What Do You Think Are Technical Topics for Developing Games?

• Consider a computer game you want to build (or, one you like that has been built)
• Assume you are inspired (or forced or paid) to engineer the game
• Take 2-3 minutes to write a list of the tasks required
  – Subtasks, too, if you’d like
• What do we have?
Topics

• Background
• Topics
• Course Materials
• Motivation

Professor Background (Who am I?)

• Mark Claypool
  - Computer Science
    • Operating Systems, Distributed Computer
      Systems, Multimedia, Networks
  - Director of the IMGD program
    • The Game Development Process
• Research interests
  - Networks, Multimedia, Network games,
    Performance (Technical)
Student Background (Who Are You?)

- Year (sophomore, junior, senior)
- Major (IMGD-Art, IMGD-Tech), CS, other?)
- Classes
  - IMGD 3000
  - IMGD 3500, IMGD 4500
  - CS 4341 (AI), CS4514 (Net), CS4731 (Graphics)
  - PH 1110 (Newtonian Physics)
- Programming Language of choice (Java, C++, ...)
- Games made (estimate)
- Other ...

Syllabus Stuff

http://www.cs.wpi.edu/~claypool/courses/4000-D07/

- TA:
  - Zhe ("Jeff") Zhou
- Office hours:
  - Jeff: M 3-4, T 3-4, W 2-3, Th 2-3, Me: (TBA)
  - See Web page
- Email:
  - {claypool, jeffz} at cs.wpi.edu
  - imgd4000-ta at cs.wpi.edu
  - imgd4000-all at cs.wpi.edu
Course Materials

• Slides
  - On the Web
  - PPT and PDF
  - Caution! Don’t rely upon the slides alone!
    Use them as supplementary material
    * (come to class)
• Timeline
  - Tentative planning
• Resources
  - Project writeups, samples, etc.

Text Books

• May supplement with other materials (make available online)
Course Structure

• Prerequisites
  - IMGD 3000
  - Programming

• In-Class
  - Mostly lecture
  - Some discussion
  - Exams
  - Project presentations

• Out-of-Class
  - Reading
  - Projects

• Grading
  - Exams (60%)
  - Projects (40%)

(More on Exams and Projects, next)

Exams

• 2 exams
• 40% of grade
• Non-cumulative
• Closed-note
• Closed-paper
• Closed-friend
• One-page “crib-sheet” (handwritten)
Projects (1 of 2)

• 4 projects
  • #1-3  
  - Done individually  
  • Ask for help, but no sharing code  
  - Apply technical concepts in class  
  - Build upon each other  
  - 30% of your grade  
  • #4  
  - Done in groups  
  • 3 ideal, 2 and 4 with permission  
  - Apply creativity, design, and technical concepts  
  - 30% of your grade  
  • Should have two working games at end!

Projects (2 of 2)

• Project 1: Chess Board  
  - Chess front end, piece movement and graphical representation  
• Project 2: Chess AI  
  - Computer-controlled opponent, different levels of “smartness”  
• Project 3: Online  
  - Networked client-server, play against other opponent or computer on Internet  
• Project 4: A Technical Game  
  - Creative idea, technical selection, technical focus, milestone, working game
Topics

- Networking
- Distributed Systems
- Artificial Intelligence
- Physics
- Graphics
- Misc

Why This Class?

- **IMGD requirements**: (Core Course, see [www.wpi.edu/+IMGD](http://www.wpi.edu/+IMGD))
- Need to be technically excellent to be a good game developer
- Fun! *(neat CS topics in games, passion for games)*