



## History of Library Automation

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### Introduction

Computerizing Indian libraries have been a rather slow process until recently, largely because of the lack of trained manpower. Since the late 1980s computerization has gained momentum. In the late 1990s the situation has changed completely: more and more library professionals are getting trained in computer application, there are increasing numbers of training programs available for the purpose at different levels; the hardware and software have become more user-friendly; and a wide range of software packages are available suitable for the needs of most libraries, semi-automatic classification to construct the class numbers. von Catalog directories, thesaurus construction, information retrieval, SDL service, etc. Apart from these works, both DRTC and INSDOC were teaching the computers pica. in documentation and information work. In 1964 it initially used an IBM 1620.

The INSDOC has been a leader in experimentation with computer application Model I, available at IIT, Kanpur, for processing data in order to compile a catalog of scientific serials. This was the first experiment on the use of computer for library and information application. The INSDOC processed data for roster of Technical Translators in India in 1967. Two programs were written For the main part and the indexes.

Haravu and Raizada at the INSDOC performed an experiment to find out the suitability of the IBM 1620 computer for storage and retrieval of data. The next experiment involved preparing the author and subject indexes for the Indian Science Abstracts. In 1969 an effort was made to develop a complete and intended program deck to Process data for the " Union catalog for Mysore "In the early years the DRTC took the initiative in using computers for library and information work. Neelameghan published a paper titled "Design of the Document Finding System: General Features" in 1968 in which he described the experiments undertaken at the DRTC on Doe-Finder (a computer used for finding documents).

VA Kamath and NM Malwad conducted a survey of computer applications in library and information work in India in 1971. They concluded that there is only one library having



computerized procedures for procurement, one for charging and discharging two for cataloging four for preparing addition lists, and one for preparing union catalog of periodicals. Among the documentation activities, indexing seems to be more common, though the criteria for indexing are different. There exists one computer system for information storage and retrieval, integrating within it a freely faceted scheme of classification such as the Colon scheme of the classification developed by S.R. Ranganathan. Software techniques have been developed in FORTRAN IV, SPS, AUTOCODER and in certain cases COBOL.

The programs are meant primarily for the configurations available at the institutions. The libraries generally make use of the spare capacity of available computer facilities which are suitable for the type of work on off-line use. In the early 1980s P.S.G.Kumar carried out a study covering thirty-seven institutions. He identified seven library routines (book ordering, cataloging, indexing circulation, serial control, classification and stock taking) and four information activities (CAS, SDI, retrospective searching and data banks). Kumar concluded: The experiments conducted at these institutions demonstrated the feasibility of the use of computers in India in library and information work. However, many of these experiments were not brought out into regular operation. After initial experimentation, many of them were abandoned. The reasons were numerous-lack of financial resources, no proper support from authorities, change in personnel, etc. None of these experiments tried to study.

Economic of computerization Many did not bother about the measurement and evaluation the computerized services as compared to manual systems. Almost all the experiment centered around solving simple problems, using in-house hardware and simple software ware packages Twenty one out of the thirty-seven institutions have computerized wherever n have computerized 3-8 library operations Six of them have computerized a couple of operations. Nine out of thee packages. Twenty-one out of the thirty-seven institutions have computerized thirty-seven have computerized 3-8 library operations.

In the early 1980s, libraries of the Bhabha Atomic Research Center / Technical Information Center (BARC / TIC); the Indian Institute of Technology (ITT); the Tata Institute of Fundamental Research (TIFR), Mumbai; the Indian Statistical Institute (ISI), Calcutta; and the Indian Space Research Organization (ISRO), Bangalore had access to second generation computers.

In 1983 Ravichandra Rao wrote, "Although the world trend in 1980s is towards the use of on-line systems, either using mini-computers or micro-processors, the computer-based information systems in India are still in their infancy stage. information activities and a few



library functions have been computerized in different information centers or special libraries (largely attached to scientific and technical organizations), there is definitely no integrated computer-based information System, even at the local level.

One of the important developments in recent years in India was the implementation of online retrieval system at the National Aeronautical Laboratory (NAL). In this system, the databases of the European Space Agency (ESA / IRS) were accessed (via Euronet, via satellite link between Bombay and Rome, and through a dedicated cable between Bangalore and Bombay). NAL in Bangalore was linked with the main computer of ESA, situated in Frascati, Italy. INTELSAT provided the vital link in this chain of telecommunication. The ESA / IRS offered more than 70 files of information, primarily science-related. This project initially cost about Rs. 37 lakhs and The operational cost was about Rs.1,000 / per query..Because of its high Operational cost this project was terminated in April 1988.

This was an experiment that failed because the conditions necessary for its success did not exist. The cost of technology was too high and the number of users / queries was far below the optimum level. The process involved lacked foresight, imagination and experience necessary for the successful implementation of such a program. Hardly any marketing of the service had been done.

Since the late 1980s computerization of libraries in India has picked up for the following reasons:

1. The policy of the government of India has been to encourage computerization as an important step toward modernizing institutions
  2. The increasing availability of commercial library-specific software packages has allowed libraries a wider choice meeting its software needs.
  3. The increasing use of the CDS / ISIS package has led to the cultivation of a computer culture.
  4. The increasing organization of training programs has led to the availability of trained manpower, essential for any meaningful computerization program
  5. Local, regional, and national library and information computerized networks have been established.
  6. There has been increasing availability and use of national and international databases
  7. There has been increasing availability and use of newer information technologies
- Couch as CD-ROM, EMAILS etc

Up to the 1980s university libraries were little affected by information technology except in the field of reprography. Under the INFLIBNET program, the UGC started funding



university libraries in 1991 to promote automation activities. By March 1998<sup>14</sup> eighty-seven university libraries had been funded for creating core facilities for information access. Thus by the final decade of the twentieth century university libraries were greatly affected by the rapid changes taking place in information technology.

As part of an effort towards globalization, the government of India has made it national policy to take steps to encourage computerization and modernization of its institutions. In India the Videsh Sanchar Nigam Ltd. (VSNL), an agency of the government, threw open the gates to the Internet to the general public through Gateway Internet Access Service (GIAS).<sup>15</sup> To use this service, one needs to have a minimum of 486 SX PC with 25 MHZ processor speed, 8 MB RAM, 8 MB hard disk space and a modem with 32 bps data transfer capacity. The facilities that VSNL offers include e-mail, telnet, and file transfer protocol (FTP).

E-mail enables one to send messages to the users on terminals located elsewhere. FTP allows transfer of files. Telnet enables one to login to a remote computer hooked to the Internet (a network of networks). The facilities offered by VSNL have popularized Internet use among the public. A new revolution in the searching of databases is taking place in India. Internet connection is being offered by VSNL to educational institutions at a nominal cost. The Internet connection allows access to worldwide information services. Internet resources can be used as a tool for acquiring, cataloging, indexing, storing, retrieving, and disseminating information (through the use of different systems such as e-mail, bulletin boards, electronic journals and electronic publications, and FTP); and the Internet can be used for providing reference and referral services. This has encouraged libraries to use the Internet. On October 24, 1997, the government of India announced an Internet policy that provided for the end of the VSNL monopoly.<sup>16</sup> This is likely to encourage their use of e-mail and the Internet.

Recently, the National Association of Software and Service Companies (NASSCOM) inaugurated video e-mail facility. For Rs. 15, one can transmit video images and the voices for a three-minute duration through public booths. Such facilities are being made available even in rural areas. Thus rural public libraries can take advantage of such a facility, which is quite cheap as compared to telephone charges for long distance calls. In the 1990s as a result of the availability of reasonably low-priced technology, and also changes in the attitudes of librarians and authorities, automation has become a possibility even for small libraries. There is no doubt that the encouraging policies of the national government are helping foster change.



## CONCLUSION

Special libraries and documentation and information centers were the first to introduce automation. University and college libraries were late starters. Automation activities in academic libraries in India slowly picked up with the support from INFLIBNET. UGC NISSAT and other similar agencies combined with increased awareness of IT and its applications among librarians. Academic librarians in India are beginning to use E-mail, CD-ROM, LAN, machine-readable catalog, etc for resource sharing. This change in academic libraries is due to rapidly changing telecommunication and technologies. cal environment, a desire for progress and declining resources. Perhaps the key to change is the willingness to share resources and to work together to  
Bring a change

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