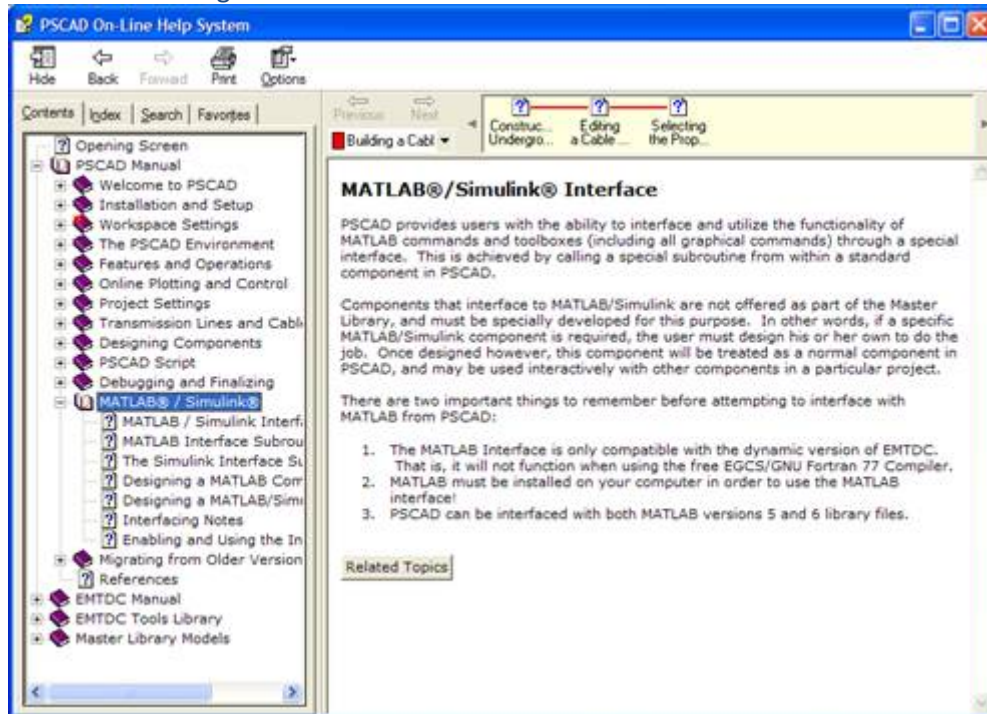


I would like to refer you to PSCAD User's Guide or PSCAD On-line help, which can be accessed by pressing F1 in the PSCAD workspace. Under "Contents\PSCAD Manual\MATLAB® / Simulink®", you can find the instructions for using the Matlab interface function.



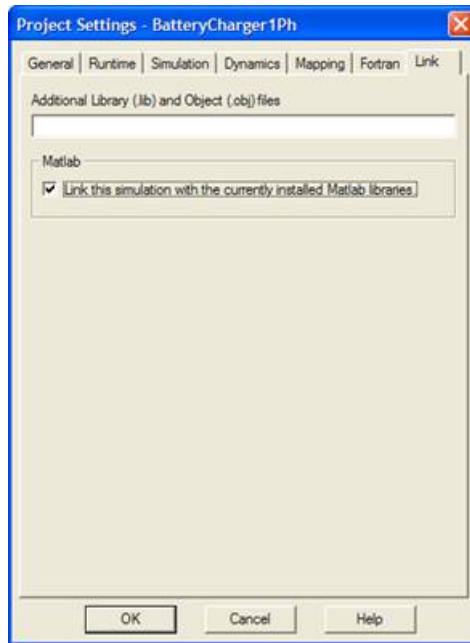
Before further descriptions, please verify whether the following requisites are met on your machine:

- 1- MATLAB has to be installed prior to PSCAD. You may need to reinstall PSCAD to make it recognize the links and dependencies to MATLAB, its libraries and paths.
- 2- The MATLAB interface feature is not supported by the GNU Fortran compiler, which is provided with your PSCAD package. I recommend that you install Compaq **Visual** Fortran 6.0 or higher, or Intel Fortran Compiler.
- 3- Please notice that **the user has to create a user-defined component to use the MATLAB interface feature; i.e. you will not find a "MATLAB Interface" component in the Master Library in PSCAD.**
- 4- Creating new components requires an Educational or a Professional license.

Before starting to run a MATLAB interface simulation, you should direct PSCAD to MATLAB's shared library folder. The shared libraries of MATLAB R200X are located at:
%MatlabRoot%\extern\lib\win32\microsoft

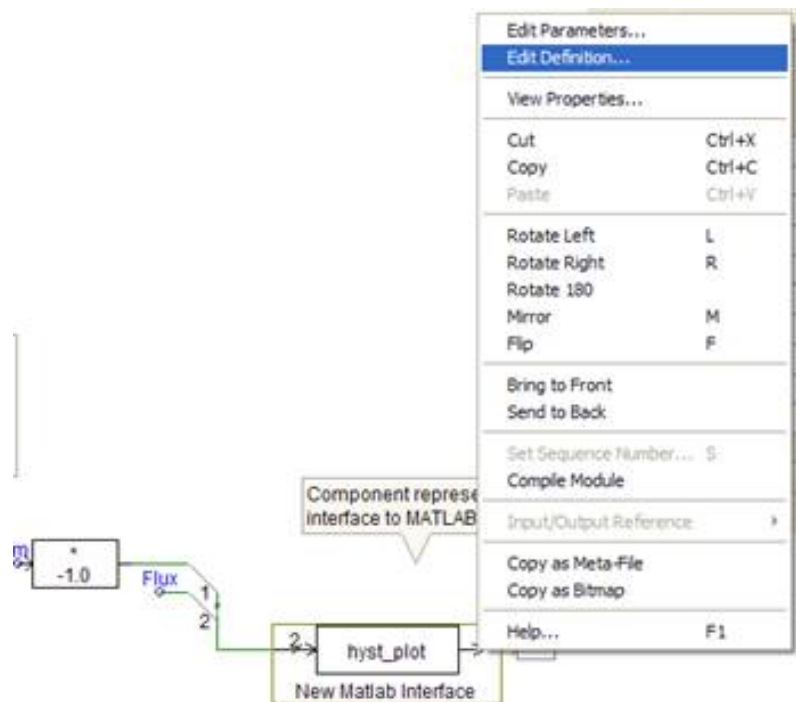
In order to specify this path for PSCAD, select **Version 5** under **Workspace Settings | MATLAB | Installed Version**. Then enter the **complete** path of the shared libraries (e.g. **C:\Program files\Matlab\R2008a\extern\lib\win32\microsoft**) under 'Library Path'.

Also, if you are creating a new model, which uses the MATLAB interface function, you have to link your model to the installed MATLAB libraries by activating the corresponding checkbox on **Project Settings | Link**:

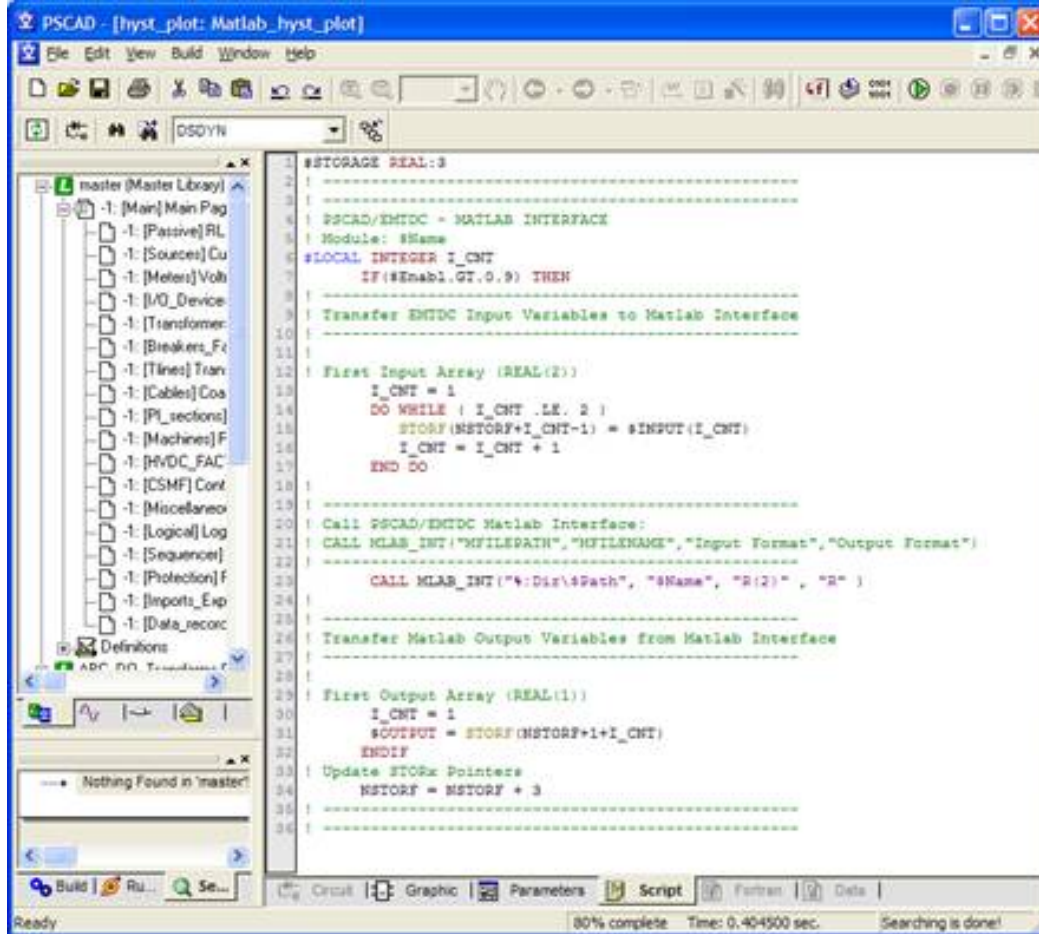


This has already been activated in the examples in %PSCADfolder%\examples\matlab.

A few examples are provided in “%PSCAD FOLDER%\examples\matlab”. In each of those cases, locate a block specified as “New Matlab Interface”. By right clicking on the component and selecting the “Edit Definition ...” option (as shown below), you will be able to explore the way the interface has been designed in each particular example.



You will see the PSCAD Script code of each block on the “Script” pane of the component definition window:



The key subroutine for using the MATLAB interface feature is ‘MLAB_INT’ (see PSCAD/EMTDC User’s Guide). Also, proper use of ‘STORF’ and ‘STORI’ is required for exchanging variables between EMTDC and the MATLAB workspace.

I personally found the user’s guide and the provided examples very helpful when I was trying to create my first *MATLAB Interface* case. So, please first try the instructions and examples. I recommend that you explore the corresponding script code blocks in the given examples. If you still encounter ambiguities, we will be glad to assist you.