Prototype II and Customer Feedback

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1. Introduction

 The purpose of this deliverable is to showcase the process we used to develop our second prototype design, which includes improved test plans, analysis, and how we implemented feedback. This prototype will focus on implementing the story's audio, fixing previous issues (camera movement), and further defining our environment's art style and overall aesthetic appeal. Finally, we updated the BOM(bill of materials) and Design Specifications to ensure accurate and timely work.

2. Client Feedback

The client expressed high commendation for the design, they specifically liked its simplicity and elegance. Their positive feedback extended beyond the aesthetic appeal to encompass a strong appreciation for our overall concept and the outlined project timeline.

During discussions, the client inquired about the proposed phone call element and they seemed enthusiastic for this creative approach to delivering exposition. They recognized the value of using a phone call as a narrative device, emphasizing its ability to provide a logical and comprehensive explanation of the set pieces and props. The client highlighted the advantage of this method, noting that it avoids the potential disruption caused by a traditional narrator. They were particularly pleased with the idea that a phone call could seamlessly integrate into the immersive experience, preserving the storyline without the intrusion of a voice-over.

Furthermore, the client conveyed confidence in the proposed timetable, indicating trust in our ability to adhere to the outlined schedule. This positive outlook on the project's timeline contributed to an overall sense of satisfaction with the presented ideas and concepts. In summary, the client not only praised the design elements but also expressed genuine enthusiasm for the innovative narrative approach and demonstrated a belief in the feasibility of the project's execution within the established timeframe.

3. Prototype II

Design Specification	Measured Value	Target Value	Comments
Functional Requirements			
Synchronized VR with text/audio	Fail	Pass	P1: Want audio and text to follow user camera during unity, work in progress with audio interface P2: Improved audio interface design, still need to record voice overs and subtitles.
Space for VR interaction	$2.25m^2$	$2.25m^2$	P1:Area needed for no collisions with outside debris P2:Limited hand movements needed to click interface so range of movement is less
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	P1:Aiming to be a bilingual product, with French and English being the main languages P2:Still need to translate script and find a French voice actor to voice our lines
Constraints			
Concise plot	45 seconds	45 seconds to 1 minute	P1:Plot may need extra material to get fully maximize delivery of message P2:Script successfully revised and with cinematic pieces is now of sufficient length

4. Prototype Illustrations

5. Prototyping Test Plan III

Test ID	Test Objective (Why)	Description of Prototype used and	Description of Results to be	Estimated Test duration and

		of Basic Test Method (What)	Recorded and how these results will be used (How)	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	Continue test 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	Continue test 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	Continues 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	Continues 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 areas for improvement	Finish testing by the end of prototype 2
6	Regulate synced audio	- Focused prototype - Add audio throughout the simulation that is	- Gather users to test out prototype and see if audio feels immersive	Continues until the completion of the final product

		synced and corresponds with the environment	- Rate how well audio corresponds with environment and rate if it adds or takes away from storyline	
7	Test various realistic voices	- Focused prototype - Test out various voices of group members or computer generated voices to see which match that of a father and child best	- Gather users to listen to the various proposed voices and rate which ones are the most realistic	FInish testing by the end of prototype 2

6. Analysis

Results

With our second prototype we focused on adding and adjusting components within our environment to make the simulation more realistic. For example, in the first prototype we received feedback recommending that we make the masks more realistic, so we changed them to medical masks, which are more recognizable. Additionally, for this prototype we implemented the audio of the phone call between the child and father. Up until this point we have been able to seamlessly adapt our simulation and plan to further fine tune it in the future for improvement.

Ease of Use

From feedback received in our first prototype we updated the code of the camera movement in order to allow the user to walk through the VR simulation with more ease.

Realistic and Recognizable Environment

We took feedback from our first prototype and adjusted some of the engineering solutions people would create to protect themselves against killer robots. We made these components more realistic and plan on continuing to fine tune different elements of the environment as we progress to the final prototype.

Script

After receiving feedback on our initial script, we made some minor adjustments to achieve a better emotional response from our viewers. The updated script is as follows:

Act - Phone Call

Phone rings, user(parent) picks up

Kid: Hey Dad, 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 right now, 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 find a mask to wear. I'm seeing people have started placing reflective curtains on their windows. I'll have to do that today when we get home. 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.

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	<	50	Dollars	Estimate
Non-offensive	=	Yes	N/A	Ensure

8. BOM Update

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	1	$0	$0

		makerLab			
4	Unity Assets	Objects from the Unity Asset Store	10	$25	$25
				Total	$50

9. Conclusion

In conclusion, we analyzed both the constructive feedback given to us by the client and test users and how integrating it affected/changed our second prototype. In addition, we created updated test plans and target specifications as well as the BOM needed. All of this ensured that our second prototype had the necessary improvements and will pave the way for the development of our third and final prototype.

10. Wrike Link

https://www.wrike.com/workspace.htm?acc=6270829&wr=20#folder/1207807027/tableV2?spaceId=1207806872&viewId=200653858