

# PROSPECTS IN LIBRARY NETWORKING AND INTERNET

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## ABSTRACT

*Highlights the importance and significance of Library Networking with special emphasis on the benefits. The advantages of on-line access to international databases and the popularity of the same have been mentioned. Presents an overview of the INTERNET also.*

## INTRODUCTION :

With the growing awareness of the role of Library and Information Science in India and abroad, it is realised that proper LIS Network systems of capability of Information handling and dissemination is essential in decision making for promoting socio-economic development by making use of scientific information. The tremendous growth in the output of scientific information and the number of people who use information have brought out the need for Library Networking Systems in India and abroad. Library Networking and Internet are the means of achieving National objective through economic and effective utilisation of information in technological innovation, decision making, research and education.

Considering the large size of our country and the enormous output of information each year in different states of our country, it is desirable that proper statewide infrastructure, based upon sectional resources network system may be linked with the national and international networks of industrialised countries. The development of computer communication network is an important technological advancement of the modern age, which uses the telecommunication facilities for data transmission. The computer network aims at resource sharing and in achieving economy in hardware, software and manpower. The scenario of telecommunications in India is changing radically. The benefits of networking in Library and Information centres are given below :-

## BENEFITS OF NETWORKING IN LIBRARY AND INFORMATION CENTRES

### RESOURCE SHARING

Library Networks offer great potential and new capabilities for sharing information amongst

different Library and Information Centres at local, national and international level and eliminate the size, distance, and language barriers among users through resource sharing.

### INTER-LIBRARY LOAN THROUGH E-MAIL

Inter Library Loan can be provided by sending the information through E-mail using the Network facilities.

### ACQUISITION

On-line ordering and other acquisition-related activities can be carried out through E-mail. Example of such system is in UK / Baker and Taylor's Betaphone system and in India CAP (Co-operative Acquisition of Periodicals) project of INSDOC.

### CATALOGUING

Centralized and computerized catalogues can be provided through Networking systems. Co-operative cataloguing or shared cataloguing information through networks in the national and international level will save the duplication of efforts, overcome budgetary constraints and problems of manpower.

### REFERENCE SERVICE

Reference service can be enhanced by E-mail through LAN or WAN.

### CURRENT SERVICE

Users may retrieve references of their interest in a fraction of second from an on-line database by Library networking systems.

### QUICK INFORMATION RETRIEVAL

Speed of data communication through networking is very high and we can obtain information within a few seconds from any part of the world sitting anywhere.

## **CURRENT TRENDS IN LIBRARY NETWORKING**

For effective transfer of information, Library and Information Network communications are the only practical means for the sharing of expensive resources to provide information at optimal cost.

Some of the Network systems currently developed in India and abroad are :

### **VSN DATA NETWORKS**

It is a gateway to world data networks by Videsh Sanchar Nigam Ltd. (formerly Overseas Communication Service) at Bombay. In 1991 VSN introduced a number of new services like X-400 based Gateway Mail Service, a store and forward Fax service, T-Fax service, Voice mail service etc.

### **EASYNET**

It was inaugurated at Madras during July 1990, which emphasised the need to develop local databases and network them. EASYNET is the world's first intelligent knowledge gateway to multiple on-line hosts like DIALOG and others, which offers single password access to over 1000 databases.

### **EDI NETWORK**

Electronic Digital Integrated network was developed by the Federation of Indian Export Organisation and the All India Shippers Council for International trade in 1992.

### **ERNET**

The Department of Electronics introduced and implemented this Education and Research Network, linking academic and research institutions to BITNET which is a major academic data network in the U.S., primarily used for the E-mail during 1990s.

### **INDONET**

It is a commercial public data processing network established by CMC Ltd. in January 1990 with nodes at Calcutta, Bombay and Madras in 1990s which provides hook-on facility for hotel Computer Network. The enhanced network system is now called WISER (Welcome group's Indonet System of Enhanced Reservation). The primary objective of the INDONET project was to provide a network of computer facilities accessible to remote areas so as to deliver the benefit of information processing to a wider cross section of the users.

## **INFLIBNET**

Information and Library Network was established during May 1991 by the Committee of UGC. It links up about 400 Institutions through a communication satellite. It is a giant network system in the direction of building a national information grid for mutual exchange of information and maximum utilization of resources. It offers a wide variety of services. (e.g. COPSAT service). INFLIBNET is a panacea for all the inherent problems that are being faced by the country in Information storage and retrieval at the higher educational level, provided the UGC takes all the necessary measures consolidating the views of information scientists and Vice-chancellors and Directors of R & D departments.

## **MALIBNET**

Madras Library Network was installed and made operational in May 1993 at Madras which links all libraries for data exchange and transmission of information.

## **NICNET**

It has been established by NIC in 1990s with four NEC S-1000 Computers located at Delhi, Bhubaneshwar, Pune and Hyderabad. The main objectives of the NICNET include development of necessary information systems in various sections of the economy for interactive use, promotion of information at State and National level and establishment of Computer Network with necessary communication equipments for easy access of information across the nation and ensuring optimal use of resources.

## **OSINET**

It is a network protocol software based on a subject of ISO-OSI (International Standards and Organisation-Open System Interconnection) reference model that has been developed by ISO in 1990.

## **PORTNET**

The PORTNET through the NICNET was implemented in the Madras port Trust building in 1990s. A statement of the position of ships of the Madras Harbour can be transmitted in 5-10 seconds from a computer in MPT to another Port Office through NICNET.

## **DELNET**

It was established in 1992 at Delhi which provides E-mail service and union catalogue service.

## **NELIBNET**

NELIBNET covers the North-Eastern Region connecting all the documentation centres, University Libraries, Colleges, Special and Research Libraries in academic institutions in the states, the State Central and District Libraries and other Information Centres in the states.

## **TELEMATICS TECHNOLOGY OF COMPUTER NETWORKING :**

The word Telematique which stands for Information Technology and its applications was used first in France in the 17s. As it is the combination of Telecommunications and informatics, it was named Tele+matics. In general telematics is the information technology in which a host computer is interconnected with a series of computers at local level (LAN), national or international level (WAN) through modem and telecommunication links for data communications.

Components of Telematics :

1. Computer technology
2. Modem
3. Communication technology
4. Communication softwares

### **Computer Technology**

Computer is a device capable of carrying out a predetermined sequence of operations, so that data is recorded, stored and analysed automatically.

### **Modem**

Modem stands for Modulator-de-Modulator. It is a newly developed technology used to transmit digital form of information from one computer to an analogue form of communication through a telephone line and again from analogue to digital form of information to other computer and vice versa. It acts as a interpreten between computer and telecommunication links.

### **Communication Technology**

It includes Telephone, Telex, Facsimile or FAX, FAX-modem, Videotex, Satellite communication software, E-mail and network communication facilities.

### **Communication Softwares**

DIALOG-LINK; STNEXPRESS, PROCMM etc are some of the communication softwares.

## **ON-LINE INFORMATION RETRIEVAL THROUGH INTERNET :**

In an on-line information retrieval system user is directly involved in a conversational mode and immediatly gets response for his queries. To access an on-line system from computer terminal, one needs to make a telephone call to the on-line system through a network of telephone and data communication lines at both national and international levels.

### **ADVANTAGES OF ON-LINE ACCESS**

Although on-line access to international databases costs considerably more, it is gaining popularity due to the following advantages :

- a) A whole database can easily be searched and then if necessary researched.
- b) Easy and rapid access to an extremely wide range of indexes, databases, many of which may not be locally available.
- c) Access to recent references during time-gap prior to the availability of published index volumes are possible.
- d) Databases searchable on-line often offer a far greater number of access points than the corresponding printed index.
- e) More than one database can be searched simultaneously using a single query formulation.

## **INTERNET**

INTERNET is a loose collection of millions of computers at thousand sites around the world, whose users can pass along information and share files, no matter which type of computers they are using. INTERNET is constituted by different types of computers. Inorder to inter-connect the computers, the administrators have to follow a same transmission language and that is called transmission control Protocol/ INTERNET Protocol (TCP / IP). To send a message on the network, a computer has to put the data in an envelope called an Internet Protocol packet and "address" the packets correctly.

INTERNET was developed by the Internet Society or ISOC which is a voluntary membership organisation whose purpose is to promote global information exchange through Internet technology.

## GETTING CONNECTED TO INTERNET

There are 4 ways of getting connected to Internet.

They are :

1. Permanent Direct Connection
2. On Demand Direct Connection
3. Dialup Terminal Connection
4. Mail Only Connection

## INTERNET FACILITY IN INDIA

In India a Library can access Internet through networks like NICNET, ERNET, SIRNET etc. NICNET users can send or receive E-mail from Internet using any of its more than 600 nodes spread all over India. Recently National Information Centre (NIC) has started a programme called Research and Education Network of National Informatic Centre (RENNIC) which provides educational and research institutes Internet services like E-mail, file transfer, remote login, gopher etc.

## SERVICES PROVIDED BY INTERNET

- 1) E-mail services
- 2) USENET News - the world's largest bulletin board service
- 3) TELNET service for logging into other computers.
- 4) FTP (File Transfer Protocol) for moving files back and forth and is useful for retrieving files from public archives.
- 5) Archie Service lets the users to locate files on Internet.
- 6) GOPHER service lets the users to prowl through the Internet.
- 7) WAIS (Wide Area Network Server) searches and provides access to resources on Internet.
- 8) WWW (World Wide Web) service provides information through hypertext technology.

## RETRIEVAL OF INFORMATION FROM COMMERCIAL DATA BANKS WITH TELNET OVER INTERNET

The commercial services accessible via Internet are :

- a) DIALOG Information Service
- b) Data-Star Service
- c) Lexis / Nexis (Legal database / Newspaper etc database)
- d) STN (Scientific and Technical Information Network)
- e) BRS (Bibliographic Research Service)
- f) Orbit Information Services.

## CONCLUSION

Information technology with its magical power has come at a revolution leading the World to a different work culture with more human efforts. So Librarians should put forth their leg to cope up with the modern technologies and they should manage their systems as they are with computerisation added, and enjoy the speed in retrieval and hence dissemination of information. Computers have not negated the progress of the past, but added ease and fastness to it. INTERNET provides golden opportunities of communication among the Library and Information Science professionals and provides access to vast information resources. Librarians and Information professionals must learn the various utilities of the Internet tools and try to implement them in their Centres.

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