

DOCUMENT DELIVERY IN DIGITAL ENVIRONMENT

By

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ABSTRACT

The increasing advancements in storage media, computers and telecommunications have forced library and information centres to access information more and more in different formats, styles and sizes. Document delivery has always been heart of the services offered by libraries, publishers and other organisations to their users. Document delivery comprises both print and electronic documents. Recently, there is tremendous development in electronic document delivery. There are sizeable number of agents in document delivery. These include library networks and consortia including national libraries, document delivery by CD-ROM, Commercial document delivery services, library suppliers and subscription agents. This paper discusses role of these agents in document delivery, process of document delivery as well as future of electronic document delivery.

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0. Introduction

Today's Library and Information Centre has passed a long evolutionary sequence. Now the concept and the very name "Library" has changed to "Library without walls", "Network Library", "Desktop Library", "Logical Library", "Virtual Library", "Information Nerve Centre", "Information Management Centre", and lastly "Digital Library". Document delivery is an essential service in a library and information centre. It involves many components like request for document, document types, document sources and functions or processes which again include functions like document selection, request procedure, document retrieval and document transfer. In case of electronic documents, delivery of documents takes place in digitised form. Both print and electronic document deliveries are very important but there are some agencies that deliver both types of document. It is a complex process involving user, supplier and time. Document delivery can involve authors, publishers, subscription agents, document delivery service providers, suppliers, library and information professionals. Electronic document delivery has gathered significant attention in recent years. Through electronic document delivery, one library can access journals and other research publications adequately for their users and thereby can reduce funds for document purchasing, which can be utilised for other purposes of the library.

1. What is it ?

Oppenheim (1997) describes digital library as “ an organised and managed collection of information in a variety of media (text, still image, moving image, sound or combinations ther of), but all in digital form”.

Trolley (1995) defines digital library as electronic library, and according to him it is “the common vision of librarians, publishers, technology experts and researchers to access information anywhere anyt ime”.

Beckman (1993) argues that the difference between the electronic and virtual library is that the electronic library can still maintain a physical presence, whereas the virtual library, since it is perceived as transparent, will have transparent physical facilities and transparent librarians.

2. Systems in digital library

Library management system should focus on ordering, acquisition, cataloguing, online public access catalogue (OPAC), circulation control, serial control, information management, interlibrary loan etc. In all such cases, standardisation has a tremendous role in increasing efficiency. One of the main concerns is to maintain library collection, and to know the status of the documents in the collection. Information retrieval applications include, document management system, online search service, Internet and CD-ROM.

In a digital environment, the distinction between library management system and information retrieval system is gradually eroding. This is possible due to improved information facilities available in OPAC.

3. Agents of document delivery

The agents of document delivery are authors, publishers, subscription agents, book suppliers and library and information officers. The different options for document delivery channels are:

Creation of document	Alerting to Document existence	Provision of Document
Author	Library	Library
Editor	Publisher	Library Consortium
Publisher	Subscription Agents	Subscription Agent
	Current Awareness Service	Publisher
	Bibliographic Database Producer	Current Awareness Service
	Online Search Service	Commercial Document Delivery Service

4. Why is it needed ?

4.1 Proliferation of published literature

The amount of information in any subject area doubles every six to seven years. We can call it as exponential growth. Now, it is possible to acquire or access any sorts of information, published documents by sitting at a desktop.

4.2 Economic growth

Faster rate of increase in the cost of raw material lead to increase in manufacturing costs of books and journals and thereby libraries of all types face financial crisis, every time they want to purchase documents.

4.3 Rising cost of documents, serial publications

Economic constraints on one hand and rising cost of documents / serial publications on the other hand are challenging purchasing capability of libraries.

5. Categories of document delivery

Generally there are five different categories of document delivery services:

5.1 Library network and consortia

For a long time, librarians are engaged in co-operative ventures or networks and consortia.

The central objectives of networking are:

- ? To reveal the content of a large number of libraries or a large number of publications, especially through accessibility of catalogue databases, using OPAC interfaces.
- ? Availability of these resources to individual libraries and users at the time they need
- ? Resource sharing activity
- ? Distribution and publication of electronic journals and other electronic documents.
- ? End-user access to databases available on online hosts and CD-ROM.
- ? Value added services through e-mail, ftp etc.

5.2 CD-ROM suppliers of full- text and multimedia databases

Generally, documents such as directories, encyclopaedias, dictionaries, collections of annual reports, collections of library works may be recorded on CD-ROM and then made available to the users.

5.3 Commercial document delivery services

There are numerous online commercial document delivery providers on the Net. Through the mode of search process, one can retrieve electronic version of document. OCLC is an example of online search service, which is widely used by the academic community. Through OCLC searching, one can get full text online, images which can be delivered through fax and a lot of general interest matter and other journals.

5.4 Library suppliers, subscription agent

Library and Information Centres interface with suppliers, make documents available and maintain circulation control systems properly. Nowadays many agents provide invoices, checklists and financial analysis reports in machine-readable form. Data can be provided in diskette, via e-mail, ftp etc. Electronic access to subscription database helps users to browse bibliographic and other details.

6. Components of electronic document delivery

Various components involved in document delivery are

6.1 End user request:

Library and Information Centre acts as a mediator

6.2 Types of document:

Includes all types of traditional printed matter e.g. text books, periodicals, reference books, reprints, theses, rare books, manuscripts, audio-visual material, govt. publications, electronic resources, etc.

6.3 Sources of document:

Sources include libraries, commercial document delivery suppliers, subscription agents, publishers, etc.

6.4 Functions or process:

Specific functions include:

6.4.1 Selection of document:

Users can select documents through OPAC, commercial online vendors, CD-ROM databases, union catalogue, etc.

6.4.2 Request for document:

Functions involve verification of citations, copyright restrictions and the sources of documents.

6.4.3 Document retrieval:

Electronic documents can be retrieved by online vendors, library staff, etc.

6.4.4 Document transfer:

This can be done by post, e-mail, and ftp or by fax.

7. Future of electronic document delivery

Documents are now available in different formats, different styles, keeping in view the demands. Evolution of documents is needed to meet the increasing need of access to information. Some of the factors that influence directly electronic document delivery include:

7.1 Technological development

The conversion of paper document to electronic documents by scanning and Optical Character Recognition will make document conversion expensive, time consuming and labour intensive. The major obstacle for scanning and OCR is the existing copyright law.

7.2 Storage technology

Mass storage devices will be required to store image and textual databases. Currently different types of CD-ROMs are being used for their greater storage capacity and less sensitivity to contamination.

7.3 Communication technology

For better transmission of digital information, both TCP/IP, Open System Interconnection (OSI) and integration of fax are needed.

7.4 Intellectual property rights

One of the main concerns for electronic document delivery is the intellectual property right. This particular law is protecting authorship of original works. In this regard however, library and information professionals feel that copyright law for paper-based environment is no longer applicable to electronic environment.

7.5 Control of bibliography

No suitable bibliographic control mechanisms are available for electronic documents. For paper based documents, changes are usually made in subsequent editions, but for electronic documents any number of authorised and unauthorised documents can be created.

7.6 Availability of increasing amount of information

The increasing amount of information day by day, poses libraries with limited resource challenges in terms of subscriptions. Co-operative acquisition policies within groups of libraries are becoming popular, but the long-term future is still a dilemma.

8. Conclusion

The electronic library played the role of electronic document delivery for so many years. User can search, select and retrieve documents at their own desktop. Electronic documents can be available even before their print publication. The copyright law for electronic document should be modified, keeping in view of its wider applicability. Individual has to use computer effectively for electronic document delivery. Technological, economic and sociological barriers are needed to be removed for effective electronic document delivery.

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