Recent Progress:

1. Timing added to simulation.
2. AMQP message grouping speed up work.
3. Batch processing of test cases added.
4. Experiments with GE 4 machine system.
5. GitHub updated:
   `https://github.com/thadhaines/`

Current Tasks:

1. Compile Code flowchart to aid in further development.
2. Work to incorporate Matt's *Suggested Use Cases* into simulation.
   - Add perturbance Agents for Generator/Slack, Shunt, Branch, …
   - Think about Shunt Control / Generic Agent control based on system state(s)
   - Add logging to Shunt and Branch Agents
   - Define Agent actions for AGC/LFC (i.e. ACE calculations)
3. Keep Goals and Requests in mind.

'Soft Goals':

1. Simulate 10× faster than PSDS.
   Not met — only ≈8x faster.
   Varies with system size & time step.

Future Tasks:

1. Formulate an experiment utilizing a multi-area model that can be validated with PSDS.
2. Identify System Slack bus programmatically (currently assumes first slack == global slack if > 1 slack found)

   AND/OR calculate system slack error differently → An average of slack errors?
3. Formulate feasible plan of action for casting all WECC governors to LTD governors (tgov1). Something like:
   (a) Parse models of interest from dyd.
   (b) Create dyd from parsed model.
   (c) Automate a Pref step test for a one machine infinite bus in PSDS.
   (d) Read output data
   (e) Generate/Calculate LTD equivalent model parameters from results (this will probably use MATLAB and `jfind`)
   (f) Export custom dyd for LTD simulation. (PSDS would still use original the dyd, though *could* use modified dyd)
4. Add import mirror / bypass mirror init sequence option to prevent repeated mirror creations.
5. Create an agent for every object:
   SVD, Transformer, …

Matt Requests:

1. Enable multiple dyd files to overwrite / replace previously defined agents/parameters
2. Allow for variable time steps.