<u>Google Drive</u> <u>DesignReview2_doc</u> Meeting Leader: Jeff M. Meeting Minutes: Jeffrey Y.

Demos

Microphone not here yet

- 1. Sensors
 - a. All systems working
 - b. Light sensors placed at different locations
- 2. Optical Communication
 - a. Successfully demoed 115.2 kbps communication
 - b. Figure out degree of buffer for installation
- 3. Signal Processing and Data Integration
 - a. GUI interface able to display floats and battery life and record data at different intervals
 - b. Ethernet
 - i. Need OIT for link-to-link (current set up for ND Wifi network).
 - 1. Can try to use IP addresses
 - ii. Need to give ESP32 a IP address get static IP address from OIT
 - 1. Private address space 168., 10. (not publicly addressable)
 - iii. Computers have dynamic IP addresses
 - iv. TCP/IP
 - v. Look into ethernet on device directly exactly what hardware is needed (SPI may not be needed?)
- 4. Power
 - a. 5 hours is too short
 - b. Identify slow changing things, try to make interrupt driven
 - i. E.g. humidity might not change significantly within 10 minutes
 - c. DC-DC converter very specific layout for temperature and EMI
 - d. EFN-10 make sure right part footprint is downloaded (matches spec sheet)
 - e. See specific inductors from datasheet (also make sure footprint matches)

Programming - add 6 pin serial programming header since 5V from USB is annoying

Frequency - what sort of events do I need to know right now, other things can be slow monitoring

- Pay attention to quiescent current