

Sensor Pod

Taiwan Forestry Research Institute (TFRI)

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August 3, 2012 (Week 6)

Proposed Research

- To set up an Android-based system that will monitor the aspects of a rainforest, such as humidity, temperature, and wind direction.
- Use Samsung Galaxy Nexus to capture audio, pictures, and videos.
- Use DataTurbine to send any captured media from the rainforest to different stations for more analysis.
- Use an IOIO board to maintain and be the basis of the sensors.

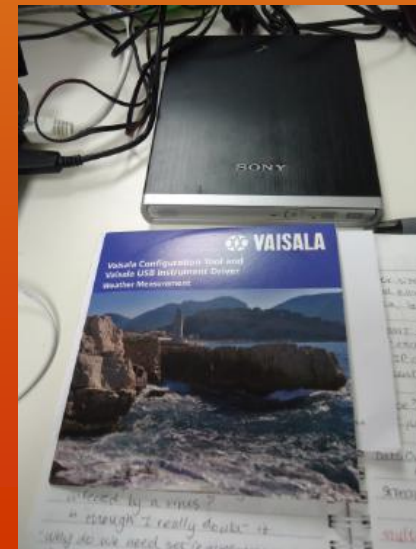
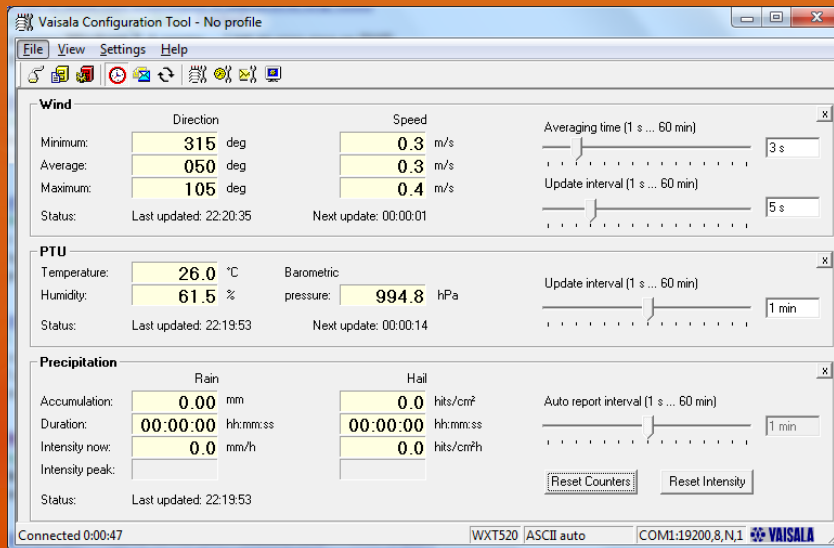


Progress (for Week 6)

- Had a Skype meeting with UCSD on Wednesday and learned that RDV is not the best way to view the audio files.
 - Wrote some code to upload the data onto the TFRI server for direct downloading.
 - The UCSD group also mentioned that they were working on a visualization tool in Google Chrome, so I looked into some existing ones. I took some Cognitive Science classes that introduced data visualization, so it was pretty interesting.
- Set up a new phone and changed the settings to save battery power.
 - It's strange how the stock apps on the Taiwanese bought phone are different from the ones on the US phone. For example, the TW one has a built in Sound Recorder app that I couldn't find on the US one.
- Installed the Vaisala Configuration Tool and configured the new Vaisala.
- Survived the first two typhoons ever in my life.

Plans (for Week 7)

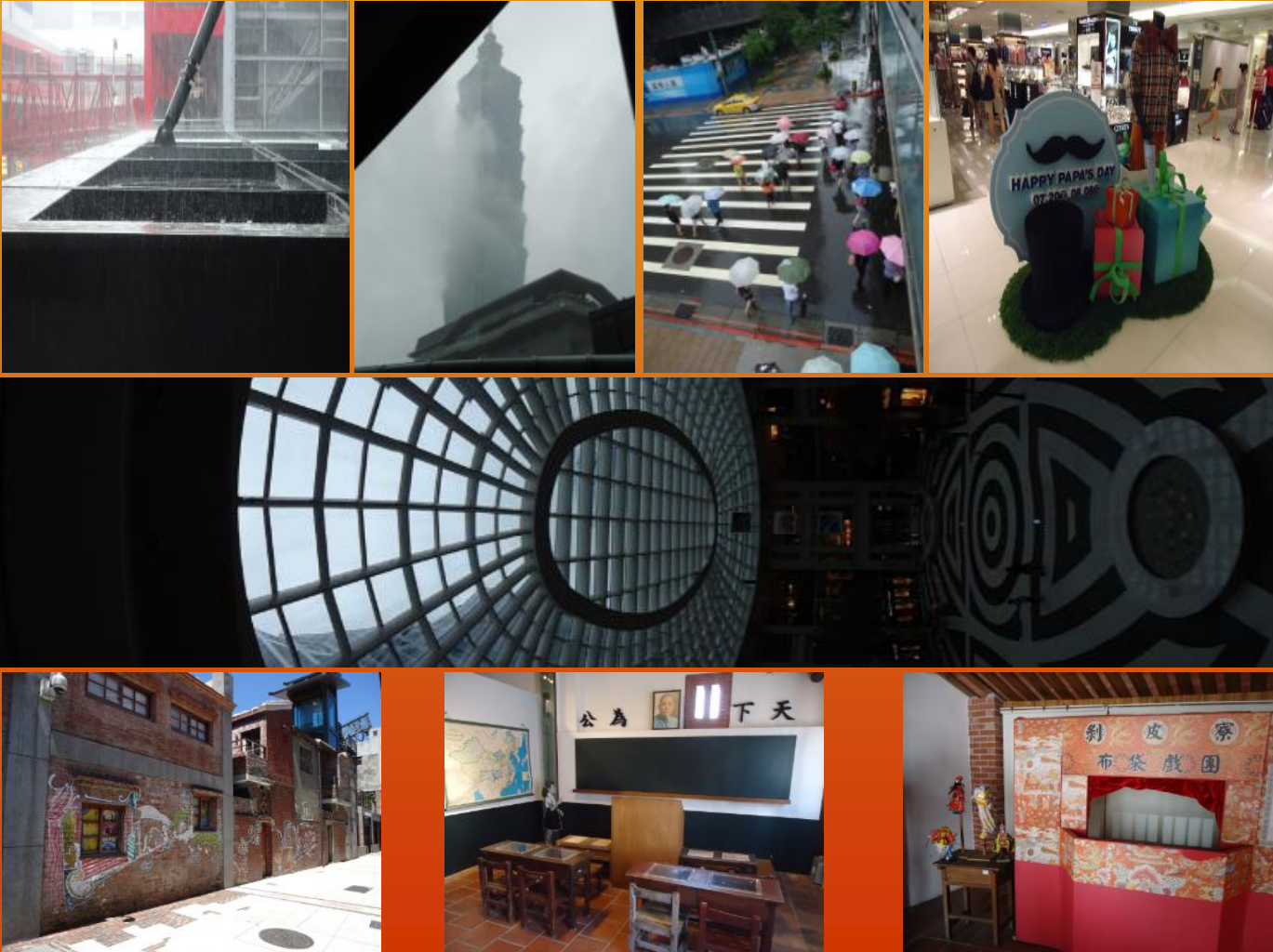
- Go to Lienhuachih on 8/6 and officially set up the system. I have to make sure that we can mirror data and send information correctly. (If we can't finish setting the system up in time, we may stay there until 8/13, rather than 8/8.)
- Begin testing code written for the IP cameras.



Problems and Solutions

- Final update for the RDV audio problem: Still tried to edit the class files for RDV to no avail.
 - The UCSD group recommends that we don't use RDV to view the audio data, but instead try to upload the data directly to the server for downloading. In the future, a visualization system on Google Chrome may be used instead.
- The new Vaisala was not being detected, then would not cooperate with the phone.
 - Apparently the program searches for Vaisala at the default COM1, but the Vaisala was using COM8. I had to change this... and then my COM1 was apparently being used by something else, so I had to free COM1 before I could use the program.
 - Turns out that the baud was not matching up with the code. Configuring the weather station and changing the baud from 19200 to 9600 fixed the problem.

Culture



Pictures taken at Mitsukoshi and Bellavita shopping centers near Taipei 101 (on a typhoon day) and Bo Pi Lao. The mustache sign reminds people of special promotions for Taiwan's Father's Day (8/8 for ba ba, which is father in Chinese).

Culture



Acknowledgements

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