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ESSENTIALITY OF AUTOMATION FOR LIBRARY

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ABSTRACT

Resource discovery is done by the library automation. Applications of resource discovery are adapted by the libraries in the institutes of higher education so adaptation of the changes is for the progress our future. Libraries are at the front line like an entire automated medium of hi-tech grounds for the discovery of resources, with the applications of the computers. The model of discovery system faces a collective set up, where content combination is denoted with combined index replication and searching for easy navigation and retrieval. Library's all collections required to be searched and represented in one result. Library catalogues are changed. Automated library is playing an urgent role to complete the research easily and timely by easy searching of the required material without any delay in searching.

KEYWORDS *Resource discovery, Application Software, Discovery tools, Unified resource discovery , Library automation,*

INTRODUCTION

The evolution of the society is responsible for the developmental changes in the information technology in research, learning, and education. So adaptation of the changes is for the progress our future. Libraries are at the front line like an entire automated medium of hi-tech grounds for the discovery of resources, with the applications of the computers. The model of discovery system faces a collective set up, where content combination is denoted with combined index replication and searching for easy navigation and retrieval. Library's all collections required to be searched and represented in one result. Library catalogues are changed. Discovery of the resources is users' cross-domain needs of information for appropriate resources. According to services and value the functions of libraries are increasing. Modern services are stressed than internet in competition. The mobile web is important for library services as SMS, mobile OPAC, and mobile applications by smart phone market and mobile internet in users. The web, recommender systems and search agents are important for information services. Search engines are essential for researchers. A number of challenges are against the librarians so library services are reinvented in today's digital information ecosystem

ELEMENTS OF LIBRARY AUTOMATION

Models of information architecture are adapting new technological tools for electronic resources. OCLC, EBSCO and ProQuest are the library automation industry players to explore cloud-based applications as well as cooperative intelligence for managing digital resources. "A number of modern technologies are helping the organizations to automate the various activities done by the organizations Application software

play an important role to complete the daily routine tasks in various organizations like banks, libraries etc." Riaz (1992, p.37) says that – A computer application software is a user program. It is a set of instructions which tells the computer how to execute a specific task on the particular set of data provided. Application software for libraries contains a sequence of instructions designed to perform tasks such as preparing list of defaulters, list of outstanding book order, list of journals received and numerous other specific tasks done in library operation." Library information search is for resource discovery target, where resources are more unified, combined and indexed along add-ons and applications to retrieve the resources electronically. Now searching the resources is to find them through faceted browsing or combined approaches. Now in library automation data, communities, as well as services are increased by a number of intelligent applications and many activities to produce a system with modules dealing with each other. Web-based library services are important for modern libraries. User behavior is changing to e-books, mobile accessibility, and electronic tablets with lesser interactions by face-to-face. Finding exact and relevant resources is complex. The internet gives the availability of information, but complications are found for locating accurate and precise results for research." Cataloguing future is debatable, and library resources are digital, the library control will be collaborative.

Information seekers have changed their thinking due to digital information. Library management systems are developed and automated by cultural organizations for example in 1960s libraries involved mechanization activities for housekeeping operations. Initially, library automation was made for in-house operations as well as making machine-readable cataloguing details. In the 1990s online services were made by internet and internet opened up opportunities for libraries to provide web-based services. Google acquired search technology market worldwide. Google search experience was unlike libraries that select, acquire and organize information systematically. Google is cited as main source for research activities. Search engines don't fully satisfy the researcher who is seeking reliable and impartial scholarly content, which is generally available at a cost.

Platforms of open content systems are without data hostage, but motivate contributive, collaborative and open content scenario .initially library automation, as proprietary systems dominated, standards were needed as other means for data exchange and interoperability weren't available. Today's Application Programming Interfaces (APIs), web services, and open source systems make it possible a level of openness far beyond what was feasible in earlier times.

CHALLENGES IN LIBRARY AUTOMATION

Libraries face amazing challenges within their organizations. Libraries are in cooperation with one another, and also in touch with their patrons. We require to work toward higher degrees of openness. The open-source dependent applications, measurable metadata, and discovery products are changing the library automation into resource discovery, Library users' hopes are beyond searching bibliographic data and taking characters on library catalogues to browse, navigate and share, and becoming a part of the resource discovery by participating in the reviewing, suggesting, tagging and creating lists, etc., on which the basics of Library 2.0 are based. This phenomenon in library automation is stressed for its dangerous promise in the way that users search library catalogues and library web portals. Web interfaces are required by libraries simply and intuitively with search results to involve users into library resource discovery. Discovery interfaces with combined library solutions have benefits, such as: web- OPACs; Web 2.0 with search engines on library websites searching library resources using search engine optimization (SEO) techniques; self services like export, print, save, e-mail, and mail delivery alerts, etc.; one-stop resource portals with meta-searching, federated search and browsing; mobile features and content having text alerts, SMS reference, library applications for mobile phones, mobile OPACs, etc.; multilingual, and federated and advanced search ; and web-scale discovery, digital assets management services. "Kadiri (2004) also asserted that library automation will address the problem of manual processing of materials overcoming the problems of filling and typing errors, retrieval errors, and the time involved. He further noted that the advantages of library automation include less drudgery, easy generation of records, space conservation, improvement of information services, and easy retrievals."Applications developed by committers, community developers, vendors and academic library implementations have resource discovery different modules of library catalogues and resources. Federation search as well as discovery tools are important for search. The LibraryTechnology.org website lists various discovery products merged

with integrated library management systems and discovery interfaces resource

LIBRARY AUTOMATION IN INDIA

"Agha (1986) library automation has been a subject of attention since the mid-1970s."

In the last decades of 20th century in India, library automation was started In 1965 computers were used first time for libraries at the Indian National Scientific Documentation Centre (INSDOC), now National Institute of Science Communication and Information Resources (NISCAIR1980) at New Delhi CDS-ISIS software package that was UNESCO-supported was first used under the National Information System for Science and Technology project, In 1988 DESIDOC developed the Defense Library Management System and the Catman software was developed by the Indian National Scientific Documentation Centre and implemented at the National Science Library Special and technical libraries of federal R&D institutions like CSIR, ICMR, ICAR and DRDO followed the suit, and this led to the growth of library automation in specialist libraries Public libraries like BHEL and SAIL joined the bandwagon growth in higher education in engineering, medicine, education and social sciences, Indian academic libraries have taken the library automation far and wide. Although India has become a leading country in the information technology sector in recent times, the culture and education sectors have not been prioritized by proactive policies or effective programs. Spending by government on information services and the library sector is remaining, especially in state public library departments. No developments affected library automation and library services like inter-library loans, resource sharing and networking of libraries not having materialized on a large scale for millions of users, hindering advocacy and the promotion of libraries as public access avenues for education, literacy and intellectual engagement. Library automation is still in its budding stages, and the discovery services is yet to catch up, library automation has increased along the growth of the information technology. The culture sector has not powered its cyber-infrastructure, so enhancements, financing and development could be streamlined. To develop consortia and networking of libraries to interdisciplinary and mutual information access, The Information Library Network (INFLIBNET) is a national inter-university centre for networking and resource sharing that was founded in 1988.

The federal cyber-infrastructure National Knowledge Network project is aimed at connecting all research and higher education institutions on a high-speed network for research and resources sharing, in 2008. Software development for libraries is in its embryonic stages. The National Informatics Centre automates public libraries with the e-Granthalaya library automation software. library automation to resource discovery applications is handicapped by the factors listed below: lack of willingness, attitude and indifference of library staff with little training and development avenues and exposure; non-supportive behavior of management and administration; poor government funding for libraries, inordinate delays, and lack of no coordination by both federal and state governments; and no strong leadership, authority, professional engagement for advocacy and community ignorance.

SEARCHING THE RESOURCES

Although many indigenous private library software like Libsys, Libsoft, Libgenie and a host of software developed by public sector organizations – e.g. Granthalaya, Sanjay and Maitreyi – have originated in India, needs-based development and library community consultation to customize the software to the needs of Indian libraries are not conducive with a lack of platforms for programming, co-operation, and community networking opportunities. Competition in the library automation industry is gaining momentum as more and more vendors from other countries such as Alice for Windows, VTLS, Techlib Plus and the open-source software Koha have tested the waters in India. An example of NewGenLib search results interface ; this could be the first instance of its kind of next-generation catalogue in India.. The amount of time being spent on administrative tasks is reduced and the speed of in-house library workflows has been streamlined, but more importantly discovery layers are being with ILMS. Many libraries are working towards the use of open-source based, integrated library solutions. Koha as an integrated library system is widely known for its features, such as Indic scripts supporting multilingual collections, Unicode compliance, tagging, and creating lists suitable for Indian libraries. Though the feasibility of resource discovery platforms are being investigated around the world, it is still alien to the

Indian library automation industry, as there are only a few sporadic trail access instances and implementation is sparse in India. Academic libraries are slowly taking up library automation, and the SOUL library automation software is being used by government -funded institutions

LEVEL OF LIBRARY AUTOMATION

The information technology revolutionizing library services, the training and development of personnel is a challenging task. Strategizing on human resources development is critically important, which is why organizations should support and encourage their staff to participate actively in associations, since librarians who participate actively are more "marketable", more likely to be promoted, and more likely to succeed in their careers. The features of six web-based library automation systems – i.e. Liberty, Virtua, Libsys, Alice for Windows, NettLib and E-Granthalaya – and ranked them respectively as the best performing ILMSs. Although Koha has become a popular ILMS in India, proprietary software is also gaining considerable prominence. For example, state public library projects such as the Connemara Public Library (see http://connemara. tnopac.gov.in/) is implemented on Koha and West Bengal Public Libraries Network was developed onLibsys, a proprietary ILMS (see http://libsys.wbpublibnet.gov. in:8080/sclopac/GwtOPAC/GwtOPAC.html). The State Central Library Catalogue of Tamil Nadu, hosted at Connemara Public Library, and its advanced search features and filtering search options are shown in Figure 4. In India the both open source software and the proprietary ILMS markets are thriving, and carving a niche in the expanding higher education sector. Although generation gaps and the perception of library staff towards computing technologies have been major hindrances, a lack of government support for libraries has side-lined the development of library automation to a great extent. "Chandra (1999) and Tamuno and Ojedokun (1997) observed that once a library system is automated there are some intangible benefits that staff and students gain such as computer literacy, introduction of new services, and internet and online database searches." As far as library automation in India is concerned, growth has been witnessed across the academic sector. But the next phase in the transition – i.e. the resource discovery approach – is not on the yet on the menu due to a lack of local initiatives, unmet organizational infrastructure needs and a lack of unstinting support from all stakeholders. As libraries are reeling under the perils of non-autonomy, the apathy of their administrations and the pall of financial woes, it is difficult to adopt next-generation catalogues and resource discovery tools with no critical investments. Although new-breed, path-breaking resource discovery technologies are of paramount importance for libraries, the utilities of the discovery system can be projected to be low in view of the prevailing circumstances in India, which can be largely ascribed to a lack of initiatives, a lack of programs reviving the cultural sector, and a lack of fully-fledged support from the government for libraries. If all stakeholders engage, advocate and strive to raise the profile of libraries the days are not far off where we will see the libraries as better places for learning, education and resource discovery."Onohwakpor and Anre(1986) observed, software selection decisions in libraries is based on reports from other colleagues through conferences. "Just-in-time technologies using the pre-harvested, pre-massaged and pre-indexed approach of search engines to meet changing user expectations are the current challenge for librarians and their vendors (Walker, 2009). According to a report by the Research Information Network (2008) on building research tools from the physical artifacts and resources of museums, "technological developments offer opportunities for cross searching, for making records findable by Google and other search engines, for linking to associated documentation, and for integrating museum catalogues with other resources, such as library catalogues. In order to realize the potential of the beneficial changes that are now being offered by technological and related developments, there needs to be a change [...] to encourage more openness, more sharing and more collaboration". argued that "all of a university's theses, faculty publications, student projects, institution research, gray literature, and more can and is being placed online for usersto access, but if that information is not easily retrievable, the benefit of having all of that information together is lost". Even when library automation operations were commercialized in the late twentieth century, open source applications came as a revolution in the library automation marketplace both in terms of cost, economy and customization. Alongside scaling up the cyber-infrastructure for libraries, library personnel need to project libraries not only in user services but also in the planning of web services to raise libraries' profile and to keep up in the information services delivery race. As the internet is moving towards containing more open content, striving for neutrality and freedom, and breaking down market

Libraries need inherent and cohesive interfaces with enhanced search capabilities that ensure precision, predictability, and scope that are in tune with users' demands. In his comparison, Breeding (2008b) described library automation in its current conditions to be siloed, closed, monolithic and brittle against the SOA architecture and its enhancements, which are shared services, collaborative, interoperable and integrated.

However, the various challenges are still elusive, and discovery as academic libraries are building up more digital collections nowadays, the situation gets complex. As Dempsey (2003) puts it, "the digital environment is one that lacks consistency; it is as if each book coming into the library was a different shape and had to be read in a different way". Moreover, advanced features like the semantic digital library, linked data, folksonomies, faceted infrastructure and Web 2.0 can be envisaged for semantic web services if the potentialities of web-based library services, metadata re-use, and open content development are harnessed. Rescaling the library infrastructure with state-of-the-art facilities, web discovery layers and migrating data to discoverability undoubtedly have become the needs of the hour. The emerging information ecosystem can be characterized by the challenges outlined below in developing unified discovery platforms for sustainability. Local indexing and custom search engines play an important role in library automation to help the library users.

METADATA AND CATALOGUING IN COMING TIME

In the rise of resource discovery phenomenon, the need for quality and consistency of Bibliographic records have been widely questioned (Bade, 2008). The future of bibliographic records and cataloguing is debatable given the evolving metadata schemas and standards for bibliographic control. Newer universal cataloguing standards and networking protocols for harvestable records, subject access points, indexing fields in catalogues have to be deliberated for their universal acceptance and consensus to keep the momentum up for developing database models, sharable structures and metadata frameworks. As the granularity of metadata is examined for semantics, its applications for the "semantic web" are realizable with research in the frontiers of linked data, knowledge organization systems and the development of ontologism. Even existing metadata standards and schemes like Machine Readable Cataloguing (MARC), the Metadata Encoding and Transmission Standard (METS) and the Metadata Object Description Schema (MODS) are paving the way for improved cataloguing standards and models. Resource Description and Access (RDA), standardized international authority files, controlled vocabularies and resource description framework (RDF) models for resource discovery are envisaged in that direction. OCLC's Virtual International Authority File and FAST Linked Data being developed jointly by the Library of Congress and OCLC are ongoing research projects. Web-scale discovery services for unified access and interoperability are useful in library automation There are different vendor products available in the market, including OCLC's WorldCat, ProQuest's Summon, EBSCO's EBSCO Discovery Services, and Ex Libris's Primo.

TOOLS DEVELOPMENT

As the web presence of libraries grows into a robust, sophisticated mechanism for resource discovery, full text searching is becoming necessary. Unfortunately the OPACs of many software packages provide advanced search features of retrieving bibliographic records, and none of them are helpful in full-text search.

Software packages, i.e. Greenstone Digital Library Software (GSDL) and Fedora Generic Search Service (FGSS), both independently. As information resources are diversified, as in aggregations as e-journals, e-books, and digital collections, it is essential to facilitate full-text search on library catalogues. As Web 2.0 and Library 2.0 principles widen the concept of user-centric approach, it is increasingly important to equip library systems to be interactive enough for the users to tag, create lists, and share data on library portals using

SUMMING UP

A number of new technologies are essential to make a library automated. Computer hardware as well as software is having an important role for making library automation. High potential discoveries like web-

based library services are available for automation of libraries. The library automation is essential for resource discovery easily for users. Contextual, convenient and relevant resources are searched on library portals. The correct resources finding through the collection of information resources is a required job. The diffusion and technological adaptation differ in different countries. The library automation industry's development is sluggish and slack in India. India, as a developing economy, has a potential to change the library activities and produce resource discovery with change. Automated library is playing an urgent role to complete the research easily and timely by easy searching of the required material without any delay in searching.

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