

e-PUBLISHING AND e-DOCUMENTARY SOURCES

by

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ABSTRACT

Developments in Electronic Publishing and creation of Electronic Documents are facilitating in the establishment of Digital Libraries. Digital Libraries are being implemented by people who work not only within conventional libraries but also by people who do not consider themselves librarians or publishers. The World Wide Web has created new professions. Research in digital libraries has become a vibrant academic sub-discipline, with computer scientists working along with economists, sociologists, lawyers and librarians. This is an interdisciplinary body of expertise, which is emerging. The paper outlines the developments in the e-Publishing, e-Documentary sources, copyright and intellectual property rights and organization of these documents and the impact on the Library & Information Centers.

Keywords: e-Publishing, e-Documentary Issues

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0. Introduction

e-Publishing can be traced back to over three decades. The databases were the first one to appear as e-Publication in late 1960s and the Dialog became the first commercial Online database service provider in early 1972. Later during a span of 5 years over 350 online databases were available for public access. True e-Publishing came into being when computers were used for printing Abstracting and Indexing periodicals. Creation and accessibility of online bibliographic databases is a landmark in the e-Publishing. During 1980s the technology gave way to the distributed database management system to link remote systems for accessing the primary and secondary source materials. CD-ROM revolution helped e-Publishing and ease of transportation and high storage medium. Several thousands of full-text sources mainly in Science were available for access by late 1980s. Digital era initiations in early 1990s gave way for establishing full-text resources in digital form and the establishment of Digital Libraries.

1. e-Publishing and e-Documents

Information and Communication Technology (ICT) developments opened up e-Publishing in a big way. Tele-authoring and on-demand publishing possibilities became realities. The e-Publishing and creation of e-documents are realities and they are fast replacing the traditional media. The emerging new value chain of activities are:

1. **The creation process** is going 100% digital with many stages. The first stage is content creation and manipulation, including acquisition and design of documents and multimedia documents with animations, interactive graphics, knowledge representations and sounds. Secondly, the resulting digital elements go in the authoring process. The final product can be customized, revised, repackaged.
2. **Distribution** will be more flexible through the parallel mechanisms: Internet, Online, CD-ROM and print. This allows for on-demand publishing, just-in-time publishing etc.
3. **Information retrieval** become more interactive because the reader needs to be more active in locating, identifying and using multimedia content.
4. **Preservation and access-** Publications in the past were typeset texts and were a matter of record. Publications today can be dynamic, evolving through reader feedback and scientific advances. This causes problems for publishers (managing back issues), users (linking the old and new versions) and the libraries.
5. **Meta information-** Useful information can be included into multimedia documents for origin, authenticity and transactions. This is critical for correct handling. Meta-information is also very pro-active.

1.1 . e-Documents

The term e-Document came in usage during late 1980s and is used by means of contrast with paper documents. It is text that is presented with or without multimedia content on a computer screen. They include books, periodicals, newspapers, manuals etc. Unlike the more general hypertext systems, the development of online books and documents is often undertaken to enhance their existing print counterparts with access and presentation tools. E-Documents may contain and organize many forms of interactive media, including text, still photographs, drawings, animation, audio-visual materials etc, e-Documents need to be interactive with the developments taking place in the IT. Unless users can perceive a real advantage to e-documents, where they can do better than they do with paper, users would be reluctant to use them extensively.

1.2 . Features:

- i. Integrated access to multiple collections
- ii. Display and interaction
- iii. Value-added content
- iv. Related works
- v. Collaboration between the users
- vi. User help function
- vii. Interaction with multimedia objects

The e-Documents have text, graphics, images, sound and video in a multimedia format. Technical tools for the production of e-Documents are powerful and have a large installed base. The number of producers are many and with image information integrated the pressure gets on to the processing equipment. These documents are easy to manipulate and re-use of information characterizes both commercial publishing world and the individuals. The consequences are problems of physical control and problems with information integrity. Copies of e-Documents are equal or better than the original without any loss of quality. This leads to the problem of establishing the authenticity. E-Documents are tied with the developments in the technology in terms of maintenance and preservation. These documents can be distributed over the net, which is equal to having the document at every place. Because of the integration of different forms and formats in to one e-Document, copyright law becomes complex.

2. e-Journals: Access, facilities, opportunities and problems

Electronic Journals are a fast developing feature of e-publishing. E-Journals are full-text journals that are accessible via Internet. The medium distinguishes an electronic journal from its print counterpart but the process of developing content for both print and electronic peer-review is generally the same. The digital medium allows the editorial process to occur at a faster rate than in print by circulating the article for review before it is made available for access electronically. The e-journals are formatted to have certain styles, designs and formats just like print journals but within the limits of the Internet medium chosen for publication and distribution.

Several organizations and publishers offer access to e-journals through gateway systems. They typically offer the aggregators the ability to be subscription agents, database providers, index and abstracting publishers or primary publishers. E-journals are very easy to browse and search by keywords in articles, abstracts, author names and journal titles. Usually the searching capabilities include truncation right, left and the use of Boolean operators. Some offer more advanced searching, including natural language searching and concept searching, which retrieve words with similar meanings regardless of spelling and building equivalencies. Specifying fields to search, limiting by date and sorting results by various parameters are also supported by some systems. Selected articles can be displayed on the user's desktop or delivered by e-mail.

Libraries can access the e-journals through the publisher's website as a single title or as part of a package for free or on a subscription basis. They can also be made available through third party services, often operated by library subscription agents. These services provide libraries with a unified entry point for e-journals and have the advantage of offering a common search interface as well as streamlining the acquisition process but subscription to individual journal titles are required in order to gain full-text access to them. Some provide 'pay per view' access to articles in journals that the library does not subscribe to. Searching facilities and access to abstract information is often available across all the journals offered by the service.

When it comes to accessing e-journals there are many issues for libraries to consider: technology requirements, restricted access, access via publisher or aggregator, making the library users aware of online access above all the cost involved etc. A Local Area Network with Fibreoptic backbone connecting all the

buildings of an institution is a minimum requirement before e-journal access facilities are made available to the library users.

Some of the e-publishing and e-journal programmes are:

ADONIS: (Advanced Document Over Network Information Services) covers over 700 journals from over 50 participating publishers primarily from the Biomedical field including related disciplines such as Chemistry, Bio-chemistry, Bio-engineering and Bio-technology.

IEEE/IEE: Electronic Library: These Societies are offering their publications on disk. The service combines records from the INSPEC database with full images of the original documents. Over 2500 publications including the journals published by them and standards of the IEEE, conference proceedings are included in the CDs.

www.acm.org

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www.ama-assn.org

www.ams.org

www.apnet.com/journals

www.blacksci.co.uk/online

www.elsevier.com

www.sciencedirect.com

www.mcb.co.uk

<http://link.springer.de/whatsnew.html>

3. e-Books

e-Book is a portable hardware and software system that can display large quantity readable textual information to the user and lets the user to navigate through this information. An e-Book is digital reading material that a user can view on a desktop or notebook personal computer with a large storage capacity and the ability to download new titles via a network connection. People need to accept the e-Book in place of paper and ink that is still easier to read and handle at present. The reader hardware is expensive, e-titles cost about the same as their print equivalents. More and more traditional book publishers and those catering to the professional and commercial communities are seeing the potential of digital publications and are working to ensure that they enjoy a share in the market's growth. The market for the e-Books will be on the increase and people accepting it as an alternative to the printed book.

Today the companies such as: Adobe, MightyWords, Everybook and Gemstar are in the business of developing technology that would hopefully help in transforming e-Books into a medium as friendly and useful as their print counterparts. Microsoft with its Reader 1.0, a proprietary e-Books reading application is becoming popular.

Adobe CoolType is another recent development that dramatically improves on-screen text resolution of digital content. The cross-platform and cross-font compatibility would be a

reassurance to the e-Book consumers to enjoy clearer, crisper type and a reading experience that is closer to the clarity of printed type.

The Time Warner Trade Publishing has recently launched ipublish.com, an online publishing initiative to unite authors and readers in the digital marketplace. Reader members can download e-Books or post submissions for publication in print and in digital formats. Time Warner also has a stake in Bookface.com, an online bookstore of downloadable e-Books.

Random House has 20 full-length novels, biographies and self-help books for print-on-demand and as online digital books. Random House in partnership with Xlibris.com has the facility for the authors to publish their works online. Original works are placed in the Xlibris online bookstore and made available through Borders.com in print and electronic format.

iUniverse.com and barnesandnoble.com are two other players in e-Books and print-on-demand market.

4. Publishing on the Web

Web self-publishing and digital rights management technology is going to sideline the traditional publishing companies. The traditional publishers have been slow to move forward on the Web because still browsing through the web volumes is not a substitute for flipping through the physical pages. But the web-savvy persons demand for more online content and technology is catching up with the latest electronic books and digital-rights management tools. Several Internet publishers like fatbrain.com and ebookstand.com publish and sell rights-protected digital works on their web sites to throw open the content to the people and also they put the publishing power in to the hands of the people. These sites provide digital-rights technologies that allows authors to produce portable and customizable digital works with built-in royalty protection. This has shown way for many big publishing companies to enter into the electronic publishing. Some are partnering with computer companies to be part of the web based books -on-demand.

5. Copyright and IPR issues

5.1 . Intellectual Property Rights

Inventions and innovations are creations or results of the human mind (intellect) and are generally treated as intellectual property. The efforts preceding the invention/innovation / creation necessitate investments in materials, human power, financial and other resources. Therefore the inventor / innovator / creator and / or the partner institution naturally tries to take advantage and guard such developments as an asset like any other material assets. So, such institutions / organizations feel it is their right to protect their intellectual properties legally so that they get returns on their investments and are encouraged to invest more resources in such ventures.

Developed countries realized that technology is a crucial element in foreign investment and also a key to the rapid expansion of trade and services. As a result these countries have made legal provisions to protect intellectual property rights.

Although, developing countries offered stiff resistance, the IPRs were included in the WTO agreement under Trade Related Intellectual Property Rights (TRIPS)

In general IPRs cover patents, registered designs, copyright and trademarks. It also covers layout designs of integrated circuits, geographical indicators and competitive policies in contractual licenses. Among these copyright is relevant for library and information work. The IPR issues of digital information include copyright ownership, pricing and rules and regulations governing multiple uses.

5.2. Copyright

Copyright is an intangible right and can be of sustainable value. Copyright shall subsist for a definite period of time in original works. It is an exclusive legal right to reproduce the work in any material and vests in the author of the work. The right can be licensed or assigned to anyone of the choice of the rightful owner/author. Copyright provides rights of ownership of legal protection against unlawful reproduction of the works. Copyright subsists through the total lifetime of the author and a term of 60 years after the death of the author.

5.3 . Copyright liability

Section 52 of the Act enumerates five categories of acts which when performed do not fall under the infringement of the copyright. Fair use is the category under which a number of infringements take place. The fair use principle codified by various laws is a defense against copyright liability. In deciding whether fair use is applicable in any infringement, courts consider:

- i. The purpose and character of the use including whether the use is of commercial in nature or for not-for-profit educational or training purpose,
- ii. The nature of the copyrighted work,
- iii. The amount and substantiality of the portion copied in relation to copyrighted work as a whole, and
- iv. The effect of use upon the potential market for or value of the copyrighted work as a whole.

5.4 . Copyright of electronic information

The developments in the field of information technology, particularly in the areas of computers, communications and mass storage, have made it possible to handle enormous volumes of electronic/digital information and data with ease. The libraries took advantage of these technologies for effectively meeting the ever-growing user's requirements and started enhancing their collections with and relying more and more on electronic information resources. Most publishers are bringing the material in electronic formats. Many publications exist in dual versions and some are brought out in electronic form only. The libraries in science and technology as well as in academic fields are increasingly depending upon electronic resources.

During the past few years there was a quantum jump in the electronic/digital information resources made available through networks particularly over the Internet and

the web. The electronic information can be distributed across the globe through electronic mail, electronic bulletin boards and networks. The proliferation of personal computers and the decreasing costs of primary and secondary mass storage media all made it possible to download, store, display and print electronic information. Further, the downloaded documents can be forwarded to others without the knowledge of its rightful owner.

Copyright applies to Internet, e-mail messages, materials loaded on ftp sites, www servers or anything else put up on Internet are copyright protected so long as they fulfill the originality criterion. Internet is creating new and newer avenues for rights and consumer privacy violations. Cyber frauds include cyber stalking, cyber hacking, cyber defamation, cyber harassment, cyber terrorism, cyber war and so on.

Copyright forbids storing of a work in electronic medium and electronic transmission of copyrighted materials by anyone other than the rights owner. In case a user of an online service violates copyright provision, the service provider is held responsible unless he complies with safety measures to protect rights.

6. e-Publishing Vs Traditional publishing

Process of publication on paper or on electronic media has following defined activities:

- i. Collection of manuscripts from author
- ii. Evaluation of content – refereeing or peer review
- iii. Editing the content
- iv. Improving the language, presentation style
- v. Composing, proofreading, page making, designing
- vi. Printing
- vii. Binding
- viii. Publicity and advertising etc.
- ix. Cost estimation and pricing
- x. Distribution and marketing
- xi. Feedback and updating
- xii. Copyright and other legal aspects.

Some of the above activities are time consuming and laborious in printmaking compared to electronic publishing. Traditional publications involve additional costs and pricing need to take care of all these aspects minutely. e-Publishing has many advantages apart from time saving and ease of publishing.

7. e-Documents: Organization and impact on LIC

Organizing large collection of e-documents and online materials is a complex task. Many of the issues are the same whether the material is an electronic journal, a large web site, an online collection or the e-documents created in house. Two important issues are needed to be looked into- how to load information in varying formats and how to organize it for storage and retrieval. The difficulty in organizing the electronic

information is compounded by the fact that digital information changes. Many of the research topics that are important for interoperability between collections are equally important for organizing collections. In particular, current research on identifiers, metadata, and authentication applies both to management of individual collection and to interoperation among collections.

Long-term preservation of edocuments is a major concern for archiving and preservation. The media on which the e-documents are stored have short life expectancies and periodically they must be copied onto new media. To further complicate the matters, the formats in which e-documents are stored are frequently replaced by new versions.

The libraries have a challenge to get a wide variety of computing systems to work together to achieve the interoperability. Interoperability and standardization are interrelated. In practice, the only standards that matter are those that are widely used like the TCP/IP for the Internet is an example. Some standards become accepted because the convention set by the leaders in the professional community like MARC format for catalog records is an example. Sometimes, generally accepted standards are created through a standard process like MPEG, the compression format used for video is an example. Other de facto standards are proprietary products like Adobe's PDF etc. Interoperability issues that are to be addressed by the LICs for digital information, storage, organization and retrieval are: User Interfaces, Naming and Identification, Formats, Metadata. Distributed Searching, Network Protocols, Retrieval Protocols, Authentication and Security etc.,

7.1. Changing role of Libraries

In electronic publishing the traditional steps between the content owners and the users are changing in scope and nature. The process of bringing content to use can be thought of as a value addition for electronic publications. Libraries need to re-evaluate their work in managing the electronic publications. Libraries main role has been to provide logical and physical access to information. Now the technological changes in libraries demand to re-state the work and the practices.

7.1.1. Acquisitions

It is necessary for the library to have a closer contact with the research community where material is created and disseminated. Evaluation of the material quality is a challenge. It is likely to take more time before the electronic publications under go quality control when compared to the existing practices. User community needs to be part of evaluation of evaluating the e-Documents.

7.1.2 Bibliographic control

The current practices of describing the electronic publications in a print-oriented description model will not be adequate. There is a need for Electronic Entities Cataloguing Rules. In the electronic age local cataloging rules are not enough to participate in International level for data exchange.

7.1.3. Maintenance and collection development

It is necessary to take decision on which material to be collected and which need to be accessed remotely. A system need to be designed to establish to identify and control links within and between electronic publications. Owned material must be kept in operable condition from a technical viewpoint with the advancements in the technology.

7.1.4. Access facilities

It is necessary to secure sufficient rights from content owners to secure adequate access for the users. The system need to be designed to interact with user systems and make possible manipulation and further processing of information. To secure user access the library must be prepared to negotiate rights from content owners and also design a system for the management of intellectual property rights.

7.1.5. Staff training

Staff needs to be trained in computer and communication systems, user instructions and training and current scholarly information practices. The un-orderly behavior of electronic material makes it important for staff to have a good command of principles for knowledge organization and information management. They need to be trained in knowledge organization principles because they need to train the users in search techniques to access information.

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