

Planning and Implementation of Libsys7 and its Comparison with Sawera :An Inhouse Software

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Abstract- *The primary objective of any library is to serve their users efficiently, effectively and in a time saving manner. Since decades, libraries have been trying to adopt new technologies to keep their patrons and themselves up-to-date. This basic necessity can be fulfilled primarily by mechanizing the routine library processes or housekeeping operations by library automation which not only ensures more productive use of library staff but also gives users, the information they need, quickly and efficiently through online public access catalog (OPAC) instead of going physically to the library and searching the catalogues to find their requisite information. Further, user experience can be enhanced by providing them an interface to get all the required information related to library at one place and also demand books and request research articles online without being physically visiting the library. This paper aims to describe the planning and implementation of LibSys7 Library Automation Software in DMSRDE technical library keeping in view the objectives, present status, feasibility and requirement of our users. A comparison with the existing in house library automation software “SAWERA” has also been discussed along with the features and services available in the current automation software.*

Keywords- Library Automation; Library website, LibSys

I. INTRODUCTION

Defence Materials and Stores Research & Development Establishments (DMSRDE) is a premier laboratory of Defence Research and Development Organization (DRDO). It is dedicated towards development of non-metallic materials including light engineering stores and textiles which directly cater to the need of Indian Defence Forces [1]. DMSRDE has a Technical library and information services cell to provide services to scientific fraternity. Technical library is subscribing to leading Journals, Magazines & Books in the area of science and technology and has a huge collection of approximately 45,000 publications in different subject areas. It is one of the best libraries in Kanpur and serves multidisciplinary needs of its users. Its vision is to consistently provide the right information to the right user at the right time and in a right personalized way that meets user's requirement in achieving their objectives pertaining to R & D work.

II. NEED FOR A NEW LIBRARY AUTOMATION SOFTWARE

Libraries are playing an important role especially in research libraries by providing scientists the quick access to up to date, pinpointed and exhaustive information for their research work and thereby contributing to the generation of new knowledge and progress of the country [2]. The 21st century is the age of information science and technology [3]. Due to the development of the computer, and the fast advancement in space communication techniques, the new information and the advanced knowledge are spreading worldwide and penetrating into every part of the world. DMSRDE has soon realize the changes happening in ICT and started adopting the change in its function by developing an in housed Base IV based library automation software ‘SAWERA’ in 1993 to keep pace with the changing environment. Though the software has gone through many changes to keep up to the present requirements but due to the lack of some basic features, a need was felt to have an integrated multi-user library management software (LMS) for increasing operational efficiencies and improving the quality, speed and effectiveness of services. The major drawback with the SAWERA software is lack of user friendliness as the software is dbase IV based and user is not getting ease of use when compared to windows based software. However, a comparative table is given below to show the comparison of the features required to be present in the new software [Table 1].

Table 1: Comparison of features of SAWERA with Modern Library Automation Software

Sl.No.	Features of Library Automation Software (LAS) (Score: 1 presence of service, 0 absence of service)	Features available in House Software 'SAWERA'	Features available in modern LAS
	Core Services		
1.	Acquisition	1	1
2.	Cataloguing	1	1
3.	Circulation	1	1
4.	OPAC	0	1
5.	Serial Control	0	1
6.	Article Indexing	0	1
7.	Retro Conversion	1	1
8.	Standard report/Administration	1	1
9.	Administration of binding	0	1
	Enhanced Services		
1.	Customized Report Generation	1	1
2.	GUI based user interface & Color	0	1
3.	Reservation facility/automatic renewals	0	1
4.	Integrated OPAC & Web browser Access	0	1
5.	Power search Facility (search through ISSN/ISBN, publisher, class no. phrase/Boolean etc)	0	1
6.	Barcode support/RFID Support	0	1
7.	Federated searching for all library holdings	0	1
8.	Alerting service(new books / journal issues)	0	1

We can clearly make out from the above table 1, that most of the advanced features and some core features are lacking in the SAWERA software. All libraries need LMS systems with all functionalities that are compatible to provide convenience and speed in day to day operations of libraries as well as provide high end technology features. Keeping this in view, library officials proposed to purchase a readymade Library Automation Software 'LibSys7' from M/s LibSys Ltd., Gurgaon.

2.1 JUSTIFICATION FOR LIBSYS SOFTWARE:

We have gone through various research articles for comparison of Library Automation software's available in the market [4-6] and selected three best Library Management software that suited our need viz Virtua by M/s VTLs, Virginia, Liberty by M/s Soft Link Asia and LibSys7 by M/s Libsys Ltd., Gurgaon. Proposal from all the three firms has been asked. All the three firms have responded to our query. Though all the software meet our requirement, but Libsys is already being used by [11] DRDO laboratories, IIT, Kanpur, HBTI Kanpur and two Engineering Colleges, Virtua in only one DRDO Lab and Liberty has not serve any DRDO laboratory. If we compare the prices, LibSys is the most economic software. Comparative chart of the prices of software is given below for ready reference. Keeping in view the above facts and the following features Libsys is proposed for procurement. [Table2]Table 2: price comparison of

Library Automation Software	Price Structure
Virtua ILS (5User License)	Rs. 820000.00 (including VAT & other taxes) AMC-15%/pa
Liberty (1 st ,2 nd ,3 rd License)	Rs. 150000.00 each (5% VAT extra) + Rs.25000/0 Data Conversion charges + Rs.5000 (Installation) + Rs.20000/-(Training) AMC-15%/pa
LibSys7	Rs. 385000.00 (5% VAT Extra) AMC-15%/pa

2.2 LIBSYS7 SOFTWARE FEATURES:

LIBSYS team is highly knowledgeable, experienced, committed and believes in complementing robust products with reliable services and support[7]. It has following distinguishable features[8]:

1. A fully automated integrated library system to handle all in-house operations viz acquisitions, cataloguing, circulation, serials etc.
2. User ID /Password controlled access at Function/module level defined by system administrator
3. A browser based administrative interface to monitor the library operation being performed by the staff.
4. An OPAC searchable through Lab website (LAN/Intranet).
5. Provision of providing number of MIS reports related to stock and circulation statistics. Report on circulation

- history of a document, various analytical reports on the movement of documents and their circulation trends.
6. User's feedback and recommendations through OPAC for purchasing new books in library.
 7. E resource management for linking digital files with the titles to provide additional information to the users.
 8. Fully automated circulation system complemented with Barcode/RFID card system to handle issue return.
 9. Interface for generating customized bar coded photo ID cards for members.
 10. Email alert for overdue books
 11. Unicode support for maintaining data in Indian & foreign languages.
 12. Simple interface to generate AACR2 catalogue cards, barcode labels and spine labels.
 13. A fully distributed user services including SDI (Selective Dissemination of Information).
 14. Interface for metadata creation in MARC 21/Dublin core
 15. Z39.50 protocol compliance. Software allows catalogue searching and downloading from z39.50 compliant databases available on internet.
 16. Federated search on local as well as external database for more fruitful results.

MODULES

1. Acquisition
2. Cataloguing
3. Circulation
4. Serial Control
5. Article Indexing
6. Web-OPAC
7. Administration & Reports

M/s LibSys Ltd., Gurgaon gave proposal for both the versions i.e. LAN and Internet version of the software. Despite of having more rich features and services in internet version we have opted for LAN version due to security reasons being a defense laboratory. The software has been installed in late 2013. Presently we have Rack mounted Intel Xeon Quad Core processor with Windows server 2008 operating system and 3 desktop PC for library staff and 5 user terminals for OPAC search in library .

III. RETROSPECTIVE CONVERSION

Retrospective conversion is an important essential activity to create machine readable records and to automate the library function. It is the process of converting existing traditional catalogue into a machine-readable form [9].The libsys7 software has the facility of retro conversion through

importing the data from the old software, but the existing bibliographic data was not having complete bibliographical details and for some thousand books data has been lost so we have decided to start it from scratch and outsourced the data entry work for entry of books in the database. All the data entry operators were library professionals so we have instructed them to directly start work by taking books from the rack itself instead of preparing data sheets for each and every book though all entries were cross examined by our professional library staff. The work of data feeding of approx. 20000 books was completed in a small span of approx 6 months.

Library has also decided to implement barcode system along with automation so as to increase efficiency, achieve accuracy and to make stock verification and circulation process easier[10]. Barcode is simply a pattern of bars and spaces of varying width that represent digits, letters or other punctuation symbols and can be read by a scanner to identify an item or object [11]. All the books have been bar-coded concurrently before putting them back on library shelves. We use barcode scanner at the circulation counter for charging/discharging of documents to save time & make the process mechanize. The reason for why we choose barcode instead of RFID in the current era of technology advancement is more of requirement rather than adopting new technology is that firstly our readers belongs to a section of higher educated Class and responsible enough not to hamper with the books as compared to children in school or college library. Secondly, again the circulation statistics is not as surfeit as compared to school or college library and thirdly of course implementing RFID is a costly affair than barcode. For security purposes we have planned to implement CCTV surveillance system along with EM chips with gate afterwards.

Presently OPAC services are available to users containing database of approx. 22000 records (Fig 1) and new entries are updated regularly in the database. The OPAC is available on Local Area Network of our laboratory so that users can access & search the library database from their desktop and additional five terminals are provided inside technical library to search OPAC.

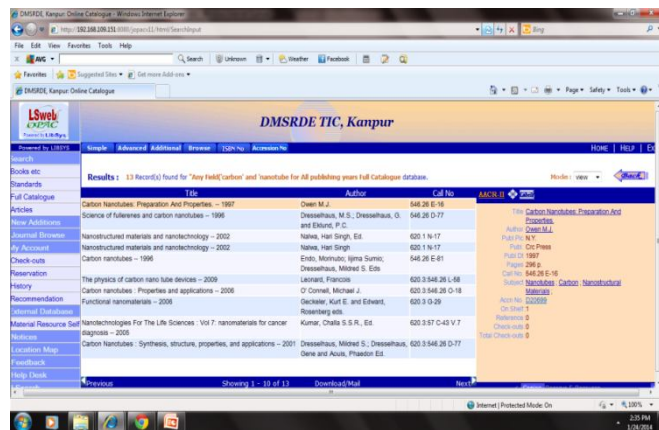


Fig 1: Online Public Access Catalogue of DMSRDE Library

IV. LIBRARY WEBSITE

Meanwhile we felt a need to have a web page of our library to provide a single point access to all library resources. Hence, a library website has been created using html, css and jsp languages incorporating all the requisite information pertaining to library to fulfill our requirement and hosted on our LAN server(Fig 2). Some of the features of library website are as follows:

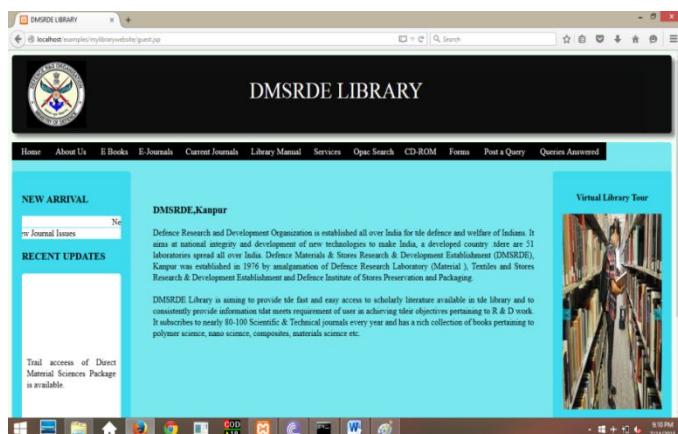


Fig 2: Home Page of DMSRDE Library Website

4.1 ABOUT US

This page describes about our library, library rules, its collection, list of library staff and location index to guide users to different floors of library.

4.2 EBOOKS

This page gives information about books which are available in soft copy and coming along with their print counterpart. CDs can be issued to the user or they can read it in library on demand.

4.3 E-JOURNALS

Approx 500 journals are available online to our laboratory under DRDO E-Journal consortium and this page navigates to link addresses of all online journals containing full text access. The list of titles is also specified where full package has been subscribed by library.

4.4 CURRENT JOURNALS

DMSRDE library subscribes to nearly 60-80 scientific & technical periodicals in print to cater to the need of scientific community especially in the area of materials science, composites, polymer, Chemical Engineering, Textiles etc. The current journal shows the list of journal subscribed in the current year by technical library.

4.5 SERVICES

Library is a service oriented institution and its sole responsibility is to provide services to its users. Technical library is providing circulation, reference, document delivery and photocopy services to its users. National Knowledge network & Internet centre with an internet connectivity of 100 mbps has been set up to provide a central hub for accessing online journals and NPTEL(National Programme on Technology Enhanced Learning) lectures. Brief information is given about all the services.

4.6 OPAC SERACH

This contains direct link to OPAC(Online Public Access Catalogue) of libsys7 to help users search & locate information in library.

4.7 CD-ROM

Technical library ++has maintained a collection of ASTM (American Society of testing & Materials) CDROM. Hard or soft copy has been provided to the users on demand.

4.8 FORMS

Important forms like Library membership form, photocopy form, article request form for document delivery etc are available online so that user can directly fill up the form and submit it to the library. The pdf version is also available for downloading the form[Figure 3].

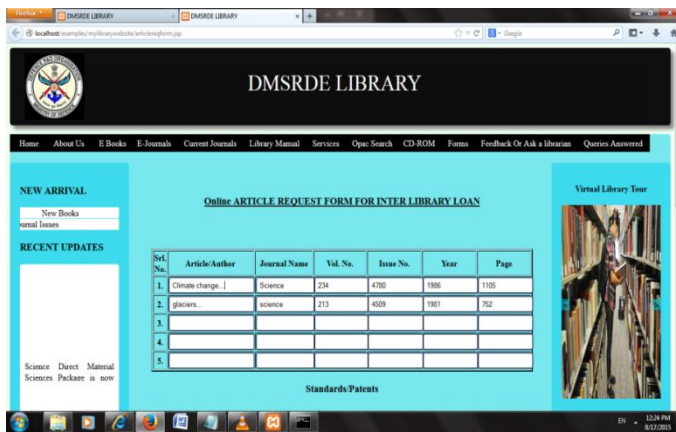


Fig 3: Online article request form for inter library loan in library website

4.9 POST A QUERY & QUERIES ANSWERED

One of the important features of our website is post a query link from where user can ask any queries related to library and its resources and can get reply to the post under queries answered option. [fig4].

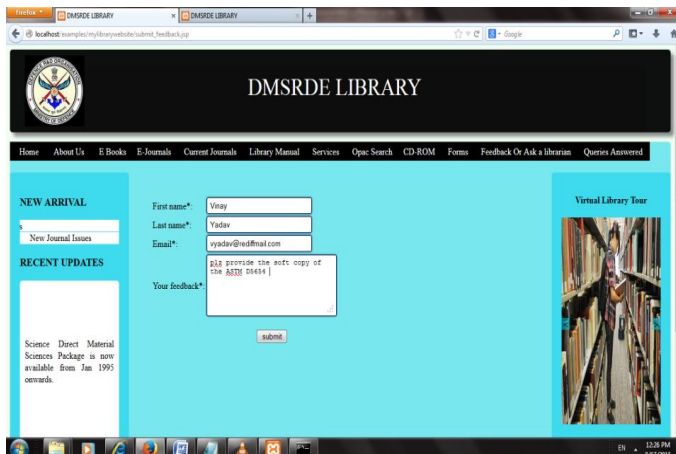


Fig 4: Library website showing Feedback or Ask a Librarian interface

In addition to the above, user can search the location of the book on library racks if class no. is known to them by locate a book link on the home page. In this way we have tried to incorporate all the necessary information on our website to provide a conducive environment to our users though there is always a chance to improve in every field of life.

V. CONCLUSION

Libsys7 software has been successfully installed and implemented. Currently circulation and OPAC services are open to the users with available database. Data updation of rest of the records is under progress and will be made available to users simultaneously. OPAC allows user to

browse and search the entire collection of library by Author, Title, Publisher, Subject, ISBN etc. The status of the book (issued/Shelved) is also displayed in OPAC and reservation for the issued books can be made in advance online. Each user has been provided a password for login into his/her own account so that they can check from their own desktop how many books are issued to them with their due dates. An integrated interface of library collection and services has also been provided to aid users in getting their required information by means of library website. Information has been arranged in very feasible and compatible way in our library website so that user gets ease of access in retrieving relevant information, navigation and browsing. We have also introduced online feedback or ask a librarian service which act as a virtual reference service as user can get the reply on the website itself through queries answered link on the navigation bar. We have planned to provide more user oriented services in the near future to assist the R & D activities of our laboratory.

Technological advancement in our surroundings should be treated as a prospect for innovation in library services and should be willingly adopted. We should groom ourselves by acquiring core competencies and new skills to be able to serve our community in a better way.

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