

Group number: 19

Project title: Portable Nutrient Data Collection System - Phase II

Client &/Advisor: Dr. Qiao & Dr. Qeu

Team Members/Role:

Ben Theisen - Group Leader

Michael Rupert - Webmaster

Zakk Belloma - Key Concept Holder

Ben Engebrecht - Communication Leader

Logan Boas - Communication Leader #2

Ryan Young - Key Concept Holder #2

o Weekly Summary (Short summary about what you did this week)

- ◆ We met with our advisors, setting up a general plan for the rest of the semester. We've scheduled a demo of the existing project, as well as discussing possible options for different microcontrollers.

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

- Mostly still group tasks, meeting with advisors and planning session. Ben communicated with our advisors to set up meeting times.

o Pending issues (if applicable)

- Getting our hands on the spectrometer for command testing
- Ordering the microcontrollers that we will use for testing
- Read through USB serial commands

o Individual contributions

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Michael Rupert	More research of microcontrollers, pricing the ordering of microcontrollers.	3	6
Ben Theisen	Reviewed Literature, Communicated with advisor.	2	9
Zakk Belloma	Reviewed datasheet, and researched how to use usb commands	2	8

Ben Engebrecht	Reviewed Datasheet, began planning hardware design	2	8
Logan Boas	Reviewed literature and diagrams of voltage booster	2	9
Ryan Young	Reviewed Datasheet for Spectrometer-tried/trying to find how pixel data is used.	2	10

o Comments and extended discussion

Discussion about learning USB commands, basic functionality of our device and the drawing up of a concept diagram.

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

- Meet with advisor on Thursday -All
- Receive demo of the existing product
- Experiment with USB commands of spectrometer to receive data

o Summary of weekly advisor meeting (if applicable/optional)

Discussed options for system components with Dr. Qiao. Going to bring in some options that students in the group have (raspberry Pi and Arduino) to show advisors the form factor/functionality of these options. Discussed functional and nonfunctional requirements to be considered in the system. Also discussed redesigning the voltage booster of the system.