

## **DIGITAL LIBRARY : ISSUES AND CHALLENGES**

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### **ABSTRACT**

A process of great change has been taking place today in libraries due the impact of information technology and application of computers in library work. We hear a lot about library automation in libraries and library automation is nothing but application of machines viz. computers to the routine library housekeeping operations such as acquisition, serial control cataloguing and circulation.. In India, some libraries and information centers made efforts to 'automate' their library routines and information services in 1960s with punch card and with a couple of second generation general computers that were available at Kanpur and Bombay. INSDOC was the leader in experimenting with computers for their application in documentation and information work in 1964. Initially they made use of the IBM 1620 Model I that was available at IIT Kanpur.

The first attempt was with work on data collected for union catalogue of scientific serial.

The real boost in library automation came from the establishment of INFLIBNET, Before INFLIBNET; scattered efforts were being made in academic libraries especially in institution of special characters like ITS, IIMS etc. INFLIBNET proved a real catalyst by providing finance and laying standards.

Keywords: Automation, Library Automation, Resource Sharing.

### **INTRODUCTION**

Now a day's developments in information technologies have changed the role of libraries and librarians in all ways. As a result, libraries and librarians are facing new challenges, competitors, demands, and expectations. Libraries are providing services and information products to users' community but IT add value to library services for satisfying the changing information needs of the user community. Traditional libraries are handling largely printed materials. Information requirement of different users are no longer satisfied with only printed materials. Users want to supplement the printed information with more dynamic electronic resources. So demands for digital information are increasing.

We are living in an environment in which digital information may substitute for much print-based information. A library's existence does not depend on the physical form of documents. Its mission is to link the past and the present, and help shape the future by preserving the records of human culture. This mission is unlikely to change in the near future. Digital libraries provide easy and fast access of information in multimedia forms.

### **DEFINITION**

A digital library is a library in which collections of information and associated services are provided in digital formats and accessible over a computer and network. Digital libraries contain diverse information for use by many different users. Digital libraries range in size from tiny to huge. They can use any type of computing equipment and any suitable software. The unifying theme is that information is organized on computers and available over a network, with procedures to select the material in the collections, to organize it, to make it available to users, and to archive it.

The Digital Library Federation defines digital libraries as: Organizations that provide the resources, including the specialized staff, to select, structure, offer intellectual access to,

interpret, distribute, preserve the integrity of, and ensure the persistence over time of collections of digital works so that they are readily available for use by a defined community or set of communities.

A digital library requires technology link the resources of many collections. The links between digital libraries and their resources are transparent to users. Digital library collections are not limited to document but they are the actual digital objects such as images, texts, etc.

Clifford Lynch a well know expert on Internet and web technology, defines digital library as "System providing a community of users with coherent access to a large organized repository of information and knowledge. The digital library is not just one entity, but multiple sources are seamlessly integrated."

According to R. Smith digital libraries are "Controlled collection of information bearing objects that are in digital form and that may be organized, accessed, evaluated and used by means of heterogeneous and extensible set of distributed services that are supported by digital technology."

According to E.A. Fox. the digital library may defined as the " New way of carrying out the function of libraries encompassing new types of information resources, approaches to acquisition, new methods of storage and preservations, new approaches t classification and cataloguing intensive use of lectronie system and networks and dramatic shifts in intellectual organizational and electronic practices."

## NEEDS OF DIGITAL LIBRARY

With the arrival of computers, the concept centered on large bibliographic databases, the now familiar online retrieval and public access systems that are part of any contemporary library. Increase in the number of user and their different needs have made modem libraries to apply new information and communication technology. As a result of this there is a worldwide need and trend to collect organize manage, protect and distribute information in digital form. When computers were connected into large networks forming the Internet, the concept evolved again, and research turned to creating libraries of digital information that could be accessed by anyone from anywhere in the world. Phrases like "virtual library," "electronic library," "library without walls" and, most recently, "digital library," all have been used interchangeably to describe this broad concept.

## CHARACTERISTICS OF DIGITAL LIBRARIES

Cleveland (1998) Arms, 1995; Graham, 1995a; Chepesuik, 1997; Lynch and Garcia-Molina, 1995): describes some characteristics of digital libraries that have been gleaned from various discussions about digital libraries (DLS):

- Digital Libraries include both digital collections and traditional, fixed media collections. So they encompass both electronic and paper materials. So digital libraries support multimedia content.
- Digital Libraries will also include digital materials that exist outside the physical and administrative bounds of any one digital library. Thus digital libraries provide access from very large information collections.
- Digital Libraries will require both the skills of librarians and well as those of computer scientists to be viable.
- Focus on providing access to primary (or complete) information not merely surrogates or indexes.

Digitaliosaries are Network accesiblu/Pen e aged mal Ex) In addition or as against image, postscript, etc. forms.

- Digital libraries are providing unique referencing of digital objects.
- Digital libraries Support traditional library mission of collection, development, organization, Access and preservation.

#### PLANNING TOOLS FOR DIGITAL LIBRARIES INCLUDES

- Target audiences
- Collaboration
- Usability of the Digital Library
- Quality of the Holdings in the Digital Library
- Rights to Distribution and Modifications
- Access and Security
- Funding and Cost Implications
- IT Infrastructure
- Digitization
- Staffing
- Furniture
- Equipment, and space
- Services

#### ADVANTAGES OF THE DIGITAL LIBRARY

The advantages of digital libraries are:

- No physical boundary: The user of a digital library need not to go to the library as long as an Internet connection is available. physically, people from all over the world could gain access to the same information,
- Round the clock availability: Digital libraries can be accessed at any time, 24 hours a day and 365 days of the year.
- Multiple accesses: The same resources can be used at the same time by a number of
- Structured approach: Digital library provides access to much richer content in a more structured manner i.e. one can easily move from the catalog to the particular book then to a particular chapter and so on.
- Enhanced Information retrieval: The user is able to use any search term bellowing to the word or phrase of the entire collection. Digital library will provide very user friendly interfaces, giving click able access to its resources.
- Preservation and conservation: An exact copy of the original can be made any number of times without any degradation in quality.
- Unlimited storage space at lower cost: Whereas traditional libraries are limited by storage space, digital libraries have the potential to store much more information, simply because digital information requires very little physical space to contain them. When the library has no space for extension digitization is the only solution.
- Networking: A particular digital library can provide the link to any other resources of other digital library very easily thus a seamlessly integrated resource sharing can be achieved
- Cost: The cost of maintaining a digital library is much lower than that of a traditional library. A traditional library must spend large sums of money paying for staff, book maintains, rent, and additional books. Digital libraries do away with these fees.

#### ISSUES OF LIBRARY AUTOMATION

Library automation brings great changes in the functioning of the library and proving effective and efficient library services. But in spite of these great advantages, there are many

issues which occur at the time of implementing the automation in libraries. There are following problems faced by the library during automation.

- Fear of adverse impact on employment: Let us examine each of the points. If we analyze the various jobs such as book acquisition, technical processing, circulation and reference service one can conclude that human interference is necessary at each and every step. The only area where substantial manpower can be saved is the cataloguing. The data entered at the time of ordering can be used for cataloging with some updating would eliminate multiple card preparation and subsequent filing. The manpower thus saved can be utilized in retrospective conversion and later on for analytical cataloguing or introducing new services. Therefore, there will be no adverse impact on employment.

- Apprehension that the technology could be too expensive: There is an apprehension that the technology, both hardware and software would be expensive and unaffordable. The cost of hardware and software depends on the level of automation. From the user point of view cataloguing system is most important and also forms the base for other library activities.

- The library staff has to undergo extensive training: The in-house training for handling the software is usually provided by the developers and one can choose the software which can suit their budget. However, training for CDS/ISIS is available at INSDOC, INFLIBNET and DRTC. For further information on training programmes one can contact NISSAT. The training of library staff also depends on the level of automation. If one decides to go only for cataloguing a minimum training of one or two week's duration will enable the librarians to develop a database and maintain it. With this basic training one can easily transfer the same data on a server/main machine in a network environment. The job becomes easy as most of the institutions have systems department with computer professionals maintaining the network.

- Lack of support from the management, may be owing to budget constraints: Fourthly lack of support from the management, may be owing to budget constraints, will be one of the barriers. Here the role of librarians becomes crucial in convincing the management that the users of libraries will also be the major beneficiaries of automation. Also, the skill and initiative play a major role in convincing the management.

- Retrospective conversion of data: The fifth reason could be retrospective conversion of data. As mentioned earlier the manpower saved could be utilized for retrospective conversion and later on for analytical cataloguing.

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## CONCLUSION:

Economical help should be provided by central, state, local govt. and library authority according to library and information policy. Libraries should be conducted training program time to time for the development of library staff. Librarian should be selected best hardware and software for automation. All the data or information should be secure with the help of different security tool such as use of Anti-virus, firewall and taking a backup of data time to time. Inverter should be used for power.

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