

# HyperLynx® Release Notes

Software Version VX.2.7

March 2020

Unpublished work. © Siemens 2020

This document contains information that is confidential and proprietary to Mentor Graphics Corporation, Siemens Industry Software Inc., or their affiliates (collectively, "Siemens"). The original recipient of this document may duplicate this document in whole or in part for internal business purposes only, provided that this entire notice appears in all copies. In duplicating any part of this document, the recipient agrees to make every reasonable effort to prevent the unauthorized use and distribution of the confidential and proprietary information.

This document is for information and instruction purposes. Siemens reserves the right to make changes in specifications and other information contained in this publication without prior notice, and the reader should, in all cases, consult Siemens to determine whether any changes have been made.

The terms and conditions governing the sale and licensing of Siemens products are set forth in written agreements between Siemens and its customers. **End User License Agreement** — You can print a copy of the End User License Agreement from: mentor.com/eula.

No representation or other affirmation of fact contained in this publication shall be deemed to be a warranty or give rise to any liability of Siemens whatsoever.

SIEMENS MAKES NO WARRANTY OF ANY KIND WITH REGARD TO THIS MATERIAL INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF INTELLECTUAL PROPERTY.

SIEMENS SHALL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, LOST DATA OR PROFITS, EVEN IF SUCH DAMAGES WERE FORESEEABLE, ARISING OUT OF OR RELATED TO THIS PUBLICATION OR THE INFORMATION CONTAINED IN IT, EVEN IF SIEMENS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

LICENSE RIGHTS APPLICABLE TO THE U.S. GOVERNMENT: This document explains the capabilities of commercial products that were developed exclusively at private expense. If the products are acquired directly or indirectly for use by the U.S. Government, then the parties agree that the products and this document are considered "Commercial Items" and "Commercial Computer Software" or "Computer Software Documentation," as defined in 48 C.F.R. §2.101 and 48 C.F.R. §252.227-7014(a)(1) and (a)(5), as applicable. Software and this document may only be used under the terms and conditions of the End User License Agreement referenced above as required by 48 C.F.R. §12.212 and 48 C.F.R §227.7202. The U.S. Government will only have the rights set forth in the End User License Agreement, which supersedes any conflicting terms or conditions in any government order document, except for provisions which are contrary to applicable mandatory federal laws.

**TRADEMARKS:** The trademarks, logos and service marks ("Marks") used herein are the property of Siemens or other parties. No one is permitted to use these Marks without the prior written consent of Siemens or the owner of the Marks, as applicable. The use herein of third party Marks is not an attempt to indicate Siemens as a source of a product, but is intended to indicate a product from, or associated with, a particular third party. A list of Siemens' trademarks may be viewed at: www.plm.automation.siemens.com/global/en/legal/trademarks.html and mentor.com/trademarks.

The registered trademark Linux<sup>®</sup> is used pursuant to a sublicense from LMI, the exclusive licensee of Linus Torvalds, owner of the mark on a world-wide basis.

Support Center: support.sw.siemens.com

Send Feedback on Documentation: support.sw.siemens.com/doc\_feedback\_form

# HyperLynx<sup>®</sup> SI/PI/Thermal

#### HyperLynx SI/PI/Thermal Problems Fixed

- dts0100933393 SDF file created by Generic Batch mode needs to be documented
- **dts0101347618** True differential IBIS [Model] Input\_diff generates errors without Vinh and Vinl
- dts0101372484 IBIS AMI eye mask adjustment eye should be passing
- **dts0101373170** Some vias look shorted in board viewer and Via Visualizer shows clearances using the auto antipad clearance when actual padstack has antipad defined.
- dts0101377646 ODB++ import gives strange results
- dts0101382585 Tcl File Viewer reports 'can't use non-numeric string as operand of "\*" during DDRx Wizard run
- **dts0101382765** Unable to open "ezwave\_cmds.txt": no such file or directory when opining EZwave with runEZwave.bat.
- **dts0101383000** Analyzed 3D EM non-existing shapes appear when creating 3D area and is also visible in advance solver
- **dts0101385268** Unexpected behavior in LineSim when saving after deleting inner layer in Stackup Editor
- **dts0101385393** The Set Model Compilation Parameters in DDRx Timing Model Editor causes unexpected behavior
- **dts0101385655** Different current density with 45/135 degree trace.
- **dts0101386912** Selection Keep Existing Project in Add or Edit 3D Area dialog does not work
- dts0101387058 Component pads are not proper shapes are missing/incomplete.
- **dts0101387314** Error: Multi-conductor system
- dts0101387316 About DSN file translation
- **dts0101388460** Unexpected behavior in HyperLynx when running an S-parameter simulation
- **dts0101388606** HyperLynx has unexpected behavior on S-parameter export if Remove Non-Functional Pads enabled
- **dts0101393940** Encountered an improper argument error in Japanese OS and Japanese menu.
- **dts0101396043** The FFS file will can't be opened by LineSim next time if we create a 3D EM model for a via

### HyperLynx SI/PI/Thermal Workarounds

• **dts0100765638** - New value of thermal conductivity set in CES stackup does not show up in BoardSim when a board is extracted from Expedition PCB through PI interface.

**Workaround**: Set the thermal-conductivity values manually inside HyperLynx, in the Stackup Editor.

• **dts0100906430** - Problem during save, EZwave warning message while exiting HyperLynx

**Workaround**: Exclude file settings.properties.lock (or this file type) from search indexing

• **dts0100941780** - HyperLynx can't simulate HSPICE 2011.09-SP2 Netlist and fails with error

Workaround: Run without VPN

## HyperLynx® DRC

### HyperLynx DRC Problems Fixed

- **dts0101365748** HyperLynx DRC component outlines are only partially translated when importing Zuken CR5000 layout with multiple component outlines
- dts0101376455 HyperLynx DRC rule displays unexpected behavior on Linux
- **dts0101379419** Vertical reference plane change misses a violation where Multi-Stitch is required
- **dts0101382488** Metal Island DRC reports an Isolated Metal on UnconCondShps in the middle of a mounting hole
- dts0101383785 HyperLynx DRC event On Open Document is not found in type library
- dts0101384443 Silk Screen when enable covers the entire board.
- dts0101384502 Stackup Technology does not match what is set in the Xpedition
- dts0101384637 Via pads on solder mask layer is not shown in CCE design
- **dts0101385831** "Mounting Holes appear to be shifted after translation from Allegro Design"
- **dts0101386052** HyperLynx DRC hangs without a proper error message in conditions with insufficient RAM
- **dts0101387025** HyperLynx DRC Stackup Editor does not follow the Unit Setting in Options Setting
- dts0101387054 Unexpected run time error
- **dts0101387524** The rule Long Stub should ignore the violating trace stubs overlapped with plane shapes
- **dts0101387677** Inconsistent names for bridged nets found between HyperLynx DRC projects opened on .pcb and the exported .cce
- dts0101388231 Pad offset is not enabled in CIBD format
- **dts0101391466** Violation Display method doesn't work
- **dts0101392116** Unexpected behavior with trying to set up user object list/constant nets/electrical nets
- dts0101394449 HyperLynx DRC Embedded rule doc link doesn't work properly
- **dts0101397470** Unexpected behavior when running the rule "Multi-layers Creepage Distance" with option "Generate Passed Results" set to "yes"

#### **HyperLynx DRC Workarounds**

#### • Design Synchronization

To synchronize a design with the data in Constraint Manager, go to Setup > Options > Constraint Manager and change the option for Constraint Manager Data Import to "Every time design is loaded". This ensures that all electrical nets, differential pairs, and model assignments comply with what is set in Constraint Manager. However, this requires that any modifications to these objects be performed in Constraint Manager.

• dts0100887937 - Promote settings dialog box doesn't display "Unit System" setting

**Workaround:** Change the "Units System" setting by loading the \*.hldset file into HyperLynx DRC and editing it using Setup/Options dialog.

• dts0100890261 - HyperLynx DRC Diff Pair DRC compares the wrong pair of vias

**Workaround:** HyperLynx DRC may fail to identify the correct via pairs for multiple blind/buried via transitions spaced very close together.

• dts010934349 - CES First Time versus Every Time

**Workaround:** "First time" use, may result in a design that has different electrical nets, diff pairs etc., than the same design with every time sync to CES. The "Every time" mode requires the user to go to CES to change data entered in CES rather than being able to override it in HyperLynx DRC.

• **dts0101041832** - Bad Copper Balancing Graphics

**Workaround:** To avoid this problem, run HyperLynx DRC in standalone and not use sCCZ stream.

• **dts0101134127** - XAC/sCCZ PCB designs with Negative Plane layers are missing plane data in HLDRC using sCCZ

**Workaround:** First copy the design, switch to Positive Plane with Dynamic Plane Data State, verify the copper area is valid, then run the DRC's as needed.

• **dts0101205724** - pdm.dll appears to be missing for Internet Explorer install directory for Windows 10

**Workaround:** Start a CMD window with administrator privilege. In the CMD window, run: regsvr32 C:\Windows\System32\F12\pdm.dll

• **dts0101270765** - Release Switcher will switch the IC Packaging/Enterprise release but HyperLynx DRC still points to the IC Packager release

**Workaround:** The Analysis Control will be launched from the tools installed last. So if Xpedition PCB is installed and then Package Designer, the XAC comes from the Package Designer install but will still work.

## **HyperLynx<sup>®</sup> Advanced Solvers**

#### HyperLynx Advanced Solvers Problems Fixed

- **dts0101345597** Metric units for current density in power scope gets replaced with imperial units
- **dts0101353711** Could not create proper pin groups as port reference (sink) pins in a specific design
- **dts0101363544** Lost connection due to licenses lost not reusing the solver buffer when you resume the simulation
- **dts0101376022** Incorrect Via Model in VX.2.5, model extracted using Full-Wave Solver
- **dts0101379511** Problem with AFS Options in cluster processing
- dts0101380428 3D Area Manager Non-passive/Non-causal models
- dts0101382284 ACIS Mesh failed when the model is cropped with boundary type ARR
- **dts0101386491** Adding series ferrite bead in PI decoupling analysis- not affecting results
- **dts0101390678** DC drop analysis results are not consistent between single board and multiboard
- dts0101394893 HyperLynx FWS projects have shorts due to polygon problem

#### **HyperLynx Advanced Solver Workarounds**

dts0101286080 - JD2 GUI not working on RHEL6

**Workaround**: The new GUI for JD2 requires GTK3, which is not included nor available for this RHEL6 platforms. Please use RHEL7.

• **dts0101173933** - Port extension does not work when source and sink are on the same net

**Workaround:** Run create valid nets to split nets in case they are broken pieces of metals connected through series components.

• dts0101360681 - Roughness settings does not correctly translate from BoardSim to HyperLynx Full Wave Solver (FWS)

**Workaround:** Set the roughness flag and model parameters in HyperLynx FWS manually.

# **HyperLynx**<sup>®</sup> **Documentation**

## **HyperLynx Documentation Problems Fixed**

None

### **HyperLynx Documentation Workarounds**

#### **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<sup>®</sup> and Linux<sup>®</sup> 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.