BASICS OF IT: INFORMATION-MODULE 2

INFORMATION AGE The Information Age, also commonly known as the Computer Age or Digital Age, is an idea that the current age will be characterized by the ability of individuals to transfer information freely, and to have instant access to information that would have been difficult or impossible to find previously.

Data and information Data are plain facts in unprocessed form. The word data is plural for datum. When data are processed organized, structured or presented in a given context so as to make them useful, they are called information.

Prerequisites and needs

Information need refers to an individual or group's desire to locate and obtain information to satisfy a conscious or unconscious need. The 'information' and 'need' in 'information need' are inseparably connected.

Information needs depend on the following factors:

a. Work activity b. Discipline/Field/Area of Interest c. Availability of facilities d. Hierarchical position of individuals e. Motivation factors for information needs f. Need to take a decision g. Need to seek new ideas h. Need to validate the correct ones.

INFORMATION TECHNOLOGY AND ITS COMPONENTS

The term "Information Technology" in English is derived from the French word 'Informatique' and "Informatika" in Russian means information handling. IT is a new science of collecting, storing, processing and transmitting information.

Components of Information Technology Technological change is becoming a driving force in our society. Information technology is a generic term used for a group of technologies. James William (1982) has identified the following six major new technologies as most relevant in modern library and information system.

Processor, memory and input/output channels, • Micro. Mini and Large scale computers, • Mass storage technologies, • Data communication, networking and distributed processing, • Data entry, display respond, and • Software

A. Computer Technology The wide spread use of computer technology has made dramatic developments in the information transmission process in very field of human life. Highly sophisticated information services ranging from elaborate abstracting and indexing services to computerized data bases in almost all scientific disciplines are in wide use all over the world
B. Communication Technology

Audio Technology Due to tremendous improvements and inventions, older gramophone records are now dwindling and much sophisticated cassettes and tape records are emerging

2 Audio-Visual Technology Motion pictures, Television, Videodisc are the main contributions of this technology. Videodisc is a new medium containing prerecorded information, which allows the user to reproduce this information in the form of images on the screen of a television receiver at, will. Videodisc technology offers high quality storage, image stability and speed of recall.

IT AND INTERNET

Internet has transformed our lives and the way we communicate, how we learn, how we work and spend free time. In essence it has more or less changed every aspect of human society one can think of. The significance of the Internet and Information Technology in both nosiness and private field has grown considerably in the last few years, with exponential growth of Internet users and services offered. The internet is a global system of interconnected computer networks that interchange data by packet switching using the standardized Internet Protocol Suite (TCP/IP). It is a "network of networks" that consists of millions of private and public academic, business, and government networks of local to global scope that are linked by copper wires, fiber-optic cables, wireless connections, and other technologies.

Publishing including full text articles, abstracts, computer programs and demonstrations. ¬Blogging, which is a form of self-publishing. A blog (or Web log) is a website, usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video. Extension, in which some of the delays associated with the printed media, may be reduced. ¬Teaching, the possibilities here include both distance learning and assistance for students.

E-GOVERNANCE

The emergence of Information and Communications Technology (ICT) has provided means for faster and better communication, efficient storage, retrieval and processing of data and exchange and utilization of information to its users.

IT APPLICATIONS IN HEALTH CARE

Information technology (IT) has the potential to improve the quality, safety, and efficiency of health care. The use of IT in health care is generally low. Barriers include the cost and complexity of IT implementation, which often necessitates significant work process and cultural changes. Given IT's potential, both the private and public sectors have engaged in numerous efforts to promote its use within and across health care settings. Additional steps could include financial incentives (e.g., payment policy or loans) and expanded efforts to standardize records formats, nomenclature, and communication protocols to enhance interoperability.

EMERGING TRENDS IN IT

Electronic Data Interchange (EDI) is the structured transmission of data between organizations by electronic means. It is used to transfer electronic documents or business data from one computer system to another computer system, i.e. from one trading partner to another trading partner without human intervention.

Mobile Computing Mobile computing is "taking a computer and all necessary files and software out into the field." "Mobile computing: being able to use a computing device even when being mobile and therefore changing location. Portability is one aspect of mobile computing.

SMS& MMS Text messaging, or texting, is the exchange of brief written text messages between two or more mobile phones or fixed or portable devices over a phone network. While the original term was derived from referring to messages sent using the Short Message Service (SMS) originated from Radio Telegraphy, it has since been extended to include messages containing image, video, and sound content (known as MMS messages).

WIRELESS APPLICATIONS

BLUE TOOTH Bluetooth is the name of a wireless technology that is standard for connecting devices without cables. Bluetooth works by using radio signals to transmit information over short distances that are generally 33 feet or less. Thus Bluetooth is a technology that allows for short distance wireless data transmission. It is used most commonly in phones for peripheral devices like headsets.

Global Positioning System

The Global Positioning System (GPS) is a space-based satellite navigation system that provides location and time information in all weather, anywhere on or near the Earth, where there is an unobstructed line of sight to four or more GPS satellites. It is maintained by the United States government and is freely accessible to anyone with a GPS receiver.

INIFRA RED COMMUNICATIONS Infrared is an energy similar to visible light, but with a longer wavelength. Infrared energy is invisible to the human eye, however, while visible light energy is emitted by objects only at a very high temperature; infrared energy is emitted by all objects at ordinary temperatures.

SMART CARD A smart card, chip card, or integrated circuit card (ICC) is any pocket-sized card with embedded integrated circuits. Smart cards are made of plastic, generally polyvinyl chloride, but sometimes acrylonitrile butadiene styrene or polycarbonate.

DNA COMPUTING Microprocessors made of silicon will eventually reach their limits of speed and miniaturization. So scientists are turning to our own DNA (deoxyribonucleic acid) molecules, the material our genes are made of, which have the potential to perform calculations many times faster than the world's most powerful human-built computers.

Cloud computing is the delivery of computing and storage capacity as a service to a community of end-recipients. The name comes from the use of a cloud-shaped symbol as an abstraction for the complex infrastructure it contains in system diagrams. Cloud computing entrusts services with a user's data, software and computation over a network.