

Lecture 7 Outline

Reading: White, §17–19, 32, 33

Assignments due: Lab #3 (“Microsoft Excel”) due Jan. 25 at 11:55PM
Term paper progress report due Jan. 27 at 9:00AM
Lab #4 (“Microsoft Powerpoint”) due Feb. 1 at 11:55PM

1. Greetings and felicitations!
2. Analog and digital
 - a. Analog→digital: sample the signal at discrete intervals, output 1 if signal present, 0 if not (or values indicating intensity)
 - b. Digital→analog: output signal based on digital values
 - c. Precision: how closely the converter can get the digital to match the analog
 - d. Resolution: range of analog values converter can handle
3. Bandwidth
 - a. Capacity of a channel: how much data can move through it
 - b. Cache data: save copies of frequently used data in cache
 - c. Latency: overhead of moving data, for example address information, error correcting codes, etc.
 - d. Prefetching: guess what data you need next, and bring it into cache so it's there when you need it
 - e. Multiplexing: split data into multiple parts, ship each part over separate channel
4. Ports
 - a. Parallel port
 - b. Serial port
 - c. USB port
5. Displays
 - a. CRT screens
 - b. LCD screens
6. Digital camera
7. Fonts
 - a. Character
 - b. Bitmap fonts
 - c. Outline fonts
8. Postscript
9. Colors
 - a. Additive colors
 - b. Subtractive colors