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**Agilent Technologies**

## **MBP**

Calling an External Simulator

Application Note

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## Calling An External Simulator Application Note

This application note describes how to call an external simulator for simulation in Model Builder Program (MBP). **Note:** This document was originally released for MBP V2010.3.0.1 in May 2011.

### Introduction

MBP supports the ability to call external simulators, regardless of whether they are installed on a local computer or a remote host. From MBP v2007.2.6 on, all the configurations for calling external simulators can be set on the software's graphical user interface (GUI). Note that to avoid a long simulation time, it is recommended that the internal SPICE in MBP be used for simulation.

This document uses HSPICE as the example to introduce the steps required to call HSPICE in MBP. The user can follow these steps to call HSPICE on a local computer or a remote host. For more information go to [www.agilent.com/find/eesof](http://www.agilent.com/find/eesof) or contact your local Agilent office. The complete list is available at: [www.agilent.com/find/contactus](http://www.agilent.com/find/contactus).

### Call Local HSPICE

To call HSPICE on a local computer, first open a cmd window. Type *HSPICE* in the command line to confirm that HSPICE can be run directly on the local computer. If HSPICE is properly installed, but cannot run directly, right-click *My Computer* and open *System Properties -> Advanced -> Environment Variables*. Add *\$HSPICE\_HOME\bin* to the variable *Path*. Here, *\$HSPICE\_HOME* is the HSPICE installation path on the computer.

In the MBP main GUI, choose *Simulation -> Simulator -> External Hspice* from the main menu to select the simulator.

When doing the simulation, the HSPICE window will flash in the background. Note that the user will not see the HSPICE window when calling HSPICE on a remote host.

If the simulation results are not correct, choose *Simulation -> External SPICE* from the main menu and deselect the *Delete Netlist Files* option in the popup window. Redo the simulation to see if the results are what is expected. Note that all netlist files can be found in the *\$MBP\_HOME\hspice* folder (*\$MBP\_HOME* is the MBP installation path on the computer). The user can use these files when debugging.

### Call Remote HSPICE

When calling HSPICE on a remote host, the user must first confirm they have permission to do so. Telnet can be used to log in to the remote service to confirm the permission.

In the MBP main GUI, choose *Simulation -> Simulator -> External Hspice* from the main menu to select the simulator. Then, choose *Simulation -> External SPICE* from the main menu. The window will pop up as shown in Figure 1.

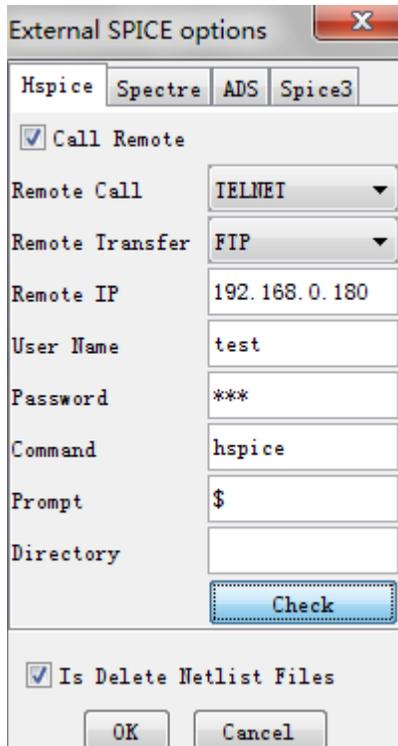


Figure 1. External SPICE options

Next, enable the *Call Remote* option by clicking the box. Enter the necessary information such as Remote IP, User Name and Password. After filling out the settings, the user can check whether HSPICE can be called successfully by clicking *Check*. Finally, click *OK* to close the window.