Project Deliverable F – Group 12

Design Criteria and Target Specifications

GNG 1103 - Engineering Design

Faculty of Engineering – University of Ottawa

Tuesday February 27, 2024

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1.0 Introduction

This deliverable marks our first prototype, integrating client feedback to design the main city scene within a virtual reality (VR) environment. We've imported all assets into the 3D city model, a pivotal step towards crafting an immersive experience. This document outlines client feedback integration, showcases the city scene prototype, analyzes its strengths, formulates a testing plan, and updates our project plan. Our iterative approach ensures alignment with client expectations and sets the foundation for subsequent VR developments.

2.0 Client Feedback Summary

During the meeting with our client, we had shared our ideas on the project and received very helpful feedback when discussing. They expressed to us that they really wanted us to prioritize showing the ethical concern choosing targets based on sensor data. Another aspect they wanted us to prioritize is showing the adaptation of how people have needed to change their ways of living when dealing with this issue. We had also gotten feedback about simplifying our project and doing readings on this issue. The feedback was very helpful and allowed our group to take a step back and look at what needed to be showcased in our design and storyline.

3.0 Prototype

3.1 Prototype Testing

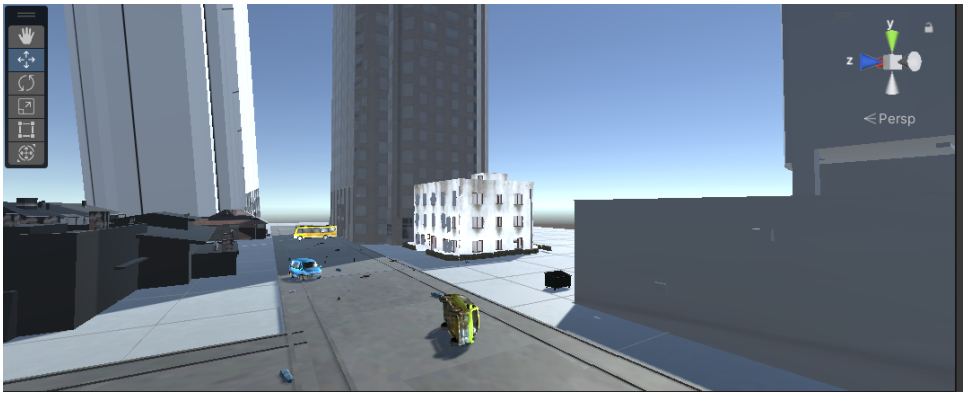
Technical: We tested out if user can walk into buildings, go through the door of one of the budlings and go up the stairs of that same building. Our system failed the first attempt of trying out these technical virtual world tests, so we got technical support and solved the problem.

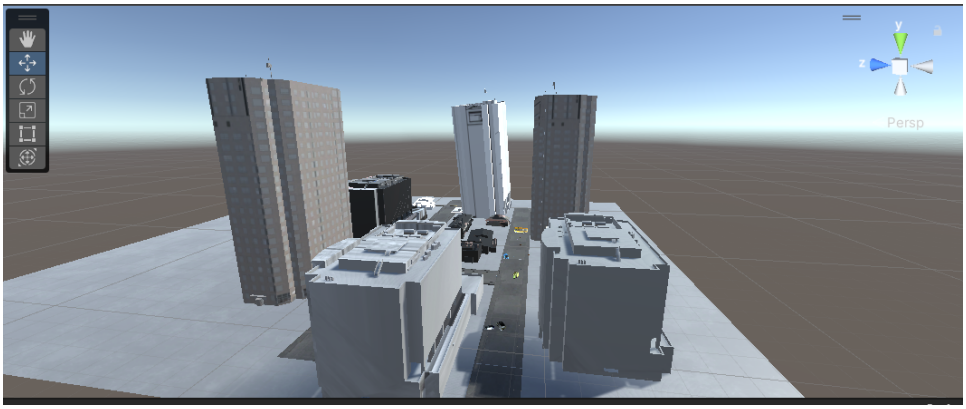
Length of video: We got an idea of how far and long the user can go around the virtual world. This of course depends on the size of the city. The first time we tested it out we got advice from a professional that our city was too big. We then kept experimenting to make our city smaller and smaller. After a couple attempts, we got the perfect size for a city that a player can go around during the time the player is given.

3.2 Prototyping Objectives

Our prototyping goals are to develop a comprehensive prototype for our city simulation, while including elements and objects that we determined to include in our game. We want to evaluate and refine the virtual reality integration within the game, focusing on enhancing features like the solidity of buildings and objects. This phase aims to test and optimize the immersive experience for a more realistic and engaging virtual city environment.

3.3 Prototyping Images





4.0 Analysis of Critical Components

Critical Components	Purpose
Buildings/Houses	These free building/housing assets were quite critical in the making of the virtual world because our story takes place in the city and the buildings let the player know that they are in one. The buildings are one of the main ways we show the user of the product the effects of autonomous weapons. The buildings are in a bad condition some are crooked, and some are dirty, also there are huge spaces between buildings, this all plays a part in showing what the city has been through, which help portrays the message to the user.
Trash on ground	The scattered trash on the floor helps show the filth the city is in. This shows the critical state the abandoned city is in which is crucial since the user needs to get a sense of what people are living through because of the outrage of autonomous weapons.
Sandbags	The sandbags are surrounding the building as can be seen from the first picture provided. The sandbags are there for the protection of the buildings. This is quite important because this is one of the ways we are showing how the people of city had adapted.
Vehicles	The vehicles and cars are all-over the place some sideways most diagonally standing. This kind of adds to the fact that the city is abandoned, which helps the user understand the situation. In addition, it shows the immense impact the robots had that it reached the point where even vehicles were affected.
Colour Scheme	Our city is unrecognizable and simple due to the colour scheme we chose. The grey, white and black colours truly leave the viewers unfamiliarized (which was one of the requirements of this project). This helps the user focus more on the imperfections of the city then on how it looks.

5.0 User Feedback

- “It looks abandoned”

- “It looks messy, and the building is crooked”

- “It looks plain”

All the feedback we got was good. All the components and requirements we wanted to portray were caught by the users.

6.0 Project Plan (Prototype II)

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 Test duration and planned start date (When)	Stopping Criteria
Testing if the player/use can walk/run.	Run the game and test that the character can walk properly	recording how easy the movement is, and recoding any glitches that may affect the quality of the game	10-15 minutes Starting from March 10th	Until having no problems for a week or two.
Quality of building, sandbags, and trashes on ground	Run the game and see if the quality for those things is good	quality of textures, ensuring environmental realism and making sure there is no graphical glitches.	10-15 minutes Starting from March 10th	Until having no problems for a week or two.
Testing in the player can look around itself	Add scripts to unity that provide this feature	see how smooth the movement is and how comfortable the user is(feedback).	5 minutes Starting from March 10th	Until there is no problem with the camera control

7.0 Conclusion

Following Client Meeting 1, our client advised us to streamline our project's scale. Consequently, we opted for the most feasible scene - a deconstructed city. Here, players can

explore the dynamic urban landscape, observing how inhabitants adapt to the threat of killing robots. Features like alarms, sandbags, and open safe houses illustrate resilience amid adversity. This strategic shift enhances both feasibility and immersion, showcasing our commitment to a captivating and technically viable virtual reality experience.