

### CAD Output

#### Gerber

**B361224**

**Bug Fix**

Gerber 274X output is now outputting the complete coordinate after a Level Specific command, previously the coordinate could be output modally, and cause confusion while loading the Gerber file.

**BB03549**

**Bug Fix**

Gerber 274X output of certain layers, containing text apertures, could cause Ucam crash while filling the text objects with vectors. Crash has been resolved.

**BB03565**

**Bug Fix**

Gerber 274X output could cause Ucam crash. Crash has been noticed on contour regions (composed by many very small objects) and containing inner contours, in combination with a Cad resource file that forced the region of being filled with vectors. Gerber 274X output of these layer can be completed successfully again.

**BB03579**

**Bug Fix**

Display of almost 360 degrees full clockwise arc, which is slightly invalid, could be incorrect, displayed as a short arc. These arcs are correctly displayed now.

#### ODB++

**B365740, B365432**

**Bug Fix**

ODB++ (v7) output of irregular stepped blocks (sub-steps; available blocks are stepped regularly, but at some location(s) a flash is not provided) could output as if the sub-steps are fully stepped and repeated (as if the block were flashed at all locations). ODB++ is correctly indicating the step and repeat of the sub-steps.

**BB03588**

**Bug Fix**

ODB++ output could be causing Ucam crash, when the uPCB attributes allocated to the potential ODB++ step blocks was confusing (same value for uPCB blocks allocated to blocks that could not result into a substep). The ODB++ output of these jobs can

**BB03589**

**Bug Fix**

ODB++ output of not fully orthogonal tracks could incorrectly output these tracks in the features files, in case the tracks need being contourized and different polarity levels are involved. The output of these tracks is now giving the expected image.

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### Editing

**BB03587**

**Bug Fix**

UcamX was not always notifying the operator that the Paste action was also being applied to other layers than the one displayed in plane 1, even if the configuration of check.active\_layers as requesting it. The request is now popping up, as configured by

#### Transform

**BB03611**

**Bug Fix**

Clinking, instead of dragging, while running Transform Move was relocating the image. No transformation are applied when clicking the mouse buttons while Move is the active function.

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### Editing Tools

**BB03548**

**Bug Fix** Draw Slots was failing when the aperture size of the proposed aperture was rounded, compared with the size of the original selected flash. Also in case the menus are not displaying the apertures in full accuracy (ucam.menu.higher\_resolution) Draw Slots can replace the pad by a slot with the proposed aperture.

## Contours

**BB03449**

**Bug Fix** Exact Contourize could corrupt the image, the expected inner contour could be handled as overlapping outer contour. Issue has been noticed on a composition of a big flashed COMplex aperture (representing positive outer contour), covered by a reverse RECTangle (representing an inner contour) and many flashes with the other smaller positive COMplex apertures that are touching the edge of the big COMplex aperture. These contours are correctly displayed as outer and inner contours.

**BB03487**

**Bug Fix** Exact Contourize of touching objects could corrupt the image, an expected inner contour could be handled as an overlapping outer contour. Issue noticed on a layer with touching COMplex apertures. These contours are correctly displayed as outer and inner contours.

**BB03546**

**Bug Fix** Full 360 degrees arcs in contour regions were not always displayed as expected. These full arcs are now always warned and represented in the image.

## Rout

**B364993**

**Bug Fix** Fill selected Polygon, in Rout Manager, could be creating invalid arcs, after running Delete Double and Chain extra rout groups could become required for routing the polygon. Fill Polygon has been reviewed for preventing the generation of these confusing arcs, as a result these filled polygons can be routed in one chain.

**BB03604**

**Bug Fix** The orientation, of involved objects, is no longer preventing trimming the objects. Previously it was possible that a warning message popped up indicating that the intersection points were too far from each other, although with opposite orientation, of some of the trimmed objects, the objects could be trimmed successfully.

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## Electrical Test

### Microcraft Emma

**B364271**

**Bug Fix** MicroCraft Emma output, using new output algorithm (ipcmet.new\_output\_algorithm: 1), is no longer mentioning the blind nets while specifying the Split Plane Information at the end of the test record lines. Emma testers are rejecting test files with these additional Split Plane Information references to blind nets (which are not mentioned in the 390SPLIT\_PLANE records).

### Utest

**B365834**

**Bug Fix** The presence of the uTestpoint attribute allow influencing the creation of a test point on certain objects. But allocating the attribute on a multi-region COMplex aperture (COMplex aperture composed by isolated regions) was ignored. Now this attribute, allocated on multi-region COMplex apertures, is also influencing the

generation of test points.

**BB03607**

**Bug Fix**

Test point generation, with option Handle Painted Pads activated, could generate overlapping Test/Mid points. The objects in the generated Test and Mid point layers are no longer overlapping.

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## Error Manager

### Errors

**BB03575**

**Bug Fix**

View Errors on some DRC Copper Cut-in violations was having problems in previewing the violation in the Info field of the Current Fault. The Info field is now also representing the location of these Copper Cut-in violations.

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## Input

### DPF

**B365749**

**Bug Fix**

Loading and displaying layer containing inner contours (and embedded outer contours) could be missing certain (inner) regions when these regions were containing slightly invalid arcs. These layers are displayed as expected now.

**BB03556**

**Bug Fix**

The Layer Information, stored in the DPF file, is loaded again while loading DPF files.

**BB03574**

**Bug Fix**

Some contours, noticed on regions containing cut-in inner contours, could be displayed incorrectly (some chains were ignored). These regions are displayed correctly now.

### Gerber

**BB03561**

**Bug Fix**

Loading certain Gerber file, with self-intersecting cut-in lines for clearances, could be displayed incorrectly after saving and reloading the resulting layer as DPF. These layers are now handled for preventing that the image changes after saving and reloading.

**BB03634**

**Bug Fix**

Gerber input of constructions where at the same location the same aperture is flashed but with different polarity, and without specifying the coordinate for the second flash, was ignoring the second flash. Now both flashes are added, as specified in the Gerber file.

### Import ODB++

**B366383**

**Bug Fix**

ODB++ Import of symbol definitions in which an attribute file is provided in the folder with the symbol definition, could result in UNDEFINED apertures (for the involved symbol definitions). These symbol definitions are now correctly converted.

**BB03572**

**Bug Fix**

ODB++ Import could get confused by usage of nested symbol definitions (customized symbol that refers to another customized symbol). Incorrect unit was used for converting a nested symbol, depending on the involved symbol name(s). The ODB++ Import conversion is now using the expected units for these customized symbol definitions.

### MDA

**B363942**

**Bug Fix** The conversion of an MDA file with incomplete aperture definition in the header could hang and cause the generation of a continuous growing file in a temporary folder. The conversion of these MDA files are giving messages indicating what is wrong with the file and the conversion is completed with the available information.

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## Job Editor

### Layers

**BB03541**

**Bug Fix** Performance of hiding all layers, in Job Edit menu, has been improved.

**BB03551**

**Bug Fix** Loading a job with many layers, in UcamX, (issue noticed on a job with more than 60 layers) could corrupt the image in the job buildup in the Job Edit menu. Job Edit is now having the expected representation of the layers in these jobs.

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## Netlist

### Build

**BB03352**

**Bug Fix** Netlist Build could be incorrect on jobs/layers containing objects with 0-sized apertures (these apertures are flagged as Invalid aperture definitions) with reverse polarity, wrong TrueObjects could be generated. As a result the image could change after expanding the TrueObject. Netlist Build is corrected on these jobs, expanding the TrueObjects is keeping the image unchanged.

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## Panelization

### PanelPlus

**BB03599**

**Bug Fix** PanelPlus on job for which the jobname contains extra dot(s) was only using the section before the first dot as the jobname for the panelized job. The complete jobname is used now while composing the jobname of the panelized job, name is extended with Prefix and/or Postfix as configured in the setup.

**BB03618**

**Bug Fix** PanelPlus is now also storing the applied value of what should be done with empty layers. This allows Panel Reproduce using the behavior for the empty layers, previously Panel Reproduce was always ignoring the empty layers.

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## PowerRIP

### mldpf

**B365378**

**Bug Fix** Conversion of certain layers on a PowerRIP could fail (depending on the applied configuration), caused by overlapping contours. These layers can be submitted and exposed successfully on a PowerRIP.

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## SmartPlot

**BB03582**

**Bug Fix** Submitting a layer from SmartPlot Merge Queue into Plot Queue of a TRIP could be losing certain regions. Issue has been noticed on regions composed by an even amount of objects and exactly half the amount of objects are very small (potentially interpreted as overlapping contours on older RIPs). These layers can be

submitted successfully now.

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## SmartView

### Inprex Verification

**BB03614**

**Bug Fix**

The registration of the images of the layers, during the FUJIFilm Inprex Verification tool, has been improved.

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## Verification

### Arcs & Draws

**BB03550**

**Bug Fix**

Validating arcs in a contour aperture is preserving the object attributes that are stored on the original invalid arc(s). Previously these object attributes were lost on these regions.

### Copper Repair

**B366348**

**Bug Fix**

Copper Repair, Slivers could be allocating all available memory till Ucam hangs/crashes. Calculating Slivers on these jobs can be completed normally now.

### Secure Etch

**BB03584**

**Bug Fix**

Saving the parameters in Secure Etch Compensation could be rounding some values (e.g. 30 microns was rounded to 29.995 microns). The specified values are not longer rounded while saving these parameters.

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## View

### Numbers

**BB03593**

**Bug Fix**

Ring calculations have been improved between (COMplex) objects (containing arcs in the shape definition).

### Query Object

**BB03516**

**Bug Fix**

Query Object was not always correctly querying through the indicated objects. Issue has been noticed when querying objects after validating arcs. Query Object is now querying the objects of the layer while dragging the area.

**BB03545**

**Bug Fix**

Query Object could be, depending on the involved zoom factor, highlighting regions, composed by a very short track and an almost full arc segment, only by highlighting the short track. Now Query Object is highlighting the complete region.

### Select

**B364519**

**Bug Fix**

Select embedded was not finding all embedded rounded boxes. The calculations in the rounded boxes have been improved for better supporting the objects using these apertures.

**B365250**

**Bug Fix**

Select Objects based on the allocated attributes was not always updating the amount of selected objects. Issue has been noticed when the active layers were displayed in a plane. The amount of selected objects is now correctly indicated in the Selections menu.