Library Consortia for ICT–enabled Library Services

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ABSTRACT

The changing faces of Information and Communication Technologies (ICTs) have affected the nature of information in networked environment. This is also changing the way of storing, retrieval and dissemination of information for the benefits of users. Library consortia have emerged as one of the means for acquiring and disseminating the information in present scenario. Some of the new ICT-enabled services and the role of library consortia in storing, accessing and retrieving them are discussed here.

Key words : Information and Communication Technologies (ICTs), Information in networked environment, Library consortia.

INTRODUCTION

Information Communication Technology (ICT) is a buzzword that is the combination of Information and Communication Technology. Information Technology was originally a technology of "storing and retrieving knowledge or data on the computers", whereas, communication technology (CT) is "a process [or transmission], by which 'A sends a message [voice and/or data] to B upon whom it has an effect' and/or 'as a negotiation and exchange of meaning', which is widely known or separately evolved as broadcasting or mass communications and telecommunications. The very critical technology to realize such a convergence is the advent of internet, which enables to transmit, record, store, retrieve knowledge, data, images (e.g., broadcasting) and even voice (e.g., telecommunication), par-ticularly worldwide on an instant or real- time base as two-way communications for both a one-to-one and one-to- multiple (Kim, 2002)1. Wiki defines ICT used as a "general term for all kinds of technologies which enable users to create, access and manipulate information"(http://en.wikipedia.org/wiki/Information_and communications_ technology).

Thus, ICT describes the use of computer-based technology and the Internet to make information and communication services available to a wide range of users. However, the term is used broadly to address a range of technologies, including telephones and emerging technology devices. In fact, the information and communication technology is about achieving age-old objectives and applications of information and communication in new and more efficient ways.

ICT AND LIBRARIES

Rijsenbrij (1997)2 has seen the ICT as the technologies that support the communication and co-operation of "human beings and their organizations" and the "creation and exchange of knowledge".

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Heeks (1999)3 refers ICT to the "infrastructure that brings people together in different places and time zones, with multimedia tools for data, information, and knowledge management in order to expand the range of human capabilities". AAU (2000) 4 defines ICT as "a shorthand for the computers, software, networks, satellite links and related systems that allow people to access, analyze, create, exchange and use data, information and knowledge in ways that, until recently, were almost unimaginable."

Libraries which at one time were considered only as the storehouses of knowledge have got a new look in the Information Communication Technology (ICT) era. Various in house activities which were carried out manually in libraries with so much of pain and strain are being carried out smoothly and effectively with the help of ICT. Digital library services have also been evolved after the introduction of ICT in the library and information centers (Atkins, 1997) 5. Now the new technique in the ICT-based library activities and services involves library automation, information storage and retrieval system, office automation and resource sharing network routines (Manjunath and Shobha, 2006)6 including digital library services.

So, the relevance of ICT to library can be seen as the new technology that permit new forms of services, generates new data analysis and supports new tools for research work. But the adoption of ICT should not be considered as a luxury item rather it is a medium to provide information services effectively to fulfill the complex needs of the users.

WHAT ARE ICT-ENABLED SERVICES IN LIBRARIES?

ICT-enabled services can be grouped into two categories – Conventional library services that can be delivered more efficiently through use of ICT, and the New library services which have been made possible due to developments in ICT.

Conventional ICT based library services include various in-house activities which are conventional in nature, like issue – return of the books, catalogue making, and providing in-house information services etc. Online Public Access Catalogue (OPAC) is also another conventional ICT enabled service that is the most important tool for locating material in the library, which allows searching the entire catalogue online, conveniently and quickly, using one or more search criteria. Web-OPAC is internet enabled form of OPAC, which can be searched using any common browser, such as Google Chrome, Microsoft Internet Explorer or Netscape Navigator. There are reference tools which are now available in electronic format whether offline (CD-ROM) or online, that can be used in providing convenience of use, storage, timeliness and currency of information as were seen in reference sources in printed form.

As far as the new ICT-based library services are concerned, the libraries are making full use of internet and computing power to provide new and innovative services in ICT environment. Chauhan (2011)7 has listed three types of new library services which can be provided by a library in ICT era – access to internet and internet based services; access to web based resources; and access to local or internal information resources in digital form.

Internet, the global network or information superhighway is not only a medium for digital communication but also the world's largest repository of information. Though, a large segment of user groups may still be deprived of personal access to internet facility, libraries, are providing free or controlled access to internet and e-mail to their users.

Many digital resources like – journals, books, patents, newspapers, standards, photographs, pictures, motion pictures or music are now available either online or offline mode. Digital format offers convenience of storage and maintenance, cost advantage, ability to target global users, etc and hold many advantages such as time and place convenience, timeliness, ability to search directly, ability to link to further reading material, and ability to disseminate and

share the information. But they also pose human, social and technological problems, such as discomfort in reading on the screen, problems in internet access and speed, poor infrastructure, and the lack of sufficient skills to use the digital resources etc (Dhiman, 20028, 2003a&b9,10).

E-journals and e-books, particularly the e-journals are coming as a good media in web-based environment for providing accurate and up-to-date information to the users. E-Journals help the librarians in addressing the problems of increasing price, spacing for storage of bound volumes and decreasing level of use of older journals to a great extent without significantly affecting the service provided. Electronic Journals can be accessed through the internet from any web-enabled PCs. They offer the benefit of full-text searching and downloading of articles. E-Books are the text analogous to a book that is in digital form to be displayed on a computer screen. E-book offers various advantages like portability, 24 hours access, text search, linking, and self-publishing possibilities etc.

Additionally, many libraries traditionally have been the repositories of local information and heritage documents such as manuscripts, rare books, maps, photographs and paintings etc. Institutional repositories of these materials are being developed by many of libraries all over the world including our country (Dhiman and Sharma, 2008)11. Institutional repositories have the potential of offering 24x7 accesses of local archives to its users in networked environment.

LIBRARY CONSORTIA

Jacob and Sornam (2011) 12 mentioned that " Library automation has emerged together with the increased use of computers in bibliographic processing and database searching 1960's developments". Now the use of electronic resources is becoming more prevalent in ICT era. According Mal and Baipai (2009)13 "An electronic resource is defined as any resource which requires computer access. There are a special and new media of resources in which in-

formations are stored electronically and accessible through electronic systems and networks."

The sharing of existing physical resources and purpose of identifying and addressing common needs arising from the developments in Information technology are the main reasons that have led to the formation of consortia. Besides, the controlling building cost by providing regional storage facilities, expanding inter library borrowing at lower cost to consortia members, better sharing of existing resources, reduce the cost of members library operations by joining group purchase of information products to meet the maximum requirements of the users are among the other reasons for the formation of consortia.

Library Consortium is a concept that facilitates the libraries to ge the benefit of wider access to electronic resources at affordable cost and at the best terms of licenses. Electronic publishing comprising mainly of e-journals and e-books and telecommunication have enabled library consortia to expand both in number and functions. The term Library Consortia is used 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. A library consortium helps to :

- eliminate the different problems faced by the libraries to provide various services to the users.
- meet the thrust of information of the vast people due to rapid growth of population all over the world.
- cope up with the newly generated knowledge published in different forms, such as, printed and non-printed documents, electronic media on various disciplines, multi-disciplinary and new generated subject areas, and
- collect all the documents published at the national and international level, because of the library financial crunch.

The access of information from electronic journals in library consortia is offered through searchable da-

tabases of contents of e-journals from several publishers, and links to journal site for full text. There are many publishers of electronic journals which offer their journals through consortia of libraries at much lower rates.

Indian Digital Library of Engineering, Science and Technology (INDEST) and INFLIBNET's , UGC-INFONET are two such big consortia operating in India. INDEST (Indian National Digital Library in Engineering, Science & Technology) consortium was set up by the Ministry of Human Resource Development on the recommendation of an expert group appointed by the ministry made by an expert group under the chairmanship of Prof. N. Balakrishnan of Indian Institute of Science (IISc), Bangalore (Arora and Tivedi (2010)14. It is the most ambitious initiative of its type taken so far in the country with its

Table 1. Some Notable Library Consortia Initiatives in India

S.N.	Name	Participating Libraries	URL	Resources	Amount in Rs. (Crores)
1	UGC-INFONET (INFLIBNET)	142 University Libraries	http://web.inflibnet.ac.in/info/ugcinfonet/ugcinfonet.jsp	1. 2000 [now 7500] E- Journals 2. Several Databases 3. JCCC	30
2	INDEST (MHRD)	120 (38 MHRD Institutes + 82 others)	http://paniit.iitd.ac.in/indest/	1. 10000 E-Journals 2. 16 Databases 3. JCCC	24
3	FORSA (Astronomy/ Astrophysics Libraries)	11	http://www.iiap.res.in/library/ forsa.html	25 E-Journals, Nature	Not provided
4	DAE	50	http://www.tifr.res.in/~libws/	1600 E- Journals	2
5	CSIR	40	http://www.niscair.res.in/Activ itiesandServices/MajorProject/majproj. htm#ejournalconsortia	3100 E- Journals	25
6	ISRO	12	Not provided	1. 900 E- Journals 2. JCCC	Not provided
7	IIM	6	http://www.iimahd.ernet.in/ http://www.iimb.ernet.in/ http://www.iimcal.ac.in/ http://www.iimidr.ac.in/ http://www.iimk.ac.in/ http://www.iiml.ac.in/	1. 1050 E-Journals 2. 6000 Aggregated Titles 3. 12 databases 4. JCCC (4271 Journals)	5 (Partly funded by INDEST)
8	HELINET (RGUHS, Karnataka)	26	http://www.rguhs.ac.in/hn/newhell.htm	1. 600 E- Journals 2. JCCC	2
9	ICICI Knowledge Park	7	http://www.iciciknowledgepark.com/	1. 500 E- Journals 2. JCCC	Not provided, funded by NISSAT
10	ICMR	24	http://www.jccc-icmr.inform india.co.in/about/about.asp	1. 693 E- Journals 2. JCCC (11800 Journals)	Not provided

headquarter at Indian Institute of Technology (IIT), Delhi. INDEST consortium not only benefits technology institution in the country but also invites all AICTE- accredited and UGC-affiliated institutions to join hands with leading engineering and technology institutions in the country. INDEST consortium is providing full text resources as well as bibliographic resources, like COMPENDEX, INSPEC and Web of Science etc. to its member libraries.

University Grants Commission–Information Network (UGC-INFONET) consortium initiative was undertaken by the University Grants Commission, India to facilitate free access to scholarly journals and databases in all fields and disciplines by the research and academic community across the country. All universities which are under the purview of UGC have been provided its connectivity and access to scholarly e-Journals and databases. The programme is being executed by Information and Library Network (INFLIBNET) Centre, Ahmedabad, an autonomous institution under the UGC with the help of ERNET, India (Murthy et al., 2004)15. This library consortium provides current as well as archival access to more than 7,500 core and peer-reviewed journals and the bibliographic databases from 23 publishers and aggregators in different disciplines to the participating universities.

Besides, attempts have also been made by other libraries to form consortia (Dhiman and Rani, 2011)16, which are providing various resources to member libraries in their respective organizations. To name a few are - the Indian Institute of Astrophysics (IIA) Library, Inter-university Centre for Astronomy and Astrophysics (IUCAA) Library, National Centre for Radio Astrophysics (NCRA) Library, Physical Research Laboratory (PRL) Library, Raman Research Institute (RRI) Library, Tata Institute of Fundamental Research (TIFR) Library, Council of Scientific and Industrial Research, Department of Atomic Energy, etc., which have established consortia to share electronic access to e-journal literature.

Various notable Indian initiatives as narrated by Tyagi (2011)17 on library resource sharing utilizing the Internet technologies are listed in table 1.

CONCLUSION

The impact of ICT on information services is seen by changes in format, contents and methods of production and delivery of information products and emergence of Internet as largest repository of information and knowledge. This has also changed the role of LIS professional from intermediary to facilitator, and we have to rely upon the new tools for dissemination of information. So a shift from physical to virtual service environment , extinction of some conventional information services, emergence of new and innovative web-based library & information services are taking place in library environment.

Library consortia in electronic era seem to be the best solution of resources sharing of the electronic resources (Dhiman and Rani, 2007)18. However, they are not free from the drawbacks, like uninterrupted online access, perpetual access to back issues, pricing, licensing, copyright and archival solutions etc (Dhiman and Rani, 2006)19, but these issues can be tackled strategically and well addressed to get the best out of the consortia. Though, traditional libraries are also not going to be abolished in near future soon (Dhiman and Goswami, 2008)11, we, the library professionals should welcome the new technologies in the libraries not only for the users but also for upgrading our skills to be keeping place in the race.

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