Project Deliverable F

Prototype I and Customer Feedback

GNG 1103 – Engineering Design

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1.0 Introduction

The goal of this deliverable was to construct our first prototype using our chosen design concept along with the feedback we gathered from our first client meeting.This initial prototype will be used to give our team a better understanding of how all of our assets and code will come together in a VR environment, and will be improved upon in the next deliverable. In this document, we will be listing our client feedback, demonstrating images of our prototype, performing an analysis of our prototype, creating a detailed plan on how we will test our prototype and updating our overall project plan.

2.0 Client Interview Feedback

During the client meeting, we received numerous feedback for our concept designs. When presenting our three concept designs, our client complimented how we designed our three concept designs based on an increasing level of feasibility and complexity. Our first concept design would require the least amount of time, our second design is the most detailed, so would require the most amount of time, and the third design was a midpoint of the two. The client suggested that we choose the option that is the most feasible while satisfying the design criteria, which was concept three. During the discussion at the end of the meeting, we had asked if we could put audio in our environment. The client gave us insightful feedback on how users can be sensitive to violent sounds (bombs, gunshots), so we should be able to remove sound on command if needed. The client suggested that we work more on signs and objects rather than the environment.

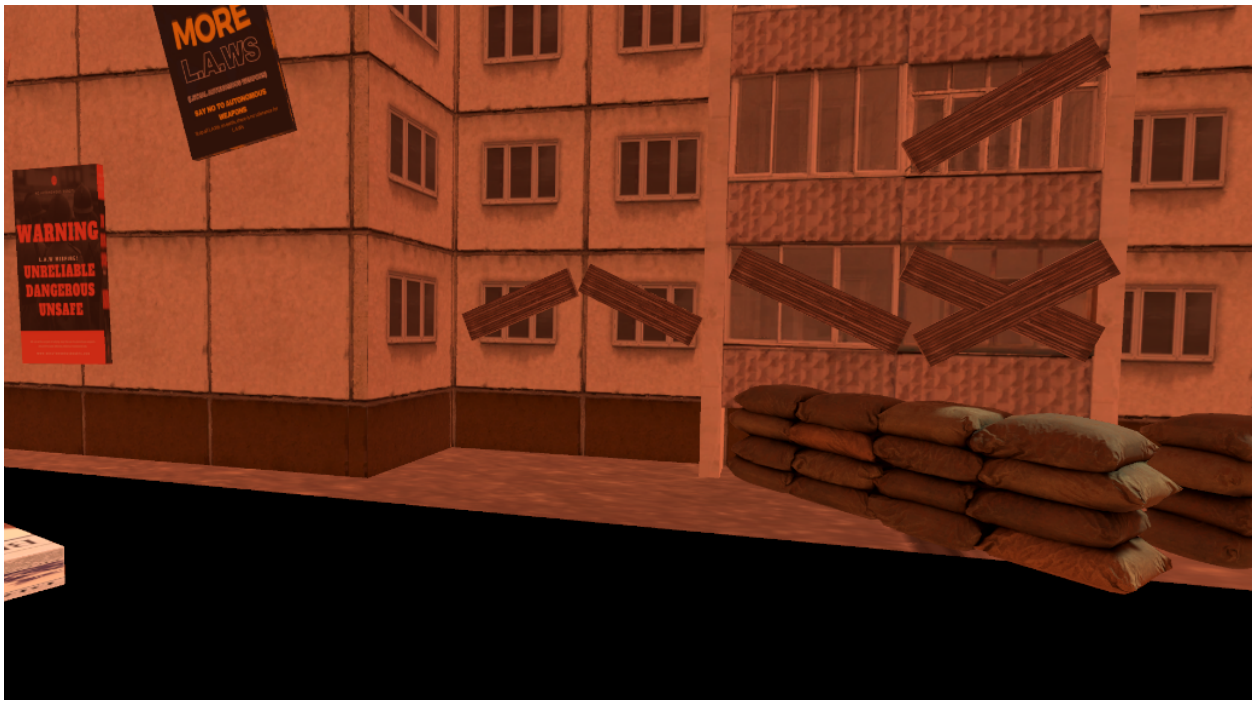
3.0 Prototype

3.1 Prototyping Objectives

- Add all free unity assets to the unity scene.
- Test that all parts/objects are working well with each other.
- Assign future tasks.
- Determine Test Plan

3.2 Prototype Images


NO
MORE
L.A.WS
SAY NO TO AUTONOMOUS
WEAPONS
UNSAFE
BREAKING NEWS
NO
MORE
L.A.WS
WARNING
UNRELIABLE
DANGEROUS
UNSAFE


MORE
L.A.WS
SAY NO TO AUTONOMOUS
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WARNING
UNRELIABLE
DANGEROUS
UNSAFE

3.3 Analysis of Critical Components

Critical Components	**Purpose**
Buildings	Our run down buildings are free unity assets. They are used in our design to over exaggerate the run down feel we want to display in our 'post-apocalyptic' environment. They are a key component in our design as our environment is based in the city. The building also helps set the boundaries in which our main environment can reside within.
Fire	The use of fire in our design is to emphasize how out of control this new reality is. It has no longer become anyone's priority to deal with hazardous events and the idea is to recreate that experience using the live fires.
Roads	Due to our environment being in a city- roads are an obvious addition. We have limited ourselves to one road for now but future canvas addition or variation will be explored. The lack of vehicles is intentional indicating the lack of human touch in the environment, this aspect may be more emphasized with abandoned vehicles and may be explored in the future.
Newspaper / Posters	Newspapers and posters are another key addition to our project. In our unity environment the signs are used to give a visual context of the state of the world. We initially thought of this idea in our ideation stage and had created different

	sketches of what it would look like. We are encouraged to see it come to fruition.
Sandbags	Sandbags serve as temporary shelter, flood protection, anchoring and for creating safe pathways. We implemented sandbags as a way of indicating disaster level events
Orange sky	The orange sky, representing the sunset, shows that the setting is the end of the day, and metaphorically speaking, connotes the end of the world is soon to come. The orange color of the sky also illustrates the polluted air denoting the presence of dust, smoke, and other pollutants in the air which, scientifically speaking, intensifies the red/orange coloration of the sky.

4.0 User Feedback

- ➔ "Love the fire"- Most users that were shown the scene loved that the fire was just everywhere, it symbolized disaster and chaos. Some commented that there should be more broken stuff around like shattered glass, destroyed buildings, cracks on the floor etc.
- ➔ "The posters and newspapers caused fear and concern"- The newspapers and posters sent an educational message and also made the VR realistic. Most people said that this is how they would imagine the world to be if there was such a disaster, Papers and fliers scattered everywhere.
- ➔ "Sandbags were cool but do not see the purpose of it"
- ➔ "Sandbags and posters work well"
- ➔ "Confused because they do not know how they got to the situation they are in"- We need to have more context to avoid confusion.
- ➔ "Makes me feel uneasy"

5.0 Prototyping Test Plan - Prototype II

Test ID	Test Objective (Why)	Description of Prototype used and of Basic Test Method (What)	Description of Results to be Recorded and how these results will be used (How)	Estimated duration of test
1	Determining if audio is properly activated by user interaction (radio).	Add different audios and play the Unity game to check if the audio is	Results will be recorded as either "success," if audio is playing as	Approximately 5 mins Date: Nov 12th To be done by: Rohan

		playing/can be heard by the user.	intended, or "failure," if audio is not playing.	
2	Determining movement quality of assets (rats, fire, smoke, etc.).	Place the rats and fire in a unity game, go into gamemode, see if they function as anticipated.	Results will be recorded as either "success," if there are not any glitches or mishaps in the mobile props, or "failure," if props are not acting as they are intended to.	Approximately 5-10 mins Date: Nov 12th To be done by: Kwab and Rohan
3	Determining if the user can move properly (Ex. walking on the ground, not floating).	Go into gamemode and test if the keys associated with movement actually move the user where intended.	The result here will either be a success or a failure. Each key associated with movement will have to go through this trial.	Approximately 5-10 mins Date: Nov 12th To be done by: Hannah
4	Determining if the user can look around with a 360° view.	Add the scripts and play the Unity game. Use the arrow keys to check if the 360° camera works.	Results will be recorded as either "success," if the 360° camera works as intended, or "failure," if it does not. If failure occurs, we will check the script for any errors.	Approximately 1 min Date: Nov 12th To be done by: Marho
5	Determining if all assets are compatible in a single VR environment	Place buildings/props/audio on the plane and play the Unity game. Search for any defects.	If any defects are found, the appropriate action will be taken (e.g replacing a glitching wall or removing a triggering/deafening audio).	Approximately 5 mins Date: Nov 12th To be done by: Jon

6	Determining if the combination of assets will run properly by the computer	Export the game and play the game. Check if the game is functional and if the user is able to interact/use all functions as intended.	If the game is not working as intended, assess the issues through appropriate troubleshooting methods.	Date of testing is dependent on Test ID 1, 2, 3, 4, and 5. Estimated time to fix the issues is dependent on the specific issue. To be done prior to *7.* To be done by: Jon and Kwab
7	Testing the user response (emotion)	Gather a set of testers who have varying qualities (ages, ethnicity, backgrounds), observe their emotions and reactions to the scene, ask them how they are feeling	Recorded while observing the users, notes will be taken per tester on a note app or on paper, results will be used to understand if the proper emotions were evoked (fear, sadness, desire to take action)	Approximately 10 minutes per user, Date: November 6-12 To be done by: Jeanine
8	Usability testing (functionality)	Gather a set of testers who have varying qualities (ages, ethnicity, backgrounds) observe how they move around in the simulation and what they interact with.	Recorded while observing the users, notes will be taken per tester on a note app or on paper, results will be used to understand if the users can easily move around, look around, if they interact with the desired assets.	Approximately 10 mins, per user Date: November 6-12. To be done by: Jeanine and Marho

6.0 Project Plan

6.1 Task List

Status	Task	Person
Coding		

PARTIALLY	Coding body and head Movement	Jon
Buildings		
DONE	Add in buildings, handmade and from asset store	Jeanine
NO	Broken Buildings	
Background Scene		
DONE	Add in roads	Jeanine
DONE	Sky	Jeanine
Other Assets		
DONE	Fire and smoke	Jeanine
DONE	Sandbags	Rohan
DONE	Signs, posters, newspapers	Marho/Rohan/ Kwab
NO	Trees	Marho
NO	Radio	Jon
Sounds		
NO	Bomb noises	Hannah
NO	Radio Broadcast	Jon
NO	Other audios & music	Kwab
DOC		
DONE	Introduction	Jeanine
DONE	Client Feedback	Hannah
DONE	Conclusion	Rohan
DONE	Others	Marho and Kwabs
DONE	Wrike	Marho

7.0 Conclusion

The client complimented our concept designs and suggested we choose the one that is most feasible with our design criteria, that being concept 3. As for audio, our client reminded us that some individuals may be triggered by the audios we proposed, hence for the first prototype we chose to not include audio to avoid any unwanted event from occuring. From the feedback given to us from our upcoming presentation, we will decide whether to include our audios for Prototype II. Signs and objects are more distinctive features to have than the settings/environment itself. Overall, according to our client, our main objective should be to balance the quality of the project and time. Moving on to the prototype, an analysis of features/characteristics of our simulation was formulated evidenced by images. From the user feedback, we added quotes from the individuals that we have chosen to test the simulator. A prototype test plan for Prototype II was outlining objectives, descriptions of a test method and recording results, and duration of testing, followed up by a task list indicating who is in charge of what task and its status.

8.0 Wrike Snapshot

https://www.wrike.com/frontend/ganttchart/index.html?snapshotId=QQhxp7cN0is78UETNobQYfzJp2mb4jZG%7CIE2DSNZVHA2DELSTGIYA