SE 492 – sdmay20-48
Hear Together
Biweekly Report 5
3/13 – 4/2

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 3/13 - 4/2 (2 weeks):

<u>Weekly Summary</u>

<u>Past two week accomplishments</u>

Jessie Rutledge: Worked on establishing socket connection for joining session. Figured out more updated means of sending data than currently documented on android. Socket configured to send floats saved to a file (FFT converts to float); so FFT is done prior to any communication.

Andrew Peterson: Was able to take sound data from Time Domain -> Frequency Domain -> Time Domain using JTransform library. Created new activity to test transformation. Researched more specific FFT transformation techniques related to transformation of sound.

Paul Licata: Worked with Andrew to figure out FFT. Gave one last attempt to make something from the TarsosDSP library before alternative libraries are considered. Talked to Jessie and Andrew about the whether its best to send data from phone to phone before or after transforms.

Richard Smith: implemented firebase firestore for users to be able to save certain settings to the cloud, includes real time updates, powerful queries, and automatic scaling.

Roger Ferguson: Continued research on Wifi Services as a method to secure connections, cleaned up UI to try and make it more appealing, added fragment to create a session, cleaned up legacy code that was cluttering the project

<u>Plans for the upcoming weeks:</u>

(WiFi Team) Roger Ferguson and Jessie Rutledge: Be able to send data via a socket from one device to another. Hide devices not within an app session via services. Selection of devices that specifically have the application installed by fishing for responses only produced by the application. More precise sending of data by coupling the devices to the session object.

Richard Smith: create more entities and implement more code in java for the firestore based upon new changes to UI and whatever else the team needs along the way.

Andrew Peterson: First Andrew will produce a demo capable of modifying the sound via changing code. Then Andrew will hook up that to a UI so that the user can specify how they want the sound modified in app. If that gets all done, Andrew will switch back to Firebase to get the settings saved on the cloud.

Paul Licata: Since Andrew had some success with a new library, I will be helping him and Jessie be able to send sound data from phone to phone. Also, I will work on now modifying the amplitude of specific frequencies.

Name	Individual Contributions	Hours this Cycle	Hours Cumulative
Jessie	Added an implementation of sending files containing float values over a socket. Looked into means of flushing unwanted wifi devices from the device list.	12	52
Andrew	Cleaned up and refactored parts of the project. Removed code that was no longer being used for capturing sound. Created a demo that did the FFT on the sound data.	12	45
Paul	Experimented with TarsosDSP. Gave it one more good attempt before a different, easier library is substituted in.	12	44
Richard	Setting up firebase firestore implementation within the app to sync user data in "settings' and other parts of	12	45

	the app that have saved differences among users		
Roger	Cleaned up sections of UI, removed legacy code, worked on Wifi Direct capabilities, investigated possibilities to securing connections	12	48