Technical Design Document (TDD)

Settlers
of
JCCC

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Executive Summary

Project

Settlers of JCCC is a shell project of Settlers of Catan. This game is an RTS-style board game that uses heavy randomization to create a unique gameplay experience with each session. For this build, only six land and four resource types are available; one could call this the beginner's step to learning Catan!

Technical

This game is being developed in Unity 5.1 for Windows platforms. With the primary graphical assets being packaged in already, no other programs outside of Unity and Visual Studio will be necessary for development. This game will be developed over a two-week period.

The following programs will be used for developing Settlers of JCCC:

Program	Purpose	Cost
Unity 3D	Game Development Environment	$1,500.00 * 3 programmers = $4,500.00
Microsoft Visual Studio	Debugging Environment	$299.00 * 3 programmers = $897.00
	Total Cost:	$5,397.00

The estimated cost for completion is:

Total software cost: $5,397.00
Developer salaries: $27.00/hr * 80 hours * 3 developers = $6,480.00
Total estimated cost is **$12,417.00**

Development Plan

Milestones

Date	Milestone
9/30/2015	Preliminary TDD complete
10/2/2015	Final TDD complete
10/5/2015	
10/7/2015	
10/9/2015	
10/12/2015	Completed project delivered

Project Goals

Game Content Creation Goals

- Main Menu scene with three buttons
    - Create Game
    - Load game
    - Quit
- Create Game scene with maps listed for the user to select, and a back option
- Information scene which will gather player name and game name, record the information, and then allow the player to start the game; has back/cancel button
- Load Game Scene with game name(s) and player name(s) listed for the user to load; has back/cancel button
- Main Game Scene
    - Map
    - Settlement(s) and Road(s)
    - Resources GUI
    - Turn Navigation GUI
    - Turn Phase GUI
    - Save GUI
    - Quit GUI
    - Trading GUI (optional)
    - Game Over GUI
- Data saving heuristic
- Phases (0-6; 2 optional)

Tool Creation Goals

- Create a new Map within Unity
  - Map supports 4 resource types
  - Resource has number between 1 and 6
  - Resources must be connected
  - Largest number discrepancy on map (number of resources) should be one
  - Map has at least one of each resource
- Button for saving map

User-Generated Content (optional)

- Heuristic for map data saving and loading
  - Hex locations
  - Hex numbers
  - Hex types

File Formats

2D

Naming Convention	Description	Format
<ResourceType>Hex	2D sprite for a Hex	.gif
<PlayerColor>Settlement	2D sprite for a settlement	.png
<PlayerColor>Road	2D sprite for a road	.png

3D (TBD)

Naming Convention	Description	Format

Scripts

Naming Convention	Description	Format
<Functionality>Script	A script for an object	.cs
<Functionality>Editor	Script for modifying the editor	.cs
<Functionality>PropertyDrawer	Used for scripts that modify the editor that need to utilize a custom property drawer	.cs

Scenes

Naming Convention	Description	Format
Scene_Startup	First scene loaded	.unity
Scene_CreateGame	Scene loaded for new game	.unity
Scene_Information	Scene for gathering game info; loaded after Scene_CreateGame	.unity
Scene_LoadGame	Scene loaded for load game	.unity
Scene_MainGame	Main game scene	.unity

Other

Naming Convention	Description	Format
TDD_Project4	The completed Technical Design Document	.pdf

Level Layouts

This is where you will include graphics that show the layout of the levels. You can use paint, gimp, or graph paper to layout your levels. Make sure to include each level/world. Include how large the level/world is, and how long (estimated) it should take to go through the level/world for an average player.

Asset List

Scene_MainGame

<u>2D Art</u>
- Hex Graphics
- Road Graphics
- Settlement Graphics

Map Creation Tool

<u>2D Art</u>
- Hex Graphics