

Multimedia in Bus

5.

Business application for multi-

media includes presentation, training, marketing, advertising, product demos, databases, catalogs, instant messaging and network communications. voice-mail & video conferencing are provided on many local & wide area networks using distributed networks & internet protocols. The multimedia technology along with communication technology provides an efficient presentation of real business environment. According to communication technology following facilities enables business applications in attractive presentation & design making capabilities.

(i) Voice-mail:— It is a tool which communicates voice over a line. A voice mail system has capability to exchange information in any manner (voice-mail time & location independent).

(ii) e-mail:— It preferred over the voice-mail as it includes wider distribution of complex information. Since, text provides more interaction than sound. e-mail is also time & location independent.

(iii) Multimedia based Fax (Facsimile Zero machine) accepted than a mail. Because, it can be used to send detailed information.

- * It is easier to use
- * It handles graphics information.
- * It provide a printed copy of information.

(iv) Multimedia based meetings (office):— The office meetings, group discussion, teaching programmes are some specific areas where multimedia technologies are used to provide

* Sampling & Quantization -

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Some systems use a digitizer card with has dual function for both audio & video conversion. The process of converting analog video signal to digital format is called sampling. Using this process the converter in the system converts the analog to video signal into digital data stream, so that the signal can be stored in the binary data structures format of zeros & ones. The digital data files is compressed to a considerable amount using some compression program.

Digital audio is created when we represent a sound wave using numbers, a process referred to as digitizing.

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Digitized sound from a microphone existing tape recordings, home radio and television broadcast and popular series. In fact we can digitized sound from any source, natural & pre-recorded. Digitized sound is sampled sound.

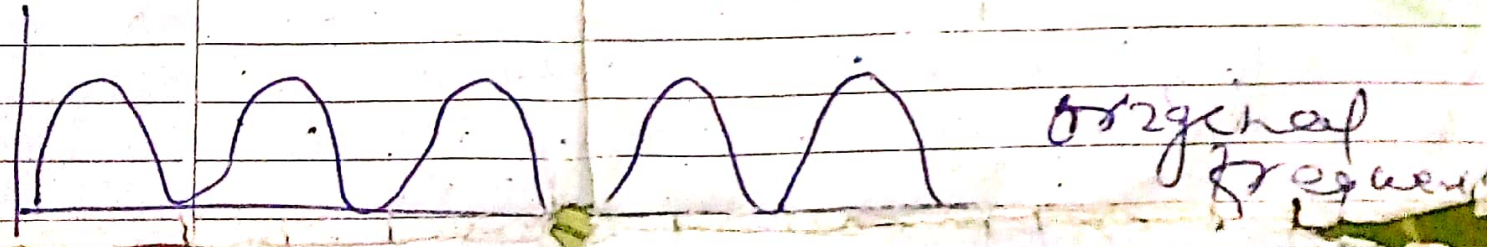
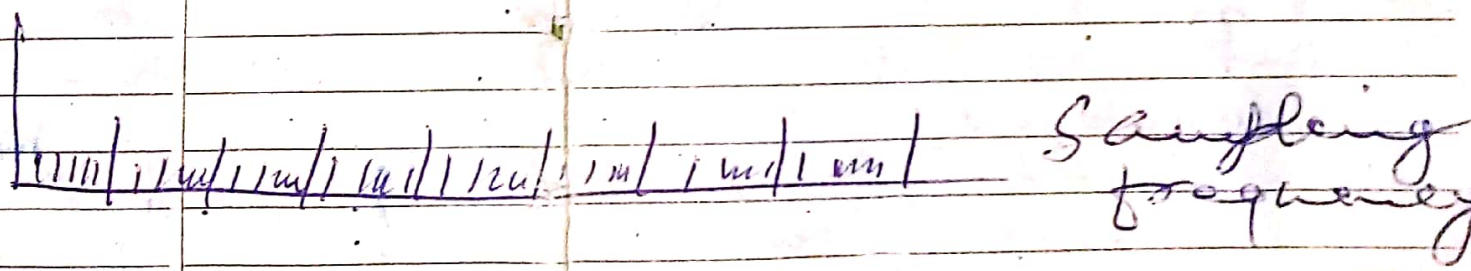
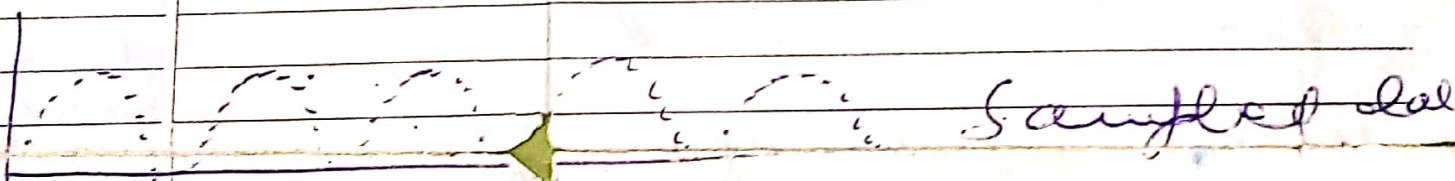
Every n^{th} fraction of a second, a sample of sound is taken and stored as digital information in the bits and bytes.

The quality of these digital recordings depend upon how often the sample taken (sampling rate or frequency), measured in kHz or (kilo of per second) and how many numbers are used to represent

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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

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the value of each sample (bit depth, sample size). The more often we take a sample and the more data we store about that sample, the finer the resolution and the quality of the captured sound when it is playback. Since the quality of our audio is based on the quality of our recording and not the device on which one end user will play the audio, digital audio is said to be device independent.



The three sampling frequency most often used in multi-media are CD quality 44.1 kHz, 22.5 kHz and 11.25 kHz

* Sound!

Sound is most sensory elements of multimedia. It is meaningful speech of any language having lower intensity to higher intensity. The sound is repeated pattern of pressure in the air. Sound pressure are measured in db (decibel). A db measurement is actually the ratio between a chosen reference point on a logarithmic scale and a local that is actual experience.

⇒ Digital audio! — A microphone converts a sound waves into an electrical wave. The shape and frequency of the electrical wave is identical to the shape and frequency ^{of the} ~~of the electrical~~ ~~wave and sound wave~~ sound wave. Sound can be recorded and reproduced using digital signals and the error can be reduced drastically (completely) in digital recording of the sound! Audio has to be converted into digital or produced

digital audio in order to use it in the multimedia and the digital audio system will then be converted the entire digitized audio in the analog form which can be heard on the speaker. The two way transformation of audio is known as analog to digital conversion respectively. The finite process of digitization is a single process of converting analog or electrical signal of audio to computer data file in the digital format. The microphone converts the voice into electrical signal or analog audio signal then the analog signal is passed into the audio input of a digital card or sound card. The signal goes into the analog to digital converter, which convert the analog audio signal to digital form and store it as computer data file. playback sequence a digital audio data file is just the

reverse process of converting analog to digital. Once the digital audio file is said to the sound card, to play back the file, if it is channelled through a converter and digitized version of the original file is converted into analog and put it to the speaker.

A common sound file format existing in pc are known as .wav files. The MIDI files - disks stores it only stores the instructions about how to play a musical instrument. It restores the sound relating to the sound modes of various instruments and reproduces it from a voice signal etc for it.

As soon as we install the OS in our computer device, some are installed in .wav files. include part .wav