

EE/CprE/SE 492 WEEKLY REPORT

Apr 7th– Apr 21st

Group number: Sdmay23/44

Project title: Mr. Ohm

Client &/Advisor:

- Client: Daniel Walker
- Advisor: Nathan Neihart

Team Members/Role:

1. Weekly Summary

- These past two weeks our group made great strides in the PCB and FPGA portion of the project. The PCB was assembled and soldered using the reflow oven in the senior design laboratory. This proved to be slightly difficult using the surface mount parts since they were so small. Using solder paste and the oven made short and easy work of it compared to if we were to use a typical iron. Our FPGA that we were currently using since the start of the project deemed to have many issues when trying to test it with our ADC circuit. Having to come up with the alternative solution of using the boards from the CPRE281 labs is our current solution to get the correct data from it.

2. Past Week Accomplishments

- Raj Singh:
 - Soldered the PCB board together to get ready for testing.
 - Setup FPGA in laboratory to prepare testing.
 - Started final documentation of project
- Jordan McGhee:
 - Began testing of FPGA and ADC circuit.
 - Carrying out tests on new FPGA from CPRE281.
- Tyler Smith:
 - Assisted in soldering the PCB together.
 - Assisted in testing ADC circuit with FPGA.

3. Pending issues

- Raj Singh:
 - Working on documentation and awaiting test results to complete it.
- Jordan McGhee:
 - Getting the LVDS signal to read out the correct signal when under test.
- Tyler Smith:
 - Improving the ADC circuit (amplifier portion) in LTSPIC to achieve more bandwidth and gain. Something the client wanted to achieve and could then be later used if needed down the line of the overall project.

4. Individual Contributions

Name	Individual Contributions	Hours this week	Hours cumulative
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Raj Singh	Facilitating, FPGA	8	107
Jordan McGhee	FPGA	10	133
Tyler Smith	ADC	10	107

5. Plans for the upcoming week

- Raj Singh:
 - Working on documentation for the project. Working with others to hear back from with their data to complete it. Adjusting it accordingly to the client's preferences upon meeting with them next week.
 - Create poster for presentation week.
- Jordan McGhee:
 - Finish up testing of FPGA and ADC circuit.
 - Address any last issues with current FPGA and make note of the changes made.
- Tyler Smith:
 - Finish testing of ADC circuit and assist in FPGA testing.
 - Help with documentation and poster

6. Summary of weekly advisor meeting

No past weekly meeting with our advisor on (4/18/23). Due to cancellation.