Recent Progress:

1. Non-linear Simulation modifications:
   - replaced 'jay' with `1j`
   - re-introduced 'stand-alone' running
2. Refined VTS operation:
   - Allow for changing integration method during simulation.
   - Ensure unique time vector
   - More functionalized
   - Rethought network solution handling
3. Added AGC to VTS
4. Documented initial AGC VTS results.
5. Created PST version document
6. Created VTS draft documentation
7. GitHub updated: `https://github.com/thadhaines/MT-Tech-SETO`
8. Employment "good" till 09/18/20

Current Tasks:

1. Confirm VTS operation
2. Generate extended term simulation events.
3. Decisions concerning remaining globals:
   - IVM (waiting for linear code?)
   - PWR (only cell data not global)
4. Incorporate pwrmod (ivmmod) into VTS
5. Refine VTS documentation
6. Work towards PST 4.0
7. Work on understanding PST operation
8. Document findings of PST functionality
9. Investigate Octave compatibility

Action Items From Sandia:

- Continue development of pwrmod / ivmmod models and their implementation in PST.
- Decide on PST base version (3.1⟶SETO⟶4.0)
- Explore variable time step methods

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. Induction machines have no speed? only angle?
2. PST modeling of transformers?
3. Play in data for variable solar irradiance? (Slow Sine with step events for clouds.)
4. PSS design doesn't seem to be used in normal simulation?
5. Deadlines of any sort?

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.