AWR Design Environment Known Issues – Version 7.52 Release

This document describes known issues within the production software. Each issue has a reference number. If this number is followed by an asterisk (*), there is a Knowledge Base entry that provides more information on the issue. To view the information, go to the AWR Knowledge Base and search for the listed issue number.

API

- Visual Basic scripts may not work when more than one instance of the same major version (e.g. 6.5x, 7.0x, 7.5x, etc) AWRDE is open. Scripts always operate, however, on the first project opened (Issue # 4760*).
- Accessing objects such as schematics, system diagrams, or graphs in the API with pure numeric names (for example "1" or "4"), does not work properly since the API reads these as indices rather than object names. For example, if your schematic name is “1” the API cannot select this schematic by name (Issue #10328).

Back Annotation

- INET I and J annotations are placed on top of each other if both are enabled. You should only enable one of these annotations at a time (Issue # 8652).
- Voltage annotations no longer display at each NCONN element (Issue # 8813).

DRC

- The NOTCH DRC rule sometimes reports false errors (Issue # 7036).
- If you close and reopen the DRC results window, the cell-based DRC results do not display. You should run the DRC again to display the cell-based DRC results (Issue #10387).

Graphs

- Elements from the **Libraries** category of the Element Browser are not shown on graphs that use "All Sources" as the measurement source (Issue # 8785).
- Plotting 1000+ traces on the same graph may cause problems displaying all the markers on the graph (Issue # 8984).

Import/Export

- When sharing projects and symbols there are significant issues with hierarchy and load order. Please contact AWR Support prior to moving designs with hierarchy to new projects. (Issue # 6809).
- When exporting EM documents, set the simulation frequencies on the EM document (in the EM document options, clear the **Use Project Defaults** checkbox on the **Frequencies** tab) so the structure won’t be re-simulated when you import into a new project (Issue #10595).

Installation/Licensing

- The *license_status.txt* file is no longer located in the program directory. To locate the file choose **Help > Show Files\Directories**. Double-click the "Temp" directory to open it and access the file. You can also choose **File > License > Configuration** and click **View Status** to see the file.
- If you have multiple AWR software versions (e.g., 6.53, 7.05, and/or 7.5) installed, when you remove one version, your registry entries may change such that the remaining version won't run correctly. To correct this, repair the installations starting from the oldest. For version 6.53, run the *Register.bat* file in the AWR

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installation directory. For versions 7.0X and 7.5, run the installer **.msi* file and run the Repair option (Issue # 8754).

- On some computers, two system DLLs are unregistered and generate a warning message when you start the AWRDE. We have not yet determined how these DLLs are becoming unregistered. To fix this problem, open a command prompt window and type:
  Regsvr32.exe %Windir%\System32\OleAut32.dll
  Regsvr32.exe %Windir%\System32\Ole32.dll
  Start the AWRDE again and the problem should be fixed (Issue #10267*).

Layout

- Projects opened without a layout feature (MWO-100 for example) will not save any layout information previously saved in the project. If using layout, you should avoid using AWRDE features that don't include layout (Issue #9266).
- The Stretch to fit function does not operate with SCTRACE elements at 45-degrees (Issue # 6803).
- When changing model parameters to a variable, assigning the variable to the model before the variable is created causes an incorrect layout display. To fix this problem, create the variable first, and then assign it to a model parameter; or save, close and reopen the project (Issue # 9021).
- When stretching a polygon segment with obtuse angles (a segment midpoint, not a vertex) that is non-orthogonal, stretching can create a bad polygon. To avoid this problem you can stretch the two vertices for the segment by the same amount or use the Stretch Area command (Issue 10412).
- The Snap to fit function does not work well with Bond Wire models. You should edit the wires without this function (Issue # 6089).
- When running DRC, **Run Inets Short Detector** can run the application out of memory. If you are not using iNets, clear this checkbox in the Design Rule Check dialog box when running DRC (Issue #10477).

Models

- The OSCTEST2 model does not pass DC properly. If DC needs to pass through this model, you must put a large inductor across the nodes of the model (Issue #9236).
- When using nonlinear controlled sources in HSPICE, the SC parameter does not work properly. If using this element with HSPICE, keep this parameter set to 1 (Issue #10553).

Simulation – APLAC

- The save and restore results mechanism does not function for APLAC HB simulation (Issue #10274).

Simulation – EM

- The X-model for the CPWTEEX model is not working correctly if you use very large geometries. Contact AWR Support if you need an X-model for your process (Issue #9231).
- EM layout has changed how the layout is drawing when used as a schematic subcircuit. Ensure that the layout is correct. Note that CPW structure types are most affected (Issue #9307).
- Cancelling certain long EM simulations may be difficult. After clicking **Cancel**, if cancellation doesn't occur quickly, open the Task Manager (press **Ctrl-Alt-Delete**), click the **Processes** tab, select "DenseMtxSolver.exe" from the **Image Name** column and click the **End Process** button (Issue #9105).
- When directly exporting DXF files from an EM layout with shapes on autogenerated layers (layer names preceded with a + symbol), AutoCAD will have trouble opening the DXF file. Contact AWR Support for a work-around to this problem (Issue #10427).

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- Via ports should not use a via extent other than 1. If you need to get a via port to the bottom of your structure, use vias for all of the layers except the bottom and then use a via port (Issue #10413).

Simulation – Extraction

- The EXTRACT block cannot be used for an EM optimization. The layout is not snapped together for each optimization iteration and this can cause the EM structure created from extraction to be incorrect (Issue # 6274).
- EM extraction won't function when using a subcircuit with a layout cell assigned to it. Extraction will push to the bottom of the circuit hierarchy and skip the artwork for subcircuits (Issue # 6955).
- EM extraction is not made dirty when a STACKUP in the Global Definitions changes. You can delete your EM structure to force it to be re-created or right-click on the EM Structure and choose **Force Resimulation**. The latter method keeps all of your EM options (Issue # 7739).
- When performing extraction using EMSight, you should inspect your schematic layout and EM layout before simulation by right-clicking in the Project Browser on the schematic for extraction and choosing **Add Extraction** (Issue #10304).
- Sometimes Automated Circuit Extraction (ACE) may fail during the first simulation. You can run the simulation a second time or right-click on the EM document for the extraction and choose **Force Resimulation** (Issue #10406).
- EM extraction cannot use different x and y grid settings, even if set differently on the EXTRACT block. The smaller number is always used for both x and y grid settings for the EM document (Issue #10547).

Simulation – Linear

- Changing the name of a schematic makes the simulation dirty and requires a resimulation (Issue # 1253).
- Swept variables do not work with PORT_TN, a network terminated port. (Issue #9098).

Simulation – Nonlinear

- Every element has a minimum impedance set under **Options > Default Circuit Options**, the **Circuit Solvers** tab, **Minimum series resistance**. Every source has default impedance, a series resistance for voltage sources and shunt resistance for current sources, which are controlled under **Options > Default Circuit Options**, the **Harmonic Balance** tab, **Advanced** button. You can change the **Series Source res. (Ohm)** setting. See the Knowledge Base for an example that explains all of the conductance settings in the AWRDE.
- In circuits with sinusoidal inputs, the phase of nonlinear measurements (e.g. Xcomp, Xfft, and Xharm; where X = I, P, or V) for all internal simulators like HB and Linearized HB, is referenced to the source angle minus 90deg, and must be compensated for manually (Issue # 8789).
- By default, all current sources have a 1e6 resistor shunted across the source. This may cause problems when going into a high impedance. You can change the resistance in **Series Source res (Ohm)** in the Advanced HB Options dialog box accessed by choosing **Options > Default Circuit Options**, the **Harmonic Balance** tab, **Advanced** button (Issue # 7118).
- If running optimization with many iterations and an HSPICE or APLAC simulator, you may run out of memory. You can view the Task Manager to monitor the amount of additional memory consumed at each iteration. If significant, you should run smaller numbers of optimization iterations, save, close and reopen the project (issue #10556).

Simulation – VSS

- Node properties are not propagated in a feedback loop unless the DELAY block is the last element in the feedback path (Issue #10417).

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Tuning/Optimization

- Using optimization and techniques to swap subcircuits sometimes results in incomplete optimizations. (Issue # 9066).
- When duplicating a yield goal, you cannot double-click on the goal on the graph to edit it. To do so you need to first move the yield goal slightly to edit it. (Issue 10594).

User Interface

- Measurements can be reordered on a graph by pressing **Alt**-**Up/Down arrow**. This keystroke does not work correctly if there are duplicate measurements for a graph (Issue # 8066).
- The Project folders feature does not function for system diagrams, EM structures, or yield goals (Issue # 8071).
- Model warnings are cleared after they display a single time when linear simulations are performed on a schematic with only linear models. To redisplay a warning, you can either move something in a schematic or place a nonlinear model in the schematic (such as an SDIODE with both nodes grounded) (Issue # 8713).
- Data plotted from data files does not display on a graph when using simulation filters (Issue # 8992).
- Copying elements to the Windows Clipboard (using **Ctrl-C** or **Edit > Copy**) in one major version (7.0X, 7.5X, etc) and pasting into a different major version is not supported. To do so, save the project to the target version and then copy and paste between versions (Issue # 7799).
- Linked items (for example, schematics and netlists) cannot be placed in project folders (Issue #9337).
- When using switch views, if you have a linear and nonlinear view for a model, make sure the primary subcircuit is the linear network and then make any switch views have the nonlinear network (Issue #10576).

XML

- XML library elements cannot yet use the PORT_NAME element (Issue #9452).

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