
Digital Libraries and Services

K Paulraj

S Kanthimathi

P Balasubramanian

Abstract

The digital library presents an opportunity for the traditional library and the librarian. Libraries and librarians have significant expertise to offer the creators of digital libraries, for example, skills in organising information. Traditional libraries will not be replaced by digital libraries, certainly not in the near future, and probably never. The reality will be hybrid libraries, with librarians needing to be able to operate in two environments: the first, physical libraries and physical collections; and the second, digital information resources. The goal will be to satisfy the information needs of the user community, regardless of whether the information needed is available in digital form or physical formats.

Keywords : Digital Library, Information Services

0. Introduction

Digital libraries aim to provide access to information 'an demand/ regardless of location of the computer in, which it is stored. In this article we examine key features of digital libraries and services.

The term library usually invokes in our mind a storehouse of information in the form of print on paper publications like books, Journals, Magazines, Newsletters and reports etc and newer media such as films, filmstrips, video and audio cassettes. Most of us view the library as place where information are acquired, organised, shelved and retrieved. Move recently, many libraries have again to use online data base- search-systems like DIALOG and connections to the online public access catalogues (OPACs) of other libraries, over telecommunication. Networks, many libraries have also taken advantage of CDROM technology to provide users networks access to large information bases. With such remote information access, the walls of the library began to be less solid

The internet and the world wide web (WWW) technologies are providing the technological environment and intellectual impetus for the development of 'digital libraries' libraries without walls, with data and ideas. The internet has enabled global connectivity of computers and the development of various tools and techniques for networked information provision and access. Starting with basic tools like e-mail (Meeaging) FTP (File Transfer Protocol) and telnet, the internet has progressed to provide user friendly tools like, Gopher, WAIS and the WWW for information publishing and access. The world wide web, which is integrating all other access tools, also provides a very convenient means for publishing and access, The world wide web, which is integrating all other access tools, also provides a very convenient means for publishing And according to multi media hypertext linked documents stored in computers spread across the world.

1. What are Dirigal Libraries ?

Digital libraries are an evolving area of research, development and application and multiple definitions have been offered by workers in this area based on common aspects among these definitions. digital libraries may be defined an electronic information collections containing large diverse repositories of digital objects, which can be accessed by a large number of geographically distributed users, Such repositories would exist in locations physically near or remote from the users. Digital objects include

text, images, maps, videos, catalogues, indices, scientific, business and government data sets as well as hyper textual multimedia compositions of such elements.

There is also general acceptances of fact that digital libraries would need to span both print and digital materials for the foreseeable future print on paper publications are expected to be around and thus digital libraries are expected to provide integrated, a coherent access to both types of maters.

Key components of digital libraries are therefore.

- ✍ Geographically distributed digital information collections.
- ✍ Geographically distributed users.
- ✍ Information represented by a variety of digital objects.
- ✍ Large and diverse collections
- ✍ Seamless access

2. Digital Electronic and Virtual Libraries

A source of confusion in this area has been the use terminologies like 'virtual' 'digital' and ' electronic libraries. One person's digital library is often another's virtual library' and some useful distinctions have recently been made.

- ✍ Electronic library : A library that provides collections and or services in electronic form for example optical videodisk, CD-Rom, online etc.
- ✍ Digital Library : A library that does not physically exist, most often used to denote a library with distributed collections or services that appear and act as one typical example is a web site with pointers to other sites.

From the above it may be seen that electronic library is more inclusive than digital library. However, digital library has come to be the preferred term perhaps keeping in line with terms like digital audio and digital video. The current usage of the term 'digital library' appears encompass both electronic and virtual libraries.

3. Networked computer Science Technical Library

Let us take a look at one of the operational digital libraries. This is the networked computer science Technical Report library (NCSTRL). NCSTRL provides unified access to catalogue records and complete documents of computer technical reports stored indistributed around the world, through the world wide web. NCSTRL put into operation. The projects participation in NCSTRL is open to all academic departments awarding Ph.D. in various faculty and to research facilities of industry and government. Currently over 200 departments around the world are participating. NCSTRL can be accessed free of cost on internet using any world wide web browser.

NCSTRL provides a very simple search interface and allows search by author title or abstracts. A retrieved document may be viewed as an HTML document or Post Script.

The technology underlying NCSTRL is a network of inter opening digital library servers. The servers provide three services.

1. Repository services that store and provide access to documents.
2. Indexing services that allow searches over bibliographic records.
3. User interface services that provide the human front –end for the other services.

These services inter-operate using a protocol, enabling development of new kinds of services.

3.1 Digital Library Projects

Since the past couple of years the idea of 'digital library' has moved to the forefront of discussion and research., several digital library projects are currently underway in the U.S.A. Europe, Australia, New Zealand and Singapore.

4. Advantage of digital libraries.

Some of the key advantages digital libraries provide include the following

- ✍ Ability to search : The ability to search provides an enormous advantage of electronic materials, When an ASCII some years been replacing printed abstract Journals. Since most of the modern material is now produced via computers. It can generally be provided in ASCII and be searched. For those documents which are searched rather than read are giving way to CD-ROMs which are small, cheaper and for more effective.
- ✍ Ubiquity : Another key advantage is ubiquity – many simultaneous users can have access to a single electronic copy from great many locations copies can be delivered with electronic speed and it would be possible to reformat the material as per the reader preference.
- ✍ Support wider range of material : Digital storage also permits libraries to expand the range of material they can provide to their users. Since audio cassette tapes and records cannot stand a large number of playings without deterioration, their digital representation can produce a format that is much super and of better quality. Digital material can also permit access to video tapes and new kinds of multi-media materials that are created only on computers and have no equivalent in any traditional format.
- ✍ Access current information - For researchers, digital libraries provide access to up to date current literature and there by help them to be aware of current trends.

5. Some of the major areas of focus are

1. Multi media object storage, retrieval and transmission.
2. Data compression
3. Digitisation
4. Hypermedia Navigation
5. Authoring tools for creating electronic documents
6. Multimedia object representation
7. Meta data bases
8. Display technologies
9. User inter faces
10. Search, retrieval and routing software.

6. Issues in Digital Libraries

Work in the area of digital libraries has thrown up several issues and challenges key issues include the following

1. Copyright: It is very easy to copy, replicate message and distribute digital information, enforcing copy right in digital environment is a major issue.
2. Technological obsolescence
 - ✍ Hardware : The major risk to digital objects is not physical deterioration, but technological obsolescence of the devices to read them while the life time of optical and magneto-optical cartridges is expected to be in decades, those of reading devices are only about one decade.
 - ✍ Software : A more serious problem is software obsolescence. It has been pointed out that the variety of software formats far exceeds the number of hardware devices manufactured and that these programs come and go more quickly than the hardware does.

7. Who will Run the Digital Libraries

All sorts of organisations are claiming the right to be the provider of information to be desk-top online services, libraries, bookstore, publishing telephone companies, telecommunication officers university centers, and new startup companies in the digital networked environment, it appears that libraries have no unique claims providers of scholarly information. In practical terms, it is likely that provision of current

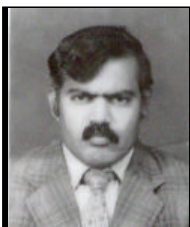
Material will move back to the publishers, who can have sufficient control of who reads what. It is possible that the publishers too will be bypassed, as the authors self publish on the net or through some new venture. Witness for instance the variety of courseware available mostly free over the internet.

8. Conclusion

Digital libraries are expected to bring about significant improvements over current modes of information publishing and access methods. Educators researchers and students across the world will be among the first to benefit from digital libraries particularly those in the developing countries.

9. References

1. DESIDOC Bulletin of Information Technology (DBIT) Special on digital Libraries Vol.17 No.6 Year 1997
2. SRELS (Sarada Ranganathan Endowment for Library Science) Journals of Information Management VOL. 40, No. 3 September 2003
3. Recent Trends in Library & Information Science Technology – Seminar 2002 – Proceedings of PG Department of Library and Information Science, Bishop Hebar College, Tiruchirappalli-620017
4. PGDLAN (Post Graduate Diploma in Library Automation & Networking) Course – Materials – 2004
5. 48th Indian Library Association- Electronic Information Environment – Seminar Proceedings – January 2003.

About Authors

Mr. K Paulraj presently working as Librarian in P M T College, Melaneelithanallur, Tamil Nadu. He has done MCom, MLIS, PGDLAN and doing PhD from Manaonmanium Sundaranar University, Tirunelveli. He is a life member of various professional associations. He has contributed 11 papers in seminars, conferences & journals.

E-Mail : paulsuresh2005@yahoo.co.in



Mr. P Balasubramanian presently working as Librarian in SCAD College of Engineering & Technology, Cheranmahadevi, Tamil Nadu. He has done MA, MLIS, PGDCA, PGDPR and doing PhD from Manaonmanium Sundaranar University, Tirunelveli. He is a life member of various professional associations. He has contributed 15 papers in seminars, conferences & journals.

E-mail: bala_phd2000@yahoo.co.in



Dr. S Kanthi Mathi is working as Librarian (Senior Grade) at Rani Anna Constituent College for Women, Tirunelveli, Tamil Nadu. She has done MLIS and PhD. She is a Research Guide for MPhil and PhD scholars at Manaonmanium Sundaranar University, Tirunelveli. She is a life member of various professional associations. She has contributed 15 papers in seminars, conferences & journals.