IMGD 1001
The Game Development Process

Mark Claypool

Topics

• Background
• Topics
• Course Materials
• Motivation
Professor Background (Who am I?)

• Dr. Mark Claypool (professor, “Mark”)
  - Computer Science
  - CS3103 Operating Systems
  - CS4513 Distributed Computer Systems
  - IMGD1001 (3rd offering)

• Research interests
  - Networks, Multimedia, Network games, Performance

Student Background (Who Are You?)

• Year (freshman, sophomore, ...)
• Major (IMGD (Art or Tech), CS, HUA, ...)
• Programming Classes
• Gamer: (casual) 1 to 5 (hard-core)
• Number of Games Built (zero is ok)
• Other ...
What Do You Think Goes Into Developing Games?

• Choose a game you're familiar with
• Assume you are inspired (or forced or paid) to re-engineer the game
• Take 3-4 minutes to write a list of the tasks required
  – Chronological or hierarchical, as you wish
  – Include your name of game and your name
    * (I'll collect and read, but not grade)
• Trade write-ups with another student
• What do we have?

Syllabus Stuff

http://www.cs.wpi.edu/~claypool/courses/1001-E06/

• Office hours:
  - By Appointment
• Email:
  - {claypool} at cs.wpi.edu
  - id111x-ta at cs.wpi.edu
  - id111x-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
  - Game creation toolkits, documentation, etc.

Text Books

• Select chapters from text books
  - Pickup from Campus Bookstore
• See Web page for full list
• Reading list provided on Web page
Course Structure

• Prerequisites
  - None!
  - Neither Programming nor Art
• In-Class
  - Lecture
  - Discussion
  - Exams

• Out-of-Class
  - Reading
  - Projects
• Grading
  - Exams (45%)
  - Projects (45%)
  - Other (10%)

(More on Exams and Projects, next)

Exams

• 2 exams
• 45% of grade
• Non-cumulative
• Closed-note
• Closed-paper
• Closed-friend
• One-page “crib-sheet” (handwritten)
Projects (1 of 2)

- About 5 projects
- 45% of your grade
- Individual or Group of 2 (scale 1.5 for group)
- Apply concepts taught in class
- Related to Game Development
- Build upon each other
  - Should have working game at end!

Projects (2 of 2)

- Project 1: Game Inception and Design
  - Inspiration of a game, design and documentation
- Project 2: Content Creation
  - Create 2-d animated sprites (or other art) and select supporting content
- Project 3: Game Logic
  - Implement game objects and game rules
- Project 4: Level Design
  - Put above components together in compelling game
- Project 5: Game Evaluation and Testing
  - Critique each other’s games
- Project pitch
  - To panel of experts
Topics

- **Game Design**
  - The Creative Process
  - Design Documentation
- **Artistic Content Creation**
  - Color and Displays
  - 2D and 3D
    - Graphics
    - Animation
  - Audio
    - Music
    - Sound Effects
- **Engineering**
  - Game Architectures
  - Programming
- **Team Management**
- **Misc**
  - Release
  - Postmortem

Why This Class?

- **IMGD requirements** (Core Course, see www.wpi.edu/+IMGD)
- Introduction to steps of Game Development
  - In depth in Area
- Fun! ("passion for games")