

EE / CprE / SE 491 – sdmay20-10

Power Scraping Module

Week 1 Report

9/08/2019 -9/20/2019

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

This week we researched topics that were necessary to know before designing our project. During our meeting with our faculty advisor we discussed a high level design prior to receiving the design specifications. Lastly, after we received the design specification from our client we began to discuss how our understanding changed. The objective for this week was to get clarification on the scope of the project and begin researching.

Past Week Accomplishments

Switch Mode Power Supply Investigation - Ahmed, Jordan, and Andesen

We learned that A Switched-Mode Power Supply is a circuit that converts power using switching devices at high frequencies, and efficiently work for storage components such as capacitors and inductors. SMSP regulate outputs regardless of variations in input supply voltage. We investigated Switch Mode Power Supply because we are interested in an efficient means of converting low voltage from AC to DC.

Precision Rectifier Investigation- Cao, Shahzaib, and Ben

The precision rectifier is known as super diode. It is useful for high-precision signal processing and design of power supply circuits. In such application, it is an arrangement achieved with one or more operational amplifiers in order to have a circuit behave like a rectifier.

Individual Contributions

<u>Name</u>	<u>Hours this week</u>	<u>Hours Cumulative</u>
Jordan Fox	6.5	6.5
Xiangyu Cao	6.5	6.5
Andesen Ande	6	6
Ahmed Salem	7	7
Ben Yoko	6	6
Shahzaib Shahid	6	6

Plans for the upcoming week

1. Our first objective for the upcoming week is to review the client document. -All team members
 - a. It is important for all team members to complete this task so that they understand the final project and the client's expectations.
2. Research the limitations in terms of design for collecting, converting, and storing low voltage energy. -Andesen and Cao
3. Research the limitations in terms of system components for collecting, converting, and storing low voltage energy. -Jordan and Ahmed
4. Meet with faculty advisor to further discuss high level design- All members
5. Continued research on SMSP implementation and limitations- Ben
6. Develop a published schedule in using MS Project and share with client-Shahzaib
 - a. Schedule will depict tasks and assignments