GNG1103 Section #B02 Team #B05

Project Deliverable G: Prototype II and Customer Feedback

GNG 1103 – Engineering Design

Comments on the last prototype:

When presenting the prototype to the class and client, the client approved the team's idea overall, however, he did express some concerns on certain features he would like the team to add in the final design. The client requested the team to make sure the video is stereoscopic, so each eye has a slightly different video and also he requested us to make an apk file and a configurable text file.

The information gathered from the meeting was very relevant, since it allowed the team to gather details on what to add to the project. risk. It was also important to use the advise the client gave us to enhance the overall quality of the project.

The team used this information to ensure that all requests are added as the prototype is developed.

Introduction: Why are we doing this test?

In this prototype, the group is trying to see if the functionality of our VR Interface. The group will add the stereoscopic video to the project as well as the 3D model of the hospital waiting room while still working on the quality of the VR Interface.

Test Objective Description.

What are the specific test objectives?

Our main goals for prototype II is to make an immersive, easy to understand and functional software, test our prototype and make sure it works and add the stereoscopic video.

What exactly is being learned or communicated with the prototype?

The team is showing the client a rough idea of how the VR Interface will look and how the files will commute. This will include the stereoscopic video as well as improving on the aesthetics of the design overall.

What are the possible types of results?

The possible types of results are to see if our design works in VR and is able to be used by the client and the patients. This includes the client's feedback on the aesthetic side of the project since he might see that it is not critical to work on the visuals as much as the team is planning to.

How will these results be used to make decisions or select concepts?

From testing our VR Interface the group will see how the game "feels" and how appealing does it look. If everything works as intended the group will continue to further develop and enhance the current project. The rest of the things to be implemented are the 3D waiting hospital room as well as just the visuals of the VR Interface.

What are the criteria for test success or failure?

A successful test will meet the following criteria:

- The video will not play if the user is not lying down
- The program runs smoothly
- The user can start/stop the video at will (working pause button)
- The user feels immersed (working stereoscopic video)

If any of these criteria are not met, the test will be considered a failure

What is going on and how it is being done?

Describe the prototype type and the reason for the selection of this type of prototype.

We have a comprehensive prototype, we chose this type of prototype to be able to have a completely working software. If we choose to make a focused prototype, we would have to make several prototypes to complete the program.

Describe the testing process in enough detail to allow someone else to build and test the Prototype.

The testing process is quite simple, set up the virtual reality goggles (at the university go to *Makerspace Lab* or *design commons* room at STEM) then proceed to run the unity software. Take note of the functionality and any issues that may arise while using the application. Update the software and repeat it.

What information is being measured?

The information being measured is not quantitative but rather qualitative as the information being tested is the design of the prototype, not numerical values.

What is being observed and how is it being recorded?
We will be observing certain criteria that will determine whether a test is considered a success or a failure. We will note the results in a table (see below) to keep track of our progress and to see if we encounter a certain problem several times.

Criteria	**Test run #1**	**Test run #2**	**Test run #3**	**Test run #4**	**Test run #5**
Functional menu					
Program runs smoothly					
Video plays stereoscopically					
Play/pause button works					
Feels immersive					

What materials are required and what is the approximate estimated cost?
No materials are required since the prototype is a software program. However, purchasing the downloadable unity asset *Clinic - Hospital Room* by MIXAILL will cost approximately 30.40$ CAD.

What work (Test software or construction or modelling work or research) needs to be done?
The team needs to incorporate our unity asset (Hospital room) as a background for our software to make it more visually pleasing as well as feel more immersive. The team needs to also make the interface easier to understand and manipulate and by the end make an apk file of the project as well as a configurable text file.

When is it happening?

How long will the test take and what are the dependencies (i.e. what needs to happen before the testing can occur)?

The test length is undetermined as it depends on the teams ability to use Unity 3D and use its mechanics to fully create and finish the teams project and add all of the features. Which are stereoscopic video (creating the two eye view) and a more pleasing interface.

When are the results required (i.e. what depends on the results of this test in the project plan)?

The results are required before the submission for prototype II but most importantly for Design Day, November 25. Using the feedback from the client meeting of the prototype I we have made adjustments to enhance our project. The development and progression of our designs will be heavily influenced by our testing from our second prototype. These results will fine-tune the details we need to finalize our fully functioning application.

Conclusion:

In conclusion, we are applying all of the client's feedback to our prototype II as well as adding a few minor features of our own if the team has time. With the feedback obtained from the client, the group was able to further develop and enhance to project and add the features that the client requested. Major changes from prototype I to II are mostly related to immersion, adding a stereoscopic video, making the menu more refined and adding the background. Prototype II is much more refined and closer to our final vision for the program. With the feedback obtained from the client, the group was able to further develop and enhance to project and add the features that the client requested.