Design Document for:

Secrets Under Murdoch

Discoverers Welcome...

TO DIE!

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Written by us

Version # 0.000
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Design History

Version 1.0
First draft

Version 2.00
Making it presentable.

Version 2.1
Adding design photos.
Add On Overview

Design

The Room is created using measurements taken by us for all the objects.

The Social Sciences Building is created using Shays Textured Polygon class display lists. The reason for this is because it was already built into the world.

Measurements

Main Room
STAIRWELL
Stairs
3.0 M
1.0 M wide
2.15 M high
6.0 C
1.0 M

Stair - 17 cm High
- 28 cm Deep
- 1.15 M Wide

Rails - 67 - Height - Top
85 - Height - Bottom
12 cm - Wide

1.3 M LW1-1
3.25 M LW1-2
Exit Sign - 30 x 15
Social Sciences

Front

Door Width = 91.8 cm
Height = 2.58 cm
Depth = 40.45 cm

288 cm depth

Doors

406 cm

12.1 cm

ART

Right WALL

Door Wide 1.5 m wide
Width 50.4 cm
2 m high

2.1 m high

1.95 m high ART

5.7 m wide

75 cm wide

Sick Door

2.1 m high

Pamphlets

2 m high
GAME DESIGN

Game Overview

Our games goals

Origins

This game is trying to build upon the success of games like Metroid and castlevania, exactly as the recently released Shadow complex does. This game will not try and change the world. We are ripping off the formula that Nintendo was so successful with in its Metroid franchise.

Compatibility

Our game only runs on all computers with open GL. The reason for this is that we are using open GL. We believe the world is coming to and end any how so what difference does it make?

Goals

We want the user to want to explore our world. We want them to want to find all the secret items to use against the enemies they will face and reach areas they could not reach before.

Common Questions

What is the game?

The Game is an Exploration based adventure through the seedy underbelly of Murdoch University.

Why create this game?

I drew my inspiration for this game from the recently released Shadow Complex on Xbox Live Arcade. This game takes the classic Metroid/Castlevania gameplay of old and makes it

Where does the game take place?

The Game takes place under Murdoch university. When the game begins, you are a normal student in bush court. After a trip though the social sciences corridor, down some stairs and though a manhole, you find yourself in a 2.5D vertical side-scrolling world.

What do I control?

The player is in contol of a Murdoch Games Technology student. You will be in charge of navigating him through the world on a 2D plane using the items he has found to access new areas.

How many characters do I control?

If this applies talk a little more about the control choices. Remember to add answers to questions that you think the reader will ask. This is totally dependent on your design.
What is the main focus?

The players friends have been going missing! They disappear in the computer science lab during all night study sessions. Camera footage shows no one entering or leaving all night. The only explanation? They have been taken underground! The players goal is to make it to the area under the computer science building and rescue his project team members so they can submit their project on time.

What’s different?

This game is different from its inspiration because it will look terrible by comparison.
Feature Set

General Features

- Large world with multiple themes
- “2.5D” world -
- 3D graphics
- 2D movement
- Metroid style exploration/combat

Multiplayer Features

- There will not be any multiplayer features

Editor

- Comes with world editor – create your own rooms!
- Editor is easyish to use

Gameplay

- Movement puzzles
- Use items to reach new areas
- Find new weapons to take out enemies

The Game World

Overview

- Our game world is a 2.5D representation of catacombs underneath mudoch.

Accessibility

- Some areas of the world will not be accessible at first. The player will need to find an item elsewhere in order to access this new area. The general structure might be, go to new area, finish area, get new item, use item to get new weapon.

Structure

- Uses a building block approach to making the world. Each room will have a themed background and a series of protruding platforms that can be traversed by the player. These blocks are cubes that can be placed using some kind of map editor. They are similar to a ‘tileset’ in some 2D games.
The Physical World

Overview

Describe an overview of the physical world. Then start talking about the components of the physical world below in each paragraph.

The following describes the key components of the physical world.

Key Locations

Default Cave setting
Vet department
Engineering department
Computer Science department

Travel

The player move across a 2d plane and jumps his way around the world. Along the way he will find new items and abilities that will enable new kinds of movement. The player will be able to crouch.

Scale

Each cube is a one meter by one meter block, the player is about 0.4 of a meter wide and 1.6 metres high, about the size of a normal person.

Objects

Most objects will all be 1x1 or part therof.
There will be the basic building blocks for the world, in 4 different themes.
There will be the items the player can pick up.
There will be enemies

See the “Objects Appendix” for a list of all the objects found in the world.

Weather, Day and Night, Time

The game is set indoors, there is no weather.

There is no day/night cycle.

There will be no special features based on time.

Rendering System

Overview

Give an overview of how your game will be rendered and then go into detail in the following paragraphs.

3D Rendering

The game will be rendered using openGL.
Camera

Overview

The camera will be 2nd person looking at the player.

Camera Detail #1

It will lock to the side of the room so that no part of other rooms are visible

Camera Detail #2

The camera will pan between rooms when the player moves between rooms.

Game Engine

Overview

The world has a series of rooms all linked together, ie a linked list. All rooms are created from one room object, all bocks in the room are stored in an array

Game Engine Detail #1

The engine will allow loading and saving, creating new rooms, populating new rooms with objects and automatically detect collisions so that the rooms are built easily, with no extra programming

Water

There will be water in the world, used as a death trap. Nothing dynamic or special, probably just a water texture.

Collision Detection

Because of the simple nature of our building blocks, each will hopefully have their own collision detection properties. For example, some types can be stood on top of but moved through sideways or from below (ie jumped through)

Lighting Models

Overview

The overall mood of the lighting will be dark and dank.

Lighting Model Detail #1

A light will emanate from the player (ie a flashlight or lamp)

Lighting Model Detail #2

Other light sources may include flame torches, light bulbs etc.
The World Layout

Overview
The world has an array of rooms
rooms have a background and an array of objects

Our world is set in the mysterious underground of Murdoch university. There will be 4 environments that the player will explore, computer science, veterinary, engineering and a basic cave.

Computer Science
This environment will be set inside a supercomputer and the background will be giant circuit boards and metallic structures to walk on

Veterinary
Medical equipment will make up the platforms, the background will be dripping chemicals. The enemies will be mutated science experiments such as pigs and sheep.

Cave
The cave environment is the first environment the player will enter. The background will be rock, and the platforms will be rock like
Engineering
This environment will be full of mechanical equipment such as hydraulics and metal beams
Game Characters

Overview

The player – a computer science student.
The final boss – it’s a secret
Each theme will have a boss, rewarded with a new item.
Miscellaneous enemies

Creating a Character

Empty vessel for player to personify.

Enemies and Monsters

The enemies will be either 1x1 or 2x1 in size, and move back and forth shooting a weapon. The look of the enemy and the weapon they are shooting depend on the themed area they are in. they will generally not be human

User Interface

Overview

The ui will have your current health, ammo, and equipped weapon/item

User Interface Detail #1

Fairly minimalist, just text, maybe icons.

User Interface Detail #2

There Will Be a MiniMap in the corner that displays a basic representation of the room paths.
Weapons

Overview

There will be at least 4 ‘weapons’

Basic Weapon

Starts with this weapon – low dmg and rof. 8 round clip

Upgrade 1

Found at the end of the first area – higher rof, same dmg, 16 round clip

Upgrade 2

Found at the end of the second area – higher rof, higher dmg, 30 round clip

Beam Gun

Found at the end of the third area – higher rof, higher dmg, 30 round clip, different bullet effect

Items

Overview

Double jump
hover
wall jump

Double Jump

Allows the player to jump twice, this extends the vertical range of their jumps – found at the end of one of the areas.

Hover

Allows the player to hover for a short duration, this extends the horizontal range of their jumps – found at the end of one of the areas.

Wall Jump

Allows the player to jump off walls – found at the end of one of the areas.
Musical Scores and Sound Effects

Overview

This should probably be broken down into two sections but I think you get the point.

Red Book Audio

If you are using Red Book then describe what your plan is here. If not, what are you using?

3D Sound

SDL or OpenAL

Sound Design

Each theme will have its own theme song.
Your gun will make noise.

Enemies will make noises when they move and shoot.
Single-Player Game

Overview

Adventure through Murdoch underground.

Single Player Game Detail #1
Each theme is like a level, play through each theme to get new items and access new areas.

Single Player Game Detail #2

Story

Discover the secrets of Murdoch. It’s a secret.

Hours of Gameplay

A couple of hours if the player finds all items.

Victory Conditions

Defeat the final boss.

Character Rendering

Overview

Provide an overview as to how your characters will be rendered. You may have decided to include this elsewhere or break it out to provide more detail to a specific reader.

Character Rendering Detail #1

Character Rendering Detail #2
World Editing

Overview

The world editor will be simple, and hopefully simple to use. We are looking at making a room that users can build their own rooms off of, as well as using the exact same world builder to build the main game.

World Editing Detail #1

The world editor may be a program that allows the user to specify in some user friendly way what objects they want where. Each object already has its collision properties and such so it should require no extra input from the user. Alternatively the user may create the rooms in a text file using some code to identify the blocks to use.

World Editing Detail #2

Enemies can be paced using the world editor. They may know where platform boundaries are or they may just walk back and forwards across the two adjacent squares shooting.

SEE THE USER GUIDE FOR DETAIL ON HOW TO MAKE ROOMS