Team: **Sdmay 18-22**

Project Title: Smart Digital Stethoscope – Phase II

Date: 10/10/2021

Members:

Joyce Lai
Omar Alsaedi
Abdalla Alzaabi
Vignati Yalamanchili
Matthew Gasparaitis
Austin Collins
Yilun Huang

What we've accomplished in the past week/what we've been researching

Austin – Researched how to set up a WebRTC server and set up the basic structure of our server. I have also been researching parts and potential routes for transmission of data. I also have been researching the details of the media transfer over the WebRTC server.

Joyce – Been in touch with previous members for the 491-492 technical documents. Gained insight on the issues preventing their successful BT implementation (insufficient data rate from the microcontroller's built-in BT module). Established a channel for each group to share resources and information about what everyone is up to during the week updates/tasks and help with the assignments.

Vignati – Set up a new meeting time with our client, Dr. Khokhar, as well as previous project member, Erik Becker, for hardware delivery and any questions.

-   The new **client meeting time** is on **Fridays at 12:30 PM** in Dr. Khokhar's office.
-   The **meeting with Erik Becker** is scheduled for **Monday, October 11 at 5 PM** in the TLA.

Everyone – Read through the final reports and learned about their project and final product. Gained a better idea of the digital smart stethoscope design and how each component is connected – used this knowledge to help in our design process.

What we're planning to do in the coming week

Omar, Abdalla, and Austin – Work on enabling real-time streaming of audio files upon indication from both parties in addition to streaming of text messages. If time permits, look into establishing multiple channels within the same server.

Also, to decide whether to continue working with the Client-Server using Spring-Boot or shifting to C libraries to establish the connection and send the audio files.

Joyce, Yilun, Matthew, and Vignati – Work on designing and implementing the second-order BPF and connecting the stethoscope, microphone, and BPF. Simultaneously, look into the data rate requirements and contact the previous group for information about their BT issues. After understanding the problem from the previous group, start researching potential microcontrollers with BT functionality or combinations of microcontrollers and BT chips. If time permits, search for ADC chips.

Issues we had in the previous week

Omar, Abdalla, and Austin – Deciding on the method that will be used to create the server for client connectivity. (The method has been decided, and the basic server has been established and demoed to our client, Dr. Khokhar.)

Joyce, Yilun, Matthew, and Vignati – Delay in progress due to limited contact with previous members and delivery of past group's hardware. (We now have the past two major project contributors' contact information for hardware and BT and will receive some hardware components on Monday, October 11.)