UNIT 8   DOCUMENT DELIVERY SERVICE

Structure

8.0   OBJECTIVES

In the previous unit we discussed literature search and database service, which may necessitate provision of full documents. In this unit we will be discussing Document Delivery Services which is sometimes referred to as one of the back-up services.

After reading this Unit, you will be able to explain:

* the need and importance of document delivery service,

* the historical development of the service;

* the impact of modern technologies on the efficiency of the service;

* the role of international agencies in promoting the service; and so

* how this service can be organised at national and international levels.

8.1   INTRODUCTION

The prime objective of any library is to meet the information requirements of its clients most effectively. To meet this objective, the library builds the collection in a planned manner and offers a variety of information services to inform the users what is available and whatever latest has been published in their areas of interest. All these services generate requests from the users for the original documents. The service that supplies the required document to the user on demand is known as Document Delivery Service.

8.2   WHAT IS DOCUMENT DELIVERY SERVICE (DDS)?

Document Delivery Service (DDS) is actually concerned with the supply of documents to the users on demand, either in original or its copy in print or non-print form, irrespective of the location and form of the original. Most of the other information services such as current awareness service, SDI service, indexing and abstracting services, etc. , are designed mainly

to guide the users to the currently published sources of information, whereas DOS actualy locates the required document and supplies it to the requester. DDS is a very important service, since the value and importance of other access services are directly dependent on the efficiency of this service. For instance, if a user, alerted by a current awareness service, requires a document and efforts are not made to supply the same to him in time, then the availability of any alerting service, however efficient it may be, will have no value for him. Thus, DDS adds value to other information services.

8.3 EFFICIENCY OF DOCUMENT DELIVERY SERVICE

The efficiency of DDS is determined by three factors, namely, speed, cost and satisfaction level. Ideally, the DDS should be cost-effective, speedily delivered and satisfying all the requests it receives.

8.3.1 Speed

The methods, of receiving requests, processing the requests and mode of delivery of fax, electronic-mail or online systems. Documents may also be supplied by any one of the above methods. Of the above methods, online request and delivery of the document is the fastest, though delivery of documents in this mode is expensive. However, the speed of supply of documents depends on many other factors such, as time taken to locate the document from within the institution and if not available, then, time taken to find its location, transmitting the request, processing of the request by the library supplying the document, receipt of the document by the requesting library and finally delivering the document to the user. All these factors affect the speed of supply. It may range from within a day to a few months. If service is operated from a centralised collection, then, the delivery is quick ranging from, say, two hours to two days. With the availability of online databases, online public access catalogues, etc., it is possible to search for information from remote locations on the networks, request the selected document and receive the required document electronically almost instantly. Electronic document delivery systems offer a great promise. Here, speed is the major attraction. However, copyright issues and high cost are some of the constraints which are attracting the worldwide attention.

8.3.2 Cost

DDS should be cost-effective. In devising a cost-effective service, all types of costs, viz, direct as well as indirect costs should be taken into consideration. Direct cost is the cost of operating the service i.e., cost Of processing of requests, copying the document, postage, etc., whereas indirect cost includes the cost of building collection, salaries of the staff, cost of equipment, etc. Service is more cost-effective if it is offered from a centralized collection and the' number of requests is large. Conversely, it is less "cost-effective if it is based on decentralised collection. It is increasingly realised that the service can be more cost-effective if it is operated by building a core collection to meet primary needs of the users and for residual requests, accessing speedily the material from external sources.

8.3.3 Satisfaction Level

Ideally, DDS should target at satisfying all the requests it receives for the supply of the documents. However, in practice this target is not achievable even from the most comprehensive centralised collection. In general, a satisfaction level of 90-95 per cent is recommended and considered very good. A high satisfaction level depends not only on the availability of the required document in the centre that offers the service but also on the ability of the centre to locate and supply it from elsewhere in the world as quickly as possible.

Self Check Exercise

1)   Explain document delivery service and state the factors that govern the efficiency of this service.

Note: i) Write your answer in the space given below

ii) Check your answer with the answers given at the end of this Unit.

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Document Delivery Service

8.4 DOCUMENT DELIVERY SERVICE ·WORLD SCENARIO

8.4.1 Historical Perspective

Earlier libraries and information centres had no capability to deliver the documents other than to buy them from the publishers, display them on the shelves and loan them when demanded by the users. In case, the document was not available with them, then borrow it from other libraries on inter-library loan and lend it to users for a specified period of time. With the introduction of xerography in mid-I950s and large scale use of photocopiers in libraries by $1970y$, the DDS was not just confined to lending or interlending of documents, but also documents could be duplicated and permanently supplied to the users. The libraries started using photocopiers for the supply of copies of documents, particularly of journal articles and parts of books. Most of the libraries still prefer supplying copies of the documents rather than the originals, so that the original may always remain in the library and not get damaged with excessive use.

The advent of computers, scanners and telecommunication technologies in 1980s made it possible to store the documents in electronic form and transfer the same electronically to long distances via telecommunication networks almost instantly. Now, many libraries and information centres are using this technology for the delivery of documents to the intended users. This has greatly improved the speed of the service.

8.4.2 Increase in Demand

Exponential growth in the volume of published information, increase in the number of users and availability of large number of online and C D - R O M bibliographic databases providing easy and timely access to published information, resulted in great increase in demand for the original documents. Parallelly, the declining library budgets, increasing costs of the publications made it difficult for the libraries to meet the information needs of their clients from their own collection. So, more and more libraries started relying on other libraries to supplement their collection to provide adequate service to their clients. Over the years, what was earlier known as Interlending, grew into a planned system of interlibrary cooperation which included not only sharing of resources but also sharing of other services like acquisition, classification, cataloguing, information services and many more. To facilitate such cooperation, a unified list of documentary resources resources of cooperating libraries, like Union Catalogues were compiled. However, interlibrary resource sharing systems had their own limitations, such as problems of updating the union catalogues, extra interleading burden on large libraries, withdrawal of some cooperating libraries, etc To overcome these delivery centres, exclusively devoted to document delivery services was felt. In response to this need many national centres came up the world over offering this service in a planned manner. Some of the centers operating in different countries are British Library Document Supply Centre (BLDSC), UK; Institute de 1' Information Scientific and Technique (INIST), France; National Library of Medicine, USA; Canadian Institute for Scientific and Technical Information, Canada "and Indian National Scientific Documentation Centre (INSDOC), India. These centres offer the service drawing upon resources ranging from comprehensive centralised, planned collection to decentralised unplanned collection be very efficient, if it is offered either from completely cetralised , comprehensive collection or from completely decentralised collection , since the former increases the cost component of

the service and latter affects the speed of the service. The service is more efficient if it is operated from a strong central service point with some back-up libraries.

8.4.3 Recent Trends

As mentioned earlier document delivery scene has changed with the emergence of a large number of electronic databases and establishment of telecommunication networks. The scope of DDS has expanded beyond the traditional libraries and specialised document delivery centres. Database producers, commercial online vendors and commercial publishers are also joining the document delivery market. Genuine Article Service of Current Contents from Institute of Scientific Information, D I A L O R D E R service from DIALOG, ADONIS from publishers of biomedical journals are some of the examples. Emerging technologies have also changed the mode of transmission of requests as well as supply of documents. Postal services used for transmission of requests are being replaced by telephone, telex, fax, e-mail and online ordering. Mode of delivery of documents from supplier to requesters are also witnessing similar change.

Traditional document storage, retrieval and photocopying functions are increasingly being replaced by imaging technology. This technology uses series of devices that scan paper copy or microform copy of the document, capture the document image and store it in digital format on CD-ROM. The compatible CD-ROM drive reads the disk, searches the information and transmits the images to the requester via printer, fax or satellite links. In other words, electronic document delivery systems are emerging.

Electronic Document Delivery Systems

The systems employing electronic technology for the receipt of requests and supply of documents are known as Electronic Document Delivery Systems(EDDS). There is a wide range of such systems operating in the world. Some are operating at experimental level and some are offering the service commercially. In this section we will study some of them.

Article Delivery Over Network Information System (ADONIS)

ADONIS is a consortium of biomedical journal publishers that supplies full-text journals on CD-ROM for document delivery purposes. ADONIS started as a two year trial project and supplied full-text articles of 224 biomedical journals on C D - R O M to selected document delivery centres. Ten publishers and 12 libraries from Europe, USA, Mexico, Australia and Japan participated in the project, Libraries received bit-mapped page images of journal articles on CD-ROM along with cumulated indexes for searching the article. ADONIS also supplied two sets of software, one for image retrieval management and other for generating statistics of usage. ADONIS system provided on-screen page browsing as well as printing facilities. Libraries receiving the C D - R O M d i s k s searched the articles on their persona] computers (PC/AT) with compatiable CD -ROM drive and laser printer. The required article thus printed could be sent to the requester by mail or by fax. During the two-year trial period, 8 4 C D - R O M disks containing 200,000 articles from 224 biomedical journals published in l987uodl988were supplied to the libraries for DDS. The participating libraries periodically sent the usage details to ADONIS office. The libraries observed that searching, retrieval searching and photocopying procedures.

After the successful completion of the trial period, ADONIS has launched a fully commercial service from 1990. The subscribers to the service receive CD-ROM disks every week. Each disk contains around 10,000 pages of biomedical articles and an index to the titles and authors of the articles for searching. By the end of 1996 ADONIS was providing full-text page images of 700 biomedical journals from 68 publishers. Subscribers receive 90 CD-ROM disk every year. Subscription charges of ADONIS for using it on stand – alone workstation and on Local Area Network are different . All material is copyright cleared and royalty charges are include in the subscription.

Pro-Quest International Powerpages

Pro-Quest International Powerpages is another full-text journal database on CD-ROM, offered commercially by the publisher UMI. The UMI(formely University Microfilms International) was the first commercial publisher of microforms , which provided microfilm version of scholarly publications to libraries for archival purposes and document delivery.

Pro-Quest International is actually based on three separate services, namely, Business Periodicals on Disk (BPO), General Periodicals on Disk (GPO) and Social Sciences Index Full-text (SSE-FT). The pattern for each service is the same. Each of the three takes an existing bibliographic database and provides full text back-up via images on CD-ROM to most heavily requested periodicals in the database. BPO is based on the ABI Inform database and provides full-text coverage of 500 of the 11,000 titles indexed in ABI Inform. GPO is a selection of 400 titles out of 1650 titles in Periodical Abstracts and SSI-FT provides cover to-cover scan of 200 titles from H.W.Wilson Social Sciences Index. In all the cases full-text on CD-ROM is based on cover-to-cover scans of the periodicals. Power pages service is available to the subscribers for running on stand-alone single workstation (consisting of personal computer with CD-ROM drive and laser printer) or on network environment. Prices for the networked service vary with the size and specification of the network. However, full-text document images are not viewable from remote locations. The users on the network can search the bibliographic database, select the references and place the order for print-outs of the articles from a central print station.

RightPages and Science Direct: Online Document Delivery Services

Another two publishers, namely Springer-Verlag and Elsevier Science, have announced launching of online document delivery services, viz., RightPages and Science Direct respectively on Internet and other commercial and academic networks. RightPages service of Springer-Verlag will be based on 1000 journals stored in image form. Files of the journals will reside on a remote machine. Users will access the service over Internet, commercial networks (such as DIALOG, BRS, SDC, etc.) or academic networks (such as JANET). Search software will permit users to carryout retrospective searches and they will also be able to input profiles of their individual interests. They would then receive electronic mail messages when new material matching their profiles is added. Once alerted to significant articles, users will be able to access the articles over RightPages and to print them out on their own laser printers. At this point they will incur delivery fees and copyright charges. RightPages is to be based on Red Sage experimental project, presently operating at the University of California.

Science Direct, an online service of Elsevier Science will provide access to 1200 full-text Elsevier Science journals over Internet. The first release of 300 journal titles were to be commercially available by July, 1997 but only about 45 are so far available. The other titles will be steadily added in due course. Science Direct is based on Elsevier's experimental projects such as TULIP (The Toronto University Licensing Program), EASE (Elsevier Articles Supplied Electronically) and ELISE (Electronic Libraries Image Service for Europe) initiated in 1991. During the experimental phase, the publisher supplied 42 full-text journals in the field of material science in electronic‚ form to selected American and European universities for local area network use. In 1995, the publisher launched a commercial service entitled Elsevier Electronic Subscription Service, providing all its journals in electronic form for local area network use and document delivery.

Inter-Library Loan (ILL) System of Online Computer Library Centre (OCLC)

The Inter-Library Loan (ILL) system of OCLC is world's largest online computerised ILL system used by over 5,400 libraries worldwide. OCLC, an online library network, was set up in 1969 in the USA to facilitate co-operative computerised cataloguing. Over the years the number of partcipating libraries increased and the size of its online union catalogue (OLUC) grew manifolds. As OLUC database grew, the combination of bibliographic records and library holdings made it a useful resource for interlending purposes as well. OCLC started its online ILL subsystem in January, 1979. At present the libraries using the OCLC ILL sub-system have online access to over 35 million records held in 23,000-libraries in 63 countries worldwide. In the last 17 years OCLC libraries have transacted 67 million loans using the OCLC ILL sub-system. The system handles over 6 million ILL messages every year. The users of the ILL sub-system have access to 3 online files: a) The OCLC database for bibliographic verification b) The ILL transaction file for transmitting and tracking of the requests and loans, and c) Name Address Directory (NAD) for contact and address information for libraries, publishers and document suppliers.

2)   Briefly describe Electronic Document Delivery Systems. Highlight the advantages of these systems over conventional Document Delivery Systems,

Note: i) Write your answer in the space given below

ii) Check your answer with the answers given at the end of this Unit.

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8.5   PROBLEMS OF DDS AND ROLE OF INTERNATION ORGANISATION

Copyright issues, non-availability of publications and restrictions imposed on the storage and delivery of documents electronically are some of the problems faced by DDS operators. Copyright law prevent unauthorized reproduction of any created literary, musical or artistic work. Copying for DDS also comes under this law. International Convention on Copyright and Universal Convention on Copyright, of which India is also a signatory, acknowledge the exclusive Tights of authors and publishers over their literary work, but at the same time permit to make single copy of the document for educational or research purposes for the benefit of the users. However, the laws of copyright in relation to electronic media are ambiguous and are continuously changing. This is because there is little protection for material in electronic form and copying of electronic material is easier. Once it is released, it can be printed and manipulated without recompense and without the owner even being aware of what is happening .Not only material be manipulated within its own form, but also multimedia packages can be created through information from different sources by downloading, copying, editing and repackaging to generate completely a new product for sale in the open market. To prevent unauthorised use and exploitation of electronic material, most of the CD-ROM publishers are selling their products under licence agreement. The licence agreements have rigid clauses which impose a number of restrictions on the librarians. Some of the restrictions include making limited print copies of the search output and restriction on distribution of search output electronically over a network. The use of CD-ROM over local area network is permitted but with additional subscription fee and use is restricted to the in-house users only. In some cases only 8 simultaneous users are allowed, which means only 8 terminals are allowed per site. Libraries are also prohibited from down-loading or loaning the CD-ROM products. These problems are being discussed at international forums and many international agencies are actively involved in finding solutions to them.

Internationally, IFLA under its Universal Availability of Publications (UAP) programme and Office for International Lending is promoting the availability and interlending of publications. IFLA Office for International Lending, operating at the British Library, Boston Spa, since 1974, offers practical support to those who are actively engaged in international lending. It collects and publicises information of interest to those concerned with international lending. It also conducts and encourages research and study of relevance to international lending. It issues standard international request forms, publishes guides to international centres and a set of guidelines on international lending. The Office has made separate studies of national and international patterns of interlending and has encouraged discussions on them. In order to foster discussion on document supply systems, the Office organizes an international conference on this topic every year. It also publishes semi-annual reviews and bibliographies on interlending document supply in Interlending and Document Supply journal published
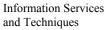
jointly by British Library Document Supply Centre (BLDSC) and MCB Univ. Press Ltd. The Office has recently introduced a voucher scheme to facilitate overseas international interlibrary loan transactions. Under this scheme libraries purchase plastic vouchers priced at US $8/- for use when paying for interlibrary loans or photocopies. The vouchers are valid indefinitely and can be used over and over again by participating libraries. Libraries which accumulate vouchers by doing more lending than borrowing can redeem vouchers from IFLA for the original purchase price with no administration fee. The objective of the voucher scheme is to overcome the difficulties in sending small amounts of money overseas for interlibrary loans which include lack of access to hard currency, high banking charges, exchange difficulties and high administrative costs. IFLA Office for International Lending is also involved in copyright issues through its connection with British Library and has extensive files on the topic.

Self Check Exercise

3) List some of the problems associated with the document delivery service.

Note: i) Write your answer in the space given below

ii) Check your answer with the answers given at the end of this Unit.

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8.6 DOCUMENT DELIVERY SERVICE OF INSDOC

INSDOC has been offering DDS at national level since 1952. The service is provided utilizing the entire country's resources including those of National Science Library and the Pilot Electronic Library of INSDOC. The requests are received by mail, fax, telex and e-mail. The location of required document is identified using the compterised National Union Catalogue of Scientific Serials in India (NUCSSI) maintained by the Centre. NUCSSI database contains serials holdings information of about 850 science libraries in India. When requests for document delivery are received, they are sorted out on the basis of availability of source documents. Firstly, the requests are serviced from INSDOC's own library collection, then from Delhi based libraries and finally, the requests are met from other libraries in India or foreign Countries. INSDOC supplies copies of documents from its own library collection of about 8000 periodicals including 2110 journals in electronic form. Some of the most important Delhi based libraries utilized for document delivery purposes are Indian Agricultural Research Institute Library, National Medical Library and Delhi University Library. The three regional centres of INSDOC located at Bangalore, Calcutta and Madras supplement the document delivery service of INSDOC utilizing the resources of the regions. Using the local resources, on an average 73% requests are met within 2 weeks and 85% within 4 weeks.Procurement of a document copy from other Indian libraries from foreign countries usually takes about 8-12 weeks time. About 22,000 requests are handled every year and of them are satisfied. Requests are received from universities, industries, R&D centres and foreign countries and also from individuals. Maximum number of demands (over 80%) are for journal articles. To improve the speed of the service INSDOC is acquiring over 2000 full-text journals on CD-ROM. Some of the full-text journal databases on CD-ROM, subscribed by INSDOC, are ADONIS, Extra Med, Health Reference Centre (biomedical periodicals), General Periodicals on Disk, Business Periodicals on Disk, 1EE/IEEE Periodicals on Disk (engineering periodicals) and Computer Select (computer science periodicals). Requests for journal articles available at INSDOC on CD-ROM, are satisfied immediately using INSDOC's CD-ROM workstation.

Another form of document delivery service offered byDN8D0C is Contents, Abstracts and Photocopy Service (CAPS) and Full Text Journal Service (FTJS). Under the CAPS service, subscribers receive tables of contents of selected journals (15 for an individual subscription and 30 for an institutional subscription) every month from a list of 8000 Indian and foreign periodicals. CAPS service is available to the subscribers on paper, on diskette and through e-mail. On browsing through the contents, users can place order for abstracts or copies of full papers. Users also have an option to place a standing order for abstracts of all the articles appearing in one or more chosen journals through Standing Order Abstracts Service (SOAS) or copies of all the articles of one or more journals through Full Text Journal Service (FTJS). By subscribing to CAPS, SOAS and FTJS services of INSDOC, the libraries can keep their users abreast of the contents of latest journals of their interest at nominal cost. Users on browsing the contents may place order for full copies of the papers which are provided under Document Supply of INSD0C. SOAS and FTJS services are available to individuals and institutions on annual subscription basis. These services are becoming popular and many libraries have started subscribing to these services.

Self Check Exercise

4)   Describe Document Copy Supply Service mFIN300C.

Note: i) Write your answer in the space given below

ii) Check your answer with the answers given at the end of this Unit.

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8.7   SUMMARY

Document delivery service is dm culminating point of all the access services and plays a vital role in information access and dissemination. While other library services help the user to identify the document he needs, this service actually locates the document and delivers it to the user. Modem computers and telecommunication technologies are exerting great impact on document delivery systems. Emergence of CD-ROM as the cheapest storage medium for large Volume storage, has resulted in the production of a large number of full-text databases on CD-ROM which are increasingly being used for document delivery purposes. The integration of online, CD-ROM and fax technologies have set new high-tech trends in document delivery. Electronic' Document Delivery Systems are emerging which facilitate online searching, online ordering and online delivery of documents. The main points discussed in this Unit are:

- The meaning of document delivery service, need for the service and essential characteristics.

- Historical perspective and changing trends in document delivery service.

- Impact of modern technologies on the efficiency of the service.

- Some of the representative examples of document delivery systems operating in the world, and

- Role of nation and international organisations in promoting this service.

8.8   ANSWERS TO SELF CHECK EXERCISES

1)   The library service that delivers the document or its copy in print or non-print form to the user, irrespective of the location of the original document. is known as document delivery service. The activities involved are identifying the document, finding its location, procuring the document or its copy from the source and finally, supplying it to the user. The factors that govern the efficiency of DDS are speed, satisfaction rate and cost of the service. Ideally, the DDS should be cost-effective, speedily delivered and satisfying all the requests

2)   The systems employing electronic technologies for receipt of requests and supply of documents are known as Electronic Document Delivery Systems (EDDS). These systems combine the benefits of online searching, online ordering, CD-ROM and fax technologies for document delivery over networks. Speed is the main advantage of these systems as compared to the conventional document delivery systems. Once the location of the document is identified, it can be delivered at a great speed, almost instantly. These systems also facilitate resource sharing and offer scanning facility to the requester to assess the utility of the document before placing an order.

3)   The problems associated with Document Delivery Service are non-availability of publications, limited library budgets, increasing subscription costs of the publications, copyright laws and restrictions imposed on storage and delivery of documents in electronic form.

4)   The document copy supply service of INSDOC is based on decentralised collection of resources held in various science libraries in India. INSDOC offers this service at national level. When requests for document delivery are received, firstly they are met from INSDOC's own library collection, then from Delhi based libraries and other Indian libraries and finally from foreign countries, 1NSDOC's own library resources include 8000 periodical titles of which 2110 periodicals are in electronic form. Over 2.000 requests are received every year and about 85% of them are satisfied: Using the local resources, on an average 73% requests are met within 2 weeks and 85% within 4 weeks. Procurement of documents from foreign countries takes a little longer. Maximum number of requests (over 80%) are received for journal articles. Another form of document delivery service offered by INSDOC is Contents, Abstracts and Photocopy Service (CAPS) and Full Text Journal Service (FTJS). Under the CAPS service, subscribers receive tables of contents of journals selected by them from a list of 5000 Indian and foreign periodicals, on yearly subscription basis. On browsing through the contents users can place order for abstracts or full papers through the document copy supply service of INSDDC. CAPS service is available to the subscribers on paper, on diskette and through e-mail.

8.9   KEY WORDS

Bit-Mapping   :The assignment of each location in the storage of computer to a physical location on an electronic display.

CD-ROM   :A non-magnetic disc 4.75 inches (12 cenimeters) in diameter, on which approximately 630 megabytes of data can be permanently recorded by using a laser beam to burn microscopic pits into the surface .Data can be read by using a lower –power laser beam to sense the presence or absence of pits.

Computer Network   :Exclusive right granted by law for a certain number of years make and dispose copies of literary, musical or artistic work.

Electronic-mail   :The electronic transmission of letters, messages and mail memos through a communication network.

Facsimile	:	: Also known as \`Fax' is a system of communication in which a transmitter scans a text, photograph, map or other fixed graphic material and converts the information into signal waves for transmission by wire or radio to a facsimile receiver at a remote point.
Imaging Method:		A technique in which data from an image are digitized and various mathematical operations are applied to the data, generally using a digital computer, in order to create an enhanced image that is more useful or pleasing to human observer.
Scanner	:	A magnetic or photoelectronic device which converts the input characters into corresponding electric signals for processing by electronic apparatus.
Telecommunication:		Essentially the transmission of information from one point to another by wire, radio, optical or other electromagnetic system.
Telex	*:*	*A* telegraph service enabling its subscribers to communicate directly with one another over the public telegraph network using start-stop apparatus, usually teleprinters operating at 50 bauds.

8.10   REFERENCES AND FURTHER READING

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