What's New in PSCAD v4.5.5

(since v4.5.4)

Written for PSCAD™ X4 version 4.5.5
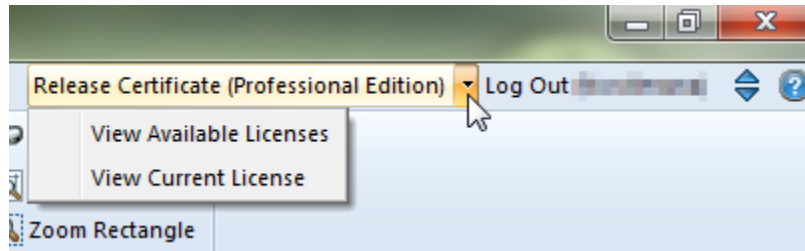
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Manitoba HYDRO INTERNATIONAL
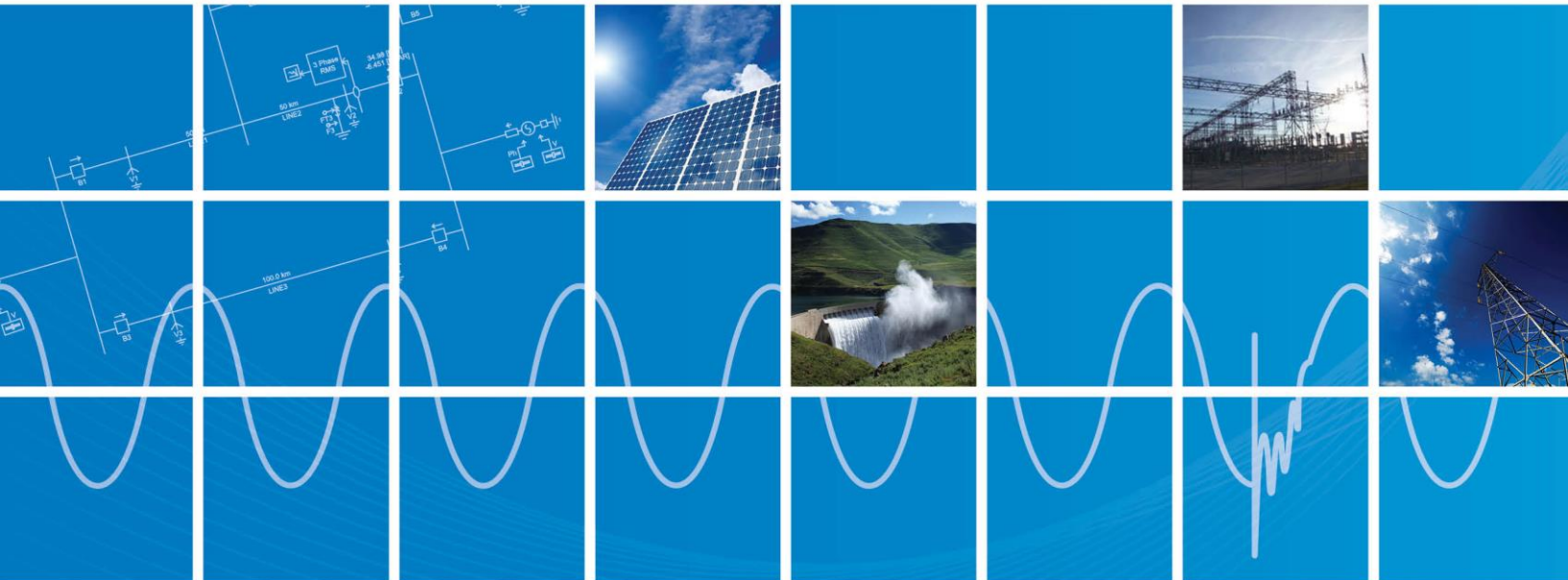
PSCAD

Deficiency Fixes:

1. **Viewing License Details**: Viewing your licence details has been simplified by providing a drop list in the top-right corner of the ribbon control bar (#5574).

2. **Added $(INSTANCE) for Plot Panels**: A new directive has been added for the purpose of displaying module name and instance numbers on plot panels. For example, *$(INSTANCE) : $(GROUP) : Graphs* results in:
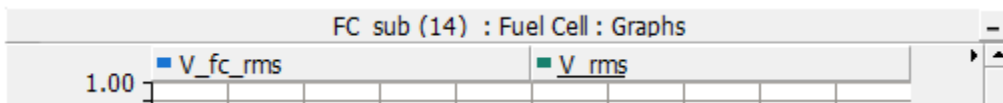
3. **Intel Fortran 14 & 15 Support**: Official support has been added for the Intel® Visual Fortran Compiler for Windows (Versions 14 & 15).

Bug Fixes:

1. PSCAD will now process custom component script segments and replace illegal characters (such as ' and ") with underscores. This ensures that component script code will conform to Xml standards (#5588).
2. A minor problem involving false positives in capitalization mismatch checking in t-lines and cables has been corrected (#5481).
3. Ctrl + left mouse drag to copy a sticky note now functions properly (#5576).
4. The graph y-axis grid in overlay graphs no longer gets reset when a simulation is launched. Previously, PSCAD would best fit the grid, even if manual scaling was employed (#5586).
5. The syntax colorizer no longer overruns its text buffer while reading. This was causing a crash under certain circumstances (#5582).
6. PSCAD no longer crashes when a user definition is named after a master library definition. On project compile, the offending component was added to an internal vector list illegally (#5409).
7. **Multiple instances of the PSCAD application, based on a single license, may now be opened simultaneously on the same workstation. This is possible only when using certificate licensing (#1686).**

8. **PSCAD no longer crashes when attempting to import SVG graphics into the graphic editor (#5645).**

9. **PSCAD can no longer enter an invalid state and crash if a user unloads a case while the workspace is still loading (#5643).**

10. **PSCAD no longer crashes following the action of deleting a bus and then using wire mode to reconstruct them (#5636).**

11. Project will now be immediately marked as modified following a scenario being modified (#5638).

12. Graph x-axis display name is now saved properly to the project file and is therefore, no longer lost when the case is reloaded (#5616).

13. Build messages sourced from definition objects are now navigable (#5380).

14. Error reporting in logic to control the total number of active EMTDC processes and port assignments has been corrected (#5590).

15. Animated graphics displays are now cleared at the start of the next run when the animated graphics project setting is turned off (#5498).

16. A new application option has been added to automatically move off-canvas objects, back on to the visible canvas during load (#5511).

17. **A specific crash condition has been fixed, involving using wire mode following a project compile (#5694).**

18. **Ctrl + mouse drag to copy now functions properly on wires, dividers, buses and file reference components. Previously attempting this would leave PSCAD in a bad state (#5685).**

19. **A subsystem splitting bug involving a specific combination of connected modules and isolated electric networks has been fixed (#5686).**

20. Projects no longer appear modified in the workspace upon navigation into or out of a module (#5702).

21. The width of the data label dialog has been increased to accommodate longer signal names (#5712).

22. Corrected a no load losses issue in the 3-phase, 2-winding transformer component (#5715).

23. Fixed a compile issue where PSCAD compiler would hang and become unresponsive in certain situations (#5362).

24. PSCAD no longer restores the previously accessed folder instead of going to the specified examples folder (#5731).

25. Master library no longer open twice when opening a project via a double-click from Windows file explorer (#5719).

26. The option to draw thin/thick lines has been removed from the polygraph properties. Alternatively, individual curves can be bolded using the curve bold function (#5742).

27. Simulation sets can now be deleted via the 'delete' key (#5687).

28. The status bar, while creating definitions and solving lines, will now display the correct total for each (#5628).

29. The entered snapshot file name in the project settings is now checked for validity (#5774).

30. Curious problem involving inability to move a custom component following project run has been fixed (#5753).

31. **The application no longer crashes when attempting to run set where project is unavailable (#5789).**

32. **PSCAD no longer winds up in a bad state following editing a definition, immediately backing out to the canvas and then attempting to delete the component instance (#5790).**

33. **PSCAD now provides a more thorough check for project corruption on import/load. Some projects will no longer load if corruption (manual modifications) is detected (#5796).**

34. PSCAD will now synchronize the project namespace to the file name before checking for duplicate namespaces on load (#5825).

35. PSCAD no longer crashes if more the 8192 characters are entered for the list of linked file paths (#5815).

36. Input parameter dimension is now set to the entered dimension value if the parameter is an array. Previously, the signal created by said parameter was set to 1 (scalar) (#5902).

37. **An object file is now properly created when blackboxing using the GFortran compiler (#5770).**

38. Curves no longer get added to the wrong graph when using Ctrl + left mouse drag and drop, and the scrollable graph pane contains multiple graphs (#3678).

39. **Ctrl + drag drop is now functioning properly when copying runtime objects from the definition tree (#5897).**

40. A warning message to indicate that signals of dimension higher than 32 may affect plotting performance has been adjusted to only be output if an output channel is connected to the signal (#5972).

41. A failsafe mechanism has been added ensure ensure that component id numbers are always unique. Unique ids are a fundamental requirement for PSCAD to function properly. Non-unique ids are detected and fixed on project load or import (#4773/#5982).

42. Components no longer disappear following a box select, ctrl + left mouse drag and then repeat operation (#4500).

EMTDC

Bug Fixes:

1. An EMTDC runtime error no longer occurs when the multiple run component is used in conjunction with the COMTRADE recorder component (#5929).

LCP

Bug Fixes:

1. The Line Constants Program now checks to ensure that the entered ground resistivity is non-zero. A zero ground resistivity was causing EMTDC to crash (#5408/5437).

Master Library

Bug Fixes:

1. Fixed an issue with the delay component when configured for a single time step delay. Previously the component was producing a 2 time step delay (#5737).
2. Fixed a regex check problem in the xy_table component. Previously it would not allow a change in table file name (#5901).
3. A trivial error in the flyby script for the 3-Phase, 4-Winding Transformer (xfmr-3p4w2) component has been fixed (#5866).
4. **The Manual Entry of Y,Z component has been modified to provide a warning (as opposed to an error, when the component is used to represent a cable, and the zero-sequence RXB data is less than the positive sequence (#5851).**
5. **An error in defining variables for XY coordinates in transmission line tower asymmetrical bundling has been fixed (#5960).**