

Games I: Design and Architecture

Week 09 (10/23)

- Choosing Your Game Engine
- Team Dynamics

What is a Game Engine?

- Software framework
- Rendering engine (graphics)
- Physics engine (collision detection)
- Scene graph
- Scripting, sound, animation, AI, network
- Algorithms for game mechanics

Some examples:

- Unity
- Xcode
- p5.js / Processing
- GameMaker Studio
- RPG Maker
- Game Salad
- CryEngine
- Unreal Engine
- Panda 3D
- Alice
- Fusion
- DarkBASIC

What game engines have you used?

List: http://en.wikipedia.org/wiki/List_of_game_engines#Freeware

Choosing Your Game Engine

- What platform(s) will your game run on?
- Familiarity with programming language(s)
 - How much of a learning curve?
- How will art and sound assets be shared with programmers?
- How easily will you be able to program and test new game elements?

Choosing Your Game Engine

- Will you continue using this engine to implement your game next semester?
- Hard coding vs. optimization
- Prototyping vs. implementation
- Skill-building

Team Dynamics - Typical Roles



Game Designer

Producer

Programmer

Visual Artist

Quality Assurance

Sound Designer

Writer

Level Designer



Team Dynamics - for Games I

Everyone is a Game Designer

- Brainstorm, playtest, document concepts
- Manage project goals and team tasks
- Speak technically with the programmer

Roles/responsibilities may be shared

Specialization (Art, Programming, Sound)

The Design Document

Ultimate goal is to communicate design idea

- To team members, stakeholders, others

A living document - always changing

Organized modularly

The Design Document - Contents

- Overview/Mission Statement
- Audience, Platform, Marketing
- Gameplay
- Characters
- Story
- World
- Media
- Technical Details

For Week 10 (10/30)

[Group] Choose Your Game Engine

- What platform(s) will your game run on?
- Familiarity with programming language
- Team communication/production pipeline
- Next semester

[Group] Design Log - Focus Questions

- What do you want to prove/demonstrate?
- What are you most concerned about?
- What are you most excited about?