

Deliverable D - Conceptual Design

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Group 01

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1.0 Objective

The game is designed to educate players about climate change, in the case of our conceptual game, impact of forest fires. We intend to provide an interactive and engaging experience. Through this game, players will learn about climate change, and the harmful impacts from wildfires.

2.0 Core Gameplay concept

The user is found in the middle of a forest fire, and they need to escape. To do this they will need to perform a series of objectives before the time runs out or the fire engulfs them. The game is meant to inform about the dangerous effects of climate change.

3.0 Ideas from Team Members

3.1 Teena Zheng

General ideas

- Make a compare of the forest before the fire and after.
- Put some animals in the forest before the fire.
- We can have a wooden house for background.
- At the beginning, we can let users walk in the forest and do some interactions to let them feel the beauty of the forest before the fire.
- The user will see the smoke and then the fire starts, then user will be running away from the forest.

Effects

- There should be different expressions before and after the fire, such as using different filters. Before the fire, the scene should have sunshine, while after the fire, the sky should appear gloomy due to the smoke, with firelight.
- Trees can be falling during users escape the forest that is on fire, they need to dodge falling trees.

Sound

- The radio in the wooden house crackled with static and a slightly distorted sound as it played the news.
- Use the real sound effects of walking on the grass and the sound effects of fire burning.

Animations

- NPCs and animals should have natural movements.

Reasons

I think the severity of natural disasters needs to be contrasted, so that users can be shocked by the impact before and after the forest fire. Wooden house, NPCs and animals are part of the visual impact, it was full of life before the fire, but after the fire, it looked very desolate without animals and NPCs. The visual impact is the most effective, so I will focus more on visual production. In addition to visuals, immersion is also important, so we need to ensure that the movements of NPCs, animals, and the entire environment in the game look natural.

We ruled out the subsystem of seeing the smoke first because it takes time for smoke to develop into fire, making it difficult to achieve. Due to time constraints, we switched to hearing the news in the wooden house about the fire is already spreading.

3.2 Joud Dergham

Gameplay Mechanics Input/Control:

- Players can use the joystick to move around
This is a common use of the joystick in many games
- Players can point and teleport to move around
People might get motion sick, and this would be a better option for those individuals
- Players use a button to jump

This is common in other games, so it'll make it easier for people who have played games to use this product

- Players use the x button to interact with the environment
This is common in other games, so it'll make it easier for people who have played games to use this product

Educational Aspect

Players will learn how climate change affects forest ecosystems and how certain activities, like preventing overgrowth or managing water usage, can help mitigate the risk of fire.

3.3 Mateo Barbosa

Fire (option 1)

- Fires in the game won't spread during the game play.
- The game simulates the dangers of a forest fire spread through a time limit on the player actions.

Fire Spread (option 2)

- Fires in the game will start at several locations throughout the map.
- They will radiate outwards covering the map, as the fire progresses there will be less of the map the user can access.

Decision

We decided that for the aspects that we are trying to convey to the user, it is unnecessary to produce a radiating fire. We will have several fires spread-out through the simulation and can overlap them in areas to create a more realistic experience. All this along with the timing we are restricted by and the more complex nature of the second option, option 1 is what we have set our sights on.

3.4 Oluwafemi Oshomoji

Animations

- At the beginning the whole atmosphere will display a calm serene environment where people are going about their daily activities without

any knowledge of what is about to happen people going for runs some walking their dogs' others might just be at home

- As much as humans will be displayed, we would love also to show a few animals as it is a natural environment where things are occurring some animals might be looking for food for instance rabbits or squirrels without any knowledge of impending danger
- Once the inhabitants are aware of the oncoming fire, they begin to make a run towards the fire safe house where they can seek refuge till things are done it will show the humans picking up their prized possession for future use
- The animation will show smothered trees and parts that have been affected by the fire so that it will take a clear and visual picture for the user so they can understand the gravity and the effect of it showing them homes that have been affected and much more.

Educational Aspect

As players progress through the game, they will learn about the real-world effects of global warming on forests, including how rising temperatures and changing precipitation patterns contribute to more frequent and severe wildfires.

Reasons

I selected this animation because it exhibits the rapid transformation of tranquil landscapes into complete disaster which harms human beings alongside wildlife. The combination of realistic panic movements with educational content effectively portrays the rising threat of wildfires that global warming increases. This strategy serves as an effective approach to generate awareness about true-life impacts

3.5 RYANNE KHAN

Sounds

Part 1: Sound at the beginning will be a relaxed acoustic sound. This will make the user feel calm and relaxed.

Part 2: When user enters the house to complete tasks, a faster paced sound will turn on to make the user feel a sense of urgency. When the fire starts, a siren sound will go off on the radio warning user about the fire.

Part 3: The user will go outside to evacuate the house and a crackling sound (fire sound). While the user is looking at the forest fire in front of them.

Reasons

For the beginning of the simulation, I decided to choose a sound which was very calming and relaxing to give the user the ability to gradually adjust to the VR and this is strategically picked so that when the next part of the simulation takes place, the user will hear and thus feel a big change in the environment. Sound is a very important aspect of an environment which is why different sounds can invoke for different emotions for the user to feel. When the user is asked to find items to pick up in the house, the sound will be fast paced which will encourage the user to feel a sense of urgency. Afterwards, when the user sees the forest on fire, the sound that will be played will match the sound fire usually makes. This will make the environment seem more realistic while keeping the user entertained and immersed within their surroundings.

4.0 Final Story

Subsystem 1

(Duration: 40-50 seconds) User will enter the VR world. The user's initial location will be in the forest, and the user needs to move towards home, which is the wooden house. The user will see animals and NPCs walking around and can interact with them.

Subsystem 2

The user is instructed to find food at home (around 30 seconds), after which the radio will announce that a forest fire has broken out and is spreading. At this point, the user needs to go out (around 20 seconds).

Subsystem 3

The user needs to run away from the forest and avoid the burned trees (up to 40 seconds). The user is then prompted with different facts about forest fires and how climate change causes for an increase in this type of natural disaster (This will be the educational aspect of the VR, up to 40 seconds).

Forest Fire
GNG 1103 Group 01

Feb. 8, 2025



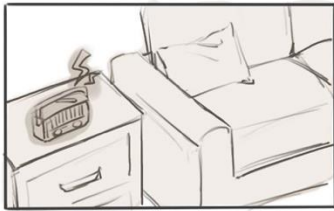
Walk in the forest and get back home



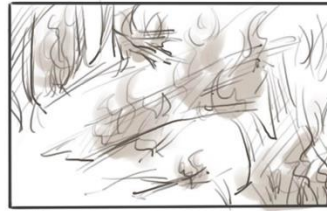
Can interact with animals and objects.



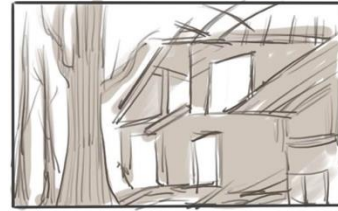
Arriving home to find food.



After a while, the radio broadcast the news that the forest is on fire



Get out of the house and run away from the forest fire



Come back to check the house and the forest after the fire.