

sddec18-21: Multi-Effect Sound Pedal Sequencer for Performing Musicians

Week 5 Report

March 2 - March 10

Team MembersTyler McAnally — *Software Lead / Outreach*Karla Beas — *Facilitator / Hardware Engineer*Charles Rigsby — *Hardware Lead*Calyn Gimse — *Test Engineer / Digital Lead*Derrick Lawrence — *Report Manager / Hardware Engineer*Professor Randall Geiger — *Adviser & Client*Professor Joseph Zambreno — *Course Instructor***Summary of Progress this Report**

A substantial amount of time invested this week went into the design document and project plan. The group had fallen behind in getting the documentation put out, so this week was catch up. Technical progress outside of the documentation included reviewing the Android API to prepare for development next week, getting familiar with the raspberry pi, and researching the Pi's audio I/O system.

Pending Issues

The issues we need to focus on will be processing an audio signal through the Pi and using software representations of sound effects to manipulate the waveform. We will need to implement a circuit to handle the signal from the guitar and use an ADC to get that signal into something the raspberry Pi can use. We will simultaneously begin work on the application interface that will control which effects are to be used.

Plans for Upcoming Reporting Period

The plan for the week after break will be to download WAV files to simulate a digital audio signal. Calyn can use such a file to begin testing the effects we have in C. Tyler is planning to begin work on the development environment for the application. Charles, Karla and Derrick are planning to prepare a circuit diagram to run by our adviser for feedback before ordering parts to start building a test circuit.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Tyler McAnally	Spent several hours researching Android API and preparing the UI layout	4	17
Karla Beas	Several hours invested into writing design document and project plan	4	17
Charles Rigsby	Several hours invested into writing design document and project plan	4	17
Calyn Gimse	Demonstrated Raspberry Pi to familiarize the	5	21

	team with it, researched audio I/O on the Pi, assisted with documentation		
Derrick Lawrence	Several hours invested into writing design document and project plan	4	17