

**Group Number:** May1725

**Project Title:** Wireless Energy Measurement System

**Advisor:** Nathan Neihart

**Team Members/Role:**

- 1) Joseph Freeland (Co-Lead)
- 2) Milan Patel (Co-Lead)
- 3) Adam Cha (Communications Lead)
- 4) Adam Dau (Webmaster)
- 5) James Tran (Key Concept Holder)
- 6) Wei LinLin (Key Concept Holder)

o **Weekly Summary**

This week we met with our advisor to show the block diagram we came up with this week. We also completed our Project Plan as well.

o **Past week accomplishments (please describe as what was done, by whom, when)**

- **Team: Completed block diagram and project plan.**
- Adam Cha - Completed weekly report. Helped write Design/Project Requirements/Specifications, references, and appendices for project plan.
- Adam Dau - Finished creating website. Wrote introduction and deliverables for project plan.
- Joseph Freeland - Created network block diagram. Wrote Design/Project Requirements/Specifications and helped create timeline for project plan.
- Wei LinLin - Met with hardware team to finalize the block diagram for the whole system. Wrote conclusion for project plan.
- Milan Patel - Met with hardware team to modify components for current sensing. Researched sensitivity specifications. Analyzed current draw patterns. Researched specifications of similar models. Wrote Design/Project Requirements/Specifications and created timeline for project plan.

- James Tran - Met with hardware team to finalize the block diagram for the whole system. Analyzed the functionality of INA168 and INA210 amplifier to see if they meet the current sensing criteria. Helped write Design/Project Requirements/Specifications and challenges for project plan.

o **Pending issues (if applicable)**

- Adam Cha - N/A
- Adam Dau - N/A
- Joseph Freeland - N/A
- Wei LinLin - N/A
- Milan Patel - N/A
- James Tran - N/A

o **Individual contributions**

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<b><u>NAME</u></b>	<b><u>Individual Contributions</u></b>	<b><u>Hours this week</u></b>	<b><u>Hours cumulative</u></b>
Adam Cha	Completed weekly report. Helped write Design/Project Requirements/Specifications, references, and appendices for project plan.	5	15
Adam Dau	Finished creating website. Wrote introduction and deliverables for project plan.	3.5	8
Joseph F.	Created network block diagram. Wrote Design/Project Requirements/Specifications and helped create timeline for project plan.	5	11
Wei LinLin	Met with hardware team to finalize the block diagram for the whole system. Wrote conclusion for project plan.	3	8
Milan Patel	Met with hardware team to modify components for current sensing. Researched sensitivity specifications.	13	20

	Analyzed current draw patterns. Researched specifications of similar models. Wrote Design/Project Requirements/Specifications and created timeline for project plan.		
James Tran	Finalized system block diagram, investigated INA168 and INA210 current sensing amplifier. Met with hardware team to finalize the block diagram for the whole system. Analyzed the functionality of INA168 and INA210 amplifier to see if they meet the current sensing criteria. Helped write Design/Project Requirements/Specifications and challenges for project plan.	4	14

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o **Comments and extended discussion**

None at this time.

o **Plan for coming week (please describe as what, who, when)**

- Adam Cha - Look to see if there are a wifi shields built into the MSP430 with the launch pad. Look to see if the wifi shields can be plugged straight into the launch pad.
- Adam Dau - Collaborate with other members of the software team to begin selecting and working on the software component of our project.
- Joseph Freeland - Look into a Raspberry Pie versus using an Iowa State Server.
- Wei LinLin - Start simulating current circuit and improve for better performance .
- Milan Patel - Look further into Hall-Effect Sensor and make sure it has the sensitivity we need. 100mA, 10mA, etc sensitivity/tolerances.
- James Tran - Order a MSP430 microcontroller with a launch pad and order ACS712 Low-Noise 2100 VRMS Hall-Effect Current Sensor IC.

o **Summary of weekly advisor meeting**

Refer to attached Meeting Minutes.