

# Weekly Status Report 5

3/3/19 – 3/9/19

Senior Design Dec19 Group 16

Wireless-enabled Smart-Lights Hub Prototype

Advisor/Client - Manimaran Govindarasu

Assistant Advisor (Post doctorate) - Gelli Ravikumar

## Team Members

Alex Beaver

Ryan Bush

Aaron Ramsey

Logan Zasada

## Past Week Accomplishments

- Client/Adviser Meeting
  - Received parts – looked over for correct purchases
  - Discussed past week's accomplishments, evaluated each person's proposed schematics/diagrams
  - Delegated tasks for the week to each person
- Team Meeting
  - Mondays meeting was cut short due to a conference that Manimaran went to as well as the group
- Outside of meetings
  - We met on Tuesday but Logan was out of town so this may have impeded some of our productivity

## Weekly Adviser Meeting Summary

Due to professor Manimaran's schedule, we were unable to meet with him so we met with his post doctorate assistant Gelli with any questions on our role, task, or goal for the week. The biggest thing that we realized to be holding us back at this point in time has been ordering the parts (or all of the parts that we need).

## Personal Contributions

Name	Personal Contributions	Hours this week	Cumulative Hours
Alexander Beaver	<ul style="list-style-type: none"><li>Met with Ryan to help him learn Python</li><li>Started to work on Python program to interface with database</li><li>Finished server-side infrastructure diagram</li></ul>	4	21
John (Ryan) Bush	<ul style="list-style-type: none"><li>Record class notes and meeting minutes</li><li>Research Zigbee/XBee</li><li>Create Zigbee diagram(include hub, module, and light unit)</li><li>Met with Aaron to understand Arduino to server connection</li></ul>	6	27
Aaron Ramsey	<ul style="list-style-type: none"><li>Tested ICs for relay-to-server communication prototype</li></ul>	4	24
Logan Zasada	<ul style="list-style-type: none"><li>Began work on Design Document</li></ul>	2	20

## Tasks in Progress

- Continued progress on the server
- Learning about protocols of Zigbee and any software that might need to be learned in the process
- Updating the design document from what we created when we made the project plan
- Any diagrams that may need to be made
- Ordering parts to help us test and understand processes more

## Pending Issues

- Figuring out how to make the light go from AC power to DC power without a waste of power of just skipping AC use at all. The light we bought is meant to be used with AC power but with it being wireless, we want DC
- Figuring out all of the protocol with Zigbee has been difficult due to the fact that none of us have used it in the past. We need to figure out how to interface the Zigbee hub (gateway) with the server, then the hub with the XBee module, then the module with the XBee light
- We have to hack into the AC light without breaking the components that we needed, then connect it in a circuit with an LED to turn it on/off with wireless Zigbee