EE/ CprE/ SE/ CybE 492 -sdmay23-02
Simulating Cyberattacks on a Power Grid to Determine Potential Impacts
Week 2 Report
2/19/23 - 3/4/23
Advisor: Benjamin Blakely

Team Members:
- Jake Stanerson – Developer lead
- Noah Peake – Developer lead
- Hrijul Balayar – Tester/ Developer Support
- Michael Gierek – Developer Support
- Conner Spainhower – Developer Support
- Cole Medgaarden – Tester/Documentor

Accomplished Tasks:

- Pushed NCS substation grid file to Github – Cole
  - Mapped out area around Molecular Bio building and began moving towards MWL commons areas.
- Gathering notes/information for scrum meetings- Cole
  - Note taker for our ongoing meetings, to keep track of ongoing processes.
- Began working on a spreadsheet to document each building's electrical usage using an Iowa State website. Putting this information into an excel spreadsheet for ease of use when the team moves to time series. - Michael
- Discussion and revision of grid documentation. Pandapower libraries were failing on my macbook and needed to be looked at because no solution was working. Communicated with groupmates and clients about the issues. Started talking about what to do and what there is to prepare for the future attacks we plan to do on the grid. Also, talked with Noah on what to do with Time Grid creation and starting to work on that. - Hrijul Balayar
- Finished work laying out the grid creation shell for Conner to fully take over and worked with Noah to get a start on getting time series implemented on the Hawthorn section of the Iowa State power grid. Once that's done will start work on simulating attacks on the grid. - Jake
- Expanded on the existing Hawthorn section of the grid to reach an external power source. Working with Jake to get time series implemented on the Hawthorn section of the grid.

Will move to focus on attack simulation after time series is functional to test with. - Noah

- Pulled the grid creation shell an started implementing more commands; ultimately continued the work that Jake started. Also researched ways to develop attacks and libraries to use. -Conner

Pending Issues:

- Determine if fuses are needed within PandaPower design and schematics
- Uncertainty of some variables in the time series library. Need to find the purpose of those variables before moving forward.

Team Member	Contribution	Weekly Hours	Total Hours
Jake Stanerson	Grid Creation Shell and Time series implementation	5	20
Noah Peake	Attack Documentation and grid creation.	5	10
Conner Spainhower	Grid Creation Shell	3	6
Cole Medgaarden	Documented meetings, pushed code to GitHub, and discussed how to continue grid creation.	4	14
Michael Gierek	Began spreadsheet creation for time series.	3	7
Hrijul Balayar	Time series and Attack documentation.	4	8

Upcoming Tasks:

- Continuation of enhancements for user grid shell environment
- Converge shim files together for main grid
- Grid completion
- Attack simulation