DESIDOC Bulletin of Information Technology, Vol 15, No 3, May 1995, pp 29-34
© 1995, DESIDOC

Library Automation in India

MK Seth and BK Dalai

Regional Research Laboratory (CSIR)
Bhubaneswar-751 013

ABSTRACT

The paper presents general needs and factors which have led to the computerisation of library operations in India. It mentions the various organisations in India who have made efforts in the area of library automation. It also mentions the software developed by Indian firms for the library operations and the problems faced while using these packages.

1. INTRODUCTION

Advances in computers, satellites, laser and optical fibres are triumphantly driving the information technology towards the 21st century. The technological revolution has altered the entire library ecology which is leading to substantial changes in the structure of libraries, revenue-base for operations and in developing competence of library professionals and users. Developments in electronic transmission methods and magnetic storage devices have enabled the managing of ever increasing volume of information at low cost and with increased effectiveness. The future libraries will have a number of databases available on different computer systems accessible to all users. The librarians will be able to call for the library catalogue, bibliographical databases and other information at any workstation.

Library automation refers to the processing of routine clerical functions in the library using computers or other mechanical/semi-automatic equip- ment, tools, and techniques. Recently, in India, more and more libraries are turning to information technology for automation. Already a large number of libraries in the world have automated one or more of their functions/ library services.

2. NEED FOR AUTOMATION

Several factors have led to the application of computers to some of the library operations and services. A machine-readable record, prepared at the time of acquisition can be used repetitively for several purposes and significant savings in terms of effort, time and resources can be achieved [1] compared to the manual processing. Other benefits of automation include the following :

patent documents. The abstracts can then be retrieved from WPI).

(*Derwent Information*, April 1995, 1)

Online Repair

Diagsoft, USA, has released a software QAplus/win 6.0 by which a computer technician can access his client's computer via modem and check the problems of that computer. After scanning for likely malfuntion either in systemboard, hard drive, video, multimedia, floppy drives, memory, COM port, printer, mouse/key, network brand, etc. the technician can set right the system from his office itself. If the problem is not identified he will ask the user to send the set-up files to support station in repairer's office and returned after corrections, via modem. The software is priced at $100.

(*Popular Science*, January 1995,14)

Publishing from Internet

For organisations in the forefront of technology and wanting access and redistribution of information, Systematic Upgrade Ltd., UK, has created PLServer to aid publishing activities on the Internet.

The product is aimed at corporations, governemnt agencies, universities and publishers, wishing to distribute and gain information from the World Wide Web on Internet. It facilitates creation of databases, accession of information and setting up of a server. The product uses Netscape and Mosaic as interface to Personal Library Software Inc's intelligent search and retrieval software.

(*Online & CD Notes*, March 1995)

Software for School Children

For children who want to leave video games and write stories, poems, essays, letters and journals, there is good news. The 'Preteen Publisher' from Macintosh enables children to publish and increase their creativity through computer without any hassles. It includes preformatted page templates and bright ideas suggestion tools to get started. The features also include various symbols, pictures and stamps to help and allow inclusion in a publication and give a professional layout look. This writing machine software is priced at $40.

(*Popular Science*, January 1995,10)

Touchpad to replace Mouse?

Touchpad, developed by Synaptics, USA, is a flat, Mylar-covered pad which can replace the mouse and performs better. To use it, the user has to move his finger on pad to move curser on the screen. For clicking, just a tap on pad is required; to drag an item, double tap and drag your finger. The size of the pad is smaller than a business card and its features make the work easier especially in graphic applications.

The basic principle behind Touchpad is recognition of the finger's voltage. The pad consists of two thin layers of copper wires in grid pattern and each intersection has capacitors which signal on touch and the area of contact is thus known and even the relative pressure can also be measured. This technology can also be used in paintbrush application to draw thick or thin lines depending upon pressure applied by brush.

(*Popular Mechanics*, February 1995,110)

BOOK-SHELF

Selected Reading

The books included in this section have been selected from the review columns of information science and technology journals received in Defence Science Library at DESIDOC. These books are not necessarily available in the Defence Science Library.

1. Abbott, JJ (Ed). UNIX for commercial use: The SINIX applications environment. Prentice Hall, 1994. £ 24.95.

2. Comer, DE. The Internet book: Everything you need to know about computer networking and how the Internet works. Prentice Hall, 1994. £ 22.95.

3. Cronin, Blaise. Marketing of library and information services 2. Aslib, 1994. 604p. £ 65 ($ 107).

4. Frey, Donnalyn & Adams, Rick. A directory of electronic mail addressing and networks, Ed 4. O' Reilly and Associates, 1994.

5. Harbour, RT. Managing library automation. Aslib, 1994. 50p. £ 15 ($ 25)

6. Held Gilbert. Dictionary of communications technology. John Wiley & Sons Inc., New York, 1995. $ 74.95.

7. Held, Gilbert. Understanding data communications : From fundamentals to networking. John Wiley & Sons, 1991. $ 64.95.

8. McCormick, A John. The optical storage technology: Including multimedia, CD-ROM, and optical drives, Ed. 2. Irwin Professional Publishing, 1993. $ 30.7.

9. Pahlavan, Kaveh & Lavesque, H Allen. Wireless information networks. John Wiley and Sons,1995. $ 74-95.

10. Skillicorn, B David & Talia, Domenico (Ed). Programming languages for parallel processing. IEEE Computer Society Press, 1994. $ 45.

11. Sheth, J & Janowiak, RM. 2021 AD: Visions of the future. International Engineering Consortium, 1991.

12. Thorner, Jan. Intelligent networks. Artech House, 1994.

13. Watson, AB (Ed). Digital images and human vision. MIT Press, Cambridge, 1993. £ 65.

14. Vickery, Brian & Vickery, Alina. Online interface design. Aslib, 1993. 84p. £ 22 ($ 36).

15. Wiggins, RW. The Internet for everyone: A guide for users and providers. McGraw-Hill, 1994. £ 26.95.

CURRENT LITERATURE SURVEY

Networking

1. Leeb, Gunther.
   A user interface for home networking.
   IEEE Transactions on Consumer Electronics, 1994, **40**(4), 897-902

This paper describes a flexible, expandable and user-friendly interface for networks in home. The interface called Home-Net consists of a central controlling PC which provides support to access control, data communications, home office, lighting control, home appliance systems, voice communications, etc., distributed in different rooms within a house. This interface can also be used in any other compatible systems like the European ESPIRIT HOME SYSTEM [EHSA92], the American Consumer Electronics Bus (CEBus) [EIAU92] and Japanese HOME BUS SYSTEM (HBS) [EIAJ86].

Office Automation

2. Chen, Tsang-min, *et al.*
   Design and implementation of a desktop computer supported cooperative work system.
   IEEE Transactions on Consumer Electronics, 1994, **40**(4), 827-35

This paper describes the implementation of desktop computer supported cooperative work system using commercially available consumer electronic devices and facilities. This is an upgradation of videoconferencing system for better utility in an organisation. Features provided are multimedia conference, shared white board, shared text editor, and voting capability. The system is developed on UNIX and OPEN LOOK environments and can support a groupware environment. Three levels of error control, protocol design and module,and scheduling are considered for better system performance.

Multimedia

3. Patel, Sanjiv P.
   The multimedia fax-MIME gateway.
   IEEE Multimedia,1994,**1**(4),12-18.

New standards in communication field may help in bringing together the rapidly growing communities of the Internet and facsimile machine users. Taking advantage of these developments, the bi-directional fax-MIME gateway developed at the University of Ottawa, USA, offers fax services to Internet users and Internet services to multimedia fax users. The paper describes the research done on Remote Printing Experiment, Multipurpose Internet Mial Extensions, Binary file transfer, etc in the fax-MIME gateway.

4. Rich, Charles, *et al.*
   An animated online community with artificial agents.
   IEEE Multimedia, 1994, **1**(4), 32-40.

The paper reports the work on interactive multimedia environment. The authors implemented a prototype computer system that combines the aspects of an online community with the aspects of a virtual reality environment. The purpose of the prototype is to explore the capabilities of current technology and to develop research directions for the future. The work involved integrating a number of key technologies, such as real time animation, networking, artificial agents, spoken language, understanding and generation, gesture recognition and position sensing.

5. Thomas, D.C. Little and Venkatesh Dinesh.
   Prospects for interactive video-on-demand.
   IEEE Multimedia, 1994,1(3),14-23

Interactive multimedia systems represent a key technology rapidly evolving from marketing hype and research prototypes to commercial products. video-on-demand (VOD) is an integration of television, telecommunication and computer technology to achieve interactivity with the viewer.

The prospects of VOD are to provide selected movies, interactive news, participatory advertisements, and allowing viewer to select the desired programme. However, VOD has to overcome major technological hurdles in integrating individual technologies. Interactive video delivery services make all programmes available to the user at any time without temporal and parallel limitations.

The paper examines the technological considerations and access technologies for designing and implementing a large scale distributed interactive multimedia system. It also identifies the core problems and examines approaches proposed and implemented to solve these problems.

Multimedia Databases

6. Yoshitaka, Atsuo, *et al.*
   Knowledge assisted content-based retrieval for multimedia databases.
   IEEE Multimedia,1994,1(4),12-18.

Multimedia database systems try to uniformly manage voice, image, and video data. The paper discusses, how the multimedia databases can do more than just managing only text and numerical data possible in conventional databases. Authors propose a system of querying and content-based retrieval that considers audio or visual properties of data.

Secondary Storage Media

7. Ram Kumar, Ashok Kumar and Sharma, S.K.
   Secondary storage media : Developments from punch card to laser media.
   ILA Bulletin, 1994-1995, **30**(3-4), 97-101

Secondary storage media, constitute an integral part of computer/information systems developed and used by libraries and information centres. The paper discusses the development of various secondary storage devices and enumerates the details of technological changes that have occurred in these media from the first generation of computer to fourth generation computer. It presents the advantages and disadvantages of the various secondary storage devices prevalent today. The suitability of these different storage devices and their applications in library and information field have also been discussed.

Printed and published by Defence Scientific Information & Documentation Centre, Metcalfe House, Delhi-110 054

- Creation of a machine-readable database of bibliographic information relevant to the product profile of the organisation.
- Improved control over library collection and library operations.
- Improvement in the existing library services as well as introduction of new services.
- Avoiding duplication of work.
- Enabling scholars, researchers, teachers and students especially those located in far off places to have access to information and documents available in libraries.
- Effective sharing of resources among the libraries.

The following factors should be considered for automation requirement analysis, software selection and its performance, etc. [2]:

- Collection or size of library
- Complexities involved in the library
- Staff strength for library services
- Funds available in hand
- Comprehensive definition of the current operations, and
- Functions in each activity.

3. LIBRARY AUTOMATION IN INDIA

At present a number of good packages are available abroad as well as in India. Computer networking is also a well established field. In India, both these fields are still in developing phase, and the credit goes to special libraries in our country. These libraries are in the R & D institutions under the Council of Scientific & Industrial Research (CSIR), Indian Council of Medical Research (ICMR), Indian Council of Agricultural Research (ICAR), and the libraries belonging to the private sector and public sector industrial R & D organisations such as Technical Information Centre of Bharat Heavy Electricals Ltd. (BHEL), and Steel Authority of India Ltd. (SAIL). International organisations, such as International Crops Research Institute for the Semi Arid Tropics (ICRISAT) have also made some useful contributions. [3].

Considerable impetuous to the use of new information technology in special libraries has been provided by the Dept of Scientific & Industrial Research through the sectoral information centres established in some of the CSIR Laboratories under National Information System for Science and Technology. NISSAT is playing an important role for different training programmes, software development projects and in transfer of technology to different special libraries in the country. Other special libraries like INSDOC, DESIDOC [4], NIC, SAIL, BHEL, ICRISAT, etc. have successfully developed software for library automation. Some public sector organisations like CMC Ltd., Calcutta [5]; Kasbah Systems Software, Madras; U & I Software Pvt Ltd., Bangalore; Minifux System Pvt. Ltd., Bombay; Wipro Information Technology, Secunderabad [6], etc. have also developed library automation software.

Unlike special libraries, academic libraries in India function in a relatively less autonomous environment due to scarce resources. However, the UGC in 1989 took initiative to plan a country-wide academic library and information network called INFLIBNET. This initiative has the potential to make a significant impact on operational efficiency and user services in academic libraries. INFLIBNET is taking care for development of academic libraries and organised the first National Convention CALIBER-94 for automation of libraries in higher education and research institutes at

Ahmedabad during 19-20 February 1994. The Convention discussed about the inability of libraries to cope up with the current information explosion due to budgetary constraints and the fast changing economic, social, cultural and scientific scenario and the ways and means to offer better services to the users employing the state of art information technology [7]. Apart from INFLIBNET at the national level, regional library networks like BONET (Bombay), CALIBNET (Calcutta), DELNET (Delhi), MALIBNET (Madras) and Pune Library Network, etc. currently under development are likely to bring forth significant improvements in the library automation scene.

In public libraries, there is no evidence of any activity nor of any planning for the introduction of new technologies with their limited funds; automation is still a dream for them.

4. LIBRARY AUTOMATION SOFTWARE

In the recent years, library and information professionals are becoming more aware of the overwhelming importance of computer software packages specially available for automation purposes in the market. Many public sector or private companies are developing software for library automation. CDS/ISIS is developed by Unesco and was made available free of cost to institutions in developing countries under a license agreement. Efforts in automating library catalogues and designing automated text retrieval systems have largely been influenced by the availability of the CDS/ISIS. Increasing availability of training facilities in the package has also stimulated the interests of Indian library professionals towards the goal of automation. Thanks to the popularisation of DS/ISIS by NISSAT in India, now, most of the Indian libraries are using this package.

There are a number of other parties also involved in production of software for library applications. Some are manufactures of computers, government agencies and others are consultant [8]. Out of them, 12 packages are highly significant now for library automation. Although CDS/ISIS is not a software of Indian origin it is highly popular in India. The library management software *SANJAY* based on the framework of CDS/ISIS is developed by DESIDOC for library house keeping jobs such as cataloguing, acquisition, circulation, CAS/SDI, etc. *MAITRAYEE* has been developed under CALIBNET Project for handling library related activities as *SANJAY*. CATMAN has been developed by INSDOC, for catalogue management in libraries of small to medium size.

The other nine selected packages, i.e., LIBMAN, ARCHIVES, WILYSIS, SALIM, LIBRARIAN, Library Manager, Integrated Library Management, Library Catalogue System and SDI Package vary in what they offer, differ in the equipment, requirements, cost, etc. A list of firms along with the name of the packages, system requirement and area of operation has been given in the Annexure.

4.1 Indian Software Industry

Significantly, in the last few years there has been tremendous growth of computer software due to several reasons. Two main reasons are : (a) India possesses the world's second largest pool of English speaking scientific manpower and (b) the low manpower costs which provide edge in the world market.

When the new software policy was introduced in November 1986, the software sales made a quantum jump from Rs three crores in 1980 to 175 crores in 1988. It is

estimated that it will grow further to Rs 5000 crores in 1995 and will touch Rs 20,000 crores in the year 2000 [9]. Very few industries can boost of such an impressive growth. But the most interesting fact is that India occupies only 0.5% of the 100 billion dollars global software market. So, there is a lot of scope for growth. India has so far controlled the inflow of information technology with a view to produce most of the equipment indigenously. At the same time it has given high priority to software exports and many measures were taken by the Government for its development. These include:

- Creation of software technology parks,
- Tax exemption of profits from software exports, and
- Exemption of 15% excise duty on hardware for software imports against 400% export commitment for Indian businessmen and firms [10,11].

4.2 Problems

(a) None of the Indian packages, with some exception, fully supports all library functions.

(b) Indian packages have attempted to accept different systems in question and have not adhered to the internationally accepted standards.

(c) The packages abroad are increasingly emphasising on the incorporation of user-friendly interfaces and the provision of online public access catalogues. But in India there is no emphasis on this aspect.

(d) Libraries abroad recognise Integrated Library Management System and have a long history and tradition of centralised co-operative and shared cataloguing, and adherence to common standards in classification, cataloguing and indexing [12]. On the other hand, in India, the key elements of the integrated library management system are missing in the software.

(e) Mostly, the software supplied may be faulty and inadequate service response is a common thing.

(f) Libraries are unable to define their data processing requirement quantitatively and are unaccustomed to the computer environment due to the lack of research and training aptitude of the library staff.

(g) Other major problems for library automation project are poor planning, designing and implementation of new technology for the library and information centres.

5. PRE-REQUISITE FOR SUCCESS

- As in USA and UK, the developers of library software in India should also carry out comprehensive research in the design of friendly interfaces including the use of artificial intelligence and graphical user interfaces in their software development.
- Govt. of India should be liberal in its investment and economic policies to encourage private sector investment in information technology industry.
- Library and information centres should give highest priority to improving their services by providing easier and wider access to documents and information for their users. They should follow integrated library management system as a whole.
- Technology alone cannot change the overall situation. Therefore, change in the practices of developers, library and information centre and in Govt policies is also needed.
- A large scale effort is required in the areas of training on software platforms and the process for software engineering with utmost emphasis on quality.

Library automation requires close interaction between the computer scientist and the library professional. However,

retrospective conversion of data appears to be a major concern. It requires research, setting up of policies, their adoption and enforcement of discipline. Library automation is somewhat successful, despite the problems mentioned earlier. The situation will improve when those involved in automation will discuss openly and candidly the difficulties and even the failures. The success and failure of any automation project rests largely in the hands of those who select/develop and those who use the systems.

Introduction of computers in library have elevated the level of a modern library, and has improved its image, functions and services to a large extent. Thus, the 21st century librarianship will not be content with the collection of information but will focus on its dissemination.

6. ACKNOWLEDGEMENTS

The authors are deeply indebted to Shri JR Sahu, Head, Library and Documentation and Shri DB Ramesh, Documentation Officer, for their encouragement and necessary help, and Miss S Das for her help in for this study.

REFERENCES

1. Ravichandra Rao, I.K. Functions of automated systems. DRTC Annual Seminar (23) 1989. pp. A1-A22.

2. Choudhury, A. Selection of library & information software: A check list. DRTC Annual Seminar (23) 1989. pp. X1-X17.

3. Haravu, L.J. Library automation & networking in India: An overview of recent developments. *Annals of Library Science & Documentation,* 1993, **40**(1), 32-40.

4. *SANJAY*: Augmented CDS/ISIS package for library automation. *NISSAT Newsletter,* 1991, **10**(3), 3-6.

5. WILISYS: Software for library computerisation. *NISSAT Newsletter,* 1988, **7**(2), 4-7.

6. *MAITRAYEE:* Library computerisation & networking software. *NISSAT Newsletter,* 1991, **10**(3), 7-9.

7. Automation of libraries in higher education and research institutes. First National Convention. *NISSAT Newsletter,* 1994, **13**(2), 17-18.

8. Mahan Das, M.K. and Shet, K.C. Software for Indian libraries. Proceedings of the 38th All India Library Conference. Utkal University, Bhubaneswar, 21-24 November 1992. pp.151-56.

9. The software industry: Promising a rich strike. *The Economic Times,* 8 January 1992.

10. Gupta, S. M. Directions for software development in India. *In* Software Technology Challenges & Opportunities, Proceedings : Indian National Academy of Engg-Meeting, Bangalore, 5-6 June 1992. pp. 71- 82.

11. Narayanamurthy, N. R. Research and development for software exports from India. Software Technology Challenges & Opportunities, Proceedings : Indian National Academy of Engg Meeting Bangalore, 5-6 June 1992. pp.15-20.

12. LIBSYS : An integrated library management software package. *NISSAT Newsletter,* 1989, **8**(3), 9-14.

Table 1. Software packages developed in India for library automation

	Name/addresses of the firm	Software package	System reqd	Area of operation
1.	System Data Control Pvt. Ltd. Tiecicon House, 4th Floor Bombay - 400 011	Library Manager (Menu driven System)	IBM PC XT 384 KB	Circulation control
2.	Uptron India Ltd. D6, South Ext-I New Delhi - 110 044	SALIM (Menu driven system)	IBM PC AT/XT 640 KB	Circulation control Stock verification Catalog card print Serials control
3.	Pragati Computer Pvt. Ltd. 8, 2nd Crescent Park Road Adyar, Madras - 600 020	Integrated Library Management (DBMS)	IBM PC AT	Circulation control
4.	Wipro Inf. Tech. Ltd. Sarojini Devi Road Secunderabad - 500 003	WILYSIS (C Language)	Wipro PC-AT with 80 MB	Acquisition control Serials control Circulation control
5.	Datapro Consultancy Services II, Kubera Chambers, JM Road Pune - 411 005	LIBRARIAN (Clipper & Foxbase)	IBM PC-AT with 80 MB	Acquisition control Serials control
6.	INSDOC 14, Satsang Vihar Marg Special Institutional Area New Delhi - 110 067	CATMAN dBase IV)	IBM PC XT with 680 KB	Catalogue control
7.	Ultra Business Systems 2nd Floor, 157 Bangalore - 560 025	Library Catalogue System	LP/M86 DBMS-II	SDI service
8.	Radig Cybernatics Pvt. Ltd. Anand Nagar Colony, Khairatabad Hyderabad - 500 004	SDI, Package (dBase-II)	IBM PC XT	Acquisition control Circulation control Serials control Catalogue control & SDI
9.	Minifax Electronics Systems Pvt. Ltd. 706, makers chambers Bombay - 400 021	ARCHIVES (Foxbase)	IBM PC XT	Database creation
10.	Keshbah Systems Software 7, 2nd Street Dr RK Salai, Mylapore Madras - 600 004	LIBMAN	IBM PC XT	Circulation control Acquisition control Reminder control IRS, Database
11.	CMC Pvt. Ltd. 28, Camac Street Calcutta - 700 016	*MAITRAYEE* (DBMS)	IBM PC XT/AT 640 KB	Catalogue control Circulation control Acquisition control
12.	DESIDOC Ministry of Defence Metcalfe House Delhi - 110 054	*SANJAY* (CDS/ISIS using PASCAL)	IBM PC XT/AT 640 KB	Acquisition control Circulation control Catalogue generation & maintenance, CAS, SDI

FORMATION TECHNOLOGY EVENTS

IASLIC Courses in 1995-96

Indian Association of Special Libraries & Information Centres, Calcutta would be organising the following courses during the year 1995-96.

- **4-16 September 1995**
  Computerised Cataloguing at Jadavpur University, Calcutta.

- **1-15 December 1995**
  Computer-Aided Library & Information Systems and Use of CDS-ISIS at TTTI, Calcutta.

- **5-19 March 1996**
  Computer-aided Library and Information Systems and Use of CDS-ISIS at Indian Institute of Advanced Study, Simla.

For more details, please contact:

Shri HK Dutta
Secretary
Education Division, IASLIC
P-291, CIT Scheme No 6M
Kankurgachi, Calcutta-700 054.

Internet World International 1995

The Internet World International 1995 Conference will be held during 16-18 May 1995 at Wembley Conference and Exhibition Centre, London, UK.

The Conference is being organised by the Learned Information (Europe) Ltd., and co-sponsored by Mecklermedia Ltd., UK.

The Conference programme has adopted the following areas as its main themes :

- *Publishing* : Publishing on Internet and future of traditional publishing.
- *Online payment and commerce* : Smart-cards, banking, encryption and how to make money for online suppliers and users.
- *Strategies and techniques for providing information* : Building web sites inside business; designing web pages; and the future of web applications.
- *Advertising and promotion* : Interactivity, marketing ad space; and using the Internet as a promotional tool.

Besides Conference sessions, there will also be instructive tutorials, product reviews and an internationally-supported exhibition.

The tutorials include Internet access as a business, connecting LAN to the Internet, firewalls and Internet security, designing web pages, and Internet for the journalists.

For further information, please contact :

Learned Information (Europe) Ltd
Woodside, Hinksey Hill
Oxford, OX1 5AU UK.

IT Asia

The information technology exposition IT-Asia '95 will be held in New Delhi during 6-9 December 1995. This is expected to be the largest event of its kind in Asia and will be held at the Pragati Maidan. The exposition is being organised by the Manufacturers Association for Information Technology (MAIT) in association with Business India Exhibitions.

A four-day seminar has been planned to address the 'Vision Seminar' at IT Asia '95.

For more information, contact :

Business India Exhibitions
17/19, Wadia Building
Dalal Street, Bombay.

Telematics '95

The Fifth Seminar-cum-Exhibition Telematics '95 on Information Technology trends will be held during 25-27 August 1995 at Holiday Inn, Bangalore.

The Exhibition will have display of the latest in computers and computer peripherals, network products, datacom and telecom products, satellite and high speed data communication, and electronic componets.

Complimenting the Exhibition will be a seminar on 25 and 26 August 1995 on global revolution in technology trends. The seminar includes the following topics :

- ☐ National telecommunication scenario.
- ☐ Radio trunking and other wireless technology.
- ☐ High speed data communications and e-mail related services.
- ☐ Multimedia and convergence of telecom and cable technology.
- ☐ Emerging transmission technology, fibre optics and V-Sat systems.

For more information, contact :

Telematics India
11 Floor, Grandlay Cinema Complex
New Friends Colny, New Delhi-110 065.
Tel : 6836375
Fax : 6836375.

World Book Fair

The 12th New Delhi World Book Fair will be held during 3-11 February 1996 at Pragati Maidan, New Delhi. The Fair is being organised by National Book Trust.

The World Book Fair provides a platform for authors, publishers, booksellers, librarians and others connected with the world of books to interact on topics of interest and concern.

For participation enquiries, please contact:

Deputy Director (Exhibitions)
National Book Trust, India
A-5, Green Park, New Delhi 110 016.
Tel : 669962, 664667
Fax : 6851795

INFORMATION TECHNOLOGY SCAN

120 MHz Pentium

Intel has announced the launch of 120 MHz Pentium processor which uses 0.35 micron manufacturing technology in place of existing 0.6 and 0.8 micron technology. This advanced technology allows the chip to be smaller due to dense configuration, resulting in a size which is half of its earlier version. The chip is very fast and works with only 3.3 volts current and generates less heat. To allow flexibility, the manufacturers have retained the pin configuration of earlier 60, 90 and 100 MHz processors.

The new chip – about 2.5 times faster than fastest 486 chip – makes it suitable for high end multimedia and communications applications, 3-D graphics, video editing with audio and other such large memory applications. The price of the new Pentium chip is US$ 935.

About 40 US hardware vendors have also announced their plans to build systems on the new Pentium processor. The next version of 150 MHz processor is also expected to be released this year.

(*Indian Express*, 10 April 1995, 5)

Data Management System

Xerox Corp. has introduced a PC-based system, Document on Demand, that stores books and periodicals digitally and prints customized versions on demand. The system has combined software and hardware modules, and uses a Windows graphical interface implements cataloguing, indexing and printing functions. The system supports industry standard network protocols for document transmission over local networks. It is intended for use by the print and copy shops, libraries and book stores of educational institutions.

The system consists of a scanner (DocuCM 620) for input, Xionics image processing board, PC terminals for access ing on LAN (minimum 486 Dx, 33 Mhz with 16 MB RAM, 17/19 inch monitor), a document server for document bank (Sun Sparkstation 51 with 64 MB RAM) with CD-ROM driver, jukebox, optional printers with interface and applications software. The document server provides storage, sharing and management of the digital document library.

The applications software consists of Document Assembler, Document Manager, Document Locater and Operations Management System and provides copyright permissions, automates permission management and royalty tracking.

(*Multimedia*, Fall,1994, 93)

LCD Remote for PC

A new device called 'Cruisepad' from Zenith Data Systems, USA enables the computer professionals to see and control what's happening on their desktop PC even while moving or working in a nearby room. Smaller than a notebook PC, with large LCD screen and based on radio transmitter, the device weighs around 1.2 kg. It has no hard disk or floppy drive but controls the memory of desktop running on DOS or Windows. The PC can be linked to a wireless cruisepad in a range upto 500 ft..

This device enables the user to run applications and connect with other systems or tap online services. A touchpen or stylus can be used to move even around the screen and there is on-screen keyboard for typing. Its list price is US$1399 and the plug-in board and PCMIA card is priced at $595 and $695 respectively.

(*Popular Science*, January 1995, 38)

New Version of OS/2

The latest version of the OS/2 operating system released by IBM is reported to be more faster and easier to operate than forthcoming Windows 95. OS/2 Warp v3 can be installed easily and can run on PC with 4MB instead of 8MB RAM required previously. The system is available in two versions; full version and Windows version. There are many features including a new interface with 3-D icons and 'Launchpad' for starting programs quickly and single key operation to access Internet. Both the versions contain many OS/2 applications including a new collection called IBM Works. However, OS/2 may run some but not all the programs written for Windows 95. The software is expected to cost below US$100.

(*Popular Science*, January 1995, 38)

Online Journals from Elsevier

With the expected launch of Elsevier Electronic Subscriptions Service (EES) in 1996, the libraries renewing their subscriptions will have a choice of printed or electronic version, or both from Elsevier Science's 1100 journals. The proposed service will be available through OCLC's Site Search System or Guidon's online Graphical User Interface.

Users will be able to recieve half-tones and colours, as well as SGML-encoded text. The features include search text, hypertext links, and electronic scrolling through pages. The prelimnary tests are planned for 12 months and depending upon the demand and user trials, full fledged commercial launch may be decided upon.

(*Information World Review*, May 1995, 1)

Online Patents Citation Index

Derwent Information, UK has added a new dimension in patents searching. The Patents Citation Index (PCI) is now offered online for patent users and information professionals, via Dialog as file 342. The PCI contains citation information from 16 major patent offices around the world and complements Derwent World Patents Index (WPI) Database. The new features include:

- Examiner citations, giving patent and literature references and the relevance indicator for all documents.
- Bibliographic information including field of search.
- Full patent family from WPI (covering upto 40 patents issuing authorities).
- Mapping between PCI and WPI (these combination can be used to improve Prior Art searching and isolate the most relevant