Recent Progress:

1. Added to global g and VTS:
   - ivmmod
   - pwrmod
2. Updated VTS documentation
3. Created 4 minute simulation showing VTS is ≈14x faster than PST 3.1.1
4. Created a document showing possible VTS switching issues.
5. 'Single Time Block' idea tested - not viable due to MATLAB solver operations.
6. Tested IVM in VTS, created result doc.
7. GitHub updated:
   `https://github.com/thadhaines/MT-Tech-SETO`
8. Employment "good" till 09/18/20

Current Tasks:

1. Verify VTS operation
2. Create long term event (with pwrmod?).
3. Refine VTS documentation
4. Work for PST 4.0:
   - AFTER VTS 'finished'
   - Place test VTS files into main Folder
   - Clean up examples
   - Clean up code comments
   - Clean up readme files
5. Work on understanding PST operation
6. Document findings of PST functionality
7. Investigate Octave compatibility

Action Items From Sandia:

- Run long term simulation to show benefits of VTS.

Coding Thoughts:

1. Rework how switching & perturbance events are handled into a more flexible and general format. (flags? objects?)
2. Generate comparison scripts to verify simulated results match after code changes.

Current Questions:

1. Play in data for variable solar irradiance? (Slow Sine with step events for clouds.)

Loose ends:

1. As infinite buses don't seem to be used in dynamic simulation, they were not converted to use the golbal g.
2. `tgh` model not converted for use with global g. (no examples of tgh gov)
3. In original `s_simu_Batch`, the global `tap` value associated with HVDC is over-written with a value used to compute line current multiple times.
4. Constant Power or Current loads seem to require a portion of constant Impedance.
5. PSS design functionality not explored
6. No examples of of delta P omega filter or user defined damping controls for SVC and TCSC models
7. Differences in `mac_ind` between pst 2 and 3. Seem backward compatible - untested.
8. A tripped generators inertia should be removed from total inertia calculations of average frequency used in the AGC model.