2.1. Introduction

Technological advances and change of form of information resources from print to digital medium have led to rapid proliferation of resources in the form of e-books, e-journals, online databases and e-reference sources. Though the current possibilities are exciting for the professionals the situation is rather challenging to deal with. Information professionals have to be well aware of the different media in which resources are available in order to provide the required services to the patrons. Professionals have to brush up their knowledge of technology to deal with variety of information products and packages. These challenges can be addressed to a great extent by forming consortium of libraries which facilitates participating libraries to get the benefit of wider access to digital resources at affordable cost and at the best terms of licenses. A consortium with collective strength of resources of individual libraries is in a better position to address and resolve the problems of managing, organizing and archiving the digital resources.

Collaborative arrangements for the acquisition and management of digital information resources can result in lower prices and savings in terms of time and staff. A most important development for academic libraries thus has been a change from organizational self-sufficiency to a collaborative approach. This trend can be seen from a rapid growth of library consortia. This chapter deals with important consortia initiatives at abroad in general and that of India in particular.

2.2. Library Consortia Initiatives: International

Important library consortia initiatives at abroad are discussed below:
2.2.1. The Georgia Library Learning Online (GALILEO), USA

GALILEO stands for Georgia Library Learning Online, an initiative of the Board of Regents of the University System of Georgia. A World Wide Web-based virtual library, GALILEO provides access to multiple information resources, including secured access to licensed products. Participating institutions may access over 100 databases indexing thousands of periodicals and scholarly journals. Over 2000 journal titles are provided in full-text. Other resources include encyclopedias, business directories, and government publications.

The community of more than 2000 GALILEO institutions includes the University System of Georgia, K-12 schools, public libraries, the adult technical institutes and colleges, and a group of private academic colleges and universities. At this time, only educational institutions are eligible to participate in GALILEO.

Through collaboration and resource sharing, GALILEO seeks to provide equal access to information for all Georgia citizens. While individual libraries benefit from the cooperative sharing of resources - lower costs and increased access to a wider range of materials - the goal is to improve library services for all Georgia citizens. No matter where a citizen lives in the state of Georgia, a library nearby provides access to GALILEO. For this reason, all GALILEO participating libraries, whether public or private, excluding schools (K-12), must provide some kind of access to GALILEO for the public, whether through open access to all library facilities, limited access to designated workstations, waiting lists, or other means. In this way, participating libraries fulfill the vision of GALILEO and reciprocate the sharing spirit in which it was created. Libraries are further encouraged to participate in other collaborative and resource sharing activities such as joint training, interlibrary loan, and reciprocal borrowing. Primary functions include electronic content licensing, electronic content...
loading/presentation, interlibrary loan/document delivery, training, union lists/shared online catalogs, digitization projects and user support. At present there are approximately 500 member libraries including Academic and Public libraries.

2.2.2. The Louisiana Library Network, USA

The Louisiana Library Network combines the resources of Louisiana's public and private academic libraries, along with a centralized support staff located on the LSU campus, to produce a dynamic library consortium. The central support staff, commonly referred to as "LOUIS" (Louisiana Online University Information System), provides many services to consortium members such as library automation, a union catalog, a digital library, electronic resources, authentication, training, consulting, and hosting related listservs and websites. Established in 1992 by the Board of Regents, LOUIS has 43 members and receives approximately $3.5 million annually in contracts and membership fees to support consortium members.

2.2.3. OhioLink, USA

The Ohio Library and Information Network, OhioLINK, is a consortium of Ohio’s college and university libraries and the State Library of Ohio. Serving more than 600,000 students, faculty, and staff at 85 institutions, OhioLINK’s membership includes 17 public universities, 23 community/technical colleges, 44 private colleges and the State Library of Ohio. OhioLINK serves faculty, students, staff and other researchers via campus-based electronic library systems, the OhioLINK central site, and Internet resources.

OhioLINK’s goal is to provide easy access to information and rapid delivery of library materials throughout the state. OhioLINK offers six main electronic services: a library catalog, research databases, a multi-publisher
electronic journal center, a digital media center, a growing collection of e-books, and an electronic theses and dissertations center.

2.2.4. TexShare, USA

TexShare, a statewide consortium of academic libraries, public libraries, and libraries of clinical medicine administered by the Texas State Library and Archives Commission, employs traditional and innovative strategies to resource sharing. Texshare is founded on the belief of Texas State officials and librarians that citizen health and well being is furthered by efficient information exchange in all communities and institutions where quality teaching, research excellence, and lifelong learning are valued. TexShare maximizes the effectiveness of library expenditures by enabling libraries to:

- Share staff expertise.
- Share library resources in print and electronic formats, including books, journals, technical reports, and databases.
- Pursue joint purchasing agreements for information services.
- Encourage cooperative development and deployment of information resources and technologies.

TexShare programs contribute to the intellectual productivity of Texans at the participating institutions by emphasizing access to rather than ownership of documents and other information sources.

2.2.5. The Virtual Library of Virginia (VIVA), USA

The Virtual Library of Virginia (VIVA) is the consortium of the nonprofit academic libraries within the Commonwealth of Virginia. Members include all of the 39 state-assisted colleges and universities (the 6 doctoral universities, 9 four-
year institutions, and 24 community and two-year branch colleges), as well as 33 of the independent (private, nonprofit) institutions and the Library of Virginia.

VIVA's mission is to provide, in an equitable, cooperative and cost-effective manner, enhanced access to library and information resources for the Commonwealth of Virginia's nonprofit academic libraries serving the higher education community. This consortium provides a set of electronic resources and expedited inter-library loan to 39 state-assisted colleges and universities in the commonwealth of Virginia. To the user, VIVA is a site on the Internet that provides access to a variety of databases including full text as well as expediting the physical sharing of resources.

2.2.6. Washington Research Library Consortium (WRLC), USA

The Washington Research Library Consortium (WRLC)\textsuperscript{6} was established in 1987 by seven major universities in the Washington D.C. area, to share library collections and information technology in order to enhance the resources available to their students and faculty.

WRLC provides the following mission-critical services to its member universities:

- Information technology supporting library operations and resource-sharing
- Access to online resources
- Technologies to support digital collections and share campus scholarship, and
- Offsite storage to free valuable space in campus libraries.
2.2.7. Arizona University Libraries Consortium (AULC), USA

AULC\textsuperscript{7} is a voluntary alliance of six university libraries situated in close proximity in Arizona. Major functions include collections sharing, electronic content licensing, interlibrary loan and document delivery.

2.2.8. Illinois Library Computer System Organization (ILCSO), USA

The Illinois Library Computer Systems Organization (ILCSO)\textsuperscript{8} is a consortium of sixty-five Illinois libraries that share an online union catalog, ILLINET Online. The mission of ILCSO is to enhance and expand access to and effectively utilizes information resources through collaborative partnerships among ILCSO members and with the Illinois library community. ILCSO membership includes the libraries of each state-supported university, thirty-six private colleges and universities, thirteen community colleges, the Illinois Mathematics and Science Academy, the Newberry Library, and the Illinois State Library.

2.2.9. Missouri Educational and Research Libraries Information Network (MERLIN), USA

MERLIN\textsuperscript{9} Consortium comprises of Education and Research libraries in close proximity. Its primary functions include cataloging services, collections sharing, electronic content licensing, electronic content loading/presentation, interlibrary loan/document delivery, preservation, training, union lists and shared online catalogue.

2.2.10. Pennsylvania Academic Library Connection Initiative (PALICI), USA

The Pennsylvania Academic Library Consortium, Inc. (PALCI)\textsuperscript{10} was formed in 1996 as a grassroots federation of 35 academic libraries. PALCI is a membership organization of private and public academic libraries. The primary mission of the group is to spur the development of library cooperation within the
Commonwealth and surrounding area by providing a virtual union catalogue and securing discounts on electronic databases.

2.2.11. Consortium of Academic Libraries in Manchester (CALIM), UK

The Consortium of Academic Libraries in Manchester (CALIM)\(^{11}\) has now united with the libraries of the Universities and Colleges of Higher Education in Cheshire, Cumbria, Lancashire and Merseyside to create the NorthWest Academic Libraries consortium (NoWAL). CALIM was established in 1992 to explore the very challenging issues of collaboration between five independent university libraries. The primary objective is to reduce duplication through a common technical platform, collaboration in the delivery of information, standardization of user services and joint staff development.

2.2.12. Consortium of University Research Libraries (CURL), UK

This Consortium was formed in 1982 and consists of 25 libraries\(^{12}\) at the universities of London, Glasgow, Edinburgh, Oxford, Cambridge, Leeds, Manchester and others. 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. CURL will make a difference for researchers by helping to build the Distributed and Hybrid Research Library of the future. Researchers, wherever in the world and whatever their disciplines, will be able to:

- Search, locate and request all resources, whatever their format, easily and quickly from the desktop
- Have quick and easy access to an increasing amount of electronic resources, both born-digital and digitized
- Have physical access to manuscripts, archives or printed items that have not been digitized and cannot be moved, wherever these are held
• Have other printed items from outside their own institutions delivered to them efficiently

2.2.13. The Joint Information Systems Committee (JISC), UK

JISC\textsuperscript{13} works with further and higher education by providing strategic guidance, advice and opportunities to use ICT to support teaching, learning, research and administration. With funding from the UK further and higher education funding councils, JISC provides a centralized and coordinated direction for the development of the infrastructure and activities, in line with its 5-year strategy. JISC provides: new environments for learning, teaching and research; access to electronic resources; a world-class network - JANET; guidance on institutional change; advisory and consultancy services; and regional support for colleges. Under this program 175 libraries are covered.

2.2.14. The Canadian National Site Licensing Project (CNSLP), Canada

The Canadian National Site Licensing Project (CNSLP)\textsuperscript{14} is a groundbreaking digital library initiative established by the Canadian research library community to increase the capacity for research and innovation in Canada. At present 64 Academic Libraries are participating in it. Its mission is to expand the universe of digital information to Canada's academic researchers through the coordinated services and expertise of academic libraries. Major goals of CNSLP are:

• To build Canada's research capacity by increasing the quantity, breadth and depth of published scholarly content available to academic researchers throughout Canada;
• To transform the research environment by speeding the transition from print-based to digital and value-added forms of scholarly content;
• To develop new and advantageous business and service models by leveraging the buying power of Canadian universities and by influencing the international scholarly publishing marketplace.

2.2.15. Council of Prairie and Pacific University Libraries (COPPUL), Canada

The Council of Prairie and Pacific University Libraries (COPPUL)\textsuperscript{15} is a consortium of 22 university libraries located in Manitoba, Saskatchewan, Alberta and British Columbia. Member libraries cooperate to enhance information services through resource sharing, collective purchasing, document delivery, Electronic content licensing and many other similar activities like distance education services.

COPPUL's vision is to be a cohesive and collaborative organization which provides leadership in the development of solutions that meet the academic information resource needs of its member institutions.

2.2.16. Cooperative Action by Victorian Academic Libraries (CAVAL), Australia

CAVAL\textsuperscript{16} was established in 1978 as a not-for-profit company limited by guarantee. The 13 members are the universities in the state of Victoria and the State Library. CAVAL consortium has encouraged the development of a number of collaborative initiatives amongst member libraries and other organizations. These include:

• CAVAL Reference Interest Group (CRIG) - provides reference staff from member libraries with a forum for discussing and sharing information and skills
• Victorian Academic Digital Library (VADL) - provides a collection of electronic resources to CAVAL member libraries
• Risk Management Group - raises awareness about the need for advance planning to cope with library disasters
• CAVAL LIDDAS Consortium (CLIC) - provides configuration and training to members for their implementation of VDX
• CARM (Caval Archive and Research Materials) Center - a single copy repository of low-use research materials which reduces the cost of storage for individual libraries
• Reciprocal Borrowing Program - allows students of universities and TAFE colleges reciprocal borrowing rights
• COOL-CAT - catalogue of all the materials available in CAVAL member libraries.

2.2.17. UNILINC Limited, Australia

UNILINC’s predecessor CLANN Limited was formed in 1978 by the then Colleges of Advanced Education in the state of New South Wales as a not-for-profit company limited by guarantee. UNILINC is a multi type library network. There are currently 16 members. It is entirely self-funding. Members implemented Australia's first all inclusive Reciprocal Borrowing Scheme in 1982 and followed that with a free interlibrary lending. Several of the services developed for the membership are also offered outside the membership including

➢ Web-ezy - now in use in many major university, college and school libraries

➢ Consultancy and benchmarking services - used by over 12 major university libraries as well as the National Library of Australia and the National Library of New Zealand.
Cataloguing - used by over 50 libraries in Australia either directly or through a range of book suppliers.

2.2.18. The National and State Libraries Australia (NSLA) Consortium, Australia

The National and State Libraries Consortium (formerly the Council of Australian State Libraries (CASL) Consortium)\(^{18}\) was established by the peak body representing state and territory libraries and the National Library throughout Australia. The National Library of New Zealand joined the group in 2005. These libraries have a major responsibility for collecting the documentary heritage of their state or territory, providing quality reference and research services and assisting in the provision of public library services to the people of Australia.

The purpose of the NSLA Consortium is to secure access to commercial electronic information resources for its members. The NSLA Consortium aims to simplify licensing arrangements, improve cost benefits for member libraries, and to explore opportunities for making electronic products more widely available to all Australians, regardless of where they live.

2.2.19. Council of Australian University Librarians (CAUL), Australia

CAUL's mission\(^{19}\) is to improve access by the staff and students of Australian universities to the information resources that are fundamental to the advancement of teaching, learning and research. Its membership is comprised of the library directors of the 38 universities, which are members of the Australian Vice-Chancellors' Committee. Its programs include inter alia University Library Australia (a national borrowing program), the Australian Digital Theses Program, and its consortia purchasing program, under the auspices of the CEIRC program.
CAUL's Electronic Information Resources Committee (CEIRC) is an advisory committee providing recommendations and advice to CAUL on matters relating to electronic information resources, particularly cooperative purchasing, IT infrastructure, mirroring, archiving, publishers' pricing models, license agreements, and intra-consortium cost-sharing models, etc.

CAUL functions include Electronic content licensing, National borrowing program; digital theses program; statistics collection for universities in Australia and New Zealand; performance indicators - development and research; copyright advice and communication with government. Members include 48 universities (39 from Australia, 8 from New Zealand, 1 from Fiji) plus 5 higher education institutions in New Zealand

2.2.20. China Academic Library and Information System (CALIS), China

CALIS\(^20\) is the most important academic library consortium in China. It is a nationwide academic library consortium funded primarily by the Chinese government. CALIS is organized in a tiered structure. CALIS members are distributed in 27 provinces, which include 5 National Information Centers, 8 Regional Information Centers and 70 member libraries. Activities include cataloging services, collections sharing, electronic content licensing, electronic content loading/presentation, interlibrary loan/document delivery, storage facilities, training, and union lists/shared online catalogs.

2.2.21. The Consortium of Swiss Academic Libraries, Switzerland

The Consortium of Swiss Academic Libraries\(^21\) includes all university libraries in Switzerland, together with the National Library, and seeks to provide them with the best information resources possible. Primary functions include electronic content licensing, electronic content loading/presentation, project
studies for electronic archiving and training. Members include 15 libraries of 10 universities, 2 technical universities, 4 research institutions, 7 universities of applied sciences and Swiss National Library.

2.2.22. The National Electronic Library (of Finland) (FinELib), Finland

The National Electronic Library (of Finland) (FinELib) is a consortium formed of universities, polytechnics, research institutes and public libraries. The aim of FinELib is to improve access and usability of electronic resources on the net through licensing and developing access methods. Its functions are Electronic content licensing, Development of a national portal to access e-resources; Development of additional services to help use and access e-resources and Training. It was formed by 51 Universities and Polytechnics, 21 Public and 35 Special libraries.

2.2.23. Japan Association of National University Libraries (JANUL), Japan

Japan Association of National University Libraries (JANUL) is a membership organization comprising libraries of national universities in Japan, the University of the Air Library, library facilities of four inter-university research institutes, totaling 92 libraries and library facilities. JANUL aims at supporting the advancement of library function through close coordination and cooperation among the members, promoting inter-library use of scholarly information resources extensively, and contributing development of infrastructures for scholarly information distribution in order to help universities achieve their missions.

JANUL carries out various operations, such as research and investigation that are necessary to advance function of national university library, cooperative maintenance of scholarly information resources, promotion of inter-library use, activities to enhance ability of national university libraries' staffs, and
coordination and cooperation with domestic and foreign organizations for scholarly information distribution.

2.2.24. Gauteng and Environs Library Consortium (GAELIC), South Africa

GAELIC\textsuperscript{24} is an academic library consortium founded, in 1996, by Foundation of Tertiary Institutions of the Northern Metropolis (FOTIM). The mission of GAELIC is to fully utilize and develop the information resources in the region in order to promote education, research and lifelong learning. GAELIC's vision is to create a virtual library with a common library software package installed at member sites, with local interfaces, to form part of a global information community. Its main functions are Collections sharing, Electronic content licensing, interlibrary loan/document delivery, shared online catalogs, IT and Networks. Currently 16 academic library sites are there as members.

2.2.25. The Free State Libraries Cooperative (FRELICO), South Africa

FRELICO\textsuperscript{25} was established in 1996 and comprises of three university libraries, a technikon, a public/legal deposit library and a technical library. FRELICO serves more than 25,000 students, faculty and researchers affiliated to member institutions in addition to more than 7000 distance education students scattered throughout the rural Orange Free State.

2.2.26. Cape Library Cooperative (CALICO), South Africa

CALICO\textsuperscript{26} is the collaborative Library Project of the Cape Higher Education Consortium (CHEC) established in 1992. It is a cooperative venture between the four tertiary institutions in the Western Cape, South Africa, viz. the Universities of Cape Town, Stellenbosch and the Western Cape and the Cape Peninsula University of Technology. The primary functions of CALICO are
Collections sharing, interlibrary loan/document delivery, Shared library and information system, portal and context-linking services.

**2.2.27. Coalition of South African Library Consortia (COSALC), South Africa**

COSALC’s main operational and strategic focus is at national level. It is particularly committed to promote and support national co-operative initiatives, e.g. contribution to the SAC at and inter lending agreements as well as proposed national initiatives, e.g. the national site licensing initiative, SASLI.

COSALC current project is Access to electronic information. South Africa is one of 39 countries participating in the eIFL Direct Project, an initiative of the Open Society Institute to bridge the digital divide. Subscription to a suite of five major databases in the social sciences, EbscoHost, has for the past two years been paid for by the national Department of Education. 94 sites are currently registered as users and SA is responsible for about 33% of total usage within eIFL.

**2.2.28. International Coalition of Library Consortia (ICOLC)**

The International Coalition of Library Consortia (ICOLC) is an informal organization that began meeting in 1997 as Consortium of Consortia (COC). The ICOLC consortia and library administrators meet periodically in North America and Europe. These meetings are restricted to consortia and library administrators only. Comprising about sixty library consortia in the United States, Canada, the United Kingdom, the Netherlands, Germany, Israel, and Australia, the Coalition represents over 5,000 member libraries worldwide. The Coalition serves primarily higher education institutions by facilitating discussion among its members on issues of common interest. ICOLC conducts meetings to keep its members informed about new electronic information resources, pricing practices of electronic providers and vendors, and other issues of importance to
consortium directors and their governing boards. These meetings also provide a forum for consortia representatives to meet with the information provider community, discuss their products, and engage in a dialog with Coalition members about issues of mutual concern. The ICOLC also maintains listservs and web pages for the benefit of its members.

2.3. Library Consortia Initiatives in India

The concept of consortia in India is still in its infancy and picking up slowly but steadily. In India, library network and cooperation started with the initiatives of NISSAT in forming CALIBNET in 1986 and DELNET in 1988. The UGC set up INFLIBNET in 1988. Many libraries in India have set up consortia among themselves for resource sharing. At the national level INFLIBNET has taken initiative for a change in developing adequate infrastructure in academic libraries to be a part of networked environment. Some of the important consortia pertaining to e-resources are FORSA (Forum for Resource Sharing in Astronomy & Astrophysics), CSIR Consortium, INDEST Consortium, IIM Consortium, MCIT Library Consortium (The Ministry of Communications and Information Technology Library Consortium), UGC-INFONET E-Journals Consortium, etc. The structure, objectives and activities of these consortia are discussed below.

2.3.1. Forum for Resource Sharing in Astronomy and Astrophysics (FORSA)

Perhaps FORSA\textsuperscript{29} may be the first consortium formed in Indian context. It was launched in 1981. The mission of the Forum was to compile union catalogues of scientific serials, annuals and other irregular publications, reference tools, recent researches in astronomy, books on order and theses holdings, holdings of duplicate issues and facilities available in each library.

All the member libraries of FORSA have been fully computerized with all modern IT infrastructures and capable of coping up with ever changing
technological developments. At present, FORSA has the following eleven members under its umbrella covering institutes from different government departments, DST, UGC, DAE etc.:

1. Aryabhatta Research Institute for Observational Sciences, Nainital.
2. Bose Institute, Kolkata
3. Harish Chandra Research Institute, Allahabad
4. Indian Institute of Astrophysics, Bangalore
5. Inter University Centre for Astronomy and Astrophysics, Pune
6. National Centre for Radio Astrophysics (TIFR), Pune
7. Centre for Advanced Studies in Astronomy, Osmania University, Hyderabad
8. Physical Research Laboratory, Ahmedabad
9. Raman Research Institute, Bangalore
10. Saha Institute of Nuclear Physics, Kolkata
11. Tata Institute of Fundamental Research, Mumbai

2.3.1.1. Objectives of FORSA

The objectives of FORSA are:\n
- Collection development in IT environment
- Facilitate e-access to journals and books
- Actively participate in resource sharing, inter-library loan, and document delivery
- Database merging of libraries holdings (books/journals) and facilitate access to merged database
- Digitization of archival materials of the institutes and making it available on website for access by all
- Participate actively in consortia plans for sharing e-journals/books and other databases with various publishers and academic societies
- To encourage Open Access and establish Institutional Repositories
The membership is open to those organizations, where astronomy is one of the subjects of study and library has collection pertaining the subject.

FORSA is a participant in the International Coalition of Library Consortia.

FORSA is an open model consortium wherein most of the institutions associated are different government organizations and university departments. FORSA Consortium has gone into formation of two consortia; **Indian Astrophysics Consortium** with KLUWER publishers for cross e-access to 23 Astronomy journals and **FORSA Nature Online Consortium** where Nature journal is accessed electronically through the consortium deal by the FORSA member libraries.

### 2.3.1.2. Services of FORSA

- Automated book catalogue
- Access to online journals
- Interlibrary loan among member libraries
- Document delivery using Scientific Technical Information Network (STN)
- Content Alert Service to member scientists

### 2.3.1.3. FORSA Consortium for KLUWER Journals

FORSA libraries have launched a consortium called Indian Astrophysical Consortium with Kluwer Academic Publishers Group. Through this consortium, member libraries have access to 23 journals. Members of this consortium are:

1. Indian Institute of Astrophysics, Bangalore
2. Raman Research Institute, Bangalore
3. Inter University Centre for Astronomy and Astrophysics, Pune
4. Physical Research Laboratory, Ahmedabad
5. Aryabhatta Research Institute for Observational Sciences, Nainital and
6. Harish Chandra Research Institute, Allahabad

2.3.1.4. FORSA Nature Online Consortium

Members of this consortium have access to Nature Online and the following members constitute this consortium:
1. Aryabhatta Research Institute for Observational Sciences, Nainital
2. Bose Institute, Kolkata
3. Indian Institute of Astrophysics, Bangalore
4. Inter University Centre for Astronomy and Astrophysics, Pune
5. National Centre for Radio Astrophysics (TIFR), Pune
6. Physical Research Laboratory, Ahmedabad
7. Raman Research Institute, Bangalore and
8. Tata Institute of Fundamental Research, Mumbai

FORSA is a very dynamic and ever improving consortium. FORSA is planning to host a website which will contain the following information; a news letter giving details about new events, list of duplicate issues of journals received by any of the FORSA member libraries and new acquisition in each FORSA member libraries. FORSA also plans to enhance its resource base with access to Elsevier Publishers, Academic Press, Nature Publishing and Institute of Physics (UK) and acquisition of Science Citation Index.

2.3.2. CSIR (Council of Scientific and Industrial Research) Consortium

One of the worth mentioning initiative is the Council of Scientific and Industrial Research (CSIR) 32 Consortium. It has 40 laboratories across the country. The major objective of the CSIR Consortium is to strengthen CSIR library resources by pooling, sharing and providing electronic access to scholars
and scientists of CSIR laboratories and to promote the culture of electronic access.

The NISCAIR (National Institute for Science Communication and Information Resources), which was formed by merging erstwhile INSDOC and NISCOM, was identified as the coordinator of the CSIR consortium and a monitoring/steering committee was constituted with NISCAIR as the focal point. Further NISCAIR set up a Task force team comprising of some nodal officers from some of the major laboratories.

As a first step, CSIR has entered into contract with M/s. Elsevier Science to enable access to all its laboratories to the 1,200 e-journals published by Elsevier, one of the world’s leading publishers of science and technology. Now, it was felt that CSIR should go for both full text journals of well known commercial and society publishers and selected bibliographic databases depending upon the R & D activities of CSIR laboratories. The consortium coordinator, NISCAIR, has already initiated efforts to provide access to 4,500 journals of well-known publishers to consortium members in the near future. For implementation of this proposal CSIR proceeded step-by-step as follows:

- Creation of a CSIR Information Consortium to begin with by signing up with Elsevier.
- Payment of access fee of certain percentage of print value for the year 2000.
- Provision for funds to support the continuation of consortium subscription initially for a period of three years up to the year 2003.
- To reflect the budget for the consortium as a CSIR program in the 10th Five Year Plan proposal covering major S&T Publishers.
- Constitution of a Committee to negotiate with the Elsevier for ScienceDirect.
As a first step, CSIR has entered into contract with M/s. Elsevier Science in 2002 to enable access to all its laboratories with access to 1,200 e-journals. The largest share of library expenditure on journals in CSIR laboratories as a whole goes to Elsevier. The cumulative expenditure on such journals is around US $. 1.2 million and CSIR labs together subscribe to nearly 600 journals. The e-journal consortium being the first of its kind, the labs did not have prior experience in accessing and using e-journals. Keeping this aspect in view, it was decided to impart training by M/s. Elsevier staff at six geographical locations of CSIR laboratories. In all a total of 140 staff members of CSIR Library and Information Centers were trained over a period of 12 days who in turn imparted training to the end users in their respective laboratory.

CSIR Consortium stipulates its archival policy as follows:

- In the case of termination of the agreement or on the expiry of the agreement, the publisher/licensor and/or provider shall provide the full text of the e-journals entered into agreement and for the period of agreement on the prevalent formats on CD-ROM, DVD etc. with the retrieval software for network access.

- In case of change in archival technology, the state-of-art archival technology shall be made available by publisher/licensor and/or provider to CSIR at no extra cost for archival of full text data of e-journals to higher versions of technology as and when it is introduced.

CSIR consortium, no doubt, has started on a flying note by providing access to Elsevier journals, but has still miles to go. It plans to provide access not only to full texts of e-journals but to database, patents and other important documents with major commercial and society publishers also. Its activities would not be restricted to buying access to electronic resources only. It would
get actively involved in content creation activity including acquisition of digital contents on CD, electronic submission of theses and dissertations, scanning of printed documents, cataloguing Internet resources and integrated interface for searching all digital resources.

2.3.3. IIM Consortium

The Indian Institute of Management (IIM) Consortium was formed in the year 2000. The objective of the Consortium was to ensure among the IIMs optimum utilization and enhancement of the resources and to minimize the expenditure by consortia based subscription to the commonly subscribed databases and journals. The idea was to approach publishers of CD-ROM Databases to begin with, as consortia, for better pricing and services. Eventually, other digital databases and journals also to be covered by the program.

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 a journals consortia, major publishers such as Elsevier, Kluwer, Wiley, Blackwell and MCB University Press were approached and they all responded positively. 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. Apart from this, all the IIMs are members of INDEST Consortium. Under INDEST Consortium a lot of additional journals are provided access to IIMs.

2.3.4. MCIT Library Consortium

The Ministry of Communications and Information Technology Library Consortium was recently set up for resource sharing among the libraries under the Ministry, which comprises of three departments – Department of Information
Technology (DIT), Department of Telecommunications (DOT) and Department of Post (DOP). Each department has the following PSU/Organizations/Autonomous Bodies:

1. **Department of Information Technology (DIT)**

   - National Informatics Center (NIC)
   - C-DAC
   - STQC
   - DOEACC
   - ERNET India
   - SAMEER
   - Software Technology Parks of India

2. **Department of Telecommunication (DOT)**

   - Telecommunications Engineering Center
   - Telecommunications Consultants India Limited
   - C-DOT
   - BSNL
   - Advanced Level Telecom Training Center

3. **Department of Post (DOP)**

   - Telecom Regulatory Authority India (TRAI)

MCIT Libraries Consortium has the following areas in its purview. All the three Departments, Autonomous Bodies and PSU(s) has number of publications like Annual Reports, Standards, Patents and many important government publications. A Digital Library of all such collections will be put on the consortium web site for general purpose in public domain wherever possible and for internal use of MCIT officials. The web server will be developed and
maintained by NIC, New Delhi. Major services of MCIT Library Consortium are given below:

2.3.4.1. Access to e-journals/databases

- IEEE Electronic Library (IEL)
- ACM Digital Library
- Business source from EBSCO
- Computer Science collection from Elsevier Science
- JCC gateway

2.3.4.2. News Clipping Services

Like every organization’s Library, the MCIT libraries provide News Clipping Service to its users as Current Awareness Services (CAS). NIC, New Delhi has developed the software (called as NewsNIC) to provide this service online to its clients sitting across the country. This software will be distributed free of charge to all the participating members. It has been planned to decentralize the job of downloading news items from website and uploading in the Online News Clipping site. This decentralization is possible as the news items covered in the service are related to Information Technology, Telecommunications and ICT.

2.3.4.3. e-Granthalaya Software

The Library Management software developed by NIC is operational in many libraries. This software will be used for Automation and Networking of all the participating Libraries in MCIT Consortium. e-Granthalaya will be installed at SAN Server located at NIC, New Delhi. All the participating libraries will update their respective database for retrieval and updating of information. Training and other infrastructure towards this will be provided through MCIT
Consortium. The objective is to strengthen the partner libraries of Consortium lagging behind in automation for information resource management.

2.3.4.4. National Union Catalogs

For resource sharing among the participating Libraries of Consortium; Union Catalogue of books, journals and resources available in the member libraries will be hosted on the consortium website.

2.3.5. UGC-INFONET E-Journals Consortium

This consortium was set by UGC under the auspices of INFLIBNET in the year 2003 to bring about a qualitative change in the academic infrastructure, especially for higher education. Under this initiative UGC plans to modernize the university campuses with state-of-the-art campus wide networks and setting up its own nationwide communication network named UGC-INFONET. It uses ICT and Internet to transform learning environment from a mono-dimensional to multi-dimensional one.

The objective is to promote the use of electronic databases and full text access to journals by the academic community in the country for their research activities. The faculty, research scholars and students of universities covered under UGC are the primary beneficiaries. However this scheme will be extended to colleges very soon. The scheme is likely to be open to other institutions such as ICAR and other institutions after signing MOU with UGC/INFLIBNET.

UGC will bear the entire expenses for UGC funded universities for providing e-journals access under this scheme. Under this consortium, access to a gateway portal is made available to the universities covered under UGC grants. This gateway portal provides access to more than 10000 journals in the area of Pure Science, Social Science and Humanities with content and abstracts for major
collections. This gateway portal also provides customized solutions to access full text for the resources subscribed under UGC-INFONET to serve as ‘one stop shopping’

INFONET provides access to highly precious databases like Chemical Abstract and Biological Abstract and E-journals covering all fields of learning of relevance to various universities including Arts, Humanities, Social Sciences, Physical and Chemical Sciences, Life Sciences, Computer Science, Mathematics and Statistics. The literature made available includes full text access to journals covering research articles, reviews and abstracting databases. Access is provided to current as well as archival literature. Its future programs include developing modules on E-Learning, Education and Tele Conferencing, collaboration with national documentation centers and other resourceful libraries. UGC-INFONET will be a boon to the higher education systems in several ways:

- UGC-Infonet will become a vehicle for distance learning to facilitate spread of quality education all over the country.
- UGC-Infonet will be a tool to distribute education material and journals to the remotest of areas.
- UGC-Infonet will be a resource for researchers and scholars for tapping the most up-to-date information.
- UGC-Infonet will form a medium for collaboration among teachers and students, not only within the country but also all over the world.
- UGC-Infonet will be an Intranet for University Automation.
- UGC-Infonet will encompass entire University Systems for most efficient utilization of precious network resources.

UGC-Infonet is aimed at establishing a channel for globalization of education and to facilitate the universities in marketing their services and
developments. Infonet proposes mirror sites for content hosting in major cities of the country as shown below.

Figure 2.1 UGC Infonet Mirror Sites in the Country

Source: http://web.inflibnet.ac.in

The UGC-Infonet will be overlaid on ERNET Infrastructure in a manner so as to provide assured quality of service and optimal utilization of bandwidth resources. The network will be run and managed by ERNET India. The project will be funded by UGC with 100% capital investment and up to 90% of recurring costs. Towards this end, a MOU has been signed between UGC and ERNET India for implementation of UGC-Infonet and also for long-term technology partnership. A joint technical and tariff committee, consisting of leading experts in the country has also been setup to guide and monitor the design, implementation and operations of UGC-Infonet. INFLIBNET, an autonomous
Inter University Center (IUC) of the UGC, would be the nodal agency for coordination of the UGC-Infonet and facilitate linkage between ERNET and the Universities. In the long run, each University will become a hub for the colleges affiliated to it.

UGC Infonet is based on open IP platform, employing state-of-the-art technologies like IP or TV, enabling on-line response to queries. Open system architecture will ensure support for current and future applications. Users from educational Institutions would enjoy high data rates while accessing Intranet and Internet resources.

**Main 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

UGC is also exploring the possibilities of alliances with publishers for adapting a consortia-based approach for e-subscription of journals. INFLIBNET Center is the focal point of this consortium. INFLIBNET Centre will place orders for subscription to e-journals to publishers/aggregators, on behalf of member
universities of the consortium. INFLIBNET Center is also responsible for creating awareness about use of e-journals among the academic and research community of the country. These journals will be available over UGC-Infonet to all the universities. Much of the new research publications are also available on the net as freeware, thereby, making quality information accessible to a wider academic scholar base spread across the country at an affordable price.

2.3.6. INDEST Consortium

The Ministry of Human Resource Development (MHRD) has set-up the Indian National Digital Library in Engineering Sciences and Technology (INDEST) Consortium\textsuperscript{40} in collaboration with the All India Council for Technical Education (AICTE). The Ministry provides funds required for subscription to electronic resources for 38 institutions including Indian Institute of Science (IISc), Indian Institute of Technologies (IITs), National Institute of Technologies (NITs), Indian Institute of Managements (IIMs) and a few other centrally funded Government institutions through the consortium headquarters set-up at the IIT Delhi. Besides, 44 Government or Government-aided engineering colleges and technical departments in universities have joined the Consortium with financial support from the AICTE. Moreover, the INDEST Consortium, as an open-ended proposition, welcomes other institutions to join it on their own for sharing benefits it offers in terms of highly discounted rates of subscription and better terms of agreement with the publishers. All electronic resources being subscribed are available from the publishers Website. The Consortium has an active mailing list and a Web site hosted at the IIT Delhi Server.

The INDEST Consortium is the most ambitious initiative taken so far in the country. The benefit of consortia-based subscription to electronic resources is not confined to 38 major technological institutions in the country but is also extended to all AICTE-accredited and UGC-affiliated institutions. (99)
engineering colleges and institutions have already joined the consortium on their own. Recently (285) engineering colleges and institutions joined under self support- new scheme.

The Consortium operates through its Headquarter set-up at the IIT Delhi. The Ministry of Human Resource Development (MHRD) provides funds required for

- subscription to electronic resources for 38 core members including IISc, IITs, NITs, and a few other institutions; and

- for operation of the consortium.

The consortium headquarter functions under a National Steering Committee (NSC) 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 (NRC) for the INDEST Consortium. The National Review Committee shall be responsible for overall policy, monitoring and coordination with UGC and AICTE for this consortium.

2.3.6.1. E-Resources Offered by the Consortium

The following e-resources are offered by the INDEST Consortium:41

Full - Text Resources

1. ABI / Inform
2. ACM Digital Library
3. ASCE Journals
4. ASME Journals(AMR)
5. Capitaline
6. DEL
7. ESDU
8. Euromonitor (GMID)
9. IEL Online
10. Indian Standards
11. Nature
12. ProQuest Science (formerly ASTP)
13. Science Direct
14. Springer Link

**Bibliographic Databases**

1. COMPENDEX & INSPEC
2. MathSciNet

### 2.3.6.2. JCCC@INDEST

**J-Gate Custom Content for Consortia**, is a customized solution for accessing and sharing journal literature subscribed by all the IITs, IISc and IIMs, individually and collectively through INDEST Consortium. Joining this community of resource sharing consortium are 17 National Institutes of Technology to whom the benefits of JCCC@INDEST is extended as secondary members. JCCC@INDEST is a common gateway to access 4,500+ e-Journals from 1,028 publishers, subscribed by IITs, IISc. IIMs. The journals of following INDEST Consortium registered publishers are included in JCCC@INDEST

- ACM Digital Libraries
- American Society of Civil Engineers (ASCE)
- American Society of Mechanical Engineers (ASME)
- IEL Online
- Nature
- Science Direct (Elsevier)
- Springer-Link

All electronic resources being subscribed are available directly from the publishers Website. Local hosting of resources has not been considered at this stage.

2.4. Conclusion

The consortia initiatives in India are not popular and the trend is slowly catching up among the professional community. In spite of the shrinking budget, academic libraries must provide better services to users. There must be accessibility to variety of information resources particularly in an environment of proliferation of information resources in order to support education, research and lifelong learning. The most pragmatic and beneficial approach is through cooperative utilization of communication networks, which allows seamless access to electronic information resources by sharing the cost of access. So, academic libraries are to embrace the concept of consortia in order to keep their existence and relevance. The motto of forming consortia is that libraries can accomplish more by working together than they can individually.
References


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