ELECTRONIC BOOK: A KIND OF DIGITAL RESOURCE

By

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ABSTRACT

Books form an important part of human culture and heritage. Traditional approaches to book production include either manual or mechanical binding of sheets of paper in order to form an organized, structured entity of knowledge. Now, the mode of production, dissemination and information seeking behavior of users are changing in electronic era and call for alternative approaches to book production, dissemination and use. One such alternative approach is the creation of Electronic Book. This paper discusses the growing importance of ebook, creation techniques, some issues and challenges and its implications in libraries and information centers.

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0.   Introduction

With the rapid development of technology and emergence of Internet, electronic publishing is getting a tremendous impetus from the publishing industry as well as library and information centers. Electronic Book, popularly known as e-book which is going to be one of the most leading digital resources like e-journals, e-magazines, e-conference etc. is exerting a dominant pressure on publishing world and paving the way to the transition from print to electronic media. With the enormous capacity, ebook can revolutionise the publishing industry as well as provide excellent opportunities to authors to publish their books directly on the Web.

1.   E- book: A conceptual evolution

An electronic book is the content of the book made available to the reader in electronic form. This definition specifically excludes the online bookstores such as amazon.com, etc. Most online book stores are currently providing a means of ordering a copy of a printed book electronically. According to Encyclopaedia of Library and Information Science, electronic book is "a term used to describe a text analogous to a book that is in digital form to be displayed on computer screen". Electronic books, or e-books, are books in computer file format and read on all types of computers, including handheld devices, designed specifically for reading e-books.

Thus, e-books can be as familiar as their print counterparts or as unique as the electronic medium itself, containing audio, video or live hyperlinks. E-books can be delivered by download or e-mail file attachment. E-books on diskette or CD-ROMs are sent by postal mail or sold in bookstores.

The first digital books date back to 1971 when Michael Hart was given a virtually unlimited account of computer time on the mainframe at the Material Research Lab at the University of Illinois. He decided that widely disseminating the contents of libraries was the greatest value computers could create. He typed the text of the Declaration of Independence and so began Project Gutenberg, which now includes more than 2000 classics online. In 1990, Voyager Co introduced the first e-book meant to be read on personal computer. The advent of Web brought both opportunities and distraction for e-books. As the first universal publishing medium, the Web could make e-book easily accessible, with its hypertext markup languages, even retaining some print-style formatting. It may be available in different file formats.

Recently, MIT's Media Lab is developing a product termed "E-Ink" and it may soon be possible to download text onto electrostatically charged 'paper' pages. When we have finished reading, we will simply plug the book into the computer to 'recharge' it with a different text.

2.   Types of e-books

2.1   Downloadable E-book

The contents of e-book are available on a website for downloading to the user's PC. The users do not have to purchase any special reading device and can employ standard and well-known Web techniques to obtain the book. The disadvantages of downloading e-book include the problems of reading from PC screens, unattractive formats, and the time required to carry out downloading operation, particularly in the absence of high speed data lines. Many consumers have only 56K modems and dial up connections that can be slow, overloaded and unreliable.

2.2   Dedicated E-book

The contents of the books are downloadable to a dedicated hardware device, which has a high quality screen and a special capability for book reading. Much of the activities of dedicated e-book arena centers around the emergence of dedicated e-book readers -- hardware devices specially built and designed to improve the reading experience and they incorporate special controls to make book reading easy and simple. They have also the facilities for bookmarking a page, move through the book in a nonlinear fashion. Some readers also incorporate links to dictionaries or thesaurus so that the user can look up the meanings of the words. There is no need for PC or Internet access facilities, because the readers incorporate modems that dial directly into the e-book publisher's server to download books.

2.3   Web accessible E-book

The book remains on the providers' web site and can be accessed on a fee basis. Readers can purchase the books to receive indefinite access. Users require PC to access this kind of e-book.

2.4 Print-on-demand book

The content of a book is stored in a system connected to a highspeed, high-quality printer, from which printed and bound copies are produced on demand. The contents may be accessible chapter-by-chapter basis, to enable the creation of single copies of customised books.

3.   Why do you create e-book ?

Some of the reasons are listed below:
- ? People will visit your web site over and over again
- ? You can advertise your products or service in it
- ? To give it away as a bonus for purchasing your product or service
- ? Make money selling advertising space in the E-book
- ? Free advertising by submitting e-book on all free sites
- ? Make money by selling the reprint rights

4.   How to create e-book ?

Before creating electronic book, it is essential to have necessary infrastructure and conducive situations. What you need is that you have to install one software to create e-book. There are many softwares available free of cost on the Web. To create an e-book I, myself, downloaded one free software called "E-ditor PRO" which runs under Window95/98/NT environment. It also requires Internet Explorar-4 or latter versions. This software allows you to compile all the HTML pages you create into a single executable file (*. Exe) and it keeps intact all photos, images, animations, sounds, texts, tables, frames etc that you use on your pages. The creation stage consists of four steps:
- ? Format your information in HTML pages using any web browser
- ? Launch E-ditor PRO and select the files that should be included in your new e-book. It is advisable to keep all your files in a directory. Try to avoid sub-directory.
- ? Select the security option, if you want to secure your e-book. There are two kinds of security options --one is Fixed Password and other is User name and Serial Number Option. E-ditor PRO provides shareware option which will ensure time limit to your e-book
- ? Choose a name for your new book and click the compile button. Your e-book is ready.

5.   Advantages & disadvantages

Followings are some of the advantages that E-book can claim:

- ✍ Easy for individuals for self publishing
- ✍ Shorter publication cycle
- ✍ Books are available on demand.
- ✍ Users need not visit a bookstore to obtain books.
- ✍ Difficult to impose government regulations (i.e. banning).
- ✍ Don't wear out with frequent use.
- ✍ Easy to update.
- ✍ Users can add bookmarks without damaging the book;
- ✍ High royalty can be paid to the authors;
- ✍ Users can carry an entire library with them;
- ✍ Compact and lighter than the equivalent number of printed books;
- ✍ Production costs for e-books are frequently much lower than books.

E-book is not free from certain demerits. Following are some of them:

- ✍ Security and copyright considerations;
- ✍ User unwillingness to read;
- ✍ Difficult to give as a gift;
- ✍ Unattractive page format;
- ✍ Long downloading time;
- ✍ Intellectual property protection is one of the potential barriers to the success of e-book.

6.   E-book reader

An e-book reader can be thought of something like Print Book. It looks more like a book with leather cover rather than a computer device. The history of e-book Readers can be traced back to 1940s. It appeared first in a science fiction but over the last ten years or so, there are many real life attempts to bring products to markets. Three companies such as NuovoMedia, SoftBook Press and Everybook Inc. have already launched their products in the market. Microsoft, the software giant have announced to launch an "Ebook Initiative" which will revolutionise the e-book market. At present, some of the important devices which are dominating the e-book market are:

6.1   SoftBook

It is an electronic device introduced by SoftBook Press. SoftBook has leather cover, that, when opened, automatically starts up the book. Touch-screen technology allows you to perform all the choosing, paging and bookmarking. One can also underline and annotate the text. The SoftBook is 8.5 by 11 inches and weighs 2.9 pounds, which is a little less than a typical encyclopaedia volume. It's portable feature facilitates to read e-book anywhere in the world, especially, it is very useful at the time of travelling. It has 8 MB of memory, which can be expanded to store up to 50,000 pages of content. Each Soft-Book customer is given a personal "online bookshelf" that stores the title that they have selected for downloading. One advantage of this device is that there is no need to have a PC.

6.2   RocketBook

NuovoMedia produces the Rocket eBook reader, which is the leader in the dedicated e-book market. The RocketBook is 7.5 by 4 inches and weighs 1.25 pounds, which is the same as normal book. It has the quality of backlit, which implies that one can read even in the dark. Rocket e-book works with the Web, which implies that you can download the book to your PC, then transfer the file to the RocketBook through a serial port. The advantage is a distribution mechanism through Web.

It comes with 4 MB of memory which holds nearly 4,000 A4 size pages of text. The Reader contains a browser that automatically connects to the Rocket Web site and downloads titles. The user can choose the type size of the text, annotate or highlight the passages of interest, and even switch to an auto mode and have the book to read. The Reader can also be customized by accessing a menu and changing to a different "skin". The Rocket Reader contains software to convert any document or HTML file to its internal software format, which allows the users to store their own documents or self-publish them.

It uses Public/Private key encryptic technology to insure copyright protection for all purchased titles. Titles can be viewed from reader's PC. These titles are encrypted in such a way that only the specific customer's Rocket book, which the title has purchased for, can decrypt the text. Rocket e-book can handle graphics also. It has voice quality, audio capabilities. The present system allows WAV files to be embedded within the text. Presently, NeovoMedia has collaborated with Barnes & Nobels to sell the Rocket Reader.

6.3   Everybook

The Everybook is little different from the above two. Here, there are two pages instead of one. Its size is 9 by 11 inches per side, so that's double when you open it up. It is developed by Everybook Inc. during mid-2000. It weighs 3.65 pounds and costs around $2000. The Everybook reader screen has a colour function, which is unique feature in e-book device arena. They are using active matrix technology and have a resolution of 1024x 764 pixels, similar to the screen in top market PC or laptop. The reader contains 233 MHz Pentium processor running the Linux operating system, a modem to access the Everybook Store and download titles, a removable card to increase the storage capacity, and audio and vedio capabilities. It has a capacity to hold upto 500,000 full-colour pages.

6.4   Glassbook

Glassbook Reader is a free downloadable software programme that enables you to read electronic books on your laptop, notebook, or desktop PC. It provides easy buying and downloading of e-books at the Glassbook Bookstore or other online booksellers such as BarnesandNoble.com. Other features include high-fidelity, full-colour display of e-book pages, including Adobe PDF e-books, searching, bookmarks, annotations, rotating display and controls for use on notebook computers. The Glassbook Reader runs on

Windows 95, 98, and NT 4.0. It requires Internet Explorer or Netscape version 4.0 or later.

7.   E-books in libraries

Despite the current proliferation of literature in electronic forms, the chief role of libraries in most people's mind is still associated with books. NetLibrary, Inc seems to be the leader in this effort at present. It has offered 1500 e-books, free of charge, to about 100 US Public libraries on six-month trials basis. Some landmarks in e-book arena are described below:

- ? The University of Texas has established a $1 million budget for e-book and has already acquired over 600 titles. Through its consortium partners, the library is accessing over 6000 titles. Digital readers are loaned to users who can download titles and who will be able to customise "libraries" in the future.
- ? North Carolina State University has experimented with e-book readers, buying a number of Rocket e-books and Soft Book Readers

There are some inherent ill-feelings of the library staff in general, regarding the circulation of e-book. Some questions remain unanswered still now. For example, how would the library control the circulation of e-book? What would be the optimum loan period? If a user borrows an e-book reader from a library and downloads some titles, how would the library collect the costs? Once downloaded, would the title be available to other borrowers or the publishers require that they are to be deleted? What about copyright and the possibility of piracy? If it occurred, would the library be legally responsible? If a library decides to invest in e-book readers, which one should it buy to access the most appropriate titles for its clients?

8.   Issues and challenges in e-Books

8.1   Standards

Standards for e-book format do not exist yet. However, the formation of an industry group, the open e-book initiative (http://www.openebook.org/) has been addressed at first NIST conference on e-books in 1998. In September 1999, the first draft specification was released and recently the Open Electronic Book (OEB) Forum was formed to continue development of a standard. The OEB standard will be based on HTML and XML languages due to the wide use in the Web.

8.2   Bibliographic control

The library could not add records for the e-book to its catalogue until the cataloguers had actually viewed them, because the vendor listings do not provide sufficient data on e-books.

8.3   Physical problems

The devices and their accompanying battery packs were too large to be conveniently carried, so the library had to issue them in bags to borrowers. Some of the users may feel uneasy and shy to carry E-Book device in front of everybody.

8.4 Price issues

It is a great issue for all who want to prepare electronic book. As far as my experience says, determining the cost of providing, service is difficult. But, the major components of cost structure of preparing e-books are network connection charge, one time hardware cost, software cost, Internet domain cost and manpower cost. But, it will certainly be less than the print publications. Determining e-book price also involves the archiving policies, indicating the positive relationship between the length of archiving period and price of e-book.

8.5 E-Index

But, who will index the books being digitized for uploading to the e-book readers? How is the index represented and how does the reader navigate between index and text? This is another challenge in front of e-book markets.

9. Conclusion

The rapid development of technology will continue to have dominant impact on scholarly communications and we are in transition from the print-based world to an era in which scholarly discourse will be conducted largely within a globally networked electronic environment. A quote by Dennis Dillon of the University of Texas is significant: "The speed with which the libraries are signing up with netLibrary speaks to the value libraries seen in e-book"[9]. E-book, with its superb qualities will play a predominant role in modern library environment as well as Publishing World. Nevertheless, e-book will not be able to replace the print publications in future but will surely supplement it by redefining publishing economics and probably, e-book will possess a lion's share in digital or virtual library environment.

10. References

1. Hawkins, Donald T. Electronic book: A Major Publishing Revolution. Part-1: General considerations and issues. Online. Vol. 24(3), July/ Aug 2000; p-14-28
2. Hawkins, Donald T. Electronic book: A Major Publishing Revolution. Part-2: The Market place. Online. Vol. 24(3), Sept/ Oct. 2000; p-14-28
3. http://www.infomotions.com/
4. http://www.softbook.com/
5. http://www.everybook.net/
6. http://www.rocketbook.com/
7. http://netlibrary.com/

8. Kurzweil, Ramond. The future of libraries. Part1: The Technology of Book. Part2: The End of Books. Part3: The Virtual Library. Library Journal, Jan 1992, p80-1; Feb 1992, p140-1; Mar 1992, p63-4
9. Nauman, Matt." Book Pricing Updates--ebooks and Publishing: Developing a new Business Relationship". Against The Grain. Vol. 12, No.2, April 2000, p34-8.