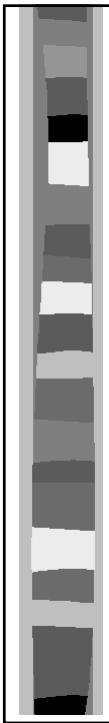
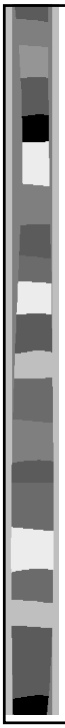
IMGD 1001
The Game Development Process

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
- 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-C06/

- Office hours:
  - TBA (about 3 per week each)
  - See Web page
- Email:
  - {claypool,flashine,jbd} 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

- *The Game Development Process*
  - By lots of people, edited by Steve Rabin
  - Close to course material, required for this class
  - 1000 pages! But good reference
- *Game Architecture and Design - A New Edition*
  - by Andrew Rollings and Dave Morris
  - Heavily used last year (in id111x)
- *On Game Design*
  - by Andrew Rollings and Ernest Adams
  - Some solid game design material
- *Designing Arcade Computer Game Graphics*
  - by Ari Feldman
  - Creating 2D art for games
- *Creating the Art of the Game*
  - by Matthew Omernick
  - Creating 3D art for games

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
- Groups (3 is good, 2 or 4 are possible)
- Apply concepts taught in class
- Related to *Game Development*
- Build upon each other
  - Should have working game at end!

Projects (2 of 2)

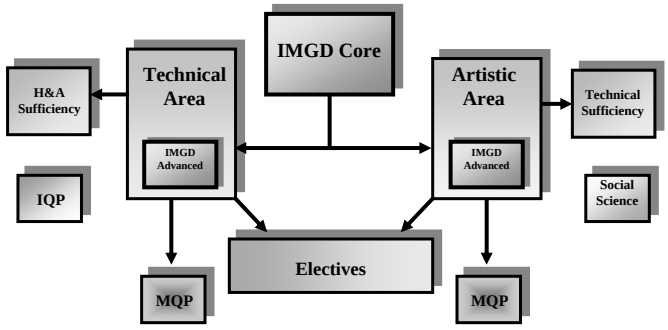
- Project 1: Game Inception and Design
  - Inspiration of a game, design and documentation
- Project 2: Content Creation
  - Create 2-d animated sprites (or other art) and select supporting content
- Project 3: Game Logic
  - Implement game objects and game rules
- Project 4: Level Design
  - Put above 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*")