that enjoys large transnational readership. Arabic is the official language of twenty-six countries, and spoken in many other countries around the world. Through a partnership with the Mada Center in Qatar, Bookshare is developing the tools to process accessible Arabic books, offer them in Bookshare, finding suitable reading tools, obtaining content and assisting in ongoing scanning/proofing capabilities. This project is intended to benefit people with print disabilities in the entire Arabic-speaking world.

Content

In 2011 we expect to add approximately 20,000 books to Bookshare International’s collection. This new content will double the size of the collection available to most non-U.S. members in late 2010. This will represent our second consecutive year of doubling the

international collection size! This is possible primarily due to the many generous publishers providing their books to us, increasingly in digital formats, and granting us permission to share the books in the countries where they have rights.

Most of our books are still in English, from American publishers, with many bestsellers and academic books of interest around the world. However, having content that is of local interest, as well as in major local languages, is clearly an important area for continued development. In addition to our current collection of over 1000 books in Spanish and over 200 books in Hindi and Tamil, we will add 200 more in Hindi and Tamil to serve our Indian members; 200 in English, with content relevant to sub-Saharan Africa; and at least 100 Arabic books, all through funding specifically focused on international activities. This allows us to scan or even re-type books where necessary, depending on available technology.

Serving Developing Countries

In developing countries, we believe we serve an even larger social mission - rectifying a pervasive "book famine" of accessible books. Our international strategy includes specific focus in developing countries in order to address this need. Our work in developed countries supports program sustainability and allows us to charge far lower fees in developing countries, in accordance with United Nations socio-economic measures.

In developing countries, the same core components apply, in regard to partners, languages and content. Additional obstacles exist in reading tools and access to our online repository, requiring additional innovation to serve them effectively.

Partners

While most developed countries have established libraries for people with print disabilities, often serving the whole country or one or more major regions, developing countries typically have no such established library. They are also less likely to have copyright exceptions and may also have significant social stigma related to people with disabilities, making it significantly more challenging to establish such an organization. Our partners in developing countries, therefore, tend to be other service providers who come in a variety of sizes and with a variety of focus areas. These groups are often service organizations focused on serving people with one or more specific disabilities, and typically in one local area.

Imagine bringing such a group access to 30,000 accessible books over night! Bookshare International can bring significant value to such organizations, by providing content and technology to add library services to their offerings, with huge benefit to the community. More and more of these organizations have basic internet connectivity, meaning they can act as a hub for Bookshare access. Where they don't, we endeavor to introduce other partners, funding or technology solutions to enable the offering. One of the lessons learned

in India was that our partners in developing countries can also benefit from additional assistance in outreach, via local consultants we help fund, hire and train.

Languages & Content

In 2011, Bookshare's addition of Arabic capabilities and content will open up opportunities to work with partners in a number of additional countries. We are happy to partner with groups that have interest in Arabic content, as well as with groups who would like to tackle other languages that can serve broad populations.

Local languages create greater challenges when they have a less developed base of published content, and have no established presence in key tools such as optical character recognition or text-to-speech engines. This is true of many African languages. At the same time, in countries such as Ghana and Kenya, the national language is English, and most major publishing is done in that language. Over time, as technology innovation continues to break down barriers, providing more tools in more languages, we hope this will allow us to serve more people in the language of their choice.

Open content, or content licensed under Creative Commons, is a growing part of the Bookshare collection. This content is available everywhere, by anyone, and is very attractive to developing countries given its typical cost: free. Bookshare has made US open content educational materials and some South African educational content available, and will continue to look for additional available content that can be of use in developing countries.

Reading Tools: Mobile

The whole world is going mobile, and the developing world is skipping other approaches to go straight there. It solves many issues around access to computers and wired internet services, as well as much of the book distribution problem that has led to significant cost in developed countries around the world.

Bookshare is working on a number of innovative projects to enable better mobile access that will benefit developing countries significantly. We are currently working on the development of a mobile reading application for the Android platform. While most phones in developing countries today are not web-enabled smartphones, this is changing quickly. According to research firm IDC, the global market for smartphones is expected to grow nearly 50% this year and Android phones will make up over 45% of the market by 2015. (Source: Tulsa World/Associated Press, 4/3/2011).

In the mean time, many current mobile phones and other very inexpensive portable devices will play MP3 files. While there are definite benefits for users, particularly those with severe dyslexia, in having access to multi-modal text and speech, having access to audio files that can be played on an inexpensive device may be the only means available in a developing country. Bookshare is working on a project to enable all Bookshare files to be downloaded

directly in audio, created by Text-to-Speech (TTS) engines behind the scenes. Bookshare books can already be downloaded in both DAISY Text and BRF (Braille Ready File) formats. We are following developments on inexpensive electronic braille reading tools, designed for developing countries, which we hope to see working with our books in the coming couple of years.

Finally, we have developed an Application Programming Interface (API) and made it available to developers around the world who would like to create an easier, more seamless interface to Bookshare for mobile devices and other reading tools, as well as libraries. By reducing extra steps and making tools easy to use, access to the rich content in Bookshare is improved worldwide.

Bookshare Innovations Benefitting Developing Countries

Bookshare Projects in 2011:

-  Arabic content
-  API: built-in search for AT and libraries
-  Android app
-  Audio file downloads (TTS)

Conclusion

Benetech has learned a number of important lessons in serving people with print disabilities around the world with Bookshare International. We firmly believe in our mission to serve anyone with a print disability who can benefit from accessible content, and are especially focused on serving people in developing countries who suffer from a serious “book famine.”

Through ongoing innovation and effective partnering, Bookshare International is bringing the benefits of its 30,000+ collection of accessible books to people throughout the world. Whether in English or Arabic, Kenya or India, we are working to provide relevant content through local partners.

While Bookshare continues to deliver solutions to more and more people with print disabilities around the world, we will also continue our strong advocacy for long range international, cross-border availability of accessible materials. We will continue our support of the DAISY Consortium and work as a part of efforts at the World Intellectual Property Organization (WIPO), through related sub-groups such as the Standing Committee on Copyright (SCCR) and the Stakeholders Platform, as appropriate. We are proud, new members of IFLA, and hope to contribute effectively to the efforts of the section on Libraries for People with Disabilities.