

Project Deliverable G

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I. Introduction

Prototyping is an iterative loop of development and feedback. Without either of these components, it is difficult to advance the prototype in the right direction. Outlined in this document is the testing plan for a second prototype based upon the feedback received on the first one. The document also contains updated documentation on the current status of the prototype.

II. Feedback

The feedback received on prototype one was very tailored toward the visual aspects of the prototype. Some of the most notable improvements we could make are, darken the colour pallet, increase button size, and text size.

III. Prototype Testing Plan

Featured below is an extensive list of criteria and methods to ensure rigorous testing of our prototype.

A. Why are we doing this test?

1. What are the specific test objectives?
 - Combine previous prototypes into one prototype
 - Link multiple scenes together using buttons
 - Continue developing the visual layout of the app
 - Load in the 3D model to unity
2. What exactly is being learned or communicated with the prototype?

This prototype will communicate two main things. The first is a proof of concept that the group, can develop a working prototype in unity. The second thing is the group will communicate our progress, through a format that is visual and very informative.
3. What are the possible types of results?

There are three main types of results that can be achieved in this test. The first is that it completely succeeds, and the prototype meets all of the requirements and standards outlined in this document. The second possibility is that the prototype succeeds in some categories and fails in others. The final possibility is that the prototyping completely fails all of the testing requirements outlined in the document.

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

After completing the testing plan, the results will be documented, and success will be documented. We will use these successes to continue improving on our prototype. Any failures that occur will be used to learn and reevaluate how to go forward with development. We will consider client feedback as a set of successes or failures. Using these we will continue to assess our progress, and plan our future development.

5. What are the criteria for test success or failure?

- The unity program can effectively switch between scenes
- The scenes look accurate to our previous prototypes with our desired design concepts
- The 3D model loads into the unity software properly

B. What is going on and how is it being done?

1. Describe the prototype type (e.g. focused or comprehensive) and the reason for the selection of this type of prototype.

- A comprehensive prototype as all members must be able to access the main Unity project, with the ability to edit and upload files

2. Describe the testing process in enough detail to allow someone else to build and test the prototype instead of you. What information is being measured?

- A stopwatch will be used to measure the time required to load a 3D model, boot into the app interface from the home screen, and how long the app will run before draining the battery
- The criteria will either be successful or not, and therefore the testing procedure is a list of successes and failures

3. What is being observed and how is it being recorded?

- How well the Unity app performs and changes between scenes
- How well the 3D model looks in unity. Is it laggy or smooth?

4. What materials are required and what is the approximate estimated cost?

- Materials required include an android development account (\$25), and potentially a premium Unity account (\$15/Month)

5. What work (e.g. test software or construction or modelling work or research) needs to be done?

- Different scenes need to be created for the home page, settings page, file load page, and main AR scene.
- Research into app development to improve the prototype outcome

C. When is it happening?

1. How long will the test take and what are the dependencies (i.e. what needs to happen before the testing can occur)? A separate test planning Gantt chart can be created to help to make sure that the testing fits with the overall project schedule or it can be defined as part of that schedule (i.e. as a sub-task).

It will ideally take 1 week to test the prototype. This will depend on the efficiency of compiling all of the components into one working unity game. The sub-tasks that need to be completed include: combining previous prototypes into one prototype, linking multiple scenes together, developing the visual layout, and loading in the 3D model to unity. Each of these tasks has simultaneous time frames, as each member of the team is in charge of one. This reduces the number of dependencies, henceforth decreasing the overall time.

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

The test results will be necessary by Saturday, November 14, in order to have adequate time to enhance the prototype and account for any issues along the way.

D. Stopping Criteria

After getting feedback from the user and the test results, we will implement the feedback and results in the designing of the next prototype, or the redesigning of the current prototype. We will keep doing this until the prototype is a final product, or the time runs out.

IV. Prototype Progress

Featured below is an update of the progress made on the development of our second prototype. It includes a recap of the critical components, user feedback, and updated pictures of the prototype.

Critical Components

App Layout: The app layout is the first screen when the app is opened, it includes the interface to select the desired file, adjust the settings, access the user manual and create a welcoming environment.

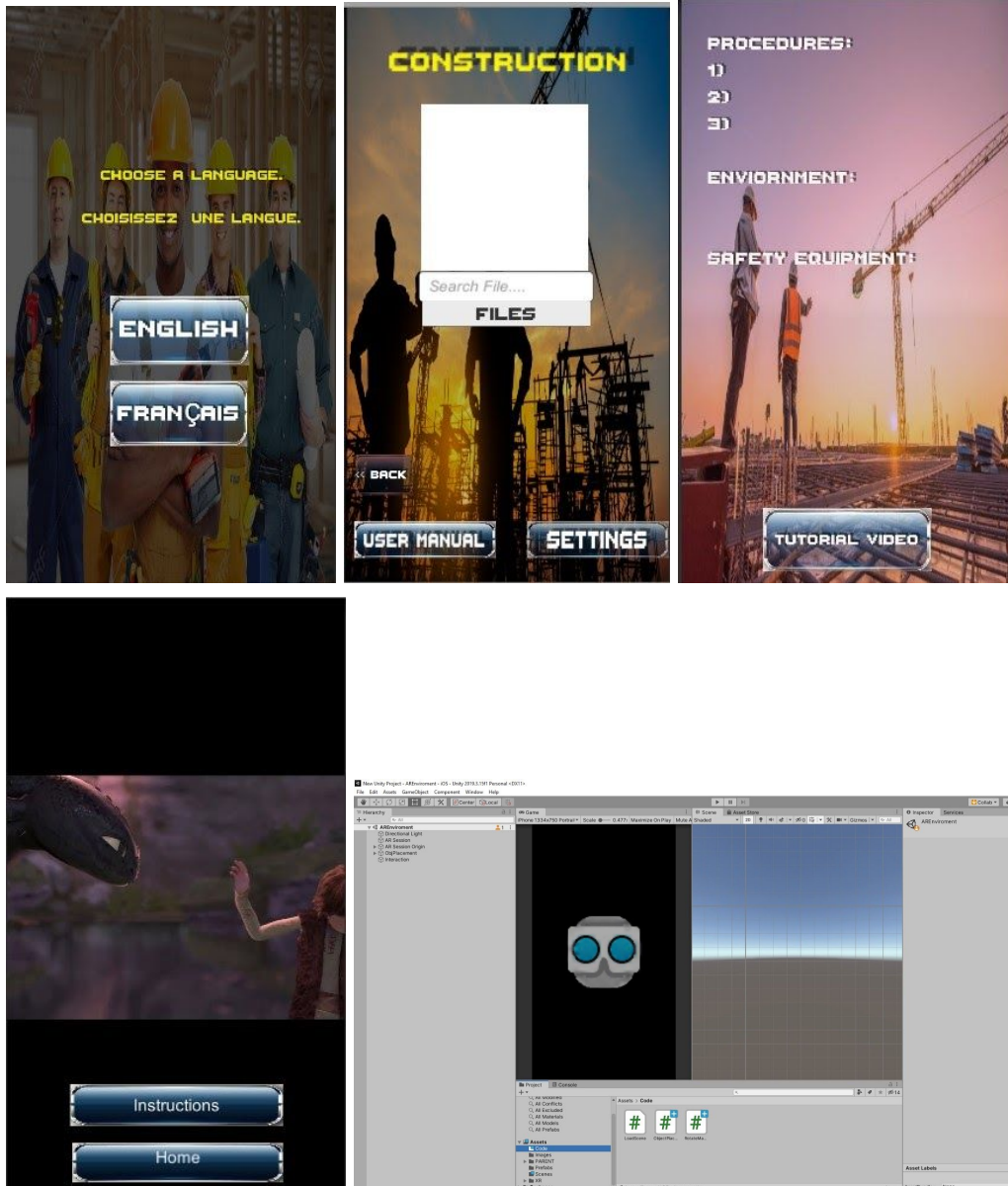
Interface View: The interface view contains the chosen 3D model desired for viewing purposes. The screen will contain all the controls to manipulate and change the discipline view. It will also contain additional features such as the angle of rotation, measurements, current view, and task lists.

Feedback

The client was extremely happy with the progress made and had no comments on issues with the prototype. Family members that looked at the prototype found it very easy to navigate and visually appealing. One person commented that our french button doesn't work. In our next prototype, this will be one of our biggest focuses along with refining the rest of the app.

Progress

Featured below are the 4 main screens of the app. Screen one is the language selector. Screen two is the main navigation screen. Screens three and four are both parts of the user manual and contain information along with a video. The last screen is the file screen, where the object can be interacted with. This one cant be documented with a picture, a video is provided in the submission. Also to demonstrate the linked scenes another video has been provided. The final image is the AR environment and the gesture controls associated with it.



V. Conclusion

This document outlines the development of the second prototype. It consists of the prototype testing planning, customer feedback and prototype status. The prototype testing plan was modified from the first one to account for feedback received and updated prototype goals. Prototype two combines all the components of prototype one, along with a real 3D model and linked scenes. A variety of criteria have been implemented throughout the development of prototype two, to test it, to see if it meets the initial target specifications and test goals.