Agilent Technologies

Advanced Design System 2011.01

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ADS Release Notes

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The following third-party libraries are used by the NlogN Momentum solver:

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Intel@ Math Kernel Library, http://www.intel.com/software/products/mkl

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Advanced Design System Release Notes

For general information about Advanced Design System (ADS), visit Agilent EEsof product web-page at

- http://www.agilent.com/find/eesof-products

What's New in ADS 2011

Welcome to the ADS 2011 platform release! ADS 2011 has a new look and feel with new icons and major enhancements in the ADS Platform area.
You will find that much of ADS has remained the same. Our goal is that you can get oriented/comfortable with ADS 2011 in less than a day and are able to perform basic tasks as easily as before.
ADS 2011 provides

- Workspaces that help you organize and share your work
- Libraries that provide technology scoping and prevent name conflicts
- Cells that support multiple schematic and layout views

For a Getting Started video, quick tutorials and answers to frequently asked questions, see the ADS Overview .
We welcome your feedback on ADS 2011.

Key Features

Some of the key features of ADS 2011 are:

- NEW Industry's first complete Multi-technology design platform
- NEW Use Model for EM Simulations
- NEW EM Simulation Features
- *NEW Load Pull Capabilities* (cktsimldpull)
- NEW Layout Improvements
- NEW Signal and Power Integrity (SI/PI) analysis wizard for the high speed digital design flow

NEW Industry's first complete Multi-technology design platform

- NEW Library construct
  - Easily organize designs into different technology groupings
  - Prevents component name collisions between PDK's
  - Eliminates conflicts between PDK AEL customization
  - Makes it easy to utilize other designs or reference libraries
- NEW Graphical Layer Editor
  - Single location to define layers, material properties, and stackup definition
  - Easily drag and drop elements in the substrate definition

- ◦ Graphical representation makes it easier to validate stackup definition
- ◦ Easier, faster with less chance of errors
- NEW Easily combine multiple substrate technologies
  - ◦ Other technologies are easily combined within the Graphical Layer Editor
  - ◦ Combine IC in a Package or Module; Module on a PCB; etc.
  - ◦ Supports multiple stacking levels (i.e., IC on Module on PCB)
  - ◦ Supports flip chip, wire bonding, and backside mounting
  - ◦ No design flattening or layer modification required
  - ◦ Fully visualized in Layout and 3D Viewer
  - ◦ Can perform Momentum and FEM simulations on multi-substrate structures

NEW Use Model for EM Simulations

- Single EM simulation setup window replaces eight previous dialogs (used in ADS 2009 update 1 and previous versions)
  - ◦ Makes EM simulation setup easier, faster, and more accessible, requiring fewer mouse clicks.
- Reusable EM setups
  - ◦ Easy to save and restore EM setups
  - ◦ Can be provided by foundries and EM experts
- EM models are fully compatible with the new dynamic model selection
- Unified use model for Momentum, Momentum RF and FEM
- EM Simulation toolbar provides shortcuts to frequently used menus
- Job manager provides improved ease-of-use for monitoring multiple local, remote, queued or distributed simulations

NEW EM Simulation Features

- Improved EM Port View now includes port editing capabilities
- Momentum dataset stores port, pin, and net names for easier interpretation of the S-parameters
- Improved Momentum performance
  - ◦ New mesher (now with quadrangular cells) provides better convergence and speed
  - ◦ NlogN matrix load algorithm
- Improved Wirebond support
  - ◦ NEW Wirebonds can now be included in Momentum simulation
  - ◦ Shape bondwire and Jedec bondwire can now be easily edited in Layout
- Improved Momentum modeling for even more accuracy
  - ◦ Improved dielectric loss model (Svensson/Djordjevic)
  - ◦ NEW Conductor Surface Roughness model
  - ◦ NEW Calibration types: TML with zero length, SMD and delta-gap.
- NEW Advanced Model Composer can now generate a scalable EM model based on FEM simulations

NEW Circuit Simulation Capabilities

- NEW "View" construct simplifies simulation
    - Easily manage different representations of the design
    - NEW Dynamic Simulation Model Selection makes it easy to change the simulation model without modifying the schematic
    - NEW Easily create different simulation model policies to control model selection through design hierarchy
    - Provides simulation flexibility while simplifying schematics
- NEW *Load Pull Data Controller* (cktsimldpull)
    - Quickly imports one or more Maury load pull files
    - Component used directly in designing matching network
    - Easier design optimization
    - Automatic interpolation of scattered measurement data
    - Automatically display performance parameters
    - Much faster to go from load pull data to doing design and simulation
- NEW *MatlabOutput component* (cktsim) to filter and output simulation results directly to a Matlab file
- *Improved simulation performance* (cktsim) of fully linear circuits
- Improved Transmission line models (including multi-layer library models)
    - More accurate broad-band skin effect calculation
    - NEW advanced method of calculating surface roughness loss
    - More accurate calculation of Power/Ground plane loss
- Support for *TSMC Safe Operating Area (SOA)* (cktsim)

Improved Capability for Data Display

- Improved Smith Chart
    - Better display of chart values
    - Better overall look and data granularity
    - More efficient memory utilization
- Improved Data Display Template Browser
    - Real time quick search
    - Template properties can now be directly edited from the Browser
    - Improved Save As and Delete from the Browser
- More control in setting Data Display trace colors
    - Can now assign a color to a family of subtraces
    - Easier to differentiate traces belonging to different sweeps
- Enabled spectrum_analzyer() function on 64-bit Windows

Improved Usability for Layout and Schematic

- NEW Object handles improves editing efficiency
    - Selecting an object displays handles for edges, vertices, rotation, move, endpoints, and component text
    - Instantly perform the most common editing operations
    - Use with Arcs, Circles, Paths, Polygons, Polylines, Rectangles, Text, Traces, Wires, Transmission Lines, Annotations, Wire Labels, Rulers, Dimension Lines, Wirebonds (JBOND, SBOND), …

- ○ Infrastructure available to end users for PDK and other customization
- NEW Flexible design data structures
  - ○ Consistent with the most common EDA design tools
  - ○ NEW Workspace
    - ▪ Provides a personal project organization space
    - ▪ Simplifies preference settings storage
  - ○ NEW Libraries
    - ▪ Makes it easy to use multiple technologies
    - ▪ Makes it easier to share design IP
    - ▪ Eliminates component name collisions
    - ▪ Simplifies technology definition and PDK development
  - ○ NEW Cells and Views
    - ▪ Cells provide single entity to represent a design object
    - ▪ Views capture different representations of the Cell design object
    - ▪ Standard built-in Views (schematic, layout, symbol, EM)
    - ▪ Users can create View names to represent their own design variants
    - ▪ Same structure that is used the most common EDA tools
- NEW Alignment functions
  - ○ Easily align selected objects
    - ▪ Align Left, Right, Top, Bottom, Center Vertical, Center Horizontal
- NEW Layout toolbar (beta version)
  - ○ Provides single click access to commonly used functions such as vertex selection control, pin number display, etc.
  - ○ Quick access to new alignment functions
- NEW Command Line (beta version)
  - ○ Optimized for efficient keyboard entry of commands
  - ○ Over 50 common commands currently defined
  - ○ User can add their own custom functions
- NEW Extended layer definition
  - ○ Layer definition is now made up of a layer number and a purpose description
  - ○ Makes it easy to have a layer (like Metal1) where you want to differentiate the display (like RF, bias, digital, etc.)
  - ○ Maps perfectly to GDSII layer definitions
  - ○ Consistent with Cadence Virtuoso and other common layout tools
- NEW Array Ref object (AREF)
  - ○ Can create an array of a single Layout object
  - ○ Can be orders of magnitude smaller memory footprint
  - ○ Same element found in many of the large layout tools
- NEW Graphical facelift for toolbar icons
  - ○ Same familiar designs with updated graphics
- You can now set the default cursor to be crosshairs instead of the arrow.
- When entering a rectangle, you can now press the CTRL key and the first point will set the center of the rectangle and the second point will set the corner of the rectangle

Updated Genesys Link

- Genesys link works with Genesys 2010.05 SP1. Earlier versions of Genesys, including 2010.05 base version, will not recognize ADS 2011 and will only work with earlier ADS versions. Please upgrade to Genesys 2010.05 SP1.

Ptolemy Improvements

- The robust multirate scheduler from SystemVue is now the only scheduler available in ADS Ptolemy
    - Wireless DSP simulations of much greater complexity are now possible
    - A number of bugs and issues with the old schedulers have been resolved
- Export to Golden Gate is now available on Windows
    - Create Golden Gate sources and sinks in ADS on Windows
    - Export virtual test benches or component models for use in the Golden Gate simulator
- TimedDataRead component is now truly periodic
- Writing to Signal Studio files is now supported on 64-bit systems
- MATLAB co-simulation is now supported on 64-bit Windows 7
- These versions of MATLAB have been tested with ADS 2011. However, unlisted versions may and most likely will work as well.
    - On Windows: MATLAB R2008b, MATLAB R2009b, MATLAB R2010b
    - On Linux: MATLAB R2008b, MATLAB R2009b

NEW Features for Wireless Libraries

- NEW feature in CMMB library
    - NEW LDPC Encoder
- NEW feature in LTE library
    - Support LTE version 8.9.0 (Dec 2009)
    - NEW examples for User Equipment and Base Station radio transmission and reception RF tests
    - NEW LTE downlink test models for both FDD and TDD
    - NEW EVM models which are consistent with Agilent VSA 89600 software Version 12
- NEW feature in HSPA library
    - Support large transport block (TB) for HSDPA

Advances in High Speed Digital Design including Signal Integrity and Power Integrity

- The new capabilities in EM simulation listed above ([Use Model for EM Simulations](#) and [EM Simulation Features](#)) enable power integrity simulations with Momentum
    - SI/PI analyzer wizard with net-driven set up
    - NEW Hybrid fitting/convolution option for using EM results with Transient and Channel Simulator. This option is especially suited to frequency responses with low frequency structure as typically occurs in power distribution networks (PDNs)
- *IBIS-AMI model simulation* (cktsimchan) and Design Guide
- 8B10B statistical encoding support
- Improved conductor surface roughness modeling accuracy at higher frequencies
- *W-element generation* (ccdist) from Multilayer library model simulations
- *Automatic collapsing of large S-parameter networks* (cktsim) for Transient Convolution simulations

- NEW "Signal Integrity - Common Components" palette for quick access to frequently used SI/PI components

Models & Libraries

- Models
  - *NXP SiMKit 3.4 integration* (ccnld)
  - PSP 102.3.4 and 103.1.1 models
  - Mextram 504.8 model
  - BSIMSOI 4.3.0 model
  - *BSIM 4.6.5* (ccnld) model
  - *HiSIM_HV 1.2.0* (ccnld) model
  - *MOSVAR 1.1* (ccnld) model
  - *R3* (ccnld) model
  - PSPICE diode model
- *User Compiled Models* (modbuild)
  - Simplified User Interface
  - C++ compiler support
  - Support for a varying number of external nodes
  - Support of repeated parameters
  - Parameter support of vector values

Translators and Links

- Full *IFF for Cadence Allegro* (iffm) link now delivered with the ADS release
  - Now provides parametric schematic and layout transfer between the two tools
  - Automatically maintains parameter settings for transmission line elements and allows changing parameters in either tool
  - Includes component library synchronization utility
  - Requires optional product from Cadence

NEW Examples

- *MW_Ckts/ACPR_From_1_Tone_Swp_wrk* (examples)
- MW_Ckts/MMIC_LNA_wrk
- *MW_Ckts/Simple_LNA_wSP_Probes_wrk* (examples)
- *FEM/QFN_Designer_wrk* (examples)
- *MultiTech_Module/Antenna_SPDT_LNA_PA_wrk* (examples)
- *MultiTech_Module/MTM_Flow_MMIC_Chip_QFN_Package_wrk* (examples)
- *Tutorial/LPF_Design_Demo* (examples)
- *Tutorial/Using_Meas_Load_Pull_Data_wrk* (examples)
- *Tutorial/WExt_example* (examples)

ADS 2011 - Help Topics

PDF files are no longer shipped with the ADS help. If required, you can download the PDF files by selecting **Print Version of all topics** from the ADS Help home page.

ℹ️ You must be connected to internet to download the PDF files.

The following topics provide an introduction to ADS 2011 and information to get started:

- *Things You Must Know About ADS 2011* (oaqkref)
- *License Setup through Wizard* (qinstall)
- *ADS Design Environment* (adstour)
- *ADS Project Upgrade to ADS Workspace* (oaqkref)
- *ADS 2011 PDK Upgrade* (oaqkref)
- *ADS 2011 DesignGuide Upgrade* (oaqkref)
- *Using Workspace* (adstour)
- *Using Libraries* (adstour)
- *Using Designs* (adstour)

Project Upgrade to ADS Workspace

Click *here* (oaqkref) for details on *ADS Project Conversion to ADS Workspace* (oaqkref).

ℹ️ **Important**
All ADS projects and PDKs created using ADS 2009 Update 1 or earlier version (or even in previous ADS 2011 alpha releases) must be upgraded or reconverted in the latest **ADS 2011** release.

Issues Addressed in ADS 2011

ADS Desktop DRC

1. DRC manual has been improved. The new category listing helps identify the right command for a given rules configuration (number of input layers). The alphabetical command listing provides quick function lookup.
2. ADS now has a default system layer that can be used for exporting DRC errors ("ads_drc_error"). Users previously had to add a DRC layer to the layer definition. This allows designers to run DRC even if the layer definition is not editable.
3. Improvements have been made for DRC commands that export polygons. The DRC output is now associated with a single DRC error message. This behavior is needed so that AEL callbacks will be triggered only once.

ADS Desktop LVS

1. ADS Desktop LVS now uses instance reference designators to resolve ambiguity when components are connected in parallel.
2. Error messages have been improved.

Artwork Translators

1. A new layer-mapping feature has been introduced for DXF-to-layout. User is no longer required to specify a layout.lay file when importing a DXF file.
2. DXF import will use the arc resolution specified in the current preferences.
3. Mitered and curved corners in paths are retained during DXF export.
4. Text is exported faithfully from ADS to Gerber and ODB++ files.

5. Drill file can be exported independently of Gerber file for a layer.

Channel Simulation

1. The Tx, Rx, and Xtlk component family's parameters are now properly optimized and back-annotated. Previously, a bug existed that could cause the wrong parameter to be optimized.
2. The IBIS component no longer selects pins or models that use reserved words by default.
3. The IBIS component dialog now properly restores the saved "Model Selector" value.
4. Added an interpolation method parameter to IBIS components. This allows the user to choose the best interpolation mode for their model data, and provides for more accurate ADS-HSPICE results comparisons.
5. Channel characterization has been extended to allow the reflection wave to arrive at the output, providing more accurate simulation results.
6. Rx adaptive equalization is now passive in all cases.
7. Memory usage is improved when the Eye_Probe density is set high.
8. Addressed a problem that caused a simulator crash when using Eye_Probes with the Batch Simulator.
9. Rx tap coefficient values are now properly modified when running Batch Simulation and sweeps.
10. Rx component tap coefficients are now output when running Batch Simulation and sweeps.

Circuit Simulation

1. Greatly increased the maximum line length of Touchstone files to better accommodate large S-parameter files.
2. The Batch Simulator no longer crashes when selecting the "Use separate processes for each sweep point" and "Merge datasets" options together.
3. Minor usability enhancements and defect fixes to the Encrypted HSPICE simulation flow.

DSP Simulation

1. Fixed a number of significant memory leaks in the Ptolemy engine and wireless libraries.
2. A host of scheduler related bugs and issues have been resolved.

FEM simulations

1. New FEM meshing solution with increased robustness.
2. Improved port connectivity checker reduces failures during simulation process.
3. 3D views in FEM mode give more precise representation on what is simulated by the FEM engine.

Licensing

1. The bundle used to start ADS is reused for any subsequent features requested that

are already contained in that bundle, even between various independent processes for the same user, host and display (UHD); a second bundle is pulled only when the first bundle does not contain the feature being requested. This works when license preference is not set as well as when license preference is set.

2. The extra traffic back and forth to the license server is largely reduced down to once when ADS starts up. Licensing information is cached during the ADS startup process upon the first successful schematic license checkout, and all subsequent feature request will operate based on that cache and hence not query is made to the license server.

3. The extended license search control is eliminated altogether. ADS will pull license either based on license preference setting or automatically find the license, if exists in the license pool, when no bundle preference is set.

4. The remote circuit simulation (GEMX-based) and the remote Momentum simulation (pvm-based) shares the same bundle as the local ADS session from which those remote simulation get started.

5. License denial message now shows a descriptive explanation of the feature, and the products that contain that feature.

Multiple Simultaneous Jobs: Stacking
o You can use multiple Bundle or Element licenses simultaneously to run multiple simulations from a single computer
o The default is enabled for Elements and disabled for Bundles
o To use multiple bundles simultaneously, you must set an environment variable ADS_MAXIMUM_BUNDLE_USAGE=on
o The choices for this environment variable are on or off

Load Pull DesignGuide

1. Specifying a complex reference impedance on the schematic or data display now gives the correct behavior. In previous releases, the reference impedance had to be real or the behavior was incorrect. The benefit is that this allows you to attain much finer resolution of load pull contours centered at any point on the Smith Chart.

Models

1. More robust derivative calculations and loading of BSIMSOI models, which previously contributed to convergence difficulties.
2. Corrected the topology descriptions for GaAs and SDD devices, which previously contributed to convergence difficulties.
3. Fixed an issue in HICUM 2.23 that resulted in unexpected low frequency noise levels compared to HICUM L0.
4. The diode component's "Bv" parameter can now be swept properly in simulations.
5. Various improvements to syntax, model selection, and model parameter compatibility for spectre and HSPICE netlists.
6. Addressed several issues causing incorrect simulation results with the BSIM4 model.

Optimization

1. Schematic back-annotation of optimized variables and goals is more robust.
2. GOAL component information from ADS 2009 and earlier is now better preserved

when migrated to later releases. Previously some kinds of information were lost, resulting in a different initial optimization EF between releases.

3. The nominal values of optimized variables are now preserved. Previously, an optimized variable's nominal value was modified by the Optimization Cockpit if it was outside the optimization range.
4. Improvements to Optimization robustness and memory usage.

Ptolemy Co-simulation

1. Implemented several performance improvements to Ptolemy co-simulation.
2. Improved Ptolemy co-simulation convergence of very short transmission lines.

SP_Probe

1. Saving the DC Operating Point while using the SP_Probe component no longer results in a simulator crash.
2. SP_Probe noise parameters can now be used successfully with Tuning and Optimization.
3. Memory usage is reduced when tuning and optimizing SP_Probe components.

X-parameters

1. The XnP component's fundamental frequencies can now be explicitly defined.
2. When an XnP component is simulated with NVNA-measured X-parameters using polar interpolation, the simulator now returns correct DC results.
3. Addressed a bug that could cause datasets created by the X-parameter Generator to be incomplete. GMDIF files were unaffected by this bug.

Known Issues in ADS 2011

For an updated list of Known Issues, refer to the Release Notes available on the ADS download page.

Circuit Simulation Known Issues

1. If the "Rough" parameter on a Microstrip or Coplanar Waveguide library substrate is set to a non-zero value, the new Multi-level Hemispherical surface roughness model will be used by default. Designs that are migrated from previous releases will show more accurate, but different simulation results at high frequencies. To obtain the same result as previous releases, set the substrate's "RoughnessModel" parameter to "Hammerstad."
2. After converting a design containing a Dynamic Link instance, the first simulation will fail. Subsequent simulations should succeed.
3. Dynamic Link instances that have been converted from previous versions of ADS should be deleted and regenerated. Until the instance is regenerated, the following features will not work: pushing into the Cadence subcircuit, getting Cadence design variables, and annotating DC results to the Cadence schematic.
4. Running a W-element extraction in conjunction with an S-parameter simulation on a 64-bit machine will result in a simulation error.

Workaround: Run the W-element extraction and S-parameter simulation separately, or run the combined simulation in 32-bit compatibility mode.

Documentation Known Issues

1. The video demos are not working in Internet Explorer (IE)
   Workaround: To watch the videos in IE, right-click and select **Save Target As** to save the video.
2. To view *ADS 2011 Quick Start Tutorial* on Linux and Solaris, please refer to the Adobe Flash Player System Requirements .
3. On SuSe SLES 9.x system with Japanese localization set as the default, the ADS License Setup Wizard help will not appear properly.
   Workaround: Use FireFox browser (and not the default Kounguor web browser) and load the generic Japanese True Type font from the Linux community sources.

EM Simulation Known Issues

1. Design kits generated with EMPro containing 3D components will have to be converted using the de_convert_3D_component() tool. Close all open workspaces. If the 3D component is contained in a zip file, unzip it using a regular unzip program, not using the 'Unzip Design Kit' menu. From the main window start Tools->Command Line. Enter the command de_convert_3D_component() and click 'Apply'. Follow the instructions. Once a design kit is converted, you can use it both in ADS2011 and older versions of ADS. However, you should not add components to a kit that already has been converted.
2. Box, waveguide or symmetry planes are not supported (ignored) in EM/Circuit co-simulation and layout-lookalike symbol generation.

Export to GoldenGate Known Issues

1. In ADS 2011 ARF_ExportPort has been removed and its functionality has been replaced with the new ARF_Export controller. The automatic migration process in ADS will remove the instances of ARF_ExportPort from GoldenGate source or sink designs and insert the ARF_Export controller. However, there is a known issue with the RFPortNum parameter. In some designs with baseband ports the parameter may be set incorrectly after the migration. The user will need to set the RFPortNum parameter to the RF port number, or to zero if there are only baseband ports in the design. If the parameter does not match the actual RF port number, the GoldenGate simulation will fail with an error "FCarrier specified is not similar to the carrier frequency of RF signal in Ptolemy," because GoldenGate treats baseband and RF ports differently.

Graphical Cell Compiler Known Issues

1. Running the GCC Compiler is not supported in ADS 2011.01. However, existing GCC generated artwork macros created in previous releases (such as ADS2009 Update 1) can be converted and run in ADS 2011.01. If you need to generate a new GCC artwork macro, you will need to create it in ADS 2009 Update 1 and convert it to ADS

2011. We are committed to the long-term support of the GCC Compiler. We expect to deliver full GCC compiler support in the year 2011 timeframe. At that point, you will be able to directly create new GCC artwork macros.

IFF for Cadence Virtuoso Known Issues

1. The IFF import/export with Cadence Virtuoso is no longer supported. IFF for Cadence Virtuoso is primarily SKILL code which runs within Virtuoso and is independent of ADS. The SKILL code to add "IFF Import" and "IFF Export" menus in Virtuoso is no longer shipped with ADS. The IFF link for Virtuoso from previous ADS releases should still work as well as before with ADS 2011.01. Although OpenAccess interoperability between ADS and Virtuoso is not supported with ADS 2011.01, OpenAccess will be the data interchange mechanism in the future. The general IFF link (export and import) from ADS continues to be an important supported interface for 3rd party PCB tools. This is currently supported for Cadence Allegro, Mentor Expedition, Zuken CR5000 and more.

Installation Known Issues

1. On SuSe SLES 9.X systems with the default localization set to Japanese, the text under the installer will not display properly. The workaround to this issue is to select "English" under the initial installation screen or load generic Japanese true type fonts from the Linux community.
2. On Windows systems, if you've installed a pre-released version of Advanced Design System 2011.01 and then try to install the current version or a newer version of the ADS 20011.01 release, you can get the warning stating "Previous Version Detected" even through you've uninstall the current version properly. **Workaround**: To get past the "Previous Version Detected" message while installing, you need to delete the file C:\Program Files (x86)\Zero G Registry\ .com.zerog.registry. On 32-bit systems, the path to this file is C:\Program Files\Zero G Registry\ .com.zerog.registry. The directory Zero G Registry is a hidden folder so you need to turn on "Show hidden files…   On Windows 7, you can get to this setting under Control Panel\Appearance and Personalization\Show hidden files and folder

Layout Known Issues

1. Change in "Show Physical Interconnect" behavior
   This is a Layout function that can be found under the Tools->Check Connectivity menu. There were specific types of physical connectivity that were detected in ADS2009Update1 that are not detected in this release. There are two scenarios where physical connectivity is not detected.
   - When there is physical overlap between two components or subcircuits. An example is where two transmission line components physically cross each other, but are not connected at their pins. Even though they are physically touching, they will not be shown as connected.
   - When there is physical overlap between a component (or subcircuit) and a primitive shape on the same layer (i.e. rectangle, polygon, circle, path, trace). If they are physically touching they will not be shown as connected UNLESS the primitive object also overlaps or touches a pin from the component/subcircuit.

All other scenarios will be detected as connected (such as primitive objects that overlap or touch each other, primitive objects that touch or overlap a component/subcircuit pin, or two components/subcircuits that are connected at their pins.

The previous ADS2009Update1 behavior will be restored in the next release.

Licensing Known Issues

1. If you are using ADS 2011 license with 518 hotfix of ADS 2009 Update1 it will not work.
   Upgrade to 520 hotfix, or set the AGILEESOFD_LICENSE_FILE variable to point to @localhost. With this both hotfix 518 of ADS 2009 Update1 and ADS 2011 will run from same license(ver 2.9).
2. The "sleep" mode is not supported, and ADS would behave unpredictably if you leave it on during the sleep mode-- you will need to reboot your PC to ensure a proper running session again. This is a known restriction with FLEXlm. We strongly recommend you to disable the "sleep" mode on your Windows 7 or Vista computers. The "hibernate" or the "stand-by" mode works fine.
3. Node-locked licenses are not supported with Remote Desktop Connection (RDC). This is a known limitation with FLEXlm. In order to use RDC you will need to obtain floating licenses.
4. If you encounter a license error such as "cannot connect to THIS_HOST failed" while trying to setup your licenses for ADS 2011, check to see if you have a license server from an earlier installation of EEsof products already running on your local system . If this is the case kill that local license server (lmgrd and agileesofd) and then try setting up your ADS 2011 licenses again. On Windows bring up the Task Manager to find and kill any older EEsof license server processes.

PDK Known Issues

1. All cells in a library are listed in the library browser and there is no way to exclude them from the list.
2. Component Pins may not be shown connected by flylines in layout.

Ptolemy Known Issues

1. Bus naming at the input of disconnected component instances may be missing after conversion.
2. The DSP components that have been listed as obsolete in ADS Ptolemy for many years have not been converted to ADS 2011. These components must be replaced with the recommended updated components, e.g. FTTAnalyzer and SpecAnalyzer must be replaced with SpectrumAnalyzer or SpectrumAnalyzerResBW, etc. Please refer to ADS 2009 Update 1 documentation for details - each of the obsolete models has a note on how to update it.
3. MatlabLibLink and MatlabLibLinkCx components have been made obsolete and migrated to Matalb_M and MatlabCx_M. However, the user may need to adjust the parameter formating post-migration.

Wireless Simulation Known Issues

1. Converting previous saved wireless designs to ADS 2011:
    1. Previous saved examples may lose parameters after conversion.
       Workaround: Save the design again in ADS2009 Update 1 format then convert them to ADS 2011 workspace again.
    2. When opening converted examples, some wireless models run into error and need to be reloaded.
       Workaround: manually picking up them from the palette to replace the old ones.
    3. LTE DL/UL EVM models have been updated to use the same kernel as VSA 89600 Version 12. The parameters and data output to DataSet are different from ADS 2009 Update 1.
       Workaround: manually reset EVM's parameters and change the DDS according to new DataSet.

ADS License Setup in ADS 2011

Before starting ADS, follow the steps below to complete the license setup:

1. Obtain the version 2.9 license file (as license version prior to 2.9 will not work with ADS 2011). To receive the license file please contact the Agilent Field representative.
2. Save the license file on your computer (preferably, outside the ADS installation folder).
3. Start the interactive ADS License Setup Wizard to set up your personal ADS licenses. For more information, see *License Setup through Wizard* (qinstall).

For advanced ADS users who are setting up one or more networked license servers, we recommend the following procedure to configure each license server manually:

- You must use the latest version of license utilities (such as, lmtools, agileesofd, and lmutil). These utilities can be accessed from the following locations:
    - For Windows, `C:\Program Files\Agilent\EEsof_License_Tools`.
    - For Unix/Linux, `<ads_install_folder>/EEsof_License_Tools`.
- To start your local license server manually, enter the following in a command line window (from the location listed above):
  lmgrd -c path_to_your_license_file
- To stop your local license server manually, enter the following in a command line window (from the location listed above):
  lmutil lmdown -c path_to_your_license_file
  -or-
  lmutil lmdown -c @localhost
- To query the status of your local license server manually, enter the following in a command line window (from the location listed above):
  lmutil lmstat -c path_to_your_license_file
  -or-
  lmutil lmstat -c @localhost

For advanced ADS users, to change your license file or license server manually (do not use the License Setup Wizard):

- Set the environment variable ADS_LICENSE_FILE to point to the new license file or license server you want to use. Note, if your new license file requires a license server you must first manually stop your existing EEsof license server, and then restart it with the new license file.
- Alternately you can directly edit the ADS_LICENSE_FILE setting in one of the following registry locations:

OS	Location	Variable
Windows 7/Vista/XP	HKEY_CURRENT_USER\SOFTWARE\Agilent\EEsof License Configuration	ADS_LICENSE_FILE
Linux/Solaris	$HOME/.eesoflic	ADS_LICENSE_FILE

> **Note**
> LINUX: The FLEXnet v11.9 comes with ADS 2011.01 installation requires Linux Standard Base (LSB) 3.0 in order to function on 32-bit and 64-bit Linux platforms. This is applicable to both RedHat and SuSe.

License Setup Wizard

Setting up your personal ADS license is very easy now with the new ADS License Setup Wizard. This wizard provides easy to follow instructions for setting up your ADS licenses for your personal computer. It starts automatically on launching ADS and will detect if your license setup is not complete. Alternatively, you can start the wizard manually:

- Windows Version: Choose **Start > All Programs > Advanced Design System 2011.01 > ADS Tools > ADS 2011.01 License Setup Wizard**.
- Windows Command Prompt: From command window, go to %ProgramFiles%\Agilent\EEsof_License_Tools\bin directory and type `aglmwizard`. **Example**

```
C:> cd C:\Program Files\Agilent\EEsof_License_Tools\bin
C:\Program Files\Agilent\EEsof_License_Tools\bin> aglmwizard
```

Linux Version: Go to your $HPEESOF_DIR/EEsof_License_Tools/linux_x86_64 directory and type `aglmwizard`.
For more information, see *License Setup through Wizard* (qinstall).

License Configuration

If you run into a problem setting up your licenses using the License Setup Wizard, manually clearing out the wizard's registry entries will allow a fresh start so that you can then proceed to configuring your licenses using the wizard from a known state. Clear out the value or file located in the following registry locations:

OS	Location
Windows 7/Vista/XP	HKEY_CURRENT_USER\SOFTWARE\Agilent\EEsof License Configuration
Linux/Solaris	$HOME/.eesoflic

Licensing on Windows

When you install a local license server on Windows, using the License Setup Wizard, a service is installed to restart the license server when you reboot your machine. If this automatic restarting of the license server fails after reboot, the next time you launch ADS 2011.01 the license wizard will automatically be invoked and restart your license server which will remain in effect until your next reboot. This one time restarting of your local license server only occurs once, the first time after you reboot and launch ADS 2011.01, and will not reoccur is subsequent launches of ADS until the next time you reboot your machine.

Workaround: It is recommended that you only use ADS 2011.01 with your new v2.9 licenses that you receive and keep your other existing license configurations for any previous releases intact and separate for the time being. Do not point AGILEESOFD_LICENSE_FILE setting for your older releases of ADS to the new license file.

> **Notes**
>
> 1. ADS 2011.01 now uses the new environment variable ADS_LICENSE_FILE instead of AGILEESOFD_LICESNSE_FILE to specify the license server path. If you are using License Setup Wizard to setup your ADS license, the environment setting is taken care of by the License Setup Wizard.
> 2. If you are using combo license (license with version 2.8 and 2.9), you may come across license denial messages recorded in the license activity log file. There is no action required as this is expected behavior due to combo license. It does not have any impact on the ADS functionality.