



SENSOR POD

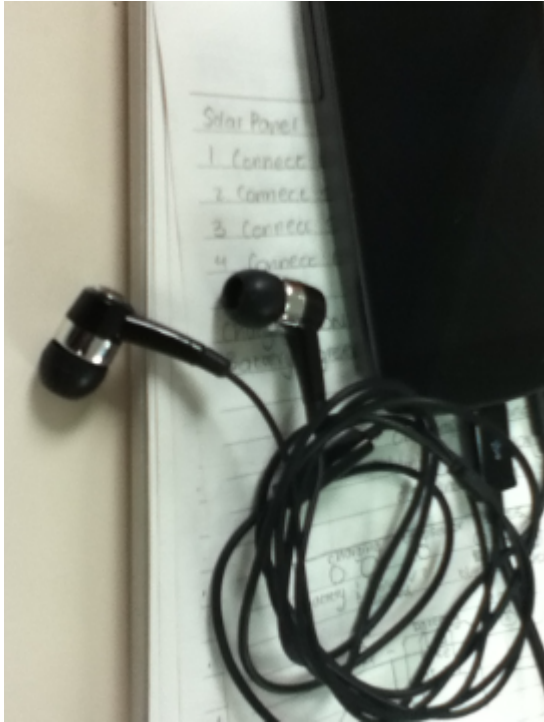
TAIWAN FORESTRY RESEARCH
ARIANA TSAI
JULY 6, 2012 (WEEK 2)

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 2)...



- Fixed the phone's battery problem by changing the phone settings. The battery now stays at 100% charge even after 6 hours when before, it would lose 5% within an hour.
 - Adjusted the phone brightness, sleep timer to the minimum and uninstalled unneeded apps. Tried it out with three different time intervals (minimum, medium, large).
- Headset was “not working” when I tested them.
 - Turns out that they do work! Stock camera app on the phone captures from internal mic by default (I have to figure out if this will affect the software video capture), and laptops can't use the headset because they have two jacks for both functions of a headset, but the phone only has one for both.



...PROGRESS (FOR WEEK 2)

- Looked into solar panel information/installation.
 - They may have to be cleaned fairly often (every one to two weeks) because they will be installed in the rainforest. Debris, such as bird droppings or dust, on the panel will decrease energy received from 10% - 90%.
- Added two more pages (Log, Overview) to the DataTurbine wiki, and updated one page (Challenges).
- Found out how to hook the Sony recorder into the sensor pod system as an external mic.
 - The headphone output of the recorder will be connected to the microphone input of the phone, using phone jack to RCA connectors.



PLANS (FOR WEEK 3)

- Continue looking into a suitable box for the sensor pod system that protects against lightning and other conditions (like earthquakes – apparently 16 occurred in Nantou last year in the 5~7 magnitude – or high humidity that will cause the phone battery to go bad).
- Understand more about phantom power units, in case we need one for the sound recorder.
- Test the system with the actual car batteries - we're still missing one. Maybe the battery will start draining more than it's charging again.
- Try to set up the solar panels with Sara. We've both read the manuals and watched some videos, so it should go fairly smoothly.
- See if there's a way to control the phone remotely (apps like Lazydroid, Airdroid), so that there's no need to walk to the towers to change the settings.



CULTURE



(Top) Tamsui, Ding Tai Fung at Taipei 101, Taipei 101, door guardians, game stall, (Bottom) llamas at Shida night market, group picture, MRT



CULTURE



(Top) Tamsui, (Middle) Tamsui, (Bottom) Yangmingshan – Datun Park

