

# Technology Issues for Library Consortia in India

By

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## ABSTRACT

Library consortia in today's digital age are quite different from that of library networks in yester years. The main reason is that the resources that are shared in today's consortia environment are predominantly in electronic form such as electronic journals and databases. Hence the technology and associated tools to support sharing the electronic resources are also important components for the success of any library consortia. Technology to store, host, retrieve and deliver information resources keep changing. This paper looks at the technology requirements for modern library consortia and issues related to that both at the information providers and member libraries end. An ideal library consortia that is technology enabled is also presented.

**KEY WORDS:** Library Consortia, consortia technology, India, technology issues, consortia developments

## 0. INTRODUCTION

The latest library trend is based on the need to form consortia to share the resources. Library consortia are not new to the library community as it is the latest phrase of the so-called library cooperation, library networks and so on. All these years, we have talked a lot of all these phrases, but failed to realize one successful implementation. And we have also talked a lot about the issues that caused the lack of successful implementation of library networks in India. Of them, technology and economics are very important factors for realizing a successful cooperation. And

then we talked about the solutions that are of global in nature but never suited Indian environments with its economic background. The result is that we developed library networks, but nothing to share. And then we realized that we need to develop information resources in the electronic form so that library networks become effective for the purposes they were setup. We have had number of conferences, meetings, publications etc on discussing the bibliographic formats, standards and the software to host these resources. There was a lot of initiatives by networks such as INFLIBNET, DELNET and other library networks supported by NISSAT to formulate bibliographic standards and formats that is suitable for Indian environment. And the database development activities started. Union catalogs of serials, theses and dissertations were developed followed by catalog of books. Web enabled search interfaces were also developed for searching. However, union catalog system will be effective only when they are supported by efficient and timely document delivery system. And that part is not yet become effective since the mode of delivery is predominantly based on the traditional snail mails or courier services. However, the development of union catalogs is a great achievement of the library networks, which facilitate what is available where.

Library consortia in today's digital age are quite different from that of library networks in yester years. The main reason is that the resources that are shared in today's consortia environment are predominantly in electronic form such as electronic journals and databases. Hence the technology and associated tools to support sharing the electronic resources are also important components for the success of any library consortia. It is essential that each participating libraries of a consortium is equipped with necessary and sufficient technology to support sharing the resources across. And ideally, these technology tools must be integrated into the library automation software that the libraries are already using. This paper looks at the issues related to the technology in a consortia environment that include the issues at the information provider/publisher, information agents/vendors and the member libraries levels.

## 1. A WORD ABOUT LIBRARY CONSORTIA

Library consortia are defined in the professional literature both in specific and broader terms. A generic term to indicate any group of libraries that are working together toward a common goal, whether to expand cooperation on traditional library services (such as collection development) or electronic information services. The term is now used perhaps too broadly, and encompasses everything from formal legal entities (such as incorporated or governmental agencies) to informal groups that come together solely to achieve better pricing for purchasing electronic information.

The simplest definition of Library Consortia would be the coming together of libraries to achieve a common goal that is beyond what an individual library could achieve on its own.

The world of library consortia is expanding rapidly, and with it the range of services and activities undertaken. However, the underline motivation remains the same: the sharing of increasingly expensive library resources in the most cost effective manner for mutual benefit and general cost savings. There are many hundreds and possibly thousands of library consortia around the world organized along many different lines.

### Library Consortia Initiatives In India

There are a few national and regional library consortia initiatives in the recent years. Council of Scientific & Industrial Research (CSIR), Tata Institute of Fundamental Research (TIFR), Department of Atomic Energy (DAE), Indian Institute of Technology (IIT), and Indian Institute of Management (IIM) have already formed their sectoral consortia (some are formal and others are informal) and have been subscribing to electronic sources like Science Direct, MathSciNet, and Blackwell, John Wiley, ABI/INFORM and Business Sources Premier. Also, both Institute of Mathematical Science (IMSc) and TIFR have been subscribing to MathSciNet database under their own consortia consisting group of libraries in their region. While University Grants Commission (UGC)/INFLIBNET through its one point programme is trying to provide access to e-subscription to all-important journals for the entire university community, the Ministry of Human Resource Development (MHRD) through its INDEST (Indian National Digital Library in Science and Technology) is proposing to fund consortia-based subscription to electronic resources for technical education system in India. Recently there was a round table discussion on "Sharing of E-journals through Consortia in Indian Libraries" held at the Indian Institute of Astrophysics, Bangalore. Many such initiatives at corporate libraries are also being pursued. National licensing of electronic resources is also being considered at the government level.

## 2. LIBRARY CONSORTIA AND TECHNOLOGY

We know that one of the main advantages of library consortia is a resources enhancement and general cost savings. And these resources are predominantly in the electronic forms (journals, databases etc) mostly hosted on the Internet platform. There are also sources available in CD-ROMs. Each member of a library consortium must be equipped with the necessary technology tools to support access and sharing these resources across. Information providers/publishers, information agents/vendors and member libraries are the important partners in any library consortia and the technology requirements for each partner would also vary. Most importantly, the requirements at the member libraries would depend on the way the information provider and the information agents provide access to their resources. In a general consortia model in practice, the information providers would host their resources at their site and provide access to the member libraries through Internet. The advantage here is that the consortia members need not worry about maintaining these resources (hardware, software and networks). In some other model, the information provider will mirror their database on one or more of the member libraries site. This requires huge investment on the infrastructure to mirror the site. Added to this is the maintenance of these mirror sites. The advantage here is that the member libraries will have faster access as the resources are sitting locally. And the mirror site will also serve as a backup server. In any case, the member libraries would have to have a dedicated Internet connectivity, at least for the time being. We do not know what will replace the Internet in the future. Each member campus will have to have a campus wide network for a simultaneous multiple user access.

## 3. ISSUES RELATED TO TECHNOLOGY IN LIBRARY CONSORTIA

There are many technology issues with which the present day library consortia operate. The issues are both at the information providers and the member libraries end.

One of the important issues related to technology at the information providers end is the stability of the systems that they deploy to store, retrieve, and deliver the information resources. This is more so in the areas of both storage and

access technology where there have been so much of changes taking place. The information provider will have to guarantee a system that is sustainable for years and an alternate system in case the present one fails.

One of the library consortia models that is largely in practice is that the information provider-hosts their resources on their site and the member libraries will have access to them through the Internet. In other words, the libraries have access to the resources and not the ownership. In this environment, there are mainly two types of access viz., Internet Protocol(IP) enabled and password enabled. In an IP enabled environment, one or more IP addresses of the workstations of member libraries are registered with Information Providers. Access is also gained through the proxy servers (under firewall environment) at the member libraries by registering only the proxy server IP addresses with the information providers. In an IP enabled access environment, the patrons will be able to access only through the workstations, which are connected to the network within the campus. Patrons may also be able to gain access from their home provided such facilities are extended. But, they may not be able to access when they are away (abroad). This could be possible only through the user name and password enabled access. In both the environments, authentication and security are main issues both for the information providers and member libraries.

Though the resources are accessible on the Internet, the formats in which the resources available are different for different information providers. Each one has their own resource discovery system or search engines, the content display, the download options etc. When a member library subscribes to various sources under consortia through many different information providers, the end user in the library will have to repeat the search for the information, which he is looking for in every resource discovery system of the various information providers so as to get a comprehensive list of search results. This will be time consuming and laborious.

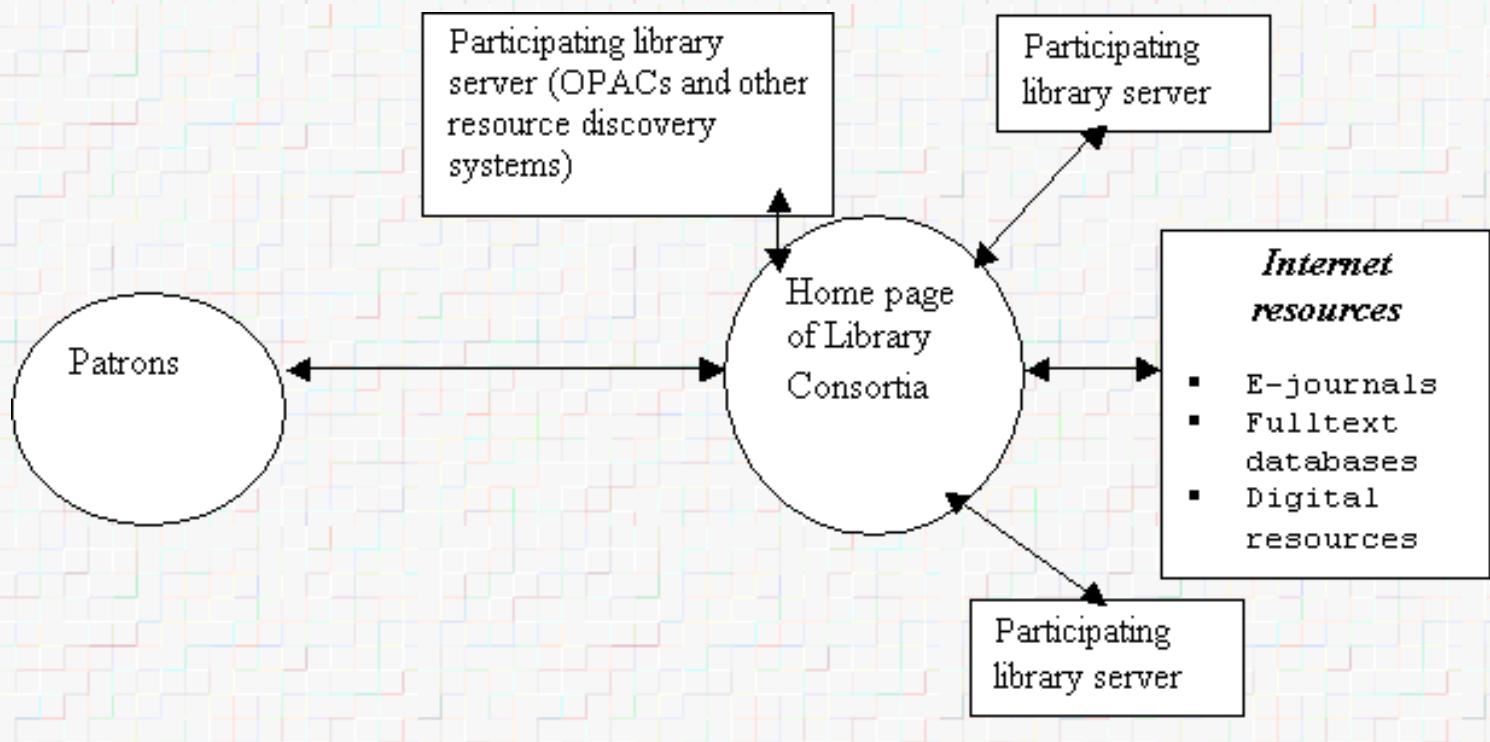
Under some other consortia model, the information provider will mirror their database on one or more libraries of the consortia. The infrastructure requirements for mirror site (cost of shared servers, and other necessary tools) are quite high. A considerable effort of maintaining a mirror site can be saved if the system is mature and stable.

The libraries in today's modern consortia need to operate as one, and yet remain separate; belong to union, but function autonomously. Each library uses their own library automation software with different formats and standards. Because, there is lot of investment already made and huge efforts have gone in developing their library holdings databases, the libraries are not prepared to change to a common platform, which the consortia may decide. Without a common platform, sharing resources becomes an issue. Integrating consortia capabilities in the existing library automation software will be a huge effort and it involves costs.

#### **4. AN IDEAL TECHNOLOGY ENABLED LIBRARY CONSORTIA**

In an ideal library consortia environment, the entry point to the patrons of each member library is through a single web enabled window system that is user-oriented and provide access to the entire collection of the consortium member libraries. The system at the user end should offer services like patron identification and authentication, a comprehensive resource discovery system (encompassing the entire OPAC of member libraries and their holdings), access to the entire e-journals collection and databases. All these should be done through a single search and that should facilitate locating all the resources that are available across the member libraries. No matter where the search results comes from. The system should be capable of patron-initiated online requests of resources and Inter Library Loan facilities. An ideal library consortia, which is technology, enabled is presented in Fig.1 below:

# Fig. 1: An Ideal Technology Enabled Library Consortia



Information requests/  
answers through browsers

## 5. CONCLUSION

Despite the technology related issues as discussed above, the recent development of library consortia in India can be considered a major step towards a real library co-operation. So far the dominant features of library co-operation in general have been the development of regional or national union catalogues and interlibrary loan and document delivery services. These forms of co-operation still leave the individual libraries as autonomous entities. The consortia co-operation is in reality a step towards inter-institutional collection development, where libraries pool shares of their funds for collection development into mutual commitments.

Some of the technology issues at the information providers/vendors end may be solved if these issues are discussed with them while signing up the consortia licenses. Solutions to issues at the member libraries end will have to be found collectively by member libraries agreeing to use common library automation systems, standards and formats. Implementation of Z39.50 protocol and web based client initiated interlibrary loan systems are some of the tools that could solve these problems.

#### BRIEF BIOGRAPHY OF AUTHORS



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