SE 492 – sdmay20-48
Hear Together
Biweekly Report 2
1/31 – 2/12

Client and Adviser: Mat Wymore

<u>Team Members</u>
Jessie Rutledge - Communicator/Full Stack Developer
Andrew Peterson - Backend Developer
Paul Licata - Full Stack/QA Developer
Richard Smith - Frontend Developer
Roger Ferguson - Test Engineer

Status for 1/16 - 1/30 (2 weeks):

<u>Weekly Summary</u>

Finished up detection functionality on WifiDirect as well as some state initialization in preparation to send audio data over sockets for use in FFT.

<u>Past two week accomplishments</u>

Jessie Rutledge: Worked on coding and testing of Wifi Direct capabilities together with Roger Ferguson. Added some initialization code for the session in preparation for data transfer over sockets. A new xml document to represent the session itself was made with 4 buttons linked up to the sound logic for (re)play, pause, record, and stop (recording). Currently the app crashes on these functions (incomplete implementation, to be worked on with the FFT team once their class is merged with master). Research for a connect and receive functionality made, an audio stream will be sent by the next biweekly report and funneled into whatever implementation of FFT is available by then.

Andrew Peterson: Researched firebase, particularly authentication, and Firebase's default configurable UI for authentication called FirebaseUI. Completed integration of FirebaseUI into normal program function, and created a Firebase instance with desired setup for authentication. Created buttons to sign in and sign out of account.

Paul Licata: Continued to research and coding of Fourier transform algorithms. Created a button on the home fragment that when pressed, starts the recording of audio through the device's microphone. Then, the frequency is displayed on the screen. So far it seems to adjust quickly

enough so that there is not much lag. Continuing this week to show the entire frequency range of a certain sound.

Richard Smith: Worked with Andrew on research and implementation of firebase, just need to finish a couple more things to allow email sign up, google account signup is successful though.

Roger Ferguson: Debugged detection functionalities on Wifi Direct as the previous implementation would only show other devices detected on the test tablet.. Assisted Jessie Rutledge with other Wifi Direct related tasks. Worked on implementing a refresh function for list fragment, which currently refreshes the data within the fragment but not the view of the fragment itself.. Attended weekly status meetings to report progress to the advisor and discuss next steps with the project.

Plans for the upcoming week

(WiFi Team) Roger Ferguson and Jessie Rutledge: Getting a functional version of the Wifi Direct working, specifically the actual sending of data over a socket for use in the FFT team's things. Initialization of the session states in a more working order. Immediate plans are to rewrite/redo sound logic functionality somewhat in order to better accommodate what appears to be a newer class structure the FFT team is presenting. Jessie will be doing some more session stuff such as fleshing and finishing out the initialization of the data structure upon opening a session in regards to how it will start linking up and establishing reliable data streams between the WiFi logic and the FFT logic, to make up for the loss of a team member and help relieve the FFT team. Roger will be fleshing out the actual connection and sending of data from specifically the WiFi side of things remotely as Jessie works more on the "glue code" and accommodating/relieving Paul of some burden.

Richard Smith and Andrew Peterson: These next two weeks we will work on uploading data to firebase, mostly sound data, and integrate that with the recording of sound. Then, we will begin work on the settings UI, and integrating firebase into the settings, so that we can save user settings on the cloud. If all of this goes well, we will go help out Paul and Jessie on recording and modifying sounds.

Paul Licata: Be able to record and modify sounds.

Name	Individual Contributions	Hours this week	Hours Cumulative
Jessie	Worked on WiFi direct P2P	11	19
Andrew	Worked on firebase authentication	10	15
Paul	Worked on frequency	7	7

	detection from sound input		
Richard	Worked on firebase authentication	5	5
Roger	Worked on WiFi direct	6	18