



Engineering Release Review

Demon & Alien Spawn
Sponsored by Polymorphic Games



Project Objective

Design an evolutionary virtual reality video game based on a classic arcade game and suitable for being used as a five minute demo at Polymorphic Games outreach events.





Value Proposition

Polymorphic Games attends many outreach events and often brings virtual reality demos to draw in crowds. The demos are side projects that are done quickly and have many design flaws. Having a better VR game specifically designed for the purpose will increase the utility of these outreach events.

Furthermore, the game can be released as a free title on the Steam Store to increase the visibility of Polymorphic Games and create goodwill among customers that will result in future profits.



Project Specifications

Specification:	Functionality:
Game Management	Movement between scenes, game state, enemy spawning and reproduction, saving and loading
Creature Evolution	Gene, chromosome, genome, and creature modeling
Player Control	Camera angle and player interaction with virtual environment
Enemy	Movement, swarming behavior, vitality strength, genetic model
Interface	User interface appearance and scenes
Demonstration Setting	Setting for fast evolution and speedy game play.



Progress

Live demo!



Completed Design

Main Menu

- Physical armory where you select weapons and perform some action to start game

Player Interaction

- Defends target with visual indicator of health
 - Should be placed in front of player

Creatures

- Large population, one hit kill, no projectiles



Project Schedule

Client Interview Questions
Budget

Due 09/10

Client Interview

Due 09/17

Product Requirements

Project Schedule

Due 10/01

Snapshot day 1

Due 10/09

Design Validation Plan

Project Value Proposition

Draft Wikipage

Due 10/29

Concept Design Review

Snapshot Day 2

Due 11/26

Design Expo Registration

Engineering Release Review

Due 09/03

Prototype population manager

Due 11/05

Prototype weapons

Due 12/10

Prototype goal

Due 09/24

Due 12/24

Enemy movement

Due 12/24

Add creature traits

Due 12/24

Due 10/15

Add fitness

Due 10/22

Due 02/04

Add evolution to creature traits

Due 02/04

Due 11/12

Weapons

Due 03/11

Implement creature model

Due 12/24

Due 01/21

HUD

Due 01/28



Total Cost Estimate

Polymorphic Games has all of the necessary equipment already available in the studio, including computers and the virtual reality hardware. As such, there is no need to purchase anything new and there is no budget.



Potential Problems & Risks

1. Time
 - a. May not finish “stretch goal” features
 - b. Should be able to finish all base features
2. Art
 - a. Done by separate team
3. Unity/SteamVR Compatibility
 - a. Unity updated, so SteamVR is behind



Design Issues

1. Dealing with particles in VR
2. Sensible movement with many creatures in the scene
 - a. They may need to attempt to avoid each other
3. Art integration
 - a. Still in progress
 - b. Will require some back and forth
 - c. Especially dealing with VR