

Team: **Sdmay 18-22**

Project Title: Smart Digital Stethoscope – Phase II

Date: 10/31/2021

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

Joyce Lai: Looked over resources for how to decrease the ADC quantization rate outputted by the Raspberry Pi Pico so that it will be more compatible with the BT chip.

Omar Alsaedi:

Abdalla Alzaabi: Worked on a secondary method of sending the audio file to the Server (doctor side) using C-libraries and the IP address of the Server to establish a direct connection and sending of data.

Vignati Yalamanchili: finished looking at the code from last year. I could not do much this week.

Matthew Gasparaitis: Simulated last year's (sdmay2021-03) bandpass filter in the TLA, have yet to try a stand alone power supply, will try this week. Ordered parts through ETG should be arriving this week as well, checked that they still weren't here on Friday the 29th.

Austin Collins: Continued to learn about WebRTC. Professor Meeting was cancelled due to professor availability. I am continuing to work on webRTC.

Yilun Huang: Looked over the past group design start to build the circuit on breadboard.

What we're planning to do in the coming week

Omar, Abdalla, and Austin – Work on enabling real-time streaming of audio files instead of microphone input. Clean up the client-server connection and number of instances. If time permits, make the user login/identification more specific and secure. Look into last year's (sdmay2021-03) web application code to see what modules we can reuse.

Joyce, Matthew, and Vignati – After receiving the Raspberry Pi Pico and HiLetgo HC-05 BT chip which should arrive this week (10/31/2021), we will start working on the initialization of the ADC module and UART and continue to read tutorials with Raspberry Pi Pico and HC-05 BT chip combined usage.

Joyce – Research an appropriate ADC quantization rate that is above but not too much larger than the Nyquist sampling rate of our desired input. Attempt to optimize the accuracy and power consumption.

Yiilun – Start thinking about overall product design, CAD model for our final product.

Issues we had in the previous week

Joyce Lai: n/a

Omar Alsaedi:

Abdalla Alzaabi:

Vignati Yalamanchili: n/a

Matthew Gasparaitis:

Austin Collins: N/A

Yilun Huang: n/a