EE 492 Weekly Report (DEC15-19)

Week 9

Project Title: Efficient Measurement of Soil Microtopography to Aid the Verification of European Space Agency and NASA Satellite Observations of Soil Moisture

Advisors: Brian Hornbuckle, ISU Agronomy and ECpE; Josh Bertram, Collaborator Instructor

Client: Brian Hornbuckle, ISU Agronomy and ECpE

Members (roles): Brant Walsh (Key concept Holder, Team communication leader), Dillon McDowell (Team Webmaster), Yan Yao Chan (Team Leader)

Weekly Summary

The group worked on the Odroid setup, testing on the voltage regulator and improvement on Kinect depth measurement.

Meeting notes:

10/19 Group Meeting

Duration: 3 hours

Members Present: All

Purpose and Goals: To work on the interface between the Kinect and the computing system and to decide on which power source to purchase.

Achievements: The group has also received the Odroid embedded board. Finally, the power source and components required for the new voltage regulator have been reviewed and has been sent to advisor for order.

10/22 Group Meeting with Advisor and Collaborator Instructor

Duration: 40 minutes

Members Present: Dillon McDowell, Yan Yao Chan

Purpose and Goals: To present the group's findings on Kinect depth measurement and current design progress.

Achievements: The group is to continue on course to complete all the tasks given.

10/25 Group Meeting

Duration: 2 hours 30 minutes

Members Present: Brant Walsh, Yan Yao Chan

Purpose and Goals: To test the voltage regulator and to set up the Kinect driver on the Odroid.

Achievements: The voltage regulator, while successfully tested, does not work as intended as the result did not match the actual specifications. The Kinect driver has not been set up yet on the Odroid.

Pending issues

The required hardware is still being ordered and delivered. While the main component for the voltage switcher has been delivered, the other components have not been delivered yet. The Kinect driver has not been successfully set up as well.

Plans for next week

To continue working on the Kinect driver setup on the Odroid and research more into the potential voltage switcher.

Individual Contributions for this week

Brant Walsh (7 hours) – Created the bill of materials for the hardware required. Worked on testing the voltage regulator and setting up the Odroid. Worked on the Kinect's interface with the computing system.

Dillon McDowell (4 hours 55 minutes) – Attended the meeting with the advisor and the collaborator instructor. Worked on the Kinect's interface with the computing system.

Yan Yao Chan (6 hours 40 minutes) – Attended the meeting with the advisor and the collaborator instructor. Worked on testing the voltage regulator. Completed the weekly report.

Total contributions for the project

Brant Walsh (19 hours)

Dillon McDowell (21 hours 15 minutes)

Yan Yao Chan (23 hours 15 minutes)