IGME 671 Final Project Documentation

Repo Link: <https://github.com/Alfie-yl5209/IGME671-Project>

**Project Description:**

This final project is based on one my current project, it is a top-down 3D sci-fi survival horror game. The game seeks to create a stressful and immersive experience. The game has a very dark color palette with sci-fi lightings. This game called Darkwood is a perfect reference to my game.

(<https://store.steampowered.com/app/274520/Darkwood/)>

In the game, the player will be exploring an abandoned underground research facility filled with hazardous environment and horrifying enemies, the goal of the player is to get up one floor at a time using the central elevator and eventually escape this place.

The target audience of this game are players who seek for an immersive horror experience, mostly using environment as the medium of stress and horror instead of cheap jump scares.

So far throughout this semester I created, designed and implemented several sound effects for this game. They are all listed in the assets list. I will be discussing the details of each sound here.

**Sound Implementation:**

General Direction:

Since I want to give players an immersive experience, the sound effect I need needs to be realistic. Moreover, since I am mostly using environment as a medium of stress, background ambient is the most important sound for this project, I spent most of my time implementing ambient sound.

Background Ambient:

Background ambient is a sound that player listens to all the time throughout the whole game, I want the ambient sound to change dynamically with player’s situation and environment, so when there is nothing happening, the ambient goes very quiet and peaceful, however, if the player encountered an enemy and enter combat or witnessed some horrifying things, the ambient should help the game to build up this mood of horror. So, what I did I found two ambient sound, a peaceful one with wind sound and a stressful one with disturbing buzzing sounds. The two sound are blended and can smoothly transit to each other using a parameter. Further more I added more sound with scatter instrument to increase randomness. I added a distant monster howl, and whispers will play if the situation if very intense.

Furthermore, for the implementation in Unity, and transition of ambient is bit more abrupt and I think the problem of that is my mood parameter is increasing and decreasing without a restriction. So what I mean is that the current game will keep increase player’s stress as long as the player is near a stress entity, so it would be very fast for player to reach the maximum stress and hear the maximized stressful ambient. To make this a gradual process, each stress entity’s ability to generate stress should be caped using a variable. So for example, seeing a dead body can only increase player’s stress level to 50, which will let player starts to hear a slight stressful ambient, and if the player then encounter a enemy, and enemy is able to increase player’s stress level to 95, this is going to make ambient sound flows more smoother based on the environment and player’s current situation. This is not implemented in the game, this should be definitely one of my future work.

General Sound FX:

I implemented some simple sound effects such as door open, door close, player foot steps and object frictions. For these sounds I spent a lot of time finding the most fitting ones for this game. There is nothing too fancy about these sound effects, I tuned their general pitch lower to fit the game’s mood more, I then used ReaEQ and reduced sounds with lower frequency that makes the sound feels unclear and distant. Sound effects without these sounds are tend to feel more realistic, high quality and closer. All sound effects are randomized in FMOD to increase randomness and sound variety, to make the game feels more natural.

Door Open/Close:

It is very hard to good sound effects that related to doors and wire of my yeti was too short to reach my door so I only found few ones. I really wish I could find more door squeaking sounds, there is only one so far in the game and that does not make too much sense as almost all the doors sound similar.

Player Footstep:

I found lots of pretty good resources for player footsteps and I pick those ones that sound like walking on hard surfaces like concrete. I then tuned their sound amplitude respectively based on the need of walking, sneaking and running. So, walking sounds normal, sneaking is slower and sounds quieter, running is fast paced and sounds very loud.

Object Friction:

I recorded these sounds using a tissue box and my desk, the sound does sound wood-like but I think they needs more weight. So I adjusted there pitch to make them feels more weighty. I also made two versions of them so that small box has lighter sound and huge box has heavier sound based on professor’s advice. I wish I could parameterize this sound effects but at the time I do not know how to achieve that using parameter. I might try to parameterize this sound in the future.

UI:

I found some UI sound that fits the sci-fi mood of my game. I added UI sound effects to interactions such as hover, click and drag. I try to use sound that are not too annoying to hear. The problem I have with the current UI implementation is that if the player drag too fast or just keep swiping through those buttons, those sounds will be shooting out very quickly and sound very loud. In order to solve this problem I reduced the amplitude of these sound, and I think that helped a little.