Release Highlights for CAM350 Product Version 11.0

Introduction

CAM350 Version 11.0 is a major release that introduces new functionality, including Intelligent CAD Data DFM checks for Streams RC, IPC-2581 support for Import and Export of Panel data, and support for cutouts for Board Outlines.

New Functionality

The following functional enhancements are contained in CAM350 Version 11.0

- ✓ **Advanced DFM Checks for Streams RC**
    - o **Signal Checks**
    - o **Negative Plane Checks**
    - o **Solder Mask Checks**
    - o **Paste Mask Checks**
    - o **Silkscreen Checks**
    - o **NC Data Checks**

- ✓ **Intelligent CAD Data Properties**
    - o **Pin Properties**
    - o **Via Properties**
    - o **Tool Tolerances**

- ✓ **Multi-Board Panel Placement Wizard**
    - o **Automatic Placement of Multiple Designs in a Panel**
    - o **Panel Editor Support for Venting a Multiple Design Panel**

- ✓ **IPC-2581 Import and Export of Panel Data**

- ✓ **Board Outline Support for Cutouts**

- ✓ **Streams RC User Interface Enhancements**

Advanced DFM Checks for Stream RC

Intelligent CAD Data DFM Checks for CAD Data Types

Streams RC for DFMStream and CAM350 is updated to perform DFM checks between intelligent CAD Data types. Intelligent CAD Data formats, including IPC-2581, ODB++ and PADS ASCII formats, can transfer intelligent EDA data. DFMStream and CAM350 are updated to interpret the CAD data and perform specific DFM checks based on the CAD data types. Examples of CAD data types include pin types (Through, SMD, Pressfit), via types (Through, SMD, Blind, Buried, Laser and Thieving), hole types (Through, Blind, Buried, Laser, Back Drill, and Dual Drill). Further, ICT Test Point status is assigned to pins and vias.
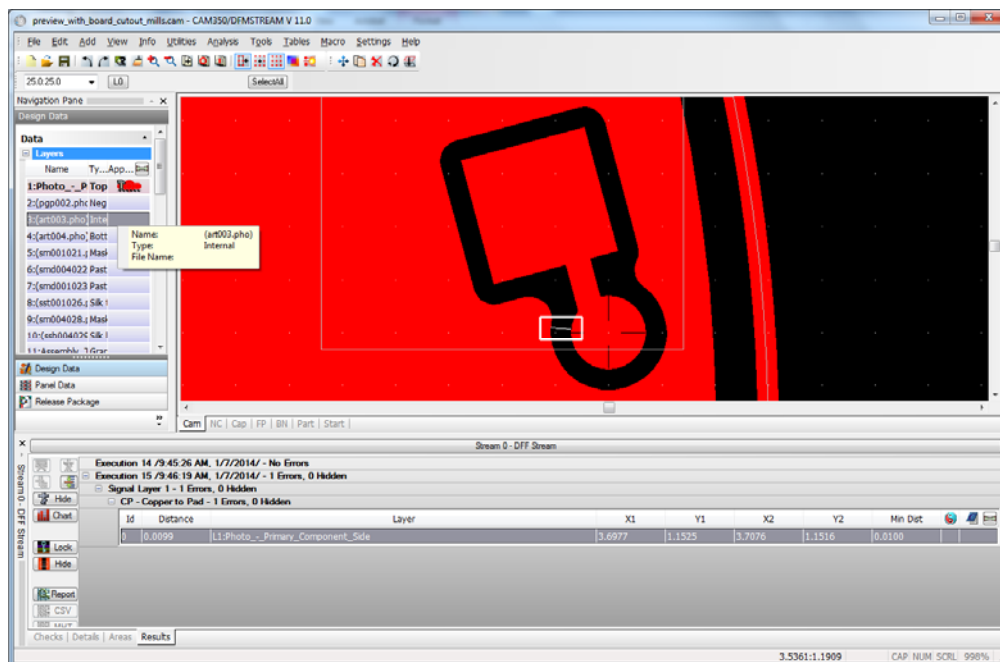
<u>Signal Layer Checks</u>

New DFM Checks are defined for Signal Layers. Groups of checks include
o   Board Outline Spacing
o   Copper Spacing
o   Pad Spacing
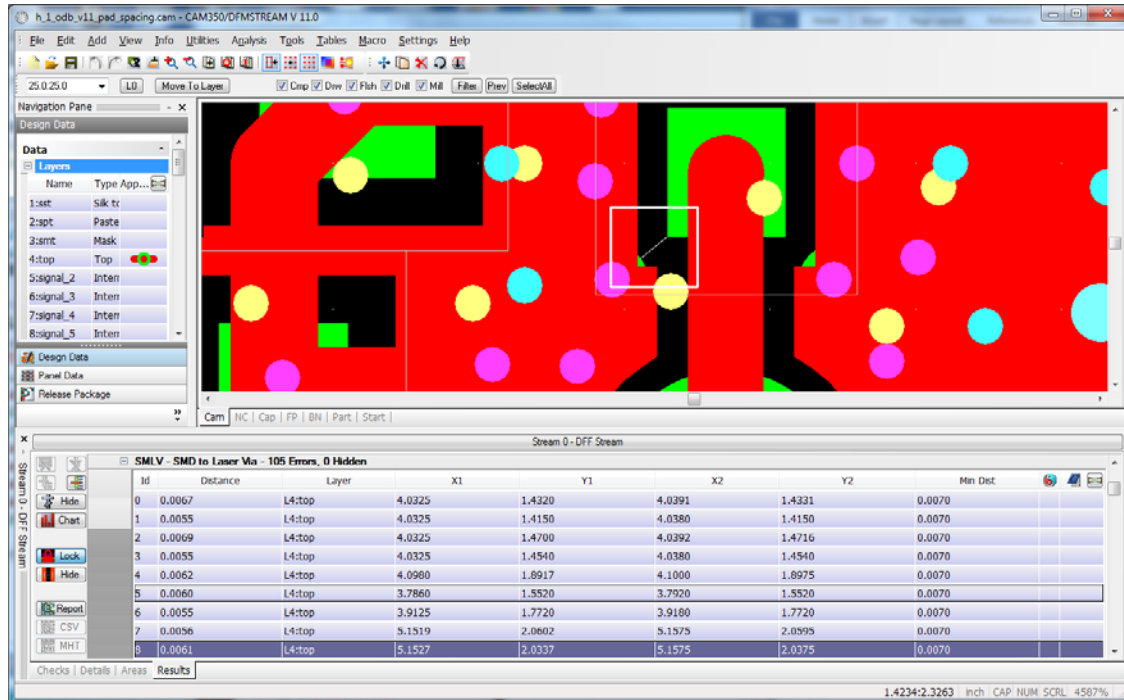o   Drill Spacing
o   Annular Ring Checks

Signal Layer - Board Outline spacing checks include Copper to One Up Border, Copper to Rout, and Copper to Mill Tab.
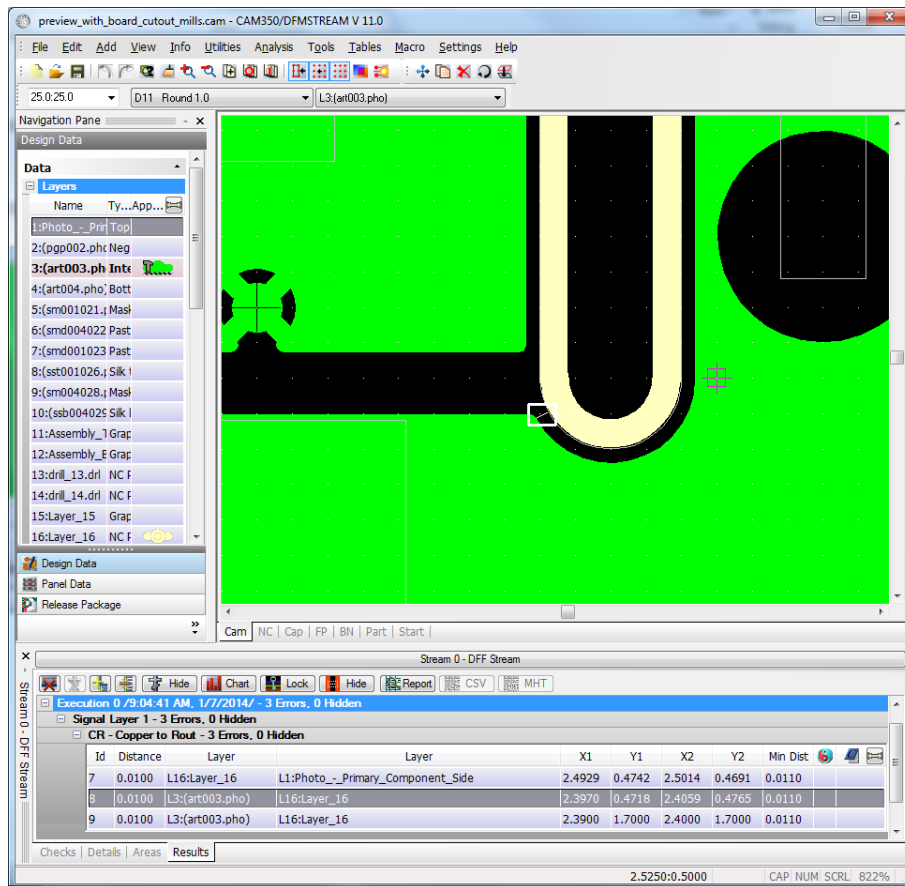
Signal Layer - Copper spacing checks include Track to Track, Tract to Copper, Copper to Copper, Track to Pad and Copper to Pad.

Signal Layer - Pad spacing checks include Flash to Flash, Component Pin to Component Pin, SMD to SMD, Via to Via, Laser Via to Laser Via, Through pad to Through pad, SMD to Via, SMD to Laser Via, SMD to Through pad, Via to Through pad, and Laser Via to Through pad.

Signal Layer - Drill spacing checks include Unplated Through Hole Drill to Copper, Unplated Through Hole Drill to Pad, Unplated Through Hole Drill to Track, Back Drill to Copper, Back Drill to Pad, Back Drill to Track, Through Hole Drill to Copper, Through Hole Drill to Pad, Through Hole Drill to Track, Via Drill to Copper, Via Drill to Pad, Via Drill to Track, Laser Via Drill to Copper, Laser Via Drill to Pad, and Laser Via Drill to Track.
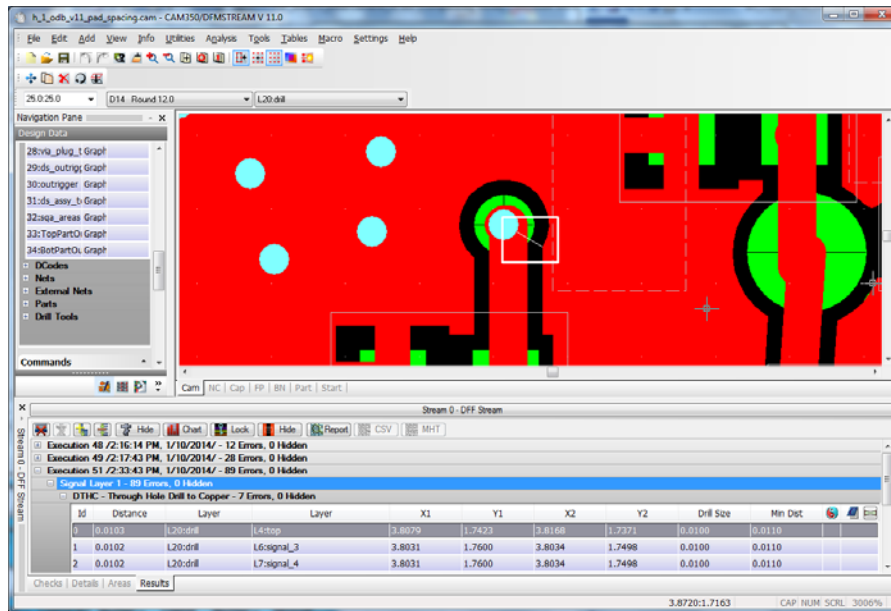
Signal Layer - Annular Ring checks include Component Pin Pad to Drill, Pressfit Pin Pad, Via to Drill, Laser Via to Drill, Blind Via to Drill, Buried Via to Drill, and Pad to Unplated Drill.
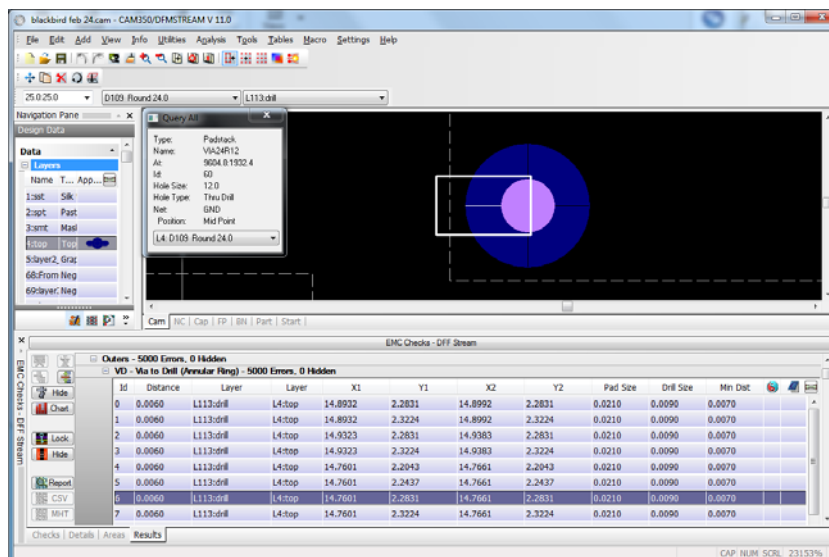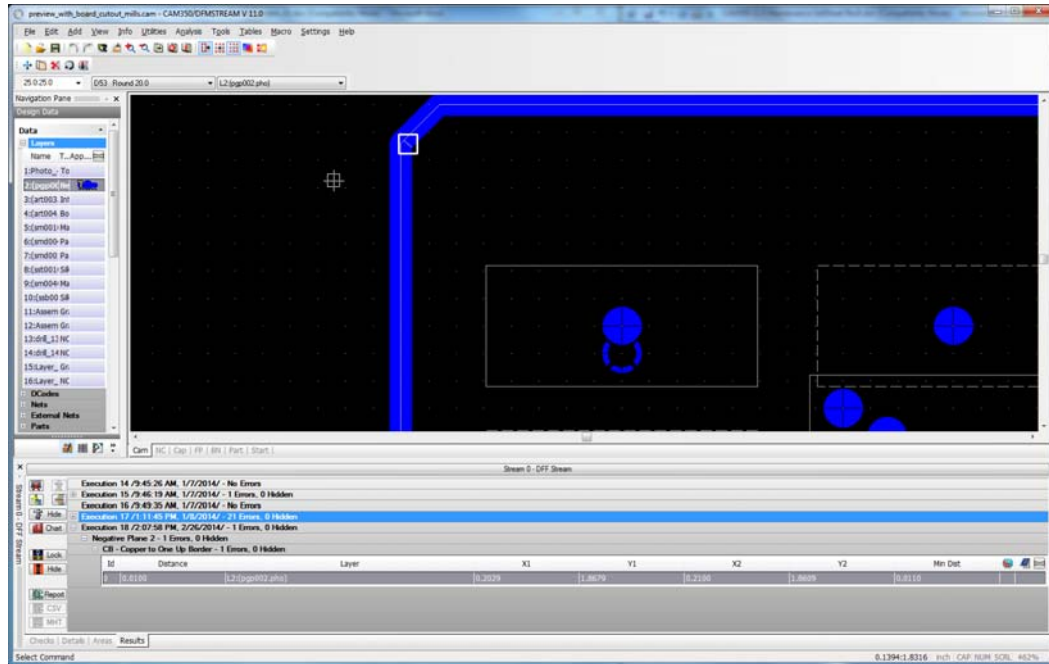

Negative Plane Layer Checks

New DFM Checks are defined for Negative Plane Layers. Groups of checks include
o   Board Outline Spacing
o   Copper Spacing
o   Pad Spacing
o   Drill Spacing

o   Annular Ring Checks

Negative Plane - Board Outline spacing checks include Copper to One Up Border, Copper to Rout, and Copper to Mill Tab.

Negative Plane - Drill spacing checks include Through Hole Drill to Copper, Via Drill to Copper, Laser Via Drill to Copper, Updated Through Hole Drill to Copper, and Back Drill to Copper.

Negative Plane - Annular Ring checks include Pad to Drill, Via to Drill, Laser Via to Drill, Blind Via to Drill, Buried Via to Drill, and Pad to Unplated Drill.
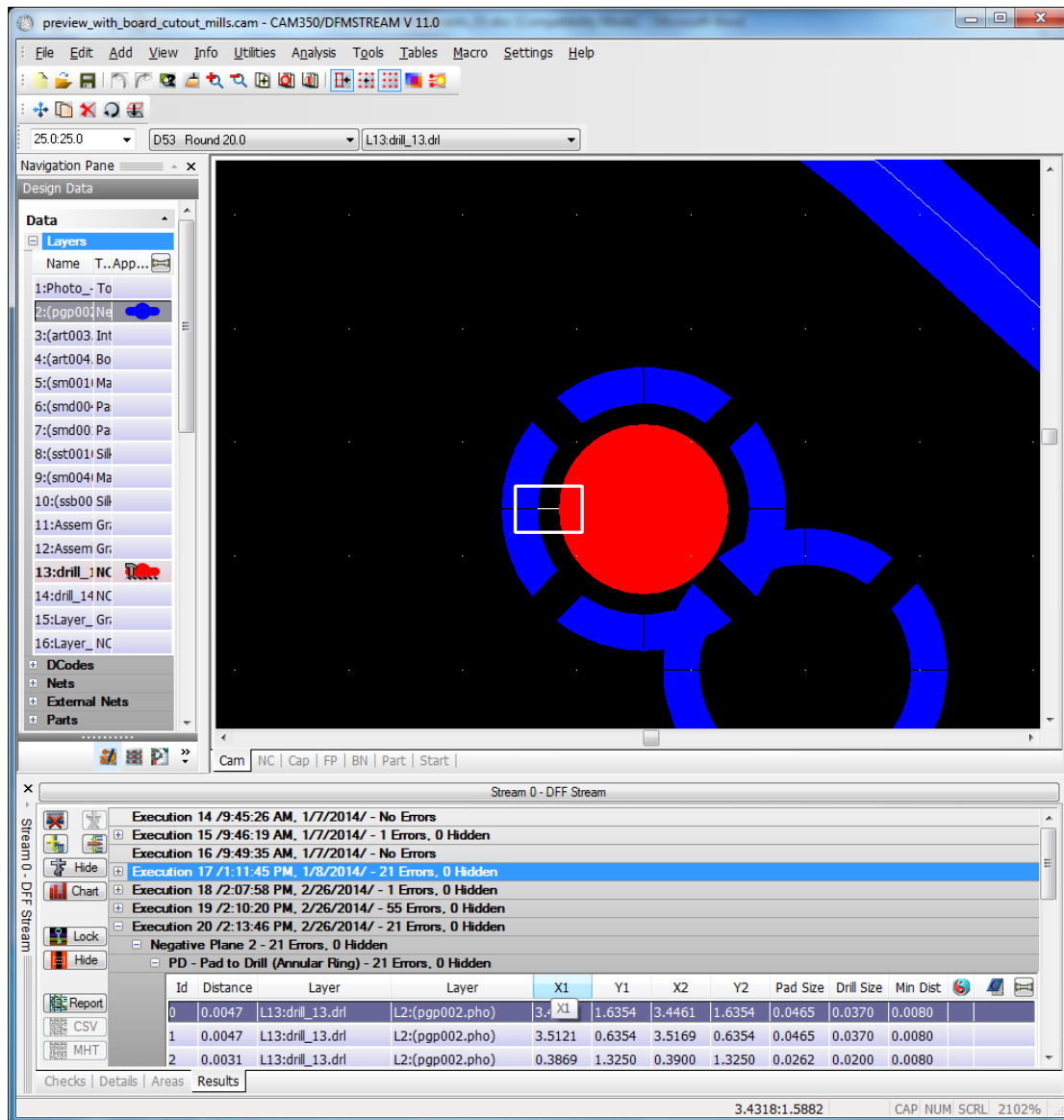
Solder Mask Layer Checks
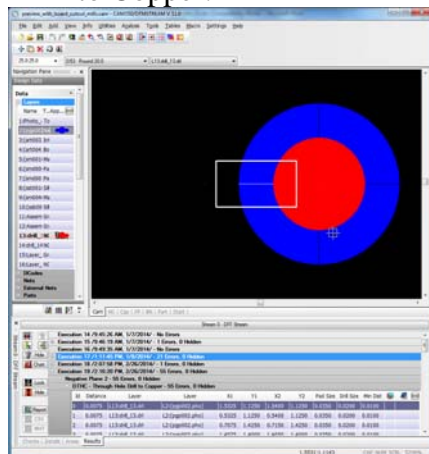New DFM Checks are defined for Solder Mask Layers. Groups of checks include

- o Pad Annular Ring check
- o Drill Annular Ring check
- o Spacing
- o Missing Mask
- o Extra Mask

Solder Mask - Pad Annular Ring checks include SMD to Mask, Plated Drill Pad to Mask, Unplated Drill Pad to Mask, Undrilled Pad to Mask, Via Pad to Mask, and Laser Via Pad to Mask.
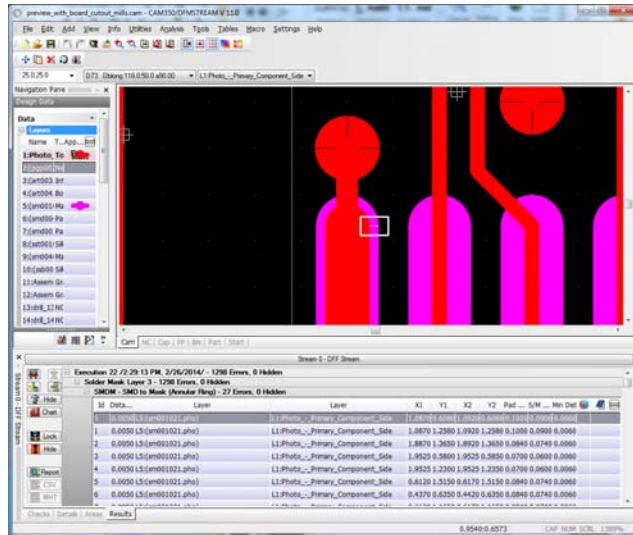
Solder Mask - Drill Annular Ring checks include Plated Through Drill to Mask, Unplated Through Drill to Mask, Via Drill to Mask, Laser Via Drill to Mask.
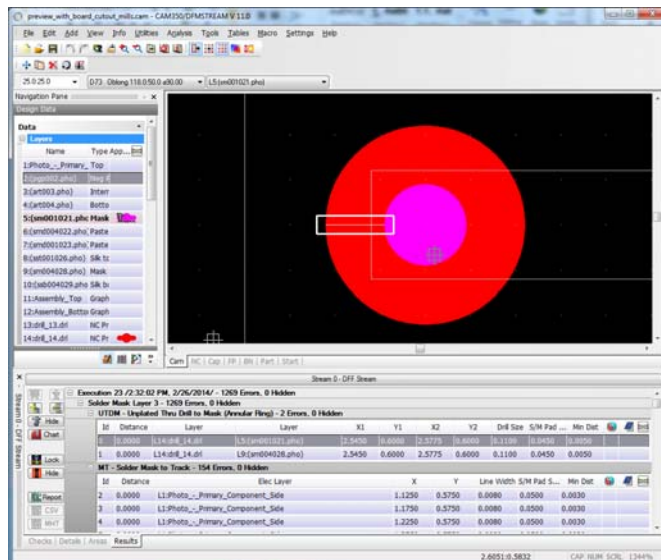
Solder Mask - Spacing checks include Solder Mask to Track, Solder Mask to Pad, Solder Mask to Copper, Mask Pad to Mask Pad, Mask Pad to Mask Draw, and Mask Draw to Mask Draw.

Solder Mask - Missing Mask checks include Missing Mask for SMD, Missing Mask for Undrilled Pad, Missing Mask for Unplated Through Drill, Missing Mask for Plated Through Drill, Missing Mask for Via, Missing Mask for Laser Via, and Missing Mask for Testpoint.
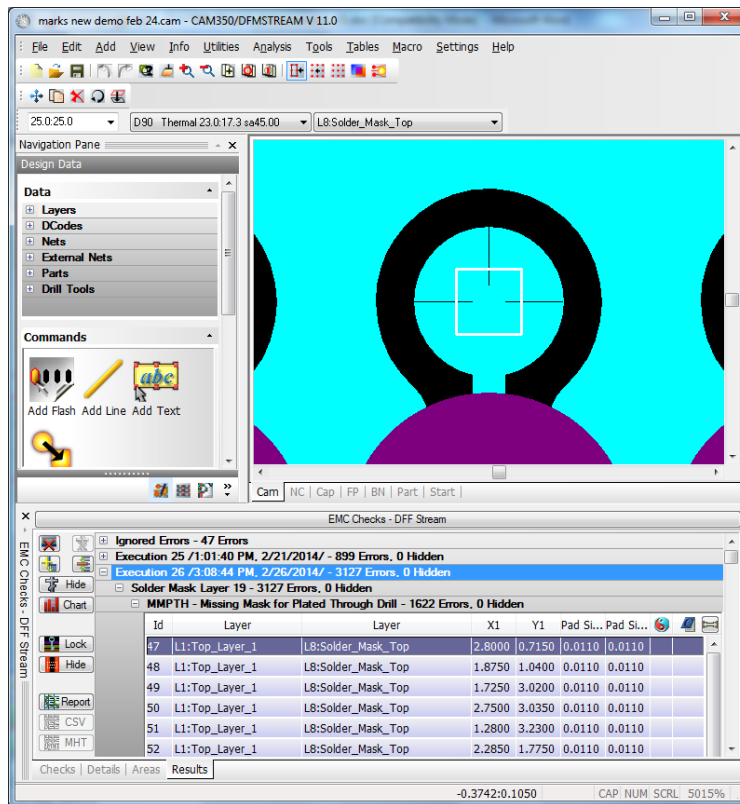
Solder Mask - Extra Mask checks include Missing Copper, and Missing Pad.
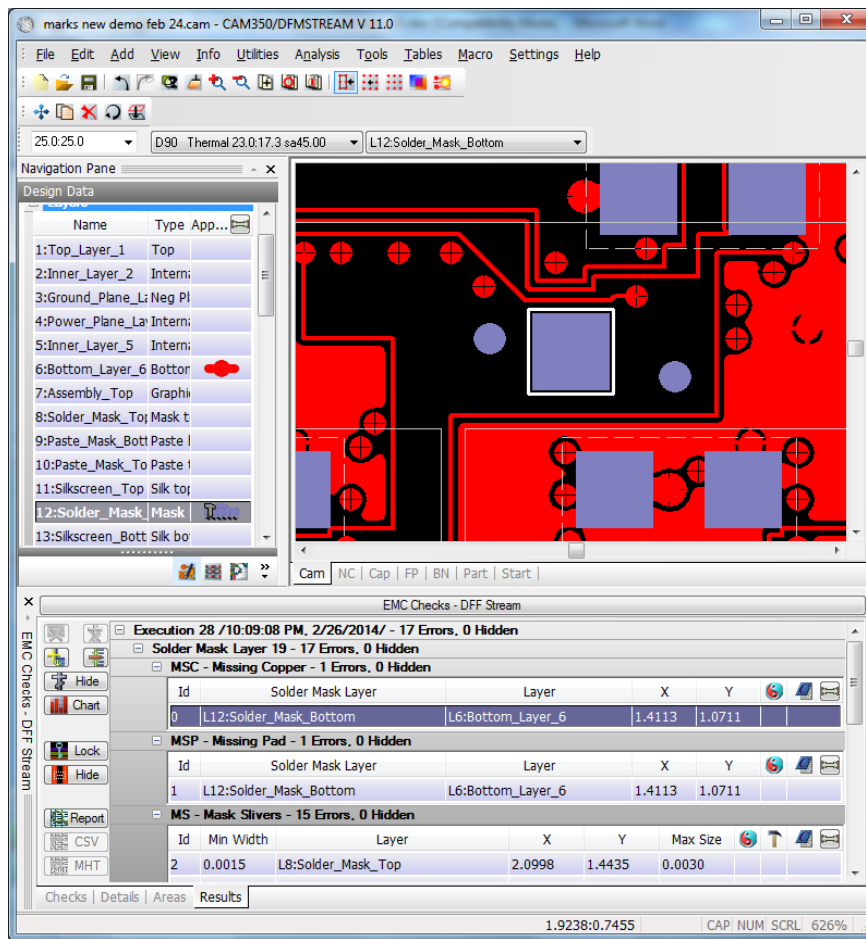
Paste Mask Layer Checks
New DFM Checks are defined for Paste Mask Layers. New checks include
o   Paste Mask to Paste Mask spacing check
o   Global Fiducials check
o   Paste Mask Pad Aspect Ratio Check
o   Paste Mask Pad Area Check
o   Paste Mask Min Width Check
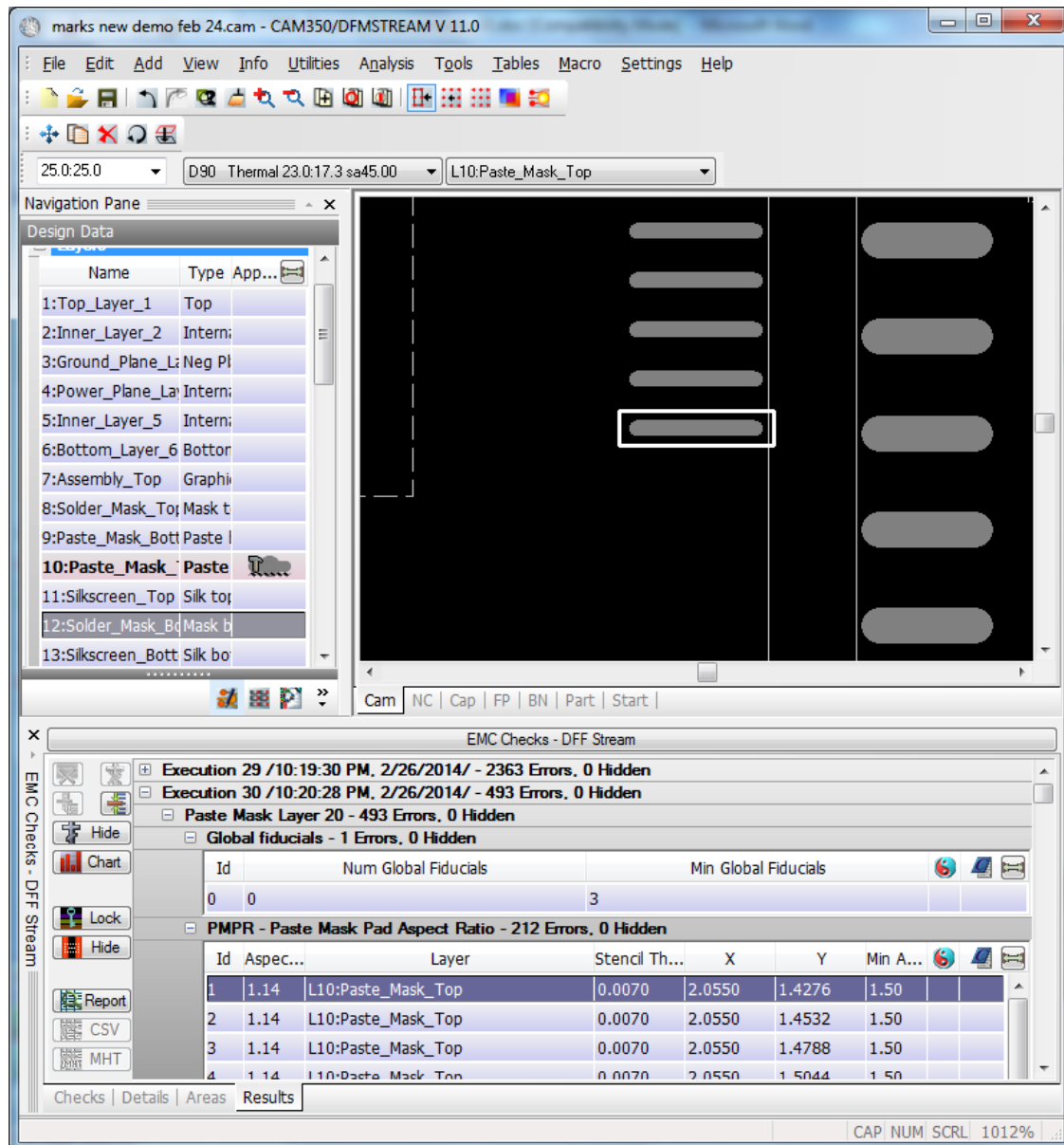
Silkscreen Layer Check
A new DFM Check are defined for Silkscreen Layers. The new check is
o   Silkscreen to Board Outline
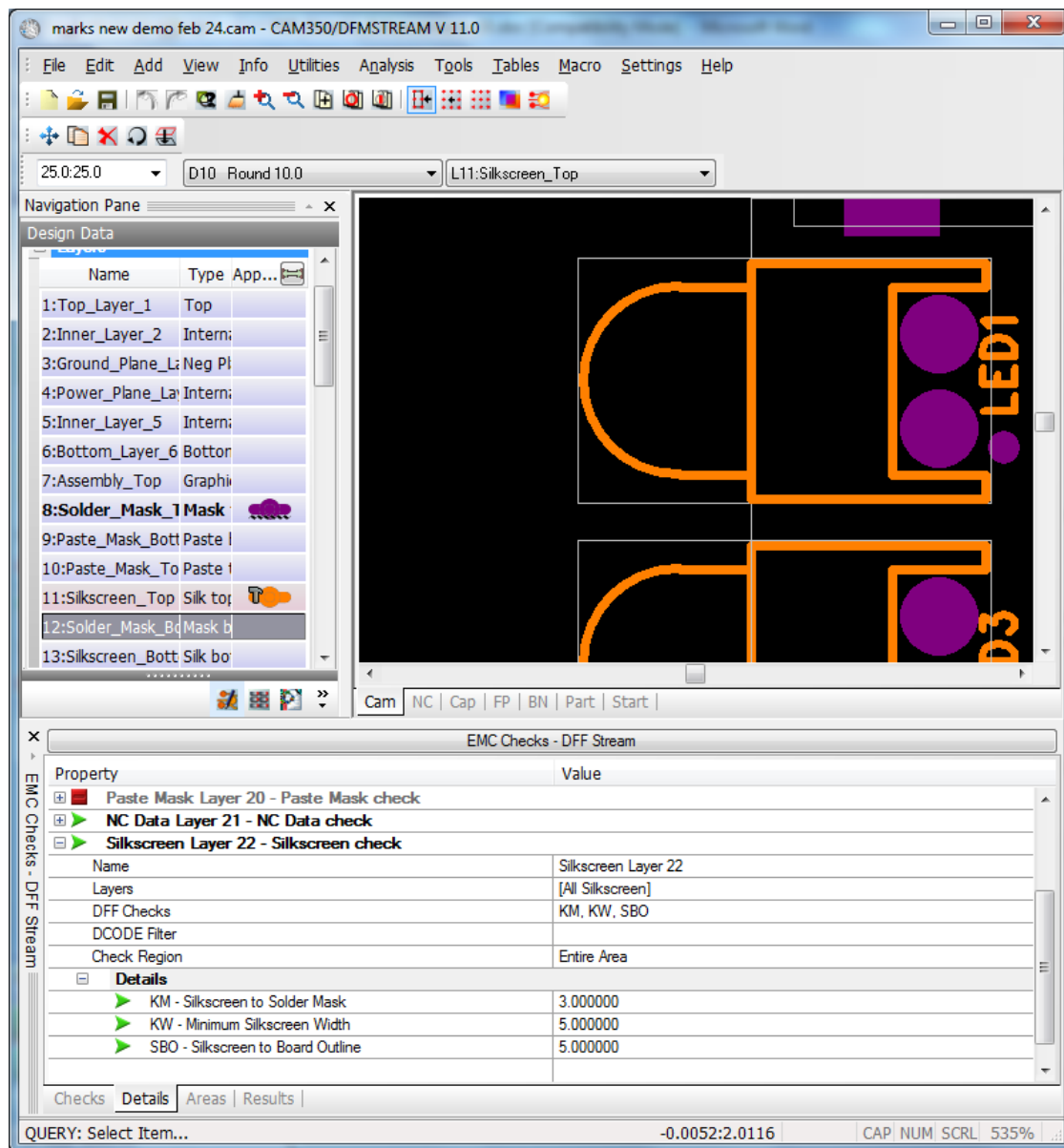
NC Data Layer Checks
A new DFM Check are defined for NC Data Layers. The new check is
o   Aspect Ratio

Intelligent CAD Data Properties
New CAD Data Properties Support Advanced DFM Checks
  Streams RC for DFMStream and CAM350 is updated to DFM checks between
  intelligent CAD Data types. Intelligent CAD Data formats, including IPC-2581,
  ODB++ and PADS ASCII formats, can transfer intelligent EDA data. DFMStream and
  CAM350 are updated to interpret the CAD data. New property dialogs for Component
  Pins and Vias are added to perform viewing and modification of certain property types.
  The Padstack table is enhanced to display Hole Types and NC properties. The NC Tool
  Table dialog is updated to support Minimum and Maximum Tool Tolerances.

<u>Pin Properties</u>
The Change Pin Properties dialog is invoked using the EDIT > CHANGE > PIN
PROPERTIES command. The fields include Pin type (SMT and THRU), Side (Device,
Opposite), Electrical Type (Electrical, Mechanical), Mount Type (SMT pin, SMT pad,
Thru Pin, Thru Hole, Press Fit, Non Board, Hole, Global Fiducial, Local Fiducial),
Drill Diameter, Padstack Name, Hole Type, Net Name, and ICT Test Point Access
(Top Access and Bottom Access).   The Mount Type and ICT Test Point fields can be
modified by the user. With the update radio buttons, you can update all pins in
components, and/or all pins in the design with the same footprint.
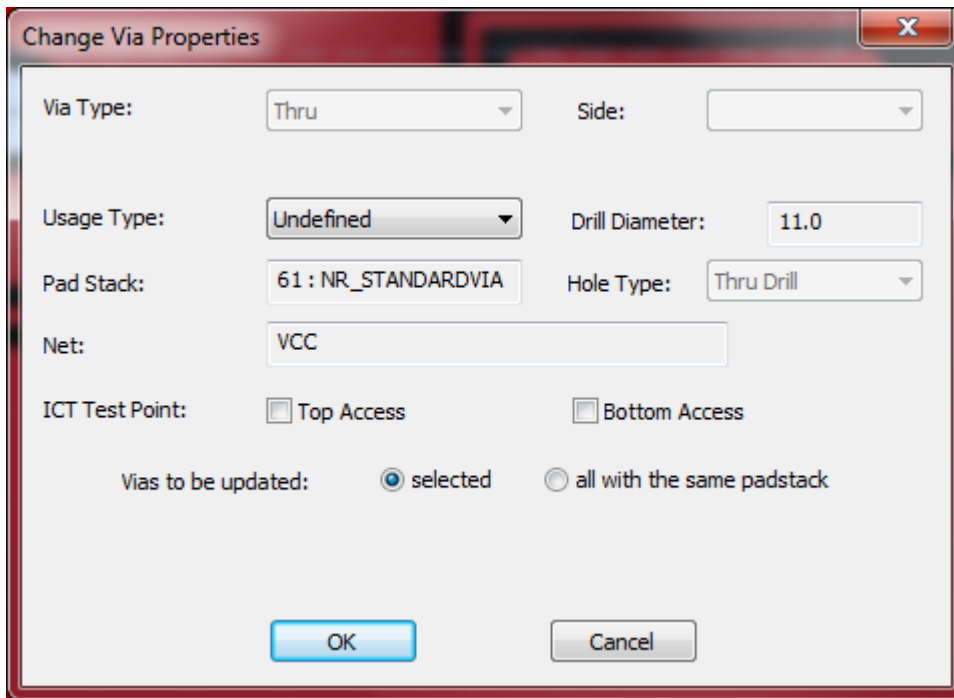
Via Properties

The Change Via Properties dialog is invoked using the EDIT > CHANGE > VIA
PROPERTIES command. The fields include Via type (SMT and THRU), Side
(Device, Opposite), Usage Type (Connection, Termination, Stitching, Global Fiducial,
Local Fiducial, Tooling Hole, Thieving), Drill Diameter, Padstack Name, Hole Type,
Net Name, and ICT Test Point Access (Top Access and Bottom Access).   The Usage
Type and ICT Test Point fields can be modified by the user. With the update radio
buttons, you can update all vias in the design with the same padstack.

Padstack Table

The Padstack Table dialog (Tables > Padstacks) is updated. The Padstack Table dialog is now resizable. For each padstack, padstack names are now derived from definitions in CAD data, such as ODB++ format. For each padstack, new data fields are displayed for : Drill Size, Plating status, Hole Type, Layer Set, Tool ID, NC Tool Table, and NC Layer name.   Hole Type is a new field that set types for Thru Drill, Back Drill, Dual Drill, Via, Laser Via, Blind Via and Buried Via status. This Hole Type field is set on CAD data import and can also be set by the user. The Hole Type field used as a filter in Streams DFM checks.

Tool Tolerances

The NC Tool Table dialog (Tables > NC Tool Tables) is updated to enter and modify tool minimum and maximum tolerances. These values can be accessed by the CAM350 macro language.

NC Tool Table

Tool Table: 1: DrillTable_1

Display Order
- ◉ Tool Num ○ Size ○ Export Order
  - ◉ Ascending ○ Descending

Tool Information Shown
- ○ General ○ Extended ◉ Tolerances

Dialog Units
- ◉ Mils ○ MMs

Tool Definitions

Tool Ref	Tool Num	Tool Type Drill	Mill	Size mil	Min Tol Mil	Max Tol Mil		Export Order
1	1	✓	✓	12.0	3.0	3.0	. . . .	1
2	2	✓	✓	10.0	10.0	0.0	. . . .	2
3	3	✓	✓	43.0	3.0	3.0	. . . .	3
4	4	✓	✓	41.0	3.0	3.0	. . . .	4
5	5	✓	✓	26.0	3.0	3.0	. . . .	5
6	6	✓	✓	31.0	3.0	3.0	. . . .	6
7	7	✓	✓	40.0	3.0	3.0	. . . .	7
8	8	✓	✓	24.0	2.0	2.0	. . . .	8
9	9	✓	✓	20.0	3.0	3.0	. . . .	9

[Delete Tools]   [Renumber Tools]   [Combine Tools]

[Report NC Tool]   Compensation Index Table is NOT in use: [Define Compensation Index Table...]

[Table Name/Type...]   [New Table...]   [Export Order...]   [Save...]   [Load...]

[OK]   [Cancel]   [Apply]

Multi-Board Panel Placement Wizard

Automatic Placement of Multiple Merged PCB Databases

The new command UTILITIES > MERGE PANEL WIZARD supports automatic placement of multiple copies of different Merged PCB Databases. Using the FILE > MERGE command, multiple different Merged PCB Database can be loaded into a single CAM350 session. Then the Merge Panel Wizard collect setup information about a panel definition and the number of stepped images to place. Then the Merge Panel Wizard presents alternative panel placements for your selection.

Automatic Placement of Multiple Designs in a Panel

The Merge Panel Wizard allow you to specify the panel size, panel outline margin, image to image spacing and the desired number of images for each Merged Database type. Alternative automatic placements are presented for you to select.
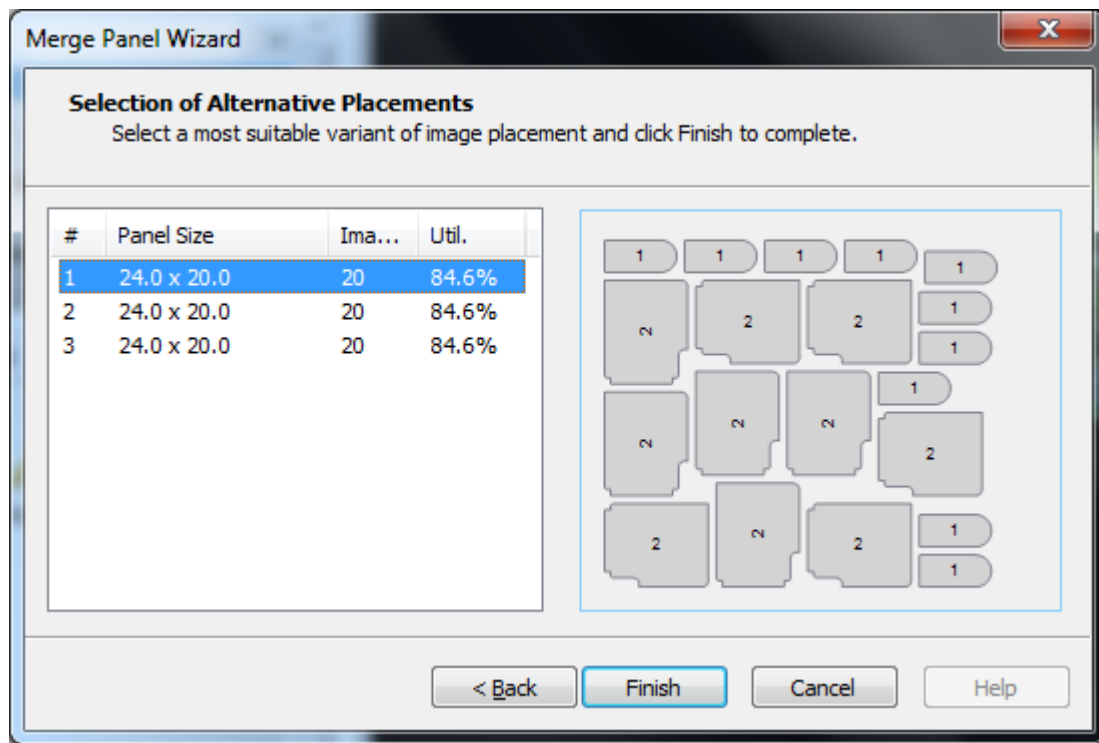
Panel Editor Support for Venting a Multiple Design Panel
The CAM350 Panel Editor is updated to support venting up to the board outlines of Merged PCB Databases.
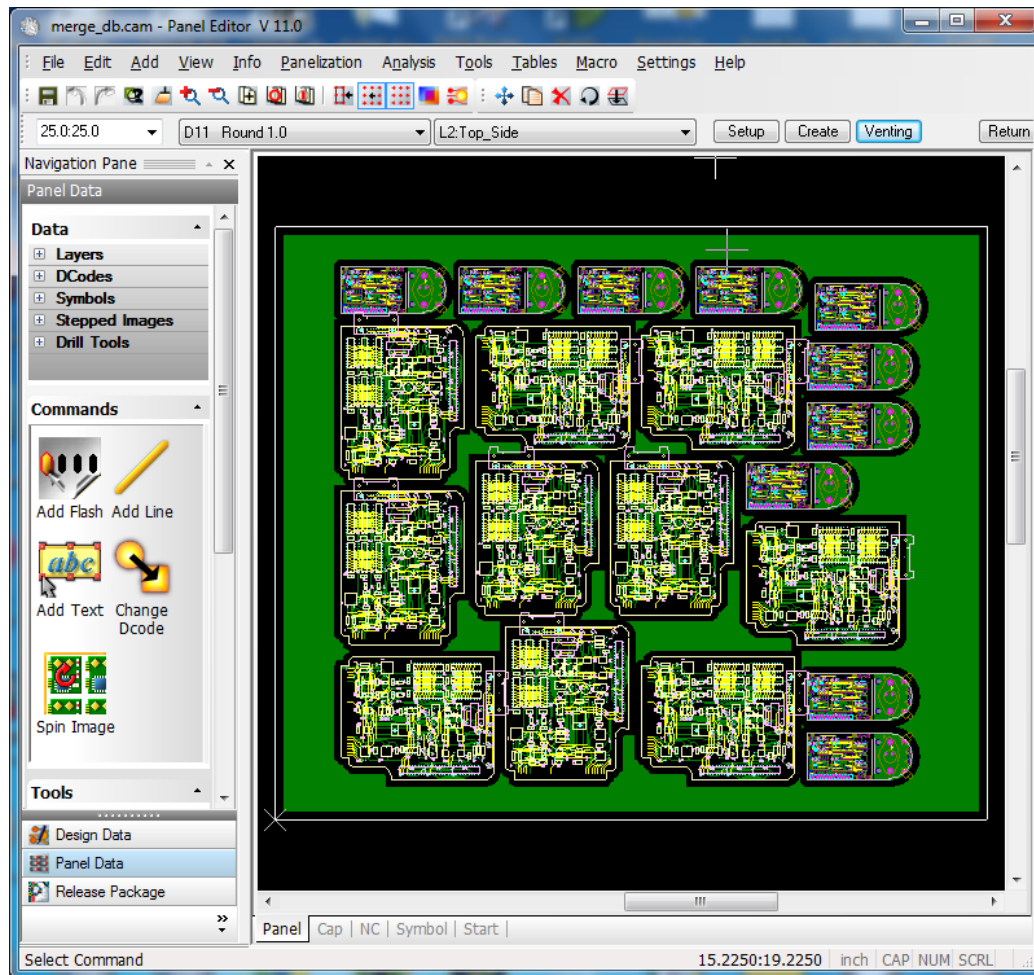
IPC-2581 Import and Export of Panel Data

Intelligent CAD Data Import and Export for IPC-2581 Format

The IPC-2581 format support for CAM350 is updated to support intelligent CAD Data transfer for Panel Data. The FILE > IMPORT > IPC-2581 command and FILE > EXPORT > IPC_2581 command are updated to understand stepped and repeated images, and panel level data for graphics and NC Data information.

Board Outline Support for Cutouts

Cutouts in Board Outlines are Supported as CAD Data

Board Cutouts are stored as native data elements for board outlines in CAM350. Intelligent CAD Data interfaces support import and export of Board Outlines with cutouts. ODB++, IPC-2581 and PADS ASCII formats support Board Outlines with cutouts as CAD Data.
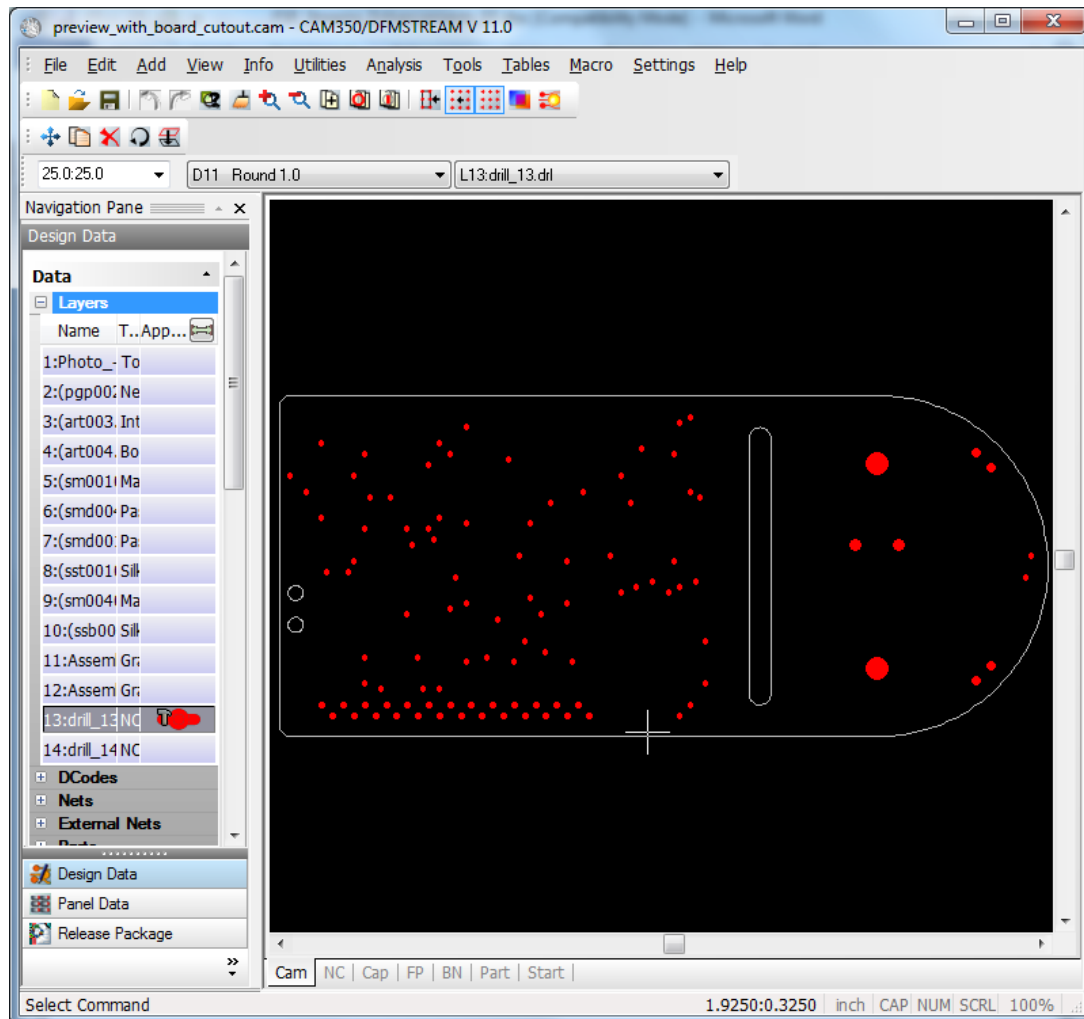
Streams RC User Interface Enhancements

Ease of Use Ability to Copy or Enable and Disable Streams RC Checks

A new Copy command is defined for duplicating an entire Stream definition. Context menus can be used in the Streams RC Details tab to enable or disable an entire tree of Streams RC checks. This allows users to select a tree of checks at different levels and quickly enable or disable all checks.

Defect Fixes – Software corrections have been made to previously existing functionality, further improving upon CAM350's quality and reliability:

Highlights from Earlier Versions of 10.x

CAM350 Version 10.9 is a support release that introduces new functionality, including the IPC-2581 Export Filter for Functional mode, interactive support for adding arcs to polygons and board outlines, Aperture property updates, and support for All Users installation context.

CAM350 Version 10.8 is a support release that introduces new functionality, including the Streams RC optimization checks, usability improvements for the Streams RC user interface and the IPC-2581 CAD data interface.

CAM350 Version 10.7 introduces new functionality, including the encryption of CAM350 VB macros and Clear Silkscreen functionality enhancements.

CAM350 10.6 introduces Flying Probe export to Microcraft tester format. The Microcraft testers support continuity and isolation tests on both side of PCB board. CAM350 10.6 supports import of spline geometry formats from DXF files. CAM350 10.6 supports zoom control for viewing Streams Rules Check errors.

CAM350 Version 10.5 introduces important new functionality, including the Design Analyzer, new data translation updates for BluePrint-PCB integration, Large Address Aware (LAA) implementation for expanded memory access, Pastemask rules checks, Stream Rules Checks updates, and DXF interface updates.

CAM350 Version 10.2 is a support release for CAM350. CAM350 10.2 includes Gerber import improvements for polygon self intersection analysis and DRC analysis accuracy updates for polygon outlines with arcs.

CAM350 Version 10.1 is a support release for CAM350. CAM350 10.1 includes performance improvements and memory usage improvements over previous releases of CAM350. Areas of improved performance include Gerber import and ODB++ import. Optimization for memory usage is delivered in CAM350 10.1 for all polygon analysis, which means that larger more complex layers of polygons can now be processed for commands such as Netlist Extract and Gerber Import. CAM350 10.1 also delivers over 50 important customer reported defect resolutions.

CAM350 Version 10.0 introduced significant new functionality, including reading and writing BluePrint-PCB files, new graphics user interface, a project explorer bar, flip panel support, design compare, Expedition cross probing, and various enhancements.

Defect fixes for CAM350 V11.0

Software corrections and enhancements have been made to previously existing functionality, further improving upon CAM350's quality and reliability:

**** CAM350 BUILD 715 ****

FILE > IMPORT

Areas affected: File Import ODB++
Symptoms: For certain ODB++ files, imported pads are shifted from their proper locations.
Reference number: 56915

Areas affected: File Import ODB++
Symptoms: For certain ODB++ files with metric units, slots defined as lines in the features file are not properly imported.
Reference number: 56914

Areas affected: File Import ODB++
Symptoms: For certain ODB++ files from PADS DX, the File Import ODB++ command will fail to complete.
Reference number: 56990

Areas affected: File Import Gerber Data Barco format
Symptoms: For certain Barco files, the File Import Gerber data command incorrectly rotates custom apertures.
Reference number: 56925

Areas affected: File Import Gerber Data
Symptoms: For certain Gerber files with layer polarities, the File Import Gerber data command may incorrectly warn user about initial polarity setting.
Reference number: 56933

Areas affected: File Import IPC-2581
Symptoms: For certain IPC-2581 files with trace arcs, the File Import IPC-2581 command may incorrectly import arcs.
Reference number: 56830

Areas affected: File Import IPC-2581
Symptoms: For IPC-2581 files with component pads on internal layers, the File Import IPC-2581 command may import component pads on the wrong layers.
Reference number: 56963

FILE > OPEN

Areas affected: File Open
Symptoms: For certain CAM files with stored Streams Rules definitions, the
File Open command will fail to complete.
Reference number: 56922

FILE > EXPORT

Areas affected: File Export Gerber Data
Symptoms: For certain CAM350 files with small arc definitions, the File Export Gerber
data command may incorrectly export arcs.
Reference number: 56939

Areas affected: File Export Gerber Data
Symptoms: For certain CAM350 files with custom aperture definitions, the File Export
Gerber data command will incorrectly convert custom oblong pads to round pads.
Reference number: 56911, 56881

Areas affected: File Export Netlist IPC-D-356A
Symptoms: For designs with custom apertures, the File > Export > Netlist command for
IPC-D-356A format may export pin locations that are offset from pin centers.
Reference number: 56835

ANALYSIS

Areas affected: Streams Rules Check
Symptoms: Attempting to import Basic Streams DFM definitions into CAM350 with
Advanced Streams DFM licensed option may fail to complete.
Reference number: 56921

Areas affected: Streams Rules Check
Symptoms: The Streams Rules Preprocess Check may cause the Design Compare check
to create false errors.
Reference number: 56909

Areas affected: Streams Rules Check
Symptoms: The Streams Rules Solder Mask Missing Mask check may produce false errors on certain designs.
Reference number: 56906

Areas affected: Streams Rules Check
Symptoms: The Streams Rules Design Analyzer Mask check is incorrectly counting drill data for certain designs.
Reference number: 56905

Areas affected: Streams Rules Check
Symptoms: For certain designs, the Streams Rules Min Gap Check fails to complete with a memory allocation failure.
Reference number: 56889

Areas affected: Design Analyzer
Symptoms: The Streams Rules Design Analyzer is reporting the incorrect number of Surface Mount devices.
Reference number: 56969

Areas affected: Design Analyzer
Symptoms: The Streams Rules Design Analyzer is erroneously reporting information for positive plane layers.
Reference number: 55870

NC EDITOR

Areas affected: Utilities Gerber to Drill
Symptoms: For certain designs, in the NC Editor, the Utilities Gerber to Drill command fails to complete.
Reference number: 56928

PANEL EDITOR

Areas affected: Merge Panel Wizard
Symptoms: For an open design in CAM350 and a merged PCB design, the Merge Panel Wizard final panel layout sometimes drops pads for parts.
Reference number: 56923

Areas affected: Merge Panel Wizard
Symptoms: For Merge Panel Wizard final panel layout with original orientation images
and rotated images for the same PCB design, pads are sometimes
incorrect for the rotated images in the panels.
Reference number: 56967

LICENSING

Areas affected: Nodelocked Licensing
Symptoms: When multiple dongle licenses are combined in a single license file
for distribution, erroneous license error messages occur when two or more
different CAM350 bundles are defined in the combined license file.
Reference number: 56913

**** CAM350 BUILD 712 ****

FILE > IMPORT

Areas affected: File Import Gerber Data
Symptoms: For certain Gerber files with composite images, image polarity is incorrect
when the background polarity matchs the initial layer polarity.
Reference number: 56887

Areas affected: File Import Gerber Data
Symptoms: For certain Gerber files, repair of self intersecting polygons causes voids to
be dropped.
Reference number: 56864

Areas affected: File Import ODB++
Symptoms: The ODB++ import command does not support setting plated and unplated
status for drill holes.
Reference number: 56799

Areas affected: File Import ODB++
Symptoms: On ODB++ import, erroneous warnings occur for data links between
component pin definitions and layout features.
Reference number: 56756

FILE > EXPORT

Areas affected: File Export ODB++
Symptoms: For certain ODB++ files with any angle rotated pads, the File > Export > ODB++ command may incorrectly export rotated pads.
Reference number: 56888

SETTINGS

Areas affected: Settings View Options
Symptoms: The Setting View Options control for Padstack Designators does not change the visibility for padstacks that have no visible pads.
Reference number: 54662

ANALYSIS

Areas affected: Streams and DRC Special Checks
Symptoms: For certain CAM files, when all DRC special checks are enabled for certain copper layer data, the DRC command fails to complete. The same occurs for the problem CAM file with Streams RC.
Reference number: 56606

Areas affected: Streams RC
Symptoms: For certain CAM files, Streams RC hangs during the finishing process. Run the entire Stream definition and Streams RC hangs during Paste Mask check, but if Paste Mask is run by itself, Streams RC finishes quickly.
Reference number: 56805

Areas affected: Design Compare
Symptoms: For certain CAM files, Streams RC Design Compare check does not report differences for top layer where the differences are voids in polygons.
Reference number: 56812

Areas affected: DRC Checks
Symptoms: For certain CAM files with vector polygons, DRC checks such as Track to Track, Track to Pad and Pad to Pad may fail to complete.
Reference number: 56819

Areas affected: DRC Checks
Symptoms: For certain CAM files with flooded regions, DRC checks run on small regions may fail to complete.
Reference number: 56842

Areas affected: DRC Check Drills Without Pads
Symptoms: For certain CAM files with small triangular polygons, the check for Plated
Drills without Pads may fail to complete.
Reference number: 56850

Areas affected: DRC Check Drills Without Pads
Symptoms: For certain CAM files with no pads on specified layers, the check for Plated
Drills without Pads may fail to complete.
Reference number: 56851

INSTALLATION

Areas affected: Crash on Installation Startup
Symptoms: For certain new PC's, CAM350 installation exe will fail on initial startup.
Reference number: 56663

**** CAM350 BUILD 668 ****

FILE > IMPORT

Areas affected: File Import Gerber Data
Symptoms: For certain Gerber files, raster polygon vertices may shift positions slightly on import.
Reference number: 56655

Areas affected: File Import ODB++
Symptoms: For uncompressed ODB++ files, the File Import ODB++ command may erroneously report missing drill tool definitions.
Reference number: 56765

FILE > EXPORT

Areas affected: File Export DXF
Symptoms: When setting the DXF version for the File Export DXF command, the last selected DXF version is not remembered for the next execution of the File Export DXF command.
Reference number: 55011

ADD > POLYGON

Areas affected: Add Polygon Void Line
Symptoms: Graphic artifacts appear in the CAM350 graphics port when the zoom keys (+ and -) are used during the execution of the Add Polygon Void > Line command.
Reference number: 56677

**** CAM350 BUILD 664 ****

FILE > IMPORT

Areas affected: File Import DXF
Symptoms: For certain DXF files, the File Import DXF command may drop void areas
within polygon shapes with splines.
Reference number: 55759

Areas affected: File Import ODB++
Symptoms: For certain ODB++ files from Pulsonix PCB CAD systems, the File Import
ODB++ command may erroneously report missing drill tool definitions.
Reference number: 56666

Areas affected: File Import CAD Data
Symptoms: For certain PADS ASCII files with split planes, the File Import CAD Data
command fails to remove unused pads with the same net as the split plane areas.
Reference number: 56667

Areas affected: File Import Netlist
Symptoms: The File Import Netlist command fails to import CAM350 XY netlists with
respect to external netlists.
Reference number: 56627

FILE > EXPORT

Areas affected: File Export Gerber (Barco DPF) Data
Symptoms: For certain Barco DPF files, the File Export Gerber Data command may
export pads as outlines instead of solid shapes.
Reference number: 56593.

Areas affected: File Export Gerber
Symptoms: For certain Gerber files with aperture macros, the File Import Gerber Data
command may fail to complete.
Reference number: 56658

EDIT

Areas affected: Edit Delete
Symptoms: For certain CAM files with text that is assigned to nets, the Edit Delete
command may fail to complete.
Reference number: 56629

USER INTERFACE

Areas affected: Info Measure
Symptoms: After the Info Measure command is executed, the keyboard focus may be
redirected from the CAM350 graphics window such that keyboard commands are not
recognized.
Reference number: 56253

INSTALLATION

Areas affected: License Installation
Symptoms: When a license file is installed or updated, or the DownStream License
Manager is installed, the installation may hang for certain laptops with wireless adapters
enabled.
Reference number: 56615

*** CAM350 BUILD 658 ****

FILE > EXPORT

Areas affected: File Export Gerber Data
Symptoms: For certain PADS ASCII files with component graphics that include raster
polygons, the File > Export >Gerber Data command may create incorrect arced segments
in the polygons.
Reference number: 56271

Areas affected: File Export DXF
Symptoms: For certain CAM files when exporting to DXF R2004 format, layers are not
properly set for DXF Block structures. The result is data displayed on the wrong layers.
Reference number: 56528

TABLES

Areas affected: Layers Table
Symptoms: After File > Import > CAD Data for certain PADS ASCII files, the Layer
Table dialog operations may cause the layer mapping to change. The result will be
graphic display of data on the wrong layers.
Reference number: 56523

Areas affected: Apertures Table
Symptoms: For the Apertures Table dialog, you can adjust the column width for the
aperture data display. However, the column width adjustment is not remembered upon
reopening the Apertures Table dialog.
Reference number: 54484

USER INTERFACE

Areas affected: File Overwrite Dialog
Symptoms: For long path names, the file name display is truncated in the file overwrite
dialog for the File Export commands. The file name cannot be read.
Reference number: 54483

Areas affected: Message Window
Symptoms: The CAM350 Message will does not scroll to the last displayed message in
the message window.
Reference number: 56288

Areas affected: Japanese Translation
Symptoms: For CAM350 files with Streams RC definitions that contain a Preprocess
check, an error is displayed concerning a missing message.
Reference number: 55748

*** CAM350 BUILD 624 ****

FILE > IMPORT

Areas affected: File Import ODB++
Symptoms: For certain ODB++ files with rotated custom apertures, the File Import
ODB++ command creates pads that are incorrectly offset.
Reference number: 56225

Areas affected: File Import ODB++
Symptoms: For certain ODB++ files with offset custom apertures, the File Import
ODB++ command creates flattened panel images with incorrect pad placement.
Reference number: 56071

EDIT

Areas affected: Edit Mirror
Symptoms: For CAM files with custom apertures, the Edit Mirror command may result in
incorrect apertures for the mirrored custom apertures.
Reference number: 56173,56207

Areas affected: Edit Mirror
Symptoms: For CAM files with butterfly apertures, the Edit Mirror command may result
in incorrect aperture orientation.
Reference number: 54381

PANEL EDITOR

Areas affected: Add Polygon
Symptoms: The Panel Editor command for Add Polygon does not work properly when
selecting a closed area to fill.
Reference number: 56218

Areas affected: Change Dcode
Symptoms: The Panel Editor command for Changing a Dcode does not allow you to
change the Dcode for Text.
Reference number: 56210

ANALYSIS

Areas affected: Netlist Compare
Symptoms: When Netlist Compare is performed on certain databases with copper pour and voids, false reports for shorts may occur.
Reference number: 56243

UTILITIES

Areas affected: Clear Silkscreen
Symptoms: When the Clear Silkscreen utility command is run on designs with silkscreen that has redundant overlapping lines, the Clear Silkscreen command may remove extra lines beyond the requested clearance.
Reference number: 56227

*** CAM350 BUILD 622 ****

FILE > IMPORT

Areas affected: File Import ODB++
Symptoms: For certain ODB++ files with rotated custom apertures, the File Import ODB++ command creates pads that are incorrectly offset.
Reference number: 56132

Areas affected: File Import IPC-2581
Symptoms: For the File Import IPC-2581 command, component pins for through hole pins were not correctly linked to their associated padstacks. This caused the ODB++ export command to generate imcomplete component information in the ODB++ output.
Reference number: 56152

Areas affected: File Import IPC-2581
Symptoms: For certain IPC-2581 files with long reference designator strings, the File Import IPC-2581 command fails to complete.
Reference number: 56114

ANALYSIS

Areas affected: Streams RC
Symptoms: For certain Streams RC rule parameter files with area rules, the execution of the Stream RC command using "Run One Up Border" fails to complete.
Reference number: 56141

MACRO

Areas affected: Macro Playback
Symptoms: For certain CAM350 basic macro files during playback, the macro command "getmousepos@" can cause CAM350 to hang.
Reference number: 56143

PANEL EDITOR

Areas affected: Edit Text
Symptoms: The Panel Editor commands for Editing Text and Editing Variant Text are not properly enabled.
Reference number: 56146,56131

*** CAM350 BUILD 619 ****

FILE > IMPORT

Areas affected: File Import IPC-2581
Symptoms: For certain IPC-2581 files with brackets ("<>") in net names, the File Import IPC-2581 command fails to complete.
Reference number: 55991

Areas affected: File Import ODB++
Symptoms: For certain ODB++ files with rotated and/or mirrored intrinsic apertures, the File Import ODB++ command incorrectly imports pad orientations.
Reference number: 55397,55977,56067,56025,54572,54987,54992

Areas affected: File Import DXF
Symptoms: For R14 format DXF files with stroked font text, the height of the stroke font is incorrect on for the File Import DXF command.
Reference number: 55252

EDIT

Areas affected: Change Dcode
Symptoms: During the Edit Change Dcode command, you can use the "W" key to select a window of flashes. If you select the first corner of a window the selection window is displayed. If you then zoom in or out before selecting the second window corner, the selection window rectangle will disappear so that you cannot select the area for selection.
Reference number: 54729

Areas affected: Change Text Style
Symptoms: For the Edit Change Text Style command, you can enter a value for Total Height. Repeat the Edit Change Text Style command again and you can see that Total Height value is not retained.
Reference number: 54730

Areas affected: Line Change Chamfer
Symptoms: Load a database Blindbur.cam from Demos folder. Make only layer 14 visible (border layer). Select the Edit Line Change Chamfer on the two 90 degree corners on the right side of the border. Now select the Edit Move and click the SELECT ALL button. The Border is not selected and it should be.
Reference number: 44406

Areas affected: Line Change Fillet
Symptoms: When the Edit Line Change Fillet command is executed and you select a vertex with a flash on it to fillet then select a second similar vertex, the command will abort.
Reference number: 55917

Areas affected: Delete
Symptoms: The delete command fails to complete after creating new graphic elements and then executing the delete command on the new graphic elements.
Reference number: 56105

ANALYSIS

Areas affected: Analysis DRC
Symptoms: When the Analysis DRC command is executed, the DRC dialog has multiple Dcode Filter dialogs. The number of characters that you can enter into the Dcode Filter is limited to the visible characters.
Reference number: 55992

Areas affected: Streams RC
Symptoms: When the Streams RC check is executed for Pad to Mask annular ring check, the error values for violations do not display negative clearance values, for example when the mask is smaller than the pad.
Reference number: 56066

PANEL EDITOR

Areas affected: Snapping to Objects in Panel Editor
Symptoms: You cannot snap to stepped image circuit elements, for example pads and drills. The Query command, Measure command and Move Window command should be able to snap to circuit elements within stepped images in a panel.
Reference number: 54274

UTILITIES

Areas affected: Netlist Extract
Symptoms: When Netlist Extract is performed on certain databases with drilled slots, the length of the slot is incorrectly modified.
Reference number: 55448

USER INTERFACE

Areas affected: Live RSS Feed
Symptoms: Customers do not want the Live Web RSS feed update on the Start Page.
Customers would like an option during installation to remove the Live RSS feed so that
users cannot enable the Live Feed.
Reference number: 55996

*** CAM350 BUILD 616 ****

FILE > IMPORT

Areas affected: File Import PADS
Symptoms: For certain PADS ASCII files rectangular thermal pads in positive copper
pour polygons have incorrect orientation.
Reference number: 55683

ANALYSIS

Areas affected: Minimum Width Check
Symptoms: For the DRC or Streams RC check for Minimum Width, false errors may be
reported for small minimum width test values and for small arcs.
Reference number: 55240

UTILITIES

Areas affected: Gerber to Mill
Symptoms: The Utilities > Gerber to Mill command creates segmented mill routes
instead of arc mill routes when converting drawn arcs to mill routes.
Reference number: 55687

Areas affected: Clear Silkscreen
Symptoms: The Utilities > Clear Silkscreen command results in data that exports to
Gerber data with drawn lines that have undefined DCodes.
Reference number: 55708

Areas affected: Clear Silkscreen
Symptoms: The Utilities > Clear Silkscreen command should optionally not use solder
mask drawn lines to clip silkscreen data.
Reference number: 55833

LICENSING

Areas affected: Network Licenses
Symptoms: For network licenses, bundle selection dialogs appear inappropriately
referring to bundles from the previous pricelist.
Reference number: 55664

*** CAM350 BUILD 611 ****

FILE > IMPORT

Areas affected: File Import DXF
Symptoms: For certain DXF files with splines, the File > Import > DXF command fails
to complete with memory fault error messages.
Reference number: 55335

Areas affected: File Import ODB++
Symptoms: For certain ODB++ files with chamfered rectangle apertures, the
File > Import > ODB++ command generates incorrect mirrored pads.
Reference number: 55397

ANALYSIS

Areas affected: Soldermask to Pad Check
Symptoms: When the DRC or Streams RC check for Soldermask to Pad spacing is run, error column headers are transposed for soldermask size and pad size.
Reference number: 55454

Areas affected: Pad to Drill Check
Symptoms: When the DRC or Streams RC check for Pad to Drill spacing is run, the error size if incorrect for certain reported errors.
Reference number: 55359

UTILITIES

Areas affected: Clear Silkscreen
Symptoms: The Utilities > Clear Silkscreen command creates incorrect silkscreen output for certain designs.
Reference number: 55370

LICENSING

Areas affected: WAN Licenses
Symptoms: For wide area networks that cover worldwide license checkout, WAN license checkout sometimes delays program startup.
Reference number: 55336

*** CAM350 BUILD 570 ****

FILE > IMPORT

Areas affected: File Import ODB++
Symptoms: For certain ODB++ files with custom symbol names that begin with the period (".") character, symbol graphics are dropped for the File > Import > ODB++ command.
Reference number: 55060

Areas affected: File Import PADS
Symptoms: For certain PADS ASCII files with copper with arcs that are associated with part decals, the File > Import > CAD Data command incorrectly displays coppers for mirrored components.
Reference number: 55102

FILE > EXPORT

Areas affected: File Export Panel Gerber
Symptoms: For certain CAM350 files with few flashes, the Export Gerber data command in the Panel Editor fails to complete.
Reference number: 55246

INFO

Areas affected: Measure Object to Object
Symptoms: The Info > Mesaure > Object To Object command displays no results for pads for SMT components that are placed on the bottom side of the PCB design.
Reference number: 54885

TABLES

Areas affected: Aperture Table
Symptoms: The Aperture Table dialog creates rounded rectangle apertures with less precision for rounded corners compared to earlier versions of CAM350..
Reference number: 55103

UTILITIES

Areas affected: Netlist Extract
Symptoms: The Utilities > Netlist Extract command fails to complete for certain MCM designs with copper fill.
Reference number: 54997

LICENSING

Areas affected: Multiple Bundle Licenses
Symptoms: When multiple bundles are purchased in a single license, the bundle choice dialog on program startup only selects the lowest level bundle.
Reference number: 55039

*** CAM350 BUILD 564 ****

FILE > IMPORT

Areas affected: File Import ODB++
Symptoms: For certain ODB++ files from Genesis, mirrored rotated pads may not be imported correctly.
Reference number: 54887

Areas affected: File Import DXF
Symptoms: For certain DXF files with long multi-line strings, the File Import DXF command fails to complete.
Reference number: 54993

FILE > EXPORT

Areas affected: File Export DXF
Symptoms: For certain DXF files, the File Export DXF command fails to complete for R14 DXF format.
Reference number: 54904

EDIT > LINE CHANGE

Areas affected: Segments To Arcs
Symptoms: For certain design files, the Edit > Line Change > Segments To Arcs
command incorrectly converts segments to arcs.
Reference number: 54908

ANALYSIS

Areas affected: Pad to Drill Check
Symptoms: When the DRC or Streams RC check for Pad to Drill spacing is run, errors
are missed for pads that are contained within drills.
Reference number: 54893

UTILITIES

Areas affected: Draw To One-Up Border
Symptoms: The Utilities > Draw to One-up Border command fails to create correct board
outlines when the selected drawn lines contain arcs that have not been sectorized.
Reference number: 54370

*** CAM350 BUILD 558 ****

FILE > IMPORT

Areas affected: File Import IPC-D356A
Symptoms: For certain IPC-D356A netlist files with long net name mapping, the long versions of net names are not imported properly.
Reference number: 54866

EDIT

Areas affected: Edit Commands
Symptoms: The D-Code filter for the Edit commands such as Move does not accept more than ten (10) D-Codes.
Reference number: 43239

ANALYSIS

Areas affected: Netlist Compare
Symptoms: For certain CAM files, if you run netlist extract after running Netlist Compare, successive Netlist Compare executions will fail to complete.
Reference number: 54799

Areas affected: Track to Pad Check
Symptoms: When the DRC or Streams RC check for Track to Pad spacing is run, clearance errors are missed for certain CAD designs.
Reference number: 54505

Areas affected: Pad to Drill Check
Symptoms: When the DRC or Streams RC check for Pad to Drill spacing is run, false clearance errors are reported for laser drills that are placed within SMD pads.
Reference number: 54549

Areas affected: Streams RC
Symptoms: When the command Run One-Up Border is executed to run Streams RC checks, any area exclusions that defined for the executed checks are ignored.
Reference number: 54086

Areas affected: Streams RC
Symptoms: For certain graphics cards, Streams RC results tab will cause the graphics screen to flicker.
Reference number: 54795

Areas affected: Streams RC
Symptoms: When the Streams RC check for Copper Slivers is run, false errors may occur when small pin holes exist and cause copper slivers to be detected.
Reference number: 54586

UTILITIES

Areas affected: Clear Silkscreen
Symptoms: The Utilities > Clear Silkscreen command does not handle different combinations of silkscreen and solder mask data types. For example, Clear Silkscreen only works for drawn silkscreen items; it needs support for flashes and polygons.
Reference number: 34781

PANEL EDITOR

Areas affected: Panel Editor
Symptoms: For various zoom levels in the Panel Editor, polygon fill is dropped for certain panel designs with polygons and stepped images.
Reference number: 54458

MACROS

Areas affected: Macro Scripting
Symptoms: Macro commands should support encryption so that CAM350 users can create and distribute CAM350 macros without losing the intellectual property (IP) that is contained in the CAM350 macros.
Reference number: 54682

*** CAM350 BUILD 517 ****

FILE > OPEN

Areas affected: File Open
Symptoms: The File > Open command fails to complete for certain old version CAM files with complex custom apertures.
Reference number: 54746

FILE > IMPORT

Areas affected: File Import Gerber
Symptoms: The File > Import > Gerber creates duplicate Dcodes on import rather than reusing existing Dcodes for certain Gerber files.
Reference number: 51576

Areas affected: File Import DXF
Symptoms: The File > Import > DXF creates text that is incorrectly offset for certain DXF files with MTEXT (embedded text style) constructs.
Reference number: 54737

Areas affected: File Import Mill Data
Symptoms: The File > Import > Mill Data incorrectly imports arcs in the IJ format for Sieb & Meyer format NC data files.
Reference number: 54243

FILE > PRINT

Areas affected: File Print
Symptoms: The File > Print fails to output text and filled polygons for certain CAM350 database files.
Reference number: 54714

EDIT COMMANDS

Areas affected:
Symptoms: After you delete a polygon vertex, the Copy, Move and Delete commands do not select the edited polygon when you use the "Select All" command button.
Reference number: 53960

ADD COMMANDS

Areas affected: Add Polygon
Symptoms: The Add > Polygon fails to maintain specified clearance when pouring around shapes for certain CAM files.
Reference number: 54224

UTILITIES

Areas affected: Teardrops
Symptoms: The Teardrops command fails to maintain specified clearance when creating teardrops for certain CAM files.
Reference number: 54727

ANALYSIS

Areas affected: Find Pin Holes
Symptoms: The Analysis Pin Holes command fails to find some pin holes for certain CAM files.
Reference number: 54780

*** CAM350 BUILD 514 ****

FILE > IMPORT

Areas affected: File Import and Export ODB++
Symptoms: The File > Import > ODB++ command incorrectly imports drilled slots from ODB++ files when slots are defined as oval pad symbols.
Reference number: 54535

Areas affected: File Import ODB++
Symptoms: The File > Import > ODB++ command incorrectly imports certain Expedition ODB++ files that have negative planes definitions with anti-pads.
Reference number: 54510

 Areas affected: File Import CAD Data
Symptoms: The File > Import > CAD data command incorrectly imports PADS ASCII files for free standing copper cutouts defined for decal pads.
Reference number: 54558

Areas affected: File Import CAD Data
Symptoms: The File > Import > CAD data command incorrectly imports PADS ASCII files for rotated SMD components that have thermal pad definitions for split mixed plane polygons.
Reference number: 54571

 Areas affected: File Import Gerber Data

Symptoms: The File > Import > Gerber Data incorrectly repairs self intersecting polygons for bow tie shaped polygons that have four edges.
Reference number: 54539

Areas affected: File Import DXF
Symptoms: The File > Import > DXF creates text that is undersized for rotated text in a DXF file that was created by exporting the text to R2004 format.
Reference number: 54594

Areas affected: File Import DXF
Symptoms: The File > Import > DXF incorrectly imports special characters (for example, the degree character and the diameter symbol) when the code page is Chinese.
Reference number: 53967

Areas affected: File Import DXF
Symptoms: The File > Import > DXF fails to complete for certain DXF files.
Reference number: 39444

FILE > EXPORT

Areas affected: File Export Panel Gerber Data
Symptoms: The File > Export Panel > Gerber Data results in Gerber files with undefined apertures for certain panel designs with flipped stepped images.
Reference number: 54459

Areas affected: File Export ODB++
Symptoms: The File > Export > ODB++ command causes duplicate drill hit definitions in the exported ODB++ file. The drill count is incorrectly increased after ODB++ export.
Reference number: 54506

Areas affected: File Export ODB++
Symptoms: The File > Export > ODB++ command does not export the nonplated status for drill hits for NC layers.
Reference number: 54530

Areas affected: File Export ODB++
Symptoms: The File > Export > ODB++ command fails to complete for certain CAM350 database that are reverse engineered.
Reference number: 54536

Areas affected: File Export DXF

Symptoms: The File > Export > DXF command fails to complete for certain CAM350 database files with empty strings.
Reference number: 54541,54485

FILE > MERGE

Areas affected: File Merge
Symptoms: When the File > Merge command merges databases with all graphic layers, after the merge operation is complete, the merged data cannot be exploded nor edited.
Reference number: 54575

FILE > OPEN

Areas affected: File Open BluePrint file
Symptoms: The File > Open command for a BluePrint database file may incorrectly drop SMT pads when the pads are centered on vias.
Reference number: 54695

FILE > PRINT

Areas affected: File Print
Symptoms: The File > Print command incorrectly assigns colors to drill tools when you print to a color printer or plotter from the NC Editor.
Reference number: 54321

EDIT

Areas affected: Copy NC Data
Symptoms: The Edit > Copy command results in reverse order for mill paths when copying mill paths from one layer to another layer and the source layer also contains drill paths.
Reference number: 53929

ANALYSIS

Areas affected: Streams RC
Symptoms: The View > Streams RC command should include zoom controls to specify the minimum and maximum zoom level for the graphics port when cross probing errors in the Streams results tab.
Reference number: 53694

Areas affected: Trace to Pad DRC
Symptoms: The DRC check for Trace to Pad misses certain trace to pad violations for certain noncircular pads.
Reference number: 54505,54597

MACROS

Areas affected: Variable Text
Symptoms: When playing back a macro that defines the values for variable text in Panel Symbols, the variable text values are not properly set for the associated symbols.
Reference number: 53931

PANEL EDITOR

Areas affected: Panel View Zoom
Symptoms: The View Zoom commands drops polygon display when zoomed in for certain panel designs with polygons and stepped images.
Reference number: 53466

*** CAM350 BUILD 471 ****

Areas affected: File Import ODB++
Symptoms: The File > Import > ODB++ command results in incorrect pad orientation for certain Allegro ODB++ files when assymetric pads are offset from pin centers for components and those components are placed on the bottom of the PCB board.
Reference number: 54455

LICENSING

Areas affected: Hardware Key Support
Symptoms: A single license file cannot be used to specify license features for more than one dongle.
Reference number: 53959

PANEL EDITOR

Areas affected: Panel Centroid Report
Symptoms: The Info Report Centroid command reports incorrect component rotations when stepped images in the panel definition are rotated.
Reference number: 54432

ANALYSIS

Areas affected: Streams RC
Symptoms: For certain designs with complex one-up borders, Streams run using One-up Border may fail to complete.
Reference number: 54392

*** CAM350 BUILD 468 ****

FILE > SAVE

Areas affected: File Save Panel NC Data
Symptoms: The File > Save command fails to save any change made to Panel NC Drill
data by using the Utilities > Sort Drills Hits command to sort the Panel NC drill path.
Reference number: 54312

FILE > IMPORT

Areas affected: File Import ODB++
Symptoms: The File > Import > ODB++ command results in incorrect pad orientation
for certain Allegro ODB++ files when pads are offset from pin centers for components
and those components are placed on the bottom of the PCB board.
Reference number: 54333,54334

Areas affected: File Import DXF
Symptoms: The File > Import > DXF command fails to complete for certain DXF files
that have font definitions that are not installed in the Windows OS.
Reference number: 54362

Areas affected: File Import GENCAD
Symptoms: The File > Import > CAD data command fails to complete for certain
GENCAD files that have FILLED keywords in the ROUTES sections of the file format.
Reference number: 54387

FILE > EXPORT

Areas affected: File Import Zuken Redac
Symptoms: The File > Export > CAD data command fails to complete for certain
CAM350 files that have paste mask layers in the component footprint definitions.
Reference number: 54387

ANALYSIS

Areas affected: Design Analyzer
Symptoms: Design Analyzer does not report SMD pad criteria when components are not
defined in the CAM file.
Reference number: 54373

*** CAM350 BUILD 464 ****

FILE > OPEN

Areas affected: File Open Large Designs
Symptoms: The File > Open command may fail to open large CAM350 database files
and report out of memory. The repair for this problem is only delivered for Windows XP
64 bit or Windows 7 64 bit.
Reference number: 53510

FILE IMPORT

Areas affected: Import Gerber Data
Symptoms: The File > Import > Gerber command fails to complete for certain files with
complex polygons.
Reference number: 53952,54174

Areas affected: Import PADS ASCII
Symptoms: The File > Import > CAD Data command for PADS ASCII files does not
support decal copper voids for certain PADS Layout designs.
Reference number: 54146

Areas affected: Import ODB++
Symptoms: The File > Import > ODB++ command may fail to complete for certain
Genesis ODB++ files that have internal parameters for pad feature oversize or undersize.
Reference numbers: 54230

Areas affected: Import ODB++
Symptoms: The File > Import > ODB++ command may shift component pads that are
offset from pin centers for certain Allegro and Expedition ODB++ files.

Reference numbers: 54249,54261

Areas affected: Import ODB++
Symptoms: The File > Import > ODB++ command may drop component pads that are offset from pin centers for certain Allegro ODB++ files.
Reference numbers: 54201, 54109

Areas affected: Import ODB++
Symptoms: The File > Import > ODB++ command may not properly define blind and buried layer pairs for certain Allegro ODB++ files.
Reference number: 53255

Areas affected: Import DXF
Symptoms: The File > Import > DXF command may fail to complete for certain DXF files.
Reference number: 53962,54238,54247,54248

Areas affected: Import DXF
Symptoms: The File > Import > DXF command may drop circles for certain DXF files.
Reference number: 53721

Areas affected: Import DXF
Symptoms: The File > Import > DXF command may fail to properly import arcs for certain DXF files. The arcs are shifted or offset.
Reference number: 53306

Areas affected: Import DXF
Symptoms: The File > Import > DXF command may fail to properly import embedded text styles for certain DXF files.
Reference number: 54089

Areas affected: Import CAD Data - GENCAD
Symptoms: The File > Import > CAD Data command may fail to properly import custom pads for certain GENCAD files with FILLED keywords.
Reference number: 54193

Areas affected: Import CAD Data - GENCAD
Symptoms: The File > Import > CAD Data command may fail to complete for certain GENCAD files with FILLED keywords.
Reference number: 54192

Areas affected: Import CAD Data - GENCAD

Symptoms: The File > Import > CAD Data command may fail to create correct padstacks for certain GENCAD files with FILLED keywords.
Reference number: 54191

FILE EXPORT

Areas affected: Export Gerber Data
Symptoms: The File > Export > Gerber command may fail to complete certain designs with complex polygons.
Reference number: 54235

Areas affected: Export DXF
Symptoms: The File > Export > DXF command may fail to fill circles for the exported DXF file for certain design data.
Reference number: 53961

EDIT

Areas affected: Rotate
Symptoms: The Edit > Rotate command may result in incorrect display of raster polygons with arcs.
Reference number: 54237

ANALYSIS

Areas affected: Streams Execution
Symptoms: Stream RC execution fails to complete for certain designs for isolated thermal check with complex negative planes.
Reference number: 53437

Areas affected: Streams Execution

Symptoms: Stream RC execution fails to complete for certain designs for track to pad check for large designs.
Reference number: 53214

Areas affected: Streams Negative Plane Checks
Symptoms: The Negative Plane Check analysis for Isolated Plane Thermals may fail to complete for certain complex negative planes.
Reference number: 53958, 53953, 53911, 53588

Areas affected: Streams Pastemask Checks
Symptoms: Pastemask analysis checks are requested by the user to verify pastemask configuration with respect to soldermask, copper and through holes pads.
Reference number: 53855

Areas affected: Streams Signal Checks
Symptoms: Signal Layer analysis checks may hang on Track to Pad (TP) analysis for certain design databases.
Reference number: 53792

Areas affected: Streams Signal Checks
Symptoms: Positive Plane Layer analysis checks may fail to complete for certain design databases.
Reference number: 53787

Areas affected: Stream Rules Checks
Symptoms: True arc analysis may cause poor execution performance times for certain design databases.
Reference number: 53662

Areas affected: Streams Signal Checks
Symptoms: Signal Layer analysis checks for Pads without Drills (PWOD) may cause false errors for designs with SMD pads on top and bottom sides at the same location.
Reference number: 54221

Areas affected: Streams Signal Checks
Symptoms: Signal Layer analysis checks for Unplated Drills to Copper (UDC) and Plated Drills to Copper (DC) may cause false errors for so-called spot pads that are smaller than the drill sizes.
Reference number: 53767

Areas affected: Streams Execution

Symptoms: Stream RC execution fails to complete for certain designs for isolated thermal check with complex negative planes.
Reference number: 53437

Areas affected: Find Pin Holes
Symptoms: When Pin Holes are automatically fixed by the Analysis > Find Pin Holes command, polygon voids may be incorrectly removed for certain designs.
Reference number: 54197

UTILITIES

Areas affected: Netlist Extract
Symptoms: The Utilities > Net Extract command does not properly merge stacked vias into the same net for stacked vias which are located at the same position and terminate on a negative plane.
Reference number: 54141

Areas affected: Netlist Extract
Symptoms: The Utilities > Net Extract command may short nets together erroneously when mill route data is present in the design database.
Reference number: 54043, 54018

Areas affected: Netlist Extract
Symptoms: The Utilities > Net Extract command may fail to complete for large databases.
Reference number: 54223

Areas affected: Netlist Extract
Symptoms: The Utilities > Net Extract command may fail to complete for certain designs.
Reference number: 54262

Areas affected: Draw To Flash
Symptoms: The Utilities > Draw To Flash > Any Angle command may fail to complete for large databases. The repair for this problem is only delivered for Windows XP 64 bit or Windows 7 64 bit.
Reference number: 54222

Areas affected: Remove Covered Data

Symptoms: The Utilities > Data Optimization > Remove Covered Data command may incorrectly remove pads that are not covered.
Reference number: 45273,51482

Areas affected: Remove Covered Data
Symptoms: The Utilities > Data Optimization > Remove Covered Data command may fail to complete for certain designs.
Reference number: 48842

REPORTS

Areas affected: Info Report Centroid
Symptoms: The Info > Report > Centroid command may fail to complete for design databases with long device names.
Reference number: 53745

USER INTERFACE

Areas affected: View Dashboard
Symptoms: After using the View > Dashboard command to turn off the Dashboard toolbar, if you then save the CAM file (or Save Defaults) and then load the saved CAM file, CAM350 may be unstable and may crash.
Reference number: 54218

Areas affected: Navigation Pane
Symptoms: When the path name is long for imported Gerber files, selection of layer names in the Navigation Pane layer bar may cause CAM350 to crash.
Reference number: 53788

MACROS

Areas affected: Netlist Import
Symptoms: When playing back a macro that imports a netlist as an External Netlist into CAM350, the final dialog for the File > Import IPC356 or IPC356A command is erroneously displayed.
Reference number: 54199

*** CAM350 BUILD 401 ****

FILE > OPEN

Areas affected: Mill Route Visibility
Symptoms: The File > Open command may fail to properly display mill routes for certain mill closed cutout shapes.
Reference number: 54076

ANALYSIS

Areas affected: Streams RC Checks
Symptoms: For certain design files with fine patterns, Streams RC may report erroneous errors for Track to Track and Plated Drill to Copper checks.
Reference number: 54074

INFO REPORTS

Areas affected: Centroid Report
Symptoms: For certain design files with long device names, the Info > Reports > Centroid command may fail to complete.
Reference number: 54072

BED OF NAILS EDITOR

Areas affected: Export CircuitLine
Symptoms: For certain design files, the File > Export command in the Bed Of Nails Editor may fail to complete for CircuitLine format.
Reference number: 54075

*** CAM350 BUILD 400 ****

FILE IMPORT

Areas affected: Import Gerber
Symptoms: The File > Import > Gerber Data command may fail or cause incorrect
graphics for Gerber files that have undefined apertures.
Reference number: 53976,53815

Areas affected: Import Gerber
Symptoms: The File > Import > Gerber Data command may fail for certain Gerber
files that have the percent character ("%") in aperture macro names.
Reference number: 42567

Areas affected: Import PADS ASCII
Symptoms: The File > Import > CAD Data command does not support PADS Layout
version 9.2 ASCII files.
Reference number: 54003

Areas affected: Import ODB++
Symptoms: The File > Import > ODB++ command may cause pads to shift for ODB++
files that contain pads that are offset from the associated component pin origins.
Reference number: 53975

Areas affected: Import ODB++
Symptoms: The File > Import > ODB++ command fails to properly import and
flatten ODB++ files that contain flipped images.
Reference number: 53778

Areas affected: Import Drill Data
Symptoms: The File > Import > Drill Data command does not support the Excellon
command ("%SR*%") to end step and repeat data in drill files.
Reference number: 53863

Areas affected: Import Drill Data
Symptoms: The File > Import > Drill Data command may fail for certain Allegro
generated NC Drill files.
that have very small arcs.
Reference number: 53486,51315,50813

Areas affected: Import AutoImport
Symptoms: The File > Import > AutoImport command fails to initialize colors for layers properly when the NEXT button is selected on the AutoImport dialog.
Reference number: 53852

FILE EXPORT

Areas affected: Export ODB++
Symptoms: The File > Import > ODB++ command may fail to export correct Mill data for certain Mill route definitions with arcs.
Reference number: 53853

PANEL EDITOR

Areas affected: Edit Flip
Symptoms: The Edit > Flip command may fail to properly display mill data that contains arcs for stepped images that are flipped.
Reference number: 53847

NC EDITOR

Areas affected: Add Mill Tab
Symptoms: The Add > Mill Tab command may incorrect add mill tab locations and associated perforations for certain jagged mill route patterns.
Reference number: 53822

Areas affected: Settings View Options
Symptoms: The Middle Mouse zoom setting will be lost after modifying and saving changes to the Settings > View Options dialog in the Panel Editor.
Reference number: 54002

Areas affected: Explode Step & Repeat Data
Symptoms: The Edit > Change > Explode Step & Repeat command fails to report that step and repeat (SR) NC data does not exist in the current design.
Reference number: 53848

UTILITIES

Areas affected: Netlist Extract
Symptoms: The Utilities > Netlist Extract command may fail to complete for
designs that have zero size Dcodes.
Reference number: 53868

USER INTERFACE

Areas affected: Grid Visibility
Symptoms: The Grid Visibility toggle on the command toolbar may cause CAM350 to
crash when the dashboard toolbar is not visible.
Reference number: 53872

*** CAM350 BUILD 391 ****

FILE IMPORT

Areas affected: Import DXF
Symptoms: The File > Import > DXF command may fail for certain DXF files
that have very small arcs.
Reference number: 53874

*** CAM350 BUILD 391 ****

FILE IMPORT

Areas affected: Import DXF
Symptoms: The File > Import > DXF command may fail for certain DXF files
that have very small arcs.
Reference number: 53874

Areas affected: Import Drill Data
Symptoms: The File > Import > Drill Data command is incorrect for Seib&Meyer
3000 files that have drilled slots (code G85).
Reference number: 53835

Areas affected: Import PADS ASCII
Symptoms: The File > Import > CAD Data command will display reference
designators that have PADS Label visibility set to "None".
Reference number: 53844

Areas affected: Import PADS ASCII
Symptoms: The File > Import > CAD Data command may drop drill definitions
for pad stacks that have square pads.
Reference number: 53862

FILE EXPORT

Areas affected: Export DXF
Symptoms: The File > Import > DXF command will fail to complete when exporting
DXF data and panel mill data layers are specified for output.
Reference number: 53834

EDIT

Areas affected: Break At Vertex
Symptoms: The Edit > Line Change > Break At Vtx command will fail to complete
when modify segments for an added circle that has been sectorized.
Reference number: 53866

ANALYSIS

Areas affected: Streams Report
Symptoms: The Info > Report > Streams Results command truncates net name lists
for long names or long lists of net names.
Reference number: 53776

USER INTERFACE

Areas affected: Cursor Display
Symptoms: For certain Microsoft Intellimouse Mouse drivers, the CAM350 cursor
graphics may disappear for various window commands.
Reference number: 44126

*** CAM350 BUILD 389 ****

FILE IMPORT

Areas affected: Import Gerber
Symptoms: The File > Import > Gerber command loses arc precision for polygons in for
certain small designs.
Reference number: 53699

Areas affected: Import ODB++
Symptoms: The File > Import > ODB++ command incorrectly assigns nets to finger edge
pads for certain files output by Mentor Expedition.
Reference number: 53590

Areas affected: Import ODB++
Symptoms: The File > Import > ODB++ command incorrectly imports bottom mounted
finger connector components for certain ODB++ files.
Reference number: 53686

Areas affected: Import ODB++
Symptoms: The File > Import > ODB++ command incorrectly handles angles for
components and other elements for ODB++ files output by PADS Layout 9.1.
Reference number: 53668

Areas affected: Import PADS ASCII
Symptoms: The File > Import > CAD Data command may drop custom apertures for
PADS 9.x files when alphanumeric pin mapping does not specify all pins in a component.
Reference number: 53675

Areas affected: Import HPGL
Symptoms: The File > Import > HPGL command fails to complete for certain HPGL files
with filled polygons.
Reference number: 53666

FILE EXPORT

Areas affected: Export Gerber
Symptoms: The File > Export > Gerber command may drop some features after the import DXF command is executed for certain DXF files with polygons.
Reference number: 53672

Areas affected: Export Gerber
Symptoms: The File > Export > Gerber command may drop resolution for certain designs with filled polygons.
Reference number: 53616

Areas affected: Export Drill and Mill Data
Symptoms: The File > Export > Drill Data and Mill Data command dialogs should support the Copy Names button to copy layer names to file names just as the Export Gerber dialog already does.
Reference number: 53629

ANALYSIS

Areas affected: Find Pin Holes
Symptoms: The Analysis > Find Pin Holes command may find false errors for certain designs with complex polygons.
Reference number: 53663

Areas affected: Find Pin Holes
Symptoms: The Analysis > Find Pin Holes command may fail to complete for certain designs with polygons that have arcs.
Reference number: 53644

Areas affected: Acid Traps
Symptoms: The Analysis > Acid Traps command may find false errors for certain designs with complex polygons.
Reference number: 53680

UTILITIES

Areas affected: Quick Part
Symptoms: The Utilities > Quick Part command does not keep track of the side of the board on which the parts are placed. Quick Part should allow you to create parts from pads on the bottom side and match pads on either top or bottom side of the board.
Reference number: 53135

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FILE IMPORT

Areas affected: Import ODB++
Symptoms: The File > Import > ODB++ command may create invalid CAM data for
certain ODB++ data files.
Reference number: 53591

FILE EXPORT

Areas affected: Export Composites
Symptoms: The File > Export > Composites command may fail to complete for
composite definitions created by deleting table entries.
Reference number: 53597

EDIT

Areas affected: Delete Segment
Symptoms: The Delete Segment command may fail to complete for certain arcs or circles
that have be sectorized.
Reference number: 53631

ANALYSIS

Areas affected: DRC
Symptoms: The Analysis > DRC command may fail to complete for certain designs with
polygons that have arcs with out of memory message.
Reference number: 53627

Areas affected: Streams DFF
Symptoms: The Streams DFF check for Copper for Border minimum gap may report
false errors for certain board outlines with arcs.
Reference number: 53660

Areas affected: Streams Design Compare
Symptoms: For an ODB++ file import, the Design Compare function reports false errors for TopPartOutline and BotPartOutline layers.
Reference number: 53640

UTILITIES

Areas affected: Clear Silkscreen
Symptoms: The Utilities > Clear Silkscreen command may fail to complete for certain CAM files.
Reference number: 53595

*** CAM350 BUILD 384 ****

FILE IMPORT

Areas affected: Import Gerber
Symptoms: The File > Import > Gerber Data command drops certain voids for complex cutline polygons.
Reference number: 53484

Areas affected: Auto Import
Symptoms: The File > Import > Auto Import command should load IPC-D-356 and IPC-D-356-A netlist formats.
Reference number: 53551

Areas affected: Drill Data
Symptoms: The File > Import > Drill Data command does not support G85 (drilled slots) for Sieb & Meyer format.
Reference number: 53160

Areas affected: Import ODB++
Symptoms: The File > Import > ODB++ command fails to complete for certain Genesis files that have annular ring attributes and CAMTEK attributes.
Reference number: 53573

Areas affected: Import ODB++
Symptoms: The File > Import > ODB++ command fails to complete for certain Zuken files that illegal references to layers that are not defined.
Reference number: 53577

FILE EXPORT

Areas affected: Export Gerber
Symptoms: The File > Export > Gerber Data command does not properly export arcs that are in mirrored raster polygon outlines.
Reference number: 53575

UTILITIES

Areas affected: Draw To Raster
Symptoms: The Utilities > Polygon Conversion > Draw To Raster command displays the warning message for polygons with more than 16,000 vertices multiple times for one command. There should be an option to not display the warning again.
Reference number: 53570

GUI

Areas affected: Arc segmentation
Symptoms: Arc graphics are not smooth for large arcs when you zoom such that the arc radius is larger than the width of the graphics port.
Reference number: 53579