



## 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](mailto: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

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Before We Proceed ...

Any Questions?

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## 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?

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Project 1 Details

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Game Maker Demo

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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 (Peggle)
  - \$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?



## 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 *pitches* 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

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### 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

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### 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"/> Popo    |
| <input type="checkbox"/> Purin    | <input type="checkbox"/> Nyarth  |
| <input type="checkbox"/> Cocoon   | <input type="checkbox"/> Mew     |

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### 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

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### 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

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### 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

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