EE 491 WEEKLY REPORT 5   *Date: 02-28-17*

Group number: 28

Project title: IoT Monitor

Client &/Advisor: Geiger

Team Members &/Role:
Ian Harris: Team Leader - Web Role
Tim Lindquist: Key Idea - Leafnode Role
Gregory Steenhagen: Webmaster -Web Role
Steven Warren: Communication -Leafnode Role
Terver Ubwa - 3G Node
Khoi Cao - 3G Node

o **Weekly Summary**

This week our group contacted Kolita Forbes to discuss a meeting time to begin testing the hydroscopic sensor. Parts came in for the Leafnode group and were picked up. On the web side, we were able to secure an Iowa State domain and a virtual space to host our app. We have begun work on the front-end with the inclusion of Angular.js. Also, on the home node group, the 3G module and other ordered parts came in and configuration of parts is in progress.

o **Past week accomplishments**

- **Ian Harris:** Began work on the front-end, included Angular.js into our project. Spent some time organizing and adding category tags to our Trello board.
- **Gregory Steenhagen:** Continued work on database backend and getting it live. Worked on getting server set up to be able to host our API.
- **Khoi Cao:** Implemented the transmitter. Still working on debugging the connection between 3G module and arduino.
- **Terver Ubwa:** Worked on communication between the 3G module and the Arduino after receiving the ordered parts. The accomplishment for the previous week was mostly software configuration which is still in progress.
- **Tim Lindquist:** Contacted Kolita Forbes to discuss starting hydroscopic tests with steve. Parts were retrieved from part shop. Began hardware development.
- **Steven Warren:** Tim and I contacted Kolita Forbes to begin testing the hydroscopic sensor in different dirt samples of varying humidity. Most of our parts came in at the

end of the week so we may begin testing the node networks.

Pending issues
- **Ian Harris:** None
- **Gregory Steenhagen:** Getting web server to work with our JAR file.
- **Khoi Cao:** Building the 1st transmitter prototype and test the sample config.
- **Terver Ubwa:** Resolving configuration issues between the 3G module and the Arduino
- **Tim Lindquist:** None, parts issue was resolved
- **Steven Warren:** No current issues.

o   **Individual contributions**

NAME	Individual Contributions	Hours this week	HOURS Cumulative
Ian Harris	Angular	2	15
Gregory Steenhagen	Database, Server	2	9.5
Khoi Cao	Built a 3G transmitter	6	14
Terver Ubwa	3G configuration with the arduino	7	14
Tim Lindquist	contacted coleta forbes. explored printing options. met with geiger	3	19
Steven Warren	Contacted Kolita Forbes and picked up parts.	3	20

o   **Comments and extended discussion**

Parts are now in so we can start putting together the hardware components of the project.

o **Plan for coming week**
  - **Ian Harris:** Get a "production" instance of our web app up and running. Begin building the project website.
  - **Gregory Steenhagen:** Finish getting server set up, and get a rudimentary API running for testing purposes.
  - **Khoi Cao:** Fix the configuration between 3G module and Arduino. Integrate the Http post in Json format with AT command.
  - **Terver Ubwa:** configuring the 3G module and transmitting data to the server
  - **Tim Lindquist:** derive a model for different soil moisture levels. Test this procedure and plot data.
  - **Steven Warren:** Begin programming with the Arduino and NRF24L01+.

o **Summary of weekly advisor meeting**

The attendance this week was half of our group. We expected only one person to miss but two of our members didn't contact the rest of the group and did not show up. This caused issues with explaining to our advisor on the current status of each of the sub-groups. The leafnode group displayed the results from some of the testing of the 3d printed material. The leafnode group also received contact information from Dr. Geiger for testing the hydroscopic sensor.