GNG2101 Report

Project Deliverable F – Prototype 2

Submitted by

Group A4.1

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November 6, 2022

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List of Acronyms

Acronym	Definition
VR	Virtual Reality

1   Introduction

For this deliverable, our group began improving Prototype 1 based on the feedback we received from the previous deliverable, which were the presentations. At this stage, the most critical product assumption is to ameliorate the storyline and adapt the script to ensure that the user does not feel empathy for the character with schizophrenia. During the Client Meet 3, the client provided our group with insightful feedback regarding the storyline, project ownership, and professionals that we can consult in order to create a scientifically accurate story. In addition, our group added features, such as teleportation, to the prototype, and continued implementing different aspects of what will be our final product.

2   Main Subject Body of the Report

Client Feedback Summary

- In the past, groups added their project to MakerRepo
- We have complete ownership of our project

- The client really wants us to get in contact with someone with schizophrenia to get feedback on our stories

- The client feels that our stories might make the user feel sorry for the person with schizophrenia instead of allowing them to develop empathy

- The client agreed that talking with a professor who did research on schizophrenia would be very helpful

- The client wants us to look more into improving our stories before we start building the technology side our VR experience

Most Critical Product Assumption

Before our last client meeting, we planned to create a script and begin our simulation in order to demonstrate the overall ideas that we developed for our product as well as to provide the client with a general idea of what the final product will look like. In doing so, the client would be able to develop a better understanding of the story that our simulation will tell and learn more about our prototype. Once our prototype was completed, we had our client meet during which the client had the opportunity to provide us with feedback and request changes before we began completing our final product. One of the main points that the client discussed was to do with our storyline. The client felt that our story didn't succeed in making the user develop empathy, rather it made the user feel sorry. Therefore, our most critical product assumption at this stage is that our story should be updated in order to allow the user to feel empathy for people with schizophrenia rather than feel sorry for them. Doing so will ensure that the final product meets their expectations.

Script

- Part 1
    - o Functionality: Character starts off on one end of a road and is able to walk down a sidewalk until a certain point.
    - o Audio: Atmospheric audio, car sounds
    - o Video: Other pedestrians walking on sidewalk, cars driving by (?)
- Part 2:
    - o Functionality: Once the character reaches a certain point, a pedestrian (the stranger) runs into them. The pedestrian asks the character a question, and the character is given a pop-up menu dialogue to answer the question.
    - o Audio: Stranger's line: "How can I get to the nearest grocery store from here?", quieter atmospheric audio, quieter car sounds
    - o Video: See the stranger standing, other pedestrians walking on sidewalk, cars driving by
- Part 3:
    - o Functionality: Character verbally answers question.
    - o Audio: Car noises in the background
    - o Video: The user is given options of answers to give the stranger.
        - ▪ Option 1: Take a left from here and continue straight
        - ▪ Option 2: Head down the sidewalk and turn right at the end
        - ▪ Option 3: Keep going straight for 2 blocks then turn left
- Part 4:
    - o Functionality: After the user selects an answer it comes out mangled and distorted (the character doesn't realize that their answer is coming out mangled and distorted)
    - o Audio: The character answers the stranger's question. Car sounds in the background
    - o Video: The character's hands can be seen moving while the character is answering the stranger's question. The stranger looks confused by the character's answer
- Part 5:
    - o Functionality: Since the stranger didn't understand the character's answer the first time, the character tries to repeat the answer, but it comes out mangled again (the character doesn't realize that the sentences are coming out mangled.
    - o Audio: The character answers the stranger's question with the choice selected by the user. Car sounds in the background
    - o Video: The stranger looks at the character confused again but now the stranger also looks frustrated and angry.
- Part 6:
    - o Functionality: The stranger curses off the characters and walks away angry and frustrated.
    - o Audio: The stranger angrily curses the user and says "Thanks for nothing." Car noises in the background.
    - o Video: The stranger walking away from the character angry
- Part 7:
    - o Functionality: The character is confused and doesn't understand why the stranger walked away angry but doesn't let it affect him.
    - o Audio: Loud audio of cars driving by.

- o Video: Can see the stranger still walking away in the distance. Cars are driving by and other people are walking around on the sidewalk.
- Part 8:
    - o Functionality: The user continues to walk down the street but while doing so they begin to hear multiple voices surrounding them. As the voices get louder, the user's walking will slow down, and they will begin to look around themselves since they are scared by some of the things the voices are telling them.
    - o Audio: Voices saying various things to the user. Ex:
        - ▪ "Watch out behind you."
        - ▪ "What is she looking at."
        - ▪ "I need to go home."
        - ▪ "What is wrong with you"
        - ▪ "There is someone following you"
        - ▪ "Take a detour to go home"
        - ▪ "Run!"
        - ▪ "Watch out"
    - o Video: Cars are driving by, and pedestrians are walking on the sidewalk. Occasionally a pedestrian will be seen looking at the user.
- Part 9:
    - o Functionality: After about 10 seconds of hearing the murmurs, all the murmurs will suddenly stop. The user will continue walking down the sidewalk like nothing happened.
    - o Audio: The murmurs will suddenly come to a stop and only the faint noises of cars will be heard in the background.
    - o Video: Since the user slowed down their walking when the voices began, the character will begin to walk down the sidewalk again following the same path that they were walking at the beginning of the simulation.
- Part 10:
    - o Functionality: At the end of the simulation, a message will appear telling the user that they will now watch the character's interaction with the stranger from the stranger's point of view. Beginning with the stranger walking up to talk with the character and ending with the stranger walking away from the character angry.
    - o Audio: From the stranger's point of view, the user will notice that the character's answer came out all distorted and mangled.
    - o Video: From the stranger's point of view, the user will be able to see the character's actions during the interaction.

Second Prototype (sketches/diagrams/pictures)

Link to a video displaying our prototype: VR prototypecity Demo 2

Prototype Testing

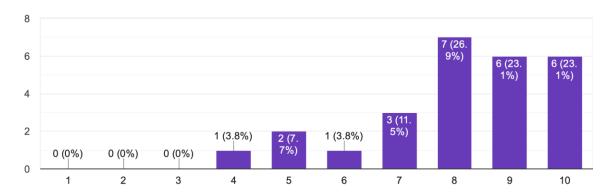**How effective was this simulation at instilling empathy?**
26 responses

Figure 1: Testing Results

Comments:

- Good for teaching people who don't understand what it's like to be schizophrenic. Didn't know schizophrenic people had trouble speaking clearly.

- Very relatable story (the pedestrian asking a question, not the schizophrenic part) which makes it a lot easier to put yourself in their shoes.

- Kind of confusing, requires a preamble or explanation of context before the story begins.

- There could be some tricky parts to implement in unity such as dialogue and realistic interactions with NPCs. Good story concept though.

- It was impeccable, worked amazingly!

- Found the story to be very educational.

Target Spec	Ideal Results	Marginal Results	Actual Results

Budget (CAD)	50	100	0
Storage Size (GB)	5	10	(not applicable to the testing of this prototype)
Combined running length (min)	5	10	(not applicable to the testing of this prototype)
Instills empathy (results from the form that will be completed by those who test the product)	100% positive response	85% positive response	73% positive response
Number of Headsets (#)	1	2	1
Type of Headset (Compatibility)	Oculus Quest and HTC Vive	Oculus	Oculus Quest and HTC Vive

Table 1: Comparing Testing Results

Our testing results for our prototype currently do not meet our marginal expected result of 85% positive response. During the next steps of our project development, we will aim to improve the user experience and educational significance of our VR experience in order to improve the percentage of positive response that we obtain in future testing.

3   Conclusions and Recommendations for Future Work

In PD F, our group had the chance to ask the client questions that helped establish certain concerns regarding the storyline and its accuracy. Our team is presently working on completing the prototype at least a week before Design Day, and we will be testing the feasibility of implementing

a second storyline in Unity. Additionally, we contacted someone with schizophrenia, as well as others who have contact with someone with schizophrenia, in order to obtain feedback about the accuracy of the storyline and script.

Wrike Snapshot Link:

https://www.wrike.com/frontend/ganttchart/index.html?snapshotId=XFYaoYMwQlS0fpD6FbNl zk8UWRzFX3iy%7CIE2DSNZVHA2DELSTGIYA