

THE ROLE OF DIGITAL LIBRARY

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INTRODUCTION:

Rapid advances in information technologies have revolutionized the role of libraries. As a result, Libraries face new challenges, competitors, demands, and expectations. Libraries are redesigning Services and information products to add value to their services and to satisfy the changing information needs of the user community. Traditional libraries are still handling largely printed materials that are Expensive and bulky. Information seekers are no longer satisfied with only printed materials. They want to supplement the printed information with more dynamic electronic resources. Demands for digital Information is increasing.

Digital libraries will start gaining ground in India in the present century. We are heading toward 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, as well as integrating emerging information technologies. This mission is unlikely to change in the near future. Digital libraries come in many forms. They attempt to provide instant access to digitized information and consist of a variety of information, including multimedia.

Definition

According to Shiri (6), the Digital Library Federation defines 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 available for use by a defined community or set of communities".

Lynch (4) says that, "digital Libraries provide users with coherent success to a very large, organized repository of information and knowledge." According to Trivedi the purpose of a digital library includes:

- To expedite the systematic development of procedures to collect, store, and organize information in digital form.
- To promote efficient delivery of information economically to all users.
- To encourage co-operative efforts in research resource, computing, and communication networks.
- To strengthen communication and collaboration between and among educational institutions.
- To take leadership role in the generation and dissemination of knowledge

Digital libraries promise new societal benefits. One is elimination of the time and space constraints of traditional "bricks-and-mortar libraries". Unlike libraries that occupy buildings accessible only to those who walk through their doors, digital libraries reside on inter-networked data storage and computing systems that can be accessed by people located anywhere in the world. When the full potential of a digital library is realized for a particular community, people shall be able to access all human knowledge hosted in that digital database from any location.

Digital libraries that are accessible over the Internet provide opportunities to advance knowledge and to dramatically improve the quality of life.

On the other hand, open access to knowledge is a key contributor in providing universal access to information and knowledge. The issue of open access is recently gathering global encouragement and support. The National Knowledge Commission of India commissioned in 2005 is demonstrating encouragement for open access. The commission's success in India today is driven by her belief that "Open access material stimulates research and helps students, teachers and researchers across the world".

Zuccala, et al. (8), say that the term open access has been given a variety of definitions while its meaning is still evolving. However, following the Budapest Open Access Initiative meeting, a definition was produced.

- *First, open access works are freely available.*
- *Second, they are 'online', which would typically mean that they are digital documents available on the Internet.*
- *Third, they are scholarly works...*
- *Fourth, the authors of these works are not paid for their efforts.*
- *Fifth, as most but not all authors of peer-reviewed journal articles are not paid and such works are scholarly, these articles are identified as the primary type of open access material.*
- *Sixth, there are an extraordinary number of permitted uses for open access materials; users can copy and distribute open access works without constraint.*
- *Seventh, there are two key open access strategies: self-archiving and open access journals.*

PURPOSE OF DIGITAL LIBRARY

- Expedite the systematic development of procedures to collect, store, and organize, information in digital form.
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CHARACTERISTICS OF DIGITAL LIBRARIES

1 The Major Five Characteristics of the Digital Library

With the development of the modern information technology, such as computer and Internet, the traditional library hasn't been fit on the requirement of the information time and knowledge economic development, so it faces the basic changes and innovation, also faces changing and developing to the modern library. To be materialization, it is using new technology and realizing automation, Internet, information and figuration which is impenetrable, having the unit function, storing the major printing literature, only borrowing books from the Digital Library, which owns

new facility, opening, having many functions and supplying diversified service. Differing from the traditional library, Digital library has its own characteristics and functions that are the direction of the traditional library. It can be generalized 5 major aspects.

1.1 The digitalization of the information resources

It is the basis of the Digital library and the other characteristics are based on the Digitalization of the information resources. Digital is the basis of the information and the information lives on the digital. This is the biggest difference between digital library and traditional library.

1.2 The internet of the information transfer

On the basis of the digitalization of the Informational resources, the digital library has contracted the world libraries with innumerable computer and Internet system. It also bridges cross-time Information service, opens the Information use and standardizes the information transfer.

1.3 The share of the information

Because of the solid foundation of the digitalization and Internet, this aspect of the digital library embodies cross-district, cross-industry limitless resource and service and embodies cross-district cross-country cooperation of resource setting up together and convenient of the resource of the sharing. The traditional library cannot compare with it.

1.4 The knowledge of information supply

The digital library has been realizing changing document offering into knowledge offering differ from the traditional library. Form analysis, recombine information, it can offer the knowledge to readers requirement or help readers find the way to solve the question, and the information offering will be met from several times to one time.

1.5 The fictitious information object

The digital library has connected the objective library with the fictitious library, and on the base of the objective library, it tends to the virtual library. In the digital library, the objective library has close relation with the fictitious library. The objective library is the foundation, and the virtual library is the direction.

FUNCTION OF DIGITAL LIBRARY

- Initial conversion of content from physical to digital form.
- The extraction or creation of metadata or indexing information describing the content to facilitate searching and discovery.
- Storage of digital content and metadata in an appropriate multimedia repository. The repository includes rights management capabilities to enforce intellectual property rights, if required. E-commerce functionality may also be present if needed to handle accounting and billing.
- Client services for the browser, including repository querying and workflow.
- Content delivery via file transfer or streaming media.

COMPONENTS

- Collection Infrastructure including collection development, management and sourcing digital content.

- Digital Knowledge Organization including metadata and its role in browse, search and navigation, object naming and addressing, unique object identifiers, etc.;
- Access Infrastructure including search, browse and navigation interfaces and subject gateways;
- Computers and Network Infrastructure including server-side hardware components, server-side software components, client-side hardware & software components;
- Intellectual Property Rights (IPR) and Digital Rights Management including IPR issues in digital world and technology used for access control in digital library; and
- Digital Library Services including E-mail alerts, RSS feeds or Atom feeds, Ask-an-Expert, electronic document delivery services, Web-based user education, digital reference service, real-time reference service, my settings, my saved searches and my saved articles.

PLANNING FOR DIGITAL LIBRARY

A digital library committee should be formed to plan for its creation and maintenance. The members must be from various library departments, and, if necessary, consultants can be hired. There are at least two ways of developing a digital library: converting a traditional library into a digital library, and direct development of a digital library.

Planning includes:

- IT Infrastructure
- Digitization
- Access
- Staffing
- Furniture, equipment, and space
- Services
- Funding

Creation of Digital Resources

- Database of digital material that is open to all users over the campus-wide LAN.
- High bandwidth Internet connectivity
- Focus selectively on acquiring digital resources
- Electronic journals and gradual elimination of print subscriptions
- Licensed databases
- Creation of local digital content available within the university

Advantages of a Digital Library

- Digital library provides a starting point for all research.
- State and federal requirements are to provide adequate and appropriate educational opportunities for all students.
- Library is ideal in support of students receiving their schooling using distance learning education.
- Provide excellent opportunities for a broad range of patrons to find appropriate research materials all in one place.

- The access to information is nondependent on the patron being in one location.
- Digital library need not be dependent on each user having a particular→ type of computer or even a computer at all.
- Libraries can be customized so user can have access to what they want and need to use
- The librarian is in full control of the selection of materials for the digital library.

LIMITATIONS

In the current situation digital libraries still have some limitations and difficulties. Here are some of the key issues facing digital libraries today mentioned by Michael Lesk. An important problem of digital libraries is the technological obsolescence which has two sides:

- **Hardware:** the technological obsolescence of the devices for reading data is a problem, since it is a real challenge for the hardware to keep along with the changing variety of the digital objects.
- **Software:** software obsolescence is a more serious problem than that of hardware. There are so many software formats existing and being created, that they get obsolete much faster than the hardware devices, which take a longer time to be designed and manufactured.

The question of control is also one of great importance and it may lead to many difficulties. It is difficult to decide who the real provider of information is: online services, libraries, bookstores, publishers, telephone companies, telecommunication offices or university computing centers etc. In the digital environment, libraries are not the unique providers of scientific information anymore. In the nearest future, the provision of current material could move back to the publishers, who will then have the fullest possible control of information. It can also happen that, as the authors publish themselves directly to the Internet and the publishers too will be bypassed.

CONCLUSION

Rapid advances in information processing, storage and communication technologies have revolutionized the role of world wide libraries in disseminating information services to their users. Libraries are reconsolidating their positions, building digital collection, redesigning their services and information products to add value to their services in order to satisfy changing information needs of users. The conclusion gives a brief description of digital Library; use of digital libraries and the Limitations of digital libraries.

Here will be continuing expansion of digital library activities. LIS and computer science professionals face challenges that will lead to improved systems. More and more libraries will have departments and programs in the digital library arena. Digital libraries will build upon work being done in the information and data management area. Digital libraries provide an effective means to distribute learning resources to students and other users. Planning a digital library requires thoughtful analysis of the organization and its users, and an acknowledgement of the cost and the need for infrastructure and ongoing maintenance. Digital Libraries present opportunities and challenges for the library and information communities and all stakeholders.

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