

EE 492 Weekly Report #4

Date: 02/16/2014

Group Project: Garmin - Energy Harvesting in Fitness Electronics

Website: <http://seniord.ece.iastate.edu/may1417/index.html>

Project Number: May14-17

Client: Adam Rasmussen

Advisor: Dr. Degang Chen

Group Members:

- Tyler Chenhall – Project Leader & Foot-Pod Team Member
- Rebekah Dejmal – Communications & Webmaster & Foot-Pod Team Member
- Catherine Homan – Research & HR Monitor Team Member
- Allison Sapienza - Research & HR Monitor Team Member
- Omer Vejzovic – Research & Foot-Pod Team Member
- Jeramie Vens - Research & HR Monitor Team Member

Accomplishments in the Past Week

- The mechanical board is operating, with an average power output of about 50 μ W.
- The thermo board is operating and provides substantial power output under modest temperature differences, but currently requires a large heat sink in order to continue producing an output
- Content is being added to the Research Document, particularly for the introductory and mechanical harvesting sections

Plan for the Upcoming Week

- The thermal group will continue to investigate the necessary sizing, etc. for a heat sink to maintain good circuit operation
- The mechanical group will continue looking for additional ways to improve power output on the board and also look into a power MUX issue
- More work on the Research Document
- Investigate possible methods of improving the prototype designs

Pending Issues

- A potential issue was identified with power source multiplexing. This is specific to the part currently selected, and we are investigating possible work arounds

Individual Hours

- Tyler – 3.8
- Rebekah – 1.5
- Catherine – 4.5
- Allison – 4.5
- Omer – 1.5
- Jeramie – 5