The purpose of this document is to record what was done to enable `lmod` PST to use the structured global variable `g` and other 'clean up' actions taken. Each paragraph describes the required changes the PST file that has anything to do with load modulation.
Initial globals:

```
%% load modulation variables
global lmod_con % defined by user
global n_lmod lmod_idx % initialized and created in lm_indx
global lmod_sig lmod_st dlmod_st % initialized in s_simu
global lmod_pot  % created/initialized in lmod.m
% g.lmod.lmod_pot(:,1) = max, g.lmod.lmod_pot(:,2) = min
global lmod_data % added by Trudnowski - doesn't appear to be used?
% maybe in new models?
```

Modified globals:

```
global g
```

User Input Data File The 'd_xxx' file should now define `lmod_con` as `g.lmod.lmod_con`. This is because in the 'standard' PST method of operations, `lmod_con` is defined as a global before the user data file is executed. This effectively means that the user defined arrays in the data file are actually defining global arrays (who knew?).
Code has been added to handle if `lmod_con` is not prepended with `g.lmod`. This approach may be simpler for backwards compatibility with 'legacy' data sets.

ml_sig.m User created file that defines signal(s) to load modulation. Should include `global g` and only receive index variable `k`. Utilize global time array located in `g.sys.t`.

lm_indx.m
Notes from file:

```
% syntax: f = lm_indx
% 5:02 PM 15/08/97
% determines the relationship between lmod and nc loads
% checks for lmod
% determines number of modulated loads
```

Comments should be redone in a similar fashion as lmod.m

- Prepended `g.lmod.` to appropriate globals:
    1. `n_lmod`
    2. `lmod_idx`
- Added comments for each code line.
- Added check for `lmod_con` field in `g.lmod`. If not found, creates empty array and displays a message. (empty array created as there may be other checks to see if `lmod_con` is empty)

lmod.m This function calculates the initial state, and states of the lmod model.

- The beginning comments and function info was modified to more closely follow recommended function documentation as provided in the S.J. Chapman MATLAB book.
- The function was modified to be a VOID function (i.e. return nothing).
- `bus` was removed from input parameters as it is not used.
- Prepended all lmod related globals with `g.lmod.`

s_simu_Batch.m

- Added `g.lmod.` to zero initializations of
  - `lmod_st`
  - `dlmod_st`
  - `lmod_sig`
- Added `g.lmod.` to initialization call to lmod function
- Added `g.lmod.` to check for live plot
- Added `g.lmod.` to integrations of
  - `lmod_st` using `dlmod_st`
- Added time array `t` to `g.sys.t`
- Removed sending of `bus` to lmod

nc_load.m Adds load modulation to Y array.

- Added `g.lmod.` to calls to `lmod_idx` and `lmod_st`.

svm_mgen_Batch.m
Not modified as there were no example cases to test functionality of changes.

ns_file.m
Called from `svm_mgen` ∴ not modified.

p_cont.m
Invoked during linearization of system ∴ not modified.

p_file.m
Associated file with svm_mgen - i.e. state space model stuff ∴ not modified.