

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 Role

Khoi Cao - 3G Node Role

o Weekly Summary

We met as a group to accomplish continue getting started on our project. Some parts were ordered and a 3D model of the hydroscopic probe was developed. A Trello board was made to assist in planning and organizing the group.

o Past week accomplishments

- **Ian Harris:** Discussed UI and web services decisions with Charlie (Gregory) and developed a plan of action reflected on our trello board. E-mailed professor Kalieta-Forbes for feedback on our decisions, and existing industry tools.
- **Gregory Steenhagen:** Discussed UI and web service decisions with Ian, and have begun implementing the database to store user info, as well as node sensor info.
- **Khoi Cao:** No commitment last week due to career fair + midterm exams.
- **Terver Ubwa:** was not able to do much. still waiting on the ordered parts to get in. however, I read up more about the 3g module (from the data sheet).
- **Tim Lindquist:** worked with steve to create a 3D model of a biodegradable water sensing probe. No meeting with geiger this week. Ready to discuss issues and direction this week.
- **Steven Warren:** With Tim, designed the 3D biodegradable - hydroscopic probe in Autodesk. Created a parts list that was sent to both Lee and Geiger. Did not have a meeting with Geiger but we had an extra long meeting last week to discuss the probe, our goals and the parts that we may need.

Pending issues

- **Ian Harris:** Waiting on a response from professor Kalieta-Forbes about our design.
- **Gregory Steenhagen:** Getting a jar file on a live server to see if the servers we have can run Java servers. Getting a web service up and running.
- **Khoi Cao:** waiting for parts. ETG and Dr. Geiger haven't approved the order list.
- **Terver Ubwa:** still waiting on the ordered parts.
- **Tim Lindquist:** parts are being ordered. Started familiarizing with the arduino setup. Unable to contact Dr. Grewell about 3D printing question. Seeking other route.
- **Steven Warren:** Waiting on parts to be delivered. Learn how to use NRF24L01+

o Individual contributions

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS Cumulative</u>
Ian Harris	E-mailed Prof. Kalieta-Forbes, UI Decisions	2	8
Gregory Steenhagen	UI decisions, database setup	1.5	5
Khoi Cao	waiting for parts	0	5
Terver Ubwa	waiting on ordered parts	0.5	5
Tim Lindquist	Designed part in autodesk Inventor. Created Trello Account	3	10
Steven Warren	Worked in Autodesk, updated Trello, Sent in Parts List	3	11

o Comments and extended discussion

We hope to get the hydroscopic sensor printed to begin testing early to see if it is a reliable means of measurement.

o Plan for coming week

- **Ian Harris:** Develop a simple REST endpoint in spring-boot that simply echos JSON data, and verifies if it is in valid JSON format.
- **Gregory Steenhagen:** Get database set up and get a jar file running on our server space.
- **Khoi Cao:** Finish the back logs from last week (Begin programming arduino to output the desired bit strings and data layout. transmit data over SIM module). Build a prototype if the items come in this week.
- **Terver Ubwa:** implementing our plan for transmitting to the server.
- **Tim Lindquist:** understand protocol for wireless communication. design rev2 of 3D part and possibly print.
- **Steven Warren:** Receive parts and begin programming with Arduino and NRF24L01+ radios.

o Summary of weekly advisor meeting

No meeting, Geiger was out of town.