Application of IT and Current Status of Mahatma Phule Krishi Vidyapeeth Library, Rahuri

Rupali S Sharnangat*, Shinde PA, Ingale RN*****

Abstract

The aim of this article is to know the term Information Technology and use of Information Technology in Libraries and current status of MPKV Library Rahuri. This IT study therefore scrutinizes the availability and utilization of IT in establishment of Digital Library. University library taking the best results from Information Technology with hardware like Printer, Barcode Reader, Barcode Printer, Scanners and moving toward fully computerized library. And for more benefits university library also decided to make almost all services through computers via Internet and LAN. At present e-GRANTH NAIP project is in progress with the financial assistance of ICAR, New Delhi through which AgriCat (National) and WorldCat (International) union catalogue is going to be developed.

Keywords: Information technology (IT) - Definition; Importance; Advantages; Availability and Utilization of IT; Digital Library; e-Granth project.

Introduction

The application of Information Technology in libraries has brought tremendous changes in the library services. The library provides information access to its users through its print and electronic resource, routine and computer aided services, resources, sharing and document delivery. These accelerating changes in the library services have brought libraries to the threshold of a new era.

The present era is predominantly called "Information Age or era of Knowledge Explosion". With the majority of books and journals are now electrically available many libraries are canceling print subscription in favor of electronic access. Growing number of peer reviewed journals are also available free of cost as a result of the World Wide Open Access movement.

Information Technology has come to say as an indefensible tool for library operations and services. In the present era, information arena is witness to an exciting overabundance of technological advances which have to a great extent been responsible for immeasurable enhancement in human knowledge.

Information Technology – A Definition [1]

We use the term information technology or IT to refer to an entire industry. In actuality, information technology is the use of computers and software to manage information. In some companies, this is referred to as Management Information Services (or MIS) or simply as Information Services (or IS). The information technology department of a large company would be responsible for storing information, protecting information, processing the information, transmitting the information as necessary, and later retrieving information as necessary.

Author's Affiliation: *Research Associate, **University Librarian, ***Chief Cataloguer, University Library, Mahatma Phule Krishi Vidyapeeth, Rahuri-413722 (MS).

Reprint's request: Rupali S Sharnangat, Research Associate, University Library, Mahatma Phule Krishi Vidyapeeth Rahuri-413722 (MS).

E-mail: Rupali_sharnangat@yahoo.co.in.

Advantages of Information Technology [2]

1. Internet may link college to college, university to university and one nation to other.

2. Rare data may be made available anywhere in world

3. Recent/advance information may be available intensely.

4. Data may be available through digital devices i.e. Multimedia

5. Internet provides an interactive environment for information handling.

6. Availability of public domain information publishing and access tool (for e.g. WEB Browsers HTML Editors)

7. Internet enables information to be delivered to the desktop of user

8. Multimedia integration (text, images, audio and Video)

9. Hyper Text linking and navigation

10. Tremendous reduction of time for publishing and accessing the published information

11. Need for keeping only one electronic copy of the digital document on net.

Historical Review [3]

In the 1960s and 1970s, the term Information Technology (IT) was a little known phrase that was used by those who worked in places like banks and hospitals to describe the processes they used to store information. With the paradigms shift to computing technology and "paperless" workplaces, information technology has come to be a household phrase. It defines an industry that uses computers, networking.

Software programming, and other equipment and processes to store, process, retrieve, transmit, and protect information.

In the early days of computer development, there was no such thing as a college degree in IT. Software development and computer programming were best left to the computer scientists and mathematical engineers, due to their complicated nature. As time passed and technology advanced, such as with the advent of the personal computer in the 1980s and its everyday use in the home and workplace, the world moved into the information age.
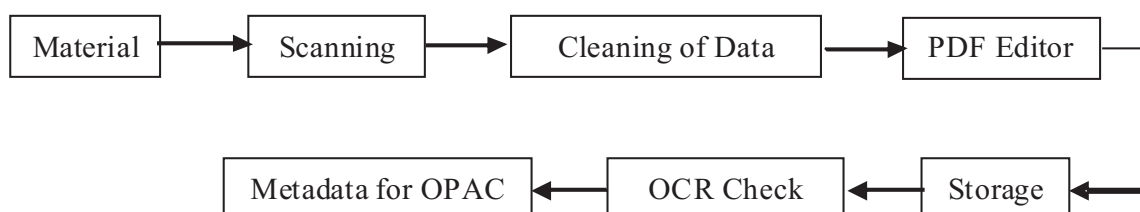
By the early 21st century, nearly every child in the world, and many in other parts of the world, knew how to use a personal computer. Businesses information technology departments have gone from using storage tapes created by a single computer operator to interconnected networks of employee workstation that store information in a server farm.

Application of IT in Libraries

Digitization: Digitization is the process of converting information into a digital format. In this format information is organized into discrete units of data (called bits) that can be separately addressed (usually in multiple-bit groups called bytes). This is binary data that computers and many devices with computing capacity (such as digital cameras and digital hearing aids) can process.

Digitized data either digitally borne or required Retrospective Conversion

i. Digitally Borne

ii. Retrospective Conversion/ Digitization

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Material → Scanning → Cleaning of Data → PDF Editor
                                              ↓
Metadata for OPAC ← OCR Check ← Storage ←
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Text and images can be digitized similarly: a scanner captures an image (which may be an image of text) and converts it to an image files, such as a bitmap. An optical character recognition (OCR) program analyzes a text image for light and dark areas in order to identify each alphabetic letter or numeric digit, and converts each character into an ASCII code. For effective digitization there are some steps to follow:

Materials

Material is nothing but information which we want to convert in digitized form.

Scanning

Paper based information can scanned through Hardware device called Scanner. There are various types of scanner according to type of information choose a scanner.

Cleaning of Data

After scanning the scanned pages may not having good clarity so that we have to clean those pages through Photoshop software.

PDF Editor

PDF Editor used to place the digitized pages in a sequential manner and in a ready only format.

Storage

Then the PDF files of all information documents are stored their classes wise for easy retrieval.

OCR Check

OCR accuracy varies from page-to-page depending on a number of variables. After each page was examined, the number of character and word errors was noted and compared with the character and word count for the page to determine the percent of accurate characters and words for that page.

Meta Data for OPAC

Metadata is essentially data about other data. Also known as metalanguage, metadata can be used in any sort of media to describe the contents of the information. The idea behind metalanguage is to provide documentation or information about a specific piece of data. When a document, image or other type of data is created, certain parameters need to be added behind the item as part of the whole file. These can include elements and attributes such as a name, size or type of file.

The collection of print documents available in MPKV library is very huge there are Books: 69,952, Back Volumes: 25,958, Thesis: 6,748, total 102,658. In MPKV Library almost all information are digitized.

Barcode/RFID Technology: [4] [5]

A barcode is an optical machine-readable representation of data, which shows certain data on certain products. Originally, barcodes represented data in the widths (lines) and the soakings of parallel lines, and may be referred to as linear or 1D (1 dimensional) barcodes or symbologies. They also come in patterns of squares, dots, hexagons and other geometric patterns within images termed 2D (2 dimensional) matrix codes or symbologies. Although 2D systems use symbols other than bars, they are generally referred to as barcodes as well. Barcodes can be read by optical scanners called barcode readers, or scanned from an image by special software.

RFID or Radio Frequency Identification is the Auto-ID technology by which one can identify objects and track information about them wirelessly using radio waves. In the simplest terms an RFID system consists of a TAG (transponder) and a READER (interrogator). The technology of RFID deals with the remote collection of information

stored on a tag using radio frequency communications. Information stored on the tag can range from as little as an identification number, to kilo-bytes of data written to and read from the tag, to dynamic information maintained on the tag, such as temperature histories. The information from the tag/reader combination is either presented to a human operator typically using a hand-held device or a host computer which automatically manages the information.

As the RFID technology is so costly MPKV Library using Barcode Technology. There are 2 barcode reader and 1 barcode printer available in library.

Library Management Software: [6]

There is various library management softwares are available in market some are: Slim++, SOUL, libSys, librarian. The MPKV library using Slim++ library automation software.

Slim++

Slim++ is integrated, multi-user, multi-tasking library information software for the Windows environment. SLIM++ helps to catalogue books, films, sound recordings, drawings, clippings, articles, reports, letters, pamphlets, serials publications... all those things that contain information so vital to your organization. SLIM++ cataloguing adheres to popular international standards. This means you can exchange data with the world. Retrieval of the data is simple, fast and efficient. Even a catchy phrase in the description of the catalogued item can be used for searching.

SLIM++ contains the following modules

Cataloguing, Circulation, Serials Control, Acquisition, OPAC, Web based OPAC, Bulletin Printing (CAS), Statistical Analysis

MPKV library uses Slim++ software because of there salient features are as below:

i. SLIM++ can be configured for specific requirements by choosing one or more of these standard and add-on modules.

ii. These modules work on the same data from different nodes of a network.

iii. SLIM++ works just as well on a stand-alone machine as it does in a network of computers.

iv. Library can be browsed through the Internet / Intranet with SLIM++.

Computer based Library Services

i. *Intranet Services*

     a. *Book Issue:* to strengthen the transaction services and to bring accuracy in issue and return of books at the circulation desk, the library is going to adopt barcode technology. MPKV library has 2 barcode reader and 1 barcode printer.

     b. *OPAC searching:* Computerized library catalogues were first introduced during the late 1960s. The online catalogue, known as the Online Public Access Catalogue, or OPAC, has gradually become more user friendly with the use of menus and simple commands. Computerized library catalogues usually form an integral part of an automated library system, which includes circulation routines as well as acquisition processing. Computerized catalogues contain the details of books, conference publications, reports, periodical titles, etc. MPKV library using the Slim++ as OPAC.

     c. *DVD/CD ROM:* CD-ROM (Compact Disc Read Only Memory) is a digital optical disc. CD-ROM has provided new dimensions for information storage. Libraries can set apart a separate budget for such CD titles and loan them to individuals just like books. In MPKV Library the thesis are

accepted in a DVD format also to take the downloaded data from the internet DVD ROM used.

d. *CAS (Current Awareness Services)[7]:* Different types of CAS involve title announcement services, announcement of research in progress, notification of forthcoming conferences etc. It involves selection of relevant information from periodicals, books, reports, patents etc. and notifying the users. This service aims at reducing time gap between primary document and its coverage in any type of periodicals. In MPKV the index page of all journals are included in CAS.

e. *Retrospective Search: [8]* It involves functions like translating the users query into a search strategy, comparing the search strategy with the descriptors of the documents in the data base and posting of matched references to the users.

ii. *Internet Services*

Internet is usually referred to as "a network of networks". Internet, as a name itself indicates, that it is essentially a worldwide network of the computer networks.

Searching the web OPACs

To take any data from web in library. Also it is possible to use Web OPAC for Interlibrary Resource sharing

a. *Interlibrary Loan Service:* ILL activities can be automated through workstation connected to the OCLC systems and utilizing their ILL module or through local or regional networks, which provide online information about resources in other libraries. The internet is increasingly used to search remote catalogue to find particular items and to make an ILL request. These systems mean that items can be located much faster nd can be transferred from one library to another via fax machines. MPKV library registered for the membership of OCLC for ILL.

b. *Accessing the e-journal/e-Books:* these days many academic and research journals are made available in the electronic format. These are full text journals accessible via internet. It takes less time to publish journals in the electronic format and they are instantly available to user. Student can access the online journals and e-books in library. Collection of e-Sources are in huge amount where e-Books: 26, e- Journals: 06, Video Cassettes: 115, DVDs: 32, Online Indian Journals: 25, Online Foreign Journals: 2 (CeRA & J-Gate).

c. *Databases:* Through internet various databases can used in MPKV library CeRA and JGate are accessing.

d. *Web Browsing:* The Internet is the world's largest library containing millions of books, artifacts, images, documents, maps, etc. Internet has given the world numerous easy to use and inexpensive research tools. For any type of query the student can get help from internet by net surfing or by query engines provided by various companies.

Impact of IT on Library Management [9]

1. *Acceleration:* Instant access to Information, Speed of Computer.

2. *Accuracy:* Information manipulated or stored is accurate, require less checking.

3. *Amplification*: Technology allows us to store and access more information. E.g. Engineering Index LISA.

4. *Archiving and Bibliographic Control*: UBC, Exhaustive search is possible, can access than owning document.

5. *Cost Effective*: Cost of machine coming down.

6. *Currency*: Retrieves nascent information as soon as it is published without time lag.

7. *Globalization*: Information distribution has become a global activity due to internet and intranet.

8. *Intensification (Awareness)*: Information is personal institutional and social resource. Information Technology made it possible to create awareness of information throughout the society.

9. *Availability*: Information Technology made is possible for the user to work at their own site/residence/office instead of going to library information reaches at the doorstep of users through their PCs.

Digital Library of MPKV

The University Library, MPKV,Rahuri is using Slim++ software for digitization of documents with OPAC search module. At present MPKV library is in second phase of computerized library management systems but moving towards fully digital steadily. The hardware available in MPKV library is: Computer: 48, Printers: 2, Scanner: 3, Barcode Printer: 2, Barcode Reader: 2, Pen Drives: 2(8GB each).

Background

ICAR launched Project CERA – Consortium of E-Resources in Agriculture with the objective of providing shared access by its academic and research community to e-Journals etc. through consortium licensing of e-content and creating a common access platform for all the content subscribed and held by libraries in 120+ institutions. These institutions include Agricultural Universities and ICAR funded research institutes in the country.

ICAR initiated its straitening of digital library information and management system, for its community of users, with the following objectives:

1. Development of a digital library system that networks and integrates twelve of its physical libraries and their collection, accessible by all its user community.

2. Creation of an institutional repository for its digitized content and to promote author archiving of research papers published agricultural scientists in India.

3. Creation of AgriCat, a Union Catalogue of books and other learning resources held by the libraries in Universities and research institutions under its domain.

4. Capacity building.

Project Scope

AgriCat project is conceived by ICAR as a part of ICT under component I of NAIP.

The Objective of AgriCat is:

i) To promote shared access to books and other learning resources currently held by the libraries under ICAR domain.

ii) To create a common catalogue (Union Catalogue) of these learning resources.

iii) To standardize and modernize cataloguing practices among its libraries.

iv) To create common infrastructure for cooperative cataloguing for the current and future acquisition of books and learning materials by all the participating libraries.

v) To join global network of libraries in agricultural education and research, to explore visibility to publications from India in agriculture and related disciplines.

Conclusion

To conclude it can be said that IT is a boon for library science. DL has variety of uses as it is possible to relate diverse opportunities for application of new technologies for information management to improve quality of services and products for users need.

The advent of the internet facilities and availability of electronic or digital libraries overshadow the existence of traditional or conventional libraries. This technical advance

changes the shape of libraries and their services. It is essential that library professional continuously acquire new knowledge and skills to ensure that they remain a vital part of information services.

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