491 Weekly Status Report S2-6

11/22

Group 15

Project: Cryen

Client: Dr. Randall Geigar

Advisor: Dr. Chen Degang

Team:
- Justin Shaver - Meeting Facilitator
- Thomas Frye - Scribe
- Will Pigg - Lead Hardware
- Chandler Davis - Lead Software
- Daniel Bohlke - Test Engineer
- Caleb Hendrickson - Test Engineer

Weekly Summary

The team has been focused on wrapping up the project. Most of the work has been used to make sure all the components are working together properly. The last final piece will be the completion of the enclosure.

Past Week Accomplishments

- **Justin Shaver**
  - Integrated filters with the client application.
  - I introduced a light interface to at least toggle between filters and display the current filter.
- **Thomas Frye**
  - Solved rotary encoder debouncing issue to acceptable results
  - Worked out some issues with the threads running the GPIO interface in the code base
- **Will Pigg**
  - Partially completed the enclosure
- **Chandler Davis**
  - Implemented the display driver

- ○ Integrated the jack_test branch code with my GUI code
  - ■ Moved the thread implementation in jack_test to use my keyboard driver instead.
- ○ Created a new directory structure and a top-level Makefile for the whole project.
- ○ Updated the README to reflect the changes I've made.
- **Daniel Bohlke**
  - ○ Worked on the Senior Design Poster
- **Caleb Hendrickson**
  - ○ Successfully debugged flanger in test environment
  - ○ Gained a better understanding of how to implement reverb & delay effects without circular buffer from reading Digital Audio Effects research paper
  - ○ Successful testing of high pass function on the Jack client
  - ○ In-progress of debugging low pass & tweaking the fuzz function and checking for correctness

Pending Issues

- **Justin Shaver**
  - ○ For time based delay filters, we need to implement a circular buffer and I am struggling to produce results.
  - ○ Integrating with Chandler's gui could pose difficult.
- **Will Pigg**
  - ○ Need proper tools to complete design
  - ○ Need paint
- **Chandler Davis**
  - ○ There's a strange high-pitched noise that's now being produced. I need to figure out what that is and fix it.
- **Daniel Bohlke**
  - ○ Need to do work on the Final Report

Individual Contributions

Name	Individual Contributions	Hours	Total
Justin Shaver	Added existing filters to client application with basic test UI	10	50
Thomas Frye	Solved rotary encoder debouncing issue Fixed bugs with GPIO interface	10	50
Will Pigg	Enclosure partially constructed	10	48
Chandler Davis	Implemented display driver	11	54.5

| Daniel Bohlke | Assisted with documentation | 8 | 44 |
| Caleb Hendrickson | Fixed bugs with existing filters | 14 | 59 |

Plans for Upcoming Week
- **Justin Shaver**
  - Get the user interface integrated with Chandler's work.
  - Debug and solve the circular buffer implementation
- **Thomas Frye**
  - Work with Will to complete enclosure
- **Will Pigg**
  - Complete enclosure and have it ready for component installation.
- **Chandler Davis**
  - Fix issue with high-pitched noise
  - Integrate drivers with Dan's GUI design
- **Daniel Bohlke**
  - Work on the Final Report and Test the GUI on the LCD Screen and the Pi
- **Caleb Hendrickson**
  - Finish implementation of flanger, low pass, and fuzz on the Jack client
  - Testing of flanger, low pass, and fuzz on the Jack client
  - Implement reverb and delay effects in visual studio test environment
  - Testing of reverb and delay effects in visual studio test environment