EE/CprE/SE 492 BIWEEKLY REPORT 5

March 8th – March 21st

Group number: sdmay18-07

Project title: InfraDrone Android VR Application

Client &/Advisor: InfraDrone, Mitra

Team Members/Role:
Evan Snitkey — Team Project Manager
Blake Agey — Team Scrum Master
David Schmadeke — Team Quality Assurance
Yangxiao Wang — Team Webmaster

NAME	Contributions	Hours this period	HOURS cumulative
Evan Snitkey	Fixed camera distancing dynamically	10	43
Blake Agey	Fixed camera distancing dynamically	7	38
David Schmadeke	Finalized load testing	5	26
Yangxiao Wang	Download all files when downloading obj file, hid all unneeded files, downloading file animation	10	42

o **Period Summary (Short summary about what you did this week)**
   • Because of Spring Break being within the duration of the sprint, we were not able to put as much work in this sprint as we would have liked to. We were able to cross off the following tasks - readjust obj size and camera distance properly, Download mtl + jpg files on obj click, File downloading / rendering animation, and all unneeded files.
o **Past period accomplishments (please describe as what was done, by whom, when or collectively as a group)**

- Evan and Blake managed to get the camera distancing dynamically working, David finalized the load testing component, Yangxiao finished the download all files within directory when clicking on an obj file, hid all unneeded files, and set up a download animation when downloading files.

- **Pending issues (if applicable)**
    - The final issue we are running into in the course of development is a texture rendering issue within the jCPT-ae library we are using. The textures mapped to the mtl files are not being rendered on the obj files. So the obj files only come out in grayscale. We are working with our client to resolve this issue.

- **Plan for upcoming period (please describe as what, who, when)**
    - Evan will be continuing to work with Blake to try to fix the texture rendering issue, Evan will work on head movement as a part of the VR component, Blake will be working on 3d obj viewer touch movement. David will be working on sending out the surveys and testing. Yangxiao will be working on the image preview on directory buttons.

- **Summary of biweekly advisor meeting**

    - As stated before, our advisor had us create a page-long checklist which we are going to talk about tomorrow so that we can assign tasks. Here is the current state of the checklist:

CheckList	Task Description	Weight (1-lowest, 5-highest)	Hours Estimated (initial / new)
~~Merge VR code with current app~~	~~Merge Evan's VR code into master, this involves copying over some methods and refactoring them so they align with the current app structure.~~	~~3~~	~~2 / 9~~
~~Finalize file structure~~	~~We must restructure the way that the directories work in our app to match the new bucket that we were given to from the client.~~	~~5~~	~~8 / 20~~
~~PDF swipe to change page~~	~~This will be used for the PDF viewer but could also be used for the image viewer. This will include tracking a persons finger location from when it touches the screen to when it lifts off of the screen. A decision will then be made whether there was a left or right swipe or neither. With this imformation the page of the PDF that the user is viewing will increment or deincrement.~~	~~2~~	~~3 / 5~~
~~Text file scrolling~~	~~Allow vertical scrolling within text files.~~	~~1~~	~~2 / 2~~
~~Client & Advisor Demo 1 = 2/21 Sam, 2/15 Mitra~~	~~Preparing for demo - involves merging everyone's code to master, preparing a~~	~~3~~	~~20 (5 per member)~~

	powerpoint presentation, and practicing going over live demo (this task involves everyone).		
Render client objs properly	This bug we have been stuck on for many weeks in the past semester, hopefully after merging the VR code with master, it will be easier to debug with actual client data instead of test data. We must be able to use the jpeg files that go with 3D obj files to color the 3D object with textures.	5	12/ 25
Download all mlt and jpg files when clicking on OBJ file in file structure	Download all mlt and jpg files when clicking on OBJ file in file structure	2	3 / 3
Readjust obj size and camera distance properly	All OBJ files are different sizes and have different distances from the camera, this needs to be dynamically set to fit the whole obj in the camera position	3	5 / 5
Fix textures not loading in on 3d obj rendering	After getting the new jPCT api working on rendering objs, the textures are not loading properly	2	3 / 3
Set head movement to move obj in VR	Set head movement to move obj in VR	4	5 / 5
Connect 3D model view to VR view with button	This consists of a VR button at the bottom corner of the 3D obj viewer screen, when pressed, it will transition into a VR view of the current 3D object.	4	3 / 3
Make sure that we can view any type of file (text, other images, etc)	The app should provide viewer for any types of file from our client's AWS storage.	3	5 / 9 (tif?)
Make UI testing survey	Creating basic survey through Microsoft Office (5-10 questions with 1-5 type answers), printing 10 copies.	1	2 / 5
3D viewer touch movement	Allowing a 3D object to be moved with either the tilt of a phone or the swipe of a finger. We must translate and render the object file based on the new positions in the rotation matrix for the object.	3	3 / 5
Finalize navigation side bar	The Navigation side bar will be used to navigate throuout the application, this will involve desigining a user friendly GUI with all of the essiental pages of the application linked on the side bar.	2	4 / 4
Extraneous testing (phone load)	We will be setting aside four hours of time to research and implement ways to test how our app can handle extraneous use and average time to complete certain functions.	4	4 / 6
File type filter - filter within current directory CANCELED DUE TO NEW FILE STRUCTURE	The file type filter willl be used to filter the file types within the users current directory, so that only the information that the user wants to see will be shown. This will involve scanning all of the file names to find the file	4	7 / 10

	~~type and then showing the wanted files while hiding the unwanted files.~~		
Image preview on file structure list	Instead of just displaying the file name as the icon 'button' in the directory structure listing, we will need to also need to display a small preview icon above the file name to make the UI easier to use. If we cannot get the 3D object previews to work in the alloted hours, we will just default to generic 3D object file symbols instead of the previews.	4	7 / 7
~~File downloading animation~~	~~This is a progress bar that will be shown when files are downloading. This will let the user know the progress of the download. To complete this we will need to find and extract the download status of each download through the download manager and use that information to create a progress bar animation.~~	~~2~~	~~4 / 4~~
Client & Advisor Demo 2 = 3/21 Sam, 3/29 Mitra	Preparing for demo - involves merging everyone's code to master, preparing a powerpoint presentation, and practicing going over live demo (this task involves everyone).	3	20 (5 per member)
Security testing (Fully use authorized role)	Security testing, make sure user's information and AWS's information cannot be easily read by any unauthorized access.	3	5 / 5
User experience testing (focus group - 10 users)	Contact 10 different people and have them test our application (after code freeze) and fill out the printed surveys. We will be using this information in our final presentation.	3	4 / 4
Create code coverage tests (eliminate all bugs, navigation bar lag)	We will break up the 20 hours of alloted time for this task into 5 hours per member. Each member will be creating code coverage tests on the lines of code that he wrote. This will eliminate the chance for bugs to occur.	4	20 (5 per member)
Client & Advisor Demo 3 = 4/18 Sam, 4/19 Mitra	Preparing for FINAL demo - involves merging everyone's code to master, preparing a powerpoint presentation, practicing going over live demo, and preparing project for handover to client (this task involves everyone).	4	40 (10 per member)
NOTE: ONLY ACCOUNTS FOR CODING AND PREPARING FOR DEMOS, DOES NOT INCLUDE ANY TIME SPENT ON DOCUMENTATION, BIWEEKLY REPORTS, OR THE FINAL POSTER			TOTAL HOURS: ~194 - 226