



# Sensor Pod

Taiwan Forestry Research Institute (TFRI)

Ariana Tsai

July 27, 2012 (Week 5)

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- 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.

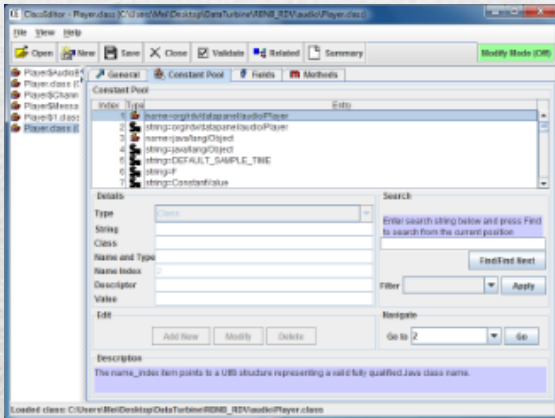


# Proposed Research

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- No more visa problems, hurrah!
- Wrote some preliminary code for collecting data from IP cameras. The logic flow should be okay, but I'm just not familiar with how the cameras will give the phone the image data... hopefully I will have time to check the cameras out when we go to LHC on 8/6.



- Continued messing around with CEditor, but RDV still doesn't want to play the audio samples at the correct rate. I've been only changing the default sample rate, but I need to change something else in order for RDV to play properly.
- Attended a Morpho and Metacat meeting with Sara. Was able to install Morpho but not use it because we didn't have accounts set up.
- Readjusted the sampling rate of the Vaisala Weatherstation.

# Progress (for Week 5)

- Continue to make my way around RDV. If it still doesn't work after a bit of tweaking, then we might have to permanently save audio files on the SD card for periodic checking or continue using the FTP solution that Allison implemented.
- Have another Skype meeting with Dr. Fountain and the others.
- More testing with Sara! This week's testing was successful, and we collected about an hour's worth of data from the Vaisala Weatherstation.

## **Plans (for Week 6)**

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- The overall system does function properly! The phone is connecting successfully with the board and will receive and send data.
- The battery no longer drains more than it's being charged.

However...

- The system is unable to and shouldn't use the Sony recorder as an amplifier for several reasons. We've decided to stick to the original plan, just a plain headset.
- RDV refuses to play the audio with CD quality, although it is being recorded at that quality. For now, a temporary solution is to save the audio samples to the SD card and play it from there directly (this is inefficient), but as mentioned before, we may have to use the FTP solution from previous years.

# Problems and Solutions

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# Culture

Pictures taken in Hong Kong (Tai O, IFC), Taoyuan Airport, Taiwan Underground Mall, and Longtan.



# Culture

Pictures taken in Hong Kong (IFC) and Longtan.

## Mentors

- Tony Fountain (CALIT2)
- Chau Chin Lin (TFRI)
- Sheng-Shan Lu (TFRI)
- Yu-Huang Wang (TFRI)

## PRIME

- Peter Arzberger
- Teri Simas
- Tricia Taylor
- Gabriele Wienhausen

## Peers

- Sara Taghizadeh



# Acknowledgements

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