



The Game Development Process: Introduction



What to Expect

- These lectures are mainly about the process of successfully bringing a game from idea to delivery
 - Major "players" in the process
 - Steps in the development lifecycle
 - What makes a good (and bad!) game
- Presupposed background
 - Not much!

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Instructor Background (Who Am I?)

- Dr. **Mark Claypool** (Prof, "Mark")
 - Professor of **Computer Science**
 - Operating Systems, Distributed Computer Systems, Multimedia, Networks
 - Director of **Interactive Media and Game Development**
 - The Game Development Process
 - Technical Game Development
- Research interests
 - Networks, Multimedia, **Network games**, Performance
- Like to play
 - RTS (Battle for Middle Earth, Warcraft, ...)
 - Sports (FIFA, Madden, Strikers, ...)
 - FPS (Battlefield, Doom, ...)
 - Adventure (Uncharted, Indigo Prophecy, Fable II...)

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Student Background (Who Are You?)

1. School (grad or undergrad)
2. Year (freshman, sophomore, ...)
3. Major (Biology, CS, ...)
4. Programming: (none) 1 to 5 (master)
 - a) Language? → Java, C++, Flash...
5. Gamer: (casual) 1 to 5 (hard-core)
6. Number of Games Built (zero is ok!)
7. Other ...

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Course Materials

- <http://www.cs.wpi.edu/~claypool/courses/osaka-10/>
- Slides
 - On the Web (ppt and pdf)
- Timeline
 - Planning
- Project writeups
- Resources
 - Game creation toolkits, documentation, etc.
- Email: claypool@cs.wpi.edu

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Projects

- 4 projects
- Project 1: Making Games in Game Maker
 - 3 parts
 - Done solo
- Groups! (2 is good)
- Project 2: Game Inception and Design
- Project 3: The Game
- Project 4: Play Testing

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Overall Lecture Topics

- Industry
- Game Design
- Artistic Content Creation
- Programming

Before We Proceed ...
Any Questions?

What Do You Think Goes Into Developing Games?

- Consider a video 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 3-4 minutes to write a list of the tasks required
 - Chronological or hierarchical, as you wish
 - Include your name and name of game
 - (I'll collect and read, but not grade)
- What do we have?

Project 1 Details

Game Maker Demo

The Game Development Process:
The Game Industry

Hit-Driven Entertainment

- Games are emotional, escapist, fantasy-fulfilling, stimulating entertainment
- Causes of success or failure are often intangible (but quality matters a lot)
 - Consumers are smart
- Hits come from individuals with skill, instinct, creativity, and experience (and some luck), not from marketing

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Costs

- Powers of 10
 - \$50K - cell phone (Bejeweled knockoff)
 - \$500K – indie (Bomberman Live), nice casual game (Peggles)
 - \$5M - "A" (Titan Quest)
 - \$50M - "AAA" title (WoW)
- WoW – costs and revenue
 - \$50 Million to make
 - 6 Million players @ average of about \$12 / month for 2-3 months = \$200 million a year
 - (Less the cost of running those servers)

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Roles

- Developer
- Publisher
- (Distributor)
- Retailer
- Service Provider

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Development Studios?

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Developers

- *Design and implement* games
- Responsible for the content
 - Including: programming, art, sound effects, and music
- Historically, small groups but now often larger
- Analogous to book authors
 - Sometimes first party (part of publisher)
 - Or third party (independent business)
- (More later -- most of this class!)

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Publishers?

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Publishers

- "To find the publisher in any deal, look for the one who's got negative cash-flow during development"
 - Dan Scherlis (Turbine, EtherPlay, ...)
- Handle manufacturing, marketing, PR, distribution, support
- Typically specialized in certain markets
- Assume the risk, reap the profits
- Might also handle QA, licensing, project management

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Publishers relationship to developers

- Star developers can bully publishers, because publishers desperate for good content
- But most developers are bullied by publishers, because developers are desperate for money
- Publishing swings from big to small and back depending on the market
- Most publishers also have in-house developers

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Distributors

- Move software from publisher to retailer
- Modeled on book distribution
- Pubs like them because they manage relationship with many small stores
- Stores like them because they manage relationship with many pubs
- Compete on price, speed, availability
- Very low margins (3%) -- dying breed

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Game Retailers?

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Retailers

- Sell software to end users
 - But really sell shelf space to publishers
 - Compete on price, volume of product
- Shift in 80's to game specialty stores, especially chains (today ~25%)
 - *EB Games, GameStop*
- Shift in 90's to mass market retailers (today ~70%)
 - *Target, WalMart, Best Buy*
- Retailers earn 30% margin on a \$50 game
- Electronic download of games via Internet still in infancy
 - Big but not huge (today ~5%)

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Service Providers

- Sound, Music, Voiceover
- Artists (2D, 3D, concept)
- QA
- PR
- Advertising
- Middleware

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Traditional Game Development

- Developer creates concept
- Developer builds demo for *pitch*
- Developer *itches* to publishers
- Publisher agrees to fund it (advance against royalty)
- Project gets developed
- Publisher boxes it, ships it, markets it
- Publisher collects money
- Developer MIGHT make more money...if advance is earned out

Traditional Model: Cross Between Books and Movies

- 1 in 10 - less than 10% of published titles break even!
- Sequels very popular
- Development costs rising
- Self-publishing is nearly suicidal
- Retail and distribution control access to customers

Pokémon – Gotta Catch them All

- | | |
|-----------------------------------|----------------------------------|
| <input type="checkbox"/> Pikachu | <input type="checkbox"/> Pigeon |
| <input type="checkbox"/> Raichu | <input type="checkbox"/> Koratta |
| <input type="checkbox"/> Lizardon | <input type="checkbox"/> Arbok |
| <input type="checkbox"/> Zenigame | <input type="checkbox"/> Pippi |
| <input type="checkbox"/> Caterpie | <input type="checkbox"/> Poppo |
| <input type="checkbox"/> Purin | <input type="checkbox"/> Nyarth |
| <input type="checkbox"/> Cocoon | <input type="checkbox"/> Mew |

Exercise: Allocate Points

- You have **14** points
- Allocate 0-6 points for each of the following facets:
 - P: Prototype/Pitch (*not important*)
 - How much effort you place on developing a solid prototype to pitch to publishers
 - D: Development (*important*)
 - How much effort you place on development
 - M: Marketing/Sales (*not too important*)
 - How much effort you place on marketing your project
 - F: Fun (*important*)
 - How effective your design is in terms of how much consumers like your product

Exercise: Roll the Dice!

- Everyone stand up
- For each roll of the die, please sit down if the number is greater than the points you allocated for that facet
 - P: Prototype/Pitch -2
 - D: Development +1
 - M: Marketing/Sales -1
 - F: Fun +1

Exercise: How Many are Left?

- Yes, luck is a factor (the roll)
- You can control it some
 - with skill (knowing which is most important)
 - and money (getting more points to allocate)
- But there's never enough of either to make it a sure thing