1 Setting SUGAR paths

To use SUGAR, make sure that your Matlab path is set correctly. In particular, make sure the analysis and model subdirectories are included in your Matlab path. This can be done from within Matlab, e.g.

```
addpath /home/eecs/dbindel/sugar/analysis
addpath /home/eecs/dbindel/sugar/model
```

or from the shell, by setting the MATLABPATH environment variable. In `csh`, for instance, this might be

```
setenv MATLABPATH /home/eecs/dbindel/sugar/analysis:\
/home/eecs/dbindel/sugar/model
```

2 Using `cho_load`

The `cho_load` command loads a netlist variable into SUGAR. For instance, typing

```
net = cho_load('mynetlist.net');
```

would create a netlist variable `net` which contained the device information used by the various analysis routines.

Suppose the netlist were parameterized, perhaps with a voltage variable `V`. Then an instance of the netlist with a particular parameter setting (say `V = 5`) could be created by typing

```
params.V = 5;
net = cho_load('mynetlist.net', params);
```

Because netlists can be parameterized in this manner, it is very easy to do "sweeps" over a parameter and investigate the effect on device behavior. For example, if I wanted to visually inspect the deflection of a device at 1-5 Volts, I might write a little script:

```
for params.V = 1:5
  net = cho_load('mynetlist', params);  % Create netlist variable
  dq = cho_dc(net);          % Find the static equilibrium position
  cho_display(net, dq);      % Display the deflected structure
  pause;                     % Pause so the user can look at it
end
```

Internally, `cho_load` uses a C function called `sugar_c` to convert netlist files into Matlab functions. Pre-compiled versions of `sugar_c` for several common platforms are included. SUGAR users who try to run `cho_load` or `sugar_c` and find that a version does not exist for their platform should contact the developers (see "Getting help" below) for assistance.

3 Getting help

If you have concerns or difficulties using SUGAR which are not addressed in the manual sections, feel free to write to

`cfm@bsac.eecs.berkeley.edu`

We will try to respond promptly.