Prototype I and Customer Feedback

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Table of Contents

1. Introduction

This document is dedicated to the development of our initial prototype design. It encompasses test plans, in-depth analysis, and result reporting. Additionally, we'll discuss the vital feedback received from our client, and we'll update the design specifications and BOM based on it.

2. Client feedback

The client praised the design's simplicity and embraced the core concept but stressed the need for greater depth and specificity as our concept was too vague. They recommended focusing on one aspect and building on that one issue, which we chose to be facial recognition. They also stressed the importance of keeping it simple in every step.

In response, we have refined our original concept. Initially, it featured a lone individual navigating a city that, while not post-apocalyptic, is noticeably more dystopian than our current world. The story now revolves around a concerned parent embarking on a journey to retrieve their child from school in this bleak urban setting. We've put significant effort into enhancing the city's appearance focusing on the issue of facial recognition, we incorporated symbolic elements like face masks for anonymity, banners, and strategically placed fog machines. Additionally, we've integrated audio elements to immerse the audience and underscore the societal challenges faced by the family and inhabitants.

Looking ahead, we'll apply this invaluable feedback to shape our future work. Our plan includes creating two more prototypes, each building upon the previous version, with the ultimate goal of delivering a compelling and immersive final project. These iterations will focus on fine-tuning the narrative, adding depth and detail to create a more captivating experience for the audience in this mildly dystopian world.

3. Prototype

Testing Results & Comments for Prototype 1

Design Specification	Measured Value	Target Value	Comments
Functional Requirements			
Synchronized VR with text/audio	Fail	Pass	Want audio and text to follow user camera during unity, work in progress with audio interface
Space for VR interaction	$4m^2$	$2.25m^2$	Area needed for no collisions with outside debris
VR Testing	1 per week	1-2 per/ Week	Make sure it runs smoothly and works with refinement
Non-Functional Requirements			
Language/ Comprehension	1	2	Aiming to be a bilingual product, with French and English being the main languages
Constraints			
Concise plot	35-40 seconds	45 seconds to 1 minute	Plot may need extra material to get fully maximize delivery of message

4. Prototype Illustrations
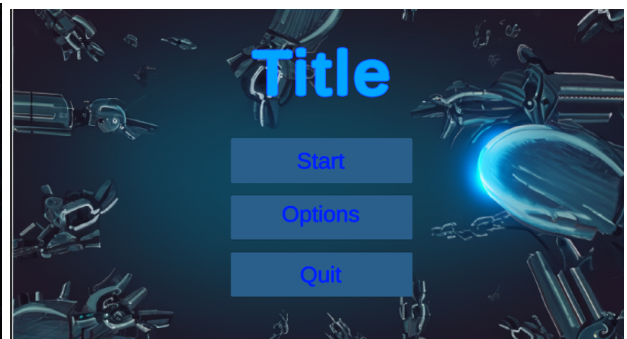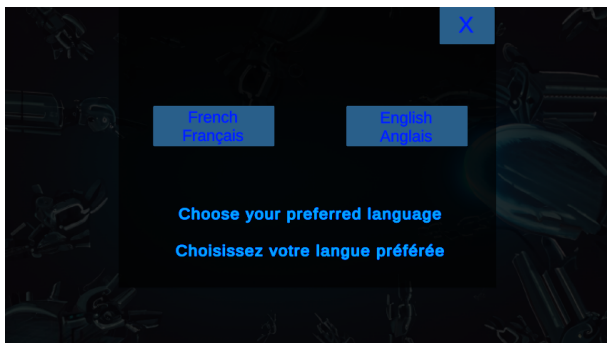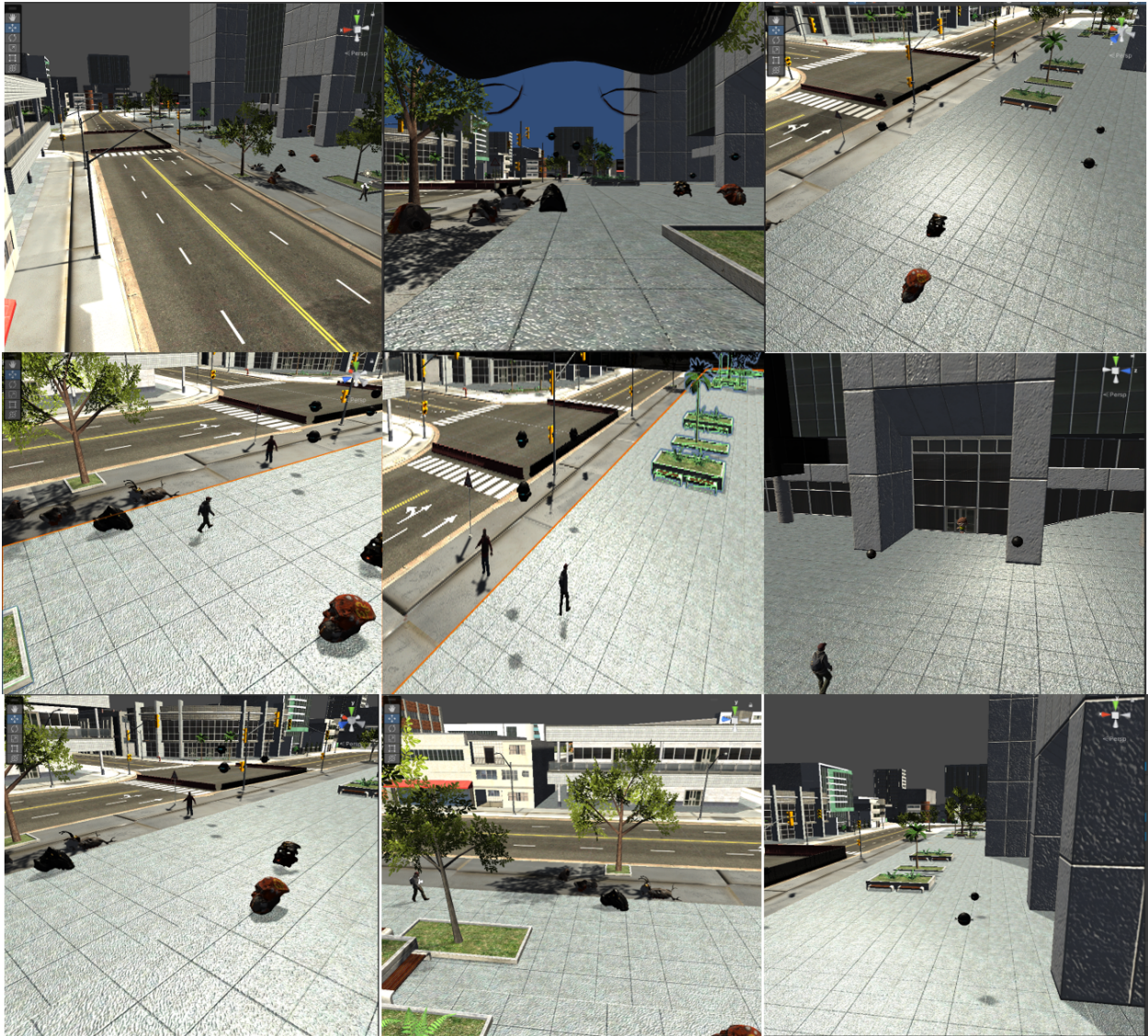
5. Prototyping Test Plan

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 Test duration and planned start date (When)
1	Determine user comprehension of scene	- Comprehensive Prototype - Measure if the user can understand what is happening in the simulation	- Gather user feedback at the end with a survey - Ask users to identify any parts that confused them or that they didn't understand	Starts with the development of prototype 1 up until the end of the development of the final product
2	Determine if simulation is realistic	- Comprehensive Prototype - Measure how realistic the simulation is to the user	- Gather user feedback at the end with a survey - Ask users to identify which parts were not realistic enough	Starts with the development of prototype 1 up until the end of the development of the final product
3	Determine emotional impact	- Focused Prototype - Measure the emotional impact of the simulation on the user	- Gather user feedback at the end with a survey - Ask user what emotions they felt and specifically what made them feel that way	Starts with the development of prototype 1 up until the end of the development of the final product
4	Determine if problems with robots are easily identifiable	- Focused Prototype - Measure if the core message of the simulation has gotten across to the user	- Gather user feedback at the end with a survey - Ask user how their opinions on killer robots changed from out simulation and what specifically made them come to that conclusion	Starts with the development of prototype 1 up until the end of the development of the final product
5	Regulate movement of camera	- Focused Prototype - Make camera movement smooth and realistic so user can walk through environment with ease	- Get a minimum of 3 users to test out the prototype and give reviews on how moving through the environment feels - Rate movement on a scale of 1-5 and give	Starts after the completion of prototype 1 until the completion of prototype 2

				areas for improvement	
6	Regulate synced audio	- Focused prototype - Add audio throughout the simulation that is synced and corresponds with the environment	- Gather users to test out prototype and see if audio feels immersive - Rate how well audio corresponds with environment and rate if it adds or takes away from storyline	Starts after the completion of prototype 1 until the completion of the final product

6. Analysis

Results

This prototype focuses mainly on the environment that the simulation takes place in. Details to highlight the impact of killer robots in the city, such as discarded masks, fog, and road barriers were added as assets, and preliminary camera movement was created. Our initial results have shown promise, and with this foundational framework in place, it allows for the seamless implementation and adaptation of future artistic elements and any necessary adaptations.

Storyline

Looking forward to prototype 2, we plan to implement a storyline in order to reach the emotions of the users. The audio will play over the simulation as the user moves through the scene as if a phone call is occurring. The script will be as follows:

Act - Phone Call

Phone rings, user(parent) picks up

Kid: Hey, can you pick me up from school right now? It's urgent, they want everyone out of the school as soon as possible.

Parent: Yeah I can, it's only the first day. Are you okay, what's happening? Are you in danger?

Kid: The new security drones the government implemented this year are having issues. They started misidentifying everyone and wanted to restrain a student because they thought they were a criminal. They also can't shut them down for some reason.

P: I'm on my way home from the supermarket, I'll be there soon. That's strange, considering the government was boasting about their advanced threat and facial recognition. It also isn't comforting they have jurisdiction to tase and restrain people. I might have you go to school in a mask tomorrow.

K: Yeah that sounds fine, I saw some other people come to school wearing masks. I heard they might enforce a no mask policy so they can still scan you in the building. It doesn't even make sense at this point

P: For now wear your mask until they make you stop. It is still absurd that they're also deploying them at military bases and warzones with full autonomy. Who's gonna be responsible for when someone gets hurt? I'm getting close, where do you want me to pick you up?

K: There is a protest on the intersection when you turn in, come to the backfield.

P: I can see it, police officers and drones have them held down
(Officers are visibly wearing masks)

K: Wait, one of the drones is free, they should all be in the gymnasium while they fix, it's tasing all the teachers trying to stop it. It's starting to go after students. I have to go

(Flashforward to school)

Ambulances everywhere, Drones on the floor, Parent is talking to police officer

The storyline received positive feedback from test users as it adds a greater emotional impact to the scene.

Ease of use
From feedback received the movement of the camera should be updated throughout our following prototypes to allow the user to walk through the VR simulation with more ease.

Environment
The environment of the simulation received positive reviews as it is very realistic. The improvements that could be made are for it to look more dark and gloomy, to give the idea that this is not a desirable state to live in.

7. Target Specifications Update

Design Specifications	Relation =, < or >	Value	Units	Verification Method
Functional Requirements				
Ease of use	=	Yes	N/A	Test/Feedback
Language	=	English, French	N/A	Consult bilingual group members
# of items on screen	<	2	Sensory objects (dialogue, etc.)	Ensure/ Test
Non-Functional Requirements				
Health and Safety (flashing light)	=	No	N/A	Ensure/Test/ Feedback
Realistic	=	Yes	N/A	Test/Feedback
Emotionality	=	Yes	N/A	Test/Feedback
Simplicity	=	Yes	N/A	Test/Feedback
Aesthetic appeal	=	Yes	N/A	Feedback
Constraints				
Violence	=	No	N/A	Ensure
Video duration	> <	30 - 60	Seconds	Ensure
References to Real World Events/Entities	=	No	N/A	Ensure/ Feedback
Cost	=	0	Dollars	Estimate
Non-offensive	=	Yes	N/A	Ensure

8. BOM Update

Including ones 0$

Part #	Part name	Description	Quantity	Cost	Extended cost
1	Computers	Provided by team members and the university	5	$0	$0
2	Unity software	3D game design engine. Personal license version is used	5	$0	$0
3	Oculus Quest VR set	VR set that is provided by the university in the makerLab	1	$0	$0
4	Unity Assets	Objects from the Unity Asset Store	10	$0	$0
				Total	$0

9. Conclusion

In summary, this document outlines our initial prototype design development, including test plans, analysis, and feedback integration from our client. It forms the foundation for refining our design specifications and BOM, and will lead us to a successful project outcome.