WEEKLY REPORT **Date: 3/11/2013**

Group Name: Dec13-09 Digital Synthesizer

Client/Advisor: Dr. Zambreno/Dr. Neihart

Attendees/Role:

Dustin Amesbury- Leader

Brittany Oswald- Meeting Scribe

Wallace Davis- Webmaster

Darren Hushak - EE Director

John Tuohy - Communication Liaison

Dr. Zambreno - Client

Dr. Neihart - Advisor

Past week accomplishments

- Experimented and tested ability to contribute to the repository (everyone)
- Installed SFML libraries on the pi (John Tuohy)
- Successfully cross-compiled on the pi (Dustin Amesbury)
- Met with Evan Balster who described a brilliant wave table synthesis algorithm (Darren Hushak, Dustin Amesbury, and John Tuohy)
- Diagramed roles of hardware and defined the software architecture (Brittany Oswald)
- Cleaned organ contacts and prepped the organ for setting up one octave to correctly output MIDI data (Darren Hushak)
- Wrote a program to light an LED by button push to understand GPIO

pins on the pi (Wallace Davis)

Plan for coming week

- Update the repository to match the software design (Brittany Oswald and John Tuohy)
- Expand the code to include multiple wave types (John Tuohy)
- Improve the code to include the new wave table synthesis algorithm (John Tuohy and Dustin Amesbury)
- Output correct MIDI from one octave of the organ (Darren Hushak)
- Create a more complicated/useful program using the GPIO pins and get what information is needed from Darren Hushak (Wallace Davis)

Pending issues

- Spring break is next week. How much time are we willing to dedicate to this project over break?
- Brittany is going to a conference in San Francisco, CA, from March 24th-30th.

Individual contributions

- Brittany Oswald utilized new knowledge of the wave table synthesis algorithm to determine better software design, defined the purposes of each piece of hardware, and wrote this report.
- Darren Hushak learned the wave table synthesis algorithm, and prepared the organ for obtaining MIDI input from one octave.

- Dustin Amesbury was able to cross-compile on the pi and distributed instructions to the group on how to set it up for ourselves.
- John Tuohy installed the SFML libraries on the pi, organized meeting with Evan Balster, derived about the wave table synthesis algorithm.
- Wallace Davis experimented with the GPIO pins and successfully lit an LED on a circuit board with a button press and within a loop that alternates the LED between on and off.

Individual hourly contributions

- Brittany Oswald - 7
- Darren Hushak - 10
- Dustin Amesbury - 9
- John Tuohy - 8
- Wallace Davis - 6