THE ROLE OF LIBRARIAN FOR CREATING A DIGITAL INFORMATION SYSTEM: A VIEW

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1. Introduction:

The advent of digital libraries presents a plethora of challenges and opportunities to the digital librarian. Digital librarians add value and can make digital libraries truly useful and user friendly. Digital librarian, a type of specialist to information professional who manages and organizes the digital library, because of combines the functionality, planning, data mining, knowledge mining, digital reference services, electronic information services, representation of information, extraction, and distribution of information, co-ordination, searching , online, Internet-based WWW, multimedia access and retrieval are involved. The ultimate goal of a DL is to facilitate access to information just-in-time to wants of end users. Additionally it will also facilitate to electronic publishing. The digital librarian plays a distinctive and dynamic role in easy accessing of Digital information that including abstracts, reviewers and Journals article, Books, and user needed information are provided. Totally Digital library it is like good friend for information seeker.

2. Definition of the Digital Library:

Digital libraries are the logical extensions and augmentations of physical libraries in the electronic information society. Extensions amplify existing resources and services and argumentations enable new kinds of human problem solving and expression The field of digital library deals with augmenting human civilization through the applications of digital technology to the information problems address by institution such as libraries, archives, museum, schools, publishers and other information agencies. Work on digital libraries focuses on integrating services and better serving human needs, through holistic treatment irrespective of interface location, time, language and system. A digital library is a collection of documents in organized electronic form, available on the Internet or on CD-ROM (compact-disk read-only memory) disks. Depending on the specific library, a user may be able to access magazine articles, books, papers, images, sound files, and videos.

In Wikipedia digital library is explained as "The electronic content may be stored locally, or accessed remotely via computer networks. An electronic library is a type of information retrieval system. (Wikipedia, the free encyclopedia)

An electronic library (colloquially referred to as a digital library) is a focused collection of digital objects that can include text, visual material, audio material, video material, stored as electronic media formats (as opposed to print, microform, or other media), along with

means for organizing, storing, and retrieving the files and media contained in the library collection. Digital libraries can vary immensely in size and scope, and can be maintained by individuals, organizations, or affiliated with established physical library buildings or institutions, or with academic institutions.

3. Need for a Digital librarian:

Necessity is the mother of invention. The emerging global digital libraries or world-wide digital information centers generate the need for creating a new job-title ``digital librarian'' to manage their digital knowledge resources. The huge digital libraries are emerging as knowledge warehouses. Digital librarians are required for this activity they are

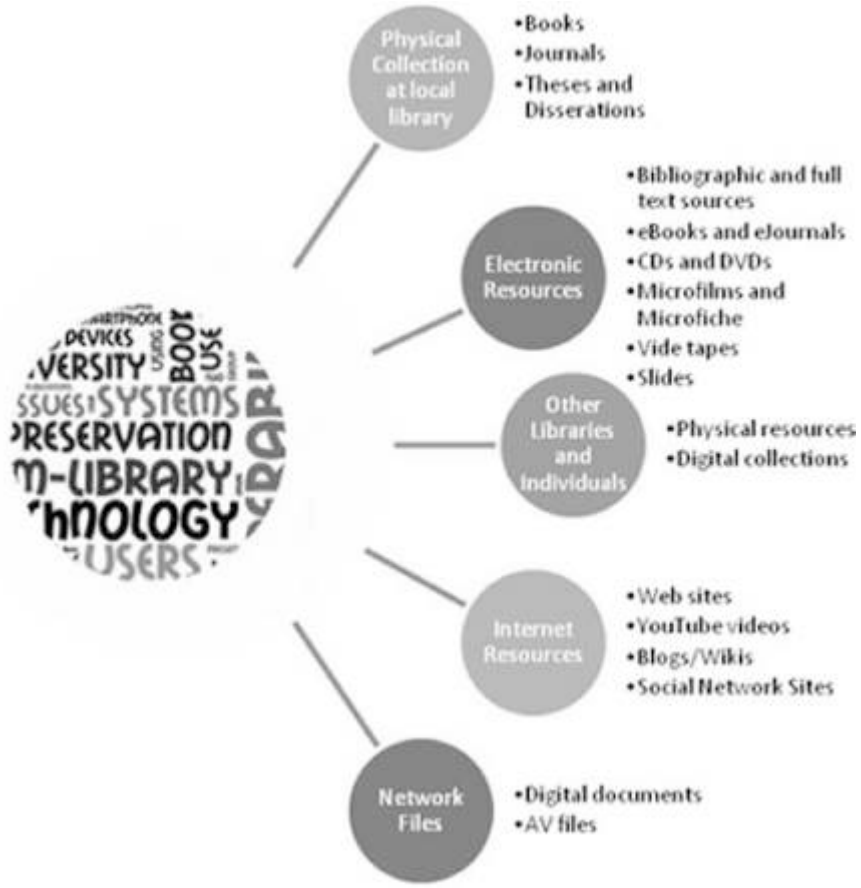
¢ Manage the digital libraries for easy to access.
¢ They organize digital knowledge and information.
¢ They disseminate digital information from the computer-held digital information.
¢ They provide digital reference services and electronic information services.
¢ To provide knowledge mining from the emerging knowledge warehouses.
¢ To handle the tasks of massive digitization, digital storage process, and digital preservation.
¢ To provide universal access and retrieval of digital knowledge, ultimately access to all.
¢ They create catalogue and classify digital documents and digital knowledge.

4. The Role of librarian to Generate a Digital Library:

Digital information system management refers to the overall competencies (knowledge, know-how, skills and attitudes) necessary to create, store, analyze, organize, retrieve and disseminate digital information (text, images, sounds) in digital libraries or any type of information. To describe the roles of the digital librarian, the following concepts are introduced to understand further.

- The traditional roles of the librarian in the era of print can be defined as follows.
- Collection development and acquisition: to select and purchase material - printed journals, abstracts and indexes, monographs, etc.
- Cataloguing and classification: to organize and provide access to information - physically and via lists and catalogues.
- Circulation: to reserve materials for and lend materials to users, and recover materials from them.
- Reference work: to advise library users and to provide and facilitate quick and easy access to information.
- Preservation, conservation and archiving: to archive, preserve and conserve information in perpetuity.
- Of these roles, it may be argued that only circulation is not applicable to the electronic medium, and that in the case of electronic materials another, and more intellectually demanding, role replaces it:
- User education: to provide information skills training.

Below chart explained the digital library needs.



5. Principles of building digital libraries:

The Main object of digital library Computer, Network, Internet, Building, Chair, Table, and other equipment are most essential. The principal are construction work and model for digital library. The principals are some of the studies indentified and that are listed.

1. Experts advice
2. Know your Institutions
3. Involve the right people
4. Design usable and reliable systems
5. Ensure open access for public
6. Beware of data rights
7. Automate whenever possible
8. Ensure quality
9. Be concerned about persistence

6. Digital Library progress:

Digital Library progress it in house work it all depend institutional support, library support, financial support and technical support most essential for create the digital library. The progresses are involved different works of library that are explained.

a. Automation

The technique, method, or system of operating or controlling a process by highly automatic means, as by electronic devices, reducing human intervention to a minimum; a mechanical device, operated electronically, that functions automatically, without continuous input from an operator; act or process of automating; the state of being automated.

- ¢ Maintenance of Digital Library Section
- ¢ Maintenance of all the computer related items
- ¢ Creation of book and Journal database.
- ¢ To make available the digital resources of library
- ¢ Provide OPAC Facility

b. Database creation

Database creation also known as document automation, document generation, or document assembly. The data base creation mean the collection of institutional documents like books. Maps, Journals, and other user benefited documents are create one data base for easy search and provide available documents in right information in right time. For example OPAC of Library collection and other documents thesis, university publications.

c. Requirement for digital libraries

The Internet and World Wide Web is most essential for digital library. The digital environment it is reasonable to say that a central back up or archive should be created at the Institutional and national level. It need of digital library they are:

1. Audio visual: Color T.V., V.C.R., D.V.D., Sound box, Telephone etc.
2. Computer: Server, P.C. with multimedia, U.P.S. Etc
3. Network: LAN, MAN, WAN, Internet etc.
4. Printer: Laser printer, Dot matrix, Barcode printer, Digital graphic printer etc
5. Scanner: H.P. Scan jet, flatbed, Sheet feeder, Drum scanner, Slide scanner, Microfilming scanner, Digital camera, Barcode scanner etc
6. Storage devices: Optical storage device, CD-ROM, Jukebox etc.
7. Software: Any suitable software, which is interconnected and suitable for LAN and WAN connection. PC.

d. Institutional Web Page

Web page is a fundamental of Digital library because about the institution surfer can search only through institutional web site. The web development is a broad term for the work involved in developing a web site for the Internet (World Wide Web) or an intranet (a private network). Web development can range from developing the simplest static single page of plain text to the most complex web-based internet applications, electronic businesses, and social network services. A more comprehensive list of tasks to which web development commonly refers, may include web design, web content development, client liaison, client-side/server-side scripting, web server and network security configuration, and e-commerce development. Among web professionals, "web

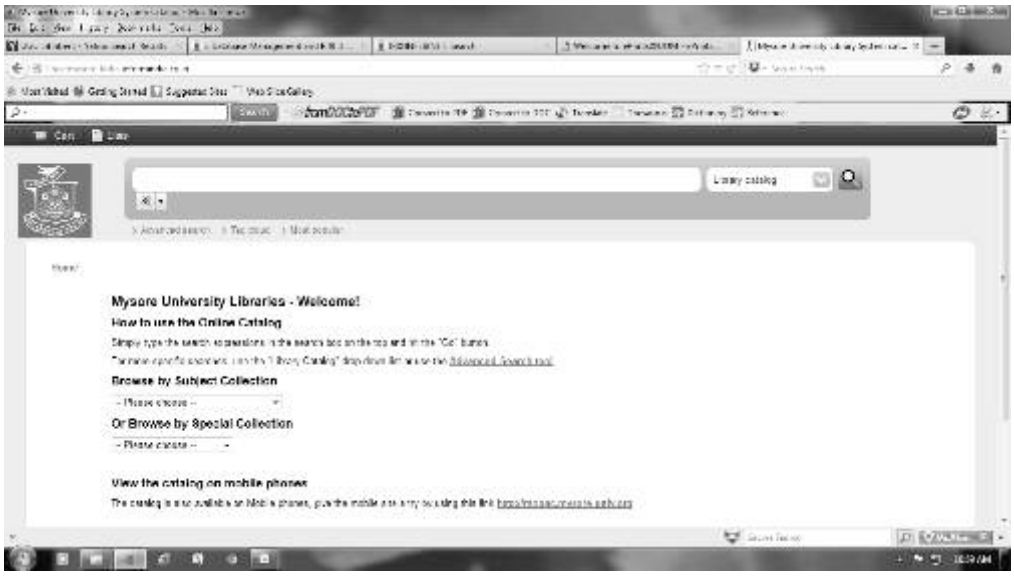
development" usually refers to the main non-design aspects of building web sites: writing markup and coding.

Screen Shot of Mangalore University Library Web site

e. OPAC (Online public access catalog)

Online public access catalog (often abbreviated as OPAC or simply library catalog) is an online database of materials held by a library or group of libraries. Users search a library catalog principally to locate books and other material available at a library. The OPAC is search media of collection of particular library. The OPAC function is basic work of Digital library because library collection is only identified in library catalogues; it is automation is main work of library collection then only digital and other concept. Mysore university library around 350000 documents are automated and the bibliographical information can easily search in our OPAC.

Screen Shot of Mysore University Library public OPAC screen

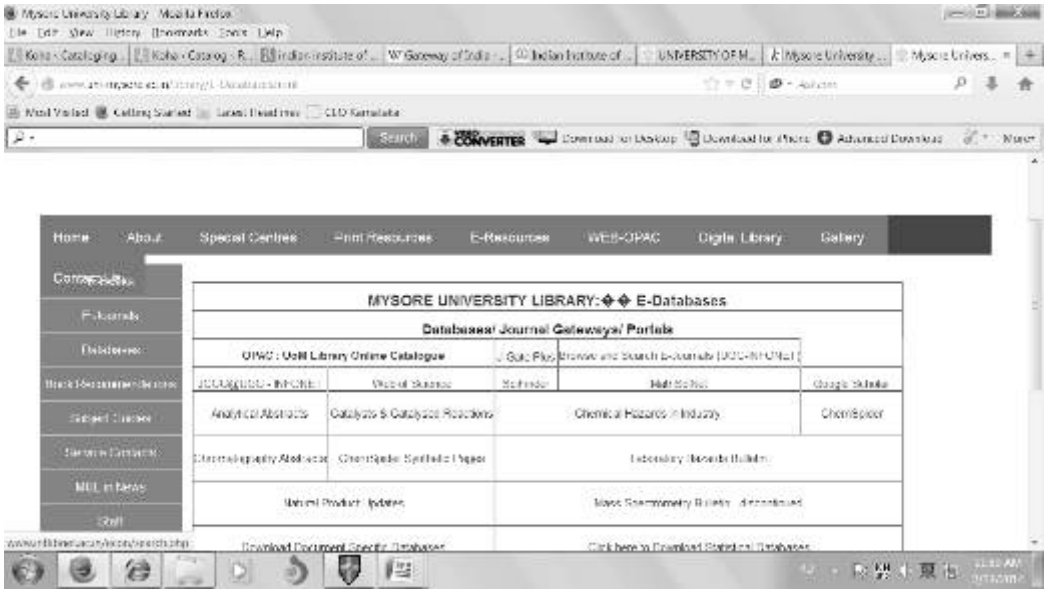


f. Information Gateway

Gateway is a network point that acts as an entrance to another network. Basically the Internet, a node or stopping point can be either a gateway node or a host (end-point) node. Both the computers of Internet users and the computers that serve pages to users are host nodes. The computers that control traffic within your company's network or at your local Internet service provider (ISP) are gateway nodes.

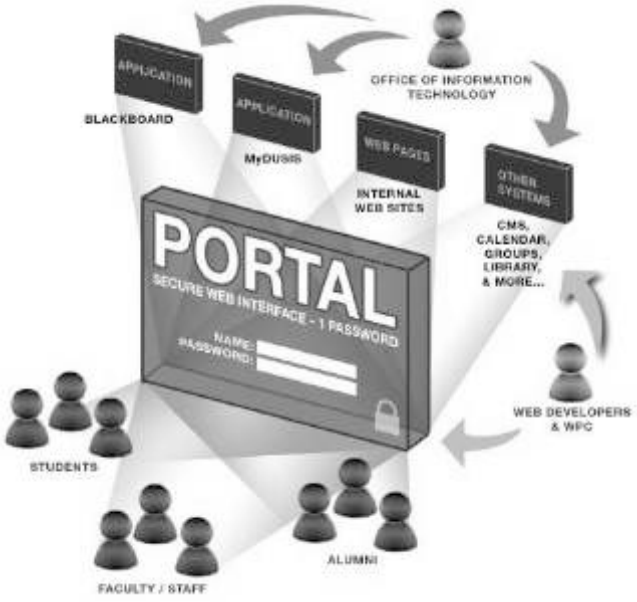
In the network for an enterprise, a computer server acting as a gateway node is often also acting as a proxy server and a firewall server. A gateway is often associated with both a router, which knows where to direct a given packet of data that arrives at the gateway, and a switch, which furnishes the actual path in and out of the gateway for a given packet.

Mysore University library web page Gate way of e-journals and Databases Screen shot



g. Web portal

Web portal flow chart



A web portal is most often one specially-designed Web page at a website which brings information together from diverse sources in a uniform way. Usually, each information source gets its dedicated area on the page for displaying information. The user can configure which ones to display web page information.

A web portal is most often one specially-designed Web page at a website which brings information together from diverse sources in a uniform way. Usually, each information source gets its dedicated area on the page for displaying information (a portlet). A portal may use a search engine API to permit users to search intranet content as opposed to extranet content by restricting which domains may be searched. Apart from this common search engines feature, web portals may offer other services such as e-mail, news, stock quotes, information from databases and even entertainment content. Portals provide a way for enterprises and organizations to provide a consistent look and feel with access control and procedures for multiple applications and databases, which otherwise would have been different web entities at various URLs. The features available may be restricted by whether access is by an authorized and authenticated user (employee, member) or an anonymous site visitor.

7. Consortia:

Consortia is group made up of two or more individuals, companies or governments that work together toward achieving a chosen objective. Each entity within the consortium is only responsible to the group in respect to the obligations that are set out in the consortium's contract. Therefore, every entity that is under the consortium remains independent in his or her normal business operations and has no say over another member's operations that are not related to the consortium. UGC consortia one of the Indian universities share the information UGC consortia. Around 419 universities are benefited and share the resources. Like E-Books, Journals, other resources.

UGC Infonet Digital Library Consortia Screen Shot

8. E-books:

Electronic book is a book-length publication in digital form, consisting of text, images, or both, readable on computers or other electronic devices. Although sometimes defined as "an electronic version of a printed book and many e-books exist without any printed equivalent. Commercially produced and sold e-books are usually intended to be read on dedicated e-book readers, however, almost any sophisticated electronic device that features a controllable viewing screen, including computers, many mobile phones, and all smart phones can also be used to read e-books.

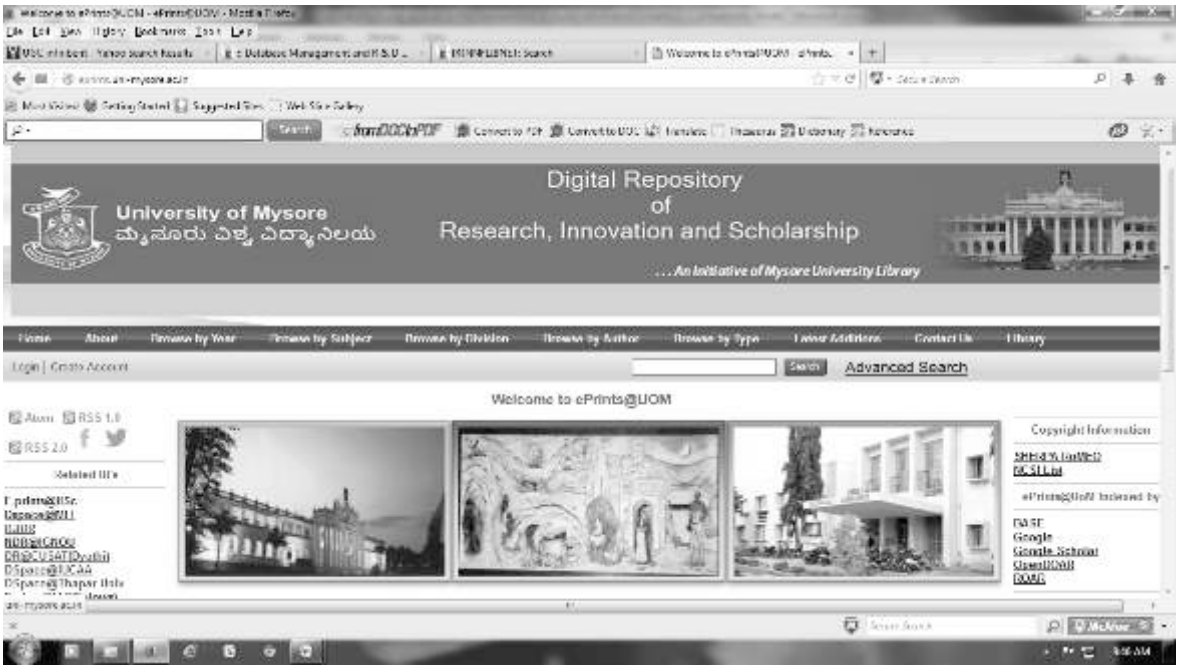
9. Institution Repository:

Institutional repository is an online archive for collecting, preserving, and disseminating digital copies of the intellectual output of an institution, particularly a research institution. For a university, this includes materials such as academic journal articles, both before (preprints) and after (post prints) undergoing peer review, as well as digital versions of theses and dissertations. It might also include other digital assets generated by academics, such as administrative documents, course notes, or learning objects. Deposit of material in an institutional repository is sometimes mandated by that institution.

Some of the main objectives for having an institutional repository are to provide open access to institutional research output by self-archiving it, to create global visibility for an institution's scholarly research, and to store and preserve other institutional digital assets, including unpublished or otherwise easily lost ("grey") literature such as theses or technical reports.

In this view of the above concept Mysore University library very recently start the Digital repository portal and more than 9000 documents are uploaded in Mysore University Digital Repository web portal using E- print open source software.

Screen Shot of Mysore University Institutional repository E-print Screen



10. Digitization of the library collection:

The Library devotes resources to the development, preservation and digitization of special collections, such as dissertations, research and thesis and other rare documents. Mysore University planned to digitalize the good old collection of Mysore, Mysore Princely state documents and other valuable records.

11. Cloud hosting:

Cloud computing is a new concept. The word cloud phrase used to describe a variety of computing concepts that involve a large number of computers connected through a real-time communication network such as the Internet. In science, cloud computing is a synonym for distributed computing over a network, and means the ability to run a program or application on many connected computers at the same time.

The phrase also more commonly used & refers to network-based services, which appear to be provided by real server hardware, and are in fact served up by virtual hardware, simulated by software running on one or more real machines. Such virtual servers do not physically exist and can therefore be moved around and scaled up or down on the fly without affecting the end user, somewhat like a cloud.

In common usage, the term "the cloud" is essentially a metaphor for the Internet. Cloud working remotely through the Internet. The end-users don't have the server they can simply log on to the network without installing anything. The major models of cloud computing service are known as software as a service, platform as a service, and infrastructure as a service. These cloud services may be offered in a public, private or hybrid network. Google, Amazon, Salesforce, and Microsoft Azure are some well-known cloud vendors.

12. Disadvantages of the Digital Library:

The computer viruses, lack of standardization for digitized information, quick degrading properties of digitized material, different display standard of digital product and its associated problem, health hazard nature of the radiation from monitor etc. makes digital libraries at times handicap.

12.1. Copyright: - Digitization violates the copy right law as the thought content of one author can be freely transfer by other without his acknowledgement. So one difficulty to overcome for digital libraries is the way to distribute information. How does a digital library distribute information and who will while protecting the copyright of the author.

12.2 Speed of access: - As more and more computer are connected to the Internet its speed of access reasonably decreasing. If new technology will not evolve to solve the problem then in near future Internet will be full of error messages.

12.3 Initial cost is high: - The infrastructure cost of digital library i.e. the cost of hardware, software; leasing communication circuit is generally very high.

12.4 Band width: - Digital library will need high band for transfer of multimedia resources

but the band width is decreasing day by day due to its over utilization.

12.5 Efficiency: - With the much larger volume of digital information, finding the right material for a specific task becomes increasingly difficult.

13. Conclusion:

The present services are main intention is readers satisfaction and user beneficiary works. The back end work is very difficult for librarians because the database creation, library automation, web page design, digital collection development, OPAC, E- Library, E-Books, Consortia, Web Hosting, Institutional repository, and other online works are manage by librarian it very difficult but it is needs and his dedication and hard work will change the atmosphere of library. What are the changes are made in the library it all benefited to user community or information searchers. Digital library in Indian point of view it is going slowly but day to day it will grow. Basic infrastructure and support of computer expert, Copy right problem and financial support will enrich the librarian function and they will build the digital library. Totally it is save the readers time so Dr. S. R Ranganathans law is very much relevant to current activity.

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