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## Application of Information Technology in Sardar Vallabhbhai Regional College of Engineering and Technology Library, Surat

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T.B. GHOSH

### ABSTRACT

The paper describes the electronic library services of the College. These include home page at <http://www.svrec.ernet.in> and directly at <http://202.141.85.210/> in addition to library computerisation, an electronic library with 350 CD-ROM, 19 CD-ROM, databases and 1500 video cassettes; e-mail/Internet services, and a virtual library which is available both at the college home page *i.e.* <http://www.svrec.ernet.in> or <http://202.141.85.210/> and at [http://www.geocities.com/ghosh\\_tbd](http://www.geocities.com/ghosh_tbd). IT has proved to be an effective instrument in raising the quality of library services.

### 1. INTRODUCTION

The library is the heart and main information resource centre of any institution. It is the part and parcel of education and teaching system. The modern age of information explosion poses stiff challenges in providing right information to right user in right time. In such a situation Information Technology (IT) comes to rescue of libraries and information centres. Today's changing scenario in the publishing and IT fields has forced the library and information professional to accept the changing demands placed on the profession today. There is a marked shift from the need of information in academic quality for industry and business houses today. The constant changes in the technology have direct impact on the functioning of library and information services. The information service has crossed national boundaries and with the rapid progress in telecommunication technology, the

demand for information and its methods of supply have undergone a sea change with advent of e-mail services and the Internet.

## 2. DEFINITION

Information technology is a generic term used for all activities connected with computer based processing, storage and transfer of information. It involves computers, electronic media, satellite, and telecommunication and mass storage devices.

According to ALA glossary "Information technology is the application of computer and other technology to the acquisition, organization, storage, retrieval and dissemination of information."

Information technology does not confine only to hardware and software but it also covers the techniques and methods used for collection, storage, processing and dissemination of information.

The information technology can be grouped in following areas: (i) Computer technology (ii) Communication technology (iii) Reprographic technology (iv) Storage (v) Databases (vi) Information systems (vii) Expert systems (viii) Videotext and Teletext.

## 3. NEED FOR INFORMATION TECHNOLOGY

The new technology has made a deep impact on the libraries. Nowadays the emphasis in libraries is shifting from collection to access. Providing speedy and accurate access to information is the pivotal point of activity. To cope up with the time electronic resources are beneficial because the information changes every minute. Due to jet speed of information emergence, to manual scanning of books and feeding the information is neither practical nor possible. In addition to this, electronic information resources are growing enormously, access to which is not possible without application of information technology. The access to electronic information resources and resource sharing with near about 140 countries of the world has been rendered easy with the application of new technology.

## 4. COMPONENTS OF EMERGING INFORMATION ENVIRONMENT

Components of emerging information environment may be grouped into following areas.

- Electronic publishing
- CD-ROM
- Multimedia
- On-line information system
- E-mail
- Internet
- Virtual library.

### **5. APPLICATION OF IT IN S. V. R. C. E. T. LIBRARY**

Sardar Vallabhbhai Regional College of Engineering and Technology, Surat was established in 1961 with three branches of engineering i.e. Civil, Mechanical, and Electrical. At present it has seven branches i.e. (i) Civil (ii) Mechanical (iii) Electrical (iv) Electronics (v) Computer (vi) Production and (vii) Chemical Engineering with 112 faculty members, 145 technical, administrative and supporting staff. All major departments have facilities for postgraduate studies and Ph.D. The college is also conducting PDDC (Post Diploma Degree Course). Most of the faculty members have published several papers in reputed journals and they have presented papers in various national and international conferences.

In addition to teaching, the college has been providing consultancy services and conducting research projects from time to time. The college is also having a Science and Technology Entrepreneurship Development cell for assisting new entrepreneur in starting new industries and existing entrepreneur in developing their products.

The central library of S.V.R.C.E.T. is satisfying the information needs of its users. Total number of collection of the library is 75,000 including back volumes, standards, technical reports. In this era of information explosion it is not possible to satisfy the specific information needs of the users with the traditional library system and use of information technology was considered necessary.

Information technology has been introduced in SVRCET Library in the following major areas:

- Library automation
- Electronic library
- E-mail and internet
- Virtual library

## 5.1 Library Automation

The first attempt to computerise the library was made in 1995-96 with modest set of machines including two personal computers one dot matrix printer and CDS/ISIS software. 3000 entries were made with the limited staff. In 1997 LIBSYS software was installed in HP Net server in SCO UNIX platform with five users license and four diskless terminals were installed. LAN and TCP/IP connection on fiber optic cable were extended to the library from the computer center. But the problem was mainly in data entry of huge collection with limited staff. Enquiries were made with other reputed big libraries which had completed automation work and it was learnt that some libraries had engaged extra manpower and other libraries had entrusted the data entry work to other professional organisations on contract basis. But in case of SVRCET library no extra manpower was available. After considering all aspects the Librarian decided to start the data entry work and circulation work simultaneously taking risk in three different steps and automated library system was started from the date of installation of software.

### 5.1.1 Step 1: Entry of frequently used books

Initially books were used for entering author, title, call number and accession number. After getting back the book the entry of the rest of the data elements is sent to the stack putting "ENTRY COMPLETED" stamp on the date slip. After running this system for two semesters (*i.e.* one year) it was found that all the frequently used books have been entered in the database.

### 5.1.2 Step 2: Entry of often used and rarely used books

After running the above mentioned system for two semesters one of the staff members who was responsible for manual cataloguing work was engaged to check the stack physically and pick up remaining books for data entry and most of the work was completed by December, 1999.

### 5.1.3 Step 3: Entry of back volumes

As the back volumes are bulky and heavy it was not possible to bring those volumes to the computer terminal. In January 2000 two staff members were engaged one for preparing worksheet and one for data

entry. The entry of 6,627 of back volumes of journals was completed in June 2000 and full-fledged automated library system was introduced forthwith.

#### **6. UPDATION OF SOFTWARE INTO INTERNET EMBEDDED VERSION**

In 1999 the LIBSYS software has updated to client/sever Internet embedded version. In this version one can add a multiple number of PCs with at least Windows 95 operating system as clients to the main server instead of 5 users license of SCO UNIX. As a result the library is connected with the Internet through a proxy server, which is installed in the library premises. The library can be accessed both from the college home page at <http://www.svrec.ernet.in> and directly at <http://202.141.85.210/>

#### **7. ELECTRONIC LIBRARY**

In addition to computerisation of library function *i.e.* OPAC (Online Public Access Catalogue) acquisition, circulation, serial control etc. a small electronic library has also been started. The electronic library consists of 350 CDs with following 19 CD-ROM databases and 1500 video cassettes. Out of different CD Rom databases following are most important.

**Table :1 List of CD-ROM Databases**

<i>Sl. No.</i>	<i>CD-ROM Database/ Publication</i>	<i>Coverage</i>	<i>Type</i>
1.	IEL (IEE/IEEE Electronic Library- All IEE, IEEE Journals, Conference Proceedings & Standards	1988 to Jun '98	Full Text
2.	ASTM Standards	Complete Set	Full Text
3.	Indian Standards	Complete set	Full Text
4.	SAE Technical Papers	1994 to 1997	1996 Full Text 1994, 95 & 97 Abstract

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<i>Sl. No.</i>	<i>CD-ROM Database/ Publication</i>	<i>Coverage</i>	<i>Type</i>
5.	Ei Compendex	1992-1999	Abstract
6.	Ei Chem Disc	1988-Prscent	Abstract
7.	ISMECH (Mechanical Engg. Abstract)	1973-1999	Abstract
8.	ICONDA (International Construction Database)	1976-1999	Abstract
9.	Active Library of Corrosion		Full Text
10.	International Civil Engineering Abstract	1972-1999	Abstract
11.	Chemical Engineering and Biotechnology Abstract	1971-1999	Abstract
12.	Peterson Gradeline (Contains information on higher education all over the world)	1998-1999	Full Text
13.	MTech On CD (A Database on Manufacturing Technology and Machine Tools) CMTI, Bangalore	1977-1996	Abstract
14.	Petroleum Abstract	1988-1998	Abstract
15.	Digicat on CD (Information of Different manufacturers of various product and Building materials)	Current	Full Text
16.	College CD (Information on Foreign and Indian Educational Instt.)	Current	Full Text
17.	ECOR (Engineering Corrosion)	Current	Full Text
18.	Event line on CD-ROM (information on Conference/Workshop)	Current	Full Text
19.	Telemetric for Libraries (Reports on development of Libraries by European Commission)	up to 1998	Full Text

In addition to the above other publications like Encyclopedia/Hand-book etc. in CD format are also available in the Library

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1. Encyclopedia of Mathematics on CD-ROM	1997	Full Text
2. Multimedia Encyclopedia of Science & Technology	1998 edition	Full text

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The library is providing electronic information service *i.e.* CD-Rom database searching and printing to the students and faculty and outsiders against a nominal charge.

### **8. E-MAIL AND INTERNET**

All the terminals in the library are connected with the V-SAT of the college. A separate mail server for the library has been installed. E-mail is being used since 1996 for correspondence with other institutions, publishers inside and outside the country. Nowadays 70 per cent correspondences are diverted to E-mail from traditional typing and postal procedure.

Most interesting feature of E-mail is that the library is subscribing contents service of 50 journals from different electronic publishers like Elsevier, Springer, and ISI etc. The contents of the journals are being received through E-mail before these are published. The library is registered as a free subscriber to different networks like Biomednet, MCB University Press Library link etc. As a result news regarding new publications, conferences and new development on the concerned field are available every week through E-mail.

#### **8.1 Internet**

The use of Internet in the library is limited within the library work *i.e.* to access the catalogue of other libraries, inside and outside the country; to access the publishers' catalogue; to access online reference source like British Library online reference service; Canada on-line, Internet Public Library (IPL) etc. In addition to these Internet is used to access the digital library of other universities/institutions and to create a virtual library for others.

### **9. VIRTUAL LIBRARY**

Virtual library is a library that does not exist physically. It is used to denote a library with distributed collections or services that act as one.

It is a website with pointers and links to other sites. Recently the librarian has undertaken to create virtual library which will be beneficial to academicians, researchers and professionals of different fields.

The virtual library is available at [http://www.geocities.com/ghosh\\_tbd](http://www.geocities.com/ghosh_tbd). From this site any user can access to libraries and virtual libraries around the world and access to a large number of journals/periodicals in full text, abstracts and contents and a lot of online information sources and services.

### 10. HARDWARE AND SOFTWARES USED IN SVRCET LIBRARY

#### 10.1 Computer

1. HP net Server 1GB. HD	1
2. Zenith Net Server 9GB HD, 128 MB RAM	1
3. HCL Infinity 2000 1GB.HD, 32 MB RAM	1
4. HCL Infinity 2000 2GB HD 64 MB RAM	1
5. Zenith Celeron 4GB HD 64 MB RAM	2
6. HP Vectra 460MB HD 8 MB RAM	2
7. HCL Infinity 2000 Diskless PC	4
8. CD Net server with 7 Dives 8X	1

#### 10.2 Printer

1. Dot Matrix Printer 132 Column	2
2. Dot Matrix Printer 80 Column	2
3. HP laser Printer 6P	1
4. HP Deskjet colour Printer	2

#### 10.3 Library Automation Software

1. CDS/ISIS
2. LIBSYS

### 11. CONCLUSION

Information Technology is a wonderful gift provided by the present day technological advancements and innovations. In order to meet the growing needs of information we must make use of the best possible services in our profession which can benefit a lot of its users. Information technology provides the advantage of, benefiting



academicians, ordinary information seekers or miscellaneous groups by making the right information available at the right time. IT changed the total information scenario and it has become the need of the day and demands its worldwide acceptance for meeting the enormous growing information needs.

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