Library Automation Strategy: A Case Study of the Central Library of Indian Institute of Technology Madras

Dr. Harish Chandra
Librarian
Central Library
Indian Institute of Technology Madras
Chennai– 600 036
e-mail: hchandra@iitm.ac.in
URL: http://www.cenlib.iitm.ac.in

Abstract

The present paper discusses the automation processes and activities currently undertaken at the Central Library of IIT Madras. It further highlights the automation strategy adopted, major automation areas and also outlines the various factors need to be considered by the librarians while formulating automation strategy for their respective libraries. The web based library and information services offered to end users and CD-ROM activities are also described

1. Introduction

IITs are institutions of national importance set up by an act of Parliament. These are considered as the leaders of technological innovation, best trainer of the manpower and promoter of technological revolution in the country. The basic objective of IITs is the enhancement of knowledge through education and research in applied science, engineering, social science and humanities and also serve to the community and nation through the use of their resources both intellectual and material through imparting training to the people.

Their main role is to enhance the country's techno-economic strength. Accordingly IITs have also contributed considerably in the up gradation of engineering education in the country through quality improvement programme and continuing education programme.

The academic programmes, research, development and other professional activities are practically planned and implemented in different IITs with the help of various facilities like laboratory, computer center, workshop, library etc. Library is one of the important central facilities, which directly affects the academic excellence, programmes, research, development, extension and professional activities. In view of this fact, IITs have established full fledged Central Libraries with good number of staff, resources and physical facilities with the objective to make academic programme more useful, visible, successful and of international character through providing various library and information support services.

As we all know that library is an important central facility which has a great potential to provide dynamic and strong support to various programme and activities of IITs. Currently, libraries of IITs are engaged to re-orient and re-design their efforts and policies to provide professional support to meet recent changes and challenges under digital era. In IITs the library products and services are generally automated. Above all, library automation has been recognized as an

integral and essential activity and fortunately getting considerable support at each IITs. As it is experienced that automated systems and procedures are more convenient and conducive to generate and provide satisfactory services to end-users. Desired and related information can be provided to the students, staff, faculty and industries instantly and comprehensively.

2. Automation Strategy

The automation strategy of IITs has been to use the in-house software developed by the faculty of the Department of Computer Science and Engineering as well as Computer Centre. This has been preferred due to the availability of expertise and also for the purpose to face the problem pertaining to software and hardware maintenance efficiently and effectively. The other factor is the large size of the databases available in the libraries of IITs. The same experience has been observed abroad also, for example University of Cambridge, U.K. has also implemented CATS-software, which has been developed at the university.

Keeping in view the above facts, IIT Madras has also adopted the same strategy due to the same reasons. Accordingly, we are currently using the software developed by the Department of Computer Science and Engineering and hardware maintenance support received from the Computer Centre of the Institute. The present

software is used to automate circulation control managing all operations including over dues calculation, issue and return of books, reminder generation, reservation of books, OPAC activities and also having capability to generate various reports for office purpose. Bar-coding of the books and ID Cards has also been integrated with the existing software.

3. Major Automation Activities

In addition to the above mentioned areas, **t**he Central Library has initiated various automation activities. Some of them are listed below**:**

3.1. CD-ROM Networking

Considering the advantages of CD-ROM products over printed and on-line search, the Central Library has initiated to install an integrated 56 drive Meridian-956 CD-ROM network system available for access under LAN.. Currently, the following CD-ROM databases are available for access:

INSPEC: This database is the leading English language abstracting and indexing service covering the world's published literature on all subjects of physics, electronics, electrical engineering, computer science, control and information technology

EI COMPENDEX PLUS: It provides coverage of the works on engineering, electronics, instruments, light and optical technology. The database contains reference to and abstracts from journals, technical reports, books, proceedings.

3 GRANTS DATABASE: It describes grants available from local, federal, international foundations and other funding agencies. Over 90 academic areas are covered. The entry covers full description, qualification, money available, full name, address, phone for sponsoring agencies.

4 CURRENT RESEARCH WORLDWIDE: This database covers around 29,000 research centers from more than 150 countries and approximately 26,000 bibliographical profiles covering R&D in a wide areas of range.

5 FINDEX: It provides good information on every type of industries ranging from consumer goods to health care. It contains more than 13,000 citations with abstracts to publicly available market research reports, studies and surveys

6 ESPACE WORLD: It provides a comprehensive coverage of European, PCT and UK patent applications and granted patents.

7 INPAT: It is an Indian patent database published by INSDOC, New Delhi. It contains information on the patents granted in India from 1972 to December 1997. Users can conduct search on inventor, applicant, keywords, subject, country, patent number, application number, application date, patent title etc.

8 Indian Standards

3.2 CD-Publishing: We have initiated to set up CD-ROM publishing facilities under AR & DB (AIP) project for creating full text CD-ROM database of Ph.D theses submitted at IIT Madras in the area of aerospace engineering. The work has been completed successfully. Currently, we are in the process to provide access to the created database under Intranet with e-payment gateway.

3.3 Total Bar-coding: We have implemented the total bar-coding in our library through in-house efforts. Regarding this, necessary training was provided to the library staff and all necessary hardware and software were procured. We have also digitized the entire photographs of library members and bar-coded membership cards duly laminated have been issued after proper scanning checks. The system is working very satisfactorily. We have saved manpower as well as transactions have become very easy to staff as well as users.

3.4 Interactive Website

3.5 Web Based Services Offered to Users: The Central Library provides various computer based library and information support services. Some of them are listed below:

3.5.1 On-line Document Delivery: The Central Library provides on-line document delivery service for academic purpose only. Special e-mail account libdds@iitm.ac.in has been created for providing document delivery service to institutions. Users can also open an Advanced Account by paying Rs. 3000 for this service. Further to this, the Central Library has also created web form under Internet environment for document delivery service which can be accessed by users at the following link http://www.cenlib.iitm.ac.in/dds.html

3.5.2 Digital Reference Service: The Central Library also provides digital reference service to users based on the resources and facilities

available. A separate <u>Virtual Reference Desk</u> has been created. Users can ask reference queries from the Librarian through the following link http://www.cenlib.iitm.ac.in/ref-desk.html
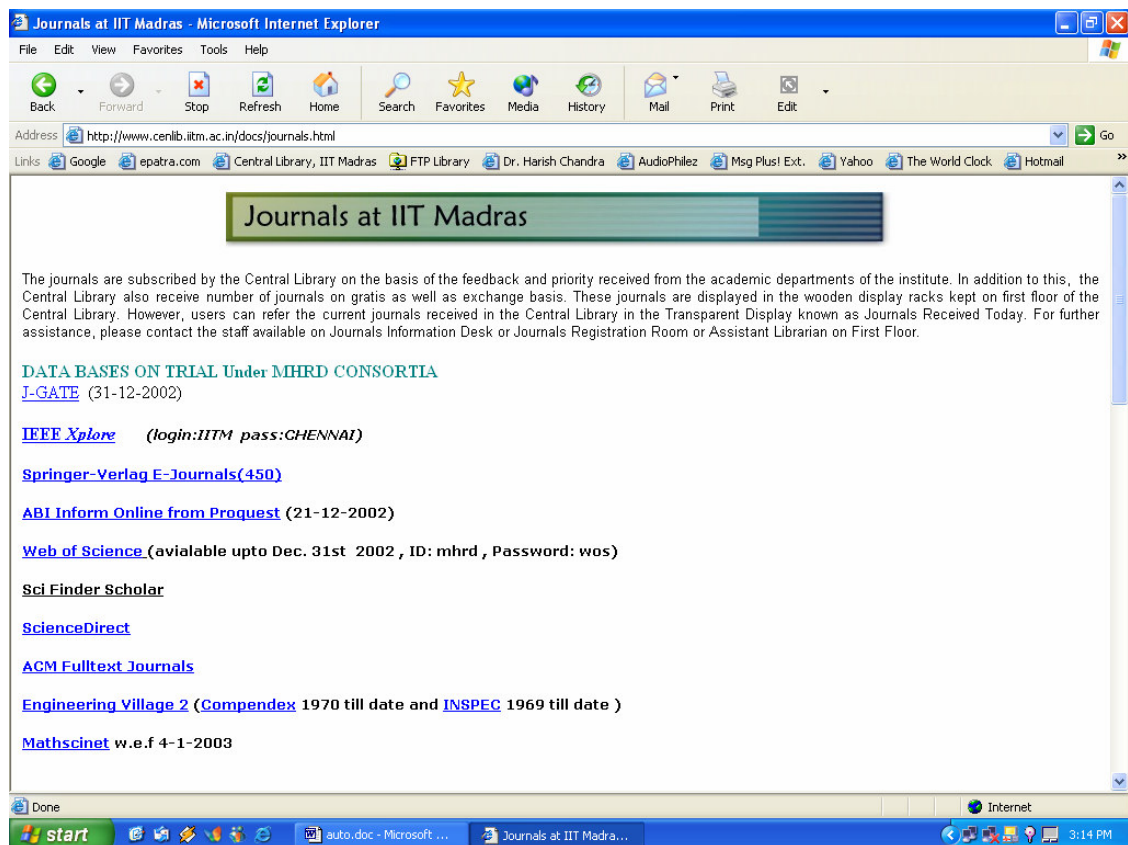
3.5.3 On-line Public Access Catalogue: Users can access books catalogue of the Central Library under Intranet. Initially, we have provided 8 dedicated user terminals for OPAC search activity. We have plan to provide more terminals for OPAC search in near future.

3.5.4 Current Awareness Service: We are professionally committed to update our users with various collections and services added to the Central Library. In this connection, we release our monthly new additions list of books and journals on web. Users are accessing new additions at the following web link of the website of the Central Library

http://www.cenlib.iitm.ac.in/docs/new_additions.html

http://www.cenlib.iitm.ac.in/catalogue/jour_nov_2002.html

3.5.5 Ask the Librarian: The Central Library has created special web link in the Central Library website which is extensively used globally by users to ask various technical as well as various general queries. The Librarian answers the queries with the assistance of professional staff. The following web link can be used to ask various types of queries.
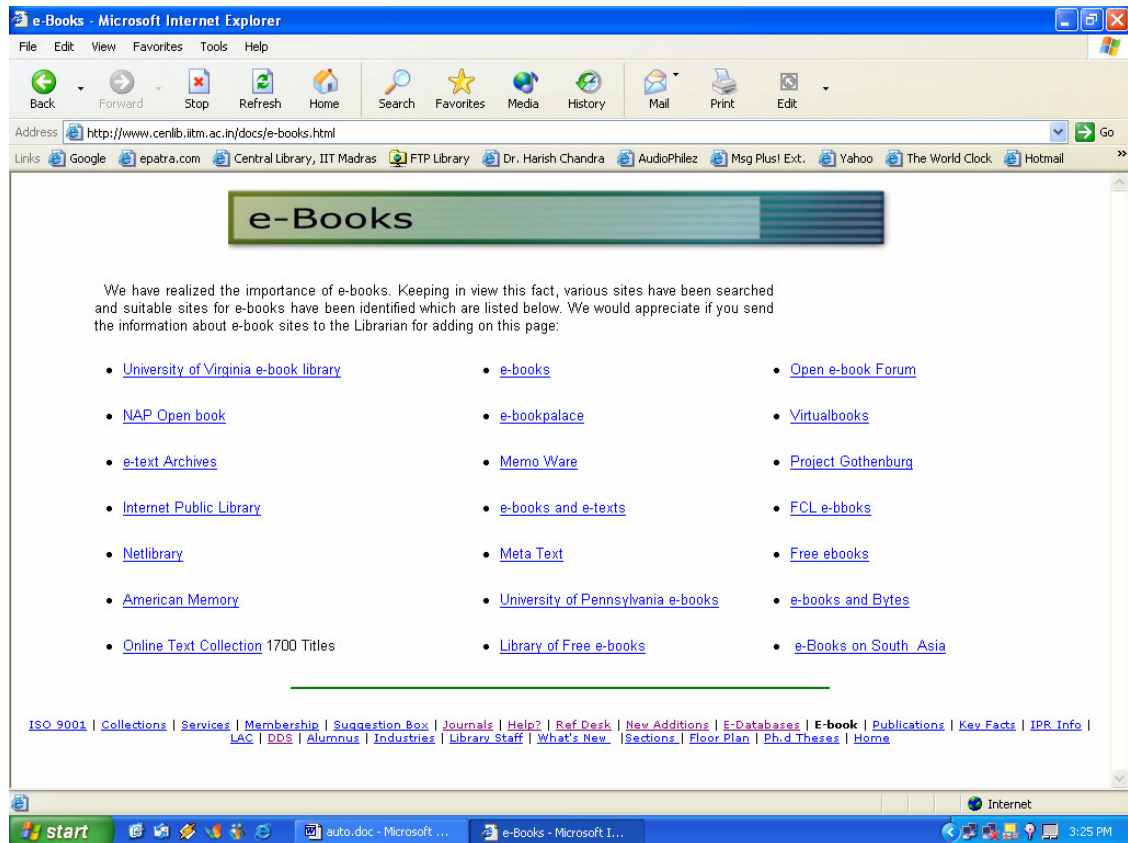
http://www.cenlib.iitm.ac.in/ask.html

3.5.6 Access to Full Text E-Journals: The Central Library has provided access to various full text e-Journals under Intranet

environment through Local Area Network. The Central Library is also actively participating in the MHRD Consortium. Initiatively, users can access the full text e-journals of the publishers like IEEE, IEE, Springer Verlag, Association of Computing Machinery (ACM), Elsevier, Academic Press, J-Gate. In addition to these, full text e-journals, users can also access various bibliographical databases including Web of Science, ABI Inform, INSPEC, Compendex, SciFinder Scholar, MathSciNet. Special links for these databases have been created for accessing e-journals. Screen shot of e-journals page is given below:

3.5.7 Access to E-Books: Realizing the importance of e-resources, the Central Library has identified various e-book vendors and other

professional institutions, offering access to their e-books free of charge. Various related hyper links have been provided in the separate web page exclusively devoted to e-books in the Central Library website (http://www.cenlib.iitm.ac.in) The screen shot of page is given below:

In addition to these e-resources, users can also search on-line resources on IPRs and standards at the following web links specially created in the Central Library website for this purpose:

http://www.cenlib.iitm.ac.in/docs/IPR.html

http://www.cenlib.iitm.ac.in/docs/standards.html

4. Digital Class Room

5. Database Creation

The Central Library is also engaged in the creation and maintenance of the following databases:

- Ph.D. Thesis submitted at IIT Madras
- Journals Holdings
- Faculty Publications Received in the Central Library
- Directory of Reference Sources

6. FORMULATION OF AUTOMATION STRATEGY

It has been experienced that there is an urgent need to formulate well thought integrated automation strategy to bring speedy, fruitful and visible impact of library automation processes and activities on the user community and the staff of concerned libraries. The following major factors may be taken into consideration while formulating strategy for library automation:

- Conducting Feasibility Study
- Data Preparation Activities
- Standardization of Forms and Records
- Writing Library Systems and Procedures
- Site Preparation
- Data Elements: Mandatory and Optional
- Data Entry Format
- Data Entry Work
- Environment Creation
- Manpower Requirement
- Proposed Services
- Training Programme
- Manual and Documentation

- Compatibility
- Maintenance of Hardware and Software
- Specialized Presentations
- Backup Systems and Procedures
- Bar coding Implementation
- Financial Resources Availability and Generation
- Interaction with Faculty and Staff of Computer Center/ Department of Computer Science and Engineering.
- Level of Understanding of Problems
- Awareness and Commitment about Current Trends
- Professional Interaction with Fellow Colleagues

7. CONCLUSION

We can conclude that library automation is very much needed in libraries. Librarians need to have a well thought and discussed integrated automation strategy for library automation for their respective libraries. It is further stated that there is strong need to provide web based library and information support services to end-users for assisting them in achieving excellence in academic activities, R&D work, consultancy and interaction with external environment.

8. REFERENCES

1. Harish Chandra, Information Technology Based Library and Information Services: A Case Study of IIT Madras, National Seminar on Challenges Before the University Libraries in India in the 21st Century, Vadodara, ILA, 1999. Pp. 277-284.

2. http://www.cenlib.iitm.ac.in