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Abstract:

The importance of digital libraries has been recognized by all nations of the world. College and Institutional Libraries in the advanced countries have already undertaken many digitization projects to establish digital libraries. Fast and recent advances in information processing, storage and communication technologies have revolutionized the role of worldwide libraries in disseminating information services to their users. College and Institutional Libraries are reconsolidating their positions, building digital collections, redesigning their services and information products to add value to their services in order to satisfy changing information needs of users. This paper gives brief description of digital library for College and Institutions. It deals with the basic requirement, complexity and data conversion issues for building digital collections, use of digital libraries and the problems of digital libraries. It concludes with a brief description of the digital library projects initiated in different parts of the world.

Introduction

College and Institutional libraries provide information services that must fulfill the information needs of present and future library users. Traditional libraries are still handling largely printed materials that are expensive and bulky. Information seekers are no longer satisfied with only printed materials. They wanted to supplement the printed information with more dynamic electronic multimedia documents. The users' demands for information delivery in digital form at their desktop are increasing in recent times. In the present environment, where there is a wealth of information resources being published and transmitted through electronic media, libraries must take proactive measures to develop digital collections to cater for digital information needs of their users.

We are witnessing an information explosion and information technology (IT) revolution leading to the emergence of electronic information era. Recent advances in information processing, storage and communication technologies have revolutionized the role of college libraries in

disseminating information services to their users. As a result, College and Institutional libraries are facing new challenges, new competitors, new demands, new expectations and variety of information services from users tailored to their wants and needs. College and Institutional libraries are reconsolidating their positions, redesigning their services, and information products, incorporating new technologies, upgrading information resources, training people, changing information objects, modes of communication and information delivery in order to add value to their services and to satisfy the changing information needs of user community.

The current developments in technological capabilities such as high resolution capture devices, dramatic increase of digital storage media, explosive growth of internet and www, sophisticated search engines, fast processing power and reducing cost of computers, high bandwidth networks and increasing number of electronic publications make it possible for the establishment of digital libraries.

Meaning of Digital Library:

The term digital library is now widely accepted to mean the use of digital technology in the provision of library services and operations, which include acquisition, organization, storage, conservation and dissemination of information to users. Digital libraries are still evolving and taking shape. At times the term digital is used interchangeably with electronic and virtual. The Digital Library Federation defines a digital library 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 and economically available for use by a defined community or set of communities

The word 'Digital Library' is now frequently used by the college libraries and information centers. Different phrases such as electronic library, virtual library, library without walls and digital library have been used interchangeably to describe this broad concept. Digital library is the most current and widely accepted term, which is now used almost exclusively at conferences, online and in the literature. Cleveland has gives the following working definition of digital library. "Digital libraries are libraries with same purposes, functions and goals as traditional libraries-collection development and management, subject analysis, index creation, provision of access, reference work, and preservation. A narrow focus on digital formats alone hides the extensive behind the scenes work that libraries do to develop and organize collections and to help users find information."

The institutions involved in the American Digital library federation came up with a similar notion of digital library.

Digital Collection:

The success of digital library depends largely on the nature, content and quality of its digital collections. The basic requirement in creating digital library will be the building of digital collections. The digital collection of information includes various resources such as electronic journals, books, full text, CDROM databases etc. The benefits of

information collections in digital form for preservation, access and managing large quantities of digital form for preservation, access and managing large quantities of information have been recognized by both library professionals as well as users.

Conversion of Data

The primary method of building digital collections is digitization. Digitization means conversion of any fixed or analogue media-such as books, journals articles, photos, painting, microforms-into electronic form through scanning, sampling or infect even rekeying. It is the creation of digital collection of information with multimedia features and thus offering faster and easy access to large number of users. Promoting access to information resources is a major driving force for digitization of documents. Digitization provides solutions to traditional library problems such as conservation, preservation, storage space, multimedia documents and remote access to information collections.

New Dimensions and Scope

Digital libraries offer new dimensions of easy access to their resources when information materials are in digital form and stored electronically on digital media, they can be used and re-used for any suitable purpose. They can be retrieved easily to answer an information enquiry used to create multimedia applications, or used for resource sharing in either a network environment or for electronic publishing on the internet, or the World Wide Web. As long as the resources are in digital form regardless of whether they are still images, video or sound-and are on a web server, one can use of multimedia and the knowledge of the navigator permit the delivery of national and international information to users at their desktop In this kind of environment, printed information sources such as books, journals archival material cannot meet a highly competitive technology. The digital information sources become essential.

Digital libraries can store large volume of information in digital form for archival management. It provides users with immediate access to the rapidly growing information stored in

digital form. It provides users fast access to multimedia information quickly and interactively through the integration of technologies. It offers remote access to expensive and special collection of information from many locations by many simultaneous users. Protection of old, rare and unique documents for posterity is an important function of any library. Paper deterioration and life consequences are major threat to document held in libraries.

The goal of distributed digital library's (Bunzel 1997) retrospective digitization is "to make research material available in digital form, which on the one hand is urgently needed by researches and on the other hand is very rare, valuable or not easy to obtain their traditional paper based form." Many of the books published in the 19th century and in the first decade of the 20th century are exposed to destruction through acid components of paper. The digitization of those collections is the saving solution to fight against the acid paper decay.

Key Functions

The key functions of digital library are

- To manage large amounts of digital contents of information
- To preserve unique collections through digitization
- To perform searches that are impractical manually
- To protect content owners information
- To improve access to information
- To deal with data from multiple locations
- To enhance the distributed learning environment

Complexity in Making Digital Library

Although digital libraries offer many advantages they are not free from certain problems. Digital libraries contain information collections predominantly in digital or electronic form. Electronic publications have some special problems of management as compared to printed documents. They include infrastructure,

acceptability, access restrictions, readability, standardization, authentication, preservation, copyright, user interface etc. Important among these are:

Expenditure Involved

The major obstacle to digitization is that is very expensive, especially to undertake alone in-house digitization. It needs technical expertise to deal with the matter is another obstacle. A digital library is an expensive undertaking. Funding is required to:

Purchase the high quality digitization equipments to facilitate the digitization of current traditional library holdings

- To train both staff and end users on the use of modern technology
- Purchase of other machines such as servers, workstations etc
- For the subscription of online and offline information resources
- Purchase of appropriate software
- Maintenance of the systems etc
- The policy should therefore identify the sources of funding.

Copyright for Digitization

Copyright has been called the single most vexing barrier to digital library development. Copyright is the right that protects the owners' creative work or ideas. Content owner's information whether in analogue or digital form has to be protected and financially compensated for use of their work and ideas? The ease with which digital objects can be copied, transmitted and used simultaneously poses a major problem to enforce copyright laws in digital libraries. Copyright law has been violated in digital environment due to lack of control over content access and reproduction of multiple copies of digital media.

Preservation of Digital Materials

There is serious problem in the preservation of digital materials caused by the fact that digital information is very dynamic. The databases are always being updated. What one gets on the web site to day now may not be there in the next few seconds. The digital media are so fragile with a

limited shelf life. Further still, the digital information on the storage devices with time will be rendered unreadable by obsolescence of technology, this is due to the fact that information technology evolves very fast and the old systems are no longer in use. To preserve the digital information libraries will keep on migrating information from one digital hardware and software configuration. The policy should address these issues. If preservation of digital resources will not be in place then future generations will look back at this time as a digital dark age- a time when, somehow, the records of human knowledge went missing. The digital storage media such as hard disks, tapes and floppy disks have a very short life span due to rapid technological obsolescence. The media used to store digital information become obsolete in anywhere from two to five years before they are replaced by better technologies.

Challenging Task

Traditional libraries have been compiling bibliographic details of information materials produced i.e. each country compiles and publishes its national bibliography. Information materials in the digital; library are massive and dynamic hence compiling bibliographic details is not possible. The policy should therefore address such issues. The College Librarians should not sit down while computer scientists take a lead on what is rightfully theirs. College Librarians should take digital libraries as simply logical extension of the traditional libraries in the new information society. Pricing of information in the digital world is going to be very complex. Ownership is expected to give way to licensing pay per use.etc. Archiving and preservation of electronic information may be one of the most challenging of all tasks we have to solve over the coming two decades. Instead of having shops that sell rare books, we may have shops that sell rare Post Script interpreters. Libraries may have a role to play here considering their traditional responsibility to keep things for a long time and to be able to make them available for use.

Advantages of Digital Libraries

Some of the key advantages digital libraries for college libraries are as follows :

1. The ability to search provides an enormous advantage to electronic materials when an ASCH version is available. On-line searching has for some years been replacing printed abstract journals. Since most current materials is now produced via computers, it can generally be provided in ASCH form and be searched.
2. Another key advantage is ubiquity. A single electronic copy can be accessed from a great many locations, by many simultaneous users.
3. Support wider range of material they can provide to their users. 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.
4. Another major advantage is preservation. Digital information can be copied without error. As a result, preservation in a digital world does not depend on having a permanent object and keeping it under guard, but on the ability to make multiple copies, assuming that at least one will survive.
5. For researchers, digital libraries provide access to up to date current literature and thereby help them to be aware of current trends.

Conclusion

Digital libraries are expected to bring about significant improvement 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 developing countries. The electronic initiative is sweeping the globe. There is mention of e-education, e-government, e-commerce, e-medicine, etc. For librarians to survive in this era the e-library must take the center stage. The College and Institutional Librarians must be willing to change from the traditional methods

of collection, organization, storage and dissemination of information. The information explosion in the world today has resulted in huge amounts of information being generated, processed, stored and disseminated in digital formats. With the growth of the Internet and World Wide Web in institutions and homes, publishing and dissemination of information resources in digital formats has become common. The biggest challenge now is that a lot of information is being generated and posted on the web. Unlike in the traditional college library where information materials are to be evaluated before selection is done. This is not the case with most of the information available on the Internet. Some of the information available on the Internet is inaccurate, out of date, inappropriate and in an accessible language. This therefore calls for proper planning, skills and professional assistance. This notwithstanding the importance of the Internet, as a source of information for most people in the world today cannot be ignored. Internet is an important technology, which influence the management of any information center or library. This therefore calls for the organization of virtual or digital libraries.

Digital libraries are 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 and economically available for use by a defined community or set of communities." In future, libraries, if they are to survive and succeed, have to change their role from store house of fixed printed materials to the digital libraries of dynamic electronic multimedia documents in order to satisfy the changing information needs of the users. The establishment of digital library is a complex task and does not happen easily and cheaply. It depends upon several factors such as organizations goal, value of timely information, availability of necessary infrastructure and resources for conversion, economics of information conversion, demands from users,

government policies etc. Most of the digital library projects initiated in advanced countries were made possible through joint efforts and external funds. It clearly indicates that increased national international support, collaboration and cooperation are essential for the development of digital libraries.

References

1. Chowdhury, G.G. and Chowdhury, S.(2003) Introduction to Digital Libraries. Facet Publishing. London. p.6.
2. Hulser Richard P., (1997) Digital Library: Content Preservation in a Digital World. DESIDOC Bulletin of Information Technology, Vol.17, No.6; pp7-14.
3. Li (Lili). (2009) Emerging Technologies for Academic Libraries in the Digital Age. Chandos Publishing, England. p20.
4. [Http://digital.itb.ac.in](http://digital.itb.ac.in)
5. Price David J. (1997) The Digital Library on Campus: a perspective from U.K. Academic environment. DESIDOC Bulletin of information Technology, Vol.17, No.6: pp23-32.
6. Colleges and Universities Home Pages. <http://www.mit.edu:8001/people/cdemello/univ.html>)
7. Deb, Subrata. TERI Integrated Digital Library Initiative, Electronic Library, Vol.24, No.3, pp.366-379
8. Barker, P. (1992) Electronic Books and Libraries of the Future. Electronic Library, 10,3;p.139
9. Maheswarappa, B.S. and Tadasad, P.G. (1997) Collection Development in the Context of Electronic Publication and networking: Problems and prospects. DESIDOC Bulletin of Information Technology, Vol.17 No.1, pp25-31
10. Haravu,L.J. and Nagraj Rao, K (1987) Talex access to DIALOG: some experience IASWC Bulletin, Vol.27 No.4 pp.180-190.

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11. Rajashekar, TB (1997) Digital Libraries, Resonance-Journal of Science education, Vol. 1 No.4, pp60-73.

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