EE/ CprE/ SE/ CybE 492 -sdmay23-02
Simulating Cyberattacks on a Power Grid to Determine Potential Impacts
Week 2 Report
3/4/23 - 3/24/23
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:

- Began process for combining NCS shim and Hawthorn – Cole
  - Uploaded shim file for new additions, and have a running version of time series that may need some revisions
- Finishing spreadsheet and now will calculate power to different times (days, weeks, months) for time series - Michael
- Began creating an attack script for a false data injection attack. Implemented logic in order to export an existing grid to allow it to be modified in the attack script. - Noah
- Continued working on shell commands to soon finish up and implement all commands needed for the environment. - Conner
- Worked with Noah in creating injection attack. Data values are being changed as expected, and we are able to simulate before and after the attack goes through and also view exactly what it changed. - Jake
- Looked at new additions to the grid, talked with and working on planning out attacks for the substations and transformers. Also working with Jake and Noah on figuring out how to properly output load and voltage level data on a color gradient. - Hrijul

Pending Issues:

Team Member	Contribution	Weekly Hours	Total Hours
Jake Stanerson	Creation of attack script. Able to manipulate any data in any component and simulate change	5	10
Noah Peake	Began creating an attack script. Wrote logic for exporting grid files.	5	10
Conner Spainhower	Grid Creation Shell	3	6
Cole Medgaarden	Documented meetings, pushed code to GitHub, and working to integrate grids	5	10
Michael Gierek	Spreadsheet is basically done but now need to calculate different times for possible scenarios	3	10
Hrijul Balayar	Time series and Attack planning along with finding out the proper way to output data.	4	8

Upcoming Tasks:
- Continuation of enhancements for user grid shell environment
- Converge shim files together for main grid
- Grid completion
- Completing attack simulation