Meeting Minutes: Friday, March 18, 2016

Team: grEEn

Team Leader: David

Note Taker: Bridget

Present: Kara, Dr. Schafer

ESP:

-goal: choose 4 ch AID (DJ is looking into this)

Power System:

-3.3 V for all sensors, should be fine

-3.7 rechargeable lithium batteries vs. 3 AAA batteries that would go up to 4.5 V

-device won’t spend most time sleeping, should have a way to recharge, plugging into a computer (need way to plug in a USB on board)

-plug USB into rechargeable battery pack

-SparkFun: lithium battery, has DC converter, just need to plug it in and charge battery, need light indicating battery is being charged (check schematic online)

-7,000-8,000 miliwatt hours, etc.

-what happens when sleeping, are sensors still drawing current?

->when sleep, all voltage sensors are turned off

->when wake up, turn on sensors, send data and go back to

sleep

->not sure what pins do when device is asleep

 ->when sleeping, essentially drawing little power, but not much

 ->sensors unpowered, should maximize battery life

Other thing to think about: what ESP device to use??

-needs to be programmable, part of the DEV thing that controls input/output data

-once programmed once, device can have over the air programming

Mobile Application:

-EEProm library, offset memory in nonvolatile memory, when you wake up check if SSID is in this memory, user can access and set WIFI username/ password

-can check automatically if SSID is in the memory, or can have app itself have a reset button to reset username/password in the nonvolatile memory

-most likely use a reset button to achieve this, have a wake-up button since device may be asleep (if you don’t want to wait for 3 hours), can put reset low, need something else for it to read

-have a state for resetting, when it resets, makes sure signal is connected, if low, want to clear EEProm and come up with an access point

Next Step: Designing Board, want to be started by next week

-how to get light from light sensor, are we worried about when sitting in the sun if it will give false readings to temperature sensor

-connect to moisture sensor outside of device, keep temp/ light sensor in device on board

-hook onto side of plant pot

-on board, start with basic ESP device, need powering and programming and then figure out IC bus/ button for resetting

-pin 16 sits high and goes low

-wake up by pulling reset signal low

-figure out board so can work on software right away

-send out an order form for ADS1115