UNIT 13 DOCUMENT DELIVERY SERVICES

Structure

13.0 OBJECTIVES

After reading this Unit, you will be able to :

- explain the meaning of document delivery;
- understand the concept of electronic document delivery and the equipment require for electronic document delivery;
- evaluate the services provided by document delivery systems;
- know the working of electronic document delivery;
- become aware of the necessity of document delivery systems; and
- describe the different methods of electronic document delivery system,

3.1 INTRODUCTION

In the age of information explosion, it is not possible for any library to subscribe or procure all the relevant documents in a subject. So document delivery is a must in this era. In this unit you will know the concept of document delivery and the how of document delivery. You will also learn about the different methods

and techniques used in the electronic document delivery. The unit also describes the origin of document delivery service. You will also know about the equipment used in online delivery. The different factors and needs of electronic delivery are also explained in brief.

13.2 WHAT IS A DOCUMENT ?

Ordinarily the word document means a textual record, e.g. names, numbers, and alphanumeric codes. Increasingly sophisticated attempts to provide access to the rapidly growing quantity of available documents raised questions about what should be considered a 'document'. The present interest in multimedia reminds us that not all phenomena of interest in information science are textual or text like.

Suzanne Briest equated document with organized physical evidence. These ideas appear to resemble notions of 'material culture' in cultural anthropology and 'object-as-sign' in semiotics. From the other point of view 'new digital technology' includes any phenomena that someone may wish to observe: Events, processes, images, and objects as well as texts are documents.

13.3 DOCUMENT DELIVERY SERVICE

Document delivery service (DDS) is 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. This is the service which actually locates the required documents and supplies it to the request. Thus document delivery service is the service which adds value to the other library services such as current awareness services, SDI service, indexing and abstracting services, etc. and is considered as backup service.

Self Check Exercise

1) What is document delivery service and what are the activities involved in this process?

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

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

.....

.....

.....

.....

.....

.....

.....

.....

.....

13.4 HISTORICAL PERSPECTIVE OF DOCUMENT DELIVERY

Before the invention of xerography, it was not possible for any library to deliver the documents other than to buy them from publishers, display them on the shelves and loan them when demanded by the users. But after the invention of xerography in 1960, it became possible to provide xerox copy of the document. By 1970s, large scale use of photocopier in libraries was started, then DDS was not just confined to lending or interlending of documents, but also documents could be duplicated and permanently supplied to the users. Most of tlie libraries still prefer supplying copies of the documents rather than the originals.

The computers, scanners, telecommunication technologies in 1980s made it possible to store the documents in electronic form and transfer the same electronically to long distances via networks almost instantly.

13.5 ELECTRONIC DOCUMENT DELIVERY SERVICE

Electronic document delivery refers to the use of electronic technologies in support of tlie interlending activities of libraries. It includes tlie use of electronic methods by libraries both for the transmission of requests and for the physical transmission of the full-text document. By extension, this definition includes the on-line ordering by libraries of documents from commercial information brokers; but it excludes the use of electronic technologies for purposes other than interlibrary lending (ILL) in its broadest sense.

Self Check Exercise

2) What is electronic 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.

.....

.....

.....

.....

.....

.....

13.6 NEED FOR ELECTRONIC DOCUMENT DELIVERY

We are living in the age of information explosion. The mount of information is being increased minute by minute. So it becomes very difficult to be in pace with the every new generated information. Another problem is the cost. The cost

of document is increasing day by day. So keeping these views in mind we need a speedy and less costly document delivery system. In this section we will examine the need of electronic document delivery service i.e. why we require an electronic document delivery.

i) **Speed:** Traditional interlibrary loan service takes a lot of time to deliver and receive the information. Sometimes when it has to drive out of country's boundary, weeks and months have been taken. Thus sometime the information becomes outdated and of no use to the user/requester.

To overcome these problems, the electronic document delivery has evolved. Since it provides information in coinparatively less time, so it is more helpful for user. The delivery of document through online i.e. e-mail is the fastest method with the availability of online databases, OPAC, 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 offers a great promise.

ii) **Financial Pressures:** The increase in the rate of growth of serials and other documents subscribed by the libraries has turned the libraries and information centres to the electronic libraries. The supplying of original document on inter-library loan is never a good step because the document can't be used by the users for the period of interlibrary loan. Supplying of photocopying is also not a good solution due to the increased cost, non-clarity, time consumption, etc. So the only solution to this is to delivery of document electronically. If a library has a good collection of electronic documents e.g. in CD-ROMs, then it provides better opportunities for the requester/ user/requesting libraries. If the same request is made by more than one user, then at a time the same may be sent to another user without investing any extra cost (we can use 'cc' and 'Bcc' options in the e-mail and attach the files).

But if the library doesn't subscribe to the electronic version then the document may be scanned through scanners and then the scanned file may be attached to the user's e-mail address. This way the cost of sending may be saved.

Sometimes, it is less cost effective if it is not centralized. It is increasingly realized 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.

Now more and more libraries are looking to electronic document delivery to provide a 'just in time' instead of a 'just in case' service.

iii) **Increase in Demand:** Since the nature of library users have changed from general information searcher to specified information searcher, so load on libraries/information centers has increased. Now through the tradition ILL method, it is not possible to satisfy the user due to cost and time factors. But electronic document delivery services overcome this, So it is the most effective and speedy method of delivery.

iv) **Evaluate the Service:** The efficiency of information can also be evaluated through this. Since the requester and the provider are always in touch through the e-mail, so feedback can be obtained instantly.

Self Check Exercise

3) Explain what necessitates electronic 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.

.....

.....

.....

.....

.....

.....

13.7 WOW DOES THE ELECTRONIC DOCUMENT DELIVERY WORK ?

The delivery of electronic documents comprises a series of steps which include the identificationof information, sources, requesting, processing, supplying, etc. In this section, we will study the different steps involved in electronic document delivery service. The different steps in electronic document delivery are as follows:

i) Identification of information
ii) Identification of source of supply
iii) Requesting
iv) Request processing
v) Supplying an item
vi) Receiving an item
vii) Billing
viii) Feedback

- **Identification of Information**

The first step in the electronic document delivery is the identification of information. For the identification of information user/requester may take the help of many available indexing and abstracting journals, which are now available in electronic version. By using this type of source, one can note down the bibliographical details for further information. The method of carrying out this search, in most cases, depends on the database which is being searched, or that of the database host or system employed. There are so many searching commands standards such as OSI search and retrieval protocol (ISO 10162 and 10163), ANSI 239.50, etc. for help to users.

- **Identification of the Source of Supply**

When the bibliographical details of the required information is identified, it needs to locate the source of supply for the same. The most automated method to

locate the source of supply is linked with the searching process. A command is made on the machine on which the search is being carried out and the article is ordered automatically. The system checks the local holdings and automatically places orders for those items which are not held locally.

- **Requesting**

When the required information and the source of supply is identified, it needs to send an order for the specified item to the supplier. The request can be placed through several ways. The simplest way to place the request is through post. However, in the era of information technology this way is relatively outdated. Now there are many automated systems for the transmission of requests to document suppliers which include fax, e-mail, telephone, etc. Besides these, many database hosts also offer documents ordering modules and many document suppliers have their own systems.

Nowadays some international standards are also developed for requesting a document. Recently all OSI protocol for interlibrary loan requesting (ISO 10160 and 10161) has been developed.

Request processing

When orders are received at the supplier and by whatever means, the request has to be processed. Ideally, it should be done as quickly as possible. In the traditional document delivery, when the request has been received and validated, the required item is retrieved from the shelf and either despatched on loan or a photocopy is produced and is despatched.

But, now a days, for the delivery of document electronically, library staff use their web browser to access the outstanding requests. It includes the following steps:

i) The option to transfer the information to the staff request form is selected. It is similar to the one available to registered users except for some additional fields: a request number field, a 'box' for choosing a supplying library and a field for staff notes.

ii) Staff can edit the request field-by-field, variety of the data, ensure that the request is valid, select a library and submit the request.

iii) At the same time, an e-mail message containing a copy of the request is sent to the user.

iv) Staff may also initialize requests received by other means, such as by mail, fax or phone, using the staff request form.

In these days many document delivery centres have adopted some new technologies for request processing, At BLDSC (British Library Document Supply Centre), a system named 'AUTOMATCI-I' has been implemented to match incoming electronic requests against a database of holdings. When a positive match is made, the batch of request can be automatically sorted into the correct picking order. But this system is not applicable for postal request. So studies are carried to use the optical character recognition (OCR) technology to convert postal forms into machine readable format to allow automated processing as with electronically transmitted requests.

- **Supply of the Item**

Ideally when a request is processed the item should be supplied to the user/ requester as early as possible. Earlier it took several days for a document to be despatched via mail services; it could extend to weeks in the case of international postal services. But now, the e-mail containing the request is delivered to the e-mail directory. The process is done in the following steps:

i) A background process scans new mail, converts the messages to HTML and copies the message to the ILL (Interlibrary loan) working directly. It then deletes the message.

ii) The supplying library uses its web browser to look at the working directory.

iii) Each request has a request number, the date and time sent and a priority rating.

iv) These requests can be printed and taken to the shelves for retrieval.

v) Once the items are retrieved, the staff members return to the working directoiy and clicks on each request.

vi) The item is then scanned.

vii) Then a second background process takes the scanned image and e-mails it separately to the requesting library. In this the scanned images are encoded into MIME's Base 64 format for transmission.

In this way a web enable document delivery service supplies an item. There may be another techniques for supplying the document by different suppliers. The above technique is used by Regional Electronic Document Delivery Service (REDDS).

- **Receiving the Item**

After supplying the document it is expected that the user/requester/requesting library may receive the item as soon as possible. For this, in REDDS, two replies to the electronic request are delivered to the requesting library's/ user's e-mail directory. The following steps are carried for this:

i) A background process checks all incoming mail for the MIME binary indicator (X-Finfo). If it locates this string, the file is processed as binary; if it does not find the indicator, it simply HTMLises the file, copies it to the working directory and deletes the message.

ii) If the incoming e-mail message is recognized as a binary file, it is run through a Base 64 decoder which will extract the scanned image in its original format. This file is then copied to the working directory.

iii) The requesting library/user views the HTML issued e-mail message through its browser, and selects the link to the image which will launch the appropriate viewer for that image which can be printed.

- **Billing**

Billing i.e. payment mechanisms is the last part of a document supply. Many systems of payment are being investigated by various suppliers. The most

common is credit card payment, but in some systems payment is made at the point of making the request, BLDSC, CARL systems, etc. supply the documents by advanced payment mechanism.

- **Feedback**

Feedback is an important part of evaluation of any system/services. So in case of electronic document delivery also, it is required. The document(s) which have been supplied is useful or not, between request processing and receiving the items are evaluated through only the feedback of the users/requesting library.

Self Check Exercise

4) Explain various steps in electronic 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.

.....

.....

.....

.....

.....

13.8 EQUIPMENT REQUIRED FOR ONLINE ELECTRONIC DOCUMENT DELIVERY (EDD)

The online delivery of documents is a development of recent technologies. The equipments required for the EDD online are as follows:

- **Web Sewer: A** web server is required for the transmission of document. Regional Electronic Document Delivery was developed for the windows 3.1 environment using Win-HTTPD. The systein is currently being transported to the Windows 95 environment using O'Reilly's Website.
- **Web Browers:** Along with a web sewer, one requires a web browser for the effective online document delivery. Any form enabled browser will work,
- **Scanner:** For **DDS, a** scanner is required. The scanner is operated by launching a product called HP Deskscan II from within the web browser.
- **Laser Printer:** The only requirement for the laser printer is that it should be capable of printing out 600 dpi.

13.9 METHOD/MEANS OF ELECTRONIC DOCUMENT DELIVERY

The means of electronic document delivery may be categorized into two **parts:**

- Electronic request transmission
- Electronic document transmission

13.9.1 Electronic Request Transmission

The electronic request transmission is beneficial for both, to the borrowing and lending institutions. Through the use of electronic networks, the borrowing process is reduced. In addition, unfilled requests are automatically referred from one potential lender to another without intervention by a third party, and borrowers receive computer generated statistical reports on their borrowing activity.

The electronic requests can be transferred by the following means:

- **E-mail Systems**

We are living in the age of information technology. In these days the e-mail systems have begun to displace the fonner teletype as the major form of electronic communications between libraries. The use of this system for request transmission has proved to be less expensive and more flexible than any other means. Some of the well known systems which provides the e-mail messaging service are ALANET, On Tyme, ENVOY 100 System, CMS, etc.

- **Online** Circulate **on Tyme Systems**

This system of request transmission is more useful for multibranch library systems or group of libraries using the same automated system. Actually multilibrary or mutli-branch automated systems act as union catalogues, the holding of all participating libraries or branches are accessible online. Besides this, online circulation system provides immediate information about the circulation status of a particular item, reducing delays caused by sending a request to a location where the item does not circulate. In a well designed system, the bibliographic information about a title can be linked with the electronic delivery module. Library Computer System (LCS) of University of Illinois at Urbana-Champaign is such an example of this system.

- Online **Union Catalogues**

It is a simple system which is little more than the electronic version of a union card catalogue supported by an electronic messaging function to highly sophisticated systems. This system provides a user the facilities of automatic routing of requests, statistical report, on-line ILL work form etc. Online catalogue of monographs and audio visuals of the Greater Midwest Regional Medical Library Network is a type of this catalogue.

- Teletype **and Telefacsimile**

These two are also good means of message transmission, but nowaday, not so much useful than e-mail. It is the least sophisticated forms of electronic request transmission.

13.9.2 Electronic Document Transmission

After receiving the request from the users/other libraries, it is necessary to deliver the document as soon as possible. So, similar to electronic transmission means, the documents should be transmitted electronically.

The various means of delivery of documents electronically are as follows:

- Online Document Transmission Systems

On the request of users the documents can be easily transmitted on-line. To transmit document online, many projects have been carried out. Some of the important projects are :

- **OCLC/IAC** Project

In the year of 1983, OCLC and Information Access Company (IAC) had started electronic document delivery system. To provide this service, they used OCLC ILL subsystem and finally they developed a full text machine readable database.

It was expected that OCLC ILL users will be able to request online the full text of any article contained in one of IAC's electronic database. Requests will be processed and desired articles transmitted to the requesting library/user via OCLC,

- Project HERMES

It is a proposed system which is teletex based electronic document delivery service sponsored by the United Kingdom Department of Industry (DOI), providing an e-mail and document delivery service suitable for general use. It will provide document ordering and delivery of known documents, automatic document delivery of prespecified documents, e-mail, etc. HERMES was also to provide document searching facilities, probably through links to existing database searching systems.

- **ARTEMIS**

It is also a system proposed by the Arthur D. Little Company. Source documents would be digitized either as text or as full facsimile. It is envisioned that requested docunzents would be transmitted overnight.

- Satellite Transmission Systems

Satellite transmission system is another means of transmitting documents electronically. The primary advantage of satellite transmission of documents is the ability to handle large amounts of binary information at extremely fast-speeds. Other advantages of satellite transmission include a low error rate, broadcasting capabilities, and independence of distance. The function of the satellite link is to provide high speed digital channels from archival databases to receiving systems and to carry orders to the archives for documents. Multimedia documents can also be sent through satellite through digitization of documents. In digital form all these data types become amenable to storage and transmission by computer. There are some projects carried out in this field.

- Project APOLLO

This project was started in the year of 1981 by Commission of the European Countries (CEC). It was originally designed to study the potential use of communication between satellites and ground stations for document delivery.

- Project Universe

UNIVERSE stands for UNIVersities Extended Ring and Satellite Experiment. It was set up by a consortium involving the British government, industry and universities. It is well suited for the intermittent transmission of a large document.

The network can transmit about 4 pages of facsimile or 40 pages of text per second.

- **Telefacsimile**

It is the only mature document delivery system currently in operation in most of the libraries. Mostly it is used only for rush requests or for special applications, but the high transmission cost, low transmission speed and lack of flexibility have limited its usefulness.

Despite it's limitations, libraries continue to experiment with telefacsiinile for document delivery.

- **Optical Disc Based Systems (ODBS)**

ODBS scans hardcopy or microform materials, captures the document images, stores the images and location indexes to each image in digital format on optical discs, read the discs and transmit the images to computer terminals for display or to a printer for hardcopy output. But because of costs, technical limitations, and copyright constraints, it is unlikely that any single institution will be able to implement such a system solely for document delivery. Despite these limitations a library might subscribe to optical discs containing the contents of highly used serials. These would be used to produce paper copies for the delivery of documents.

One of the important project named ADONIS was carried in this field. ADONIS stands for Article Delivery Over Network Information Systems. It was launched in 1984, It was proposed by a group of major periodical publishers. The ADONIS system proposed a central agency to capture document images on optical discs.

Recent developments in the applications of videodisc technology by companies such as Laser Data demonstrate the practicality of replicating videodiscs containing either digitized document images or machine - readable full text. Laser Data has developed a process whereby video discs containing digital data can be readily and inexpensively mastered and replicated. The data on these discs can be retrieved and displayed using relatively inexpensive video disc players and simple micro computer interfaces.

Self Check Exercise

5) Describe the different techniques used for electronic document delivery.

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

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

.....

.....

.....

.....

.....

.....

13.10 FACTORS AFFECTING THE ELECTRONIC DOCUMENT DELIVERY

Electronic document delivery is the most effective method for document delivery in these days. In this section we will examine the factors, which affect the delivery of documents electronically. The following factors affect the service:-

- **Types of Internet Connection**

Type of internet connection refers to the transmission speed i.e. transmission rate. The downloading of material or opening of an attachment will vary on the type of connection to the internet and the size of file. The faster type of connections use broadband cable, DSL (Digital Subscription Line), ISDN (Integrated Services Digital Network), Leased line, etc. Downloading a file using these connections takes a very short time, perhaps only a matter of seconds. Dial-up access using a modem, however, is the slowest method.

Scanning Resolution

The downloading is also dependent upon the scanning resolution of the sending libraries and information centres as well as the content itself. Articles with graphics and pictures tend to create larger files when compared to another article of the same length, though with mainly text. Even then, the density of text page can affect the overall file size of a given document.

- **PDF Viewer**

The type of PDF viewer also affects the delivery of document electronically. PDF is a type of standard which stands for Portable Document File. There are many PDF viewers in the market in which Acrobat Reader is very popular and widely available. It is a very robust and stable application with many user-oriented enhancements. It has a facility to rotate the file as necessary for proper viewing and allows us to zoom in or pan out when viewing a page to adjust the size of the image, while some of the PDF viewers do not have such facilities.

- **Internet Browser**

Not only the type of internet connection, but the type of internet browser also affects the delivery of documents. If the settings between the PDF viewer and web browser do not match sometimes, a blank white page is displayed. This problem sometimes occurs when Netscape Navigator is used as borrower and Acrobat Reader is used as PDF viewer.

Self Check Exercise

6) State briefly the different factors that affect the delivery of document online.

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

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

.....

.....

.....

.....

13.11 PROBLEMS ASSOCIATED WITH ELECTRONIC DOCUMENT DELIVERY SERVICE (EDDS)

Electronic document delivery service is a unique service of its own kind among the different services provided by a library. However, there are some problems mainly related with the online delivery which are given below:

- **Problem of Internet Browser:** The electronic document delivery services sometime depend upon the type of internet browser. Sometimes some supplied documents can be accessed on Netscape, while at the sometime the same documents cannot be accessed on some other browser such as Microsoft Internet Explorer and vice-versa.
- **Time Limitation:** The delivered documents from the supplier only can be stored only for a fixed time. So it is necessary to convert the relevant documents into hard copy for archives.
- **Problem of Missing Page:** On the way of delivery of the article, due to some technical problems, sometimes the message of missing pages or illegal operation are displayed on the screen.
- **Type of Connection** : Type of internet connection e.g. lease line, ISDN, modem, etc. also affect the document delivery service.

Self Check Exercise

7) Explain what difficulties that are faced in electronic delivery of documents. What are the problems associated with EDDs?

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

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

.....

.....

.....

.....

.....

.....

.....

13.12 EVALUATION OF A DOCUMENT DELIVERY SYSTEM

In the present age, librarians play a pivotal role in the different areas of research and thus may be renamed as information scientists. In this era of information technology online services continually improve access to full text. Thus now the

research function and document delivery functions are coming closer. However, full text online with commercial database is still limited to select articles from relatively current issues, though the evaluation of the system can be measured from the following points of view.

- Method **of Order Acceptance** : **A** user/library may place their orders through different means viz e-mail, fax, telex, mail, telephone, etc. ***So,*** it is necessary to adopt the method that is most reliable. It may vary among different document delivery services. One may prefer more common fax request methods or online request transmission methods.

- **Method of Charging** : Document delivery service is the service intended for specialists. So, if the rates do not seem competitive, find out more - the difficult literature citations may prove the service is well worth. Minimum order charges are uncommon. However, a larger DDS may require a subscription to access the online order system. **A** minimum delivery fee or invoice total may be required to retain the services of a local independent - DDS.

- **Specialization:** Document delivery is a specialty that crosses all subject areas. One can get the best docuinent delivery service with experience in the field of research. The time to track down a dated foreign publication may be a evaluation factor for the docuinent delivery system.

- **Turnaround Time** : One DDS rush service is another DDS standard turnaround, and some are not as flexible as others on using one's favourite courier or deliveiy method. Some DDS will give a list of libraries they access, while others let browse or download their titles list. A full service DDS is distinguished by finding publications not on those lists, and providing status reports on delivery delays and search continuations.

- **Check Local Holdings** : Use of independent DDS is a beneficial method due to flexibility. The independent DDS can copy holding list of users and return the citations that user can fill in house. It is another task that can be outsourced for a little or no cost.

- **Itemized Invoices** : Many **DDS** are limited in how they can modify **their** accounting procedures. Some DDS, supply invoice along with each delivery while some supply invoice monthly or quarterly. A typical invoice statement is line itemized with little more than quantity and date of delivery with total royalty and delivery fees.

On the basis of abave the evaluation criteria, one can choose a **DDS .**There may, however, be other criteria that are important which may be summarizedas follows;

- Implementation of local network/hardware;
- Highest recall and precision;
- Quality of the supplied documents to the usersllibraries;
- Handling the issue of intellectual property rights; and
- Level and quality of customer service.

13.13 COMMERCIAL DOCUMENT SUPPLIERS

To be in the pace of increasing demands of documents, many libraries and information centres have started the document delivery service on commercial basis. Here we will learn about some important document delivery suppliers:

- **British Library Document Supply Centre (BLDSC)**

BLDSC is one of the most well known centre in the field of document supply. It is regarded as the central organization for interlibrary loans in UK. The centre supplies books and photocopies of journal articles from its own collection at Boston Spa and other parts of the British Library. BLDSC provides two ways for passing the requests.

- Request online using ARRTel System
- Request via www site.

Subscription is required for the first, while for the next subscription is not essential. BLDSC maintains several databases, available on www site:

- Monographs help at supply centre, published since 1980. In this database only basic bibliographicaldetails are given, which is useful for bibliographical checking and document ordering. This database is also available on Blaise as file DSC.
- Serial holdings: British Library has a collection of near 64,000 currently received serials, BLDSC also holds runs of 290,000 journals which have ceased publication. The site address of BLDSC are given below:

http://www.bl.uk/services/bsds/dsc/

(for information on services on www)

http://opac97.bl.uk/

(for searchable catalogue of holdings)

- **National Library of Australia**

The National Library of Australia's Document Supply Service (NLADSS) is the Australia's largest document supply centre. The Catalogue of NLA provides information on our holdings. The majority of the materials held at the library is. available for loan. Some of the material, however, is part of a special collection and is not available for loan. The library doesn't lend material to individuals, Individuals who wish to use library materials should contact their institution library or local public library to arrange for them to borrow the material on their behalf. NLA is offering the largest research resource of Asian material Australia has ever seen. Since June 1,2000 NLADSS has ceased accepting ALIA vouchers as payment for interlibrary loans and document supply. In place of this, libraries using the NLADSS can choose the following methods of payment:

- Kinetic Document Delivery (KDD) payments Service
- Monthly account (payable by cheque or credit card).

- **Chicago Public Library**

The Chicago Public Library is one of over 80 Patent and Trademark Depository Libraries in the United States. The library provides copies of U.S. patents as well as foreign patents. The library holds an almost complete collection of British patents dating from 1617 to mid-1994 and German patents dating from 1912 to 1938. The copies can be obtained through the xerox copy centre.

- **Patent Information** System

To provide technological information contained in patents or patent related literature through publication service, search services and patent copy supply service. Government of India has established Patent Information System (PIS) in 1980.

PIS operates subscriber advance payment scheme. Under this scheme, users interested in availing regular service by way of procurement of patent information, may remit an amount of not less than Rs. 1000/- or in multiples of thereof and open an account in their names. On receipt bf this payment, the user is allotted a subscriber account number by the office of PIS, Nagpur. For more information one can contact at the following address:

Patent Information System
CGO Complex, Block 'C', 3rd Floor
Seminary Hills, Nagpur- 400006
e-mail: pisnag@mah.nic.in

- **INSDOC (NOW NISCAIR)**

Indian National Scientific Documentation Centre (INSDOC) (NISCAIR) 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 computerised NUCSSI. NUCSSI database contains serials holding information of about 850 science libraries in India. When request for document delivery are received, they are sorted out on the basis of availability of source documents. INSDOC supplies copies of documents from its own library collection of about 8000 periodicals including 2110 journals in electronic form. Using the local resources, on an average 73% requests are met within 2 weeks, and 85% within 4 weeks. Procurement of document copy from other Indian or from foreign libraries usually takes about 8-12 weeks time.

Another form of document delivery service offered by INSDOC is Contents, Abstracts and Photocopy Service (CAPS) and Full Text Journal Service (FTJS).

Besides these agencies, there are some other centres like Academic Press IAS, ADONISIAS, IAS, BIOSIS IAS, CAS, EBSCO CAS, Elsevier, IEEE IAS are also provide this service. The subject coverage, source of data, scope of data, mode of access, cost ordering systems, mode of delivery, etc. are given in appendix.

13.14 SUMMARY

In this Unit, you learnt about the document delivery service and electronic document delivery service. The different methods of delivery of electronic documents are also discussed in this Unit. How can one evaluate suitable document delivery systems and what should be the evaluation criteria are also discussed in this unit. The different factors affecting the document delivery systems are discussed in this Unit. In the appendix different document delivery service providers are also enlisted.

13.15 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 documents is known as document delivery service. The activities involved are identification of document, identification of source of supply, requesting, request processing, supplying the item, receiving the item, etc. Nowadays, by the use of electronic technology, the dimension of document delivery service has been extended and as a result refers to electronic document delivery service.

2) The system employing electronic technologies for receipts and supply of documents are known as electronic document delivery service (EDDS). These systems combine the benefits of online searching, online ordering, CD-ROM and fax technologies for the delivery of documents over network. Speed is the main advantages of these systems as compared to traditional interlibrary lending. These systems facilitate resource sharing and offering scanning facility to the requester to assess the utility of the document before placing an order.

3) Electronic Document delivery service is the demand of present age. Due to the changing nature of user's demand and use of modern information technology, it has required to change the traditional interlibrary lending activities. Besides these, the speed to delivery a document within a fraction of time, increasing cost of printed copies, and to evaluate the services, the electronic document delivery service is needed.

4) The various steps involved in electronic document delivery service are:

   a) Identification of Information: To locate the information user may refer the secondary or tertiary source of Information.

   b) Identification of source of supply: Through which mode, the user/ requester need to get the source.

   c) Requesting: After the identification of information and source of supply, the user(s) put his/her request.

   d) Request Processing: Now a days, web browser is used for fast and automated request processing,

   e) Supply of Item : After request processing, the relevant document (item) is supplied to user/requester.

f) Receiving of item: Supplied document is received by the user/requester.

g) Billing: Bill i.e. the cost of item is also send to user along the item or after some time.

h) Feedback: It is the step related to the judgment of relevance of the service.

5) The means of electronic document delivery can be categorised into two types:

a) Electronic request transmission.

b) Electronic document transmission

Electronic request transmission comprises e-mail systems, online circulation systems, online union catalogues, teletype and telefacsimile. Electronic document transmission comprises online document transmission systems, satellite transmission systems, telefacsimile, optical disk based systems.

6) The different factors that affect the delivery of document online are:

- Type of internet connection
- Scanning resolution

PDF viewer

Internet browser

7) The problems associated with,electronic document delivery service are problems related to internet browser, time limitation, problem of missing pages, types of internet connection, etc. Besides these non-availability of publications, limited library budgets, increasing subscription costs of publications also affect the electronic document delivery system.

13.16 KEY WORDS

Document : Documents are the textual records which includes names, numbers, alphanumeric codes as well as magnetic storage media (e.g. microfilm, microfiche), optical storage media (e.g. CD-ROM, DVD, Floppy Disk, WORM, etc.)

Document Delivery Service: The supply of documents to the users on demand irrespective of the location and form of the original.

Electronic Document Delivery Service : It refers to the use of electronic technologies in support of the inter-library lending activities.

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

Facsimile : It is known as 'Fax'. It is a system of communication in which a transmitter scans a text, photograph, map or other fixed graphic materials

and converts the information into signal waves for transmission by wire or radio to a facsimile receiver.

Internet : A network of networks; a group of networks interconnected via routers

Remote Access : Service allowing users away from the server or network to access these resources from remote locations.

Sewer : A computer that provides some service for other computers connected to it via a network. The library's database containing all book records is located on a server so that several client machines (OPAC) can access the files.

Telex A telegraph service enabling its subscribes to communicate directly with one another over the public telegraph network using start stop apparatus.

Usenet Newsgroups : Usenet is a collection of messages on various subjects that are posted to servers on a worldwide network. Each subject collection is called newsgroups. Most newsgroups are hosted on internet-connected servers, but they can also be hosted firm servers that are not part of the internet.

Web Browser Software program that allows you to access web pages on the internet, an Intranet or an extranet. Microsoft Internet Explorer and Netscape Navigator are two most popular web browsers.

13.17 REFERENCES AND FURTHER READING

Braid, J. Andrew (1993). Electronic Document Delivery: A Reality at Last?. *Aslib Proceedings.* 45 (6), *161-166.*

Brandehoff, Susan, E. (1983). Libraries Begin to Think Digital Telefacsimile. ***American*** *Libraries.* 14 (3), *162.*

Citation Data from SCI CD-ROM Database. Library *Science with a Slant to Documentation and Information Studies.* 35 (4), 213-220.

Davies, Mary (1998). CAS IAS Services: Where are we now? *Electronic **Libraries.*** 16 (1), 37-48.

Day, Dorothy (1993) (et al.). Agents for Electronic Document Supply: Who are the likely players?. *Aslib **Proceedings.*** *45* (7/8), 189-199.

Ganesan, P.(et al.) (1998). Automatic Extraction and E-mail Delivery of
http://www.ariadne.ac.uk/issue9/redd
http://www.libraryhq.corn /
http://www.onlineinc.com/database/DB1998/delivery10.html

Mathias, Eilec C. (2003). Using a web OPAC are deliver digital collection. ***Online*** *information* **Review.** 27(1), 28-36.

APPENDIX
COMMERCIAL DOCUMENT SUPPLIERS

SUPPLIER	SUBJECT COVERAGE	SOURCE OF DATA	SCOPE OF DATA	MODE OF ACCESS	MODE OF DELIVERY
Academic Press IAS http://www.apnet.com/www.ap/aboutid.htm	IDEAL Multi-Discipline-175 Academic Press Journals 1996	Academic Press Journals-	TOCs, citation,abstracts,HTML,full-text-PDF	Via www-UK site at BIDS	Online PDF
ADONIS IAS http://www.adonis.nl	ADONIS Biomedical field	Cover 700 journals from 78 publishers	Abstracts,citations, full-text	Subscription based plus quarterly billing of royalties	Hardcopy printout
BLCASIAS http://portico.bl.uk/inside	All disciplines via web	BLs journals & conf. collection	Science 13K jours Soc Sci. 7K Web-21K jours. 16K conf. prof.	CD-ROM inside science & inside social science & human. Updated monthly Each disc last 6 mths. Jours. Sent to BL.	Mail/Fax/Courier
IAS http://www/bids.ac.uk	Journals Online Currently Blackwell Science & Blackwell Publishers. IOP offer individual services.	Participating Publishers. 120 jour. Titles.	Includes citations & abstracts-free for all. Full text free if subscribe to h/copy Citations & abstracts.	Via WWW interface Via WWW interface	PDF format via WWW Mail/Fax
BIOSIS CAS http://wwwbiosis org	B-I-T-S BIOSIS Information Transfer System 6K scientific, journals, Books,conf. Proc. Life Sciences	BIOSIS Previews Databases	Abstracts,citations,individual profiles on Keyword,author,Journal-updated Monthly	Disk etc. variety of formats e.g. Pre-Cite End Note,Ref. Manager etc. Email/ftp	Diskette/Email

CISTI IAS http://www.bma.org.uk	CISTI supply-STM	OWN collection, BLDSC & other suppliers	Full text	Online via CISI's catalogue-free to registered end users	Ariel/Fax FTP/Courier
CAS	Info Alert	NRC Information Centre Ottawa	Citations, weekly Bimonthly, Monthly	Delivered Elect print Cost depends on d/bases & no. refs Retrieved e.g. INSPEC $300 pa	Ariel/Fax FTP/Courier
EBSCO CAS http:lwww.ebscodoc.com/	EBSCO Doc. Alert Multiple discipline	Ebso Publ. Mainfile of 30 k in house Journals+Inside Conferences. ADONIS d/base Available on WWW	TOCS,citations & abstracts Updated daily, TOCs searchable on WWW	EBSONET & WWW	Fax /Courier.Mail Ariel
Elsevier . http:/www.elsevier.nl:80/estoc/Menu.ht.ml	EsoTC>1k Elsevier Science Primary & review Jours	Elsevier titles	TOCs,abstracts searchable, not viewable.	Via WWW	N.A.
IAS	Elsevier Electronic Subscriptions EES- Entire range of Elsevier jours.	Full text CD ROM/magnetic tape wkly biweekly-Dependent on jour titles.	Full text	Via WWW	N.A.
Engineering Information Inc. CAS http:/fwww.er.org_	Er Page One Engineering/applied Science/technology	>5K journals, conf. proc. technical & trade publications	Citations, no abstracts, Updating varies with format from weekly –Bimonthly	Via WWW	N.A.
http://www.ei.orgeihome/services/ihihmenu.tm/	Standards Web	Bib. Standards/base >250k sources of world-wide standards	Updated quarterly. EU,ISO,world-wide.	Online via. AEI	N.A.
IEEE IAS http://www.iee.org.uk/publish/inspec askieee.html	ASK/IEE Specializes in electrical eng. Comp. Sci. & phys. Sci. Journ.& Conf. Proc	INSPEC.IEE & IEEE collections	INSPEC 1994	Also provides ordering system for purchase of books & standards	Mail/Fax/Email Online ordering
Infotrieve IAS http://www .infortrieve.com	Science/biomedical/Business	Collections in US & Europe	Full text	WWW Medline on the Wet service $50 per month acce to medical jours Aidsline & Toxline Also available	Internet/Fax/Mail courier
INISTIAS http://www.inst.fr	Concentrates on grey lit in all fields of science & tech. 23k Journal titles,60 k confs. 100k diss not limited to PASCAL Database content	Scans images of 2k most requested titles	Full text	Online WWW	Mail/Courier Fax

IOP IAS ttp://www.iop.org/EJ	IOP journal titles	IOP titles	TOCs & abstracts- Htmi Full text-PDF & Post Script	Via WWW	PDF/PostScript Format
ISI IAS http://www.isnet.com	The Genuine Article	ISI databases >7K journals 5yr coverage	Full text	Mail Phone Fax/Online: Dialog OCLC, First Search; STN,DIMDI & WWW site	NA
ISI CAS http:/www.bids.ac.uk	Citation indexes -multi disciplinary Current Contents Research Alert Direct RAD Multidispline-6 titles	Journals held in stock ISI databases ISI database-8k science/technology/social science journals	Includes all authors, scanned abstracts Abastracts, citations Weekly updates TOCs+abstracts includes all authors. Scanned abstracts Weekly updates TOCs+abstracts	Via BIDS, commercial hosts Hardcopy/magnetic tape/CDROM Delivered Email/Ftp	NA
Knight Ridder IAS http://krsourceone.krmfo.com	KR Source One Multi discipline	Internal holdings, External collection of libraries including BLDSC	Citation	Online via WWW.Dialog d/bases	From stock & collection of libraries
OCLC CASIAS /http://www.oclc/Europe/horne.htm	ArticleFirst ContentsFirst/Content Alert NetFirst FirstSearch Fast Doc ELO EPIC	TOC of 15k journalshed by OCLC libraries Full text ABL Inform articles	Excludes letters,editorials & reviews Cites first 4 authors only	Subscription or fee based service. Pre buy in blocks of 500	Mail Fax/Courier/download,ASCII text Credit card account Monthly billing/credit card
Royal Society of Chemistry CAS http://chemistry rsc.Org IAS	Tailored search service Science & technology Library & Information Centre Chemistry	RSC databases External databases eg. Chem. Abs.Biosis.Inspec In house collection	Updated monthly with a keyword search,citation+abstract Full text	Mediated search carried out by RSC Mail/Fax/Teleph one Email	Mail/Fax
Springer-Verlag CAS http://www.spring er.de/server/svjps.html http://link springer.de	Springer Journals Preview Service SJPS Springer LINK	150 Springer scientific journals 100 Springer titles- up to 400 by 1999 & books	TOCs & abstracts & full text	Email/I-TP/WWW Via WWW	Email.WWW
SWETS CAS HTTP:/WWW.SW ETSNL IAS	Swetscan All disciplines biomedical bias Swet Doc	13k journals scanned selected journal profiles	Includes all authors TOCs	Online via DataSwets Diskettes magnetic tape Prinout/file transfer STN/E-mail	Mail/Fax

Uml IAS http://www.umi.com	Infostore Traditional methods ProQuest Direct- Applied Science & Technology	Large internal collection & external Collection Scanned images 4k images	Full text Citation abstracts, Fulltext,full page Images	Fax/E.Mail/Phone/Dial ORDER/OCLC/Ariel Wilson Disc/PQ/WWW WWW interface or customized Windows interface	Fax/Mail/Courier Ariel Proquest Electronically-pdf Format or traditional Fax courier mail
Uncover CASIAS http://www.blackwellco.uk/libserv.technical/uncover.html	Science & Technology 53% Social Sciences- 33% Humanities 14% Reveal Express	>15Kjournals 15 million articles since 1988 Current awareness Direct to email. Select from 17k journals & TOCs sent Store search strategies run weekly 20k articles documents available in 1hr	Citations	WWW access. Telnet Via BIDS 5 modes: open- no charge for search p/word. Direct connect. Standard gateway. Customized gateway.	Fax Cost viewable Online preordering $8.50+c/right Credit Card/account Deposit account Min. $100.insit.a No of accounts Billing-invoices Monthly-$10 Invoicing fee, Ceiling limit Reveal-email directly

Note : K- 1000
WWW-World Wide Web
TOC-Table of Content