BASIC MULTIMEDIA KNOWLEDGE

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1.0.0 INTROUCTION

Multimedia is the buzzword of the decade. Multimedia is the use of computer to present and combine text, graphics, audio and video with links and tools that let user navigate, interact, create and cummunicate.

Multimedia is fast emerging as a basic skill that will be as important to life in the twenty-first century. Multimedia is changing the nature of reading itself. Instead oflimiting to the simple presentation of text as printed in books, multimedia makes reading dynamics by conveying meaning, words serve to expand the text in order to learnmore about the topic with sound, pictures, music and video.

Multimedia is highly effective. As per Computer Technology Research reports, people retain only 20% of what they see and 30% what they hear. But they remember 50% of what they see and hear and as much as 80% of what they se, hear and do simlutaneously. That is why multimedia provides a powerful tool for teaching and learning. Multimedia will spread the information age to millions of people. Multimedia is redefinning the communication system that forms a significant part of the infrastructure jof our society.

2.0.0. MULTIMEDIA AND ACADEMIC LIBRARIES

2.1.0. ELECTRONIC PUBLISHING

Multimedia is changing how we read newspaper by eliminating the need for the paper and offering all the features of multimedia, including full-text search, graphics, audio and video. for expamle ClariNews, an electronic newspaper offered by Clarinet uses Multimeida Internet Mail extensions to deliver not only text, but also graphics, audio and video. Read by more than 40,000 users worldwide. Electronic publishing gives a newspaper the tools to focus on all aspects of the society, business, culture, sports etc.,

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2.2.0. TEACHING AND LEARNING

Skills and knowledge are too often taught out of context, as ends in and of themselves. To overcome this , teachers are using multimedia to bring into their classrooms real-life expamples to provide the contextual framework so important for learning. Multimedia gives teachers instant access to thousands of slides, videos, soundtracks, and every lesson plan they ever wrote. Some research findings indicate that if multimedia is used effectively average learning time has been reduced significatly and achievement levels are being improved more. Networks add an important dimesion to educational computing. The Information Superhighway is linking universities, colleges, schools and research organizations to collaborate on worldwide projects, share data and contribute findings to reach more immediate results.

2.3.0. INFORMATION SERVICES

The most strategic use of multimedia may be to help bring the public into information age. Multimedia relieves information overload and techno stress by engaging more sense. If one medium is not getting the message across, multimedia will engage more of the senses to make the communication more effective. Multimedia makes user interfaces easier, thereby providing much wider across to information services.

3.0.0. MULTIMEDIA COMPUTER COMPONENTS

Any one who plans to learn, teach, work, play, govern, serve, buy or sell in information society needs to know

about multimedia. Every one who plans to function producitivity in twenty-first century society needs to know about multimedia and the computer major components.

3.1.0. SYSTEM UNIT

The system unit includes the central processor a colour monitor and a pointing device.

3.1.1. Central Processor

The central processor has a numerical name that indicates the basic type and speed of the processor. Processors in Multimedia PC-compatiable multimedia computers have the numbers 286, 386, 486 and pentium. The more powerful the processor, the faster the multimedia computer will respond.

3.1.2. Random access memory (RAM)

It is the main memory at the heart of the computer in which multimedia programmes execute. RAM is measured in megabytes(MD). Since multimedia objects are big, 4 MD is the minium required. 8 MD works well. 16 MD is recommended for the large programs like windows and for quick hype.

3.1.3. Colour display

Also referred to as colour monitor. 14" colour monitor is good for multimedia with 640 x 480 pixels on the screen. Most important is the number of colours the system unit can display. VGA monitor is needed which can only display 16 colours. For multimedia SVGA monitor is needed which can display 256 simultaneous colours chosen from more than 16 million colours.

3.1.4. Pointing device

The mouse is the pointing device on multimedia computers. In the windows enviroment mice have two or three buttons. A two-button mouse works fine. Mouse pens which let you write with stylus instead dragging the mouse; trackballs, which let you spin a ball TraclPoint mounted in the center of the keyboard on IBM notebook computers.

3.2.0. MULTIMEDIA ACCESSORIES

They give the multimedia computer the ability to make sound, play music and record movies.

3.2.1. CD-ROM Drive

Early CD-ROM drives could read computer data but did not have audio circuitry needed to make sound. The original CD-ROM drives read computer data at

a speed 150 KB per socond. Double speed drives read at a speed of 300 KB per second. Triple and quadruple speed CD-ROM drives are available with pentiums. CD-ROM is an evolving technology that keeps improving.

3.2.2. Digital Auido

Multimedia computer requires waveform audio to record and play back waveform digital auido files. 8-bit sound card produces a dynamic range of 50dB whereas 16-bit sound card increases the dynamic range to 98dB. The grate the dynamic range the more faithful sound reproduction. (dB = decibel, a measurement of loudness)

3.2.3. Digital Video

It is a combination of sound, video and animation. This requires a massive diskspace, faster drives and processors because video playback has to be done at 30 derames per socond to achieve the T.V.quality. Use MS Video for windows to display digital movie clips and use frames grabber cards to convert video footage to digital files.

3.2.4. Audio Speakers

A pair of auido speakers to listen the stereo sound.

3.2.5. MIDI

Midi is the Musical Instrument Digital Interface. MIDI was invented to provide a means for music keyboards synthesizers and computers to communicate with each other. MIDI synthesier or keybord purchased fallows general MIDI specifications which stadardise the set instrumental sounds MIDI device [rpdive. Unlike waveform data which stores actual digitised sound, a MIDI file waveform data which stores actual digitised sound, a MIDI file contains a series of 3-Byte key-on and key-off messages.

3.3.0. MULTIMEDIA READ/WRUTE STIRAGE

Multimedia requires lot of storage if you are into digital audio and video. The storage alternatives are

3.3.1. Hard disk

Multimedia computer should have much hard disk built into it. No matter how much capacity the library gets, it will eventually run out as your library multimedia software grows. The size is measured in MB. Hard drive capacities of 540 MB and higher begin

to look credible for users of multimedia.

3.3.2. SCSI

Stands for Small Computerr System Interface. Many CD-ROM drives use SCSI it is better that your multimedia PC also should install a SCSI board.

3.3.3. Read-Write Optical Disk

A read-write optical disk is an storage medium for multimedia because the disks are removable and insert another to provide access to more storage. They are slow when compare to hard disks and slow down the multimedia applications.

3.3.4. CD-ROM Recorders

If you want to record on the CD you can do so by using the CD-ROM Recorder.

3.4.0. COMMUNICATION OPTIONS

If your multimedia computer is connected to the Information Superhighway, You can access to many of the multimedia computers all over world.

3.4.1. Modems

Connection of Information Superhighway is by way of a modem. This is connected to the serial port of the computer. The faster the modem, the less the time it will take to download files to the computer. If long distance telephone charges are involved higher speed modems can save cost as well time. Modems with speeds as high as 28,800 baud are advisable.

3.4.2. Networks

Networks cards provide even faster ways to access multimedia files. The most popular network topologies are Ethernet and Token Ring. Ethernet cards provide access at speeds upto 10 MB per second and Token Ring networks run at 4 MB or 16 MB per second depending on the number of users connected to the network.

3.5.0. AUXILIARY INPUT

The auxiliary input devices provide convenient ways to digitize pre-existing texts and pictures for use with the multimedia computer.

3.5.1. Hand-Held scanners

Hand-held scanners are used to scan text from a book or pictures. Monocrome and colour hand held scanners are available.

3.5.2. Flatbed Scanners

Flatbed scanners do the job of scanning both text and graphics. Flatbed scanners are good for producing multimedia text and graphic objects.

3.5.3. Slide Scanners

Slide scanners have a slot into which 35mm slide is inserted to scan the slide and produce a bitmap image of it.

3.5.4. Digital Cameras

Digital cameras that snap pictures by producing a real digital bitmap to read directly into application.

3.5.5. Printers

Since colour is important in multimedia applications, better to have a colour printer.

4.0.0. MULTIMEDIA APPLICATIONS

HOME/LIBRARY	EDUCATION	BUSINESS	GOVERNMENT
Education	Interactive learning	Training	Public information access
Information	Simulation	Education	Dept. information
Entertainment	Reference	Retail sales	Tourism
Reference		Simulation Visual/audio catalogs Business pre-sentations	Surveys

5.0.0. FUTURE OF MULTIMEDIA

Technology is one of the most difficult areas in which to make predictions because new inventions occur at such a speed that the future changes can not be assumed correctly. How can the future change before it gets here? Many companies are investing millions and millions of dollars in promoting new products and many consumers to believe that their products will remain in the mainstream in the future. But shortly after coming to the market, the products get abandoned because the manufacturers pursue newer technologies that promise bigger profits. This has happened so often during the past decade that almost anyone involved with multimedia has been frustrated by purchasing so-called "mainstream" technologies that get quickly out-of-date and are abandoned by their manufacturers. Knowledge is the best strategy for copying with fast-paced change. The

more you know about multimedia issues and technologies, the better prepared you will be to make strategic choice in purchase and maintain.

6.0.0. CONCLUSION

There are many reasons why you need the multimedia knowledge. Since the ability to use it is emerging as a life skill, you need to develop the multimedia techniques to stay competitive in your profession and to live in the information society. As the technology changes and you upgrade your computer, you will need the latest informtion and advice on what to buy and what not to buy. By subscribing to the periodicals, joining associations and attending the workshops and conferences, you will remain current and even contribute your own opinions and ideas about multimedia access to the Information Superhighway.

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