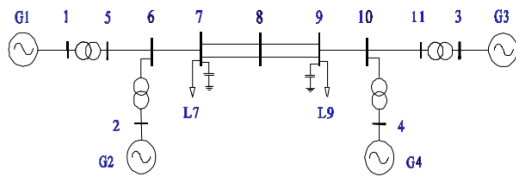


**Recent Progress:**

1. PSLF License Expires June 30.
2. Timing added to simulation.
3. AMQP message grouping speed results.
4. Batch processing of test cases functional.
5. GE 4 machine 2 area system too sloppy for actual study  $\therefore$  Kundur 4 machine 2 area system created and adapted for LTD.



6. Work on step and ramp perturbances for Loads and Generators.
7. 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 perturbation 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.

**Current Questions:**

1. Reason for, and how to correctly set up multiple slack buses in PSLF?

**Future Tasks:**

- (a) Formulate an experiment utilizing a multi-area model that can be validated with PSDS.
- (b) Formulate feasible plan of action for casting all WECC governors to LTD governors (tgov1). Something like:
  - i. Parse models of interest from dyd.
  - ii. Create dyd from parsed model.
  - iii. Automate a Pref step test for a one machine infinite bus in PSDS.
  - iv. Read output data
  - v. Generate/Calculate LTD equivalent model parameters from results (this will probably use MATLAB and `jfind`)
  - vi. Export custom dyd for LTD simulation. (PSDS would still use original the dyd, though *could* use modified dyd)
- (c) Add import mirror / bypass mirror init sequence option to prevent repeated mirror creations.
- (d) Create an agent for every object: SVD, Transformer, ...

**Matt Requests:**

- (a) Enable multiple dyd files to overwrite / replace previously defined agents/parameters
- (b) Allow for variable time steps.

**'Soft Goals':**

1. Simulate  $10\times$  faster than PSDS.  
Not met — MiniWECC  $\approx 8\times$  faster.  
Varies with system size & time step.