Digital Library at RGUHS: a Study

J Sridevi   Sharad Kumar Sonker

Abstract

Digital libraries are being built and operated by a wide variety of institutions for a wide variety of reasons. They are meant for storage, access, and retrieval repositories of digital objects (HTML, XML, PDF, Audio, Video, multimedia etc.) usually accessed via Internet or intranet. The purpose of this article is to introduce this technology development in libraries, digital collection, discuss the workflow of the Digital library, describe how it functions, problems and opportunities in digital library and present a picture of a digital library.

Keywords : Digital library, Library services

0.　　Introduction

Information Technology is the combination of telecommunications and computer technology, which facilitate transmissions, collection, processing, interpretation, and distribution of information. Information technology is considered to be useful to us in the digital world. Traditional publishers, information intermediaries, and users of books, magazines, and other publications have started re-inventing and re-positioning themselves in the broader and more ubiquitous Digital Library. Libraries have been involved in resource sharing initiatives for many years, yet the advent of new technologies, such as the World Wide Web, have fostered unprecedented growth in the number of institutions impacting the world with rapidly evolving information products and services. Electronic information resources are of increasing importance in modern library services, particularly in special libraries that are oriented towards science and technology. Libraries in highly focused settings such as health sciences are at a pivotal point in their development as the synthesis of historically diverse and independent information sources transforms institution libraries. Boundaries are breaking down between published literature and research data, between research databases and clinical patient data, and between consumer health information and professional literature"

1.　　Digital Library

Digital library is a collection of digital objects, including text, video and audio, along with methods for access and retrieval, and for selection, organization and maintenance of the collection (Ian Witten et al, 2001)

Digital Library is an emerging field in the area of information and library services. With rapid developments in information technology, particularly, the web technology, the world of digital information resources has changed rapidly and exponentially. This new technology approach has increased or forced interest in the libraries around world. Digital information resources not only include rapidly growing collections of electronic full text resources, but also images, video, sound, and even objects of virtual reality. There are many advantages in opting for digital library system, Materials can be delivered directly to the users' computers, searching information is easy, any number of documents can be given to any number of users, multiple copy distribution at anytime, anywhere and easy maintenance among others. The first step in the search for information has to be digital, as it will allow exploring more sources in limited time. Internet is a huge repository of electronic information used widely. In the present day context the physical sources of information are being digitized, for its inherent advantages such as multiple usage, easy access.

2. Digital Library@RGUHS

Rajiv Gandhi University of Health Sciences has developed a Digital Library Network with necessary infrastructure of computer hardware, software and databases for dissemination and document delivery of health science information resources to the affiliated institutions under its jurisdiction. The objective of this concept is to supplement the existing library resources available in the affiliated colleges and minimize the cost of recurring expenditure on journal subscription and other databases on the principle of resource sharing from the university on an Intranet module.

3. Objectives of Digital Library

1. Guaranteed, round-the-clock, access to global and local health information resources for the students and faculty of the affiliated colleges of the University.

2. Develop the Digital Library as a state-of-the-art Health Science Information Centre with networking infrastructure and information resource:

3. Remote access to global and local health science information

4. To improve graduate education by allowing students to produce electronic

 documents, using digital libraries.

5. To increase availability of student research for scholars and to preserve it electronically

6. To lower the cost of submitting and handling theses and dissertations

7. Build a central collection base to augment the existing information resources scattered among the libraries of the affiliated colleges

8. Develop infrastructure for continuous user training to encourage better usage of information resources.

9. To update researcher or scholars and help to achieve objective of the organization.

10. To disseminate the information around the world without wasting time and resources.

11. To improve preservation & archiving.

12. Develop local digital content to preserve and promote literature in Indian medicine.

4. Digital Library Network Infrastructure

1. High end Server with good configuration and client Computers

 (Web Server for hosting library resources)

2. CD-Net server for accessing Medical related Databases or others

3. Router and Gateway

4. Leased Line Connection from Internet Service Provider

5. Proxy for Local Area network Connection

6. Firewall for Secure access

7. Library Automation Package

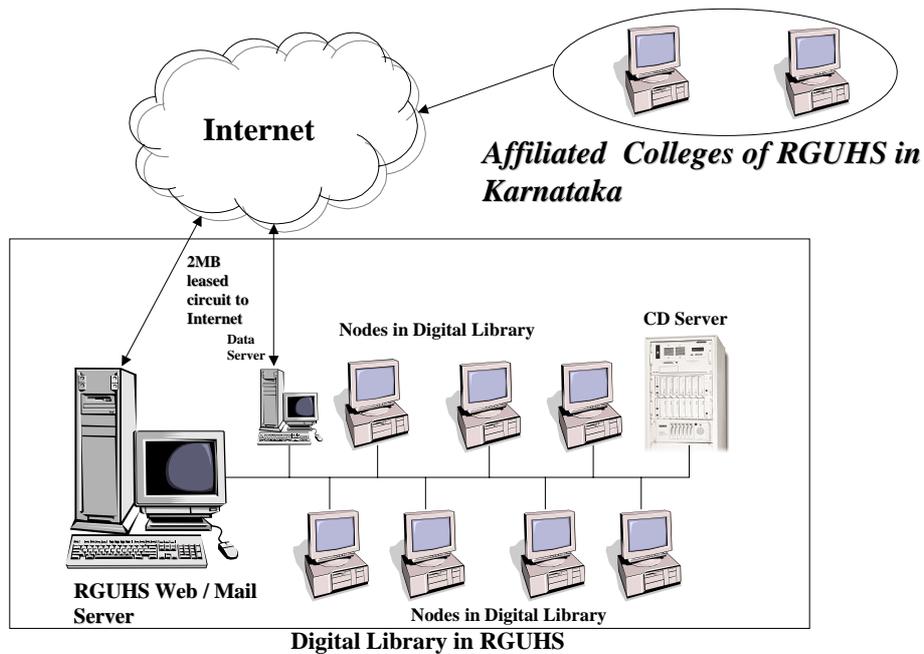8. Scanner for scanning images and putting it onto the Internet.

Fig. Structure of A Digital Library Network, RGUHS

5.   **Digital Library Collectons:**

(1)   Digitized Collection: Digital library are going to include digitised question papers of various steams like Medical, dental, and Nursing etc.

(2)   Digital library have world-class Health Sciences databases and electronic Journals

(3)   JCCC-HELINET is a gateway for E-Journals. It provides common interface for the Searching and browsing E-Journals published by various publishers.

(4)   E-learning Modules for self learning

(5)   Internet resource catalogue compiled by the digital library, which includes various high-quality Internet resources.

(6)   Multimedia: Digital library has various conferences proceeding in multimedia format that enables anyone to view those proceeding at Digital library.

(7)   Bibliographic database for thesis and dissertation.

(8)   Digital library has various reference sources in printed format.

(9)   Digital library has online public access catalogue for the print resources.

6.   Access Methods

Digital libraries facilitate different type of access method over Intranet or Internet and Extranet. Each Institution affiliated to RGUHS would be given password access to the resources available in RGUHS. The Institution would connect to the RGUHS web site and access the information they require:

(1)   IP Address   (2)   User name and passwords

7.   Services of DL

- Digital Library has implemented HELINET-Consortium for electronic medical journals. Thought the consortium, all the medical college in Karnataka can get seamless access to 600+ core international Scholarly Biomedical journals through the consortium.

- Digital Library provides access to high-quality Internet resources through Internet resources Catalogue, compiled by professionals.

- It offers Bibliographic databases for thesis and dissertation, which include 6000 records that are accessible through Internet.

- It offers world class (Bibliographic & Full text) Medical Databases for the affiliated colleges.

- It offers CAS and DDS services for the Users.

- Digital library offers online public access catalogue through Digital library websites that any body can access.

- JCC-HELINET is a J-Gate Costume content for health sciences library and information network. It provides common gateways to journal literature subscribed by Medical Colleges affiliated to RGUHS.

- The Digital Library of RGUHS provides tools, training, and consulting services to college librarians need for cost-effective Services creation, information management, Library administration, and E-services implementation.

- Digital Library of RGUHS identifies, evaluates, develops, and implements products and services that enable its members to develop and administer effective and useful digital resources

- The Digital Library of RGUHS enables libraries to deliver valuable information that already exists within library walls electronically to patrons outside those walls, to create new digital resources locally, and to integrate local digital resources with remote ones. Through coordinating regional efforts to index and deliver information in an integrated fashion,

- The Digital Library of RGUHS also assists libraries in the creation and maintenance of high-quality access to shared digital resources in ways that ensure long-term preservation and access.

8.   Challenges In Digital Library

8.1   Challenge from administrator's point of view:

- Metadata : Creating and using new surrogates for non-textual objects is an active area of digital library research. All digital libraries must cope with making metadata available to users. In some cases, only the metadata available are made available digitally. In such cases, users must search through pointers and must acquire the primary information physically or through a different system. Huge challenges remain in creating surrogate for digital content. Metadata plays an important role in providing digital information service.

- Digital Collection Development : To provide any digital information service one should have sophisticated information sources. As we already know, along with digital content we have legacy content. These legacy collections should be converted to digitized form to provide information service. An obvious obstacle to digitization is that it is very expensive.

- Preservation : To provide continuous digital information service, one should not only have current information sources, but should also the historical information sources. Preserving these collections is an inherent challenge. To preserve digital information, information on digital hardware and software configuration will require regular "refreshing" or migration to more current systems.

- Copyright : Copyright issues are increasing uneasiness among members of library communities in providing digital collections and services. The problem for libraries is that, unlike private businesses or publishers that own their information, libraries are, for the most part, simply caretakers of information-they don't own the copyright of the material they hold. It is unlikely that libraries will ever be able to freely digitize and provide access to the copyrighted materials in their collections. This is a great challenge, which need to be changed by the library community to provide effective information services.

- Cost : Cost is another challenging aspect in providing information service to the

  Library community. Economic models for making the "digital information services" work, in terms of real costs and benefits, have neither been clearly articulated nor established.

8.2   Challenge from technical point of view :

Technical architecture is another issue that underlies any digital information service system. Libraries need to enhance and upgrade current technical architecture to accommodate digital materials.

Technological Obsolescence : The major risk to digital object is not physical deterioration, but technological obsolescence of the devices (hardware and software) to read them. Digital libraries are mostly dependent on suitable telecommunication link and computer system for proper utilization and information transfer, these libraries depend much on suitable technology and training of end users in handling a variety of retrieval software, search strategy, formulation and cost consideration in the case of online search.

8.3   Challenge from user point of view :

Information in digital libraries is electronically stored and accessed. Access to the digital library is, therefore, no bound by space or time. These libraries provides access to information via electronic gateways to remote digital and digitized databases .The users have become more information conscious. They need pinpointed, updated, comprehensive and relevant information and data pertaining to their special interests and academic pursuits. This has totally changed the users behavior regarding information seeking and using pattern. Accordingly librarians need to formulate the pragmatic strategy for meeting the challenge pertaining to the user behavior with the special reference to the implication of new information technology on libraries.

9.   Opportunities

Digital library is in demand for improving information and knowledge management solutions in enterprises, which can integrate access to disparate information resources and provide personalized information to the users. Let us look at some of the features and design framework for the development and management of enterprise-wide digital information system. The basic functionality in such systems usually have, content organization, content storage and processing, resource discovery, management of content publishing, usage and monitoring, access management, preservation and maintenance, interoperability and networking.

10.   Conclusion

A digital library is an entity that stores information such as full text, images and multimedia in a digitized format and has methods to access and retrieve the same. It consisted of infrastructure such as software, hardware and Internet facilities to provide users with easier, faster and comprehensive access to information. Digital library help students by providing them with a rage of reference they are aimed at disseminating information worldwide without wasting time and resources they are also aimed at encouraging better use of information resources.

11.   References

1. The Challenge of the Digital Library: National Library News: May 1996, vol. 28, no. 5 [online] Available: http://www.nlc-bnc.ca/nl-news/1996/ may96e/2805e-07.htm (accessed July 30, 2003).

2.   K Venkatalakshmi and Sharad Kumar Sonker, Challenging aspects of Digital Information Services. MANLIBNET 4th National Convention on Paradigm of IT Application to Business and Management Libraries, NIFM, Faridabad, 3-5April 2002: P.135-145.

3. T.B.Rajashekar, Digital Information Services in Enterprise: A design Framework and Strategies" ICADL 2001 , Bangalore.

4. Ian H. Witten, David Bainbridge, Stefan J. Boddie, Greenstone Open-Source Digital Library Software, D-Lib Magazine, October 2001, Volume 7 Number 10. (www.dlib.org)

5. Cardenas, A F, Chu, W.W., and Fox, E.A. (1999).Proceeding at the MSF information and data management work shop. Las Angles. CA: Sponsored by NSFI and Data Management program.

6. Lesk, M.(1999a). how much information is there in the world? Retrieved September 9, 1999, from the World Wide web; http://www.lesk.com/mlesk/ksg97/ksg.html (accessed Sep 09, 2003).

7. Fox, E.A and Drs.Shalini R(2002) Digital Library Annual Review or Information   Science Technology, Vol 36, 2002, P.503

About the Authors

J. Sridevi is Assistant Librarian at Bundelkhand University, Jhansi, India and holds B.Com., B.Ed., M. L.I.Sc. She has worked as a Lecturer in DLIS at the same University earlier. She has to her credit one book and few articles.
E-mail: sridevi_jetty@yahoo.com

Sharad Kumar Sonker is Project Assistant at Digital Library & Information Center, Rajiv Gandhi University of Health Sciences, Bangalore and holds MLISc, PGDCA and one year training program NCSI, Bangalore. He has published seven papers on various conferences and journals.
E-mail: sksonker@yahoo.co.in