



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

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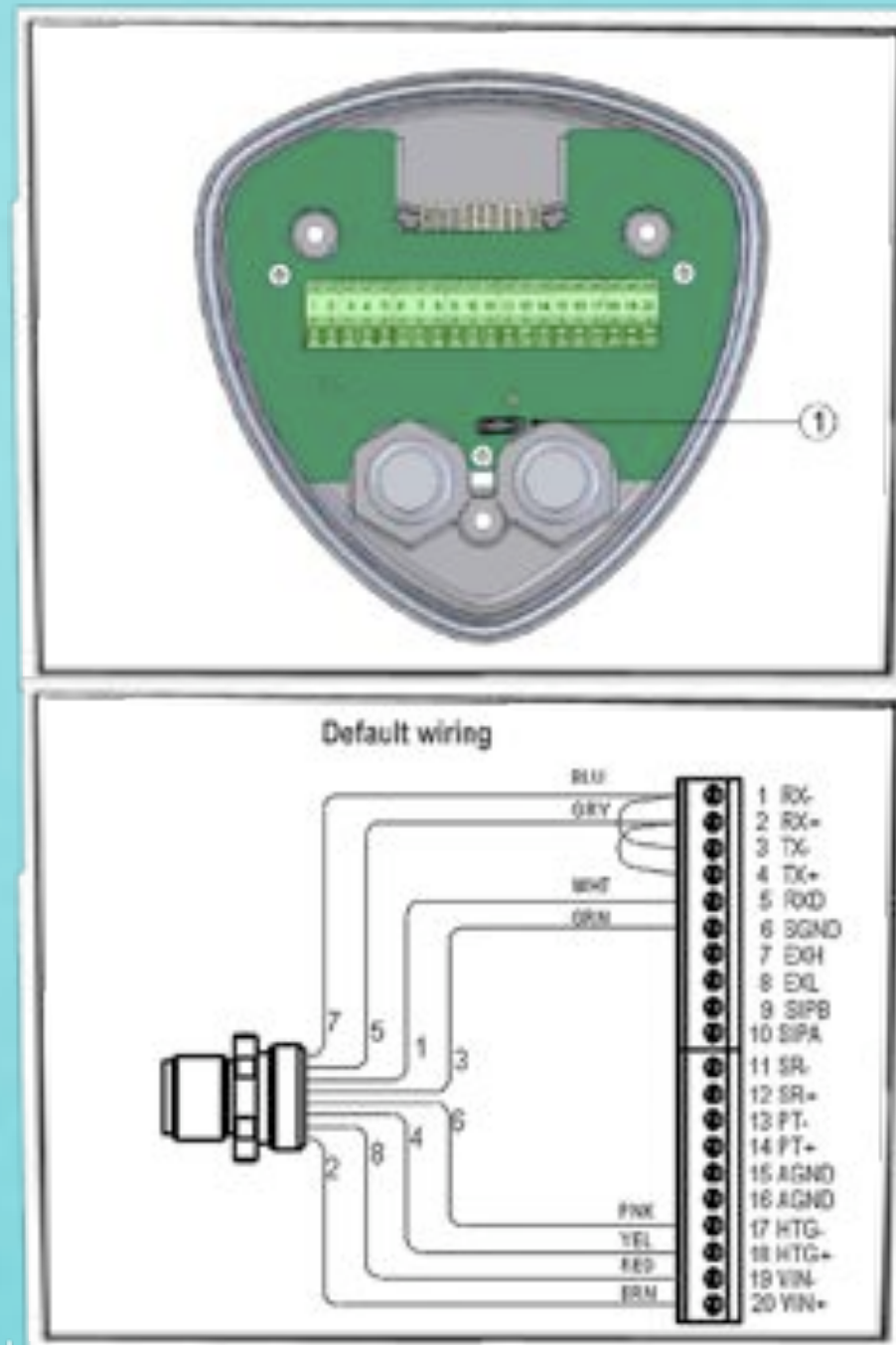
August 3, 2012

Project Proposal

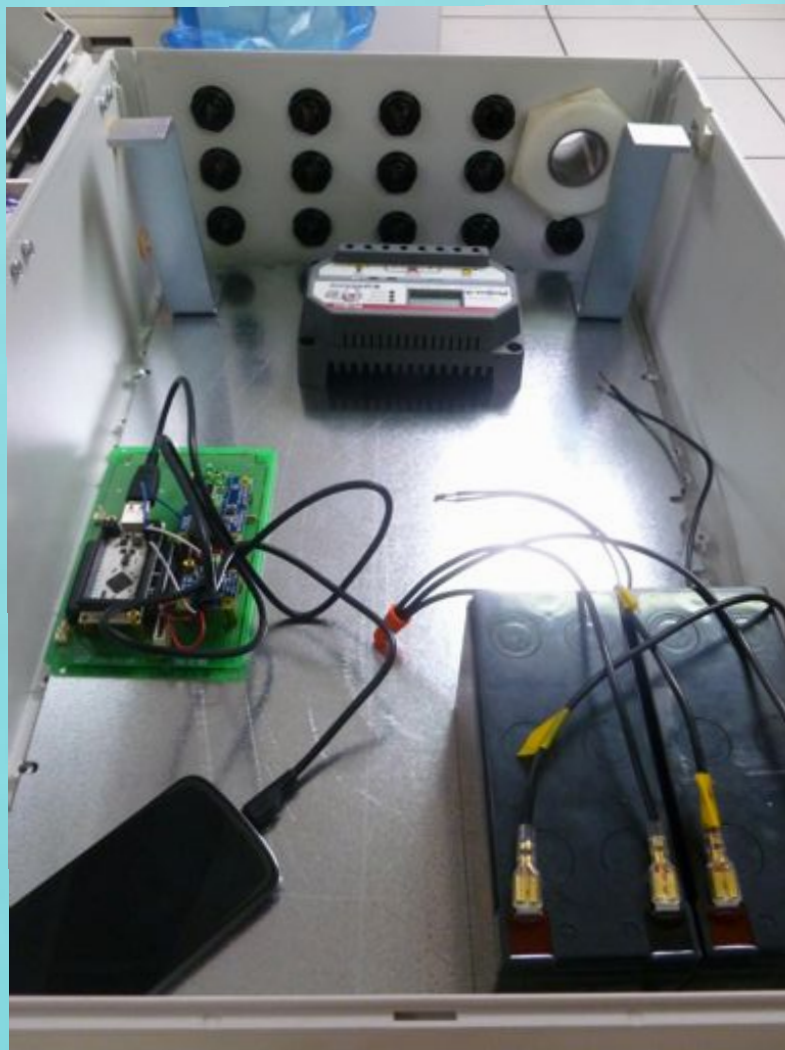
- ▶ This project will assist researchers at the Taiwan Forest Research Institute (TFRI) in developing and testing an environmental monitoring system based on the Android platform and the Data Turbine software.
- ▶ As for my part, I will focus on integrating a weather station at the TFRI research station with the DataTurbine Android Sensor Pod developed by my mentor's research group at UCSD.

Progress

- ▶ Skype meeting with the UCSD mentors, discussing future plans
- ▶ Learned how to use the specific applications on the phone to test the Temperature, Humidity, Voltage sensors and Vaisala weather station
- ▶ Installed the internal wiring of the new Vaisala
- ▶ Found out that the easy way to see if the Vaisala is connected properly: It will make some noise every few seconds and the DB 9 connector will blink in green lights



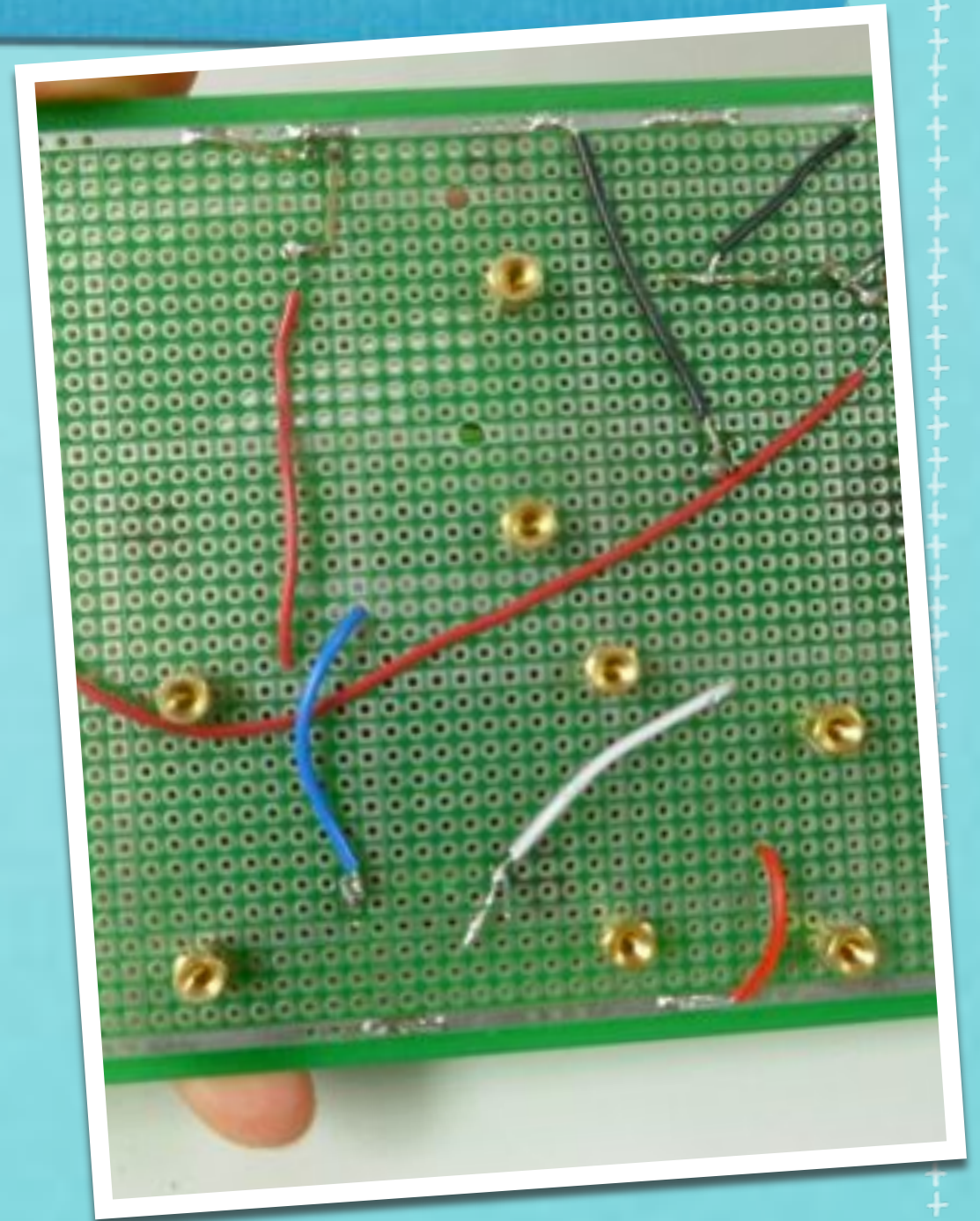
Goals for next week



- ▶ Leaving For Nantou for testing the system at the field station:
 - Place two Solar Panels that are in parallel on the ground
 - Place a water proof box on top of the tower that contains: Galaxy Nexus , the board and two car batteries connected in series
 - Install the surge protection for Vaisala and check the ground terminals

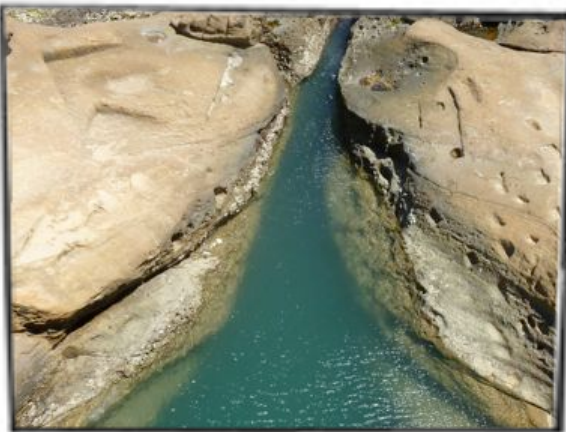
Problems/Ideal Solutions

- ▶ Figured out that Voltage regulator is not delivering 5 V to the ioio and only carries 1.67V and as a result the board was not functioning properly
- ▶ Had to make some adjustments to the board due to short circuits that were created probably because of combination of old/new soldering on some connections
- ▶ After finishing the internal wiring of the Vaisala, the device did not work due to different sampling rate set ups, but the issue was then resolved



Yeliu Geopark and Taroko Gorge

Yeliu Geopark



Queen's Head



Candle Rocks



Mushroom Rocks



Taroko Gorge



Local Lunch



Eternal Spring Shrine



Acknowledgments

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▶ Gabriele Wienhausen

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▶ *Mentors (TFRI)*

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▶ Yu- Huang Wanf

▶ *Mentors (UCSD)*

▶ Tony Fountain

▶ Peter Shin

▶ Gesuri Ramirez

▶ *Collaboration with:*

▶ Ariana Tsai

