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Library Automation at University of Moratuwa, Sri Lanka

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Abstract

Today, many service oriented organizations like libraries have focused on enhancing their customer service strategies in collaboration with modern developments in technology. Therefore, introduction and use of new technology is becoming a common part in modern libraries. This technology introductions to, the libraries have made complete change in all traditional library processes and services. Not only the technology has affected to make impressive improvements in library services but also it has streamlined the library operations, enhancing image of library and librarians. Introducing and promoting of new library services, creating a social learning environment within the library etc. were some of the aspects in library automation projects.

The purpose of this paper is to present experiences, problems and solutions experienced during the automation project at University of Moratuwa library. This cover introduction of new integrated library system, migration from one system to another and the technical perspectives of the process of library automation. Automation was introduced to Sri Lankan university libraries in 1987 as a result of proposal provided to University Grant Commission (UGC). University of Moratuwa library started its automation entering catalogue data using CDS/ ISIS in 1981 and in year 2000, Libsys software package was installed as a complete integrated library system.

Key Words : *Library automation, integrated library management systems, University Libraries, Sri Lanka*

Introduction

Information revolution could be divided into three stages. Developing reading and writing skills as a medium of communication among the humans could be considered as the first stage of the information revolution. Invention of printing press made a huge impact on human's behavior regarding their information needs. This was the second stage of the information revolution. Applying computer technology for handing the information in 1950s could be considered as the third stage of the information revolution. Since then, the revolution has continued with technological developments in the field of information technology (IT), with a massive development in all areas on information services.

New information is added in rapid rate to fulfill the information needs of the information driven society. When catering to the information needs of present library users, libraries have to overcome many challenges with their traditional library approaches. Due to the large amount of information crated and the rapid development in technology, libraries were forced to find new solutions in satisfying the information needs of modernized and highly technologically equipped library user (Punchihewa, 2009).

Today, the computers have become essential equipment in the field of librarianship and information services due to its efficient and accurate performance and the capability in handing large volume of documents. Malik (1996) has explained how the computer has proved its success in the fields of library acquisition, cataloguing, classification, circulation, serials control, and information storage and retrieval activities. With the help of the computer, many new services such as SDI and current contents services have been introduced by the libraries.

Because of the modern information needs of the patrons, library automation has become a burning issue among librarians throughout the world. According to Daniel (1989), library automation could be defined as the "application of automatic and semi-automatic data processing machines to perform library functions such as acquisitions, circulation, cataloguing, reference service, and serials control". In the beginning, creating machine readable cataloging records and using for in-house operations were the main objectives of the library automation. In 1990s with the birth of Internet, libraries were able to provide many web based services through their library automation projects (Badu & Krishanmurth, 2013)

History of Library Automation

Library Automation around the world has a very short history. As highlighted by Malik (1996), first library automation project was started in 1950s and 1960s in America and Europe. Online delivery of Machine Readable Catalogues (MARC) by Ohio College Library Center (now OCLC, Inc.) in 1972 was the first attempt of using true networks as a basic part of operational library automation in United State of America (Richmand, 1981). According to Manson (1995) for the first time in United Kingdom, library patrons had the opportunity to query the online catalogue through dedicated online library system running on minicomputers in 1980s at library University of Hull. This situation was very similar in the South Asian countries like India, Pakistan and Sri Lanka. With the introduction of mini-computers during the late 1970s and microcomputers later in the 1980s, many information centers and libraries started to use computers for their library activities in India. Library automation of India accelerated the momentum in 1980s when microcomputers were introduced to the Indian market (Gulati, 2004) Introduction of library automation in Pakistan was started in 1980s and number of libraries were computerized during or after 1987 (Malik, 1996).

As mentioned by Talagala and Gamage (2003), Sri Lanka Scientific and Technical Information Centre (SLSTIC) which is a division of the National Science Foundation (NSF) started to use a computer for bibliographic data processing for the first time in Sri Lanka in 1983 and this was the first computer installed in a Sri Lankan Library. In Sri Lankan university libraries the automation process began according to the decisions taken at the seminar on 'Library Management' on 2nd May 1987. Based on this decision, Librarian University of Peradeniya submitted a proposal on 'computerized of University Libraries In Sri Lanka' to University Grants Commission (UGC) through Inter University Committee of Librarians (IUCL). As a result of this proposal, a single computer was offered to each university library by the UGC to start the automation at the libraries. University libraries started to computerized their catalogues using CDS/ ISIS (computerized Documentation Service/ Integrated Set of Information Systems), a free software package developed and distributed by UNESCO (United Nations Educational, Scientific and Cultural Organization) (Gamage, 2014; Jayasuriya, 2011; Jayatissa, 2014).

Through CDS/ ISIS was not an Integrated Library System (ILS), it was heavily used by many libraries. Mr. Upali Yapa one of the prestigious librarians in Sri Lanka,

developed two library software's called 'Purna' and 'Taxila' with combining the member data and bibliographic data created by CDS/ ISIS for general libraries and school libraries respectively. According to Yapa (2005) (cited in Gamage, 2014), eighty five libraries were using 'Pauna' in 2005.

By year 2000, Sri Lanka University libraries realized that the functions offered by CDS/ ISIS software were not matching the developing needs of university libraries. Therefore many libraries conducted different projects and surveys to find out a proper Integrated Library System (ILS) which suits for their library demands. As a result of this, two integrated library systems were introduced to Sri Lankan universities. 'Libsys' integrated library system was installed initially in University of Moratuwa followed by University of Jaffna and University of Kelaniya. Another integrated library system called 'Alice for Windows' was used by University of Colombo, University of Peradeniya, University of Sri Jayawardanapura and Open University of Sri Lanka.

As the cost of these commercialized integrated library system was very much high, University of Ruhuna conducted a project to customize the open source library management system. Mr. Nimal Hettiarachchi, Senior Assistant Librarian at University of Ruhunu was the pioneer of this project and he customized New Zealand based Koha open source integrated library system. It was named as 'Isuru' (Gamage, 2014)

Library automation at University of Moratuwa

University of Moratuwa (UoM) is the Technology University in Sri Lanka. It has three faculties namely, architecture, Engineering and Information Technology and the Institute of Technology. Presently, it has a staff of 1066 and students 9160 as postgraduate (PG), undergraduate (UG) and National Diploma in Technology (NDT). University has only the main library and no branch libraries. Library being the heart of the University is bound to serve its whole community providing access to its materials. Services and facilities.

Since the inception of the university in 1972, the library functions such as issues, returns, reservations overdue fines, lost books, reminders, registration etc were handled manually. Pace of work was smooth as library catered to a less population, less demands and time was not an issue.

1. Initiation

Yet with the advent of computer, Internet access and globalization, library had to move with the advancing technology. In order to face the new challenges, the decision made at Library Management Committee in the University Grant Commission (UGC) in 1987, paved the way to a new era (Gamage, 2014). As a result of this historical decision, University of Moratuwa library received one ARC proturbo 286 personal computer in 1991 and started entering catalogue data by using CDS/ ISIS software.

2. Progress

With the receipt of another two personal computer in 1997, data entering was quickened and by end of 1998, 30000 entries were entered. In the same year, with the assistance and direction of Prof. Gihan Dias and a team from Department of Computer Science, library catalogue was linked to the University of Moratuwa website. In 1998, university received a grant from Asian Development Bank (ADB) funded by Science and Technology Personnel Development Project. The then Dean of Engineering Faculty, Prof. L. L. Rathnayake decided to allocate Rs. two million from that fund to the library and in 1999, it was decided to utilize this fund for automating the library functions.

The only integrated library management system (LIS) available during this period was 'Libsys' which was development by Libsys Ltd., India and was successfully running at British Council and Central Bank of Sri Lanka. As it was not used in any of the universities in Sri Lanka, it had to be evaluated to find the suitability for a university library. Thus, many Technical Committees (TEC) were formed at different stages to evaluate the suitability and almost one year was spent for negotiations and recommendations for making the payment through ADB funds. Meanwhile Libsys software package was installed at Library University of Moratuwa and it was planned to test the system for one year before the commencement of actual transactions.

Libsys was developed based on client-server architecture and its application software runs on client computer and the database is located in a server. Graphical user friendly Libsys clients' interface could be run on windows platform. Graphical interface could be configured in two ways as working-interface for the library staff

and as an Online Public Access Catalogue (OPAC). Libsys has seven integrated modules. Acquisitions, Cataloguing, Circulation, Serial Control, Article Indexing, OPAC and System Set-up are modules that exist in Libsys.

3. Way Forward

One of the former Deans of Engineering Faculty in the University of Moratuwa, Prof. L. L. Ratnayake was appointed as Vice Chairman of UGC and Chairman in Standing Committee on Library and Information Science (SCOLIS) during the period 2002- 2006. In the same manner he showed interest in allocating funds through ADB project to promote Moratuwa library's automation system, his generous thoughts and consideration to improve IT facilities in all the university libraries, resulted in providing Rs. 2-3 million per university each year. University of Moratwa library decided to use this fund to install electronic security gates and move to use RFID (Radio-Frequency Identification) technology. In the year 2008, library opened its wings in introducing 'Tagsys', a software compatible for RFID and became the first university in Sri Lanka to implement the same.

4. Libsys Management, Assistance and problems Encountered

a. Maintenance fee

Since Libsys is commercial software, library has to pay an annual fee $ 3600 for which they provide new versions, problem solving through e mail, team viewer, annual visits, training on new updates etc. As the system is now utilized without any problem for many years, library stopped paying the fee after 2008. Though the maintenance fee is not made, Libsys still continue to provide assistance on any urgent matter as well as data conversions.

b. Updates in the system

Since the installation in 2000, Libsys has been providing annual software revisions to upgrade the system, with new features. As this was a customer oriented software, Updates affected certain modules and need another system patches to update it. Since Library had to depend on the supplier, time factor was a problem.

c. New requirements

Some functions available in the system were not used but library required new functions to cater the needs of the university community. Such requests to Libsys were attended lately or never.

d. Training

After the installation of Libsys, the company held two week training program for all library staff on all modules. In order to set up the system, Librarian and one Senior Assistant Librarian had the opportunity to train in Libsys office in New Delhi funded by ADB. This helped to commence work in all modules without any delay. Along with this, fourteen more library assistants participated in the training in India funded by ADB. This exposure made them available to Libsys modules better and faster than earlier.

e. Present and Future

Presently with the assistance provided by Libsys Corporation, the system is running smoothly. No updates have been installed since 2008 but company has assisted as and when required for any shortcoming in the system. Library discussed obtaining web based Libsys 7 with advanced features but library was not satisfied with their offer and was expensive as well.

Since library wished to move ahead with software which includes more facilities compatible to present developments in technology, library studied that Open Source (OS) was the best option and most suitable software to fulfill the present needs of the library. Though Libsys and Alice for Windows were installed in 3 and 5 universities respectively, other six universities have installed 'Koha'. University of Ruhuna being the pioneer. Considering the zero budget cost for installation and maintenance and the impressive developing features of Koha such a s integration of the powerful Zebra indexing engine, strong patron management and working as a complete web based solution etc., University of Moratuwa also decided to adopt open source Koha software in year 2014.

Moratuwa team comprises of three Senior Assistant Librarians who are sectional heads of library activities and they are contributing tremendously to finalize the installation of Koha by mid April, 2015. Several meetings and discussions are being held with Library Assistants and daily problems are attended by them. It is worth mentioning that they are not given any training on this software but are self-learning as they need to provide solutions for the practical issues that are raised by the library staff when transferring from Libsys to Koha. There would be trial periods where both software need to run parallelly. It is a huge task that lay in front of them and cooperation and dedication of the whole staff expected to commence the transactions with Koha library management system.

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