

E-Books: Its accessibility, Problems and Prospects in context to Science & Technology Libraries in India

**BY
T. B. GHOSH**

ABSTRACT

The production and usage of e-books is growing at a fast pace and warrants serious consideration, especially in libraries and information centres of Indian universities, institutions of Higher Education, S & T Organizations and other institutions of national importance like IITs, NITs, IIMs, and IISc. They are actively engaged in building electronic information resources for providing value added services to users to meet their information needs. The paper discussed with various challenges facing by S & T Librarians and potentiality and future of e-books. It also discussed the role of e-book providers like Net Library, QUESTIA, Versaware, Abode E-Book store, CyberRead, E-Book Studio and many more. In addition to that the paper discuss the role of free e-book providers like Gutenberg Project, University of Verginia E-Book Library, University of Pennsylvania E-Books, National Academy Press etc. It also discussed the advantage and limitations of e-books in different environment like bandwidth, connectivity etc. Lastly, it suggests that there is need to formulate a workable and sustainable strategy in S & T Libraries. It also urgently needed that systematic efforts are taken to develop suitable information infrastructure for providing access to e-books. It can be concluded that there is need to formulate a workable and sustainable strategy in S & T Libraries. It also urgently needed that systematic efforts are taken to develop suitable information infrastructure for providing access to e-books.

0 INTRODUCTION

With rapid growth and development in the use of modern information and communication technology and the internet, a huge potential exists in the ways the information is published and made available to the individual at home, institution or libraries and information centres. The production and usage of e-books is growing at a

fast pace and warrants serious consideration, especially in libraries and information centres. Libraries and information resource centres of Indian universities, institutions of Higher Education, S & T Organizations and other institutions of national importance like IITs, NITs, IIMs, and IISc are actively engaged in building electronic information resources for providing value added services to users to meet their information needs. Presently S & T Librarians facing various challenges like users information behaviour, database creation and its security formulation of collection building strategy etc., To meet these challenges E-Book is a boon to the S & T Librarians.

1 DEFINITION

The concepts of the “electronic book” are varied wildly. Some attempts have been made to include different definitions:

The **Webopedia** defines as: “An electronic version of a book. Currently there are two e-book products available, the Rocket eBook, from Nuvomedia (www.nuvomedia.com) and the SoftBook from SoftBook Press (www.softbook.com). Both are small computers size of a paperback and a legal notepad with backlighted screens that allow a user to read, save, highlight, bookmark, and annotate text. Both can download books from a Web site, such as barnesandnoble.com (although the Rocket e-Book requires another PC).[7]

According to **Ana Arias Terry** “an e-book consists of electronic content originating from traditional books, reference material, or magazines that is downloaded from the Internet and viewed through any number of hardware devices.” These include PCs, laptops, PDA’s (personal digital assistants), palm PC’s or palmtops, or dedicated e-book readers. [12]

The **Visual Book Project** concentrates on the preservation of the familiar paper book metaphor: The result of integrating classical book structure, or rather the familiar concept of a book, with features which can be provided within an electronic environment,

is referred to as an electronic book, which is interpreted as an interactive documents which can be composed and read on a computer

Tony Cawkell notes, the traditional concept of the book includes novels, dictionaries, telephone books, textbooks, anthologies, instruction manuals, proceedings of meetings, and directories. The phrase “electronic books”, however, has been applied to some types of CD-ROM systems, palm-top CD players, on-demand text, electronic documents systems of various kinds, and nearly any kind of computer-based text system that needs “hyping up” for marketing purposes . [1]

Therefore, the definition can be integrated as “An electronic book is the electronic content that is transmitted and or displayed on a device or system to be read by the viewer similar in experience to reading a physical book. An e-book is written in machine-readable form (Computer Screen) down loaded to a PC of digital assistant or place on a reader design for that purpose. It may be referred to a document of written record or electronic text. It can be delivered by down loading or as e-mail file attachment.

2 TYPES OF E-BOOKS

There are different types of e-books available in the market. Some of the types are explained in this paper

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 nodes and dial up connections that can be slow, overloaded and unreliable.

2.2 Dedicated e-Books

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 control to make book reading easy and simple. They have also the facilities for book marking 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 meaning 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-Books

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 high speed, 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 customized books.

3 WHY E-BOOKS

It is observed that e-books have great potential and bright future to attract users. In addition to this fact, there are some other major factors which also motivate S&T institutions to consider to develop e-books are listed below:

- Can be updated and, stored very easily
- Can be downloaded instantly

- Contain the latest and most updated information
- Users can read an e-book any time
- Due to portability, e-Books can be taken any where on portable computer
- Business and recreational travelers can load e-books on their portable computers without adding weight or taking up space in their luggage
- Font size can be changed suitably.
- Provide facility to hold and turn pages easily
- Physically disabled users can hear audible e-book
- In buying e-books, the overhead charges like shipping, postal, handling are totally ruled out
- No cost of technical processing and maintenance
- Link can be created in the record of OPAC
- No risk of book theft and tearing and mutilation of pages
- E-books have background music and animations.
- Hyper linking enables users to communicate directly with authors
- E-books save library space
- E-books do not require bindery and repair
- E-books save human resources for shelving and rectification
- Users can not misplace e-books

4 E-BOOK RESOURCES AND ACCESSIBILITY

Electronic books are accessible via the Web in a number of forms. Generally, they are texts that have been scanned or typed and either published on a Web server or made available on the Web for downloading. These can be free access or access on payment.

4.1 FREE ACCESS

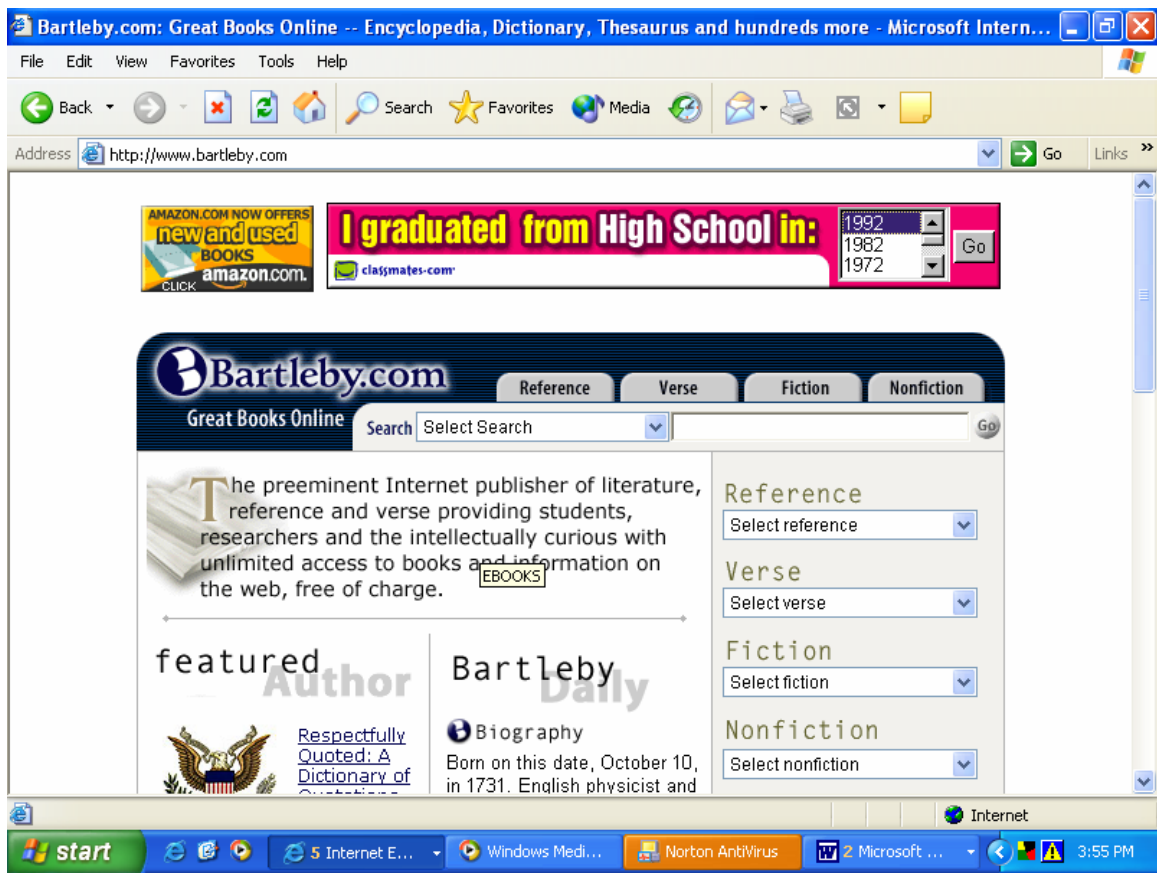
E-Book resources are referred to be a free when access to the sources is not dependent on a subscription or membership in an organization or a publisher. Some of the freely accessible E-book resources are stated below:

4.1.1 Project Gutenberg (<http://www.promo.net/pg>)

Project Gutenberg is the Internet's oldest producer of FREE electronic books (e-Books or e-Texts). It is the brainchild of Michael Hart in 1971. Thousand of e-books are available in this site free of charge. The site is having browsing facility by Author , and by Title. It also provides advanced search facility by Author or by Title (Words). Author wise list of e-books is available at <http://www.promo.net/pg/authors.zip> and Title wise list of e-books is available at <http://promo.net/pg/titles.zip> and current list of e-books is available as GUTINDEXALL at the FTP site at the University of North Carolina <ftp://ibiblio.org/pub/docs/books/gutenberg/GUTINDEXALL> Total of 6267 Total Project Gutenberg e-Books and 119 e-Books have been posted so far by Project Gutenberg of Australia.

4.1.2 Bartleby.com (<http://www.bartleby.com>)

It is a comprehensive, searchable database of reference, verse and classic literature, summaries of each book, and author biographies, having enhanced navigational tools and extensive cross –referencing. No access fee is charged. The screen shot of the web allowing access to e-books to the users is given below:



4.1.3 University of Virginia e-book Library (<http://etext.lib.virginia.edu/ebooks/ebooklist.html>)

1,800 publicly-available e-books including classic British and American fiction, major authors, children's literature, the Bible, Shakespeare, American history, African-American documents, and much more are available. Thousands more titles can be found on electronic text center.

4.1.4 University of Illinois Electronic books (<http://www.press.uillinois.edu/epub/books.html>)

The University of Illinois Press is a growing archive of free e-books, most with full content, features electronic versions of front list and newly released titles. It provides to browse through this collection by author, title and subject free of charge. It also provide full keyword searching across the archive to help the user to locate specific information.

4.1.5 University of Pennsylvania Online Books (<http://onlinebooks.library.upenn.edu/>)

The Pennsylvania Online Book page facilitates access to books that are freely available over the Internet. This site includes different sections like Books Online, News, Features, Archives. It was founded and is edited by John Mark Ockerbloom, the digital library planner and researcher at the University of Pennsylvania. It includes over 20,000 free books on the Web in various formats. Recently it is updated on October 7, 2004. All are free for personal, noncommercial use. Users can search by author and title, browse new listing, by author, by title, by subject and can browse serial archives. The screen shot of the web allowing access to e-books to the users is given below:



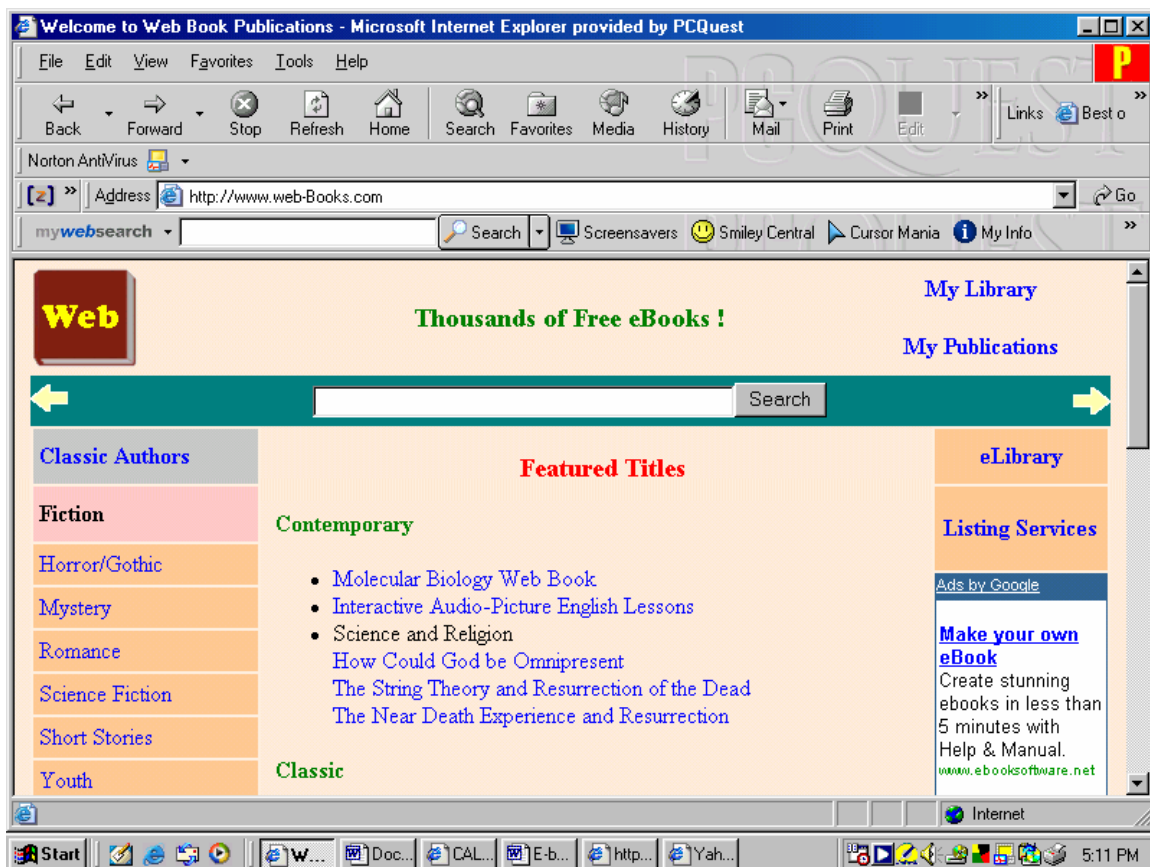
4.1.6 The National Academies Press (<http://www.nap.edu/>)

The National Academies Press (NAP) was created by the National Academies to publish the reports issued by the National Academy of sciences, the National Academy of Engineering, the Institute of Medicine and the National Research Council, operating under a charter granted by the Congress of the United States. NAP publishes over 200 books a year on a wide range of topics in science, engineering, and health, capturing the most authoritative views on important issues in science and health policy. The institutions represented by NAP are unique in that they attract the nation's leading experts in every field to serve on their blue ribbon panels and committees. More than 3,000 books online Free and more than 900 PDFs now available for sale. The screen shot of the web allowing access to e-books to the users is given below:



4.1.7 Web Book Publication (<http://www.web-Books.com>)

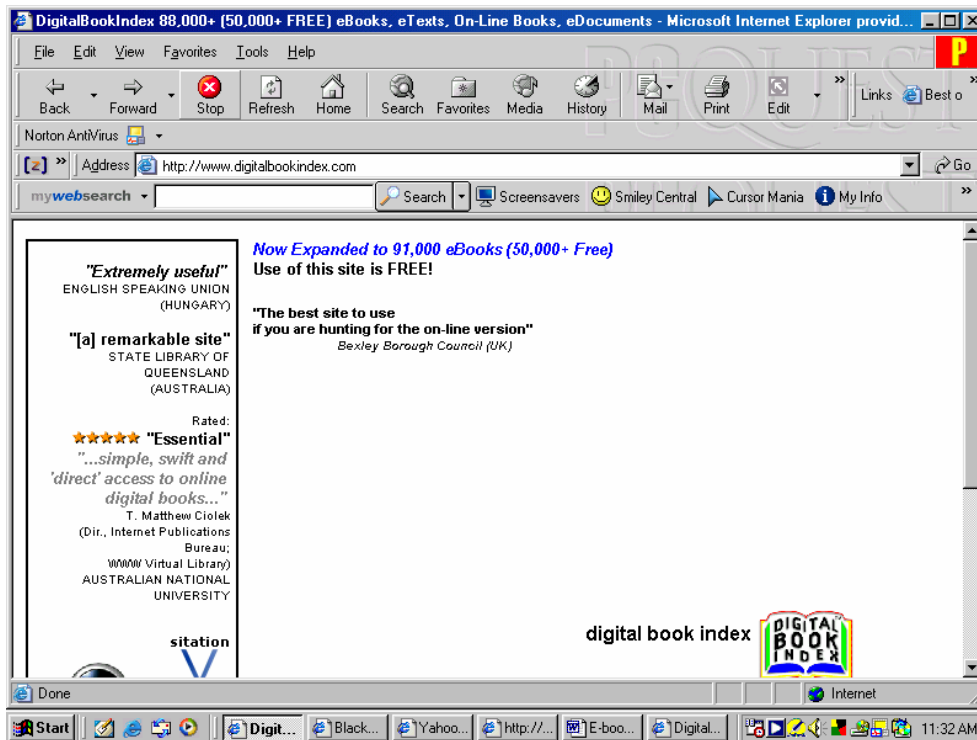
All titles in this public domain are free for online reading and download in EXE and/or ZIP formats (collectively called Web –books. The EXE format can be read by Internet Explorer on Windows 95/98/XP. The ZIP format is a collection of HTML files that can be read by any web browser on any device (notebook, PDA, smartphone, etc.). Currently it has over 700 titles. More titles will be added regularly. The screen shot of the web allowing access to e-books to the users is given below:



4.1.8 Digital book Index (<http://www.digitalbookindex.com>)

This site is expanded to 91,000 e-books and out of 91,000 e-books more than 50,000 e-books are freely available. Before accessing this e-book database the users have to identify themselves for better understanding of the visitors and to identify the kinds of resources the visitors are looking for. They also make user e-mail addresses

available to partner publishers who want to offer their new and current titles to the visitors. The screen shot of the web allowing access to e-books to the users is given below:



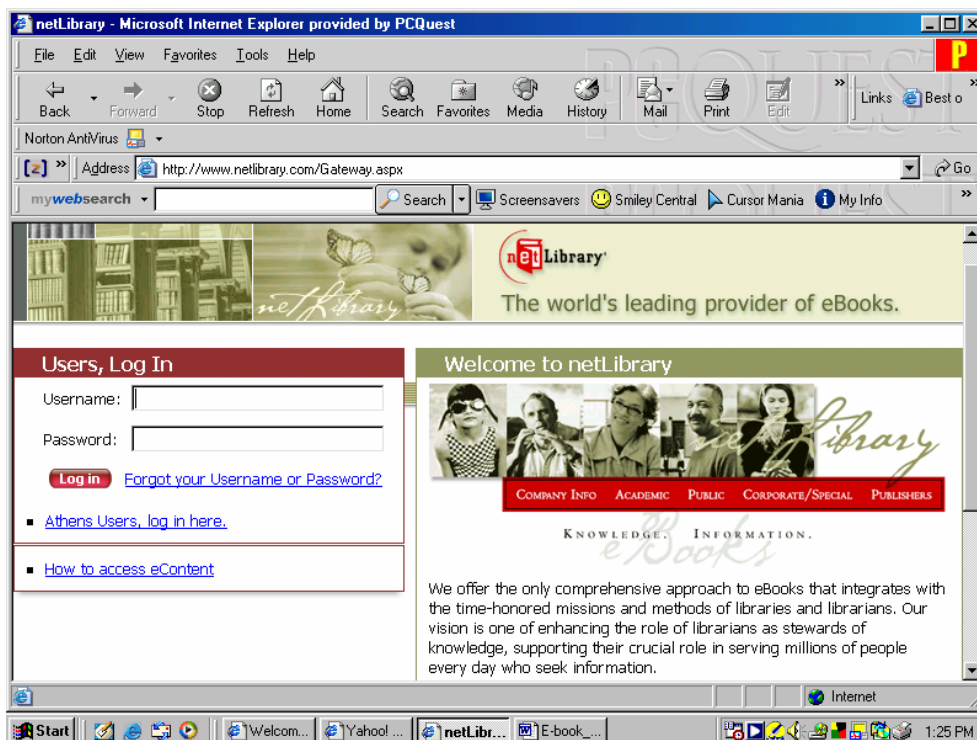
4.2 ACCESS ON PAYMENT

Due to rapid growth and development in the use of modern information and communication technology and the Internet, publishers are now started to shift their publications from print media to online electronic media. Instead of onetime selling printed books they are giving access to books in their server on rental basis like e-journals. Some publishers are selling e-books one time at the real cost of books and again they are charging annual access fees like subscription of e-journals. Some prominent e-book publishers and e-book sellers on Engineering and Technology and other subjects areas are described below.

4.2.1 netLibrary (<http://www.netlibrary.com/Gateway.aspx>)

netLibrary is founded in 1999 and based in Boulder, Colorado, U.S.A. and become a division of OCLC on January 25, 2002. It currently provides about 60,000 e-books from 400 publishers and adds 2,000 additional titles per month. Full list of books is available at URL: <http://www.netlibrary.com/titleselect> . The user can create his/her own login and password before access this page. The list of publishers of netLibrary is also available at URL: http://www.netlibrary.com/about_us/publishers/publisher_list.asp

netLibrary e-books can also be linked to library's website or integrated with existing cataloguing systems and OPAC using referring URLs behind a password protected page or an authentication system. The screen shot of the web allowing access to e-books to the users is given below:

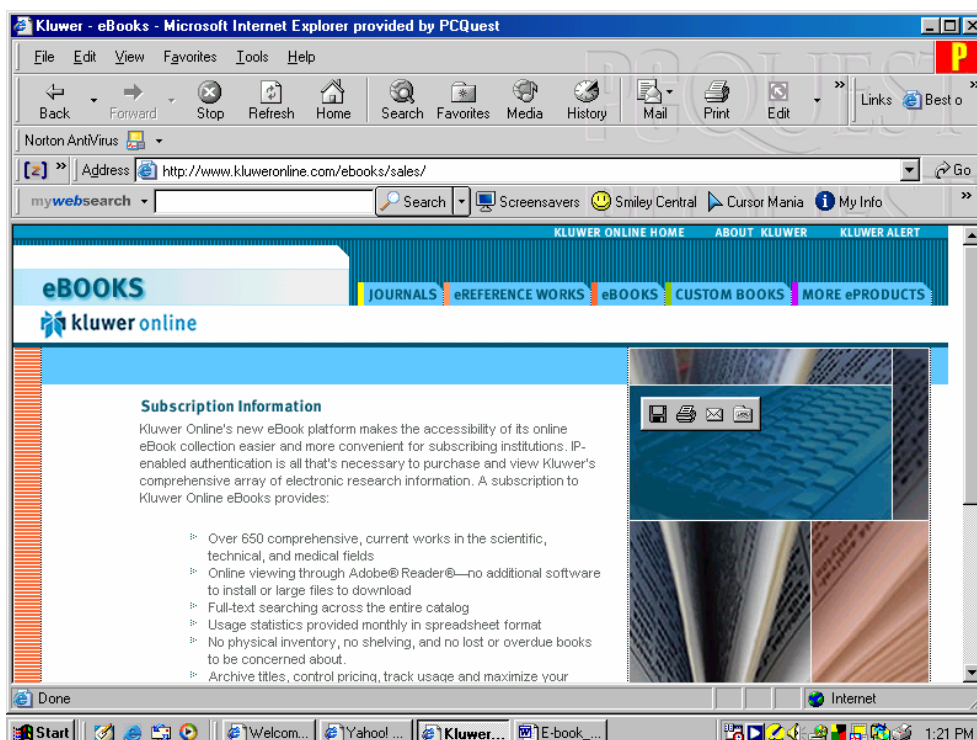


4.2.2 Kluwer Online (<http://www.kluweronline.com/ebooks/sales/>) (Recently merged with Springer)

Kluwer Online's new eBook platform makes the accessibility of its online eBook collection easier and more convenient for subscribing institutions. IP-enabled authentication is all that's necessary to purchase and view Kluwer's comprehensive array of electronic research information. A subscription to Kluwer Online eBooks provides:

- Over 650 comprehensive, current works in the scientific, technical, and medical fields
- Online viewing through Adobe® Reader®—no additional software to install or large files to download
- Full-text searching across the entire catalogue
- Usage statistics provided monthly in spreadsheet format
- No physical inventory, no shelving, and no lost or overdue books to be concerned about.
- Archive titles, control pricing, track usage and maximize the budget.

For academic and corporate institutions, making a complete collection of eBooks easily available to their users gives them the power to search quickly and effectively for the information they need. For more information on a Kluwer Online e-Book subscription any user can contact through email to: kluweronline@wkap.com or call 1 866 269 WKAP (toll free in the US) or +31 (0) 78 657 6050. It may be noted that recently Kluwer Academic Publications are taken by Springer. The screen shot of the web allowing access to e-books to the users is given below:



4.2.3 Safari Tech Books Online: (<http://proquest.safaribooksonline.com/>)

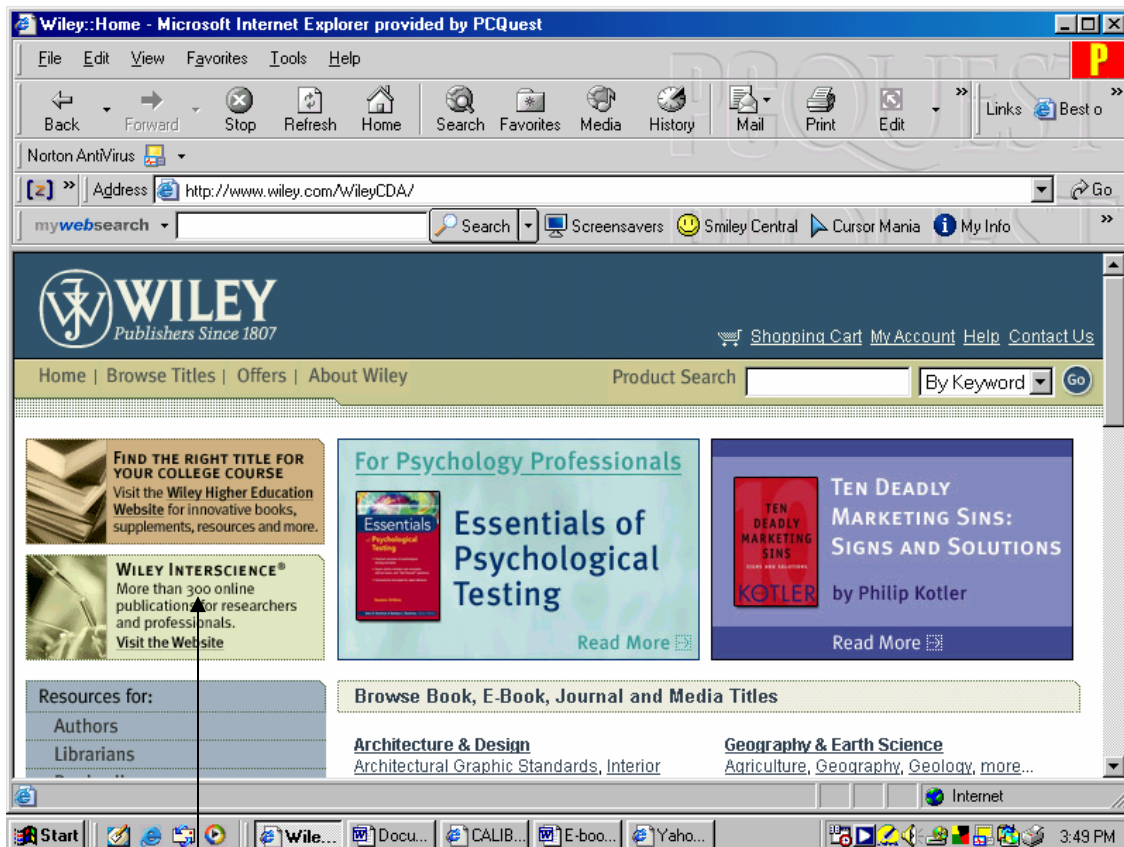
Safari Tech books is part of ProQuest Information and learning. Safari Tech Books Online provides powerful tools for libraries to integrate and manage the collection including seamless IP authentication, prominent library branding in the interface, the ability to create links from the OPAC directly to books in the collection, and robust usage reporting.

Safari Tech Books Online is available on an annual subscription basis, priced according to the number of simultaneous users and titles selected. Customers can build collections book by book to meet the needs of the library. The screen shot of Safari Tech Books website is given below:



4.2.4 John Wiley (<http://www.wiley.com>)

More than 300 online publications for researchers and professionals are available in Wiley Interscience. In addition to 300 online publications it features over 1,000 journals, major reference works, online books, Current Protocols, laboratory manuals, and databases as well as a suite of professional and management resources. The site was launched in 1997 and currently caters to over 12 million users in 87 countries. The screen shot of John Wiley website is given below:



300 Online
Publications are
available

4.3 OTHER E-BOOKS PROVIDERS

In addition to netLibrary, Kluwer online etc. dealing with engineering and technology subjects there are numbers of e-books providers in different variety of subjects like fiction, history, entertainment, college books. Some of the e-book providers dealing with such subjects are stated below:

4.3.1 Questia (<http://www.questia.com>)

Questia is the world's largest online collection of books and journal articles in the humanities and social sciences, plus magazine and newspaper articles. The users can

search each and every word of all of the books and journal articles in the collection. They can read every title cover to cover. This rich, scholarly content selected by professional collection development librarians is not available elsewhere on the Internet. Undergraduate, high school, graduate students, and Internet users of all ages have found Questia to be an invaluable online resource. Anyone doing research or just interested in topics that touch on the humanities and social sciences will find titles of interest in Questia.

To complement the library, Questia offers a range of search, note-taking, and writing tools. These tools help students locate the most relevant information on their topics quickly, quote and cite correctly, and create properly formatted footnotes and bibliographies automatically. Questia provides a comprehensive research environment to meet students' academic needs.

4.3.2 E-Book Palace (<http://www.ebookpalace.com/>)

eBook Palace is a visitor submitted directory listing over 3,500 titles in popular ebook formats including pdf, lit, html, exe, palm, mobipocket, & Rocket Editions that users can download and read from their desktop, handheld device or read online.

4.3.3 BarnesandNoble.com (<http://www.barnesandnoble.com/>)

It carries downloadable e-books in their E-Book section. CD ROM and diskette e-books available in the general book section

4.3.4 Booklocker.com (<http://www.booklocker.com>)

Booklocker.com, Inc. develops low-cost, author-friendly products, services and programs that help authors publish and market their own works. Their offerings work best with entrepreneurial authors who actively market their books and want to be involved in the entire process. Their goal is to provide the tools and the knowledge to help them successfully sell their books.

4.3.5 Book-Studio/Studio E (<http://www.studio-e-books.com>)

Book-Studio is a complete book production service. From raw manuscript to delivered book, Studio E provides editing, text preparation, book design, typesetting, and digital or camera-ready layouts ready for the printer. They are also broker of printing and shipping, delivering finished books ready to read.

4.3.6 Word Wrangler (<http://www.wordwrangler.com>)

Word Wrangler Publishing , 332 Tobin Creek Road, Livingston, MT 59047 is publishing fiction and non-fiction E-books partnering with SynergEbooks

4.3.7 Palm Digital Media (<http://www.peanutpress.com>)

Palm Digital Media is the first electronic book publisher to offer contemporary fiction and non-fiction books, newspapers, and magazines for reading on handheld computers including the Palm Organizer, Sony Clié, Handspring Visor, and Pocket PC machines, as well as Windows and Macintosh computers.

4.3.8 Powells.com (<http://www.powells.com>)

This is largest new and used bookstore, carries a large selection of Rocket Editions contains rare books , technical books and schooling books.

4.3.9 CyberRead (<http://www.cyberread.com>)

CyberRead is the store for eBooks. They offer thousands of eBooks in various formats by some of the biggest names in books. Each eBook purchased may be stored on user's bookshelf for download at user's convenience. The screen shot of the web allowing access to e-books to the users is given below:



5 LIMITATION OF E-BOOK

Though the e-book has great potential and bright future to attract the users it also have some limitations.

- Physical and Mental Strain: to read an e-book is not comfortable in comparison with printed book. It cannot be read in leisure time lying on bed or sofa. It can't be read in open air. Continuous reading of an e-book sitting in front of computer system affects the eyes and nerves.
- Reading an e-book while traveling in train or bus is not so easy and cheaper in comparison with printed books. Laptop or Palm top with battery system is urgently necessary to read an e-book, which is more costly than a book.
- In addition to cost, the user has to carry the machine which is difficult and a matter of risk like break / damage or theft.

- Students, faculties and research scholars those are staying in campus may avail the computer facility during working hours but if any student stays out side campus has to purchase computer and Internet connectivity for reading online e-books. Common students cannot afford such financial burden. Only in campus students, faculties and research scholars of IIT's, IISc., and NIT's / REC's can avail this facilities. In India there are plenty of private Technical & Engineering Collages who can't afford even in campus facilities.
- E-book is costlier than printed book. The expenditure of an e-book is sum total cost of e-book plus access charges plus internet connectivity and usage charges which is costlier than that of a printed book.
- In addition to Indian Scenario the survey of Task Force of the University of California 2001 found that most institutions are still in trial stage with e-books and e-book market viable are not quite in pace.

6 PERSPECTIVE AND FUTURE OF E-BOOK

The e-books are having so many disadvantages and problems but still e-book has its perspective due to the following features:

- Malleability
- Flexibility
- Search ability
- Ubiquity

As per statistics available from open e-book forum June 22, 2004 the sales and production of e-book are gradually increasing. A comparative statement of sales, production and reference is stated in the following figure.

Particulars	First half of 2003	First half of 2004
Unit Sale	288,440	421,955
Revenues	\$ 2,516,469	\$ 3,233.220

Though there are several problems of e-books in Indian environment the institute like IISc, Bangalore, NIT Calicut, NIT Surat is going for e-book through netLibrary, Kluwer online and Safari Tech. Books online. Other NIT's are also coming forward to procure e-books in near future.

7 SUGGESTIONS AND RECOMMENDATIONS

It is noted that e-books are very useful source for academic and research pursuits, teaching and serving the students and faculties effectively and efficiently. The librarians can provide satisfactory services using e-books. In case of NITs and other engineering and technological institutions following points are suggested which will help to develop e-book collections in S&T Libraries and Information Resources Centers.

- While selection of e-book the usability may be considered
- Encyclopedia and handbook type books may be given first preference as these types of costly books may be preserved safely in provider's server and there is no problem of theft and any mutilation.
- Text book may be avoided as these books will be used by the students and faculties outside the campus according to their own time.
- In case of NIT and self-finance engineering and technical institutions band width may be increased up to 100 MBPS for fast access.
- Strong negotiations are to be enriched regarding access charges through the consortium.
- Stability and longevity of access of e-books should be ensured from the providers in case of any provider decide to close down their business.

8 CONCLUSION

The role of e-books in academic, science and technology library there is a considerable development of standard technologies and pricing models needed to make the market for e-books viable and sustainable. Vendor's support for open process of scholarship and long term preservation may be preferred. It can be concluded that there is

need to formulate a workable and sustainable strategy in S&T institutions for e-books development, procurement and circulation policies. There is great future for e-books in S&T libraries. It is also urgently needed that systematic efforts should be taken to develop suitable information infrastructure for providing access to e-books.

REFERENCE

1. CAWKELL (TONY) . Electronic books. *Aslib proceedings*. 51 (2), 54058. February 1999.
2. GHOSH (T. B). Electronic library: An initiative taken by Sardar Vallabhbhai Regional Collage of Engineering and Technology (SVRCET), Surat. Paper presented at NACLIN-2001 held at Central University of Hyderabad during November 6-9, 2001. pp. 106-114.
3. GHOSH (T. B). , Freely available online information sources and their impact on libraries and information centers. Paper presented at CALIBER-2002 held at Jaipur, February, 14-16, 2002. pp. 375-383.
4. GUPTA (K. K.) AND GUPTA (P. K.). E-Books: A new media for Libraries. Paper presented at CALIBER-2002 held at Jaipur, February, 14-16, 2002. pp. 384-399.
5. JALAL (SAMIR KUMAR). Electronic Book: a kind of digital resource. Paper presented at CALIBER-2001 held at Pune University, Pune, March, 15-16, 2001. pp.24-31.
6. HARISH CHANDRA. development and use of web based information resources with specific reference to e-books : a case for S&T libraries. Paper presented at International CALIBER-2003 held at NERF, Ahmedabad, February 13-15, 2003. pp. 575-586.
7. INTERNET.COM (*WEBOPEDIA*).
http://webopedia.internet.com/TERM/e/electronic_book.html. Last visited 10/07/2004.
8. LANDONI (M.) AND GIBB (F). The role of visual rhetoric in the design and production of electronic books: the visual book. *The electronic library*. 18 (3). 2000.
9. PLOAMA (DIAZ). Usability of Hypermedia Educational e-Books. D-Lib Magazine, 9 (3), March, 2003 available at:
<http://www.dlib.org/dlib/march03/diaz/03diaz.html>. Last visited 05/07/2004

10. URS (SHALINI R.). E_books: Requiem or resurrection? U & I Special issues, March-April 2004, pp.7-8..
11. SNOWHILL (LUCIA). E-books and their future in academic libraries. D-Lib magazine, July/August, 2001 available at:
<http://www.dlib.org/dlib/july01/snowhill/07snowhill.html> Last visitd 05/07.2004
12. TERRY (ANA ARIAS). Demystifying the e-Book - what is it, where will it lead us, and who's in the game? *Against the grain*. November 1999. Available:
<http://bibliofuture.homepage.com/demyst.htm>. Last visited 28/9/2000.

WEBSITES REFERRED

1. <http://etext.lib.virginia.edu/ebooks/ebooklist.html>
2. <http://proquest.safaribooksonline.com>
3. <http://www.barnesandnoble.com>
4. <http://www.bartleby.com>
5. <http://www.booklocker.com>
6. <http://www.cyberread.com>
7. <http://www.digitalbookindex.com>
8. <http://www.dlib.org/dlib/march03/diaz/03diaz.html>
9. <http://www.dlib.org/dlib/july01/snowhill/07snowhill.html>
10. <http://www.ebookpalace.com/>
11. <http://www.kluweronline.com/ebooks/sales/>
12. <http://www.nap.edu/>
13. <http://www.netlibrary.com/Gateway.aspx>
14. <http://www.openebook.org/pressroom/pressreleases/q104stats.htm>
15. <http://www.peanutpress.com>
16. <http://www.powells.com>
17. <http://www.press.uillinois.edu/epub/books.html>
18. <http://www.promo.net/pg>
19. <http://www.questia.com>
20. <http://www.studio-e-books.com>
21. <http://www.web-Books.com>
22. <http://www.wiley.com>
23. <http://www.wordwrangler.com>