

Lecture 9 Outline

Reading: White, §22, 23

Assignments due: Lab #4 (“Microsoft Powerpoint”) due Feb. 1 at 11:55PM

Lab #5 (“Building a Simple Web Page”) due Feb. 8 at 11:55PM

Midterm on Feb. 10 in class

“Spew” paper due Feb. 17 in class

Question for the Day: How trustworthy do you think digital evidence is (such as digital photograph, audio recordings, or printouts of emails)?

1. Greetings and felicitations!
 - a. Office hours for Tuesday, Feb. 1 are *moved* to 11:00AM–12:00 noon.
2. Brief history of computer games
 - a. 1961: Spacewar
 - b. 1971: Star Trek
 - c. 1972: Hunt the Wumpus
 - d. 1974: Maze War
 - e. 1975: Adventure
 - f. 1980: Rogue
 - g. 1980s: Pong, Pac-Man, etc.
3. Joystick
 - a. x-axis, y-axis, r-axis; buttons
 - b. Force-feedback
4. Game pad (PlayStation, GameBoy, etc.)
 - a. D-pad
 - b. Analog sticks
 - c. Action buttons
 - d. Feedback
5. Video cards
 - a. ATI vs. NVIDIA
 - b. Rendering, rasterization
 - c. Scissors rendering
 - d. Supertiling
 - e. Shader is on chip, adds texture, etc.
 - f. Frame buffers
6. 3D graphics
 - a. Polygons and 3-D objects
 - b. Geometry engine
7. Rendering engine of the GPU creates 2D rasterization of 3D scene
 - a. Wire frame
 - b. Z-Sorting
 - c. Z-Buffering
8. Filling things in
 - a. Texture maps
 - b. MIP mapping
 - c. Perspective correction
 - d. Alpha blending
 - e. Fogging, depth cueing
9. Shading
 - a. Bilinear filtering
 - b. Shading, Gouraud shading

- c. Ray tracing
 - d. Vertex shaders
 - e. Particle shaders
10. Brave New (Game) World
- a. Descendent of Dungeons and Dragons
 - b. Massively Multi-Player Online Role Playing Game, or MMORPG
 - c. Avatars (also called “PC” for “player character”)
 - d. Mobs
 - e. Client-server relationship
11. Brief history of networks
- a. ARPAnet
 - b. CSNET, BITNET, SPAN, UUCP
 - c. Development of Ethernet
 - d. Interconnection of networks (Purdue→Stanford→Stanford gateway→Megatest)
 - e. NSF backbone , leading to the beginning of the Internet
 - f. World Wide Web