

# EE / CprE / SE 492 – sdmay20-10

## Power Scraping Module

### Week 5 Report

3/13/2020 -4/2/2020

Client: Honeywell FM&T

Faculty Advisor: Gary Tuttle

### Team Members/Role:

Jordan Fox — Chief Engineer

Xiangyu Cao — Design Engineer

Andesen Ande — Design Engineer

Ahmed Salem — Test Engineer

Ben Yoko — Test Engineer

Shahzaib Shahid — *Team Leader*

### Weekly Summary

After extraordinary, unforeseen circumstances our final deliverables for our project are being modified. As a result of no longer having the ability to test our circuit we had to reevaluate with our client about what is expected. We will present where we left off on testing and how we planned to overcome some of the issues we were having. We will also present what alternative designs and/or components worth investigating.

## Past Week Accomplishments

### Potential Plan to Overcome Issues

The biggest issue we are currently facing is the inability for our supercapacitor to charge past 1 V. Our supercapacitor is rated 5 V but the measured charging rate drops drastically past this voltage point. The function generator we used to power our circuit was set to 'High Z' mode when it should be 50 Ohms which is the input impedance of the EH4205. High Z mode increases the internal impedance of the function generator producing a current that is not sufficient enough to drive our circuit.

### Poster Layout and Delegated Tasks

Below is our initial idea of what layers our poster will consist of. Our overall layout will include different arrangements and are subject to change. Jordan will be in charge of putting everything together and making it look polished.

1. (Top) Power scraping module
2. Short Description
3. Group Members, Faculty Advisor
4. Problem Statement, Functional/Non-functional requirements-Ben
5. Circuit Diagram
6. Modules, Picture of implemented circuit
7. Testing, Testing results- Cao/Shahzaib
8. (Bottom) Testing Methodology, System Implementation, Conclusion -Andesen/Ahmed

## Individual Contributions

<u>Name</u>	<u>Estimated Hours this week</u>	<u>Estimated Hours Cumulative</u>
Jordan Fox	1.5	18.5
Xiangyu Cao	1	21.5
Andesen Ande	1.5	19
Ahmed Salem	1	17
Ben Yoko	1.5	22
Shahzaib Shahid	1	21.5

## Plans for the upcoming week

1. Get a complete understanding of the booster module -all team members
1. Improve design document-all team members
  - a. Discuss how we were going to determine the charge rate and the total time it takes to charge the capacitor to 3.3 V.
  - b. Update testing information
  - c. Conclusions
  - d. Alternatives worth looking into.
1. Meeting with client - all team members  
Will discuss upcoming presentation and research findings

## Summary of weekly advisor meeting

Did not meet with our advisor because of spring break and the extenuating circumstances. We have shared our project updates and aside from clarifying questions, the remainder of our project will consist of research and talking about what we did. This does not require us to meet with our advisor as frequently to end the semester.