Data Turbine Android Sensor Pod Taiwan Forest Research Institute (TFRI)

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Project Proposal

▷ This project will assist researchers at the Taiwan Forest Research Institute (TFRI) in developing and testing an environmental monitoring system based on the Android platform and the Data Turbine software.

▷ As for my part, I will focus on integrating a weather station at the TFRI research station with the DataTurbine Android Sensor Pod developed by my mentor's research group at UCSD.
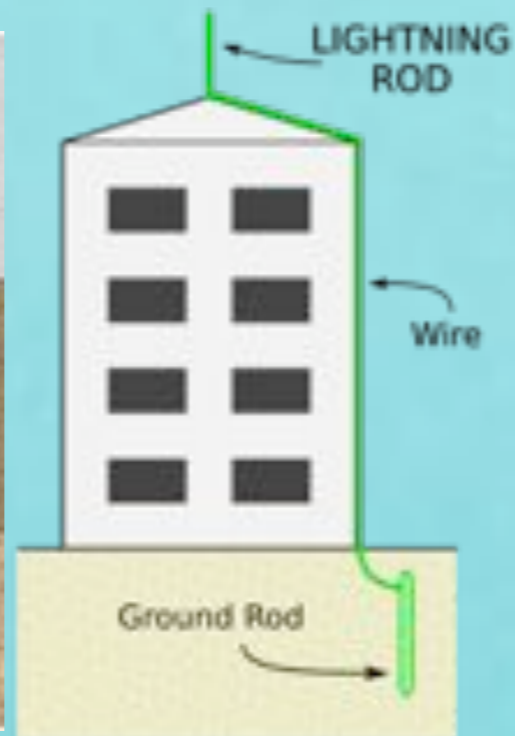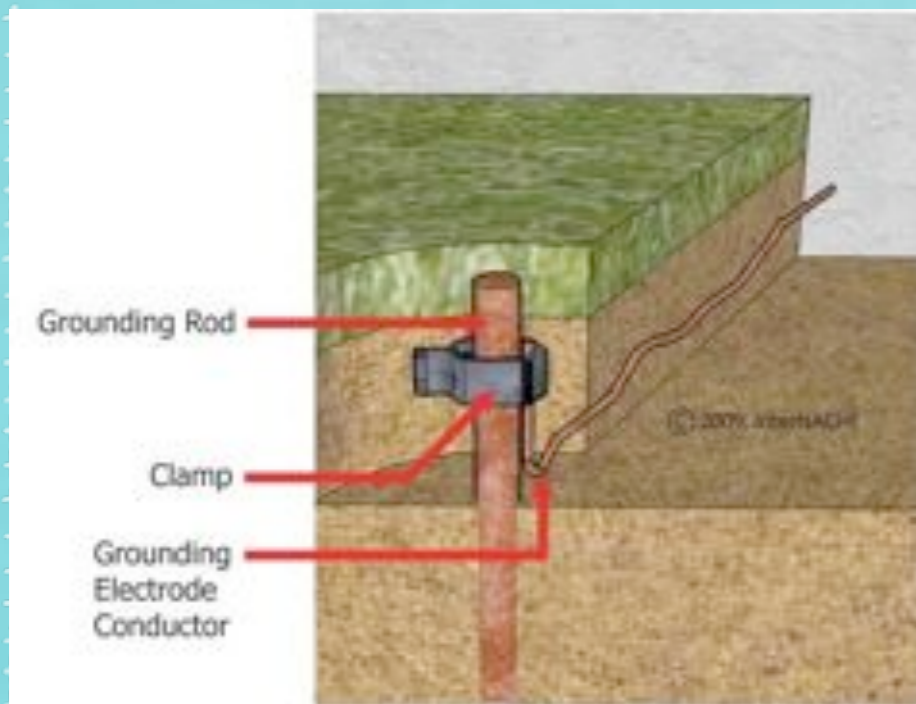
Progress

▷ Test the system with a sampling rate of 1 [s] for Vaisala and 5 [ms] for Voltage,temperature and humidity sensors

▷ Added the WSP150 Surge protection to the system for Vaisala lightning protection

▷ Learned about the difference ways of lightning protection
  - Air Terminal
  -Ground Terminal
  -Their difference with Surge Protection

▷ Attended a work shop discussing:
  -MetaCat
  -Morpho

Goals for next week

- Make the necessary changes to the box (i.e. make hole drills for air circulation and prevent over hearing,etc)

- Decide on using a separate case for the phone or keep it with next to the ioio board

- Work on tower/solar panels lightning protection solutions (i.e. Proper grounding, Surge protection,etc)

- Skype meeting with mentors at UCSD.

Problems/ Ideal Solutions

▷ In case of using an IP camera, the Galaxy Nexus has to have its own water proof case. The USB connected to the ioio has to get extended and the box should be placed in a position to take pictures. Due to lack of equipment and time, in case of using IP camera, the best way is to order a custom design box.

▷ As for now, we have two boards. One that I build at UCSD during spring quarter and one that we have built here. For some reason our new board is not powered up properly. I have tested the board with DVM and the connections seem to be fine. I will however,
- Test the new ioio
-Test the MW voltage regulator
to fix this issue.

Hong Kong!

No alcohol, no meat!

@ The Peak

Po Lin Monastery

Hong Kong Fashion

Wisdom Path, Tian Tan Buddha

Lantau Island

Chopsticks Gallery

Engineered beautifully!

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Mentors (TFRI)

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