SCOPO PHOBIA

Game Design Document

Written and developed by

Vasilis Dimitrakas

Gerasimos Filippakos

Table of Contents

1. Game Overview

1.1   Game Concept

Scopophobia is a Survival Horror PvP game. It is a local multiplayer project with up to two players, as users playing in one computer. One player moves through VR, while the second through the computer, simultaneously on the same device. The purpose of the VR player is to find specific objects, in order to escape from this abandoned city. In contrast, the PC player will try to block him, as well as play with his psychology.

1.2   Genre

Scopophobia belongs to the Horror games genre, with a philosophy governed by games such as Slenderman and Dead by Daylight.

1.3   Target Audience

This project tries to bring back the friendly couch gaming, as it is aimed in a specific audience of gamers who own VR and enjoy horror games. The main goal is to entertain two players who sit side by side and switch roles between each round, in order to feel both the tension VR technology can offer.

1.4   Platform

Scopophobia is developed for Windows PC platforms that support Oculus VR. The implementation of the project was done in Unity 3D Engine and the code was implemented through Visual Studio Community 2019.

2. Story, Setting & Characters

2.1   Storyline

Scopophobia takes place in a post-apocalyptic environment, which has been destroyed by a nuclear explosion. It is a ghost town as no trace of life has been found since the event took place. Knowing this, the protagonist of the game is a scientist (VR Player) who has dedicated his life to research, in order to avoid similar situations for humanity. However, for the continuation of his research, he has to visit this city in order to find and acquire rare objects that were created after the explosion.

As soon he reaches his destination though, he realizes that he is not alone…

A life form managed to survive the explosion, changing into human form from the c-rays. All these years after the explosion that form rarely comes into contact with other people, and if it does, it destroying them immediately. For this reason, it only moves at night as it has developed a type of night-vision. Thus, the scientist with light as his only ally tries to find the objects and escape from this abandoned city.

2.2 Game World

As mentioned above the game takes place in a city that was destroyed by a nuclear explosion, caused by a nuclear energy factory nearby. The city was built in a green landscape, so the players wander in a world where there are building districts, parks, forests, churches etc. The light sources during the gameplay is almost scant for a better sense of horror ambience.

2.3 Characters

The 3D model for the scientist (**VR Player**). This model was found from Sketchfab and was created the from the user RussianAstolfo.

The 3D model for the anthropoid (**PC Player**). This model was found in Mixamo.

3. Gameplay and Mechanics

3.1   VR Player mechanics

The main gameplay mechanics of the VR Player are created through Unity's Oculus Integration, such as the movement, camera rotation and various interactions. As mentioned, players need to find the necessary items they need for their research and escape from the city. At their disposal players have a flashlight to navigate through the level more easily, as well as defend themselves from the anthropoid.

3.2   PC Player mechanics

In addition, PC players are able to interact with objects such as branches or stones, in order to distract the VR player. In addition, they are able to crouch, reducing that way the noise of their character, for a stealthier approach. Furthermore, with the vault mechanics, they are able to enter building or jump through fences to approach their opponent quicker and strategically.

Lastly, PC players have four different abilities with different cooldowns each, that distract, scare or increase their attributes for certain circumstances.

Jumpscare Ability: Players generate an anthropoid clone in front of the VR player. *(Cooldown 60 sec)*

Stamina Enhance: Players refill their stamina bar instantly. *(Cooldown 80 sec)*

Predator mode: Players increase their running speed for 10 seconds. *(Cooldown 45 sec)*

Sound Enhance: Players increase VR's output audio for 20 seconds. *(Cooldown 60 sec)*

3.3   Gameplay Analysis

3.3.1 Flashlight is the only ally

As mentioned, the VR players have a flashlight at their disposal, as it will be their only "weapon" against the anthropoid. Essentially, as mention in Chapter 2, the anthropoid can't come into contact with light sources. As players use their flashlight to facilitate their navigation throughout the map, they have also the ability to immobilize the anthropoid whenever the light is reflected on the PC player character. However, each time the above incident happens, the anthropoid leaves a clone of itself where the beam "fell" on it, in idle state. Thus, a sense of fear is always created, in case players finds themselves in the same place again.

3.3.2 Win/Lose Conditions

The objective for the VR players is to find the necessary items to complete their research. Every time players acquire an item, by interacting with their hands, it is added in the inventory. When they retrieve all the required items the game will end and VR players win.

Contrariwise, the PC Players' objective is to find and thus neutralize the scientist. The VR players have an attached Geiger device on their body, which generate radioactive sounds when an objective item is nearby. This mechanic serves as an indicator to navigate through the level, but also create a sense of horror for VR Players. However, when the humanoid manages to enter a small trigger area around the scientist, they can perform their lethal attack and the VR Player will be neutralized. That completes also the game and the PC player will win.

3.4   Animations

The animations for the PC Player are created through Mixamo. The states for the PC players include Idle, Walking, Running, Crouch, Crouch Walking, Jump, Vault and Attack. Regarding the VR player, the animations are generated by the Oculus Integration and Inversed Kinematics (IK) has been used for the arms and legs of the character, in order to respond to user input and environmental interactions.

4. Aesthetics

4.1   Level Design and UI

In Scopophobia, ready-made assets are used for the level design purposes of the game. As a team we used Flooded Grounds from the Unity Asset Store, which was later modified via post processing effects for both players. Additional models for props purposes were added at later stages of the game to create a more believable experience. The purpose of the game is to display objects and environments for a scarier experience, especially for the VR players.

Level Overview from the last build of Scopophobia.

PC Player perspective from the last build of Scopophobia

VR Player perspective from the last build of Scopophobia

In terms of UI, other than the UI elements used for PC player's abilities, we created a Main Menu which was necessary to start the game, explain the gameplay mechanics to new players with a "How to Play" section, as well as indicate the controls. In Photoshop we created different buttons and implemented them through Text Mesh Pro.
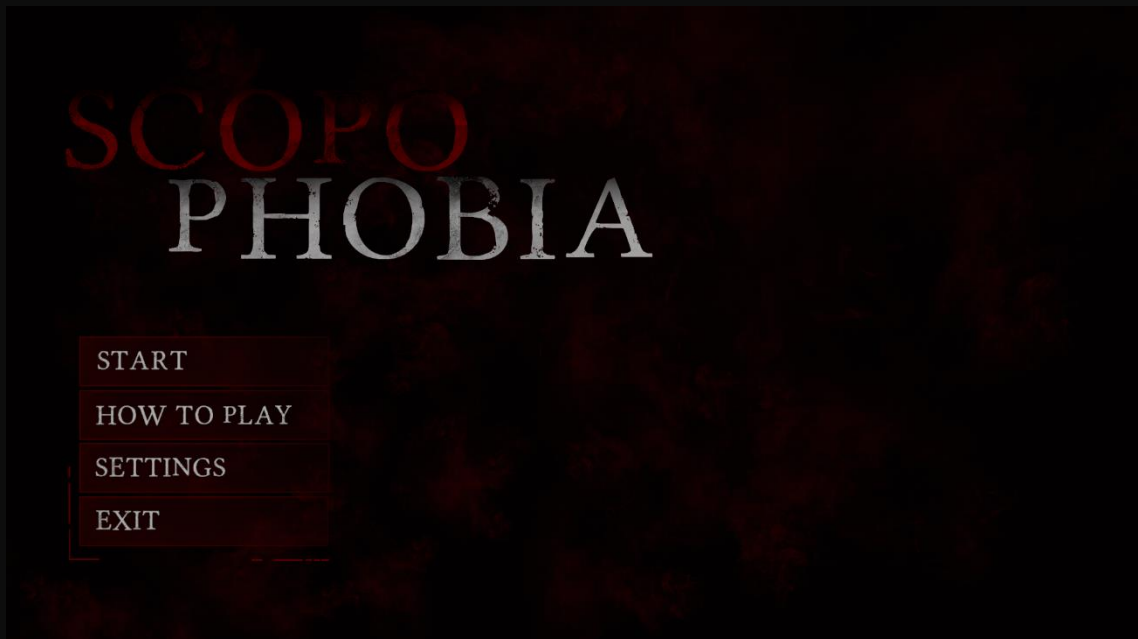
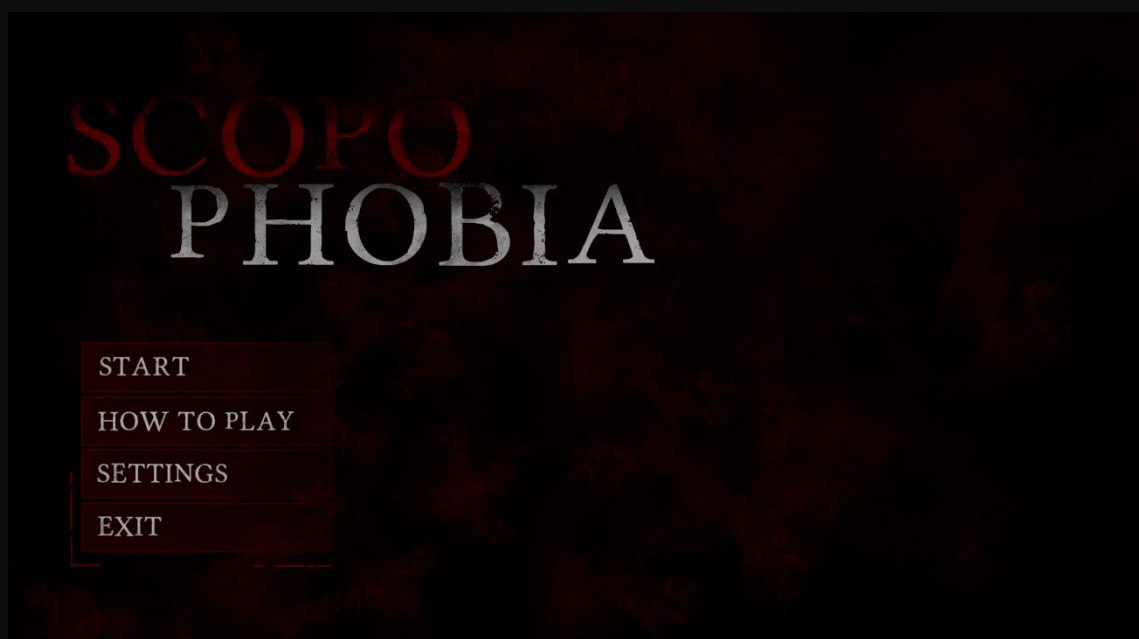Main Menu overview of Scopophobia

"How to Play" section of Scopophobia

4.2 Controls

Control Mapping for both Players

4.3 Audio, music and sound effects

Like any other horror entertainment medium, special emphasis is placed on the sound design of the game, for the best player experience possible. The Main Menu of the game is governed by a free-licensed soundtrack to create tension and set the right mood. However, there will be no music tracks in the Game scene, in order to avoid any distraction for the VR players. Additional sound effects are also included for footsteps in different surfaces, different actions like interactions and movement, jumpscares, heartbeat sounds, as well as ambient SFX like wind, wood cracks etc.

Main Menu Overview

5. Conclusion

As developers, we want to offer an unprecedented experience to two players, as we respectively envision it as gamers. We want to mix the horror tension Scopophobia is aiming for, as well as the fun couch gaming does. Collaboratively, we have a common goal and vision to create a breakthrough concept by blending the capabilities of VR with the existing computer technology. We want to test the experience and knowledge we have obtained over the last few years by creating a game in a genre, which we never developed a game for.