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?).

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.