UNIT 10 LIBRARY AND INFORMATION NETWORKS AND CONSORTIA: NATIONAL AND INTERNATIONAL

Structure

10.0 OBJECTIVES

The objective of this Unit is to discuss the development of library and information networks in India and some other countries. After reading this Unit, you will be able to:

- trace the history of library and information networks;

- discuss the functions and services of select library and information networks;

- explain the factors that led to the development of library consortia; and

- discuss the functions and services of select library consortia.

10.1 INTRODUCTION

Due to multi-faceted uncontrolled growth of information and financial constraints none of the library or information centres can claim to be self-sufficient in terms of finance and collection. Unaware of the situation, a user wants all relevant documents published in her/his area of interest. In this situation the only solace libraries had, was, locating the documents in the union catalogue for getting them on Inter-library Loan (ILL). Due to geographical, postal and bureaucratic constraints it took days or months to get just one document. Revolution of telecommunication technology has opened a new world for library cooperation. Due to recent developments, initiatives were taken at regional and national level to bring libraries together in order to share their collections. Several library and information networks have been created that serve towards library cooperation but they also provide variety of services like Internet connectivity, e-mail, and central repository for data storage, and so on. In such networks, union catalogue is transformed to Online Public Access Catalogue (OPAC) and linking of the digital collection with OPAC has led towards creation of digital libraries. The National Commission on Libraries and Information Science (NCLIS) in its National Programme Document (1975) defines a network as "Two or more libraries and/or other organisations engaged in a common pattern of information exchange, through communications, for some functional purpose. A network usually consists of a formal arrangement whereby materials, information and services provided by a variety of libraries and other organisations are available to all potential users. Libraries may be in different jurisdictions but agree to serve one another on the same basis as each serves its own constituents. Computer and telecommunications may be among the tools used for facilitating communication among them". UNISIST II working document defines it as "A set of inter-related information systems associated with communication facilities, which are cooperating through more or less formal agreements in order to implement information handling operations to offer better services to the users." Thus, library networking helps in cooperation among libraries. These libraries are connected through telecommunication networks to share documents and services, form consortium, subscribe journals, and so on.

10.2 DEVELOPMENT OF LIBRARY AND INFORMATION NETWORKS IN INDIA

It was in the mid 1980's that the telecommunication boom came to India and networking was given thrust by the Government of India. In India Department

of Telecommunication is responsible for maintaining national telecommunication infrastructure which is the backbone for network architecture of country. The major breakthrough was establishment of NICNET by National Informatics Centre (NIC) in 1975. In library parlance NISSAT was a major development. It was established in 1977 under Department of Scientific and Industrial Research (DSIR) with the objective of development of national information systems and services. It played a major role in development of Ahmedabad Library Network (ADINET), Bombay Library Network (BONET), Calcutta Library Network (CALIBNET), Developing Libraries Network (DELNET), Mysore Library Network (MYLIBNET), Bangalore Library Network (BALNET) and Pune Library Network (PUNENET).

Development of INFLIBNET (Information and Library Network) in 1988 facilitated a nation-wide effort to improve information access and transfer, initiated by University Grants Commission (UGC). Besides, there were several networks developed for resource sharing among organisations like SIRNET of Council of Scientific and Industrial Research (CSIR).

Table 10.1: Chronology of Development of Networks in India

Year of Establishment	Name of the Network	Supported by
1977	NICNET	NIC
1986	CALIBNET, Kolkata	NISSAT
1988	INFLIBNET	UGC
1992	DELNET, Delhi	NISSAT
1993	ADINET, Ahmedabad	NISSAT
1993	MALIBNET, Chennai	INSDOC
1994	MYLIBNET, Mysore	NISSAT
1995	BALNET, Bangalore	NISSAT

Due to growth of Information Technology (IT) now Internet is being heavily used as communication channel. This has given a chance for these restricted networks to become global networks. Almost all the networks use Internet for dissemination of their service.

10.3   LIBRARY AND INFORMATION NETWORKS: INDIA

There have been several initiatives in setting library and information networks in India but not many of them are active. Some of the most active networks and consortia are INFLIBNET, DELNET, INDEST, NKRC, etc.

10.3.1 INFLIBNET (Information and Library Network)

INFLIBNET has played an important role in automation and modernisation of university library system in India. It provided universities and research institutions the bandwidth for accessing e-journals. It has become a major player in enhancing scholarly communication in India. INFLIBNET was set up by University Grants

Commission (UGC) India in 1991. Initially it was started as a project under Inter-University Centre for Astronomy and Astrophysics (IUCAA) to be converted later into a full fledged programme of UGC. Its headquarters are located at Gujarat University Campus, Ahmedabad.

Objectives

The INFLIBNET Programme is directed towards modernisation of libraries and information centres and establishment of a mechanism for information transfer and access, to support scholarship, learning and academic pursuits. It was established with following objectives:

- "To promote and establish communication facilities to improve capability in information transfer and access, that provide support to scholarship, learning, research and academic pursuit through cooperation and involvement of agencies concerned.

- To establish a computer communication network for linking libraries and information centres in universities, deemed to be universities, colleges, UGC information centres, institutions of national importance and R & D institutions, etc. avoiding duplication of efforts:

  i) to promote and implement computerisation of operations and services in the libraries and information centres of the country, following a uniform standard;

  ii) to evolve standards and uniform guidelines in techniques, methods, procedures, computer hardware and software, services and promote their adoption in actual practice by all libraries, in order to facilitate pooling, sharing and exchange of information towards optimal use of resources and facilities;

  iii) to evolve a national network interconnecting various libraries and information centres in the country and to improve capability in information handling and service;

  iv) to provide reliable access to document collection of libraries by creating on-line union catalogue of serials, theses/ dissertations, books, monographs and non-book materials in various libraries in India;

  v) to provide access to bibliographic information sources with citations, abstracts, etc. through indigenously created databases of the Sectoral Information Centres of NISSAT, UGC Information Centres, City Networks and such others and by establishing gateways for on-line accessing of national and international databases held by national and international information networks and centres respectively;

  vi) to develop new methods and techniques for archival of valuable information available as manuscripts and information documents in difference Indian languages, in the form of digital images using high density storage media;

  vii) to optimise information resource utilisation through shared cataloguing, inter-library loan service, catalogue production, collection development and thus avoiding duplication in acquisition to the extent possible;

viii) to enable the users dispersed all over the country, irrespective of location and distance, to have access to information regarding serials, theses/ dissertation, books, monographic and non-book materials by locating the sources wherefrom available and to obtain it through the facilities of INFLIBNET and union catalogue of documents;

ix) to create databases of projects, institutions, specialists, etc. for providing on-line information service;

x) to encourage co-operation among libraries, documentation centres and information centres in the country, so that the resources can be pooled for the benefit of helping the weaker resource centres by stronger ones; and

xi) to train and develop human resources in the field of computerised library operations and networking to establish, manage and sustain INFLIBNET.

- To facilitate academic communication amongst scientist, engineers, social scientists, academics, faculties, researchers and students through electronic mail, file transfer, computer/audio/video conferencing, etc;

- To undertake system design and studies in the field of communications, computer networking, information handling and data management;

- To establish appropriate control and monitoring system for the communication network and organize maintenance;

- To collaborate with institutions, libraries, information centres and other organisations in India and abroad in the field relevant to the objectives of the Centre;

- To promote R&D and develop necessary facilities and create technical positions for realising the objectives of the Centre;

- To generate revenue by providing consultancies and information services; and

- To do all other such things as may be necessary, incidental or conducive to the attainment of all or any of the above objectives".

Services

Document Delivery

INLIBNET provides inter library loan and document delivery services from the comprehensive collection of subscribed journals under JCCC@UGC- INFONET. It has designated 22 libraries to fulfill ILL request from the users, affiliated to 149 universities covered under UGC. The ILL libraries together subscribe 2000 plus journals that are not available through consortia. Universities can request for articles from the journal holdings of those libraries wherever they find useful articles in JCCC search.

OJAS

Open Journal Access System (OJAS) is an open source journal management and publishing software developed and freely distributed by the Public Knowledge Project at the University of British Columbia. INFLIBNET has installed and

configured the software at its server and provides the facility of uploading the e-versions of journals of universities and even individuals for open access.

Library Automation

INFLIBNET has developed a library automation package called SOUL (Software for University Libraries). It has all the necessary modules which a library needs. Besides SOUL, INFLIBNET has developed several small utilities for day-to-day libraries operations. It also develops solution on demand by university libraries, like retro conversion, preparation of catalogue cards; duplicate checking of library records and so on.

Human Resource Development

INFLIBNET runs several short-term courses for professionals in order to train them with new automated tools and techniques. It has conducted many programs for working university library professionals. The course contains training module in computer application for library and information centres.

Databases

Bibliographic

INFLIBNET has developed the following bibliographic databases pertaining to the collection of participating libraries to enable sharing of resources:

- Serials Holdings
- Current Serials
- Secondary Serials Catalogue
- Theses
- Books

a) Shodhganga

INFLIBNET has been assigned the responsibility of hosting, maintaining and making available Ph.D. research work submitted in Indian universities to all in open access mode by UGC. INFLIBNET responded by developing Shodhganga, a digital repository of theses and dissertations submitted in Indian Universities. It has been built using the open source software DSpace that is OAI- PMH complaint. It collects, stores, indexes, disseminates and preserves the rich knowledge reservoir of Indian universities. Shodhganga provides a platform for researchers to share their research findings reported in their Ph.D. theses with the entire scholarly community in open access. There have been efforts earlier in this direction, e.g. the Vidyanidhi Project by the Mysore University. It served the purpose quite well but suffered due to lack of updation. The involvement of UGC and INFLIBNET would enable it to remain updated. Till now 8500 theses have been uploaded on the repository.

b) Shodhgangotri

This is a database of research-in-progress in universities in different disciplines. Researchers and their supervisors can send synopsis approved by appropriate bodies to be uploaded on the site. It helps researchers to know that areas actively being researched and the status of research. It helps to

avoid unnecessary duplication of research. Once a thesis is approved the synopsis in Shodhgangotri would be linked to the thesis uploaded on the Shodhganga.

c) Infoport

InfoPort is a subject gateway for Indian electronic resources. It is designed and developed to serve as a comprehensive gateway to all Indian scholarly content. The gateway collects the Indian scholarly content scattered over the Internet through an integrated interface that supports searching and browsing online resources of Indian origin available in open access. InfoPort is classified according to DDC, indexed subjectwise and arranged alphabetically subjects.

Non-bibiographic

It has also developed non-bibliographic databases on research projects and experts in different fields by the name "Vidwan" to help improve communication and collaboration in research.

Programmes

NLIST

National Libraries Information Services Infrastructure for Scholarly Content (N-LIST) Is a project of Ministry of Human Resource Development under National Mission on Education through ICT being jointly executed by the UGC-INFONET Digital Library Consortium, INFLIBNET Centre and the INDEST-AICTE Consortium. The N-LIST project provides access to e-resources to students, researchers and faculty from colleges and other institutions. The authorised users from colleges can now access e-resources and download articles required by them directly from the publisher's website once they are duly authenticated as authorized users through servers deployed at the INFLIBNET Centre.

a) Components

The project has four distinct components, i.e.: i) to subscribe and provide access to selected UGC-INFONET e-resources to technical institutions (IITs, IISc, IISERs and NITs) and monitor its usage; ii) to subscribe and provide access to selected INDEST e-resources to selected universities and monitor its usage; iii) to subscribe and provide access to selected e-resources to 6,000 Government/ Government-aided colleges and monitor its usage; and iv) to act as a Monitoring Agency for colleges and evaluate, promote, impart training and monitor all activities involved in the process of providing effective and efficient access to e-resources to colleges.

The INDEST and UGC-INFONET are jointly responsible for activity listed at i) and ii) above. The INFLIBNET Centre, Ahmedabad is responsible for activities listed at iii) and iv) above. The INFLIBNET Centre is also responsible for developing and deploying appropriate software tools and techniques for authenticating authorised users.

b) Current Status

A total number of 3398 registrations have been done with the N-LIST programme till now that includes 3094 colleges comprising 2214 Government/

Government-aided colleges covered under the section 12 B/2F of UGC Act as well as 880 non-aided colleges. All e-resources subscribed for colleges under the N-LIST Project are now accessible to these colleges through the N-LIST website

Project

a) e-pathshala

e-pathshala is a project of the MHRD, under its National Mission on Education through ICT (NME-ICT), for development of e-content at postgraduate level. At present it caters to 77 subjects in different subjects across all disciplines of social sciences, arts, fine arts and humanities, natural and mathematical sciences, linguistics and languages.

b) UGC's E-Journals Consortium

The UGC's E-Journals Consortium aims at providing online access to electronic journals and databases in all disciplines to the universities in India. All universities which comes under the purview of UGC will be beneficiary members of the programme. The scheme would be gradually extended to colleges as well. The programme is being executed by Information and Library Network (INFLIBNET) Centre, Ahmedabad, Access to various electronic resources have formally commenced from January 1, 2004, initially for 50 universities and has been extended to 100 universities with effect from January, 2005.

The programme aims at increasing accessibility of electronic resources to the universities. It will go a long way in mitigating the severe shortage of periodicals faced by university libraries for several years. The E-Journals programme is a cornerstone of the UGC-INFONET effort, which aims at addressing the teaching, learning, research, connectivity and governance requirements of the universities. The E-Journals programme demonstrates how communication networks and computers can be used to stretch and leverage available funds in furthering these aims. A bouquet of e-journals were presented to the nation by His Excellency the President of India Dr. A P J Abdul Kalam on 28th December 2003 during the concluding day of UGC's Golden Jubilee Celebrations.

(Detailed information on UGC- INFONET is available in the Sub-section 10.5.3 in this Unit)

Conference and Workshops

INFLIBNET conducts an annual event called Convention on Automation of Libraries in Education and Research Institutions (CALIBER) on different places in India. The topics covered in conference are recent and related to library automation.

INFLIBNET also supports workshops all over India which are related to library automation and digital libraries. Currently, INFLIBNET is supporting a series of workshops on Dspace (Digital library software) in collaboration with Documentation Research and Training Centre, Bangalore.

INFLIBNET is playing a major role in modernisation of university libraries. It is supporting creation for infra-structure by providing financial support besides it is running several courses as well as conducting workshops for training of library professionals.

Self Check Exercise

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

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

1)   Describe role of INFLIBNET in library automation?

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10.3.2 DELNET (Developing Library Network)

DELNET has been sponsored by the National Information System for Science and Technology (NISSAT), Department of Scientific and Industrial Research, Government of India and is currently being promoted by the National Informatics Centre, Department of Information Technology, Ministry of Communications and Information Technology, Government of India and India International Centre, New Delhi. Though it became a registered body in 1992 but was functional since 1988. DELNET was originally established as Delhi Library Network and subsequently the name was changed to Developing Library Network. The Headquarter of DELNET is in New Delhi.

Objectives

DELNET is fully functional with following objectives:

•   "To promote sharing of resources among the libraries by developing a network of libraries, by collecting, storing and disseminating information and by offering computerised services to the users.

•   To undertake scientific research in the area of Information Science and Technology, create new systems in the field, apply the results of research and publish them.

•   To offer technical guidance to the member-libraries on collecting, storing, sharing and disseminating information.

•   To coordinate efforts for suitable collection development and reduce unnecessary duplication wherever possible.

•   To establish /facilitate the establishment of referral and /or research centres, and maintain a central online union catalogue of books, serials and non-book materials of all the participating libraries.

•   To facilitate and promote delivery of documents manually or mechanically.

- To develop specialised bibliographic database of books, serials and non-book materials.

- To develop databases of projects, specialists and institutions.

- To possess and maintain electronic and mechanical equipment for speedy communication of information and delivery of electronic mail.

- To coordinate with other regional, national and international networks and libraries for exchange of information and documents".

Currently, DELNET has about 4667 libraries as its members of which 241 are from Delhi, 4402 from states and union territories outside Delhi and 24 outside India.

Services

a) Inter Library Loan Online

Member libraries can request online for a document using inter-library loan facility of DELNET through DELNET server and the document is couriered to the requesting library. The member library needs to pay an annual subscription for this service.

b) Reference Service

DELNET has a referral centre that provides reference service to participating libraries.

Online Databases

DELNET provides online access to several databases to member libraries and information centres.

- Union Catalogue of Books – It comprises around 7160 lakh records and can be searched by author, title and subject.

- Union List of Current Periodicals – The database covers periodicals in science and technology, social sciences and humanities. It covers 35,990 periodicals

- Union Catalogue of Periodicals enumerates 20,235 periodicals with the holding data of libraries.

- Database of Periodical Articles – It has 9,22,042 records searchable by author, title, subject and name of periodical.

- CD-ROM Database – a database of CD-ROMs available in member libraries has 6,000 records.

- Union List of Video Recordings has 6,000 records.

- Union List of Sound Recordings has 1,025 records.

- Union List of Newspapers The database has 70 records and contains information about the newspapers including title, name of the editor, published from, E-mail address and also the Web address of the INTERNET edition if available on the WWW.

- Database of Theses and Dissertations has 70,293 records.

- Database of e-books has 1613 records.

Training Programmes

DELNET organises monthly training program with NIC on topics like Web page design, Internet search strategies and other resources, etc. It also conducts courses on Machine Readable Cataloguing and bibliographic standards like MARC21.

Conferences, Lectures and Workshops: National Convention on Library and Information Networking (NACLIN) in an annual conference by DELNET which is organised at different parts of country. Besides DELNET regularly organises workshops lectures in different parts of country and abroad.

Newsletter

DELNET publishes newsletter called 'DELNET Newsletter' in communicate the activity of DELNET to professionals.

Research

DELNET has actively played an important role in imparting knowledge of international standards applying them in libraries particularly Marc 21. Recently it has been advocating the open source softwares and teaching their use by conducting training programmes in KOHA and D- Space.

Self Check Exercise

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

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

2)   Describe different services offered by DELNET.

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10.3.3 CALIBNET (Calcutta Library Network)

The CALIBNET was envisaged as a metropolitan network in 1993, linking 38 libraries in Calcutta with financial support from NISSAT. The prime objective was to institute systematic interlibrary co-operation and document delivery among the networked libraries for effective resource sharing. The applications to be supported are electronic mail, file transfer, remote logging to databases and document access. The participating libraries computerised their in-house functions such as cataloguing, serials control, acquisition and fund accounting, circulation and user services. These have been interconnected through X.25 protocol. The Network Services Centre provides global information services for all the users of the participating libraries. The services include current awareness, union catalogues, database, access to national and international networks.

CALIBNET provides libraries and their members an efficient solution for their information needs. The project was supported by NISSAT in 1986 and managed by the CALIBNET Society established under the West Bengal Government's Societies Registration Act 1961. The centre is stationed at Jadavpur University Campus, Kolkata.

Objectives

CALIBNET is established to pursue the problems of eastern region of country, mainly West Bengal. The primary objective of the organisation is creating and facilitating access to available library and information resources in West Bengal. The main objective is supported by other objectives like given below:

- Facilitating remote online access to the holding data of Calcutta libraries and other specialised databases; and

- Providing electronic access to globally available information, imbibing its information centre approach.

Services

a) Software Development

   By intense in-house research and development two software have been developed for supporting library activities.

   i) Sanjukta: This in-house software has been developed for storage and retrieval which is used in Centralised Database of CALIBNET for providing online access from remote locations. The software provides options and flexibility for record generation, organising and searching information.

   ii) Parapar: Parapar has been developed to support interchange of bibliographic data between different bibliographic standards like, USMARC, UNIMARC and CCF. It converts other format data to ISO-2709 format which can be imported into the centralised Database of CALIBNET.

b) Current Content Service: Confile Service: Confile is a current content service. It covers almost 20,000 journals of different disciplines. It economizes library service on journal subscription and reduces the drain on precious foreign exchange resources.

c) Document Delivery Service: Caliborder

   Caliborder is a document delivery service which delivers full text of any article and even patents on demand.

d) Selective Dissemination of Information: ConAlert service is designed to give current and tailored bibliographic information. A user profile is created based on the keywords. Notification about the arrival or availability of the document is sent to the user. On demand document is also delivered at user's desk.

e) Institutional Resources Development Services: CALIBNET supports institutes to build library. It also assists and provides consultancy in library automation and creation of databases and electronic resources. It runs wide range of training programs and customized courses based on institutional needs.

Databases

CALIBNET maintains a centralized database of holding of Kolkata libraries. It also maintains database of Asiatic Society Journals, and current serials acquired by Kolkata Libraries. Through website, CALIBNET also provides links to:

- Overseas Library Resources on India;

- Worldwide Library Catalogues;

- National Libraries of the World.

CALIBNET is an active library network in West Bengal. It is running few of its services through website http://www.calibnet.org.

10.3.4 ADINET (Ahmedabad Library Network)

ADINET was established for developing cooperative mode of working amongst the libraries and information centres in and around Ahmedabad. It was established in 1994 with the help of NISSAT. ADINET promotes sharing of resources and disseminates information among member libraries by networking them. It is stationed in INFIBNET Centre, Ahmedabad.

Objectives

ADINET was established with following objectives:

- "To bring about cooperative mode of working amongst libraries and information centres in and around Ahmedabad;

- To integrate the economic, scientific and technical information systems into an effective network in and around Ahmedabad;

- To facilitate and promote sharing of resources amongst the libraries and information centres in and around Ahmedabad by developing and maintaining a central on-line Union Catalogue containing bibliographic information on books, serials and non-book materials of all the participating libraries;

- To coordinate with other regional, national and international networks, libraries, information and documentation centres for exchange of information and documents;

- To offer technical guidance to member libraries on selecting, storing, sharing and disseminating information;

- To coordinate efforts for suitable collection development and reduce unnecessary duplication whenever possible;

- To develop databases of projects, specialists and institutions in and around Ahmedabad; To create awareness amongst all users' groups and to educate them in the utilisation of information;

- To develop resources and to propagate information in ways appropriate to the needs of users in and around Ahmedabad; and

- To help library and information centre users and also individuals who practice different professions in getting specialised information of their interest".

Services

a) Document Delivery and Inter Library Loan

ADINET acts as referral centre for finding any periodical, book, report, theses and non-book material like audio-video materials, etc. It facilitates inter library loaning among the libraries of Ahmedabad region. Besides, it procures and provides Photocopies of articles from Journals received by the libraries in the region.

b) Current Content for Library and Information Science (CUCOLIS)

ADINET prepares consolidation of content pages of library and information science journals and provides the list to member libraries. On demand full texts of selected articles are also provided under document delivery service. It is based on 5,000 journals received from 19 major publishers.

Databases

ADINET acts as referral centre and maintains a database of all the databases available in different libraries in and around Ahmedabad. It also has a database of 5500 current periodicals received by more than 140 libraries in and around Ahmedabad. It has also prepared a Directory of Libraries in Gujarat having 2,077 entries.

Continuing Education and Skill Enhancement of Library Professionals

ADINET performs several professional activities round the year. It runs course for fresh graduates of library science in Internet surfing and CDS/ISIS. It also maintains a database of available jobs in and around and helps professionals in finding suitable jobs. It is consultant to several institutes for their requirement of suitable staffs. It conducts lectures of imminent scholars and professionals from time to time. Besides, ADINET provides several services on demand like Computerisation of library, Cataloguing, classification of library documents, Labeling and Shelving of books, Stock verification of library documents, Staff training, Planning for library development, etc.

ADINET maintains a website with URL as http://www.alibnet.org.

10.3.5 MYLIBNET (Mysore Library Network)

Mysore Library Network (MYLIBNET) was initiated in 1995 with the support of NISSAT. It is stationed in Central Food Technology Research Institute (CFTRI), Mysore. About 116 colleges/institutions are affiliated to the University of Mysore; of these 34 college libraries are located within Mysore. These were networked in the first phase.

Objectives

The objectives of the network are as follows:

- "To share resources available with all the libraries;

- To provide a faster communication to all the libraries through Electronic Mail facility;

- To develop software tools for better library management;

- To create awareness in the field of latest Information Technology by conducting seminars/workshops/training programmes;

- To setup a Information base in collaboration with industries and

- To flash arrival of new books/journals, announcement of events like seminar/workshop/training programmes".

Services

a) E-Journals

MYLIBNET provides links to several free online e-journals in the field of medicine, physics, mathematics and chemistry.

Union Catalogue of Journals

In order to achieve the objective of 'Resource Sharing' for optimum utilisation of available resources and to avoid as far as possible duplication, a project was initiated in 1990 by Academy of Information Science to conduct a survey and bringing out a hard copy of the "Union Catalogue of S&T Serials in Mysore City Libraries". The project has been completed and a hard copy of the catalogue was published in 1991.

Experts Database

The database contains the list of library professionals and their details. One can search for details of an Expert either by selecting the Name of the Expert or by selecting the Name of the Institute. The database is not very exhaustive and is still being developed.

10.3.6 MALIBNET (Madras Library Network)

MALIBNET was established in 1993 with the support of Indian National Scientific Documentation Centre (INSDOC). Now it is a registered society of Tamil Nadu Government. It provides information to the users in and around Chennai. Nearly 83 libraries in Madras are members contributing actively to the creation of various databases on MALIBNET. It has around 37 educational and research institutions as members.

Objectives

The main objectives of MALIBNET are:

- "To foster growth in the field of information science and technology;

- To undertake scientific research in the field of library and documentation;

- To evolve a network of libraries and information centres in India;

- To establish appropriate links to national and international libraries and networks; and

- To facilitate resource sharing and information dissemination through networks".

Services

MALIBNET provides following services:

a) Content Search Service

   This service allows a search of journal database of MALIBNET having 7747 journals. It can be searched online through journal title, volume, year and issue number options.

b) Document Procurement Service

   MALIBNET provides full text of articles from the journals available in its database. One needs to provide journals, year, volume, and issue along with page numbers. The service is available on payment of Rs. 3 per page for members and Rs. 5 per page for non-members.

c) Internet Services

   MALIBNET provides facility of Internet search for which it charges the users for the time spent on searching. It is preparing Directories of Current

Journals available in Madras City in different areas like Engineering Sciences, Basic Sciences, Medical Sciences and Social Sciences.

MALIBNET maintains a website with URL as http://www.malibnetonline.com

10.3.7 BONET (Bombay Library Network)

Bombay Library Network (BONET) was established in 1994 with financial support from the NISSAT. It has 25 members in the city of Mumbai. Located in the National Centre for Software Technology (NCST, now CDAC) a number of computers and software for shared use to the members. The services offered includes access to bibliographic databases, email, CD-ROM, etc. The BONET conducts seminars and training programmes for member institutions.

The metropolitan areas networks in India were sponsored by the erstwhile NISSAT in 1980s. These are not active today except for DELNET which has been providing active services and has extended its scope from Delhi to developing countries.

10.4 ISSUES RELATED TO LIBRARY AND INFORMATION NETWORKS

The objective of library and information network is for resource sharing among libraries as well as easy access to information. But it requires heavy implementation of Information Technology (IT). Though IT has facilitated the access to information but unfortunately there are many issues needed to be addressed. The libraries require high-speed connectivity to Internet which in turn require specific hardware and software for creation of system. Installation of a system is not the only issue which should be addressed. Libraries should make conscious effort for training the staffs who are involved in delivery of service and the user who are to be served. One of the major outcome of such networks is accessibility of Online Public Access Catalogue (OPAC), which in turn requires adhering to particular standard. Library network must follow one bibliographic standard but selection of a particular standard is a subjective issue which needs to be addressed in very beginning.

India is big country with many different languages and culture. Growth of literature is there in all the language. In such a multilingual environment rendering service in once own language and script is very big challenge. There is a conscious effort at Documentation Research and Training Centre, Bangalore towards rendering multilingual OPAC service for users. A system has been developed which converts records on the fly in different Indian scripts.

10.5 LIBRARY CONSORTIA IN INDIA

As we have stated earlier, consortium is ubiquitous because of digital form of information published across the world through Internet. It refers to cooperation, coordination and collaboration among the libraries for the purpose of sharing information resources. In India, the real drive for cooperation was seen during 1980s due to the developments in Information and Communication Technology. Some of the academic libraries in India have formed consortia. A few of the major consortia in India are given below:

- INDEST

- FORSA

- UGC – INFONET
- CSIR E – CONSORTIA
- HELINET
- IIM CONSORTIA

10.5.1 INDEST (Indian National Digital Library in Engineering Sciences and Technology)

INDEST stands for Indian National Digital Library in Engineering Sciences and Technology. It is a "consortia based subscription to Electronic Resources for Technical Education Systems in India", set up by the Ministry of Human Resource Development based on the recommendations made by the Expert Group appointed by the Ministry under the Chairmanship of Prof.N.Balakrishnan. The headquarter of the consortium is located at Indian Institute of Technology, Delhi.

Objectives

The main objectives of the INDEST consortium are to:

- provide a common gateway of journal literature subscribed by seven IITs and the Indian Institute of Science, to subscribe, access and manage their journals.

- provide common access and search interface for the journals subscribed by all members.

- provide access to the common database for the usage benefit of students and researchers in regional engineering colleges (National Institutes of Technology) and support them in sharing the collection of IITs and IISc.

Features

The common features of INDEST are:

- It provides common access to TOCs (Table of Contents) and full text articles;

- It allows to search common TOCs and database for both print as well as online journals with scholarly content subscribed by all members of consortium;

- It provides links to full text articles, where available;

- It facilitates to search a bibliographic database of articles and links to full text;

- It has provision to mirror the content in the server of each participating consortium member;

- It has also provision to view the list of journals subscribed by each consortium member; and

- It is possible to send E-mail request for the photocopies from one consortium member to the other.

Operation

The Consortium operates through its Headquarter. The Ministry of Human Resource Development (MHRD) has agreed to provide funds required for:

- subscription to electronic resources for IISc, IITs, NITs, RECs and a few other institutions; and

- operation of the consortium.

The consortium headquarter functions under a National Steering Committee, which consists of 21 members, for inter-institutional coordination and for taking decisions on policy issues under the overall policy direction of the Government of India. The Ministry has also set-up a National Review Committee, which comprises 6 members, for the INDEST Consortium. The National Review Committee shall be responsible for overall policy, monitoring and coordination with UGC and AICTE for this Consortium.

Membership

Based on the recommendations of the MHRD Task Force, institutions have been grouped into three categories as detailed below:

- **Category I (Core Members)**.

- The members in this category include IITs , IIScs, Nits, ISM, SLIET, NERIST, IISER, IIMs, IIITs, IIITM and NITIE. Ministry of Human Resource Development provides funds for differential access to e-resources to core members. These are 62 in number.

- **Category II (AICTE supported members)**

    These members are provided funds to access e-resources by AICTE. At present they are 60 in number. It includes government engineering colleges and other technical institutions.

- **Category III (Self- supported institutions)**

    The category includes all other AICTE accredited and UGC recognised engineering institutions. These institutions pay themselves for the e-resources accessed by them. At present around 1233 institutions are registered under this category.

E-Resources

The following are the Electronic Resources available through INDEST for different categories of members as mentioned above. The details of resources, and the category of members who can access the resources are mentioned hereunder (see table 10.1). These can be searched by journal title, words in a title and name of publisher:

Table 10.1: Details of Resources and Member Category

Resources	Member Category who can access the resources
Full Text Sources	
IEL Onlin	All Categories
Science Direct and Ideal*	I
Science Direct (on trial)	II
Springer Verlag$^{*\$}$	I & II
ABI/INFORM	I & III
ACM Digital Library	I & III
ASTP	II & III
India Informer*	III

CRIS INFAC Business Intelligence Service*	III
CERC's Insight*	III
Springer's Link	III
Bibliographic Databases	
COMPENDEX + and INSPEC	I
Web of Science	I
SciFinder Scholar	I
MathSciNet	I
JCCC (J-Gate Custom Content for Consortia)	I, II, and III
J-Gate (Free for the first year	I and II

* Print subscription to be maintained by the beneficiary institutions

\$ Limits on number of downloads

10.5.2 FORSA (Forum for Resource Sharing in Astronomy/ Astrophysics)

In the early 1980s, librarians working in institutes where astronomy and astrophysics was one of the major research areas felt the need to establish a forum among the libraries to enable sharing of resources due to the following reasons:

- Very few institutes in the country were involved in research in astronomy and astrophysics;

- Considerable interaction already existed between astronomers of institutes doing research in astronomy and astrophysics;

- No library can be self-sufficient in the resources, and access to the holdings of the member libraries would help in minimising duplication; and

- The information resources should be used to the mutual advantage of the members as well as for optimum use.

Based on the proposed plans made by the members of Forum, the first meeting of the Forum for Resource Sharing in Astronomy/Astrophysics (FORSA) held on July 29, 1981, at Raman Research Institute, Bangalore. Emphasis was placed on obtaining detailed information related to literature in Astronomy and Astrophysics for speedier dissemination of information.

Objectives

The objectives of FORSA are:

- Collection development in IT environment;

- Facilitate e-access to journals and books;

- Actively participate in resource sharing, ILL;

- Document delivery by fax, e-mail, speed post, courier, etc;

- Database merging by library holdings (books/ journals) and facilitate access to merged database;

- Digitisation of archival materials of the institutes and making available on website for access by all;

- To facilitate access to website of each institute's library;

- Participate actively in consortia plans for sharing e-journals, e-books and other databases with various publishers and academic societies publications and joining existing consortia where forum members are benefited;

- To come forward for open access and to develop institutional repositories; and to welcome new members of institutes where astronomy is one of the subjects and library has collection pertaining to the subject".

Members

FORSA has 12 members. The member libraries are:

- Aryabhatta Research Institute of Observational Sciences (ARIES) , Manora Peak, Nainital

- Bose Institute, Kolkata.

- Harish- Chandra Institute, Allahabad.

- Indian Institute of Astrophysics (IIA), Bangalore.

- Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune.

- National Centre for Radio Astrophysics (NCRA), Pune.

- Nizamiah Observatory, Department of Astronomy, Osmania University, Hyderabad.

- Physical Research Laboratory (PRL), Ahmedabad.

- Raman Research Institute (RRI), Bangalore.

- S.N.Bose National Centre for Basic Sciences, Kolkata.

- Saha Institute of Nuclear Physics, Kolkata.

- Tata Institute of Fundamental Research (TIFR), Mumbai.

Services

All the participating libraries are well equipped with recourses and share them for mutual benefit. They provide the following services:

- Access to OPAC

- Access to online journals

- Inter library loan

- Document Delivery (by e-mail, speed post, courier and fax)

Workshops and Conferences

FORSA organises workshops and conferences on emerging areas. Some such programmes were organised on KOHA and DSpace. A meeting is done every year along with the Annual Meeting of the Astronomical Society of India.

10.5.3 UGC – INFONET

University Grants Commission (UGC) is a national body for the coordination, determination, and maintenance of the standards of University Education in India.

It initiated a programme called the UGC-Infonet E-Journals Consortium to provide online access to electronic journals and databases in all disciplines to the universities in India. The programme aimed at increasing accessibility of electronic resources to the universities. INFLIBNET is the coordinating and monitoring agency in the UGC - Infonet Project. INFLIBNET is also responsible for providing training to university library professionals in the use of this network for providing variety of services to the users. The project aimed to provide e-resources and state-of-the-art technology for providing access to these resources. The part responsible for providing connectivity for the e-resources has been closed with effect from 31st March 2012.

Subscription to Electronic Journals

With globalisation of education and competitive research, demand for journals has increased over the years. Due to lack of funds and increase in the prices of journals, libraries have been forced to cut subscriptions of journals. Infonet provides access to more than 7500 core and peer-reviewed and peer-reviewed journals and 10 bibliographic databases from 26 publishers and aggregators in different disciplines. So far 209 universities including 14 National Law Schools and central universities along with private universities who are associate mebers have been provided differential access to e-journals.

UGC-Infonet Training

Training manpower is one of the most critical resources for successful implementation of high-tech programmes like UGC-Infonet. INFLIBNET/ERNET is giving training to network managers and library professionals for managing the WAN connectivity, network security, Mail Server, Web Server configuration and e-journal access management at their premises. More than 108 network managers from around 99 universities have been trained at ERNET India, New Delhi. Around 63 Library professionals from more than 63 universities have been trained at ERNET India, New Delhi. Above 63 Library professionals from 63 universities have been trained for e-resources management at INFLIBNET Centre, Ahmedabad.

10.5.4 National Knowledge Resource Centre (NKRC)

CSIR E – Journals Consortium has been re-named as NKRC due to the change in its scope. Earlier it served the laboratories of Council of Scientific and Industrial Research (CSIR) but now it serves 24 Department of Science and Technology institutions and 39 CSIR laboratories. It provides access to more than 5,000 e-journals, patents, standards, citations and bibliographic databases. It also provides access to large number of open access resources in science and technology.

The Council of Scientific and Industrial Research (CSIR) which has thirty eight constituent laboratories together subscribes to over 4,000 scholarly and research journals at a cost about Rs. 25 crores every year. The collection of print editions creates an annual depository of 5,00,000 plus printed articles spread across the labs in stand-alone manner. In order to enhance the accessibility, use and increase the resource base of world S&T literature, the fifth meeting of the Heads of CSIR Laboratories and Information Centres held at RRL in Trivendrum in February 2001, had recommended that a Consortium for access to E-journals be set up. Consequently, Director General, CSIR set up a Study Group to collect and compile information on the journals presently subscribed to by the CSIR

laboratories, including CSIR Headquarter and also to study the feasibility and economic viability of CSIR laboratories subscribing to identified journals on-line on a consortium basis and devise a system for the management of the consortium and equitable sharing of the expenditure thereof. The Study Group submitted its report in October 2001 with the following recommendations:

- The CSIR must set up a Consortium to provide electronic/online access to journals for the CSIR laboratories.

- No major additional requirements of manpower or hardware are foreseen.

- Informational resources are a basic necessity for an R&D organisation.

- CSIR is a premier R&D organisation and presently invests around Rs.25 crore annually for books and journals, some of which are being subscribed in duplicates/triplicates by the labs of CSIR.

- Individual labs of CSIR spend between Rs.10 and Rs.150 lakhs per annum on information resource building.

- Many publishers now are offering their products in electronic formats. They encourage the formation of consortia and accordingly offer consortia friendly pricing strategies.

- Information technology has enabled users to access online many of the research journals. Publishers of the journals offer concessional rates of their e-format journals subject to maintain status-quo of print subscription.

Based on the recommendations made by study group, the CSIR accepted the recommendations and decided to set up a consortium, 'CSIR E – Journals Consortium' for electronic access to journals.

Objectives

The main objectives of the CSIR E – Journals Consortium are:

- To provide CSIR S&T staff electronic access to world S&T literature to strengthen the facilities for pooling, sharing and electronically accessing the CSIR information resources;

- To provide access to world S&T literature to CSIR labs; and

- To nucleate the culture of electronic access with a view to catalyse the evolution of digital libraries.

Activities of Consortium

The following are the broad activities envisaged to be involved in carrying out the project:

- Identification of vendors

- Invitation of proposals

- Negotiation

- Signing of agreement

- Enabling access

- Training

- Payment to vendors

- Monitoring

- Usage statistics

- Analysis

- Reports

Roles and Responsibilities of NISCAIR

National Institute of Science Communication and Information Resources (NISCAIR formerly INSDOC), New Delhi is the nodal organisation of the Consortium. As nodal agency of the consortium, it performs the following roles and responsibilities:

- to collect the link-up fee from CSIR and release payment as per the contract terms and conditions to vendor(s);

- to make certification of bills;

- to receive and keep secret the passwords that are supplied by the publishers to the laboratories as well as NISCAIR;

- to co-ordinate training to staff of participating labs for E-journals access;

- to monitor the analysis of usage data and appropriate reports generation and use the report for strategic planning;

- to undertake various studies related to E-journals for planning, monitoring, etc.;

- to monitor complaints and access problems of the laboratories; and

- to maintain smooth functioning of the Consortium.

Resources available through Consortium

As a first step, CSIR entered into an agreement with Elsevier Science which is one of the leading publishers of S&T journals, to enable all its laboratories access to 1,200 odd electronic/online journals. Afterwards it started subscribing to e-journals from many publishers. At present, all 38 CSIR laboratories have access to 3500 e-journals of different publishers. In addition, the labs have access to about 1500 e-journals from Directory of Open Access Journals (DOAJ) which are free for every one. Thus, the consortium provides an opportunity for CSIR labs to have access to 5000 international reputed e-journals.

10.5.5 IIM Consortium

The Indian Institutes of Management are premier national business management education institutions set up by the Government of India. They are independent societies governed by independent Board of Governors. The major objective of the institutions is to train young graduates to become professional managers. The IIMs are available at 6 places – Ahmedabad, Bangalore, Calcutta, Indore, Kozhikode, and Lucknow.

The concept of IIM Library Consortium was floated a few years back. Since the year 2000, the Librarians of all the IIMs had been interacting extensively on the possible resource sharing of the CD-ROM/Digital Databases being regularly subscribed to by them.

A pilot study was conducted in this regard on the CD-ROM/Digital Databases being currently subscribed to by the various IIMs and it was found that:

- ABI/Inform (Abstracts), ABI/Inform (Full-Text - Business Periodicals Ondisk - BPO) are being subscribed to by IIMA, IIMB, and IIMC respectively,

- Business Source Elite (BSE), the Full-Text journal service of EBSCO, is being subscribed to by IIMA, IIMI, and IIMK, and

- Econlit (Silver Platter) is received at IIMA and IIMK, and Econlit (Ovid) at IIMI.

The Librarians of IIMs discussed and deliberated in one of their meetings and resolved that:

- while doing this exercise, the information resources of any of the Institute(s) should not be affected in any manner, and shall ensure quality improvement and revenue saving to each Institute.

- it is high time for all IIMs to jointly approach publishers for journals and databases of common interest for better services and prices.

- they may approach publishers of CD-ROM Databases to begin with, as Consortia, for better pricing and services.

- eventually, other digital databases and journals shall also be covered by the Consortia programme.

- the proposal of IIM Library Consortium seeks the authorisation and guidance of the Heads of all the IIMs, to proceed further.

Based on the above, four of IIMs placed orders for databases such as BSE and Econlit and the rest two IIMs placed orders for ABI/Inform. Subsequently, the Directors of all IIMs in one of their meetings held in August 2001 approved the formation of IIM Library Consortium and encouraged the librarians to actively participate for mutual benefit.

Objectives

The objectives of the IIM Consortia are to:

- ensure among the IIMs, optimum utilisation and enhancement of the resources;

- minimise the expenditure by consortia based subscriptions to the commonly subscribed databases and journals;

- approach publishers of CD-ROM databases to begin with as a consortia for better pricing and services; and

- cover other digital databases and journals by the programme.

E-Resources

In the case of journals, all the six IIMs put together subscribes to over 2550 scholarly titles of which around 1200 are duplications (overlapping titles). Among these, 33 titles are being subscribed to by all the IIMs. Having convinced on the dire need for journals consortia, major publishers such as Elsevier, Kluwer, Wiley, Blackwell and MCB University Press were approached and they all represented in the second meet which was held at IIM Bangalore in 2001. The end result has been highly praiseworthy, that over 740 E-journals IIMs are able to get online access, across all the IIMs, by paying a nominal additional amount.

The present information resource base of the IIM Consortium is as follows:

- Blackwell Hss Collection

- Capitaline

- Nexis.com+Corporate Information

- ISI Emerging Markets

- Kluwer Online

- Talyor & Francis

- John Wiley.

10.5.6 HELINET (Health Sciences Library and Information Network)

The Rajiv Gandhi University of Health Sciences (RGUHS) launched HELINET (Health Sciences Library and Information Network) Consortium, on the 15th of March 2003.

The importance and the role of quality medical journals in medical education are known. Moreover, in a survey conducted in early 2002, the colleges of RGUHS were spending enormous amount of money to get only about 150 journals each, and even among these 150, many were duplicates. This spurred the need for reducing the cost while making the core medical journals more affordable and easily accessible.

Objectives

The main objectives of the consortium are to:

- "network the libraries in the colleges affiliated to the University to promote resource sharing;

- move these libraries gradually to digital main-stream; and

- bring all the libraries under HELINET for minimising the cost of acquisition and maintenance of learning resources and maximising their utilisation, among the faculty, students and researchers the colleges and institutions affiliated to the University".

E-Resources

Under the HELINET scheme, the member libraries can get access to around 600 scholarly, international biomedical journals, from 24 leading publishers, at about one-third the price of their print subscription. Moreover, the member libraries can get all time access to the current journals as well as archives i.e. the back-volumes of journals for a period of 7-10 years.

The University has already spent Rs. 2 crores for establishing the consortium on a cooperative e-access model. For this purpose, the university has set up digital library infrastructure for managing and providing access to e-content. Participating institutes can get access to full-text of e-resources through 11 gateways,

Science Direct;

Ovid;

MD Consult;

Annual Reviews;

Springer;

Theme Verlag;

Taylor and Francis;

Blackwell;

Bentham;

Ebrary; and

Oxford University Press.

Membership

- There are members from colleges of medicine, dentistry, pharmacy, nursing, physiotherapy, ayurveda/ unani/ homeopathy and other paramedics. A differential fee is charged from the categories, highest from the users in medicine and lowest from other paramedics.

Self Check Exercise

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

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

3) Discuss the salient features of UGC - Infonet.

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10.5.7 SPACENET

Spacenet is a communication network of Indain Space Research Organisation (ISRO) using Very Small Aperture Terminal (VSAT) network. The hub is located at the ISTARAC, Bengaluru and remote stations at 44 centres/divisions of ISRO at different places in India. It is a Closed User Group (CUG) network facilitating transmitting and sharing of data, information and other resources between the members.

ISRO libraries exchange various resources including print, electronic. The libraries provide access to their resources by having their OPACs on the intranet. E-journals and e-books are also shared amongst the participating libraries. The divisions generate lot of information internally in the form of reports, pre-prints, re-prints, conference proceedings, lectures, etc which are shared amongst them. Effective document delivery services enable sharing and transfer of information amongst them.

10.5.8 CeRA (Consortium for e-Resources in Agriculture)

Consortium for e-Resources in Agriculture (CeRA) was formed in November 2007 at the Indian Agriculture Research Institute (IARI), Pusa, New Delhi. It was funded by the National Agricultural Innovation Project (NAIP). It was set up to provide access to information in agriculture particularly the e-resources to researchers, teachers and scientists, students, extension workers, policy planners and administrators in the National Agricultural System(NARS).

Objectives

The objectives of CeRA are:

4) "To upscale the existing R&D information resource base of ICAR institutions/ universities comparable to world's leading institutions/organisations.

5) To subscribe e-journals and create e-access culture among scientists/ teachers in ICAR institutes/ Agricultural Universities.

6) To assess the impact of CerRA on the level of research publications measured through NAAS Id and Science Citation Index".

Membership

The members of CeRA comprise the ICAR institutes and state agriculture universities. At present the membership is 147.

Services

a) Online Access

    Members in CeRA are provided IP authenticated online access to full text articles in more than 2900 journals in agricultural sciences. These comprise those subscribed by the consortium, by the participating libraries and the open access journals.

b) Document Delivery

    Members are provided access to full text of journal articles not subscribed by CeRA but subscribed by individual libraries through the Document Delivery Request System.

Training

Training programmes are held regularly for members in different institutions under NARS to enable use of the resources and services in CeRA. Around 40 such programmes have been held in the last four years benefiting more than 3500 members. They are also helped in their day today use of services through online help and chat with experts in the consortium.

10.5.9 ICMR e-Consortia

ICMR has two types of consortia, JCC@ICMR which covers all subscribed journals of ICMR and free journals also. The other, ICMR e-Consortia provides full text access to the journals subscribed by ICMR.

JCCC@ICMR

J-Gate C custom Content for ICMR provides a single point access to all subscribed and free open access journals in medicine. It provides a platform to access the

journals, search articles of interest, locate the library possessing it and put a request for acquisition. It acts as a common gateway and search interface to the journals. JCCC provides access to the table of contents, abstracts, full-texts and facilities to access.

ICMR e-Consortia

It provides access to the subscribed journals to the users in different ICMR institutes through IP authentication. The consortia organises training programmes for users to enable effective use.

10.6 LIBRARY NETWORKS: INTERNATIONAL

10.6.1 OCLC (Online Computer Library Centre)

The Online Computer Library Center, Inc. (OCLC), a non-profit corporation, is a membership-based, service and research organisation dedicated to the purpose of furthering access to the world's information at reduced cost. The OCLC members are institutions, primarily libraries, which use OCLC products and services to locate, acquire, catalogue, lend and preserve books and other library materials. Researchers, students, faculty, scholars, professional librarians, and other information seekers use OCLC systems through libraries to obtain bibliographic, abstract, citation, and full-text information. The OCLC cataloguing and resource sharing system is the largest and most heavily used computer library system in the world. The OCLC FirstSearch service ranks among the leaders in the online information industry in terms of connect hours. The OCLC bibliographic database, WorldCat (the OCLC Online Union Catalogue), is one of the most consulted electronic databases in higher education.

The OCLC and its member libraries cooperatively produce and maintain WorldCat, the Online Union Catalogue of Books available in the libraries of member institutions. Members of the OCLC can also get access to a wide range of services and databases, including WorldCat. The OCLC is the world's largest library network.

History of OCLC

In 1967, the presidents of the colleges and universities in the state of Ohio founded the Ohio College Library Center (OCLC) to develop a computerised system in which the libraries of Ohio academic institutions could share resources and reduce costs. Mr. Frederick G. Kilgour was the first President of OCLC, responsible for the growth of OCLC from a regional library computer system for 54 Ohio colleges into an international network. The objective of the OCLC as stated in its Articles of Incorporation is to "establish, maintain and operate a computerized library network and to promote the evolution of library use, of libraries themselves, and of librarianship, and to provide processes and products for the benefit of library users and libraries...."

In 1977, the OCLC changed its policy that enabled libraries outside Ohio to become members and participate in its governance. The Ohio College Library Center became OCLC, Inc. in 1981, the legal name of the corporation became Online Computer Library Center, Inc.

Membership

More than 25,900 libraries in 170 countries and territories around the world are members of OCLC.

Services

The OCLC offers several products and services; a few of them are described below:

WorldCat

WorldCat is a worldwide union catalogue created and maintained collectively by more than 72,000 libraries representing hundreds of languages and cultures. Built from the bibliographic and ownership information of contributing libraries, it is the largest and most comprehensive database of its kind. WorldCat is the foundation of many OCLC services that facilitates libraries to process, manage and share information resources.

The WorldCat includes catalogue records dating back to thousands of years nearly in every format. Records exist for everything from stone tablets to electronic books, wax recordings to MP3s, DVDs and Web sites. Whether an item is physical or digitally preserved, popular or one-of-a-kind, the integrity of its record is maintained by the input of cataloguing members, OCLC's standards and quality control. World Cat holds 302 million bibliographic records for 2 billion items in 470 languages and dialects. Every 10 seconds a new record is added to the catalogue, and it is searched every second.

NetLibrary

The OCLC's NetLibrary platform provided access to electronic books from a wide range of publishers forming monographs and reference resources on hundreds of subject areas that could be accessed through an intuitive, easy-to-use interface that offered a single point of access. Users could find the latest titles, reference sources, business and economics resources, best-selling fiction, and more. It has been acquired by EBSCO in June 2010.

OCLC's Electronic Collections Online

OCLC's Electronic Collections Online is a powerful electronic journals service that offers web-based access to a growing collection of more than 5,000 titles in a wide range of subject areas from over 70 publishers. It provides access to 4.2 million records from 1995 onwards. It also provides a robust archiving solution and searching across journals. OCLC has secured archival rights to journal content, subscription to e-journals through the OCLC thus it ensures perpetual access to the journals subscribed through OCLC for the paid period of subscription.

OCLC Database Service: FirstSearch

The FirstSearch (FS) is an online service that provides web access to research databases consisting primarily of journal. The service provides seamless electronic access to more than eighty databases containing 258 million full-text and full-image articles via World Cat in most subject fields. Libraries have an option to select databases based on their needs. Some of the more important databases included in FirstSearch are:

- Article First
- Clase and Periódica
- Electronic Books
- Electronic Collections Online
- ERIC
- GPO Monthly Catalog
- MEDLINE
- OAIster
- PapersFirst
- ProceedingsFirst
- SCIPIO
- WorldCat (The OCLC Online Union Catalog)
- WorldCat Dissertations and Theses (WorldCatDissertations).

The size and period covered in FirstSearch varies between the individual databases but many include data going back as far 1980. The FirstSearch facilitates search across multiple databases through its simple menu-driven search interface. Full-image articles from Electronic Collections Online journals are linked to corresponding citations in databases throughout the FirstSearch service. Subscribers to FirstSearch may also place their orders online for articles that are not accessible to them.

EZ Proxy Authentication and Access Software

It is the world's leading access and authentication solution. EZproxy helps provide users with remote access to Web-based licensed content offered by libraries, and is easy to set up and maintain. More than 2,500 institutions in over 60 countries have purchased EZproxy software. EZproxy is now also available as a hosted solution, giving libraries the option to outsource the set-up and ongoing management of their proxy configuration.

Question Point: Cooperative Virtual Reference Service

QuestionPoint is a unique virtual reference service, supported by global network of cooperating libraries worldwide, as well as an infrastructure of software tools and communications. QuestionPoint is also a source of unique centralized knowledge resources built by a collaborative network of member libraries.

Benefits

24/7 Cooperative benefits and features

- **Meet users at their point of need**—provide reference service around the clock with trustworthy, real-time one-on-one reference assistance from professional librarians, right from you library Web page or other Web portal.

- **Expand your reference desk hours without increasing staff**. For a modest weekly contribution of staffing to the Cooperative, you can provide failsafe coverage 24 hours a day, 7 days a week, to your customers.

- **Belong to several groups simultaneously**, such as a local consortium and a subject-specific group. Any number of librarians may monitor the service at any time. Within the Cooperative, this means that an individual customer's library is more likely to be monitoring.

- **Q&A knowledge base** that is carefully reviewed and maintained by Cooperative contributors.

- **Automatic subject referral through the Global Reference Network** routes your submitted question or chat session to a partner library based on criteria such as subject, language or hours of coverage.

- **Pricing based on population**—more locations mean a lower cost for each participating library.

Reference Management benefits and features

- **Web-based** chat, cobrowse and cooperative reference tools use best-in-class technology and require no special software or browser plug-ins. A librarian does not need to use Windows Operating System to do simple chat and page push (for highest-level co-browsing, Internet Explorer browser is required). A streamlined conference process allows librarians to transfer to another librarian smoothly. There is also support for multilingual reference transactions.

- **Unique Customisable Messages.** Instead of just one list of scripted chat messages for an entire group of libraries, each library can add their own individual scripted messages, which appear when one of their customers comes into the queue.

- **Expanded Patron Link Views.** This feature allows patrons, while still in session, to click on previous links sent to them by the librarian.

- **Administrative Monitoring.** Administrators can join any of their librarian's chat sessions, to send private notes or suggestions unseen by patrons, or to communicate directly with the patron. In addition, librarians can add notes during (or after) a session which are visible only to other librarians. These librarian notes assist in question follow up as well as in quality control and other administrative functions.

- **Customisable Surveys and Reporting Tools.** Each library can customise its own unique survey for patrons and make it available after the chat session, after a follow up is complete, or after an answer is sent in response to a student email. Surveys help libraries measure user satisfaction levels and make service improvements. Librarians have the flexibility to characterise sessions and retrieve statistical information through descriptive categories such as research, business, instruction, etc. to help them identify trends and perform usage analysis.

- **Flexible, institution-based pricing** model, instead of per-seat; even greater savings are possible if you work cooperatively within a group of libraries.

- **Fully accessible user interface** that supports users with accessibility needs, including those who use screen readers.

- **User customisation of interface** color scheme and font size and an optional chime for new messages.

- **Customisable management reports**.

- **Reach out to users from every Web page** with "Qwidget," QuestionPoint's chat widget. Qwidget combines the simplicity of a chat widget (on the user side) with the full features of QuestionPoint's reference management system. Embed the link to Qwidget anywhere on the library Web site, in social networking spaces—anywhere you want to reach out to your users.

Implementation Services

We ensure your virtual reference service is well designed and executed delivering expected benefits to both library staff and patrons. We customise our services to fit any size library or group-from a small public library to a group of large academic libraries.

From the very beginning, we work closely with your staff and guide them through each step of the implementation process. We understand your staff is hard at work assisting patrons. We help to save their time, and leverage their knowledge of your library.

As part of the Implementation Services package you receive:

- A dedicated Implementation Manager, who is your single point of contact throughout the project. The Manager partners with you to set milestones, define key tasks, design workflows and educate library staff.

- One virtual or self-paced training program configured for your staff and their needs. There is also the option to receive further training, including live instruction, for an additional fee.

- First-line technical support during and after the implementation to help resolve any technical issues or questions that arise as you use the QuestionPoint service and participate in the 24/7 Reference Cooperative.

Benefit from step-by step support

Our implementation managers have superior understanding of the QuestionPoint solution plus an outstanding knowledge of reference services and libraries. They know the key steps and activities to effectively implement your library's virtual reference service.

Your Implementation Manager works with you to:

- Develop your library's goals, objectives and implementation schedule

- Create a work plan consisting of key activities

- Develop customised, virtual reference workflows

- Identify resources that will help library staff to be proactive in using the services

- Build an effective marketing and communication plan for your library's virtual reference service

Receive a customised implementation program tailored to your library's objectives. Quickly launch your virtual reference service and begin meeting patrons at their point of need anytime, anywhere.

Other Services

The OCLC's digitisation, microfilm and archival services are designed to protect and share collections for their members. The OCLC has infrastructure and skilled staff at their preservation centres. The OCLC's collection development services can assess the strengths and gaps of collection available in the libraries if a member institution using their analysis tools.

10.6.2 RLG (Research Libraries Group)

The Research Libraries Group (RLG), a not-for-profit organisation consisting of over 150 research libraries, archives, museums, and other cultural memory institutions was founded in 1974 by the New York Public Library, Columbia University, Harvard University and Yale University. The reason for the formation of yet another consortium in US when OCLC already existed, was the dissatisfaction of research libraries with OCLC record keeping. The RLG was founded to provide solutions to the challenges presented by information access and management of digital resources. It served researchers by providing access to research materials held in libraries, archives, and museums. It designed and delivered innovative information discovery services, organised collaborative programs, and takes an active role in creating and promoting relevant standards and practices.

After three decades of its serving libraries, RLG merged with OCLC in 2006. After its merger, its catalogue merged with OCLC WORLD Cat and its databases merged with OCLC First Search service. RLG merged with OCLC to be known as RLG Programs as part of OCLC Programs and Research Division. The latter was renamed as OCLC research in 2009 and the former as RLG Partnership. RLG Partnership was renamed as OCLC Research Library Partnership in 2011. The changes depict the steady adoption and integration of RLG into OCLC.

Activities

OCLC Research Library Partnerships provides the following services to find solutions to the problems faced by research libraries and archives:

- Shared Network Resources – The research library collections in print are available for sharing amongst the members.

- Sharing Special Collections – It is a document delivery service in which rare and unique materials are delivered to users. It helps to economise on resources.

- COBOAT – It is a metadata publishing tool developed by RLP to transfer information between databases and different formats.

- SHARES Programme – It is a interlibrary loan programme that strives to introduce innovative methods for sharing of collections.

- Demistifying Born Digital – The programme focuses on enhancing the effective management of born-digital documents.

- Sharing and Aggregating Social Metadata – This is a programme wherein efforts are made in identifying user contribution to enhance descriptive metadata created by libraries.

10.6.3 Jisc

Jisc, leads the further and higher education community in the use of ICT for learning, teaching, research and administration. It is advisory in nature and is funded by all further and higher education councils. It has the following sub-committees to facilitate work:

- JISC Organisational Support Committee
- JISC Content Services Committee
- JISC Integrated Information Environment Committee
- JISC Learning and Teaching Committee
- JISC Network Committee
- JISC Support of Research Committee

It works with the following aims to fulfill the needs of the education and research communities:

- "develop solutions that help enable the UK education and research communities to keep their activities world class through the innovative use of Information and Communications Technology.

- provide advice to institutions to enable them to make economic, efficient and legally compliant use of Information and Communications Technology, respecting the individual's and corporate rights and responsibilities.

- help the sector provide positive, personalised user learning experiences and to aid student progression.

- develop mutually advantageous partnerships with organisations in the UK and abroad.

- advise, inform and help implement the strategies of government, funding councils and research councils".

Services

Online resources

Jisc provides electronic collections to the education and research community in the UK at subsidised rates. It acquires resources for members in consortium mode ensuring economy and quality. The economy has been estimated to the tune of £75 million to the members.

The aims of the online resources division are to:

- "Provide leadership for national negotiations designed to lower the cost of access to electronic information resources;

- Facilitate debate and, where appropriate, action to help implement possible long-term solutions to the rising costs of scholarly communication;

- Develop and advance strategy for cost-effective content acquisition and the delivery of electronic information resources which takes account of the dynamic nature of the information market place and the changing needs of the community;

- Assist the community in achieving and demonstrating value for money;

- Commission research to assist the community in the effective exploitation of electronic information resources to support research and teaching;

- Work in collaboration with JISC to support the enhancement of innovative resource discovery and library collection management services;

- Communicate to all stakeholders to foster a mutual understanding of the issues around electronic information resources;

- Ensure the best possible licensing terms and conditions and preservation arrangements for the library community".

Union Catalogue

Access to research materials in major libraries of UK and Ireland is provided through the union catalogue, Copac that includes bibliographic records of more than 70 libraries. These include the national libraries, university libraries and research libraries. Copac also provides details of the collections of British Library. The catalogue is frequently updated on the basis of user feedback.

SUNCAT

SUNCAT is the union catalogue of serials held in libraries all over UK. It provides information on print and electronic journals, newsletters, magazines, newspapers and annual reports from 91 libraries in UK. It is developed and maintained by University of Edinburgh and designated as an EDINA service (EDINA is a Jisc designated national data centre at the University of Edinburgh).

Jisc Journal Archives

Journal archives is very important in view of the fast changing information world. Access to current journal articles is easier than the old articles. Jisc Journal Archives provides access selectivel y to over 4 million journal articles.

Zetoc is one of the world's most comprehensive research databases, providing access to over 28,000 journals, 45 million article citations and conference papers through the British Library's electronic table of contents providing free access to HE and FE.

Jorum

Jorum, is a free online repository of learning and teaching materials. It is intended to integrate it with repositories being developed by other institutions and in different subjects. It is designed in a modified version of DSpace.

Training

Jisc offers different types of activities to enhance the competencies of LIS professionals. It has specially worked for development in areas like digital literacy and e-learning. Programmes have been organised regularly for professionals to update these skills which are essential today.

10.6.4 JANET (Joint Academic Network)

JANET is dedicated to the needs of the UK education and research community. It connects education and research organisations in UK to each other, as well as to the rest of the world through the Internet. In addition, JANET includes a separate network that is available to the community for experimental activities

in network development. The JANET connects all universities in UK, FE
Colleges, Research Councils, Specialist Colleges and Adult and Community
Learning providers. It also provides connections between the Regional Broadband
Consortia. The JANET network currently serves over 16 million end-users.

JANET allows videoconferencing and video streaming capabilities to be used to
deliver lectures to remote groups of students. For researchers, the high capacity
of the JANET backbone allows the linking of large data storage and high
performance computing facilities at a national and international level.

Role of UKREN

UKERNA (United Kingdom Education and Research Networking Association)
manages the operation and development of JANET on behalf of JISC (Joint
Information Systems Committee) for the UK Further and Higher Education
Funding Councils. JISC also works in partnership with the Research Councils.
UKERNA is funded by the UK government, with the primary aim of providing
and developing a network infrastructure that meets the needs of the education
and research communities. The JANET consists of a backbone, known as
SuperJANET which, in turn, is linked to Regional Networks. Education and
research institutions are connected to the JANET backbone through Regional
Networks.

JANET Services

The JANET offers a wide range of network, support and information services to
help educational institutions to maximise their benefits from JANET. Major
services offered by the JANET includes:

JANET Customer Service (JCS): JCS (JANET Customer Service) is the primary
point of contact for enquiries concerning JANET. The JCS is in contact with
technical experts and service managers both within UKERNA and throughout
the education community, and is, therefore, able to provide relevant assistance at
any level. The JCS responds to a large volume of customer queries and facilitates
provision of new and upgraded connections to JANET. It also assists in the
registration of domain names and applications for IP addresses.

Mail Services: A range of mail services is available, including an electronic
mailing list service, a Mailer Shield service, a SPAM-relay Tester System and
the Mail Abuse Prevention System. A Web Mail Service is also offered to a
limited number of organisations, which do not have the resources to support an
e-mail service themselves.

Networking Support Services : Networking Support Services include a co-location
service for hosting equipment within the JANET backbone, a Network Time
Service offering organisations a stable time reference and a Managed Router
Service for those needing expertise in managing their network router.

Usenet News Services : Subscribing organisations with their own news servers
can accept a news feed sent from central JANET servers. Organisations without
their own news server can let their users read news directly from a JANET server.

*Videoconferencing Services :*Videoconferencing over IP networks and ISDN
(Integrated Services Digital Network) are provided. A Booking Service lets

registered users book a videoconference online. The Video Technology Advisory Service evaluates products, develops documentation and offers an on-site consultancy service.

Web Services : A pilot Web Filtering Service is available to provide protection against access to inappropriate content on the Internet and to allow the maintenance of lists of blocked or permitted URLs. Two other pilot services – Web Hosting and Web Mail – are available to small organisations only, such as specialist colleges or adult and community learning centres.

Training : The Training Section was set up initially to provide for the needs of technical staff at sites new to JANET. It has been extended to include education and training for staff charged with the management of networking and networking services at JANET sites with Primary Connections.

Workshops and Conferences : UKERNA ensures that the JANET community is kept up-to-date with networking developments by organising workshops and conferences to cover either general networking issues or more specific topics. The annual events cover a number of different networking issues, from strategy to technical support. UKERNA also organises events in conjunction with other organisations.

Other services include Advisory Services, Domain Name Services, Information Dissemination services etc. JANET web site provides further details.

10.6.5 CALIS (China Academic Library and Information System)

The China Academic Library and Information System (CALIS), launched in 1998, is a nation-wide resource-sharing system among Chinese academic libraries. Its mission is to serve directly those universities, which are funded by the central government, by providing document and information services to the users through the China Education and Research Network. The CALIS also serves users in other universities and colleges so long as they have network connections to the China Education & Research Network (CERNET). The CALIS is just like a nation-wide academic library consortium in China, half supported by the government, half by the libraries themselves. At present, it provides service to 1251 academic libraries and 792 journal content users in China.

Aims and Objectives

CALIS aims to build a national information infrastructure along with CERNET. The priority of CALIS is to reveal what already exists in academic libraries in China and to increase its utilisation. Two main tasks of CALIS are i) to build an information service network that contains hardware and software; and ii) to introduce and produce various databases.

Governance and Organisation

A top-level committee that consists of officers from related departments of the Ministry of Education and two university presidents from Beida and Tsinghua governs CALIS. An expert team acts as consultants to the committee. CALIS Administrative Centre located at Beijing University coordinate and execute various activities of the network under the leadership of the committee.

CALIS is organised into four national information centres, i.e., Science, Social Science and Humanities Information Centre, Engineering and Technology Information Centre, Medical Information Centre and Agricultural Information Centre. These Centres provides information support to users. Seven regional information centres divided as East China South Regional Center, East China North Regional Center, South China Regional Center, Central China Regional Center, Southwest China Regional Center, Northwest China Regional Center, and Northeast China Regional Center, which provides secondary support for the information users.

Current Status of CALIS

CALIS has established a three-level resource and service infrastructure. Cooperative activities are undertaken in various cities and regions. Currently, CALIS has undertaken six major activities drafted in its plan. These activities include: Coordinative Acquisition, Online Cataloguing, OPAC, ILL, Document Delivery and Internet Navigating.

A number of bibliographic databases and full-text databases are being subscribed / acquired either as central-funded acquisition or consortium acquisition, covering almost all the disciplines and subjects. Some major bibliographic databases and full-text resources include:

- Science Citation Index (SCI)
- Social Science Citation Index (SSCI)
- Engineering Information (EI)
- Biological Abstracts (BA)
- Chemical Abstracts (CA)
- Cambridge Scientific Abstracts (CSA)
- ABI/Global
- ProQuest Academic Research Library
- Science Online
- Elsevier ScienceDirect Onsite
- Academic Press
- IEEE/IEE Electronic Library (IEL)
- Genome Database
- China InfoBank , etc.

Besides, a series of databases are produced in-house. These databases includes:

- Union Catalogues of Books and Journals: 150 members have contributed 1.4 million titles and more than 3 million holdings;
- Current Contents of Chinese Journals: 28 members have contributed more than 2 million abstracts of 5500 Chinese journals;
- Chinese Dissertation and Proceedings Abstract Databases: 85 members have contributed more than 70,000 abstracts;
- Chinese Databases with Unique Features: 23 members have contributed 25 databases which contain more than 450,000 records;

- Navigating Databases for Key Subjects: 45 members have contributed more than 290 disciplines;

- An application platform operated on networks, which are Unicode, Z39.50, ISO10160, and 10161 compliant. The platform includes:

- online cataloguing server and client, through which librarians can download and upload MARC records and holdings;

- data-making tools and database servers for TOC and other self-made databases;

- web-based search engines for accessing self produced databases;

- software for ILL and desktop document delivery services.

Self Check Exercise

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

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

4) Describe major developments in library networks at international level?

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10.7 LIBRARY CONSORTIA: INTERNATIONAL

10.7.1 CARLI (Consortium of Academic and Research Libraries in Illinois)

CARLI was formed in July 2005 to serve the consortia needs of academic and research libraries in Illinois. There had been consortia existing in Illinois since the 1980s prior to the formation of CARLI. These were:

- Illinois Cooperative Collection Management Program (ICCMP), formed in 1986, provided statewide collection studies and grants.

- Illinois Digital Academic Library (IDAL), formed in 1999 to provide centralised electronic resource licensing.

- Illinois Library Computer Systems Organization (ILCSO), formed in 1980, provided the shared integrated library system Illinet Online which later became I-Share.

CARLI took birth as a result of consolidation of these three consortia. Its mission is to create and maintain a rich, supportive, and diverse knowledge environment to facilitate teaching, learning, and research through the sharing of collections, expertise, and programs.

Membership

CARLI serves 8.5 lakh students and thousands of faculty and staff covering almost 94% of the higher education clientele in Illinois. It has 145 libraries as its

members. Any institution that is recognised by Illinois Board of Higher Education (IBHE) and a member of Illinois Library and Information Network (ILLINET) can join CARLI. Those institutions that do not meet the above criteria may also be considered for membership to the consortium.

There are two kinds of members, viz., governing members and affiliate members. The difference is due to the facilities in terms of services provided and programmes available to them. Governing members are eligible for all services and can participate in all programmes whereas affiliate members can avail most services and programmes.

Services

- E-Resource Program

  Participating libraries are provided access to a large number of e-resources in a consortium mode enhancing the collections of individual libraries. It not only increases access to resources for libraries but also provides access to collections of lasting value. CARLI has arrangements with EBSCO, Sage, Springer, etc whose databases are provided free to all members. Besides these, CARLI helps its members by providing access to other databases on discount.

- I-Share

  I-Share database is the union catalogue of all participating libraries. It contains 11.5 million unique bibliographical records and 36 million item records. These pertain to 82 CARLI I – Share member institutions. I- Share acts as an OPAC also for individual libraries.

- Document Delivery

  I-Share libraries allow users to borrow documents form other libraries. Libraries are assigned user id which can be quoted to borrow documents from other libraries. Libraries participating in the I-Share programme have to pay a fee. This goes towards paying the vendor of the Voyager software that is used for I-Share.

- Training

  CARLI organises training programmes for the staff of participating libraries. It also conducts training programmes for the users. Webinars are also conducted on topics related to e-resources for their effective and efficient utilisation.

10.7.2 CONCERT (CONsortium on Core Electronic Resources in Taiwan)

The CONCERT was set up in 1990 to take advantage of the growing popularity of web-based full-text documents. It consists of members mainly from universities, colleges as well as research institutes in Taiwan. As the coordinator of CONCERT, Science and Technology Policy Research and Information Center (STPI) tries its best to fully exploit the economies from group-purchase and resource sharing. In the year 2002, CONCERT leased 22 international database systems, partly funded by the Ministry of Education and National Applied Research Laboratories.

Objectives

The main objectives of CONCERT include the following:

- To enhance sci-tech policy research and establish knowledge bank: major themes include critical national issues; and

- To establish national integrated information service mechanism.

Features of CONCERT

The following are some of the salient features of CONCERT:

- **To Sustain Academic Research Progress** — developing and integrating national information resources and introducing international information resources to foster the domestic research through our information service databases like CONCERT, ILL, etc.

- **To Support Policy-Decision Makers** — providing critical insights for governmental policy decision-makers by undertaking policy research of S&T development and value-added analysis, establishing the monitor system of manpower allocation in the S&T industry as well as performing information & communication security endorsed by the Executive Yuan of ROC.

- **To Facilitate Circulation of Industrial Innovation** — serving as a major dissemination gateway of knowledge innovation in support of cutting-edge technology research through taking part in nation-based nanotechnology programme, performing patent analyses, and offering technology transfer interface, and bringing about economic benefits as a result.

- **To Enhance S&T Cooperation Across Nations** — accelerating bilateral & multi-lateral collaboration via participating in the information activities worldwide, and introducing our research accomplishments throughout nations as so to upgrade our image.

International Cooperation

Cooperation with international Organisations is not just a means to acquire international resources; it has also opened more channels to disseminate the information about the national S&T activities and performance to the international arena. It provides access to over 100 databases to about 230 members. There are two types of members, full or core members, 9 at present and affiliate members that number to 220. The members include universities, national and private (70), science and technical universities and colleges (51), junior colleges (15), R&D organizations (30) and government organisations (18).

10.7.3 SANLIC (South African National Library and Information Consortium)

SANLIC is a consortium of higher education and research libraries in South Africa. It works with a mission to provide high quality research materials to participating institutions at cost-effective rates. Its mission is to "facilitate, on a nonprofit basis, affordable access to scholarly electronic information in support of the learning, teaching and research activities of its members. This is achieved mainly through collective negotiations with publishers and aggregators. It also promotes the use of high-quality, open access electronic information resources". It offers access to e-journals, e- books and open access resources. It also publishes

regularly its newsletter 'SCANLiCTALK' informint its clientele about its activities and resources.

10.7.4 CURL (Consortium of University Research Libraries)

The CURL is a Consortium of University Research Libraries in UK. Several activities of CURL are funded by the JISC. The CURL helps member institutions to build distributed and hybrid research library in their institutions with an aim to help researchers all over the world: i) to search, locate and request resources of all kinds in different formats, easily and quickly from their desktops; ii) have quick and easy access to an increasing amount of electronic resources, both born-digital and digitized; iii) have physical access to manuscripts, archives or printed items that have not been digitised and cannot be moved, wherever these are held; and iv) have other printed items from outside their own institutions delivered to them efficiently. The CURL's mission is to increase the ability of research libraries to share resources for the benefit of the local, national and international research community.

The total membership of CURL has grown to 28 libraries in UK including 22 university libraries, as well as the British Library, the National Library of Scotland and the National Library of Wales.

Services and Projects

CURL's services and related projects are as below:

Online Databases: The CURL database consists of bibliographic records of documents available in members libraries as well as data from other sources (like Library of Congress). Records are stored in UKMARC and can be accessed via telnet or Z39.50 client. The database is available to non-members of CURL on charged services. The database currently consists of more than 38 million records, which is growing constantly. As libraries progress their retrospective conversion programmes the number of records for older material and for non-book material is increasing. The records are of good quality and CURL has established bibliographic standards for contributors and records are flagged to indicate standard. The service is open to any non-profit organization.

COPAC (http://copac.ac.uk/) : Copac is a union catalogue that provides free access to the merged online catalogues of members of the CURL. There are some 30 million records on Copac representing the merged holdings of 26 CURL member institutions, including the British Library and National Library of Scotland, plus special collections from a small number of non-CURL libraries. The remaining CURL libraries' catalogues are also being loaded. The Copac web site contains service information and support materials. Copac is funded by the JISC.

Archives Hub (http://www.archiveshub.ac.uk/) : The Archives Hub is a collaborative service, which provides a single point of access to descriptions of archive collections held in universities and colleges throughout the United Kingdom. Over 60 institutions are contributing high-quality information to the Hub, which covers over 20,000 archives. The website is free to use and contains information relevant to a wide range of research areas. The service is funded by the Joint Information Systems Committee (JISC) and is overseen by CURL. MIMAS runs the service at the University of Manchester and development work

on the Archives Hub software is undertaken by the Cheshire Development Team at the University of Liverpool.

Britain in Print (http://www.britaininprint.net/) : The Britain in Print project, funded by the Heritage Lottery Fund, is a collaborative venture led by Edinburgh University Library involves participation of ten CURL libraries including the Edinburgh Royal College of Physicians and the Mitchell Library in Glasgow. All ten libraries have significant collections of pre-1700 British books which are not yet catalogued in electronic form. Launched in January 2003, the Britain in Print project will provide free access to information about the rich collections of early British books that are held in twenty-one of the nation's most important libraries.

CURL-CoFoR (http://www.cocorees.ac.uk/): CoFoR (Collaboration For Research) is a new CURL initiative, set up to provide its members and other research libraries with practical tools (templates, guidelines and recommendations) for collaborative acquisition and retention. It will also give special attention to techniques for serial de duplication and to the mapping of relationships between research activity and library provision.

10.7.5 EIFL (Electronic Information for Libraries)

EIFL is a not- for- profit organization based in Europe to provide access to knowledge through a global network to developing and countries in transition in Africa, Asia, Europe and Latin Amercia. Starting with providing access to e-journals libraries in Central and Eastern Europe in 1999; it has spread wings enabling access to knowledge for learning, teaching, research and sustainable development into 60 countries.

Programmes

EIFL provides the following programmes:

- **EIFL-Licensing:** EIFL negotiates with publishers to provide access to scholarly material for research and education on discount rates. It provides consortia access to libraries in more than 60 countries. E-resources ranging from scholarly journals, e-books to bibliographic databases from more than 25 vendors are available. It also trains local librarians in the licensing and management of e-resources. An estimate puts the savings in subscription fees accrued from consortia purchase of the order of $215 million achieving a discount of 97%.

- **EIFL-OA: Open access**: EIFL is a strong advocate of open access. It helps institutions to build and sustain open access repositories.

- **EIFL-FOSS**: **Free and open source software for libraries:** EIFL helps libraries to install and use free and open source software . It also provides training to professionals to use open source software.

10.7.6 ICOLC (International Coalition of Library Consortia)

ICOLC refers to International Coalition of Library Consortia. It is a Consortium of Consortia, and first met informally in 1997. It comprises over 200 library consortia across the world and the Coalition represents thousands of member

libraries worldwide. The Coalition serves primarily higher education institutions by facilitating discussion among consortia on issues of common interest. Additional information about the ICOLC can be found at http://www.icolc.net

Activities of ICOLC

To accomplish the task, it performs the following activities:

- It conducts meetings twic e ayear generally in March/April in North America and September/ October in Europe to keep participating consortia informed about new electronic information resources, pricing practices of electronic providers and vendors, and other issues of importance to directors and governing boards of consortia.

- The Coalition meets with members of the information provider community, providing a forum for them to discuss their offerings and to engage in dialog with consortial leaders about issues of mutual concern.

- It also maintains listservs and web pages for the benefit of its members.

10.8 SUMMARY

This Unit delineates the activities and services of library networks and consortia in India and abroad selectively. It begins with an introduction to the developments of library and information networks in India. Thereafter, the activities of INFLIBNET and metropolitan area networks in India have been discussed. Library consortia have come up in a big way in the country. Some of these from different areas and fields have been taken up and discussed here.

OCLC has the credit of introducing the concept of resource sharing and networking. It covers a major portion of international networks in this Unit. Other important networks like RLG, Janet, CALIS, etc have been covered. EIFL has played an important role in spreading e-resources in developing countries. Its activities have been discussed followed by that of ICOLC.

Note: Students are advised to visit the relevant websites for more details.

10.9 ANSWERS TO SELF CHECK EXERCISES

1) INFLIBNET is playing a major role in the development of library automation. The thrust is more in following areas:

   Library Networking: INFLIBNET is a national body which is promoting library automation of Indian University Libraries. INFLIBNET is providing leased line for university libraries to access Internet for communication among scholars, students and researchers. With this network backbone it is connecting the libraries and information centres in universities, deemed to be universities, colleges, UGC information centres, institutions of national importance and R&D institutions, etc.

   Same line is used by Indian universities to access online e-journals subscribed by UGC under UGC-INFONET scheme. INFLIBNET has become the hub for UGC-INFONET program.

Library Automation: INFLIBNET has developed a automation solution for Indian libraries called SOUL (Software for University Libraries). It works in client server environment. Currently, it is developed in Windows environment and UNIX version of SOUL is under development.

Education: INFLIBNET runs courses in library automation and training in SOUL. The duration of courses are one week. It also provides on site training for library staff. It also conducts workshops and seminars in designing and developing digital libraries.

2) DELNET runs following services for its members:

    •   Inter Library Loan Online;

    •   Retro-Conversion and Creation and Maintenance of Bibliographic Databases;

    •   Training Programmes;

    •   Conferences, Lectures and Workshops;

    •   Newsletter;

    •   INTERNET, Electronic Mail AND Videoconferencing. Besides, there are many databases to which it provides online access:

    •   Union Catalogue of Books in Common Communication Format (CCF);

    •   Union List of Current Periodicals: in science and technology, social sciences and humanities;

    •   Union Catalogue of Periodicals.

3) The salient features of the UGC-Infonet are:

    •   Scaleable Architecture to grow from Universities to affiliated Colleges;

    •   Nation-wide Terrestrial Backbone using Fiber Optic links;

    •   Integrated Satellite WAN supporting broadband and SCPC VSAT technology;

    •   Comprehensive Network Management Systems for overall monitoring of the network, down to each and every device;

    •   Linkage with other Academic and Research Networks all over the world;

    •   Data security and virus protection using firewalls and Intrusion Detection Systems;

    •   Dedicated Data Center for Web hosting, e-Journals and Mail Boxes;

    •   Mirror sites spread all over the country for content hosting;

    •   Broadband Multimedia and Video Channels for Distance Learning.

4) The library networks in USA are at the most advanced level of development. The some of the enabling factors responsible for successful development of library networking in USA includes long tradition of cooperation among libraries, introduction of library automation as early as from 1960's, advances in information science during 1970's and 1980's and introduction of MARC format by the Library of Congress in 1968. The Library of Congress has played a pivotal role that led to the development of successful networks such as OCLC, RLIN and other networks in USA.

In USA, the OCLC is a non-profit membership organization serving 50,540 libraries in 84 countries and territories around the world. Its mission is to further access to the world's information and reduce library costs by offering services for libraries and their users, and to be the leading global library cooperative, helping libraries serve people by providing economical access to knowledge through innovation and collaboration. Research Library Group (RLG) is another important library network in USA that is devoted to the mission of "improving access to information that supports research and learning". In UK, JANET is a network operated and developed by UKERNA under a Service Level Agreement from the Joint Information Systems Committee (JISC) of the UK Higher and Further Education Funding Councils. JANET is connected to the equivalent academic networks in other countries and to many commercial networks in the UK and abroad forming part of the global Internet. Consortium of University research Libraries (CURL) is a library network fully devoted to enhance cooperation amongst university libraries in UK.

10.10   KEYWORDS

CAS (Current Awarness Service)	:	A service designed to aid research workers in keeping themselves abreast of the current developments taking place in their subjects of interest.
CD-ROM Database	:	An organised collection of information available on a CD ROM
Centralised Database	:	It refers to centralised storage and usage of unified reference information.
Consortia	:	A group of libraries or other organisations that form a partnership to achieve a goal, such as resource sharing, that cannot be achieved by the individuals alone.
Digital Collection	:	A digital collection is a body of materials in digital format treated as a group or considered as a whole.
Document Delivery Service	:	A service whereby the Library provides full-text copies of the documents research papers, conference papers journal articles etc. to the users on demand irrespective of the location and form of the original
E-Resources	:	Electronic information resources accessed via the internet.
Gateway	:	A network point that acts as an entrance to another network, such as the server through which people on a company's local area network access the internet.

Inter Library Loan	:	A cooperative arrangement among libraries by which one library may borrow materials it does not own from another library.
Internet	:	The vast collection of interconnected networks that all use the TCP/IP protocols and that evolved from the ARPANET of the late 60's and early 70's.
Intranet	:	A private network inside a company or organisation that uses the same kinds of software as the Internet, but is only for internal use and is not connected directly to the global Internet.
MARC	:	Machine Readable Cataloguing. The MARC formats are standards for the representation and communication of bibliographic and related information in machine readable form.
Metropolitan Area Network	:	A network of computers spread over a metropolitan/city-wide area such as buildings located throughout a town or city.
Online Database	:	A database located in a remote computer and accessed through the Internet.
Online Union Catalogues	:	Union catalogues of the libraries available online.
OPAC	:	Online Public Access Catalogue. It is an online catalogue of a library collection that is available to the public.
Resources Sharing	:	Collaborative arrangements made between libraries for mutual assistance, by the sharing of resources or division of costs, which can be advantageous and efficient.
Retro conversion Service	:	Retrospective Conversion Service is a service that involves conversion of a library's paper catalogue records into machine-readable form.
SDI	:	SDI is a current awareness system which alerts the user to the latest publications in his/her specified field(s) of interest.
Shared Catalogues	:	A form of cataloguing undertaken by the Library of Congress and other agencies responsible for material bibliography.
Union Catalogues	:	Union catalogues reveal information about the collections of more than one library. They are a way for groups of libraries to share information about their collections in a consistent way, both for cataloguing and inter-library loan purposes.

Virtual Reference Service : Virtual reference is reference service initiated electronically where patrons employ computers or other Internet technology to communicate with reference staff, without being physically present. Communication channels used frequently in virtual reference include chat, videoconferencing etc.

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