

Meeting 10/24/2019  
Location: BEL G10  
Time:2:30pm

## Materials of the meeting

### I Design validation plan

1. To make sure that we are efficient
2. Divide the experiment into small pieces
  - Second Lab: Controlling device using python or personal computer.
  - Very simple master slave control scheme.
    - Reach out to Joe and talk to him about our concept
    - If trying to communicate through python, look into DNP3 library to communicate with.
    - PyDNP3 protocol
      - Bindings for open DNP3 Library
      - Not the most reliable of software
      - Consider how much time students would have to work in the two hour lab time.
      - Available source with slight modifications for students to complete experiments.
        - Programs would be hosted on ECE444 site for students to download.
        - Command console level
        - Download anaconda or spyder
    - **Action item:** Download Anaconda to each of our computers
    - **Action item:** Download GEC and PyDNP3
    - **Action item:** Look into industrial controls labs at other universities
      - ISU for example
    - Gec
      - Most of materials off of Github
      - Last updated in 2013
    - Explore reliability of DNP3 libraries and DNP3 libraries
    - Reach out to Joe ferguson for advice for DNP3 and Modbus libraries
    - Reach out to Joe stanley for advice
    - **Action item:** Reach out to Joe Stanley and ask about communicating through DNP with relay.

### I Ideas for outreach students

1. Make local students come in to attend
2. Record lab and post through EO portal
3. Video conference through skype or zoom
4. Siemens may be willing to donate licenses

#### **Action Items**

-Email

**-Action Items:** Talk to Joe about 400G

**-Action Items:** Hussam sancari or John Hostletler would be good points of contact

**-Action items:** Talk to siemens about digital twin software.

**-Action items:** Reach to ABB as well, Dr. Johnson has contact information

I Discuss techniques needed for the next lab

1. Modbus and DNP3
2. How to connect the devices and controllers(lab 1)
3. Measure the current on the load

#### Action Items

#### Meeting minutes

- PyDNP3: <https://pypi.org/project/pydnp3/>
- GEC/DNP3: <https://github.com/gec/dnp3>
- For Anaconda Python Install, Follow steps 1-6 and 11
- Virtual Relay: <https://new.siemens.com/global/en/products/energy/energy-automation-and-smart-grid/protection-relays-and-control/engineering-tools-for-protection/virtual-testing-of-siprotec-5-protection-devices-in-the-cloud-siprotect-digitaltwin.html>
- Lab Website, again: <http://ece.uidaho.edu/ee/power/ECE444544/>
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