



What's New in PSCAD v4.4.1

Written for PSCAD™ X4 version 4.4.1

December 6, 2011



PSCAD

Bug Fixes:

1. A warning message is now output to the message tree for every module definition whose auto-sequencing canvas setting is turned off (#2007).
2. Transmission line towers can now be added to the tline editor canvas directly from the ribbon bar (#3488).
3. Tower components copied from the master library and pasted to the t-line editor canvas, are no longer replaced by a ground component when the project file is reloaded (#3480).
4. The schematic compiler now detects components that are stacked directly atop one another. A warning message is displayed if such a situation is detected (#3442).
5. XY table component online help link fixed (#3460).
6. Global substitutions are now supported in data label names, effectively allowing the definition of signal names directly from a global constant (#3535).
7. Error/warning messages sourced from wires/buses are now navigatable (#3193).
8. Support has been added for the Intel Fortran compiler version 12.1 (#3537).
9. The proper component parameter dialog will now appear when double clicking on a meter interface (#3500).
10. The 'On Release' option on slider controls now works properly. A floating label is drawn to the left of the control while the slider is being dragged, which displays the slider value that will be applied on release (#783).
11. Incremental build will now re-compile all module instances following changes to their corresponding definition (#3513).
12. Module instance numbers are now displayed correctly in the tabbed document interface (#3472).
13. Undo/redo now works properly following a polywire being added to the canvas. The source of this bug involved incompatibilities between wire mode and undo/redo (#3517).
14. Components no longer get created off-canvas if added from the toolbar while wire mode is active (#3465).
15. Undo/redo works properly following the addition of a graph panel to the schematic canvas (#3545).
16. Component bounding box no longer shifts position when component added to canvas (#3538).
17. Editing a component definition now forces the 'format' ribbon interface to activate automatically (#3512).
18. Removed 'Use idle time polling if network is large (200+nodes)' project setting. This option was written specifically for single-core, hyper-threaded processors and is no longer necessary. In fact, it was causing a performance problem in v4.4.0, resulting a large runtime speed decrement when compared to v4.3.1 (#3473).
19. Beta menu option removed from multiple component select popup menu (#3453).
20. The transmission line/cable detailed output viewer window can now be closed once opened (#3555).

21. An imported v4.2.1 case containing both a page module and a tline/cable sharing the same name will no longer crash PSCAD. Instead the import is stopped and the user is informed to adjust the name and try again (#3111).
22. Too many messages in the message table no longer halts the simulation runtime. Instead of limiting the messages, users may now enable/disable build or runtime messages (#3544).
23. Resizing a graph pane will no longer add an extra step in undo/redo stack (#3548).
24. Hotkeys (such as rotate, flip, etc.) are now functioning on the graphics canvas (#3563).
25. Changes within the graphics canvas will now flag the project as modified (#3564).
26. Irrelevant master library right-click menu items have been disabled (#3511).
27. Undo/redo now works properly after adding a curve to a graph or plot frame (#3558).
28. PSCAD v4.3.0 project files are no longer stamped with a new version number when loaded in v4.4.1 (#3554).
29. Project files are now stamped with the proper version number upon being saved by that version (#3542).
30. Undo/redo no longer fails following an output channel being added is added as a polychannel, phasor meter or oscilloscope (#3561).
31. Undo/redo no longer fails when output channel is added as an overlay or poly graph with signal (#3566).
32. The delete definitions dialog has been switched to modal operation (always on top) (#3531).
33. New graph frame vertical scroll is now included when copy graph frames to a metafile (#3452).
34. Changing the Fortran compiler no longer changes the message table window tab focus (#3342).
35. Component parameters window drop-down menus now function properly when window is floating (#3576).
36. The 'Replace All' operation in the script section no longer gets stuck in recursive loop when replacing with text containing the original text (#3520).
37. Application no longer blocks run of projects containing more than 1024 output channels. Instead, a user-adjustable soft limit is imposed (#3575).
38. Copy/paste action using Ctrl +c/Ctrl + v now works in search interface window (#3521).
39. Create new project dialog default path is now consistent with general rules regarding memory of default folder path (#3540).
40. PSCAD will now allow case projects with identical namespaces to be loaded, provided that the project files do not reside in the same folder (#3582).
41. Changes in definition script editor will now set project as modified (#3557).
42. Removed hard subsystem limit set in in workspace options. Limit is now soft and will warn the user if exceeded (#3593).
43. PSCAD will now allow the saving of a project filename that contains a leading number (ex. 2xxx.pscx) (#3600).
44. Copied text in script editor and other text editors, no longer gets pasted twice (#3067).
45. Displayed simulation start time offset no longer incorrect when using the runtime snapshot button (#2643).
46. It is no longer possible to cut switch and pushbutton control interface graphics (#3529).

47. Radiolink transmitters must each have unique signal names on the same module schematic (#3509).
48. The Load | Examples folder link (under the PSCAD tab in the ribbon control bar) is now set properly upon initial installation (#3570).
49. Ribbon bar link to the FortranMedic utility will now work as expected (#3606).
50. Snapshot file floating point format problem with extremely small numbers when using Windows XP no longer a problem (#3623).
51. All transmission line related mapping errors will now halt the run process (#3635).
52. Fixed error in unit converter: Pound (lb) conversion now works properly (#3637).
53. Curve objects no longer get 'lost' when dragged between graphs (#3631).
54. Minimized ribbon bar now functions properly when editing definitions (#3641).
55. Message table window is now brought front and centre on compile, make or run operations (#3539).
56. Ribbon bar rotate and flip buttons now work when multiple components are selected (#3620).
57. An option has been added to control the enable/disable of case sensitivity when matching ports/parameters to corresponding import/export tag (#3651).
58. The LCP detailed output viewer is now functioning (#3671).
59. Project importer now replaces space characters in namespaces with an underscore. Also, library projects containing invalid namespaces are corrected on load (#3662).
60. Auto-save is now functioning properly (#3665).
61. Simply selecting a project in the workspace no longer sets it as modified (#3669).

Master Library

Bug Fixes:

62. Transmission line half-tower components now provide an x-coordinate input for the ground wire (#3339).
63. Master library component parameter dialogs no longer improperly sized (#3279).
64. All tower components have been modified to include a parameter for entering the total number of conductor strands. This parameter was added to support the corresponding bug fix in the LCP (#3562).
65. The default saturation parameters (incl. knee voltage, inrush decay time constant, time to release flux clipping) in the general transformer components were modified to be more realistic (#3412).
66. The multimeter master library component now properly declares RVD1_2 and EMTDC_VVDC variables under all configurations (#3595).
67. Reworked the end time and time step checking in the recorder2_0 component so as to ensure accurate warning messages (#3251).
68. Multiple run component .out and .inf naming of files is now more consistent. If output is plotted every run, the format is xxx_r#####_###.out; if plotted last run only, xxx_###.out (#3588).

69. Multiple run additional recording component will now function properly when a snapshot is taken with Meas-Enab turned on and if the multiple run is started from that snapshot (#3615).
70. The trip time calculated by the inverse over-current relay now matches the results obtained from IEC 60225 relay characteristic equations (#3650).

EMTDC

Bug Fixes:

71. Snapshot now correctly calculates SNAP_IISNP variable on runtime snapshot (#3495).
72. EMTDC no longer crashes when using the frequency scanner with the GFortran compiler. This bug was caused by an uninitialized variable problem in the LCP cable crossbonding algorithm (#3496).
73. EMTDC now pre-processes all tline/cable lengths and then displays the maximum allowed timestep required for accurate modeling in the message table (#3252, #3514, #3156).
74. EMTDC will no longer fail to create a snapshot file at a specific time, if that time falls exactly halfway between timesteps (#2567).
75. GFortran compiler messages now more accurately state the cause of EMTDC runtime crash (#3516).
76. GFortran compiled projects now log cause of failure when involving attempt to open files (#3413, #3300).

Line Constants Program (LCP)

Bug Fixes:

77. Fixed uninitialized variable problem in cable crossbonding algorithm (#3534).
78. The total number of number conductor strands is now included in the calculation of cross-sectional area and the conductor impedance, correcting solution accuracy when inputting stranded conductor information (#3562).
79. A minor correction was made to the calculation of hollow conductor impedance (#3573).
80. Correct earth impedance now calculated when using a non-unity, ground relative permeability (#3598).

Licensing/Utilities

Bug Fixes:

81. The FixLock utility now supports operation when run under terminal services (#3449).
82. FortranMedic now detects long filenames in GCC_EXEX_PREFIX path segment (#3450).
83. Getinfo program no longer crashes if run more than once (#3492).
84. License Manager and PSCAD installers now both support the "/IgnoreDrivers" command line switch (#3493).
85. License manager v1.30 no longer installs otop previous license manager versions. Previous versions are uninstalled first (#3469).
86. FortranMedic now warns if unsupported Windows XP detected (#3536).
87. FortranMedic now warns that v4.2.1 is not capable of selecting an Intel compiler version (#3494).
88. FortranMedic warns that Compaq Fortran is not compatible with Matlab 7.8 (R2011a) or better (#2150).
89. FortranMedic now detects all Visual C++ Redistributables (#3571).
90. PSCAD installer now detects license manager settings from the registry when invoked (#3448).
91. License manager now supports clients on VPN networks (#2961).
92. Getinfo program no longer fails to detect hardware lock if lmgrd.ini file is missing (#3602).
93. FortranMedic will now issue a warning if the full .NET 4.0 package is not installed (#3614).
94. The license manager installer v1.30++ will now uninstall all previous LM versions before installing its new files (#3469).
95. The FortranMedic now detects and warns if the .NET Framework 4.0 Extended version is installed. This package contains *.dll files needed by PSCAD to function properly (#3613).
96. The PSCAD installer will no longer hang if no previous PSCAD versions are detected on the target machine (#3657).