



Data Turbine Android Sensor Pod (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

▶ Went to Nantou to Test the system

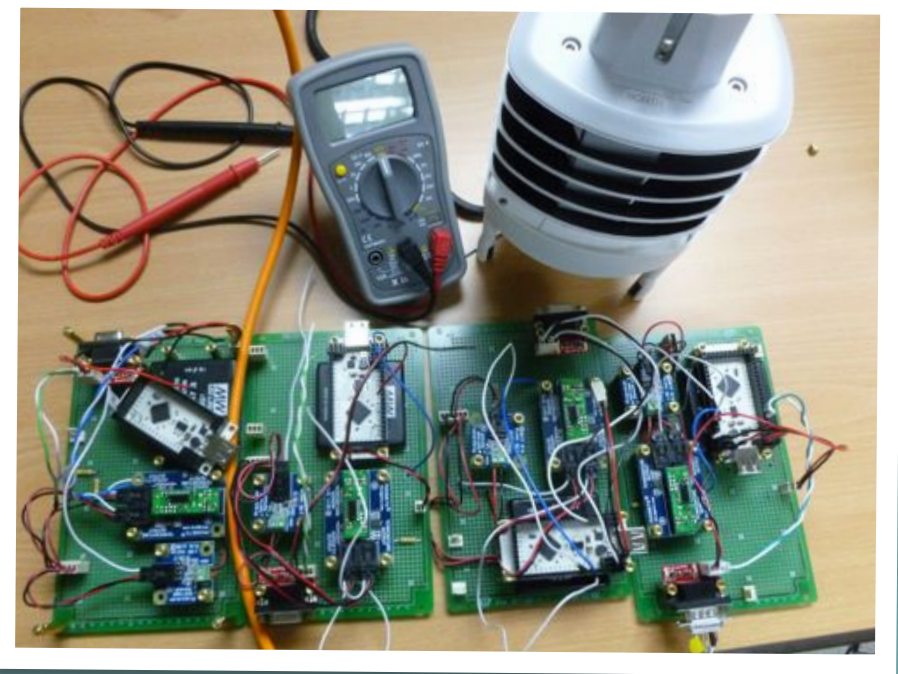
▶ Held a workshop discussing the hardware part of the project

▶ Topics discussed included:

- Components on the board: What they are, how they function and how their connection works
- The importance of using a Solar Charger
- Vaisala Weather Station

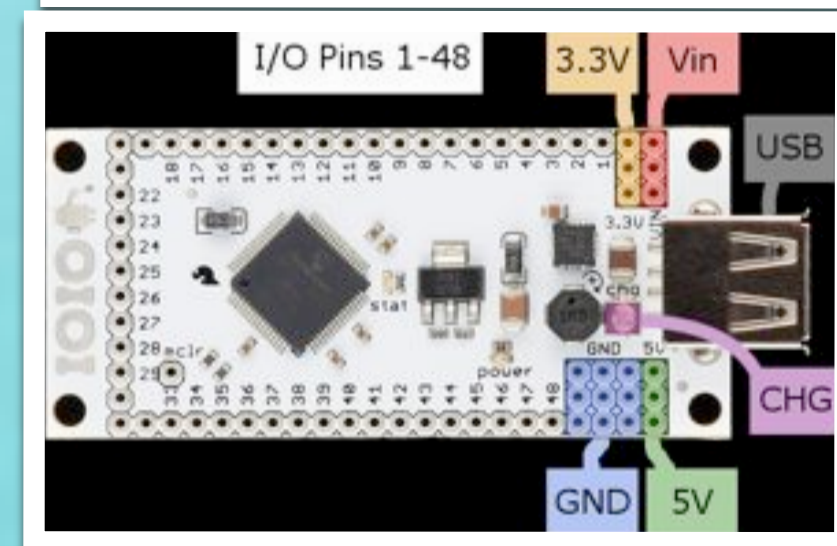
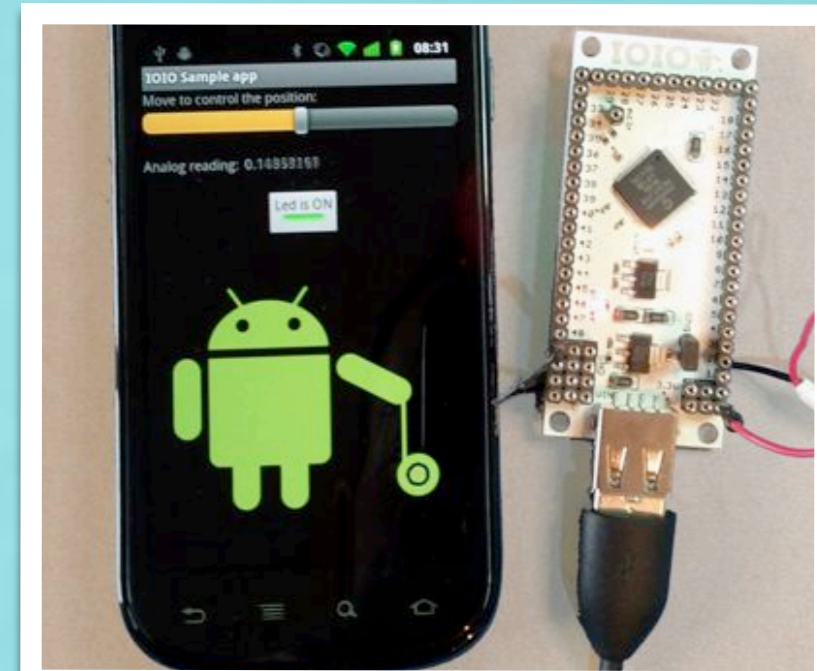
▶ As a result, 4 more boards were build successfully

▶ Attended a workshop for the software part of the project, presented by Ariana



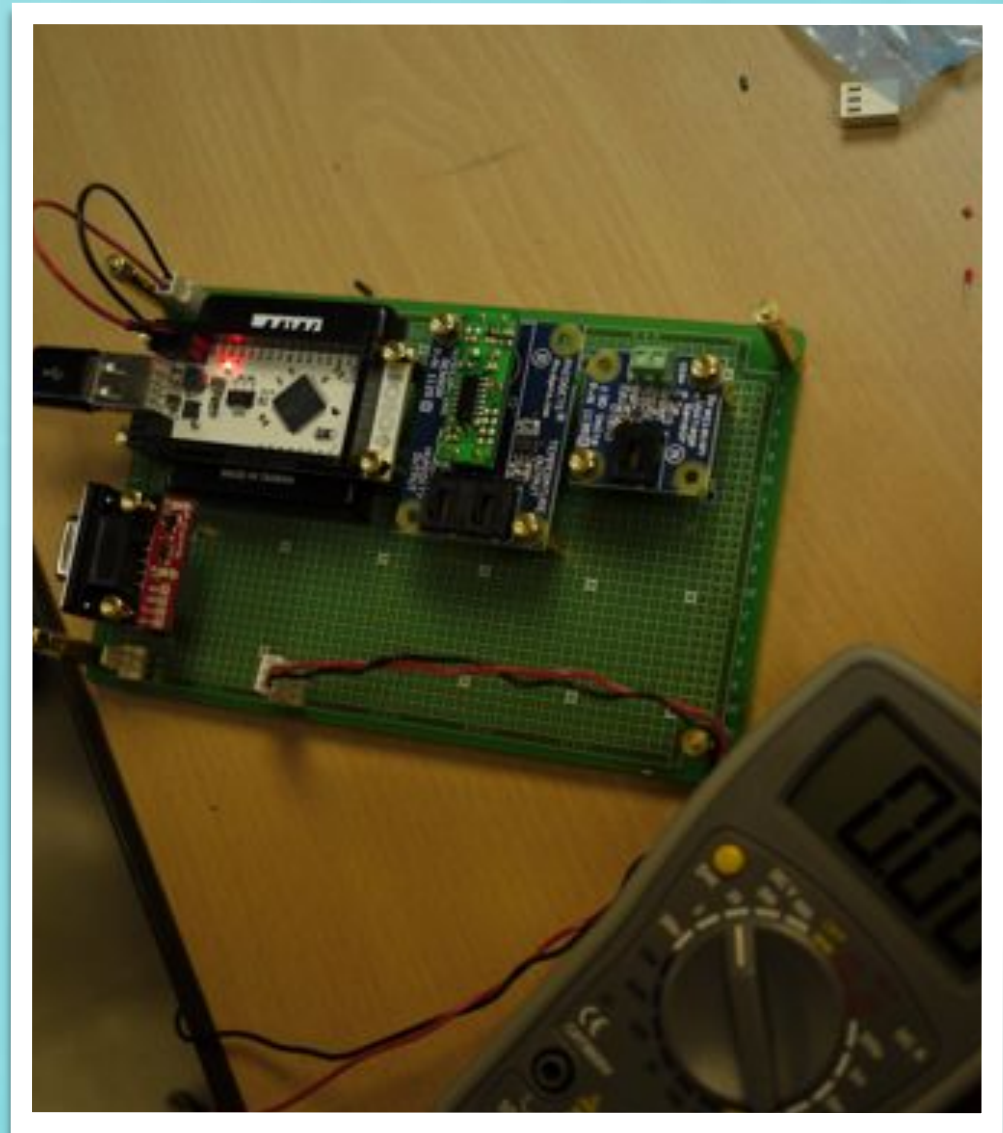
Problems

- ▶ The Phone's battery did not last as it was expected. The ioio board had to communicate with the phone while charging it. There was not a problem for providing enough power for the ioio itself, since the power light did not get turn off.
- ▶ After discussing the matter with the mentors at UCSD, possible factors that could have caused the problem were:
 - The potentiometer (marked CHG on the picture) did not provide enough current to charge the phone
 - Having the phone's screen on and/or busy a processor
- ▶ Possible Solutions:
 - Keeping the potentiometer closed at all times to receive max current from the ioio
 - Set up the brightness to lowest and the time to turn off the screen to 15 seconds.
- ▶ Our Case:
 - We could not close the potentiometer on our ioio. Although the phone was able to communicate with the ioio board, it did not receive enough current from it and the battery drained.



Goals for next week

- ▶ Prepare the final presentation for Mentors at TFRI.
- ▶ As of now, we have set up a system in the lab, using only a 13.25V car battery for power. We are interested to see how long will the phone battery last, with the WiFi on.
- ▶ Return to the U.S. on August 21st.



Taipei Zoo and Window on China



I will miss my team!



Hot pot dinner with TFR team
Left to right: Kevin, Jin, Sophia, Poki, Sara, Tsai

Acknowledgements

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▶ Gabriele Wienhausen

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▶ Gesuri Ramirez

▶ *Collaboration with:*

▶ Ariana Tsai

