

Recent Progress:

1. Global g,non-linear functionality added for:
 - g.k
 - g.vts
2. Added Variable time step simulation via standard MATLAB ODE solvers into PST.
3. Documented initial VTS results.
4. Refined AGC implementation.
 - Added conditional ACE
 - created algorithm block diagram
5. Updated AGC example documentation
6. Created `handleStdX` function
7. Created `s_simu_BatchTestF` - a more functionalized simulation script
8. Created `s_simu_BatchVTS` - a more variable time step script
9. Updated pst SETO change doc
10. GitHub updated:
<https://github.com/thadhaines/MT-Tech-SETO>

Sandia Action Items:

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

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 cloud cover.)
4. PSS design doesn't seem to be used in normal simulation?
5. Deadlines of any sort?
6. Continued employment beyond August 12th?

Current Tasks:

1. Refine VTS operation (add AGC)
2. Decisions concerning remaining globals:
 - IVM (waiting for linear code)
 - PWR (only cell data not global)
3. Create pstSETO flowchart of `s_simu_BatchVTS`
4. Work on understanding PST operation
5. Document findings of PST functionality
6. Investigate Octave compatibility

Coding Thoughts:

1. Rework how switching & disturbance events are handled into a more flexible and general format. (flags? objects?)
2. Generate comparison scripts to verify simulated results match after code changes.
3. Allow for changing of solver/method during VTS.

Loose ends:

1. `tgh` model not converted for use with global g. (no examples of `tgh` gov)
2. 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.
3. Constant Power or Current loads seem to require a portion of constant Impedance.
4. PSS design functionality not explored
5. No examples of of delta P omega filter or user defined damping controls for SVC and TCSC models
6. Differences in `mac_ind` between pst 2 and 3. Seem backward compatible - untested.
7. A tripped generators inertia should be removed from total inertia calculations of average frequency used in the AGC model.