

Project Deliverable H

November 21th, 2020

Nassar Shakir (300082867)

Adam Jahan (300189300)

Adam Walters (300109768)

Emeric Chanhoun (300211395)

Abdullah Nauman (300136237)

I. Introduction

Prototyping allows for an idea to be communicated and criticized in an efficient and thorough manner. This report contains the documentation for the final prototype and contains a detailed testing plan to ensure flawless performance. This testing plan is based upon past feedback and current goals for the prototype's development. To finalize the document, pictures and descriptions of the prototype are included.

II. Feedback

When we showed the prototype to the client and family, the feedback was overall positive. The only comment we received was that our french button did not work. We will improve on this in prototype three, along with refining the overall app layout and functionally.

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?
 - Finalize Prototype development
 - App runs smoothly
 - Toggle 3D model between views
 - Improve on AR model
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 has finalized a working prototype in unity. Secondly, the group will communicate our progress, through a working prototype for people to interact with.
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 and successes 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?

- Smooth integration of 3D Unity model
- Efficient transitions between scenes
- Scenes accurately represent the higher performance parts of the prototype I
- Accurate

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.

It was collectively decided that Unity would be the best platform to develop the AR application as it was cheap, user-friendly and allowed for cloud syncing of the project. This is a comprehensive prototype as all aspects are being implemented and put together to work as one system.

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?

In order to test the prototype, you would first need to build the app into iOS format. Then, download Xcode onto a macintosh system. Plug in your ios device and turn on "automatic signing". Next, load the app onto your phone and it should appear as an app on your home screen. Test the load times, if tap to place works, and if UI buttons work.

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

The performance of our project is being observed with respect to functionality, smoothness and appearance.

The functionality will be tested using several devices of different

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

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

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

Some research would need to be done on how to implement various features into a unity project. For example, the most efficient method for AR integration would need to be selected. Code would also need to be written to give instructions to the AR module.

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).

The testing will take approximately 2 days. Therefore we plan to have a finalized prototype by November 23, so we can test from November 23-25. Allowing us to have 1 day to finalize and repair anything necessary.

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

The results would need to be in before the final presentation can be created as all the features would need to be demonstrated.

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 feedback received on prototype three was overall positive and we have decided that because it is, we have satisfied our stopping criteria. The only feedback we will continue to develop is the development of our name, to help with branding. This is shown in the comment below.

“I like the app, you should come up with a catchy rad name!” - Karen

Progress

Featured below is the final prototypes split into all its separate components. Each screen is linked together with functioning buttons

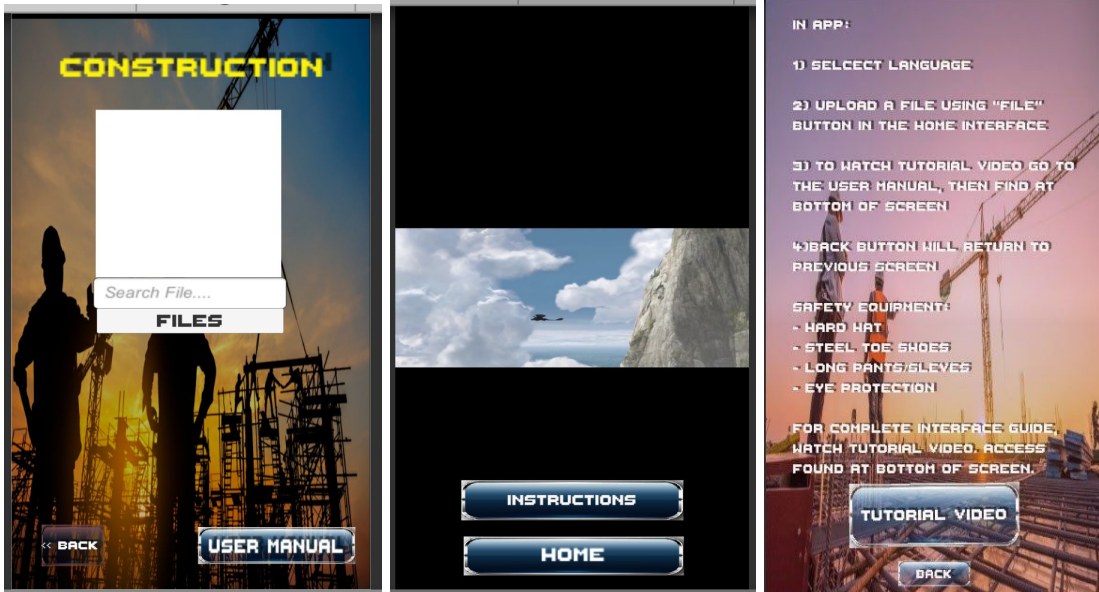
Opening scene

This scene is the first scene and is where the desired language is chosen



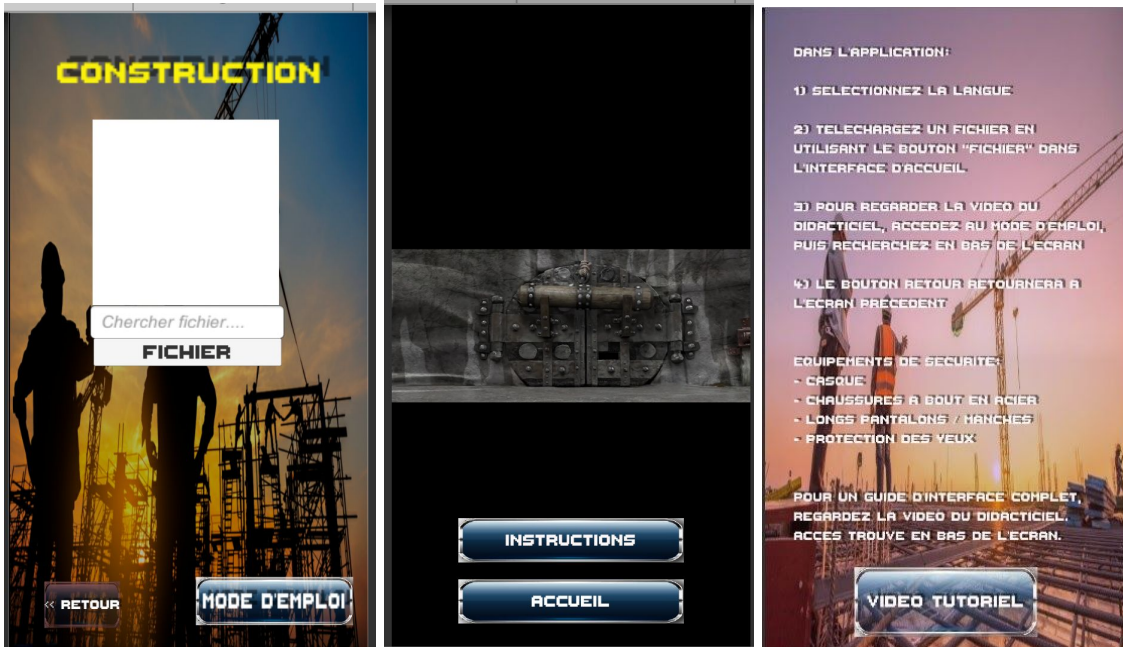
English Scenes

These scenes are the general features of our prototype, they include the home screen which navigates to the tutorial video and instructions



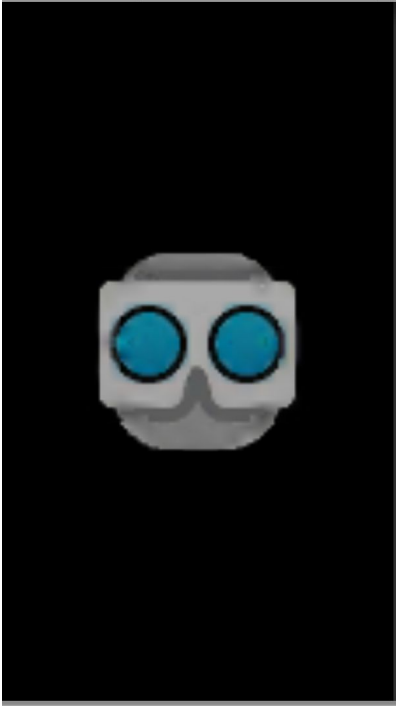
French Scenes

These scenes are identical to the English scenes but are in french



AR Scene

This is a placeholder for the actual AR scene, it is included in the video that was submitted separately.



V. Conclusion

A prototype can provide great constructive feedback and highlight areas of concern ultimately providing a basis for a polished final model. This prototype is the final prototype in the development process. Upon completion of the testing with positive results and positive feedback, we have satisfied our stopping criteria. Featured above is the documentation of the final prototype, along with a reminder of the critical components of the prototype.