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E-Books and E-Readers Program Best Practices at the NIST Research Library

By Stacy Bruss, Reference Librarian, National Institute of Standards and Technology

The National Institute of Standards and Technology (NIST) Research Library is one of three programs within the Information Services Office (ISO) — along with the Electronic Information and Publications Program and the Museum and History Program— that support the research efforts of the 3,000 scientists and engineers at the NIST campus located in Gaithersburg, Maryland.

The Research Library implemented successful full-scale e-book and e-reader lending programs starting in FY10. Both programs provide its customers mobility to conduct and access their research where and when they need to. While planning and implementing these programs, the Library learned many lessons and developed best practices that other libraries can learn from and use.

E-Books Lending Program

The Library established its e-book program due to a number of factors:

- The extreme popularity of e-journals, which integrated well with the customers' research workflow.
- Customers specifically requested e-books so they could conduct their research remotely and seamlessly alongside e-journals, preferably on the same platform.
- As the number of available e-book titles expanded, the Library made a collection development decision to replace missing or popular print titles on waiting lists with ebooks.

Today, the Library's e-book program consists of over 2,200 titles with more than 8,900 full-text downloads last year.

E-Book Best Practice #1: Consider customers' preferences. Pilot or trial a small number of e-books to get feedback on the preferences of your customers at the outset of your e-book program. It's best to start with e-book providers that have similar interfaces, licensing, and business models to your e-journals.

There are a number of e-book vendors in the market today that provide institutional access to e-books. These vendors differ in the subject areas of e-book content provided, online interfaces, file formats, digital rights management (DRM), licensing, and business models. This variety among e-book vendors is why it is important to pilot or trial different types of e-book providers with your customers, incorporating these differences to determine which providers work best for both your library and your customers.

The Library piloted e-books in 2006 with NetLibrary (now EBSCOhost e-books)¹, which provided perpetual, single-title e-book licensing. Customers used the e-books frequently during the first year (560 uses of 61 titles). However, feedback indicated customers did

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¹ Note: The identification of any commercial product or trade name does not imply endorsement or recommendation by the National Institute of Standards and Technology.

not like the usability of the e-books, particularly the e-books' interface and the DRM. In the next three years, the Library trialed and purchased small pilot collections from other e-book providers to identify the features that resulted in more usable e-books for customers.

In 2010, the Library instituted a full-scale e-book program. Based on its experience with the e-book trials and pilot collections from the previous four years, the Library set collection development criteria for future e-book purchases that included: downloadable e-book files without access-restricting DRM; standard PDF or HTML file format; and perpetual license, simultaneous IP-authenticated access purchase models. These criteria match the interface and licensing and access models of all e-journals subscribed to by the Library.

While the criteria set by the Library excluded many e-book providers and aggregators at the time the full-scale program started, it reflected customers' preferences best, and showed that the Library was listening to its customers. This, in turn, created a positive e-book experience for the customers and they embraced using e-books; therefore, the e-book program started out and continues to be successful. The Library continues to monitor e-book providers to identify when changes in platforms, licensing, and business models bring them into alignment with the Library's e-book acquisition criteria and customer preferences.

E-Book Best Practice #2: Collect e-books wisely. A mixture of collections and individual title purchases will often provide the best foundation for starting your full-scale e-book program. Choose e-book collections in frequently used and cross-disciplinary subjects to reach as many customers as possible.

E-book pilot programs and trials help identify e-book providers that best suit libraries and customers. The next challenge is to build a full-scale e-book program that reaches as many customers as possible, while minimizing the time and effort required for selecting and purchasing e-books. When the Library established its full-scale e-book program in 2010, one goal of the program was to reach as many customers as possible by purchasing large numbers of e-books. That way, customers had a greater chance of discovering an e-book useful to their research.

E-book collections are an excellent way to acquire large numbers of e-books at one time. However, when purchasing e-book collections, it is best to focus the collections in subject areas frequently used by customers and cross-disciplinary subjects. Previous analyses of the Library's print collection usage showed that physics titles frequently circulated, prompting the purchase of the Springer Physics & Astronomy e-book collection. Evaluation of e-journal usage showed that the Library's customers heavily used the IEEEXplore database, so the integrated IEEE-Wiley e-book collection was purchased. Finally, as mathematics was a cross-disciplinary subject that all scientists at NIST incorporate into their research, the Library purchased the Springer Mathematics e-book collection. These three e-book collections quickly added over 950 e-books to the Library's collection.

However, the purchased collections only covered three major subject areas. To ensure that the Library's e-book collection had breadth and reached even more customers, these collections were supplemented by the purchase of individual titles in more specialized fields of NIST research.

The broad foundation of the Library's e-book collection that was provided by the e-book purchases in 2010 allowed the Library to more selectively purchase e-books in subsequent years, yet still meet the research needs of all of its customers. In 2011 and 2012, the Library has purchased only the current-year Springer Physics & Astronomy e-book collection, with an increasing number of individual e-book titles in many subject areas, from broad to niche focus.

E-Book Best Practice #3: Increase usage and usability of e-books by encouraging customers to use mobile devices to access e-books.

E-books provide Library customers mobility by allowing them to conduct research from their desktops or remotely connected computers. Taking it to the next level, customers can enjoy additional mobility if they can use e-books with hand-held devices. How customers can use e-books on mobile devices will depend on the e-book provider.

One of the first lessons learned by the Library regarding e-book access was that the license terms of e-books cover all means of access by its customers. That means that all of the purchased e-books may be read on NIST computers, personal computers of the Library's customers, e-reader devices borrowed from the Library, or customer-owned e-readers.

With e-book providers that do not restrict access to their e-books with DRM, it is very easy for customers to use e-books beyond reading them on computer screens. As all e-books purchased by the Library under the full-scale e-book program are non-DRM PDF e-books, they have the flexibility of being used on any e-reader device or tablet on the market today.

Note that e-book providers that use access-restricting DRM are developing applications that allow their e-books to be read on e-reader devices and tablets. Most use Adobe Digital Editions (ADE) to apply access DRM to temporary loans of these e-books, compatible with almost every major e-reader device and tablet on the market except the Amazon Kindle or Kindle DX.

Anecdotal feedback from customers indicate that the e-book formats selected by the Library and the licensing terms of the e-books have all increased the usage of our e-books by encouraging reading on mobile devices.

E-Book Best Practice #4: Make e-books an integral part of the research process. Increase discoverability of the e-books.

In the early years of implementing any e-resource, it is sometimes difficult to gain widespread customer acceptance of a new technology. However, there are several steps that a library can follow to help integrate e-books into customers' research workflows. They include: having a large collection of e-books (see e-book best practice #2); making e-book discovery easy through the catalog and other discovery tools; and incorporating e-books in reference research results.

All of the e-books' MARC records have been included in the Library's online catalog with a URL link to directly access the e-books so customers can discover the e-books as they search for books applicable to their research. The pilot e-books were often only accessible through the catalog, as they were not co-located on any platform with other electronic resources of the Library. However, from 2010 forward, many of the e-books purchased by

the Library are provided by the same publishers as its e-journals. Therefore, customers who are conducting research on the publishers' platform, such as SpringerLink or IEEEXplore, will not only discover e-journal articles that are relevant to their research, but applicable e-books. In addition, all of the recent NIST e-book collection is discoverable through Google Scholar. These additional means of discovery beyond the catalog integrate e-books into customers' research processes.

Where applicable, the Library's reference librarians use relevant e-book chapters in their reference research and provide copies of or links to the chapters. This increases customer awareness of e-books and demonstrates to customers how the e-books are directly relevant to their research.

E-Book Best Practice #5: Keep abreast of developments in the e-book marketplace.

The e-book market is still in a state of development. E-book providers are constantly adding additional features, file formats, business models, and means of e-book access. Libraries can consider such changes in their ongoing e-book acquisitions, such as considering vendors who did not previously meet acquisition criteria. Other changes, such as those in e-book platform features, can also increase the usability of past e-book purchases.

There are many avenues to keep abreast of developments in the e-book market. E-books are a frequent subject of articles in library professional publications and presentations at conferences. Technology magazines, news outlets, and library blogs (such as Sue Polanka's *No Shelf Required*) are ways to rapidly learn of recent developments in the e-book market. Libraries can also utilize relationships with e-book vendors to learn of upcoming and recent changes available to them.

Libraries should then make sure to communicate relevant changes in features, formats, and means of access to their customers. The NIST Research Library lets customers know how these changes will make their research life better through its marketing efforts, including its blog and digital display.

E-Reader Lending Program

The e-reader lending program at the Library was started in 2010 to:

- increase accessibility to the Library's existing e-book and e-journal collections,
- increase usage,
- allow the Library's customers to be more mobile, and
- allow the Library and its customers to explore new technology.

Additionally, the Library had positive experiences in mobile device lending, beginning in 2007 with our iPod lending program.

The Library's current e-reader lending program consists of 19 devices, including: one Amazon Kindle 2, three Amazon Kindle DXs, three Sony Reader Daily Editions, PRS-900, and 12 Apple iPads. The e-reader program has been extremely successful, with the devices almost all constantly in circulation. The following four best practices resulted from the lessons learned as the Library developed this e-reader lending program.

E-Reader Best Practice #1: Consider customers' preferences. Pilot several models and brands of e-readers with customer focus groups and library staff before making bulk purchases.

Similar to e-books best practice #1, consider the customers' preference in your selection of e-readers. Market recognition can affect customer preference of e-readers; however, other factors may determine the best e-reader device(s) for a library and its customers. These factors may include file formats readable by the device, portability, display type, and device features. Focus groups are a great way to determine customer's preferences by directly interacting with the customers.

In the summer of 2009, before the lending program was started, the Library conducted focus groups to determine the e-reader features and devices that would be most successful with its customers. The Library provided focus group participants a Kindle 2, Kindle DX, and Apple iPod Touch to explore various types and formats of electronic content. The preferences voiced by the focus group participants included the ability to read PDF files (only available on the Kindle DX at the time of the focus group) and the ability to change text size of e-reader content. They also stated they preferred devices with larger screens over device portability. Based on these preferences, most of the Library's additional e-reader device purchases for the program consisted of large-screen devices that had the capability to read PDF files. The focus group was very instrumental in the Library's development of its e-reader program. Had the Library used general preferences in the consumer marketplace to make e-reader device selections, it would have focused the program on smaller, more portable devices that would not have met its customers' preferences.

Focus group feedback and the Library's device circulation statistics indicate the Kindles and iPads, with higher market recognition, are more sought after than the Sony devices. Therefore, if all other factors are equal, purchase e-reader brands with greater consumer market presence for library lending programs, as they often will also reflect customers' brand appeal. This will automatically boost e-reader program marketing efforts.

In addition to focus group feedback, the Library used the pilot devices internally to assess the level of staff effort and develop the administrative and physical controls that would be required to maintain the devices in a circulation program. Considerations evaluated ranged from simple issues, such as a suitable location to keep the devices when they weren't checked out, to complex strategies that included consultation with other divisions, such as how to maintain compliance with IT security regulations on mobile devices. When iPads were added to the circulation program, the Library again purchased a small number of the devices internally to assess the additional level of staff effort and develop controls before making iPads part of the program. This process of assessing and developing controls with pilot devices helped to make the e-reader program a success while minimizing the staff effort required to maintain the program.

As with any technology product, newer e-readers released in the market will have different features and possibly different sizes available. Instead of making a bulk purchase of all the e-readers in its collection, the Library made gradual purchases over the two years in which the program has been running. One benefit of this purchase process was that the Library was able to add newly released devices, including new models of the Kindle DX and iPad, to its program. Additionally, the Library was able to base additional purchases of e-readers on the circulation frequency of existing devices in the program.

E-Reader Best Practice #2: Don't be surprised by the license agreement. Check with your agency's Legal department before purchasing any e-readers to identify whether license restrictions exist regarding lending e-reader devices or e-reader content. Don't be afraid to negotiate with e-content providers for approved, modified license terms that allow library lending.

Although there are many e-reader lending programs at public and academic libraries that include e-reader devices and content, their license agreements may differ from those of government libraries. Government libraries must comply with license agreements approved by their Legal departments.

Typically, the license agreements for the operating systems of e-reader devices have no restrictions on lending of the devices. However, the licensing of e-reader content is murky on the subject of library lending at best and excludes library lending at worst. E-reader content in this case is defined as commercial e-books and other digital content specifically formatted or sold for specific e-reader devices and intended for individual consumers. Examples include Amazon Kindle eBooks, Barnes & Noble NOOK Books, and Apple iBooks.

During the Library's e-reader device focus groups, the devices were preloaded with PDF files and Kindle eBooks e-reader content. The focus group readers liked the ability to change the font size of the Kindle eBooks (a feature not available with PDF files).

The Library next worked with the NIST Legal department to review the use of e-reader devices and e-reader content in a lending program. Unfortunately, the Legal department determined that the licensing agreements for e-reader content for all of the major e-reader devices on the market at that time did not allow for library lending of e-reader content; they did explicitly approve the Library lending the e-reader devices themselves.

Nevertheless, based on the customer preference voiced during the focus groups, the Library felt that it was important to include e-reader content on at least a portion of its e-readers. Based on Sony's collaboration with Penn State in lending Sony Reader devices and content, the Library directly approached Sony about circulating Sony e-reader content. After many discussions with and submitting program plans to Sony, the Library was able to obtain a modified license agreement that would allow it to not only circulate Sony Reader devices, but also e-reader content from the affiliated Sony Reader store preloaded on the devices. Based on this approved, modified license agreement to circulate Sony Reader devices and content, the Library added three Sony Reader devices to its collection and preloaded 21 e-books from the Sony Reader store on each of the devices; these devices are the only ones in the lending collection that have e-reader content preloaded on them.

E-Reader Best Practice #3: Increase usability of e-readers. Provide customers the ability to load their own material on borrowed e-readers.

One of the key benefits in lending e-readers is allowing customers to be more mobile in their research. During the loan period of an e-reader, the customer may need to read e-books or e-journal articles that are not preloaded on the device. Customers prize the ability to load and read their own material.

Unfortunately, each e-reader is unique in the means to load content on the device. In addition, there may be different agency IT security requirements for each device, specifying if and how e-readers can be connected to computers on the agency's network.

To minimize technical issues for customers while loading their own content and to ensure compliance with NIST IT security requirements, the Library issues with each device a single-page quick-start guide specifically created for that type of device. These guides cover almost all questions that customers may have, from basic operation of the device to how to load personal content. Because of the guides, the Library has had very few customer questions or complaints about technical/security issues with borrowed e-readers.

E-Reader Best Practice #4: Maintain return interest in your e-readers. Keep an eye out for innovative apps for and uses of the devices.

E-reader devices are a capital, one-time investment. There will be initial high interest in any new technology that a library provides to its customers. However, libraries need to have a plan to maintain long-term use of e-readers before making an investment.

The Library seeks to maintain return interest in the e-reader devices. One way this is accomplished is to change out the 20 PDF e-books preloaded on each device on a regular basis. This encourages customers to re-borrow e-readers. An added benefit is that the e-readers create free marketing for the Library's e-book collection, as the preloaded PDF e-books are all from the collection.

The Library is also examining new uses for the e-reader devices in the future. It is evaluating apps to add to the iPads in the lending program that will increase the mobility and productivity of its customers. It is also evaluating additional uses of all e-readers in the program, such as incorporating exclusively preloaded devices in training classes conducted at NIST.

Marketing

One best practice that is common to both e-books and e-readers is NIST's creative marketing.

Marketing Best Practice: Market, market, market. Use multiple marketing venues to make customers aware of e-book and e-reader programs.

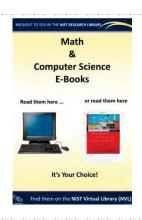
Marketing is an important tool for increasing awareness and usage of e-books and e-readers. It is important to conduct marketing not only at the introduction of a program, but throughout the life of the program. In addition, since customers interact with the library in different ways, it is important to use multiple marketing venues to reach as many customers as possible.

The Library used a broad range of marketing tools to introduce customers to the NetLibrary books in 2006. This included articles in the Library's newsletter, articles on the Library's web page, and posters in the Library. Many customers learned of the NetLibrary books through these outreach points.

In 2010 and beyond, the Library built on the success of the NetLibrary e-book marketing strategies to increase awareness and usage of both its e-books and its e-readers. Marketing includes blog posts and digital display slides about the programs, articles on the Library's web page, posters throughout the library, and creating book dummies with e-book titles to display at the Library's New Book Shelf. By using multiple outreach points with repeating messages, the Library helps customers to be aware of and comfortable with integrating e-books into their research processes. Some examples of the marketing conducted by the Library follow.

E-book Poster

This is one example of posters that are located throughout the Library stacks and at the open-access computers. The posters encourage customers to read ebooks on either a computer or using a mobile device. Each poster features a different subject area or lists all major subject areas covered by the e-book collection.



E-book Digital Display Slides

The Library's Digital Display, outside its main entrance, markets to customers as they pass by the Library. These slides are displayed after every holiday season to promote new owners of personal e-reader devices or tablets to read Library materials on them.





E-readers on Library Web Page

The e-readers in the collection are periodically highlighted on the Library's home page. A link to an e-reader FAQ page provides additional details.



E-reader Digital Display Slide

This digital display slide promotes circulation of Sony Readers by featuring e-reader content available exclusively on the devices.



Conclusion

The best practices in this article reflect those that have served the NIST Research Library well. As discussed in e-book best practice #1 and e-reader best practice #1, customer preferences are the first and most important consideration in the success of any e-book or e-reader program and may vary from library to library. By being aware of current and future developments with e-books and e-readers (e-book best practice #5 and e-reader best practice #4), libraries can continue to provide the best resources and technologies that will increase customers' research mobility.