



Modern Trends in Information Technology

Research Paper

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Introduction :- Now days, Information is an essential part of daily life. For the better standards of living, people use information more intensively in their daily activities. Thus information is required in every phase and every walk of life so, the availability of right information for the right user at the right time in right cost becomes all the more vital. It means that, the use of the information should be done properly. But the proper use of information is only possible when the information is processed in a professional way by implementation of various new types of technologies, so that the same can be reached easily to the needy users. The history of Information Technology may be traced to early civilizations when the art of recording the information developed. It followed mechanical and later electronic path as in today's society. In the early age information was recorded on stones, metal plates, cloth, paper and a like materials.

The Term :-The Term 'Information Technology' is in English, in French it is 'Informatique' and in Russian language it is called 'Informatica.' Information and Technology these are the two separate terms. These two terms consider together, thus the term Information Technology. Technology is the collective term for the various technologies involved in processing and transmission of information. They include computing, telecommunication and microelectronics. There fore Information.

Evolution of Information Technology :- There are some steps to evolution of Information Technology.

Paper and Ink :- First break through was the invention of paper and Ink. The paper was invented most probably in 105 A.D. in China and subsequently the ink also. Paper provided better and durable writing medium than the earlier fragile ones.

Movable Type :-The other most important landmark in the history of recorded knowledge was the invention of movable type by Gutenberg in 1438. A.D. in Germany. It led to the proliferation of literature and brought a revolutionary change in the development of library.

Telecommunication :-The third in the series of great inventions are the development in the field of telecommunication which include. Telegraph - In 1837 by An American SFB Morse. Telephone - In 1876 by Scottish gentlemen

Alexander. Graham Bell, Radio - In 1895 by an Italian G. Marconi. Television - In 1925 by a Scotsman J.L. Baird Laser - In 1960 by an American Theodore Mainan - Optical Fiber Communication - Communication Satellites - Facsimile Transmission - Electronic mail etc.

Information Technology :- Technologies which are used in Information handling is called 'Information Technology'. In the strictest sense, 'Information Technology is the new science of collection, storing, processing and transmitting information. Basically Information Technology is a tool and applications support through which or by means of which information is transferred, recorded, edited, stored manipulated and disseminated. The definitions of Information Technology are manipulated in many ways. "Information Technology means as acquisition, processing, storage and dissemination of vocal, verbal, pictorial, textual and numerical information be microelectronic based combination of computer and telecommunication."- Macmillan Dictionary UNESCO defines Information Technology as, "Scientific, technological and engineering discipline and the management techniques techniques used in informaion handling and processing their interaction with man and machine and associated social, economic and cultural matters."

Different Trends in Information Technology :- Information Technology is developed throughout the age, but there was always a change in the materials and techniques used for storage, processing, recording and combination of information. Depending upon these characteristics of technology at present IT put under the different categories.

1. Computer Technology :- The Computer Technology is the most useful tool for human life. The number of computer users increasing day by day. The computer is an electronic machine, which works with huge speed and accuracy. It stores, process and retrieves the information in a very efficient way. Computer performs many functions at the same time. It has much effective than print media it is stored various types of information, rerecorded by people and instantly recall it for use. The computer calculates tens of millions of times faster than the human brain and solves many problems in a second. It processes information that can be represented in many forms, i.e. numbers, letters,

verbs, sentences, voice, pictures, formulas, mathematical signs, control signals, punctuations marks etc. The processing is controlled by a set of step - by - step instructions called programmes.

2. Communication Technology : This is the process of transmitting the information. Without proper communication information cannot reach its defined destination. The technology used in transmitting information is called communication technology. This technology comes in picture if the range of communication is such that direct communication cannot take place in the usual way then a communication system must be used. The method by which the message sent to the destination is said a communication system, in which some types of technology is used. Telephone is one of the tools of communication system.

3. Multimedia Technology :- This is the new technology which is gradually getting acceptance by the libraries and information centers. The term multimedia refers to delivering information in a simpler and understandable way to the end users. It is most widely used and simpler technology which presents the information in text, graphics, image, video, audio and animation interactively in a computer environment. Multimedia information kiosks are one of the most important applications in libraries.

4. CD - ROM Technology :- CD-ROM is the abbreviation of Compact Disk Read only Memory and is a optical disk which has the capacity of holding information equivalent to 1000 double side double density floppies it is a silver plated disk of 1.2 mm thickness and 12 cm in diameter. It is read only device and cannot write or record data on it.

5. Database Technology :- This technology has been emerged in the late sixties as a result of a combination of various circumstances. A database can be conceived as a system whose base, is simply a particular way of handling data in other words, a database is nothing more than a computer based record keeping system. A database is an organised, integrated and logically interrelated collection of digital data, record, files or information where data is collection of facts, figures & statistics which can be processed to produce meaningful information.

6. Networking Technology :- The concept of this technology in libraries to aid information resources sharing and support activities in libraries has become real necessity.

Networking is a means through which two computers can talk to each other. Some are general data network and some are specialized information networks. General data networks in India are NICNET, INDONET, VIKRAM etc. and specialized networks are ERNET, and the networks supported by NISSAT, such as CALIBNET, BONET, DELNET, MALIBNET, BALNET, and HYDLIBNET etc. UGC also setup INFLIBNET at Ahmadabad for libraries of colleges and universities in India.

7. Barcode Technology :- 'A self contained message with information encoded in a series of black bars of varying breadths and white spaces between every two of them. The bars and spaces represent a series of characters or digits, is called Barcode Technology.' These are readable only by a scanner, which sends messages to the computer that decodes the number of digits. The computer identifies such bars as 0's and 1's (Zero and ones) and white blanks as off's and one's. Therefore a barcode is a series of 0's and 1's representing characters or digits in such a form as can be identified by computer only.

8. Digital Technology :- The use of digital technology has paved the way of emerging digital as well as virtual libraries. The term digital library may be understood in different ways and named differently. In the digital library services are fully automated and all resources are in digital form and they are heterogeneous in nature. Digital libraries provide instant access to digitized information by utilizing the avenues of information technology. Digital libraries have the ability to view for several persons at the same time.

9. Virtual Reality :- Virtual libraries are the libraries without resources but resources simply may be a collection of web sources. It is the library with no physical presence of books, periodicals, reading space or support staff, but is the one that disseminates information directly to the users, usually electronically.

Conclusion :- Information Technology has now become a part of the society and no one can afford to without use of the Information Technology, as its use in libraries is developing at a very fast rate. The users of the libraries are getting used to the existence of information technology all over. Professionals of the libraries are now in a position to meet the challenges and provide the information resources to the users with the help of information technology products.

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