

Electronic Books (eBooks): Current Trends and Future Directions

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Abstract

As a greater number of electronic resources become available, retrieving relevant and authoritative information has become progressively more challenging and time consuming. Locating relevant information in a timely manner is critical for both the researcher and the information professional. Electronic books (eBooks) are one way to enhance the digital library with global 24 x 7 access to authoritative information. eBooks enable users to quickly retrieve and access specific research materials easily, quickly, and effectively.

It is crucial to not only provide these electronic resources, but to integrate them into library systems to streamline library operation, as well as promote user adoption. EBook providers targeting the library market are involved in the selection, cataloging, and distribution of eBooks and are working with library system vendors to integrate eBooks into library online public access catalogs (OPACs). This enables library users to remotely search, locate, and checkout eBooks from the library's OPAC.

As with any new opportunity, new challenges emerge and utilizing the Internet to deliver book content is no exception. Integrating electronic books into the digital library has created challenges and opportunities for librarians, publishers, and eBook providers.

Introduction

When discussing the societal and cultural changes created by available new technologies, Paul Hoffert, Director of Cultech Collaborative Research Centre at York University and Executive Director of Intercom Ontario, stated "... the context has

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changed.”¹ These changes in context are affecting how people communicate and how they seek and use information, as well as how and why they use libraries.

Librarians would be remiss in addressing eBooks without first considering the needs of the library's users. In this sense, the context in which librarians function has changed. Library users have varied expectations for accessing and acquiring information. The context of the information and technology environments has changed.

Library Challenges

In addition to these changes in context, librarians are facing several other challenges in providing information. These include, but are not limited to, shrinking budgets; limited shelving and space; reduced or no funding for additional space and new buildings; rising costs to repair or replace damaged, lost, and stolen books, some of which are out of print; users' dependence upon and demands for resources in electronic format; the rising costs of interlibrary loan services; the increased need for developing resource-sharing and purchasing groups to increase buying power; and the demand to support distance or distributed learning and other remote users.

Libraries are moving from a "warehouse" perception to an information gateway or portal. Libraries are also being required to be more relevant to institutional and community objectives, or in other terms, libraries must be accountable to university, state, or local governing bodies.

eBook Opportunities

The Internet has caused a revolution in the book publishing industry with the emergence of the electronic book (eBook). The advantages of eBooks for libraries are straightforward and include: easy access to content; on-demand availability; cannot be

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lost, stolen, or damaged; capabilities to search within a book and across a collection of books; links to other resources, including dictionaries and thesauri; no physical space requirements; no device requirements for access to the content; access to content using standard Web browsers; customizable search interfaces; easily transported; and access from anywhere.

Opportunities for publishers have also been created with the birth of the eBook. EBooks have been attributed to the revival of the scholarly monograph. They also provide an opportunity for publishers to maintain a competitive position in the publishing and ecommerce markets. The emergence of the eBook has given publishers new ways to serve customers by repurposing content and creating “living books,” which incorporate text, audio, video, and other resources, such as dictionaries, thesauri, etc.²

eBook Definition

An eBook is based both on emulating the basic characteristics of traditional books in an electronic format, as well as leveraging Internet technology to make an eBook easy and efficient to use. An eBook can take the form of a single monograph or a multi-volume set of books in a digital format that allows for viewing on various types of monitors, devices, and personal computers. The technology should allow searching for specific information across a collection of books and/or within a book. An eBook should utilize the benefits of the Internet by providing the ability to embed multimedia data, to link to other electronic resources, and to cross reference information across multiple resources.

An eBook collection should be accessible anytime, anywhere via the Internet, requiring no device but a personal computer to access the content. An ideal eBook should

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provide content of value, the ability to view online, the ability to download to a PC or view offline, and the ability to view on a handheld device or personal digital assistant. Users should be guaranteed privacy for the content they access and use and should be able to aggregate and customize items and content regardless of format.

Copy and print capabilities for portions of the eBook should be permitted within copyright and fair use laws. Copyright protection must be ensured regardless of whether the content is accessed via the Internet or via a downloadable reader that allows access to the book offline.

A dominant developing model is based on the belief that an electronic book (eBook) = Content. Therefore, an eBook cannot be a device; nor can it be a mechanism of creation; nor can it be defined as one dedicated source of content. An eBook **IS** the content itself. It is the intellectual property of the author and the copyright holders. Based on this premise, the content, even in an electronic world, should be available to share between and among users, as content produced on paper has been and is currently used, while in compliance with fair use and copyright laws.

The ideal eBook model leverages the Internet and the electronic environment to provide more efficient and effective means of aggregating, organizing and making content accessible, while retaining the integrity and essence of the traditional book industry and the use of content that is easily accessible and not restricted by devices or technical environments.

eBook Challenges

The integration of eBooks into the digital library has not only created opportunities for librarians, but has also created several challenges. Full-text access and

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retrieval of eBooks combine library-based theories and principles with Web search and retrieval techniques. Librarians must develop innovative policies, procedures, and technologies to accommodate the publication of and access to eBooks.

EBook challenges for librarians can be grouped into three categories – acquisitions and collection development, standards and technology, and access. Within each of these categories are subcategories. Acquisitions and collection development challenges include budget allocations; usage and distribution models; purchase models; and collection development strategies. Standards and technology challenges include not only cataloging and metadata standards and schemes, but eBook hardware and software technologies, digital rights management software, and user and staff training. Access challenges include the cataloging and indexing of eBooks, circulation models for the electronic environment, and preservation and archiving of eBooks and the resources linked to them.

Publishers must also contend with challenges created by the emergence of the eBook. These include securing both electronic and territorial contractual rights for content and permission clearance since the Internet knows no boundaries. Publishers must become involved in the development of format identifiers, such as ISBNs, digital object identifiers (DOI), etc. EBook metadata maintenance and delivery and compositor and eBook file delivery are new publisher venues that require additional resources. Editorial and production workload, quality assurance, and sales reporting and accounting, including royalties for electronic content, require publishers to revise policies and procedures, to hire personnel with these knowledge and skills, and to train personnel in this new publishing venue. Publishers must also develop methods for the storage and

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transmittal of eBook files for repurposing content. The marketing for and the publicity and sales integration of eBooks also require publishers to revise current practices or to develop new practices.

In spite of these challenges, progress has been made in the production and distribution of eBooks during the last eighteen months. Librarians, publishers, eBook providers, and integrated library system vendors have worked together to implement and integrate acquisitions systems; test various collection development strategies; propose and adopt new, revised, and combined standards; provide new eBook hardware and software; identify and test new indexing and retrieval methods for full-text eBooks; test new access and usage models; and initiate preservation and perpetual access agreements for eBooks. Great progress has been made in providing, distributing, accessing, and retrieving eBooks and there are several models that have emerged.

One Ideal eBook Model

Publisher relationships are the key to ensuring a steady flow of vetted content. An eBook provider should make available content from many publishers, allowing access to an additional distribution channel for publisher content. The contracted publishers should adequately represent academic, commercial, and trade publishers.

The one-book-to-one user model allows only one person to access each title at one time. Publishers feel comfortable with this model, believing that their content, available in paper, will not be cannibalized in an electronic environment. Some publishers have invested in eBook content companies, both through outside providers and within their own organizations; therefore, having a vested interest in providing an effective eBook model.

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Quality content is one of the key factors in providing an effective eBook model and publishers are instrumental in identifying the content that will be available electronically. A well-positioned eBook provider will have thousands of titles available that are identified and targeted for academic, public, school, and corporate library collections. Librarians on staff should have subject-area expertise in collection development, as well as staff from the publishing industry who are familiar with publishers' areas of specialization. Available eBook collections should be focused in areas reflecting both the activity in the publishing market place and the areas of high user interest. They should reflect titles with current imprint dates, as well as classic titles freely available in the public domain.

The ideal eBook model will allow users to copy and print portions of content while complying with copyright and fair use laws. Copyright compliance is of great importance to publishers since they are obligated to protect the intellectual property of their authors. The model should provide the secure rendering of digital content both on site via Web browsers or via downloadable readers. Publishers must be confident in the eBook provider's digital rights management software and assured that dissemination of their content is secure.

The delivery and distribution of eBook content should be customizable to meet each library's needs. EBooks are one of a library's significant assets and should be platform independent; accessible worldwide, online (via a Web browser), or off line via an eBook reader; and capable of integration into the library's online public access catalog (OPAC) through MARC records provided directly through the eBook provider or a bibliographic utility (e.g., OCLC, RLIN, RLG, etc.).

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Management of content, whether paper or electronic, is critical to librarians' collection development, budget, user services, and circulation decision-making processes. The model eBook vendor should provide usage reports, as well as reports of titles that are not used, which enable librarians to monitor and adjust their collection strategies and circulation models. It should be possible to assign circulation periods by title and/or collections and to access collection development tools for reviewing and acquiring new content that are developed and offered by the eBook provider.

In this model, the eBook provider should offer customer services, such as technical support, training, collection development assistance, and marketing services. Technical support should be available to set up access to collections and management reports and to assist with MARC record integration. Both on-site and online training should be offered to library staff, in addition to training and user documentation.

An eBook provider should supply published eBook content to academic, public, school, and corporate libraries both directly and through distributors to accommodate libraries' current acquisition processes. Some distributors that are currently cooperating with eBook providers in distribution agreements include Blackwell's, Follett Corporation, EBSCO Information Services, Baker & Taylor, J. A. Majors, COUTTS Library Services (including BMBC Limited in the United Kingdom), Teldan Information Systems in Israel, and Bibliotekstjänst AB in Sweden. The eBook distributor should have experience with the international market and provide content to library customers throughout the world.

The model eBook distributor should make available an eBook MARC record for each offered title. Library customers should be able to acquire these records directly

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through the eBook provider or through a bibliographic utility (e.g., OCLC, RLIN, RLG, etc.). The model eBook distributor should have alliances with integrated library system vendors, such as Innovative Interfaces, Inc., epixtech, SIRSI, and Follett Software Company, enabling librarians to incorporate eBook titles into their paper book collections. This allows a seamless interface for users and facilitates their access to eBook content.

The model eBook provider should employ professional librarians who are available to collaborate with library collection development staff and to assist with the creation of MARC records for all eBook titles. The eBook distributor's marketing team should provide promotional materials to librarians, the libraries' users, and publishers. These services provide the conduit between library customers and the publishers of the available eBook content.

eBook Trends 2001

eBooks have become more popular with publishers, librarians, and vendors within the past twelve months. This is evident by the number of eBook initiatives. There are eBook readers, which can be divided into the following categories: eBook hardware, Personal Digital Assistants (PDAs), and eBook software. There are also electronic ink and paper, print on demand, and online providers.

The major eBook hardware providers are Rocketbook, now known as REB 1100, and Softbook, now known as REB 1200, which have become increasingly popular in public libraries. The most commonly used PDAs that allow for downloading eBook content are Palm, Casio, Compaq, and Hewlett Packard.

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The major eBook software companies include peanutpress, Adobe, Microsoft, Folio, and netLibrary. eInk and Xerox provide electronic ink and paper. Print on demand companies include Xerox, IBM, Sprout, Lightning Source, netLibrary, and Hewlett Packard.

There are numerous online eBook content providers. These include publishers, such as Gale, Bowker, Oxford University Press, National Academy Press, and ProQuest; libraries, such as the University of Virginia; and vendors, such as Books 24x7, netLibrary, Questia, and eBrary. The increased number of eBook content providers in the past year may be an indication of the growing interest in this relatively new medium for the delivery of information.

Future Directions

Librarians must think beyond the paper book and utilize the capabilities of the eBook. It is more than an alternative to a paper book. Librarians should not make the mistake that was made when moving the paper card catalog to the online environment – simply digitizing the catalog card, without considering the new possibilities for search and retrieval. Links from the eBook to dictionaries, thesauri, related images, photographs, electronic text, and audio and video segments should be incorporated.

Now is also the time to enhance the bibliographic record. The table of contents and book indices should be included in the bibliographic record since these are already digitized in the eBook format. Links to book reviews, electronic resources that are referenced in the book, and book summaries should also be included in the bibliographic record. Librarians need to work with publishers, technology providers, and eBook

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providers to not only map standards and schemes, such as the Dublin Core and ONIX, but to integrate these into the MARC format.

The incorporation of full-text search capabilities of eBooks should be integrated into our library online public access catalogs to enable users to search within the library's electronic collection, as well as across other available electronic collections. CORC can be used as an example to move in this direction, since it enables users to search across all types of electronic information, i.e., Web sites, electronic journals, eBooks, newspapers, advertisements, etc. Library systems should also enable the integration of semantic searches that map and retrieve concepts and ideas in addition to keyword and known searches.

These advances will move libraries into the digital world of our users. With the advancement of wireless technologies, library users' expectations are changing as they become more wired and more dependent upon technology. E-cars, high-tech automobiles with Internet access, allow individuals to check e-mail, monitor stocks, and keep up with sports scores without taking their hands off of the steering wheel because of telematics, a wireless technology that transmits information to and from a vehicle. Telematics is available in 2001 automobiles from Mercedes-Benz and General Motors and includes voice-activated features.³

The popularity of Napster and MP3 have given users the capability to aggregate their electronic content into private digital libraries. The popularity of peer-to-peer technology, such as Gnutella, fashioned after Napster but that allows all types of files to be shared between individuals, is facilitating this aggregation.

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If individuals are aggregating content to create their own information stores, will libraries and librarians become obsolete? The literature indicates that librarians will be needed to assist individual users with the retrieval and evaluation of electronic information.⁴ John Lombardi also anticipates that the role of the librarian as gatekeeper will change as individuals become their own gatekeepers. He believes that librarians will digitize unique special collections and maintain and manage these collections. He also envisions librarians creating a "mega" library union catalog and developing library portals to compete against commercial services.⁵

If librarians do not provide new methods for library users to access electronic resources, they may become "disintermediated," or, even worse, obsolete. As stated by Toffler, "The illiterate of the year 2000 is not the one who cannot read and write, but the one who cannot learn, unlearn and relearn."⁶

¹ Hoffert, Paul. "The Bagel Effect." Presented at the Netspeed '99 Conference, September 23-25, 1999, at the Crowne Plaza-Chateau Lacombe, Edmonton, Alberta, Canada.

² Franklin, Kelly. Presented at netLibrary, Inc., January 4, 2001, at the netLibrary offices, Boulder, Colorado.

³ Hales, Dianne. "E-Cars take to the Road." *Parade Magazine* (October 1, 2000): 18-9.

⁴ Keller, Larry. "Looking It Up." (November 28, 2000).
<http://www.cnn.com/2000/CAREER/trends/11/28/librarians/index.html>.

⁵ Lombardi, John. "20/20 Vision for the Future." Paper presented at the annual meeting of the American Library Association, University Libraries Section and The College Libraries Section of ACRL. Chicago, July 2000.

⁶ Toffler, Alvin. *Future Shock*. New York: Random House, 1970.