ELECTRONIC PUBLISHING : AN ANALYTICAL STUDY

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Abstract:

The ultimate objective of any information system is utilisation and exploitation of information that raise levels of education, strengthen community links and stimulate participation in decision-making for development of mankind. The information produced is disseminated by different model of publishing information. New technologies have transformed the process of publishing and distribution of information. In view of growth information, electronic publishing has become a foundation for the new information society to get the right information to the right person at the right time. The paper attempts to discuss the impact of electronic publishing on Library Information Management and radical changes in the publishing industry especially with impact of electronic media and Internet. The authors highlightened different models for electronic publishing and possible changes and complexities involved in it.

Towards Electronics Era :

Information is an intellectual resource that has the capacity to change the image of recepient. In the post-industrial society, it has been said that what counts is not raw muscle power or energy but information. Consequently, large investments are being made in the information technology industry for the purpose of generating, processing and disseminating information.

Changes in the publishing industry have a direct impact on the information systems and services. This information technology has altered the mode of publication in such a way that though the traditional sources of information continued to be flooded with the attractive elctronic form of publications. In the changing scenerio, libraries and libraraians will have to play a crucial role in handling conventional and electronic resources. Thus the era of electronic publishing has begun affecting producers, distributors, library and Information centres and user community.

The ultimate goal of electronic publishuing is to provide fast & easy access to the infoprmation contained in the objective publications with simple, powerful search and retrieval capabilities. Thus, electronic publishing can be used effectively in the context of Dr. S.R. Ranganathan's fouth law `Save the time of user' for many purposes.

F.W.Lancaster is one of the first poineers, who has been cited more in library literature for his vision of elelctronic publishing, predicting that electronic publishing would eventually displace paper-based publishing methods. In one of his later articles.

Lancaster noted **"**true electronic publication implies that authors would compose for a different medium, and in so doing, would no longer be constrained by the static limitations of the printed page . . . . What I am suggesting, then, is that the printed book will be replaced by something quite different from anything we have yet seem, and this will occur because the medium replacing it will be widely perceived to be better**"**.

Electronic Publishing:

Electronic Publishing is the process for production of typeset quality documents containing text, graphics, pictures, tables, equations etc,. Electronic Publishing can be represented as ;

> **EP = Electronic technology + Computer technology +**
> **Communication technology + Publishing**

Kist (1989) defined electronic publishing as "the application by publishers of a computer-aided process, by which they find, capture, shape, store, and update information content in order to disseminate it to a chosen audience" (p. 600). Kist pointed out that this definition makes no distinction between the manufacturing process and the disseminating process. Less than a decade ago the term electronic publishing identified an activity that is now referred to as desktop publishing, in which information is stored and formatted electronically, but manufactured and distributed by traditional paper-based methods. Kist claimed that the term electronic publishing (which can include any single aspect digital storage, manufacture, or transmission of a publication) is now so broad that it is usually meaningless.

Brownrigg and Lynch (1985) took a very different approach to defining an electronic publication. Their insightful article began by making a clear distinction between electronic production and distribution of information. The authors distinguished between what they called Newtonian (Gutenberg/paper-based) publishing and quantum-mechanical (electronically transmitted) publishing. They concluded that much of what is currently labeled electronic publishing is actually traditional Gutenberg-style publishing carried out by modern methods. Their thesis was that electronic publishing is a delivery medium: that publication is an action and process rather than an artifact. This idea seems to have some merit.

One of the most complete definitions of electronic publishing appears in a popular electronic encyclopedia (Grolier Electronic Publishing, 1995). This wholly electronic publication defines electronic publishing this way "Sometimes used to describe the application of computers to traditional print publishing--from word processing to computerized order processing--the term electronic publishing refers more precisely to the storage and retrieval of information through electronic communications media. It can employ a variety of formats and technologies, some already in widespread use by businesses and general consumers, and others still being developed. Electronic publishing technologies can be classified into two general categories: those in which information is stored in a centralized computer source and delivered to the user by a telecommunications system; and those in which the data is digitally stored on a disk or other physically deliverable medium. The former category, including online data base services and videotext, represents the most active area in electronic publishing today".

Table 1. summarizes information contained in past editions of The Directory (Okerson, 1993; Okerson, 1994b; Strangelove & Kovacs, 1992).

Measurement	1991	1992	1993	1994	1996
Journals and Newsletters	110	133	240	440+	5517
Discussion Lists	517	769	1152	1800	23175
Refereed academic journals	15	35	74	92	131

Table 1: Growth in Internet Publishing

Models for Electronic Publishing

Electronic books

The book is quiet popular document to meet the academic and general needs of user community. Project Gutenberg, perhaps the best know publisher of book length electronic texts, began in 1971 with the goal of encouraging the creation and unlimited distribution of 10,000 electronic texts by the end of the year 2001. These books fall into several main categories, including light literature, the classics, reference books, and other literary fields.

Publishing a book electronically is to achieve quick publishing and dissemination of information. A book may not have contemporary value that a journal has but it certainly has an archival and reference value. A number of encyclopedias do come out on CD-ROM. It is felt that the Internet is not a satisfactory platform for publishing full text of documents but CD-ROM is appropriate medium for publishing books.

Book length E-texts are also available on floppy disk and CD-ROM, although distribution by floppy disk is decreasing due to the convenience and growing popularity of CD-ROM. Most E-texts published on CD-ROM are public domain works including encyclopedias. Using the Electronic publishing language on Internet like SGML (Standard Generalised

Markup Language) & HTML, the text can be presented and published attractively with multimedia effects especially for documents like Yearbooks, Encyclopedias.

Electronic periodicals

This new media is a vehicle of scientific communication and purely a product of scientific research. This category includes electronic journals, newsletters, magazines, zines, and discussion lists. Perhaps no other area in electronic publishing has received more study than the area of electronic journals, particularly as they apply to scholarly research.

Franks (1993) authored a more recent article that provided analysis of current forms of electronic journal publication, explored some alternative possibilities for an electronic research journal, and commented on the strengths and weaknesses of those alternatives.

The model of academic journal publication that Franks proposed was:

The Vanity Press Model: Franks saw the current system of scholarly journal publication as falling under this model. He characterized it as having three main advantages:

* certification of the material (including quality control and peer review)

* archiving (establishing an authoritative version and bibliographic information)

* marketing (distribution and publicity).

Electronic Databases

With the emergence of computers & communication technologies the strength of information system in the development of modern database has taken new shape. Information originating from a database has become a large segment of electronic publishing that provides a base or foundation for procedures such as retrieving information, drawing conclusions, and making decisions.

The holdings of the library database consisting of books, periodicals, reports & theses can be converted to electronic form that allows access for public use through digital networks. The online electronic library card catalog (OPAC) shows how information could be published and that enable users to search the document with various access points like author, title, subjects.

They also pointed out that machine-readable databases exist as a by-product of the preparation of printed publications. The six major developments that have taken place since the 1960's that have spurred the use of databases are;

* Networking and cooperative arrangements.

* Leasing arrangements for information access.

* Establishment of scientific information dissemination centers.

* Increased online access (remote access via terminals).

* Emergence of the online retailer (such as Dialog, Lexus, etc.).

* Improved distribution (via CD-ROM or other means).

Various electronic database publishers today account for publishing information both bibliographic and full text on CD-ROMs as well as making them available for On-line retrieval. The prominant On-line publishers include DIALOG, BRS, EBSCOhost etc.

An excellent example of an electronically published database, the ERIC (Educational Resources Information Center) database is the largest educational database in the world that contains more than 800,000 records with the addition of 30,000 new records per year. ERIC is available in CD-ROM format as well as on the net free of charge (URL: http://www.accesseric.org:81)

Electronic Publishing on CD-ROM

CD-ROM has provided new dimension for information storage and retrieval. Publishing information mainly abstracting sources are quiet common in CD-ROM. Although much of the work on e-journals has concentrated on distribution via the Internet, there has been some work on CD-ROM as well.

CD-ROM publishing has three major advantages;

Advantages of CD-ROM

- More material can be included, both in terms of quantity (650+ megabytes) and type (multimedia resources)
- Full-text searching is relatively easy to include
- Considerable savings in cost--a 1000 page book may cost as much as $14 per copy to produce in quantities under 1000 while many replication plants will produce 1000 copies of a CD for less than $2 each.

Disadvantages of CD-ROM

- Relatively high cost for equipment to create a master CD
- Time intensive to develop
- Limited to higher-end computers equipped with CD-ROM drives
- Changes to content require re-mastering and additional replication

Text Processors

A number of easy-to-use text processing programs have been available for years. Simple text processors such as Notepad for Windows, Simple Text for the Macintosh, and Edit for DOS allow users to easily open and save text files.

HTML (HyperText Markup Language)

HTML is a simple language used to create Web documents. It is these HTML language "tags" that designate headings, lists, body text, images, hypertext links, etc. HTML is based on SGML (Structured Generalized Markup Language), a formatting language developed by the International Standards Organization (ISO) for higher-level document annotation. HTML has been extensively written about in numerous books and articles and a proliferation of Web documents have been developed to explain the workings of HTML. One such resource is NCSA's Beginner's Guide to HTML which provides an extensive tutorial on understanding and using HTML. Hypertext link, cross platform capability are some of the advantages of HTML.

SGML:

A product of more than 10 years' work by a worldwide standards committee, SGML is a set of rules for describing the structure and managing the content of any digital document. SGML can create complex documents that can be shared across a corporation or industry and can remain linked to source information for instantaneous updates. The typical application is a technical or equipment manual. Examples include Adept-Editor, Author/Editor, XSoft InContext, DynaTag, DynaText, FasTAG, Near and Far, SGML Author for Word, TagWrite, and WordPerfect Intellitag SGML Edition.

PDF (Portable Document Format)

Adobe's Portable Document Format (PDF) is an electronic document system that allows for the creation of formatted documents that include text, graphics, and page layout elements along with Hypertext links to other locations within the document or to other documents. Any file that can be sent to a printer can be saved as a PDF file and displayed using Adobe Acrobat software. PDF files are most commonly created with desktop publishing or word processing software applications such as Adobe PageMaker or Microsoft Word. Enhanced page-layout techniques, freely available software & web link features are some of its advantages, though there is a difficulty in modification.

Prospects and problems

If we review the articles on electronic publishing, virtually they spokeenthusiastically, in one way or another, about the prospects & problems for electronic publishing. Weber (1990) examined the issues and obstacles that confront the development of an electronic publishing industry and infrastructure. He identified many barriers to electronic

publishing, but concentrated on six primary areas that need to be addressed if electronic publishing is to succeed. These are:

* The rate of new investment in advanced technologies.

* The rate at which the telephone system can be upgraded to digital.

* The rate at which existing research networks are integrated into a national networking infrastructure.

* The creation of standards for user interfaces, text and images.

* Development of advanced output devices (displays and printers).

* Whether a workable means of enforcing copyright will be found.

Hunter (1994) identified six issues that need to be addressed to make electronic publishing a reality: market readiness; availability of public and private funding; delivery standards; improved enabling software; intellectual property concerns (copyright); and new pricing and licensing models. These six categories reflect closely the impediments to electronic publication listed by Weber(1990). Of the six issues identified by Hunter, the issue of market readiness is an issue not addressed by other commentators. She contended that, for the present, electronic distribution in most cases does not provide what it must in order to succeed, which is increased functionality with lower unit cost.

Brownrigg and Lynch (1985) paid particular attention to the question of intellectual property rights. While they asserted a clear economic need to protect authors' rights to their work (what author would not?), they contrasted reproduction of digital media with photocopying of printed media. They contended that at the heart of the matter lies the murky question of fair use of a work. They suggested that the management of copyright for digital material might be more appropriately modeled on performance rights, rather than on those currently used for printed material. Finally, they noted that the question of privacy is a new issue which arises when thinking about digital distribution of material. In a system where information (of whatever kind) is distributed by computer, it is exceedingly easy to track who is reading what. This issue is an important one for the future of electronic publication and civil liberties.

Conclusion:

The role of library and its viability in the electronic publishing environment poses serious problems. There is no doubt that electronic publication is expanding rapidly. Research on the effects and implications of electronic publication has not been undertaken except in the area of academic electronic publishing. While electronic publication clearly allows for the rapid distribution of information at a reduced cost, its use is limited to certain economic sectors because many technical and legal problems must be resolved before its

use becomes widespread. In areas where it is well established, it provides a unique communication medium that cannot be duplicated by the use of paper-based technology.

Electronic publishing may not completely replace the existing printed version but both will supplement each other in order to meet the needs of the users. So, librarian should accept change & adopt to new situation for the benefit & interest of users. Thus, the librarian's role has to be redefined in view of technological development and needs to weigh all the alternatives & procure some of the documents in electronic form whether it may be On-line or CD-ROM keeping the best interest of users and its retrieval efficiency.

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