

EE/CprE/SE 491 WEEKLY REPORT 5

10/7/2018 – 10/17/2018

Group number: 45

Project title: IoT environmental monitor

Client &/Advisor: Dr. Geiger

- **Team Members/Role: Tyler Fritz – Software Developer, Dong Xing – Hardware developer, Ahmed Abuhjar – Hardware Developer, Haoyue Ma – Hardware developer, Yuanzhe Wang – Hardware Developer**

- **Weekly Summary**

This week we continued to work on the code testing and started communicating with data storage service companies to make a data saving plan for this project. Once we finish the contract with one of these companies, we decide to start testing our nodes in some farms.

- **Past week accomplishments**

- Tyler Fritz
 - Wrote program that has nodes to send messages to each other while having the receiving node confirm the message was received
 - Spent 3 hours implementing AODV routing protocol
- Ahmed Abuhjar
 - Tried to develop the network from point-to-point to a star topology network
 - Three arduinos: One emitter and two receivers / One receiver and two emitters.
 - I ran through code issues and couldn't figure out a technique to specify the address so that the emitter can communicate with different receivers.
 - Questions arose: How many slave/leaf nodes can be there in one network? Does that depend on the type of the radio signal we're using?
- Dong Xing
 - Working and searching for data storage services from companies and online researches.

- Communicating with teammates about the materials, like connection for each cable which we just received.
- Haoyue Ma
 - Checking the circuit connected.
 - Tried to debug the code.
 - Communicated with Tim about the company they used for data transmitting in their project.
 - Went to At&t and T-Mobile to compare the price for the survey

- Yuanzhe Wang
 - Went to At&t and T-Mobile to find a good service plan for our project.
 - Tried to program and debug the code.

- **Pending issues**
 - Since

- **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Tyler Fritz	Wrote program that has nodes to send messages to each other while having the receiving node confirm the message was received. Spent 3 hours implementing AODV routing protocol	12	30
Ahmed Abuhjar	Tried to develop from point-to-point to a star topology network	8	25
Haoyue Ma	Checked the connected circuit and tried to debug the code. Contacted the companies for data transmitting	5	24

Dong Xing	Searching online resources and looking for services from companies.	3	7
Yuanzhe Wang	Went to different cellular company to find a good data service plan for our project	4	22

○ **Plans for the upcoming week** *(Please describe duties for the upcoming week for each member. What is(are) the task(s)?, Who will contribute to it? Be as concise as possible.)*

- Finish implementing AODV (stretch goal)
 - Contributors: Tyler, Ahmed,
- Start testing collecting and transferring data
 - Contributors: Haoyue, Dong ,Ahmed, Wang
- Continue working on the home node network.
 - Contributors: Ahmed, Wang
- Will try to use the library called EasyTransfer. This could be helpful to transmit data and address of the recipient arduino. Didn't get a complete idea on how to use it yet.
 - Contributors: Ahmed,

○ **Summary of weekly advisor meeting**

- We plan to start testing our nodes after the service deal plan has been decided.
- We are going to keep editing our code and recording the range, accuracy,etc. Type of data about our nodes during the testing progress, and these data may help us to improve our project.