GNG 1103

# **Deliverable F: Prototype I and Customer Feedback**

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# Introduction:

#### Why are we doing this test?

This test to be completed is to display the initial concept and design to the client. The reason for this test is to understand what the client identifies from the basic structure of the group's VR output and controls to further advance the completion of the VR simulation.

# Test Objectives Description:

#### What are the Specific test objectives?

For this test, the group's objectives are to complete the basic structure of the menu, video sequences and controls to further analyze and enhance the VR system.

#### What is being communicated with the prototype?

We are showing the client a rough idea of what the simulation will be like for users. This simulation will include: at first the start menu, where the user will be able to access all videos showing different treatment procedures by clicking on the "Video Selection" Button. Upon selecting a video, the selected video will play on the screen. To terminate, or quit the simulation, the user will notice a "Back" button on the top right of the screen. This back button will end the simulation, and display the video selection menu again for the user to choose another video to play, or click on the "Back" button to return to the main menu.

#### What are the possible types of results?

The possible types of results are minimal as the client may like or dislike the functionality of the simulation and may deem the result feasible.

## How will the results be used to select concepts?

When the client gives feedback, it will be used to further advance the simulation in that specific way to narrow down the concept and achieve a near end result. This will help the group modify the simulation to best aid the user with simulation interaction.

## What are the criteria for test success or failure?

Criteria for a test failure would result in a dysfunctional simulation if the client cannot provide any feedback as it would be non-operational. This would be difficult in developing the simulation further to provide a final product. Criteria for a successful test is that we receive feedback on our shortcomings, as it would allow us to fix any major errors to provide the best simulation experience for the user.

# What is going on? How is it being done?

## Why was this prototype chosen? Describe the prototype.

This prototype was chosen to give an initial and basic understanding of our simulation concept. This prototype design allows the client to easily see our end goal. It will be simple for them to comment and give us feedback on the design. Moreover, this prototype includes the menu design which is the first branch that will lead to the development of many other, more

sophisticated, branches in the following prototypes. Our first prototype works on our first basic concept of a menu, along with the options imbedded in each button. Whereas in our first prototype, the user will be able to choose the desired video, and start the simulation. Additionally, the user will also have the option to return and select a new video.

#### What information is being measured?

During the testing of the prototype, our group intends to assure that all the requirements set by the client during the client meets are clearly visible and found in the prototype. We also are willing to make sure that the prototype is properly functioning and if not, the areas of improvement which we need to work on for the next prototype. Finally, the group will be measuring whether the device is realistic, as wanted by the client, to insure that the patients are getting the feel of a real life experience.

#### What is being observed?

This prototype helps us and the client to observe how the program will run. It shows what our idea is and where we are going with it. Basics like the menu selection and videos are uploaded on Unity. All the videos we have will have the 360° view later, however only 2 videos have that. Also, it will be a stereoscopic view so we will be testing that with Vive and see how it works. Currently, we can see the main menu, which has an option to play, select a video or quit. Once, the video is selected and played, it brings you to the video. The video has the option to pause or 'go back', which will bring you back to the main menu. With this prototype, our main aim was to see if we can make a working menu where we can select a video from various options. At the same time, we wanted to see if we can make the videos having 360° view and having the pause or going back options. We observed that all the mentioned tasks are doable, so we can further add new essential features such as subtitles, instructions and more to ensure maximum accessibility.

## What materials are required for the prototype and what is the cost?

The only materials required for the prototype is a computer with Unity program downloaded on it. The Unity file was made on a computer. For the prototype, we are just showing our menu selection and videos that can be played on the VR. We will be using the Vive VR set to check how the prototype works. The VR set will be borrowed from the makerspace.

## Any work required? (Construction, software, research)

The platform used to build this prototype is Unity. The prototype required us to create new scripts and coding in order to make the menu selections and the video. There is no required construction for this prototype as we will simply be putting the built software onto a VR device which we will test from the device itself. We will continue to build a home menu display for future prototypes.

# How long will the testing take? Dependencies?

The testing will only take 10-20 minutes depending on the length of the video. Perhaps the client may want to test the different functionalities of the menu so give or take a few minutes. The dependencies of the test are that the client provides feedback to the group. We should all be present and prepared for the client presentation.