SIEMENS EDA

Tanner™ Tools Release Notes

Software Version 2023.2
Document Revision 1

SIEMENS

About Siemens Digital Industries Software

Siemens Digital Industries Software is a global leader in the growing field of product lifecycle management (PLM), manufacturing operations management (MOM), and electronic design automation (EDA) software, hardware, and services. Siemens works with more than 100,000 customers, leading the digitalization of their planning and manufacturing processes. At Siemens Digital Industries Software, we blur the boundaries between industry domains by integrating the virtual and physical, hardware and software, design and manufacturing worlds. With the rapid pace of innovation, digitalization is no longer tomorrow's idea. We take what the future promises tomorrow and make it real for our customers today. Where today meets tomorrow. Our culture encourages creativity, welcomes fresh thinking and focuses on growth, so our people, our business, and our customers can achieve their full potential.

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Revision History

Revision	Changes	Status/Date
1	Modifications to improve the readability and comprehension of the content. Approved by Lucille Woo. All technical enhancements, changes, and fixes are listed in this document for all products in this release. Approved by Barry Dyne.	Released July 2023

Author: In-house procedures and working practices require multiple authors for documents. All associated authors for each topic within this document are tracked within the Siemens documentation source. For specific topic authors, contact Siemens Digital Industries Software documentation department.

Revision History: Released documents include a revision history of up to four revisions. For earlier revision history, refer to earlier releases of documentation on Support Center.

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Chapter 1
Configuration and Compatibility

This chapter provides information on compatibility, licensing, and system requirements for this Tanner™ Tools release.

For more information on licensing and system configuration, refer to the *Tanner Tools Administrator's Guide*.

The exact access date is July 2023.

The following issues are described in this chapter:

Windows Support

Tanner Tools are no longer supported on Microsoft® Windows® 7, effective January 2020, coinciding with the end-of-life date for Windows 7.

Tanner Tools 2016.2 and lower are no longer supported as of January 2020.

Additional information on supported platforms is available at "Installation and Application Requirements" in the *Tanner Administrator's Guide*.

RHEL Support

Tanner Tools no longer support RHEL6.8, beginning with the 2021.2 release.

SVN Support

The Tanner 2023.2 major release and subsequent update releases support a minimum SVN version of 1.7.14 (RHEL 7.9 version).

Licensing

The Tanner Tools are currently installed with Siemens Advanced Licensing Technology (SALT) version 2.1.0 and FlexNet licensing version 11.19.0.1.

This release supports the new licensing solution, Siemens Advanced Licensing Technology (SALT), and includes new licensing documentation: *Siemens Digital Industries Software License Server Installation Instructions* and *Siemens Digital Industries Software Licensing Manual for Siemens EDA Products*.

If you encounter issues, please install the latest version of licensing software from Support Center.

Shipping Files

If you are loading the third-party compatibility Tcl startup scripts, please update the file in your startup folder to the latest release version in order to allow the bindkeys associated with the custom scripts to be auto-loaded correctly upon startup.

The Tcl startup scripts are *sedit_custom_startup.tcl* and *ledit_custom_startup_tcl*. These scripts are located in the *TannerTools_<version>\FeaturesByTool\S-Edit\BindKeys* and the *TannerTools_<version>\FeaturesByTool\L-Edit\BindKeys* directories.

Broken Links in PDF Documentation - (MG595892)

Due to enhanced security restrictions with web browser PDF plug-ins, some links do not function. Links in HTML documentation are fully functional.

Clicking a link within a PDF viewed in a web browser may result in no action, or it may load the title page of the current PDF manual (instead of the intended target in the PDF manual). The unresolved link behavior occurs in all web browsers on Windows® and Linux®[1] platforms. Because of this behavior, the navigational experience of PDF manuals is compromised. PDF is ideal for printing because of its page-oriented layout.

Use the HTML manuals to search for topics, navigate between topics, and click links to examples, videos, reference material, and other related technical content.

For information about Adobe's discontinued support of Adobe Reader on Linux platforms and your available options, refer to Knowledge Article MG596568 on Support Center.

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1. Linux® is a registered trademark of Linus Torvalds in the U.S. and other countries.

This chapter contains all of the enhancements and corrected defects for this release.

For more information, refer to the individual product manuals available from the InfoHub (**Help > Help and Manuals**) or from Support Center.

Enhancements for ESI

This section lists the enhancements available in this release of the ESI application.

- **ER 55772 —** When ESI <Exit> is performed, if there are any running, stopping, or post-processing simulations, then a dialog box is displayed providing the opportunity to continue with exit, cancel exit, or wait for ESI to automatically terminate when the simulations complete.

Enhancements for Installer

This section lists the enhancements available in the Installer for Tanner tools.

- **ER 55923** — Software is now installed in *C:\SiemensEDA* by default. Previously the software was installed in *C:\MentorGraphics*. To enable the installer to see older MentorGraphics installations so they can be uninstalled, go to **Tools > Installation Preferences**, select the "Target List" tab and add the MentorGraphics folder.

Enhancements for L-Edit

This section lists the enhancements available in this release of the L-Edit application.

- **ER 34905** — GDS and OASIS import now support a layermap.

- **ER 37339** — Object Groups are now supported in L-Edit. An object group is a collection of objects linked together without creating a new cell. When a group is moved (copied, deleted, etc.), all objects in the group will be moved (copied, deleted, etc.). Any object type can be a member of a group, including other groups. Nesting of groups can therefore be done. Push into a group (Page Down) can also be performed to edit, draw, delete, or perform other operations on objects inside a group. Objects outside a group can also be added to existing groups, and objects inside of groups can be detached from their group.

  The "Group" command allows the user to choose between creating a Group, a Cell, or an Array if that is possible. The "Ungroup" command previously applied to flattening selected instances a single level. The Ungroup command is now called "Ungroup Group" operates on Groups, and no longer operates on instances. A more powerful "Flatten" command is now available, that allows the user to choose to flatten a single level, a specified level, or all levels. Flatten enhancements also includes options to flatten the selection or the entire view, excluding cells from specified libraries, and flattening arrays into instances as a single level. Other options include selecting results and allowing undo, deselecting these options can improve performance.

  "Individual Edit Mode" (IEM) allows editing of objects without the constraint of group membership. In "Individual Edit Mode" objects in groups may be operated on (moved, edited, deleted, etc) directly, without having to push into the group.

  The Selection Manager has been enhanced to show group membership. With "Individual Edit Mode" off, groups are shown as a tree, whereas with IEM on, groups are shown as a list.

  New UPI functions are available to create, move, delete, and perform a variety of operations on groups. To avoid confusion with our previous use of the term group/ungroup for creating cells and flattening cell hierarchy, the following UPI commands have been marked as legacy and will no longer run unless the #define EXCLUDE_LEDIT_LEGACY_UPI is commented out. Legacy commands cannot be run via Tcl/python: LSelection_Group, LSelection_UnGroup, LSelection_Flatten, LC_Ungroup, LInstance_Ungroup, LCell_Flatten. These commands replace those above and perform similar operations now with the more appropriate naming:

LSelection_CreateCell, LSelection_Flatten_Ex22, LC_FlattenOneLevel, LInstance_FlattenOneLevel, LCell_Flatten_Ex22.

> **___ Note ___**
>
> The new default bindkeys for ungroup group is CTRL+U and for flatten is SHIFT+U. As bindkeys are stored in user TCL files, these bindkey assignments cannot be automatically created for users that already have CTRL+U assigned to ungroup. Therefore, users should reassign CTRL+U to flatten and assign SHIFT+U to Ungroup group under **Setup > Application > Keyboard** tab in the Draw and Group Utilities Category.

- **ER 39593 —** SDL can now designate nets as any type (Power, Ground, Signal, Clock, Scan, Reset, Analog, TieHi, TieLo, TieOff). The net type is displayed in the SDL Navigator, and is used to correctly identify net type in LEF export. To set the net type, right click on the net in the SDL Navigator, and choose "Signal Type".

- **ER 40505 —** Interpreted labels are now supported. In particular, instance names with interpreted labels "[@instanceName]" are now evaluated.

- **ER 45397 —** Performance of log window is improved for large amount of data logged. This improves performance on any operation that logs many messages to the log window. In particular, save after GDS import is improved.

- **ER 50305 —** A new function has been added to assign power types to selected objects within the active layout view. This feature enables users to create patterns for power rings, power stripes, and power rails in floorplan layout view, designate them with the appropriate types, and export them with the correct syntax in DEF format. Power types may be assigned by going to **SDL > LEF/DEF > Set Power Type**.

- **ER 55777 —** New UPI functions LLayer_SetParametersEx2022 and LLayer_GetParametersEx2022 respectively have been created, similar to the earlier versions of those function, but with an additional "ShowInList" variable in the struct, which, when set to LTRUE, will set the layer as valid.

- **ER 55924 —** Selection Manager now has a column to display the Net names of selected objects.

- **ER 55824 —** Library Navigator now has context menu for "Save Selected Libraries, same as S-Edit has.

- **ER 56131 —** L-Edit now has the ability to save placement obstructions, and to export them to DEF in the BLOCKAGES section. This allows users to generate placement blockages in floorplan layout view. A new Blockage layer has been added to the "Special Layers", and placement obstructions should be placed on this layer. Only boxes and rectangular polygons will be saved.

- **ER 56140 —** GDS and OASIS import and export now automatically find a layer map file placed in the library folder. If the user types (or browses) to a file, it is used. If no file is specified, but a layermap file with name <LibaryName>.cellmap is found in any

of the libraries, it is used. If no file is specified, and no file is detected in any library, the GDS numbers in Setup Layers are used.

- **ER 57326 —** Integration of the RFPro flow has been improved. Starting RFPro from L-Edit will now automatically launch S-Edit and load the database. Upon completion of RFPro, S-Edit will then automatically load the S-Parameter subcircuit created by RFPro. A cross platform environment is now supported, with L-Edit and S-Edit on Windows and RFPro on Linux.

- **ER 57567 —** SDL is now able to write a minimal Liberty file needed for PnR tools such as Aprisa and Nitro. The streamlined liberty file includes the liberty library name and essential cell information. For each cell, it only contains area and pins info, and for pins, it only contains direction. The minimal liberty file does not contain timing, power, and other data. The Liberty file can be written from **SDL > LEF/DEF > Write Minimal Liberty**.

- **ER 57594 —** Autogen names changed from <mastername>_Auto_#_# to <mastername>_Auto_<md5 hash>. Using the previous naming convention, the same autogen could have different names under different conditions. The new name ensures that autogen names are stable. AutoGen names are normally hidden in the Library Navigator, but can be made visible by Library Navigator **Context Menu > Settings > Filters > Show Hidden Cells**.

- **ER 57671 —** Many new features have been added to support FinFet technologies. FinFet Grids are now rendered on the layout area, and all L-Edit Drawing and Editing tools now support snapping to FinFet Grids. Options of how FinFet grids are rendered can be customized through the rendering tab of Setup Layer dialog. The new FinFet features requires a new license called L-Edit Advanced.

  o FinFet Grid Setup: A new FinFet tab in the Setup Layer dialog to visualize the setup of FinFet Grid as defined in the iPDK.

  o A new command, **Setup > WSP > New WSP Def**, to define the track pattern of a Metal layer routing.

  o A new command, **Setup > WSP > New WSP Set**, to create a collection of WSP Definitions

  o A new command, **Setup > WSP > Generate Layout from WSP Def**, to generate the corresponding layout view to a WSP Def.

  o A new command, **Setup > WSP > Generate WSP Def from Layout**, to generate a WSP Def from a selected layout pattern.

  o A new command, **Setup > WSP > Export WSP Defs...**, to export WSP Defs to a CSV file.

  o A new command, **Setup > WSP > Import WSP Defs...**, to import WSP Defs from a CSV file.

- o A new command, **Draw > Draw WSP Region**, to draw a WSP Region to snap metal routing to their corresponding tracks inside it.

- o New layer operations lets one monitor the visibility, the protection and lock of WSP layers independently from the other layers.

- o A FinFet grid toolbar lets one easily enable/disable FinFet snapping, toggle a FinFet Display option, enable/disable WSP snapping, and toggle a WSP Display option.

- **ER 57856** — Performance opening a lib.defs has been improved by multi-threaded reading of the list of views to populate the Library Navigator. Performance improvements up to 10x have been accomplished, especially improved for slow environments such as reading from a drive over a network.

- **ER 57857** — Flatten has been enhanced with several options, including i) flatten to a specified level of hierarchy, ii) flatten selections or active view, iii) allow undo, and iv) select results. The last two can improve performance by turning them off. Flatten operates on instances hierarchy and does not affect group hierarchy. Objects in an instance hierarchy that are in a group will remain in the group after flattening.

- **ER 57886** — In cases where there is same cellname in multiple libraries, or the same cellname with Multiple views, GDS/OASIS export now names cells as <cellname>_<libname>_<viewname> rather than simply appending a digit on the cellname. Viewname is omitted if the viewname is "layout".A cellmap file is also written on GDS Export, both when GDS/OASIS is explicitly exported via **File > Export Mask Data > GDS/OASIS**, and also when GDS/OASIS is written for Calibre. Calibre RVE will be able to use this cellmap file to resolve ambiguous cellnames, starting in their 2023.4 release.

Enhancements for Library Manager

This section lists the enhancements available in this release of the Library Manager application.

- **ER 52288** — Library Manager now has an option to allow a user to select two schematic or symbol views and launch S-Edit Compare for these two views and display the differences.

- **ER 57739** — Library Manager is able to open any config view to launch S-Edit with SDE.

Enhancements for Licensing

This section lists the enhancements available for licensing in the Tanner tools.

- **ER 56283** — The dialog box that appears when there is a license failure on starting now has information about license servers defined, and if they could be connected.

- **ER 56808 —** Tanner Tools has been upgraded to use SALT Licensing Version 2.1.0. Clients using SALT 2.0 or greater require upgrading to Siemens License Server 2.x or greater.

Enhancements for S-Edit

This section lists the enhancements available in this release of the S-Edit application.

- **ER 33814 —** Import Spice/CDL and Import Verilog have been enhanced to generate a schematic from the imported netlist. Symbols are placed in a grid and connections are formed by placing netlabels on pins. There are no wires in the generated schematic, however the schematic can be used for subsequent netlisting and LVS, now with the PDK symbol and all its properties. For Spice import, a mapping file containing the subcircuit definitions can be specified to obtain the pinorder mapping. For import of primitive devices (transistors, etc) a Calibre cellmap file containing Lib-Cell-View mappings as well as property and pinorder mappings can be specified.

- **ER 48572 —** Added check to design check #14 to warn user when CDF or other term order is inconsistent with an interface.

- **ER 49190 —** A warning is now issued if trying to close S-Edit while an Eldo, AFS, or Symphony simulation is running, and giving the user a chance to proceed or cancel.

- **ER 51685 —** Performance of log window is improved for large amount of data logged. This improves performance on any operation that logs many messages to the log window. In particular, performance of small AFS simulations where logging would take more time than simulation is improved.

- **ER 52157 —** A new dialog box has been added to AFS PSS Noise Analysis for setup of Jitter Measurements.

- **ER 55104 —** Testbench setup has been enhanced to give greater control over where additional commands can be placed in the netlist. Additional commands can now be placed in a tab corresponding to any of the following places: i) Beginning of file, ii) Before Design, iii) After Design, iv) After Analysis, v) with each corner, vi) end of file. Additional Commands from prior releases will be placed in a tab called "Legacy".

- **ER 55550 —** A field to provide a list of libraries to exclude from validation has been added to the **Setup > Design Checks > Validation** pane.

- **ER 55938 —** The 'Simulation completed with <n> warnings ...' message is now always displayed in the S-Edit log. A TCL command "tsp log -log <logfilename> -summary" displays the summary information for the simulation.

- **ER 56912 —** Changed aspect ratio of **File > Export > Spice/Spectre** dialog box to better fit on small displays.

- **ER 57476 —** CDL Import now supports the $PINS syntax for specifying pins.

- **ER 57529 —** The default value of Design Check #24 – "Overlapping netlabel and pin" has been changed from "Warning" to Ignore". Importing a netlist to Schematic, as well as importing a Calibre View, will create symbols with netlabels on the pins, and these should not generate a warning.

- **ER 57621 —** AFS simulations now use the --ovd command line argument. Simulations that have Results page expressions containing the EZwave waveform syntax wf("<sim/Folder>Wavename") will need to be converted to the syntax var("Wavename", "Folder"). Folder is typically OP or STB.

- **ER 57833 —** Solido Design Environment (SDE) is now integrated in S-Edit. SDE provides enhanced simulation setup options over the built-in Tanner Design Environment (TDE). Users needing chained simulations, trimming, and distributed processing will be interested in SDE. SDE's Variation Designer provides advanced simulation features such as Hierarchical Montecarlo for full-chip memory statistical variation, High-sigma Montecarlo, Fast PVT for verification across corners, high-sigma verification, variation-aware design sensitivity, and automated variation aware cell-level optimization.

  A button on the Run Simulation toolbar allows users to choose between operating in SDE mode or in TDE mode. A new Config view has been added to S-Edit with a Config View Editor, to allow users to specify the view hierarchy for SDE when multiple views of a cell exist. The config view editor allows specification of Global Binding priority with a Library List, View List, and Stop List. Cell Bindings may be specified either in a tree view or table view by directly specifying the view to use, or use the inherited view list from the Global Bindings. The schematic view for the config view may be opened from the config view, using the hierarchy context of the config view.

  A new Setup SDE page has been added to allow specification of default View List and Stop Lists as well as Model files and other Simulation and netlisting parameters.

  A new SDE view has also been added to S-Edit. The SDE view stores the setup information for the SDE Testbenches. The Simulation Toolbar has been split into two toolbars, the Run Simulation toolbar, and the Simulation Results toolbar. In SDE mode the Run Simulation toolbar contains two dropdown controls, the first lists all SDE state views in the cell of the active view, and the second lists all config views in the cell of the active view. In TDE mode, there is a single drop down control that lists the testbenches for the active view, as well as Run and Stop Buttons, and a display of the number of errors and warnings for the last simulation.

  The Simulation Results toolbar contains controls for Opening the Netlist and warning logs, as well as for probing and operating point display.

- **ER 57840 —** Many enhancements have been made to Setup Simulation for AFS RF simulation for Harmonic Balance Analysis and PSS Analysis. New setup pages have been created for the following:

  o •HB S-Parameter Analysis

- o •HB Stability Analysis

- o •HB Transfer Function Analysis

- o •PSS S-Parameter Analysis

- **ER 57841 —** Many enhancements and improvements have been made to various Setup Simulation, including Simulation Options, DC Operating Points analysis, DC Sweep, Monte Carlo, AC Analysis, Noise Analysis, Stability analysis, Temperature Sweep, DC Mismatch analysis, and Corner Analysis.

- **ER 57856 —** Performance opening a lib.defs has been improved by multi-threaded reading of the list of views to populate the Library Navigator. Performance improvements up to 10x have been accomplished, especially improved for slow environments such as reading from a drive over a network.

Enhancements for T-Spice

This section lists the enhancements available in this release of the T-Spice application.

- **ER 40823 —** Improved multi-threaded performance on Linux.

- **ER 41799, 40850 —** T-Spice simulation performance has been improved on Linux, especially for temperature and parameter sweeps.

Enhancements for Waveform Viewer

This section lists the enhancements available in this release of the Waveform Viewer application.

- **ER 24207 —** Voltage probing from S-Edit to either Waveform Viewer or EZWave will now color the net in S-Edit and the waveform the same color. Changing the color of the net will also subsequently change the color of the waveform.

Corrected Problems for ESI

This section lists the fixed defects in this release of the ESI application.

- **DR 54245 —** The version of Putty installed with Tanner Tools has been upgraded to 0.78, providing compatibility with PPK version 2 and 3 private key formats.

- **DR 56235 —** DISPLAY (and all Environment variables) is now treated as case insensitive in ESI.

- **DR 56653 —** Fixed problem saving ESI settings to the registry.

- **DR 56992 —** Fixed problem in ESI resulting in the message, "Error: could not open file" when running a MC simulation.

Corrected Problems for L-Edit

This section lists the fixed defects in this release of the L-Edit application.

- **DR 53062 —** Fixed problem on Linux where many commands such as New Design, Open etc. menus and Command window would default to a random path instead of the directory the tools are launched from.

- **DR 54217 —** DEF Export now writes extension values for all coordinates of a wire with "End Style" set to Extend. Previously on the endpoint vertices had extension values written.

- **DR 55601 —** Tori and Arcs are now exported to ODB++.

- **DR 55742 —** Pick Layer now works when editing in place but picking a layer outside the cell you are editing in place.

- **DR 55836 —** Fixed problem on GDS import, when there are two layout views for a cell in "Search cells in" library, GDSII import uses different layout views randomly. Also, views named "Layout" are now given priority.

- **DR 55868 —** The net name of an object is now visible and editable on the Edit Objects dialog box.

- **DR 55965 —** GDSII Import "Search for cells in" is now updated correctly when the value is deleted.

- **DR 56032 —** Invoking Custom Layer Palette dialog will no longer reset the current palette, even after Cancel.

- **DR 56115 —** Temporary rulers no longer disappear while moving instances.

- **DR 56293 —** Improved Performance of Cell Copy with hierarchy when the top cell is open.

- **DR 56582 —** Fixed issue where **SDL > Check Connectivity** was incorrectly reported in the Verification Error Navigator when multiple views of the cell were present.

- **DR 56612 —** Fixed a problem where Mask Bias would assign data type.

- **DR 56737 —** Fixed a problem where the GDS numbers in Setup layers were used instead of the GDS layermap file for GDS Export during LVS.

- **DR 56793 —** Fixed problem where TCL parameters defined on a T-Cell were missing when the T-Cell was instanced.

- **DR 56957 —** In **Draw > Convert > Snap** to grid, instances, vias, and circles are now correctly snapping to the Mouse Grid.

- **DR 56958 —** Fixed command line -U option. Command line scripts (-u, -U, -t, -T, filename) are now executed in the order they appear on the command line, in both L-Edit and S-Edit.

- **DR 57256 —** Fixed problem where after using Duplicate and auto-increment, the entire set could not be renamed to the initial label if the rename is to the first value of the sequence.

- **DR 57360 —** Improved performance of loading and refreshing layer palettes when there are a very large number of Layer-Purpose-Pairs. Layer Palette data is now stored in *%appdata%* in the *L-Edit/SetupDesign/<design>/LayerPalettes* folder. This allows palettes to be shared between users.

- **DR 57598 —** Fixed problem when editing an object in L-Edit (Ctrl-E) to modify the number of columns or rows (usually a via array), if the existing value is deleted a pop-up error is immediately displayed saying "Enter an integer".

Corrected Problems for Library Manager

This section lists the fixed defects in this release of the Library Manager application.

- **DR 46365 —** Fixed issue where opening a new schematic view from Library Manager gives *.tmp cell not found error if a schematic view is already open.

Corrected Problems for S-Edit

This section lists the fixed defects in this release of the S-Edit application.

- **DR 47674 —** Improve performance loading large schematics with inherited connections.

- **DR 48910 —** Long delay from the end of AFS simulation until "Simulation finished" message and EZwave launch is resolved.

- **DR 49638 —** When exporting a netlist for Symphony simulations, empty subcircuit definitions are now generated for digital blocks, in order to support the mapping of pins by name.

- **DR 51581 —** Fixed problem where Import Spice with Parse Connectivity results in "missing port(s)" errors.

- **DR 52051 —** Fixed problem where tooltips over the simulation progress bar did not always appear.

- **DR 52503 —** Signals with wildcard in **Setup Simulation > Results** page now works for AFS simulation.

- **DR 53059 —** Fixed problem on Linux where many commands such as New Library, and also the Command window, default to a random path instead of the directory the tools are launched from.

- **DR 54642 —** Prevent crash when saving after renaming a cell by changing case only.

- **DR 54683 —** Fixed problem where Netset property assignment does not get exported to SPICE, unless the design is closed and reopened.

- **DR 55061 —** Testbench field is now updated after duplicating, renaming or deleting it on Properties window or by tcl.

- **DR 55363 —** Fixed problem where shorting inherited nets on top level caused shorts in subcircuit and incorrect evaluation of inherited nets in schematic.

- **DR 55620 —** On Linux, "Pick from schematic" under all applicable AFS Analyses' fields in Sim Setup can now be canceled.

- **DR 55731 —** ClioSoft error messages are now sent to the command window.

- **DR 55876 —** Fixed problem where Renamed Property names disappeared from the properties navigator when "Query" is checked.

- **DR 56019 —** The Stop Simulation behavior has changed so that the first press will attempt a graceful stop that releases licenses and closes files, while a second press will forcefully terminate the simulation.

- **DR 56174 —** Fixed problem where DC result annotation disappeared or cut off while panning around the schematic with the keyboard arrow keys.

- **DR 56180 —** Double-clicking on a label and then approving the dialog box no longer results in shifting of the entire label.

- **DR 56194 —** Deleted views are now ignored in design check as both views to check, and as views to check against.

- **DR 56270 —** Fixed reading of OpenAccess cdsTerm labels written by Custom Compiler so "annotate port" no longer appears. Replace [] with <> in port names, net labels, and evaluated labels.

- **DR 56319 —** Fixed issue where "Save All" took longer when the design is in SVN working copy and not managed compared to the design which is out of working copy.

- **DR 56790 —** Several import issues fixed and more data is now imported from ADE state files into Setup Simulation.

- **DR 56823 —** Fixed warning from '24 Overlapping net label and pin' when net label is overlapping text label in a symbol.

- **DR 56897 —** EZwave is now brought to the foreground when probing from schematic.

- **DR 57220 —** In Setup Simulation, on all pages, all controls on the "Value" side (RHS) of the setup table are now consistently displayed in English, even when in Japanese mode. These correspond to simulator options and so they are in English. This cases situations where fields were enabled/disabled incorrectly in Japanese mode.

- **DR 57412 —** Fixed problem in import of CalibreViews case of properties was not being imported correctly.

- **DR 57528 —** Corrected EZwave error "The file <name> cannot be opened" when S-Edit Waveform viewing is set to 'During' for an AFS simulation.

- **DR 57606 —** Corrected a Windows to Linux EZwave probing failure with error message "The file <name> cannot be found", when the simulation results folder name begins with a slash.

Corrected Problems for T-Spice

This section lists the fixed defects in this release of the T-Spice application.

- **DR 52436 —** Corrected BSIM4 cgtot, total gate capacitance, printed values (internal capacitance values were correct).

- **DR 52761 —** Fixed a .measure error 'boost::bad_get: failed' when measurement result values are chained into the expression for a subsequent measurement.

- **DR 53154 —** Enable use of named .print values within measurement calculations.

- **DR 57109 —** Recognize // as a comment line in netlists.

- **DR 55631 —** Corrected DC Sweep hysteresis simulation results which under some circumstances did not show hysteresis effects.

- **DR 55815 —** Corrected some noise contribution terms for M multiplicity scaling with VBIC, JFET, MesFet, EKV, and bipolar devices.

- **DR 56482 —** Fixed memory leaks and reduced memory consumption with some device models.

- **DR 56559 —** Corrected Rise=Last measurements that were 'Not Found' under certain circumstances.

- **DR 57295 —** String parameter declarations will now support str(<param_name>) syntax used by some PDKs.

- **DR 57497 —** Added support for auto-completion in the T-Spice editor using <Ctrl><Space> keystroke.

Corrected Problems for Tanner Designer

This section lists the fixed defects in this release of the Tanner Designer application.

- **DR 53224 —** The grouping of Monte Carlo measurement results into Data Sets has been corrected for certain circumstances.

- **DR 55597 —** The Waveform Viewer button will now open Eldo simulation results using display formatting specified in the associated *.swd* file

Corrected Problems for Waveform Viewer

This section lists the fixed defects in this release of the Waveform Viewer application.

- **DR 38715 —** Fixed problem where moving magnitude curves of a complex trace onto a different plot would show the deg component on the new plot.

- **DR 56052 —** The menu accelerator key bindings to drop down menus have been removed from the Japanese menus.

- **DR 56171 —** Bindkeys "Zoom In" and "Zoom Out" have been changed to "Zoom In Horizontal Around Center" and "Zoom In Horizontal Around Center". Defaults bindkeys for Zoom In Horizontal Around Center is "]" and for Zoom In Horizontal Around Center is "[". As with all bindkeys, these can be custom bound to any key as user prefers.

- **DR 57741 —** Bindkey for Save Chartbook, "Ctrl+S", is now persistent between sessions.

- **DR 55996 —** Bindkeys for **Chart > Move Curves > Up/Down** are now persistent between sessions.

Known Problems and Solutions

This section lists known problems and solutions in this release.

- Custom presentation of Library/Cell/View names is available in the L-Edit and S-Edit tools, but is not yet available in the Library Manager tool.

- **DR 57098 —** Implicit Selection is not currently available on groups.

- **DR 57382 —** The "database layers" TCL command now lists the layers in the database and their layer number. The old "database layers" command that listed layer-purpose pairs, is now called "database lpps". Scripts using "database layers" will need to be updated to use the new command. A -tcl option has been added to the "database lpps" command to output all lpps to a tcl script to save rendering attributes for lpps.

- **DR 57665 —** When you run an SDE test across corners and annotate individual corners' DC OP results, S-Edit displays only the first set of annotations. Any subsequent corner annotations fetch the same (previous) results. There is no work-around for this issue, and it will be fixed in a future product release.

Application and online help is available from technical support and documentation.

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Documentation

These release notes and the accompanying Tanner Tools documentation are available through multiple resources.

View the Tanner Tools documentation from the following locations:

- Application help through the **Help > Help and Manuals** to invoke the InfoHub documentation portal.

- On Support Center under the **Documentation** tab for Tanner Tools releases.

Third-Party Information

Details on open source and third-party software that may be included with this product are available in the *<your_software_installation_location>/legal* directory.