RELEASE NOTES
SIMETRIX 5.6

NOTES

This document describes the new features and changes for SIMetrix version 5.6.

LICENSING

If you have current maintenence you should already have been issued with a license file that will support version 5.6. If you haven't installed this license, you should do so now. If you were not issued with the license or have mislaid it, please contact sales@simetrix.co.uk to receive the new license.

SIMPLIS SIMULATOR ENHANCEMENTS

ADVANCED DIGITAL

The SIMPLIS simulator has been developed to allow the simulation of digitally controlled power supplies by the addition of the advanced digital capability. Full details on the new features can be found at

http://www.simplistechnologies.com/digital

SIMETRIX SIMULATOR ENHANCEMENTS

HSPICE MONTE CARLO DISTRIBUTION FUNCTIONS

SIMetrix can now accept the Hspice method of defining distribution functions using .PARAM definitions with special functions GAUSS, AGAUSS, UNIF and AUNIF. For details see the *Simulator Reference Manual* Chapter 7, "Hspice Distribution Functions"

.FUNC ZERO ARGUMENT DEFINITIONS

.FUNC function definitions may now be defined without arguments and also accessed without requiring parentheses. This is useful for defining random variables for Monte Carlo analysis as it makes it possible to create a variable that returns a different value each time it is used. See the *Simulator Reference Manual* Chapter 6 "Command Reference", ".FUNC" for full details.

REAL TIME NOISE MODE OPTION

There is a new real time noise option which controls the way the simulator handles the situation where the operating point of a noisy device changes dramatically between noise steps. This situation typically arises in switched capacitor filters where the switching device resistance switches from fully on to open circuit in a very short time. In mode 0 the noise value is scaled progressively as the operating point changes. This approach can underestimate the noise if the noise step is too large. In mode 1 the noise value is constant during the noise step. This can sometimes grossly overestimate the noise. The two methods give similar results if the noise step is small enough, but in some applications this leads to excessivley long simulation times.

For information see the *Simulator Reference Manual* Chapter 6 “Command Reference”, “.TRAN”

SCHEMATIC EDITOR

MULTI-COLOUR NET HIGHLIGHTING

Highlighting nets on the schematic now uses 4 colours in rotation. Previously it was just a single colour. The number of colours may be changed up to a maximum of 8 using the option variable MaxHighlightColours. Use command:

Set MaxHighlightColours=8

to increase to 8

READ-ONLY STATUS SWITCHING

The read-only status of a schematic may now be changed after a schematic has been open provided file permissions allow it. Use schematic menu File | Set/Clear Read-only status. A small icon depicting a padlock will show in the tab of a schematic in read-only mode.

This feature is to help users who need to share schematics. Only one user can open a schematic in writeable mode at a time so it is sometimes convenient to always open in read-only mode for viewing or simulating, while only switching to writeable mode when needed. In the past switching from read-only to writeable required closing and reopening the schematic.

WAVEFORM VIEWER

BUS PROBE IMPROVEMENTS

Bus probes now work inside hierarchical blocks.

Bus probes now support busses of analog signals by providing a means of defining threshold voltages for conversion to logic levels.

Fixed bus probes now provide options to set grid/axis and a separatee graph sheet.