HERO++

DESIGN DOCUMENT

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VERSION 6

June 6, 2011

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VERSION HISTORY
Version 0.1 – April 9, 2009
* First version of the document. Template based on link noted in “Links” section
* Removed “Mods” and replaced a few sections are based on the template in Game Design

Version 3- May 10, 2011

- Working on character generation
- Added textures of characters, spectators, and some enemies
- Added level 1 texture
- Added game, level 1 and level managers
- Added camera manager
- Camera updated to follow two characters
- Multiplayer (2) player
- State machines added for enemies
- Added particle effects
- Added health bar
- Removed the keyboard controls since we are doing two players

Version 4- May 19, 2011

- Created second level
- Added boss
- Added second shot
- Added third shot
- Added sandwiches and energy drinks
- Added spectators to level
- Main menu
- Character selection
- Character HUD/healthbar
- Added enemy health and binary counter
- Fixed camera controls

Version 5- May 19, 2011

- Refined Levels. Level two begins on right side of screen.
- Made boss smarter
- Made menu better and more abstract
- Added life system
- Players respawn after death as long as they have lives

- Enemy shot collides with player and has an effect
- Fixed jumping bug
- Fixed secondary shot and third shot fires
- Identified hero and enemy collisions with tinting
- Heroes randomly shoot critical hits with no cost to energy
- Binary number more visible
- Sung hero added to game
- Heroes get tinted when items get picked up

Version 6- June 6, 2011

- Added Diversity to game
- Made game more challenging
- Distributed less energy drinks
- Distributed less food for health
- Increased the number of waves in level 3
- Heroes take damage when they collide with damage- This will discourage players from trying to run through enemies
- Red hero now has a special ability where multiple shots fire in all directions
- Blue hero can slow down enemy movement speed
- These character's special abilities cost a lot of mana on top of costing health
- This will encourage players to choose different players and force the players to use more strategy in their play

GAME OVERVIEW

Game logline

A CSS student saves UWB from robots on the fritz.

Gameplay synopsis

Hero++ is an action type video game that incorporates side scrolling game play with a small number of role-playing game elements. The overall game viewing experience will be two-and-a-half dimension where there is some perspective and 3-dimension elements but the game still behaves like a 2-dimension side scroller.

A player will be able to control two heroes and will be able to switch between them depending on --the situation. The heroes will shoot pluses and minuses. The robots will have health in strings of binary and pluses will increment that binary number and minuses will decrement it. When the health reaches zero either by having enough minuses reduce the health to zero, or the pluses bring the health up to all "1"s and the final plus will perform a carry and will result in a heath of all zeros. At the end of the level, the player will need to defeat a boss.

The hero will also have their own implementation of health. The robots will be firing asterisks and when it collides with a player, the player's health will decrement.

The player will have a leveling up system where the player will be able to gain experience depending on how many enemies the player has destroyed. After a player gains enough experience, the player will be able to earn new skills.

GAME DETAILS

Description
A CSS student wakes up from a nap in the linux lab to find the campus under attack by robots. He finds a friend who fell asleep in the windows lab and together they fight their way out of UW1.

Game genre?
Action/ RPG, 2.5D side-scroller

Is this single-player or multiplayer game?
Multiplayer

Is this 2D or 3D?
The overall game viewing experience will be two-and-a-half dimension where there is some perspective and 3-dimension elements but the game still behaves like a 2-dimension side scroller.

Where does the game take place? (world)
The setting of the game takes place in UWB1. Primarily in the hallways where we can travel through the width and length of the hallway down to the end of the building.

What do I control? How many characters? Can I use vehicles?
Character control is through the XBOX360 controller. An individual player will have access to 1-2 characters. Vehicles are undecided.

Left thumbstick to move (WASD keys)
Y button switches between the two characters you control
A button makes the character jump
X button makes the character attack
B button makes the character use his/her special attack

What is the main focus?
The main focus of Hero++ is complete the mission (save UWB), while fighting robots to gain experience and power yourself and your abilities up.

How long the game lasts? Or how long game matches last?
The game will last until the player(s) either complete the mission, or lose all their health and flash off the screen.

Comparison
Castle crashers
Double Dragon
Donkey Kong

What is unique?
Tag team style with 3D setting in an RPG game.
The individual players can control two different characters with the other on follow and under the control of AI, and each player contributes something to the party as a whole.

Why create this game?
We want this game to have the aspects of previously successful games but also incorporate our feel to this game and get a 4.0. Then we want to sell the game and make money.

AUDIENCE, PLATFORM, AND MARKETING

Target Audience
The primary audience is students in the Game Development Class. The game will be very technology oriented with many references to programming and video game culture. With these themes, we expect to attract many fellow nerds to play our game.
Platform
The game will originally be developed on the PC while being designed for the XBOX 360. The XBOX platform will allow players to have greater control over the player while using the XBOX controller.

Top Performers
1. Castle Crashers
2. Mortal Combat
3. Double Dragon
4. Scott Pilgrim versus the World

Feature comparison
Our game will have many of the same aspects of our competition. Such things may include 2.5 dimensional spaces, jumping, environment interaction, and many different types of enemies. We will attempt to add something different that will set our game apart from the competition by allowing the player to switch between multiple teammates while playing, giving the player the ability to use multiple types of hero classes.

FEATURE SET

General features
2.5 dimensional space

Variety of enemies
Variety of teammates with different abilities

Multiplayer features
The game can be easily expanded to incorporate multiple players at once. Our camera follows only hero objects and pans the camera according to the positions of the two furthest heroes. Camera will know where both players are and will change accordingly.

Level Editor
No Level editor

Gameplay

THE GAME WORLD
Overview
You are playing as a UWB student who just wants a degree but when evil robots take over the building, you develop a sense of heroism and a hunger for knowledge that you will use to save the school.

Key locations
UWB1 hallways and potentially other rooms
Our own rendition of the “P” floor in the building. The top floor that is labeled “P” on the elevator but no one ever has the curiosity to press it and see where it leads to.

Travel
Run state
Jump/Fall state
Scale
Normal world but can be altered with abilities of gameplay

Objects
Sub sandwiches for health
Energy drinks for mana
Some type of monetary drops (school credits)

Weather
Inside a building

Day and night
Depends on level

Time
Party time

Water
None

Other elements
None

CAMERA

Overview
The overall game viewing experience will be two-and-a-half dimension where there is some perspective and 3-dimension elements but the game still behaves like a 2-dimension side scroller. The camera will follow the heroes and the hero will not be able to leave the camera view. Moving the hero to the left and right will also move the camera left and right.

The camera will move left and right at the same speed.

GAME CHARACTERS

Overview
The heroes of the game will be themed after supercharged programmers who fight evil robot creations.

Character creation
Heroes are photoshopped and shown below

Enemies and monsters
Many types of robots may appear in the game including:
Humanoid robots (Small and Large)
Flying Robots
Ceiling Dwelling Robots

USER INTERFACE

Overview
The user will be presented with all relevant information concerning the heroes at the top of the screen. Such information will include player health and power.

Details
The heroes will be color coded so each player will be able to easily identify their own hero. All heroes will be shown on the screen at the same time. The enemies will not be constrained to the camera view.

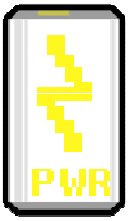
OBJECTS

Overview
There will be minimal objects to pick up.

Weapons
Heroes will have the unique ability use ++ or -- to their advantage. Robots must be destroyed by incrementing or decrementing their health until their health becomes zero.

Items
Sub sandwiches for health

Energy drinks for mana



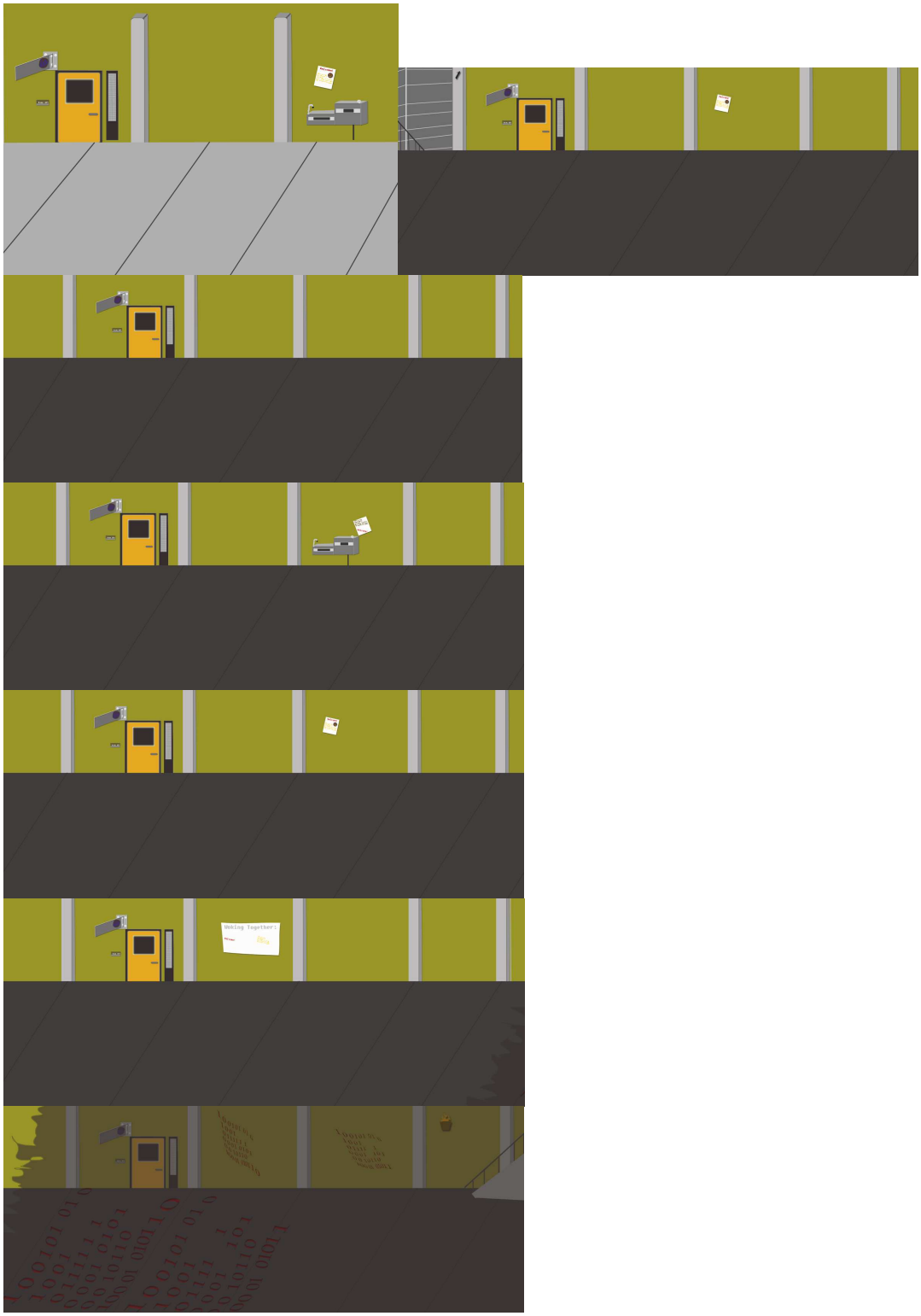
(Given the tie we had, this may not be implemented)

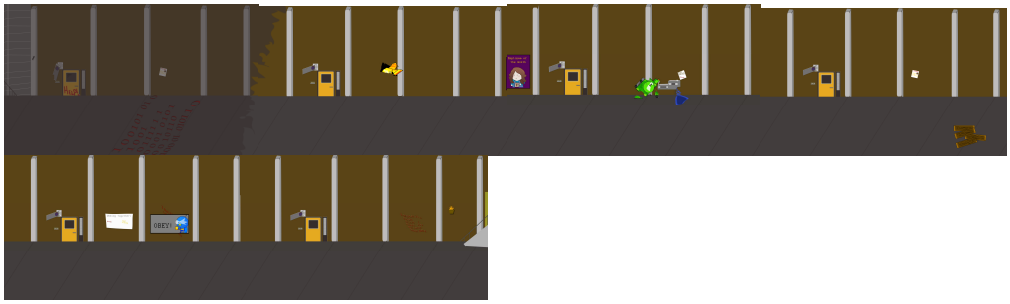
Some type of monetary drops (school credits)

Negative Hero

Posistive Hero

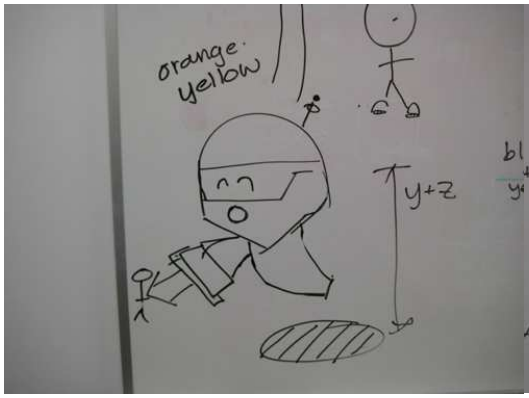
Background

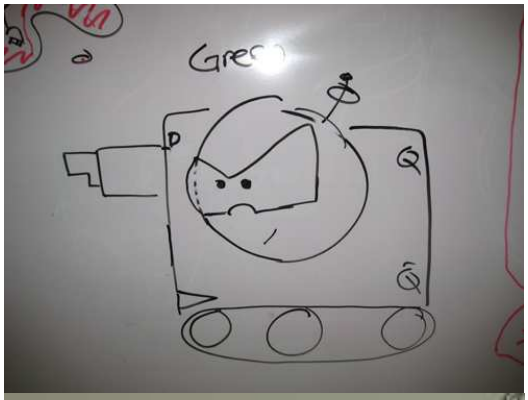

Working Together!

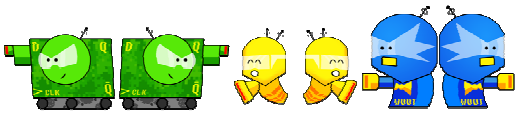


Spectators

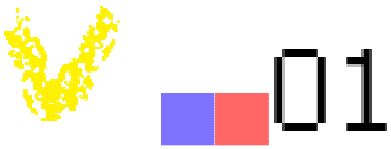
Enemy Prototypes







HUD



MUSIC AND SOUNDS EFFECTS
Overview
Robot sounds and a few human sounds
Shooting sounds

Details

Music tracks
4 Background Audios: 1 for boss battles, 1 for menu screen, 1 for normal level progression, 1 for level transitions.

Sound effects
Shooting, Picking up currency, Changing weapons, Getting hit, Hitting enemy with projectile

3D sound
None

Other
Maybe voices

ART
What kind of style will be used in the game?
Cartoon

Needed building models
UWB1, UWB2
Scenery models
Windows/Linux Labs, Hallways, Common Area by stairs (Tons of drawing will be required however we have been on top of it and we are currently on track with where we want to be in the game)
Character models
2 Heroes, Robots, Bosses
Vehicle models
None
Particle effects
Unknown
Other

SINGLE-PLAYER GAME

Overview
The player travels the world controlling two characters in order to beat up robots

Details

Story

Victory conditions
Level: Beat sub-boss; Entire game: Beat final boss

MULTIPLAYER GAME

Overview
4 people can join up to bash baddies

Max players
4

Servers
None

Customization
None

Is the world persistent or not
No, world moves as characters move

Saving and loading
none

Scores
No points, only credits and experience. As you attack you gain experience and after a certain amount of experience gained, you obtain a level. School credits drop when enemies die. These can be picked up and used to buy items

Chatting
None

No

RESOURCES & LINKS

Links to related resources

Design document based on this template:

HTTP://FORUMS.XNA.COM/FORUMS/T/229.ASPX

HTTP://INDIEPATH.COM/PUBLIC/DESIGNDOCUMENTTEMPLATE01.DOC

A few sections of the document are based on the design template in this book:

Fullerton, Tracy. Game Design Workshop, 2nd Edition: Elesvier Inc, 2008.

EXTRA MISCELLANEOUS STUFF

Overview

Playing the role of a techie in a fantasy world that is based on computer science principles will be fun for CSS students and faculty.

Pop culture references

Tag team style rpg

Crazy ideas

Some levels might have lightning bolts that change the binary counter on the enemies to a random number that isn't 0 adding some additional difficulty in using the correct hero to take them out. The chances of this happening would need to be pretty low and something would need to trigger it, otherwise it will just be annoying to the player.