

**Group number: Dec1713**

**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 spent time making the presentation. We scheduled a time to all meet to practice before our presentation date on tuesday of dead week. Testing Started again on the moisture sensor, everyone signed up for a time slot to take readings. We decided to take measurements in the morning, afternoon and night time. This test will run for the next week and a half. The node group got the long distance communication working.

### **o Past week accomplishments**

- **Ian Harris:** Created some UML diagrams for the flow of information for our presentation. Worked on Database Schema, need to verify with team. Worked on presentation slides, took sensor readings.
- **Gregory Steenhagen:** Put up a user interface that does not yet show actual user data. It is in place so that when we are sending data, it will be easy to display it for real.
- **Khoi Cao:** contacted AT&T and successfully got a reasonable data plan for the project, worked on the presentation.
- **Terver Ubwa:** worked on slide presentation, took moisture measurements.
- **Tim Lindquist:** Set up soil moisture tests, got soil to correct moisture levels and buried probe. Worked on making presentation slides and organizing all our documentation/pictures.
- **Steven Warren:** Worked on Presentation, more soil moisture testing, programming

with NRF24I01 radios.

### Pending issues

- **Ian Harris:** Need to talk database schema with the team, we plan on having that in the presentation. Working on getting JDBC set up in our web application (pending schema).
- **Gregory Steenhagen:** Data that is currently visible is hard coded in the website, and not being pulled from the database.
- **Khoi Cao:** resolving the issue of no HTTP access for the home node. Integrate the receiver section into the home node
- **Terver Ubwa:** Arduino programming reception for the home node.
- **Tim Lindquist:** Unable to automate testing due to not having drivers. Started taking manual readings until this is solved as to not waste time. Need to put in another order to amazon for some hardware for next semester.
- **Steven Warren:** Need to complete full send and receive network for nodes.

### o Individual contributions

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS Cumulative</u>
Ian Harris	Database Schema, sensor readings, presentation pre, UML diagrams.	5	50
Gregory Steenhagen	Worked on getting a user interface up to show in our demo.	5	41.5
Khoi Cao	Obtained SIM card from ETG, Presentation	4	46
Terver Ubwa	Presentation slides. Took moisture readings	4	42
Tim Lindquist	Set up soil moisture tests, took readings. Ordered parts. Made slides for presentation	7	70
Steven Warren	Moisture testing, radio programming, presentation	7	69

### o Comments and extended discussion

Hydroscopic sensor testing continues.

### o Plan for coming week

- **Ian Harris:** Get JDBC up and running, confirm database schema with Geiger and

- team. Taking sensor readings every afternoon this week.
- **Gregory Steenhagen:** Continue working on the user interface and hopefully get to a point where we are ready to get real data from the server.
  - **Khoi Cao:** Continue the soil moisture reading. Resolve the HTTP issue on the home node. Adding time stamp for the data sent to the server.
  - **Terver Ubwa:** program the reception part of the home node
  - **Tim Lindquist:** Continue Testing, call hydroscopic sensor companies to get an estimate.
  - **Steven Warren:** Continue with moisture testing and work on presentation.

**o Summary of weekly advisor meeting**

No meeting with Dr. Geiger this week he was out of town.