Ucamco

Former Barco ETS

Integr8tor v2019.03

Release notes

Integr8tor

V2019.03

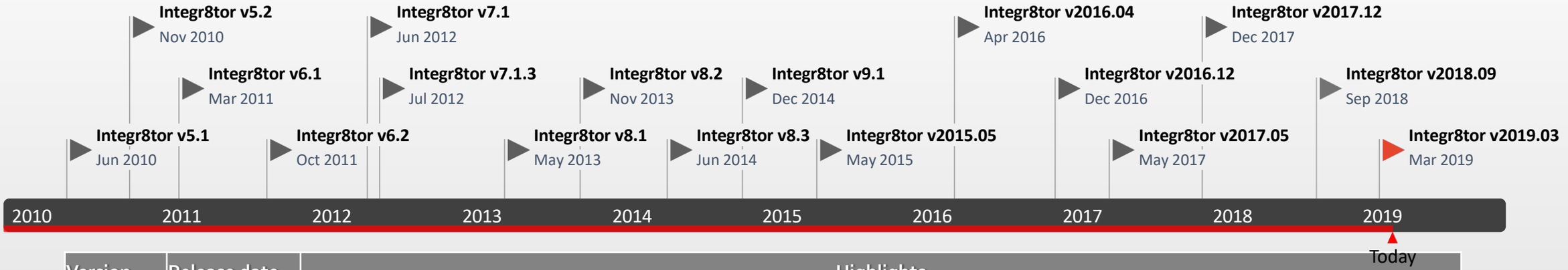
Data Analysis Made Easy...

64 Bit

Multi Core

Integr8tor v2019.03

Serving our customer base with regular updates



Version	Release date	Highlights	
7.1	Jun-12	Localized interface.	Line width on planes.
7.1.3	Jul-12	Bug fix release for 'recovered job'.	
8.1	May-13	Support for ODB++ v7.	Compatible with Windows server 2012 and windows 8.
8.2	Nov-13	Detection and flagging of duplicate archives.	Edge connector recognition.
8.3	Jun-14	New standard parameters.	Determination of laser/mechanical drilling.
9.1	Dec-14	Support for Gerber X2 datasets.	Optimized and new QED values.
2015.05	Jun-15	New standard parameters.	Determination of laser/mechanical drilling.
2016.04	Apr-16	SMD/BGA pads differentiates copper- and solder mask defined	DFM Checks (former Capabilities) revised
2016.12	Dec-16	Introducing Integr8tor Job Perspectives	Drill hole tolerances
2017.05	May-17	Support for PCB Surface finish	Same-sized jobs detection
2017.12	Dec-17	Checkpoint review extensions for various QED results	Analysis of via holes with different solder mask openings top/bottom
2018.09	Sep-18	New QED feature: Minimum Critical Trace Width	User-selectable layer registration
2019.03	Mar-19	Measure functionality and freely displayable layers in Checkpoint	Extended import&export support for advanced ODB++ features

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New features - Overview

NEW

Checkpoint / DFM Viewer Additions

- Measure functionality…
  - Object-to-object
  - Point-to-point
  - Annular ring
  - Outline-to-outline
  - Clearance, distance, angle
  - Between objects on different layers
  - On-screen measurement result display

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New features - Overview

NEW

Checkpoint / DFM Viewer Additions

- Object Snap functionality…
  - To object center
  - To object end point
  - To object midpoint
  - To intersection point
  - To object edge
  - To Objects on different layers
  - Keyboard shortcuts
  - …

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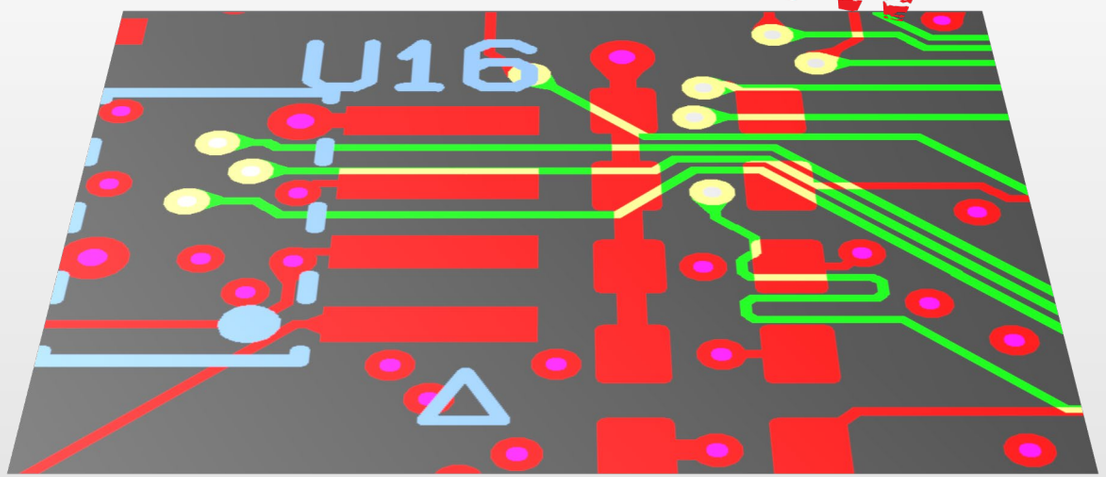
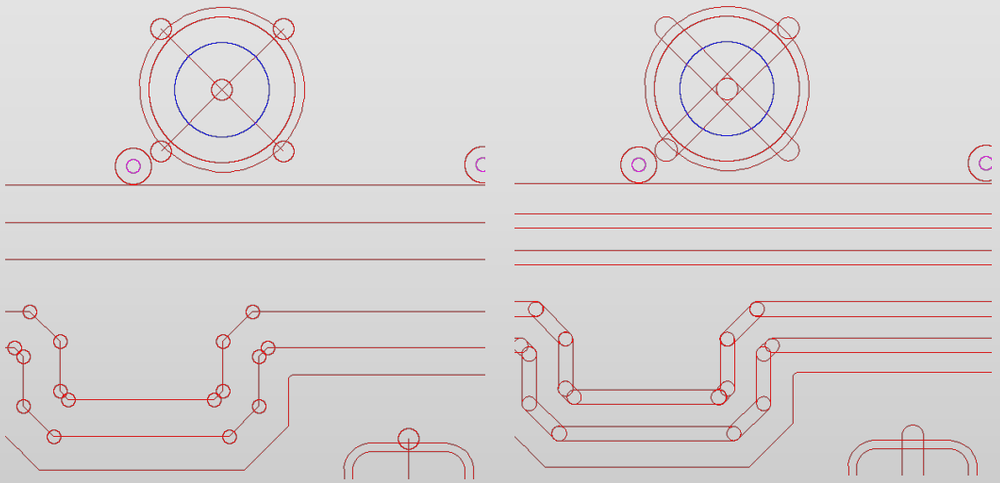
New features - Overview

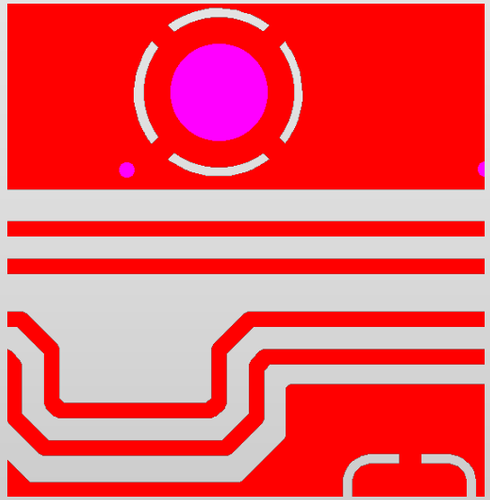
NEW

Checkpoint / DFM Viewer Additions



- Multiple layer display…
  - Up to 5
  - Freely selectable
  - Underlay / Overlay / Mix colors
- Multiple data display modes…
  - Skeleton
  - Outlined
  - Solid





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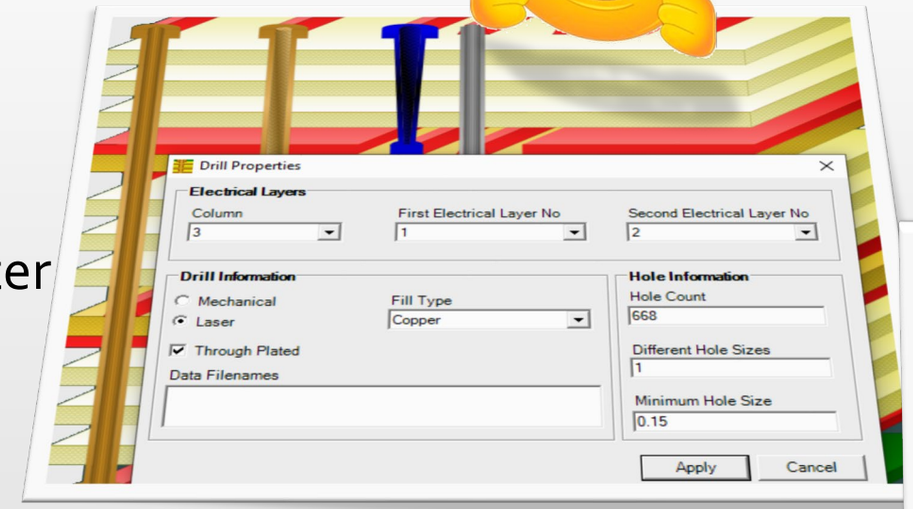
Enhancements - Overview

ENHANCED

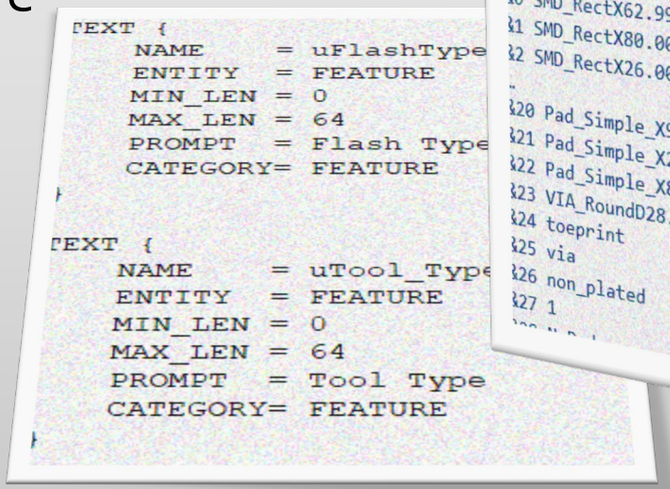
Ustack Integration

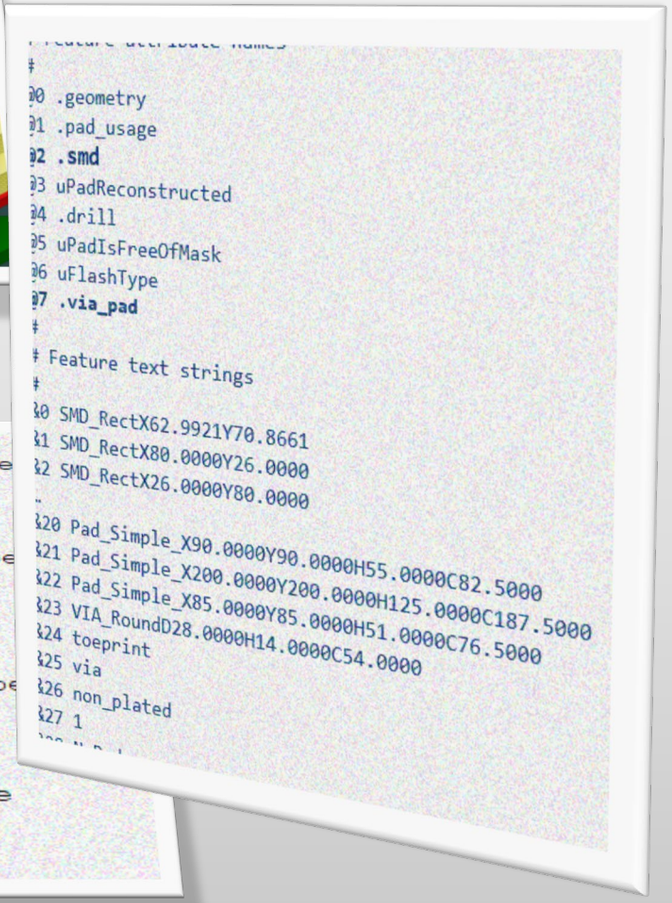
- Hole fill type
- Number of holes
- Smallest hole diameter
- …



ODB++ Data

- Import…
  - Non-ODB++ files in ODB++ file structure
  - Duplicate layer name handling
- Export…
  - Step name customization
  - System attributes export
  - User attributes export





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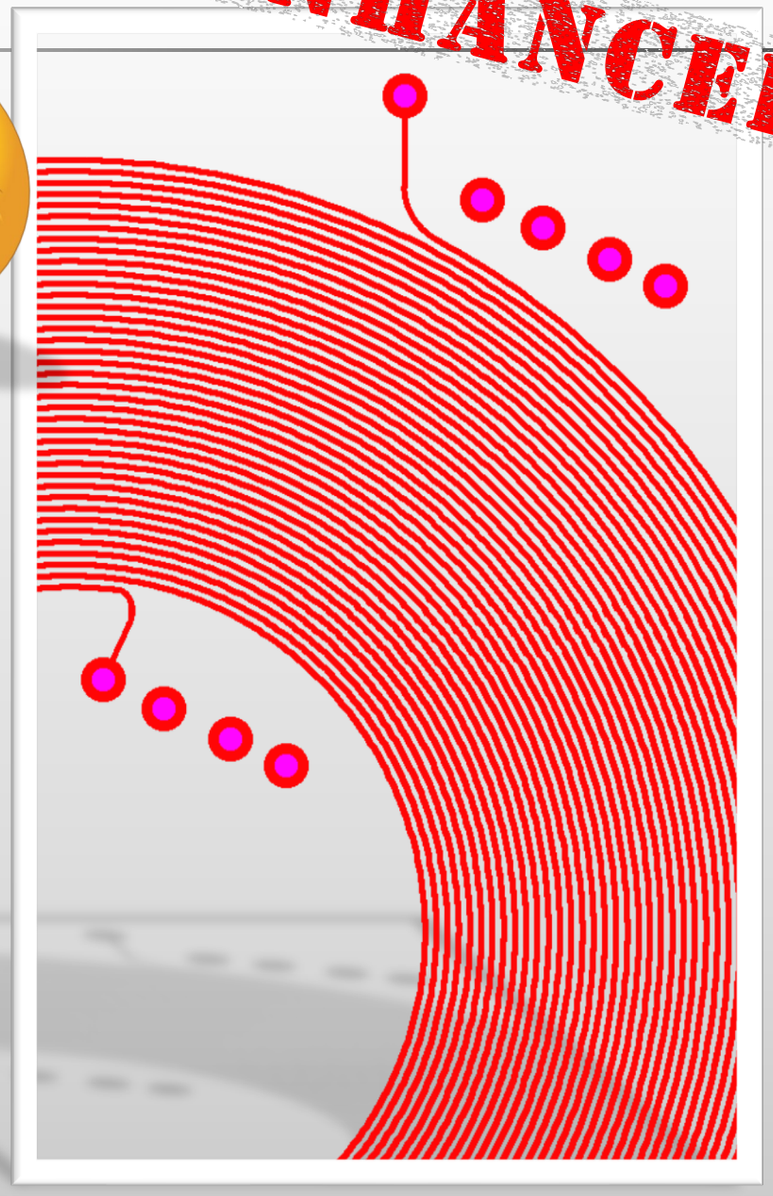
Enhancements - Overview



Workflow

- Performance increases…
  - Same net spacing calculation on coils
  - Heavily painted data sets
  - Hatched/crosshatched copper pours
  - Rename script redundancy elimination

- Rout
  - Improved recognition and input of rout files
  - Compensation recognition for better board outline detection

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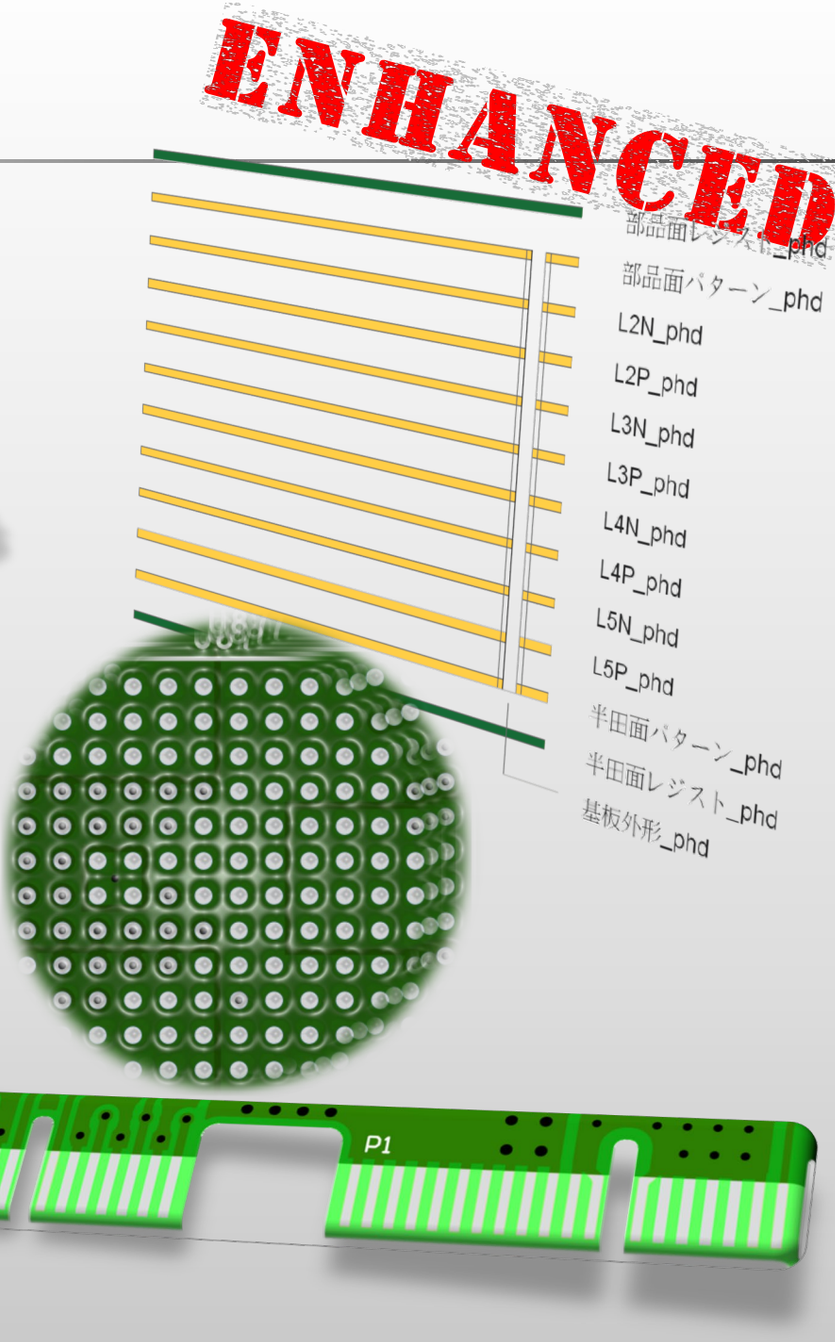
Enhancements - Overview



Workflow

- Miscellaneous
  - extra.drawing aliasing
  - Addition of recent versions of the Eagle.dtd XML specification
  - Cockpit Japanese regionalization
  - More robust QEDLayout.xml inconsistency handling
  - Automatic stackup recognition improvements
  - More consistent drill hole density calculation
  - Edge connector recognition enhancements
  - BGA recognition improvements
  - Adding job comments from scripts

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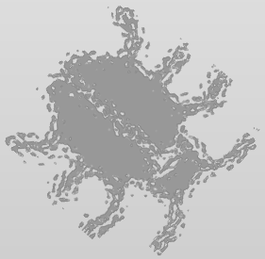
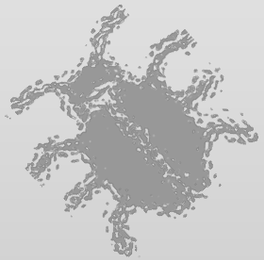
Code fixes

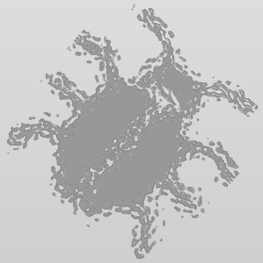
V2019.03 comes with a series of fixes for issues you have cared to report to our hotline

Full details can be found in the last chapter of these release notes

We would like to thank you for your continued effort to help us turn a great product into an excellent one…







Integr8tor

v2019.03

New Features

64 Bit

Multi Core

Integr8tor v2019.03

New features – Checkpoint / DFM Viewer Measure functionality

NEW

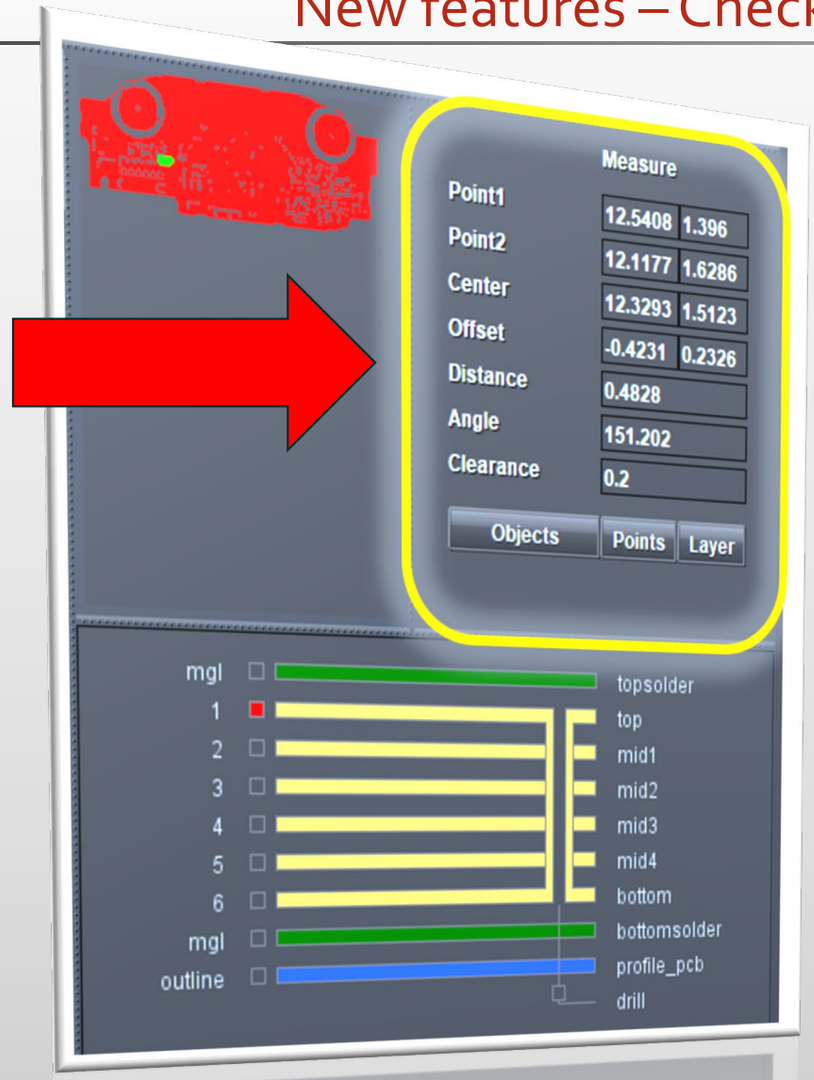
- Measure distances, clearances, offsets or rotation angles between any objects in Checkpoint or DFM Viewer

- Do a quick measurement on nearby items to better assess an analysis results in Checkpoint or DFM Viewer…
- Validate that a tight clearance will be repairable later in CAM, by measuring the available space in the vicinity…
- Find out the exact step values in X and Y when the incoming customer data represents an assembly panel…
- Submit annular rings on odd-shaped cuts to a quick manual verification…
- Readily establish the X and Y dimension of any layer in a job…

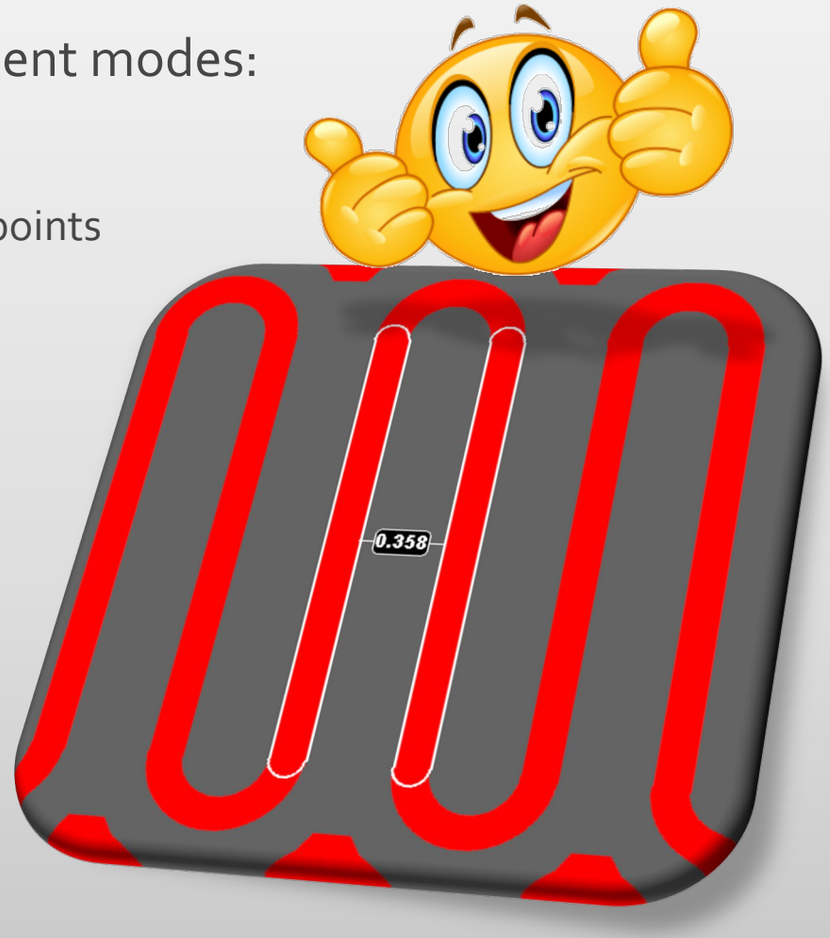
- There are many occasions where measuring data can help you do a better job…

Integr8tor v2019.03

New features – Checkpoint / DFM Viewer Measure functionality



- Easy-to-use Measure toolkit located above layer stackup area
- Regrouping 3 different measurement modes:
  - Measure between 2 objects
  - Measure between 2 arbitrary points
  - Measure layer size
- With unit-dependent feedback fields
- And on-screen
  - Objects highlight
  - Clearance value display
  - Annular Ring value display



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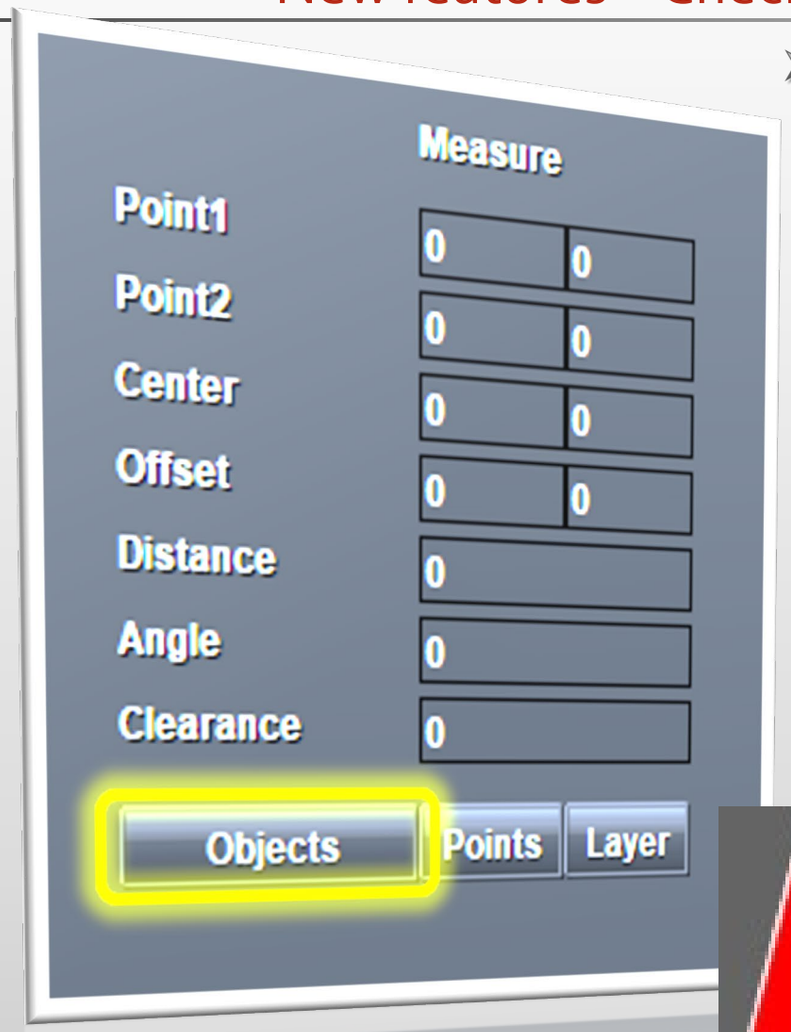
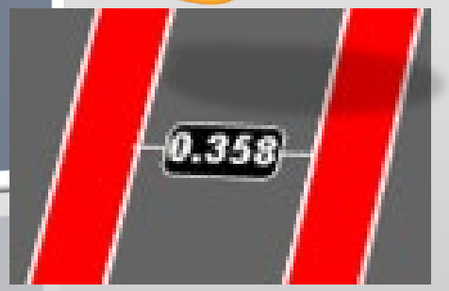
New features – Checkpoint / DFM Viewer Measure functionality

NEW



Measure Objects

- Click function and move cursor over data in drawing area – objects are highlighted to help you pick correct one
- Click and drag between two objects – highlighting continues as you execute the function
- After mouse button release, the minimum clearance is automatically calculated and displayed on screen; the remaining values are displayed in Measure toolbox:



- ***Point1:*** snapped X/Y coordinate of first object
- ***Point2:*** snapped X/Y coordinate of second object
- ***Center:*** the X/Y coordinate of the center of the rectangle enclosing point1 and point2
- ***Offset:*** distance along the X and Y axis between point1 and point2
- ***Distance:*** straight-line distance between Point1 and Point2
- ***Angle:*** angle of rotation of the (imaginary) line between point1 and point2
- ***Clearance:*** minimum clearance between the 2 objects

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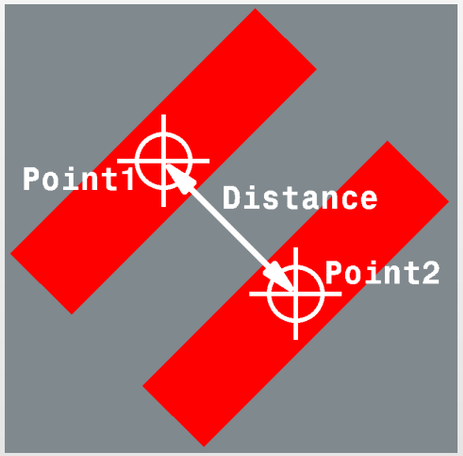
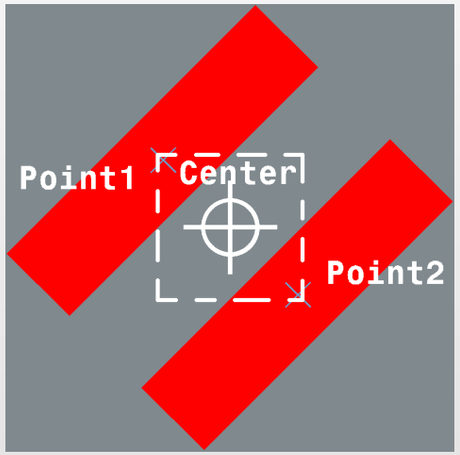
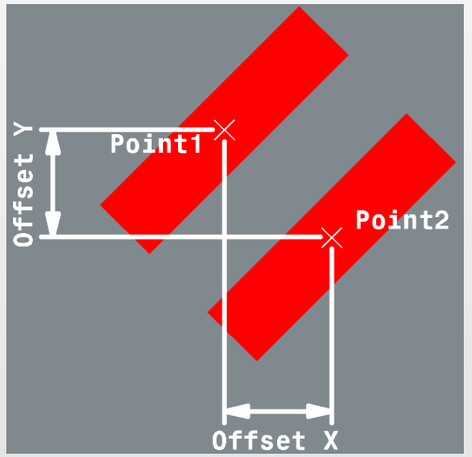
New features – Checkpoint / DFM Viewer Measure functionality

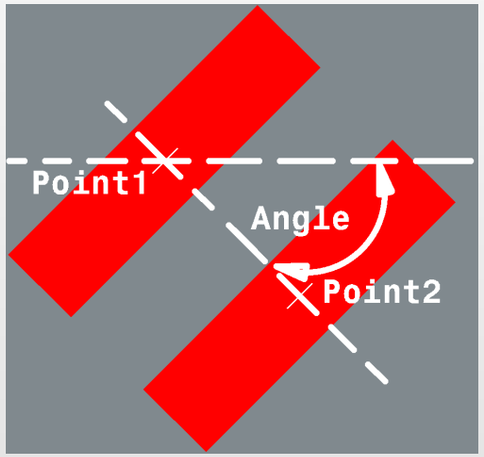
NEW

- Measure Objects - Illustrated…

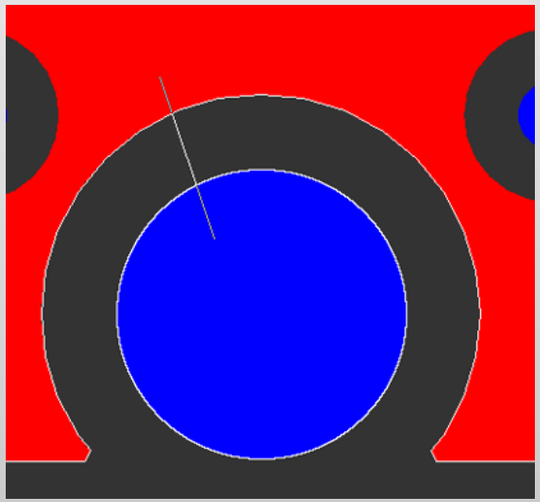




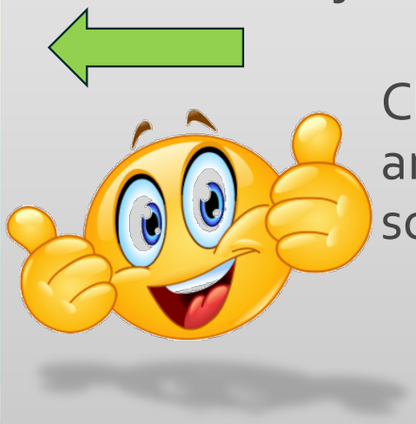




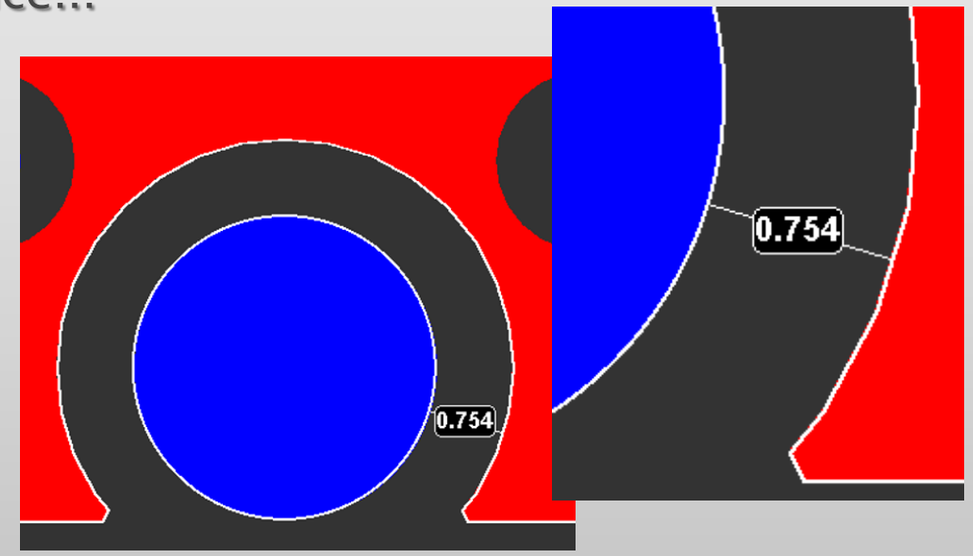
- Clearance = Minimum clearance…



Measure Objects…



Clearance calculation and result and on-screen display…



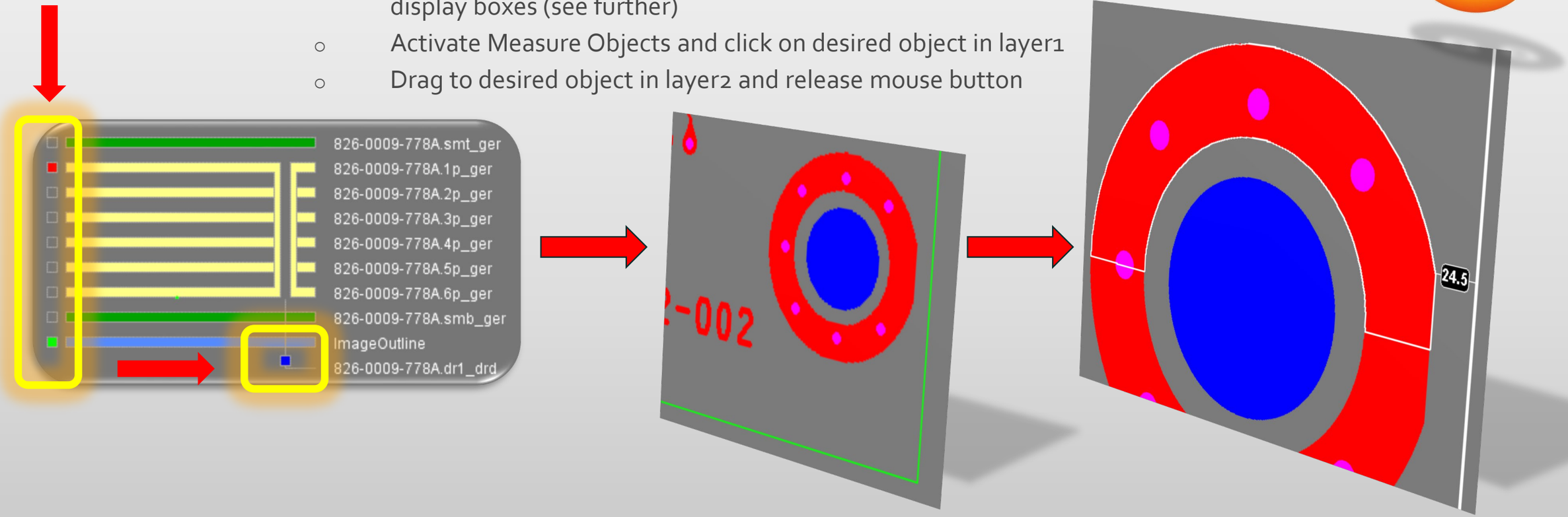
Integr8tor v2019.03

New features – Checkpoint / DFM Viewer Measure functionality

NEW

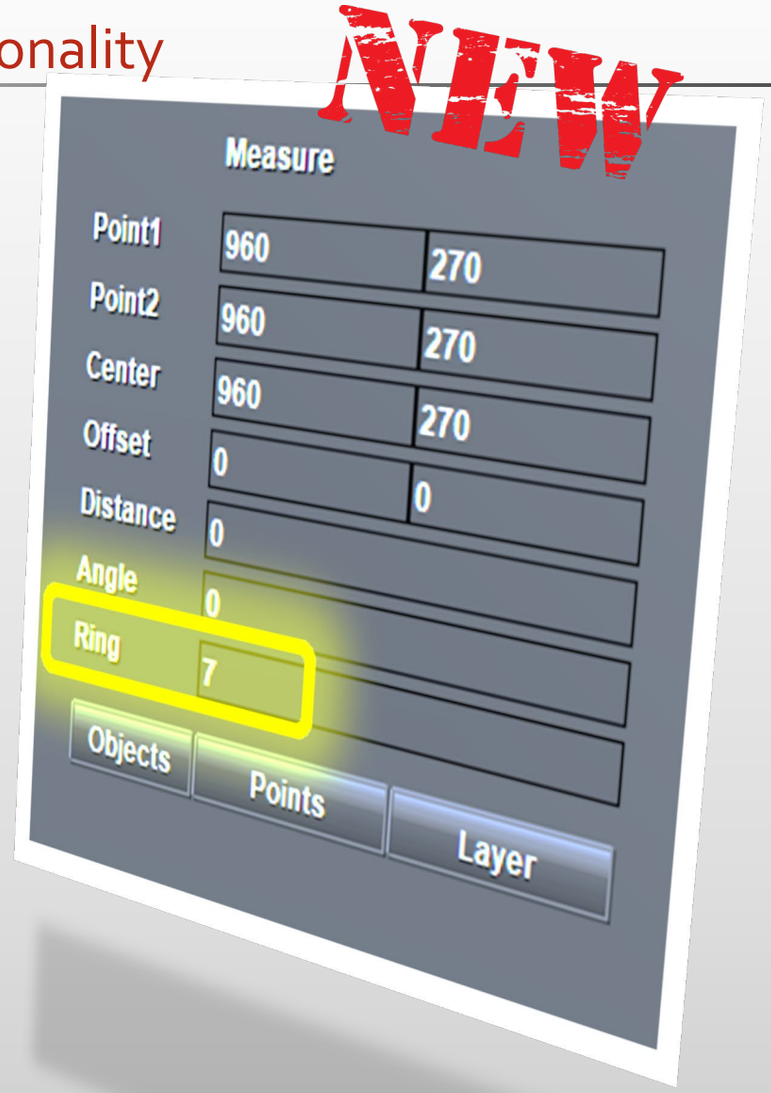
Measure Objects – Tips and Tricks…

- Measure Objects between items on different layers
  - Standard feature of the Measure Object function
  - To easily find out how far a copper feature is away from the board edge for instance
  - Make the layers of interest visible in a particular color, by clicking on the new layer display boxes (see further)
  - Activate Measure Objects and click on desired object in layer1
  - Drag to desired object in layer2 and release mouse button



Integr8tor v2019.03

New features – Checkpoint / DFM Viewer Measure functionality



- Measure Objects – Tips and Tricks…
  - Measure annular rings
    - Standard feature of the Measure Object function
    - Visualize a copper layer in red and a plated drill layer in blue by clicking on the new layer display boxes (see further).
    - Activate Measure Objects and click on the annular ring in the red layer
    - Drag to a magenta position, where copper pad and drill hole overlap
    - Before releasing the mouse button, "tell" the function to consider the object in the blue layer (drill hole) by pressing the number 3 on the keyboard
    - Let go of the mouse button
    - The annular ring is calculated and displayed on-screen. In the measure toolbox, the word "Clearance" has changed to "Ring"
    - To access an object
      - on a layer in red press 1
      - on a layer in green press 2
      - on a layer in blue press 3

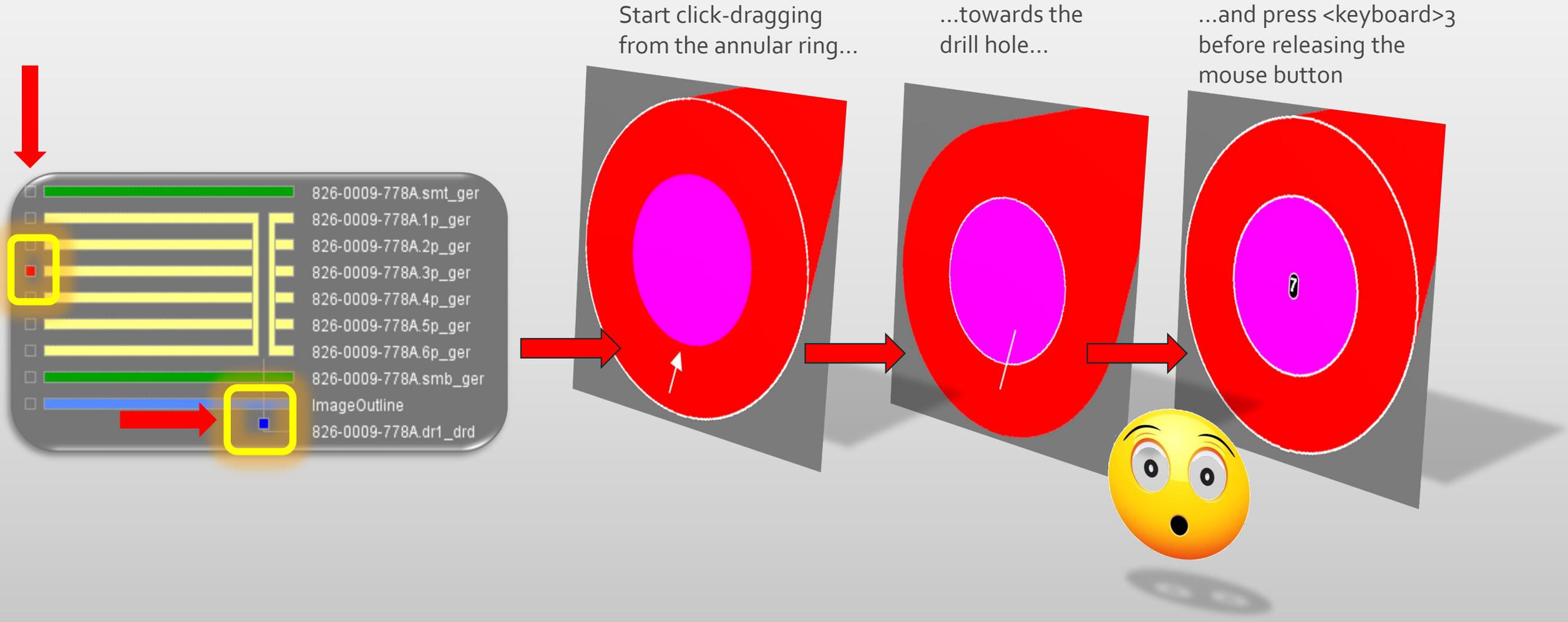
Integr8tor v2019.03

New features – Checkpoint / DFM Viewer Measure functionality

NEW

- Measure Objects – Tips and Tricks…

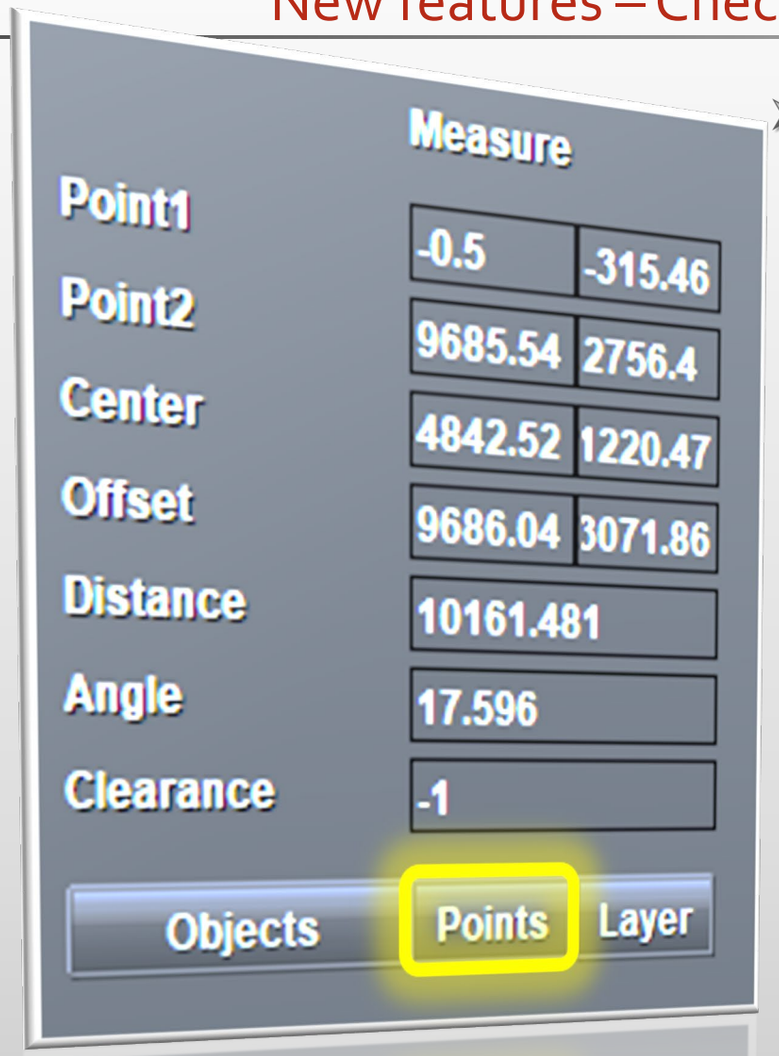
  How to measure annular rings - illustrated…



Integr8tor v2019.03

New features – Checkpoint / DFM Viewer Measure functionality

NEW



Measure Points

- Click function and move cursor into drawing area
- Click and drag between two arbitrary points
- Release mouse button to have resulting values displayed in the Measure toolbox, similar to Measure Objects

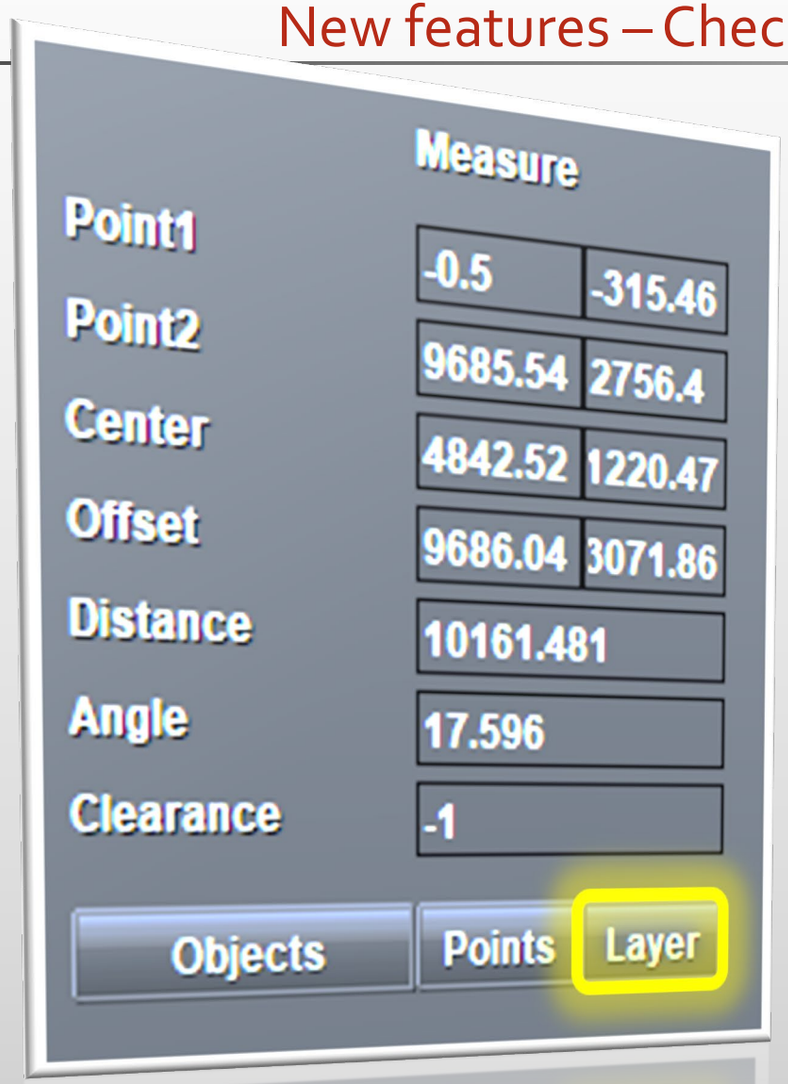
  - No embedded snap mode and therefore
    - ***Point1:*** X/Y coordinate of mouse click
    - ***Point2:*** X/Y coordinate of mouse release
  - Other values are calculated based on these positions
  - No object highlighting
  - No object-to-object clearance calculation (Clearance field always states -1) and no on-screen clearance display

- Ideal for freehand measurements or in combination with any snap function for instance to do edge-to-edge measurement

Integr8tor v2019.03

New features – Checkpoint / DFM Viewer Measure functionality

NEW



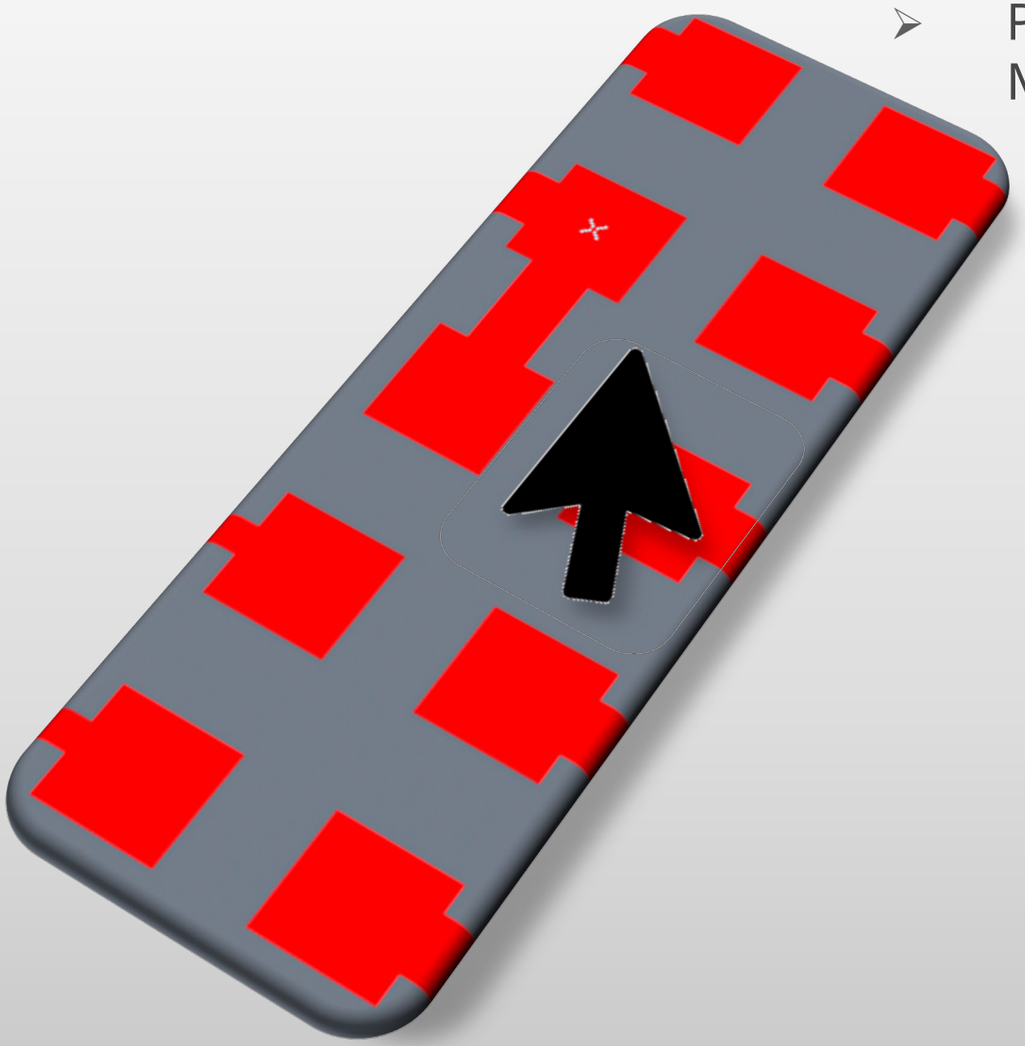
- **Measure Layer**
  - To take the dimension of a layer(s)
  - Visualize the layer(s) to be measured
  - Simply click the Layer function

- ***Point1:*** X/Y coordinate of bottom left-hand corner of the enclosing rectangle around all data on the displayed layer(s)
- ***Point2:*** X/Y coordinate of top right-hand corner of the enclosing rectangle around all data on the displayed layer(s)
- ***Center:*** the X/Y coordinate of the center of this enclosing rectangle
- ***Offset:*** Layer(s) dimension in X and Y
- ***Distance:*** length of the rectangle's diagonal
- ***Angle:*** angle of rotation of the rectangle's diagonal
- ***Clearance:*** always -1, meaning "not applicable"

Integr8tor v2019.03

New features – Checkpoint / DFM Viewer Snap modes

NEW



- Perform accurate measurements by combining Measure Points with a variety of snap modes:

  - X marks the spot…
    Have the mouse cursor accompanied by a small sticky cross for immediate graphical feedback which object you are querying
  - Always accurately hit the objects you are interested in when doing a measure Points

Integr8tor v2019.03

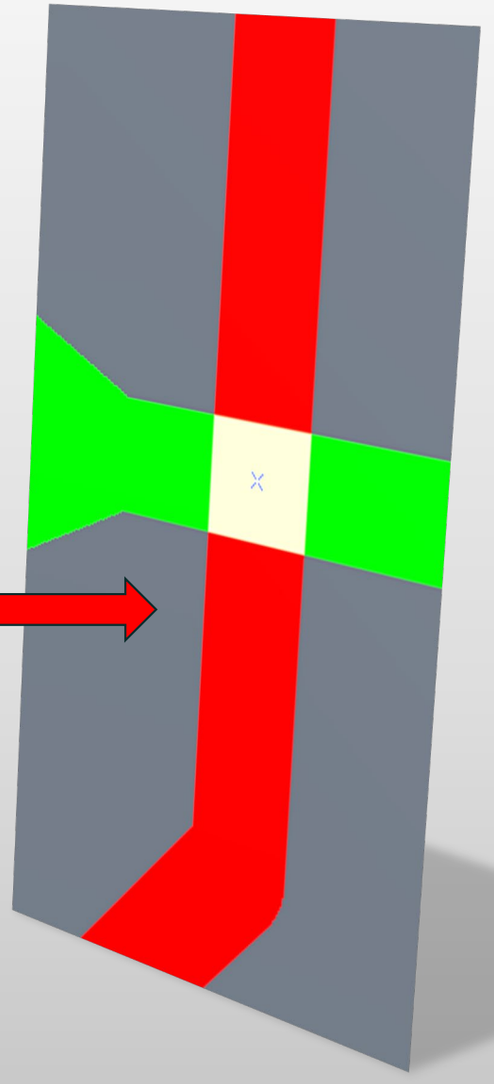
New features – Checkpoint / DFM Viewer Snap modes

NEW

- 7 different snap modes to choose from
- All gathered on an extra toolbar below the main graphics area

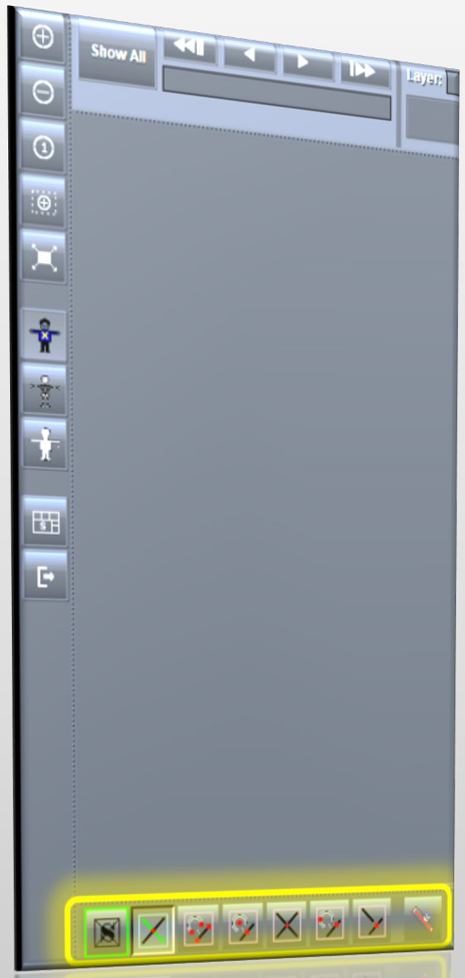
1. **Snap on/off** – Shortcut <keyboard> X
   Colored outline around the function button shows the layer in which objects are looked for (=snap layer). Use <keyboard> 1-2-3 to set the snap layer to red-green-blue
2. **Snap to intersections between work and snap layer**
   To exactly hit for instance an intersection of 2 traces located on different layers

1 2



Integr8tor v2019.03

New features – Checkpoint / DFM Viewer Snap modes

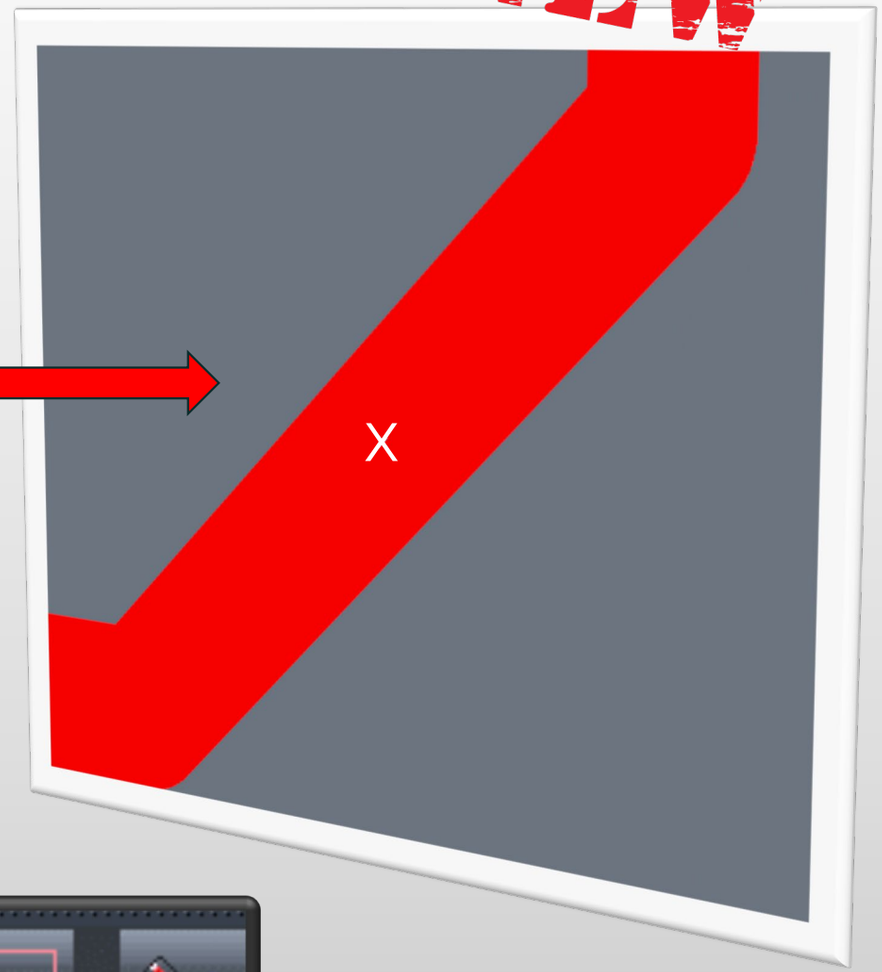


3. **Snap to line and arc ends**
   Always takes the coordinate of the start or end point of a trace or arc

4. **Snap to line and arc center**
   Considers the X/Y coordinate of the middle of a trace or the center point of an arc

5. **Snap to object intersection**
   Similar to option 2 but with the objects located on the same layer

6. **Snap to nearest object**
   Whichever object's X/Y is closest to the cursor (pad/trace/arc/region)



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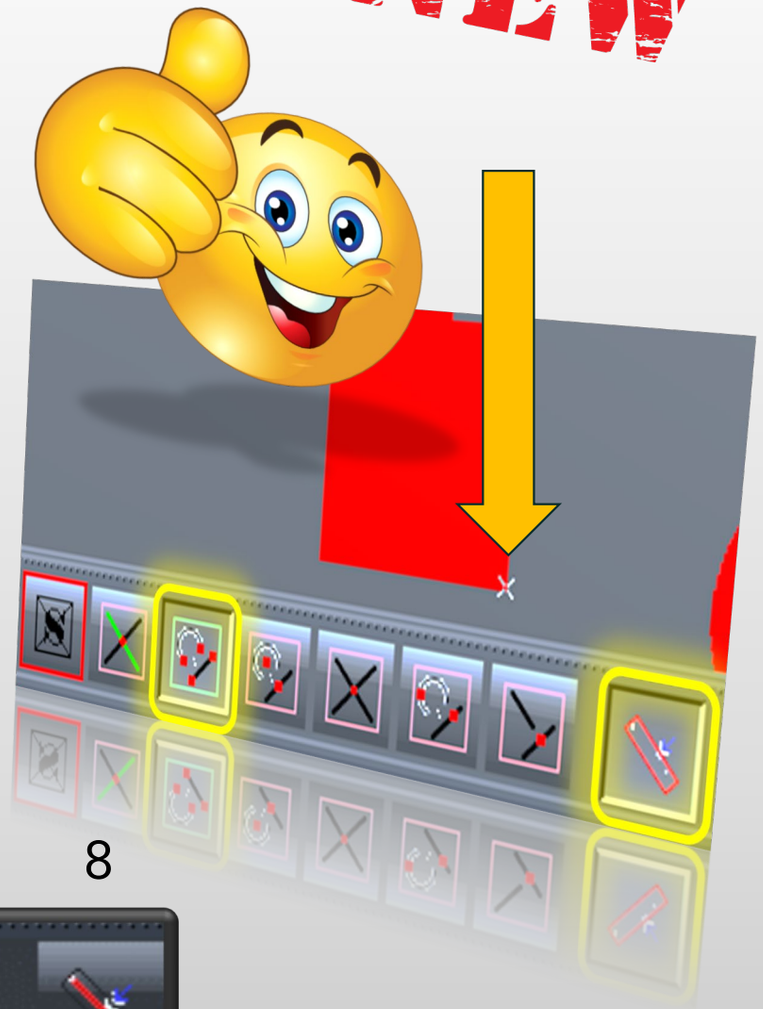
New features – Checkpoint / DFM Viewer Snap modes

7. **Snap to virtual object intersection**
   The X/Y of the point where 2 non-parallel traces would intersect if they were extended far enough. The 2 traces must be located on the same layer.

8. **Snap to edge**
   Not a real snap mode, but an option to the other snap modes…
   When pressed, snapping is done to the edge of the object rather than to the center or midpoint coordinates



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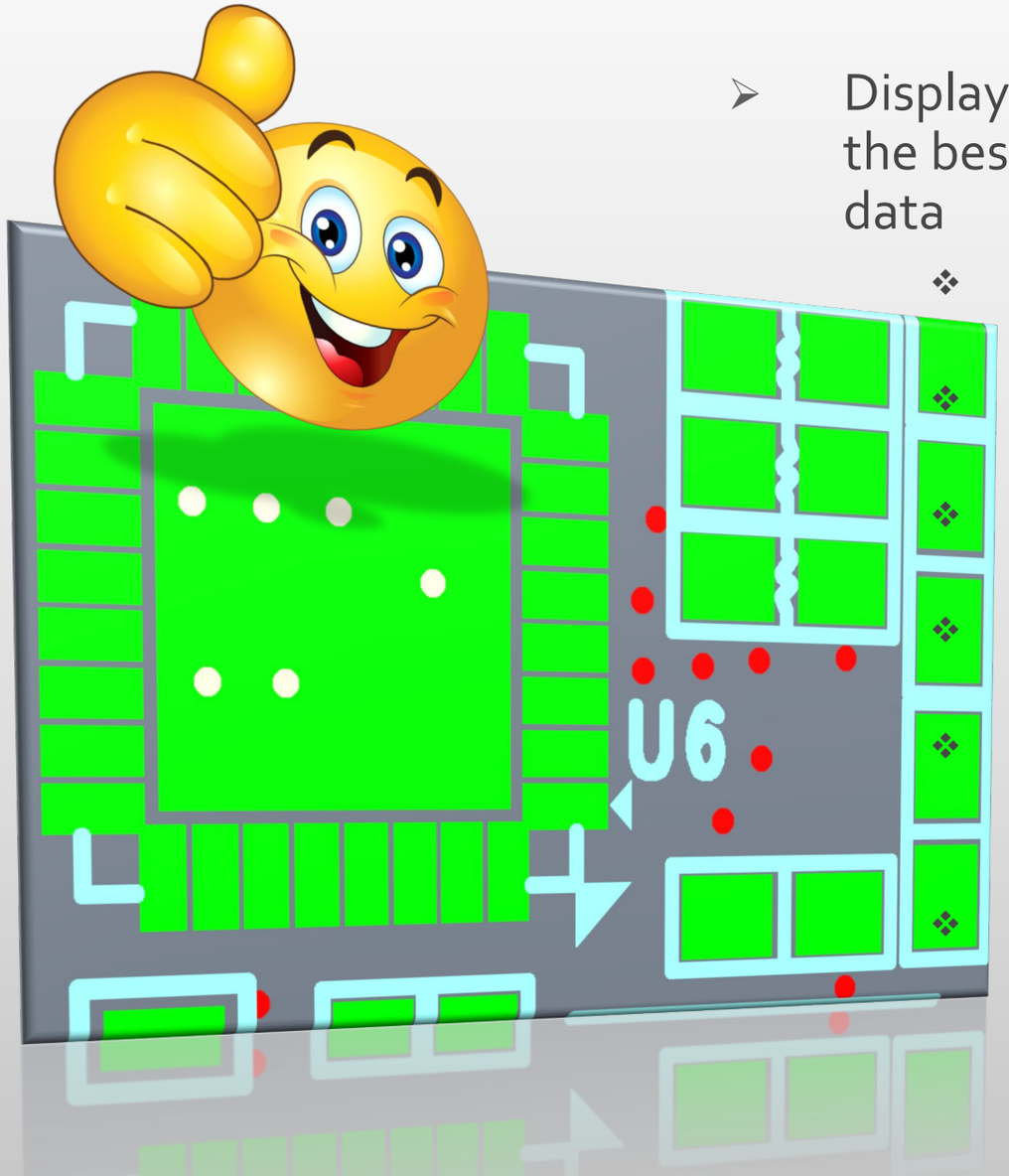
Integr8tor v2019.03

New features – Checkpoint / DFM Viewer Multiple Layer Display

NEW

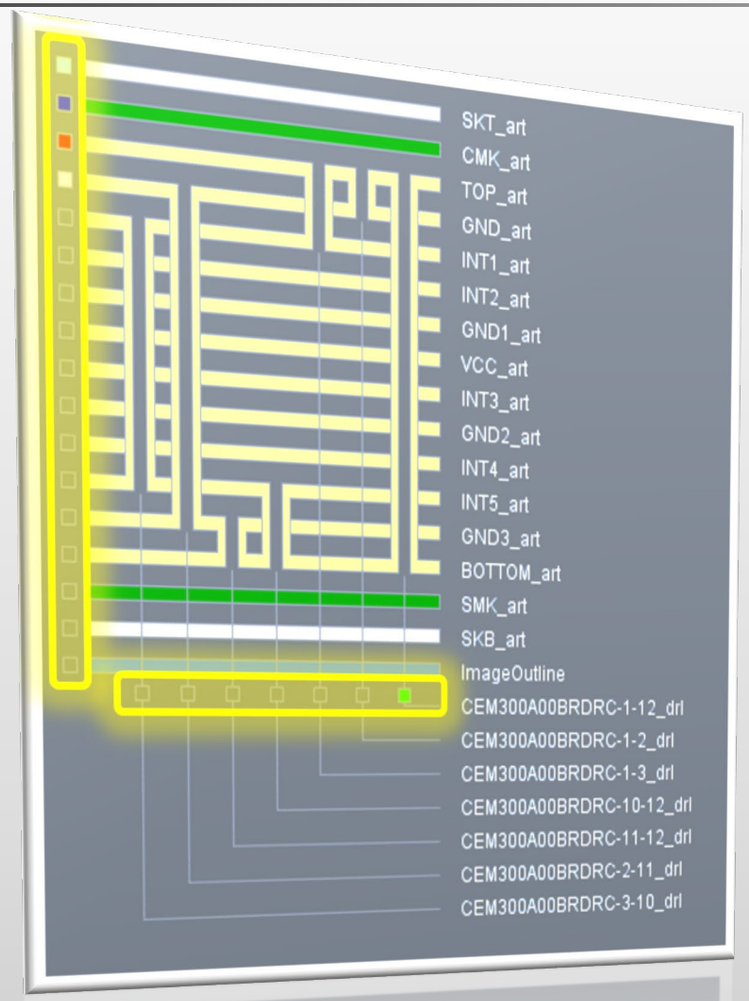


- Display up to 5 layers simultaneously for optimum viewing and the best possible understanding of complex situations in your data
  - Visualize drill and solder mask layers to see if via holes are covered or clear of solder mask…
  - Look at legend and solder mask layers together to see if legend will need to be clipped…
  - Bring up the board outline and visually compare it against other layers in the stackup to find any obvious anomalies…
  - Display the layers of concern to be able to do measurements between objects on different layers…
  - Bring on an extra layer in the stack while looking at an analysis result to help you put things in perspective…

Being able to look at any layer in the stackup offers huge advantages on numerous occasions and boosts the Integr8tor results viewing applications' flexibility to unprecedented heights…

Integr8tor v2019.03

New features – Checkpoint / DFM Viewer Multiple Layer Display

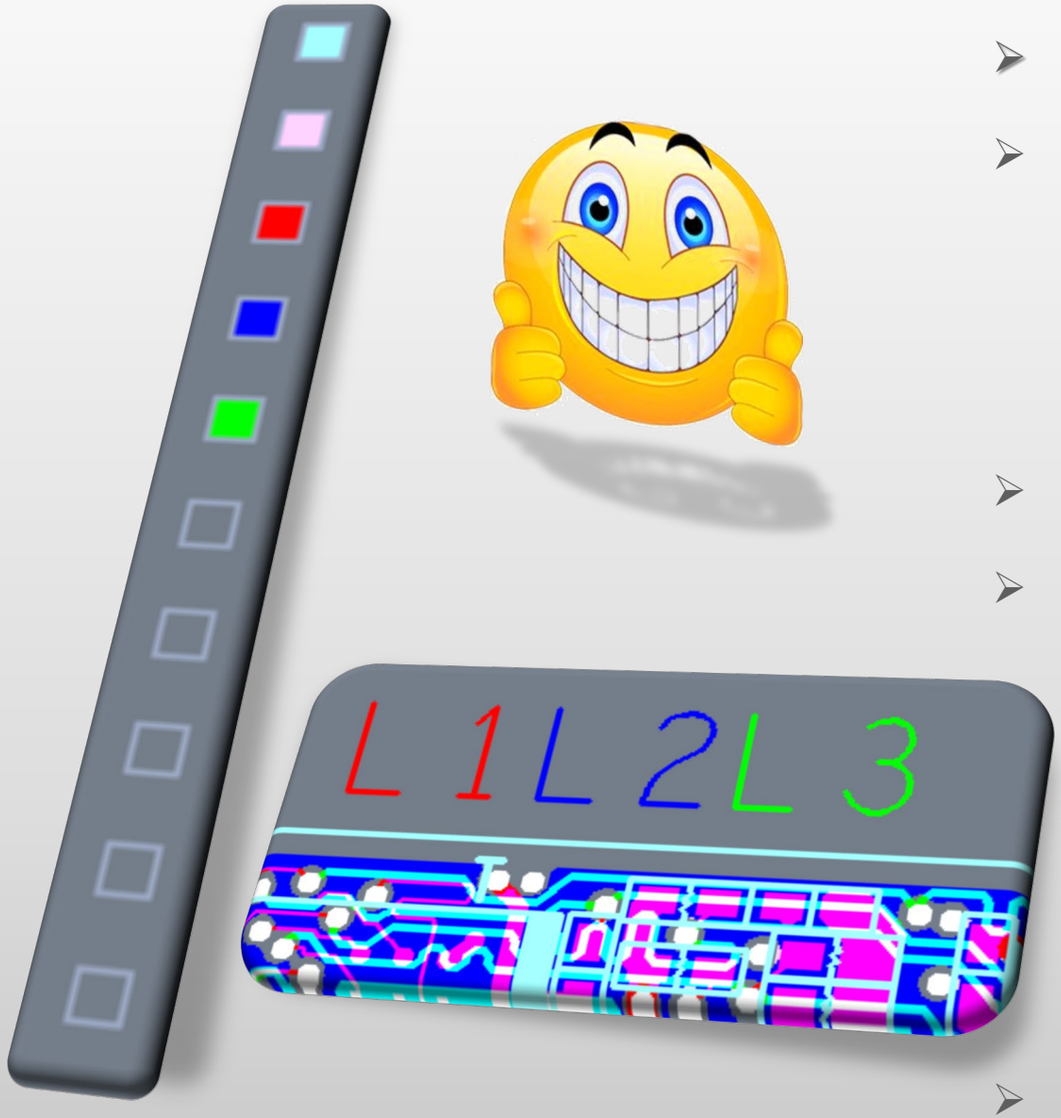


- Every layer in the stackup now has a small display on / off display toggle box, either to its left (copper layers / extra layers) or at the bottom (drill layers)
- As part of this new feature, the outline layer too is now part of the stackup area (ImageOutline)
- Up to 5 different layers in 5 different colors can be displayed simultaneously
- 5 Colors break down in 2 groups
  - Colors that mix in case of overlap (red – green – blue)
  - Underlay/Overlay colors that do not mix (carnation pink – air force blue)
- The mix colors group can be addressed with <keyboard> 1 – 2 – 3 in combination with the Measure Object function for annular ring measurement for instance.

Integr8tor v2019.03

New features – Checkpoint / DFM Viewer Multiple Layer Display

NEW

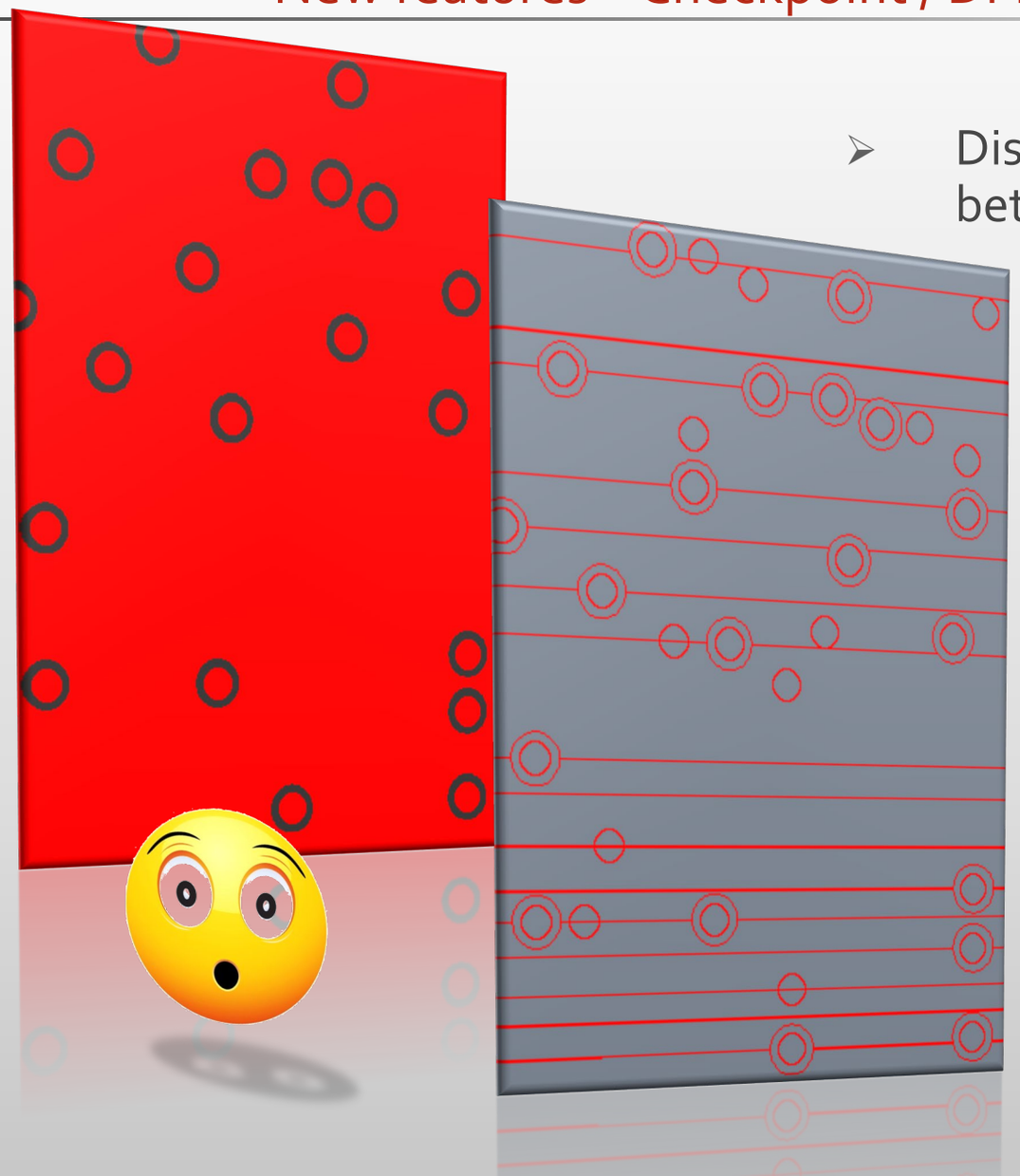


- How Multiple Layer display works…
- After opening a job in Checkpoint / DFM Viewer:
  - top copper layer is displayed in red
  - bottom copper layer is displayed in green
  - plated drill is displayed in blue
- Click on a colored toggle box to hide a layer
- Click on an empty toggle box to assign the lowest available color to the layer, e.g.
  - If red-green-blue are already in use → next layer will be displayed in carnation (underlay) pink
  - In this situation, untick the 2 copper outer layer boxes so only blue and pink remain → assigning a color to the next layer will use color red, next one green, next one air force (overlay) blue
- All colors can be used once

Integr8tor v2019.03

New features – Checkpoint / DFM Viewer Multiple data display modes

NEW



- Display data in one of three different display modes to better see the way how data has been constructed :

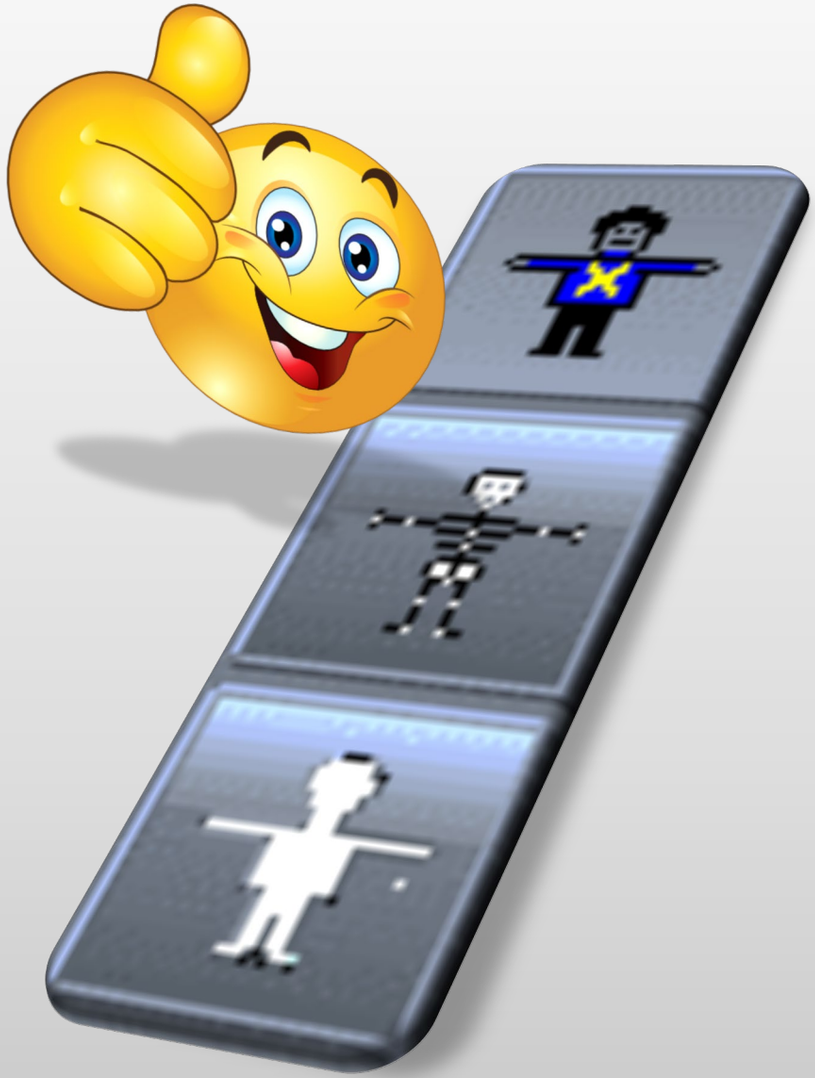
  - See smaller objects embedded inside larger ones
  - Use a different data display mode to ensure you are measuring between the objects you are interested in…
  - Detect smaller painted areas embedded inside bigger copper planes…
  - Find out if a copper object is stretching out further than what the regular image shows and is cut back by a negative, as this may impact on layer dimensions…

  - There are many circumstances where different representations of the data can combine to help better interpret the results of an analysis or a measure…

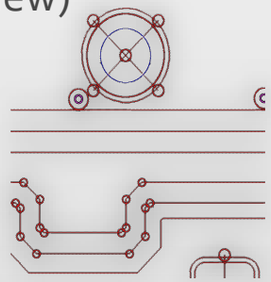
Integr8tor v2019.03

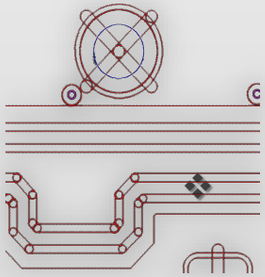
New features – Checkpoint / DFM Viewer Multiple data display modes

NEW



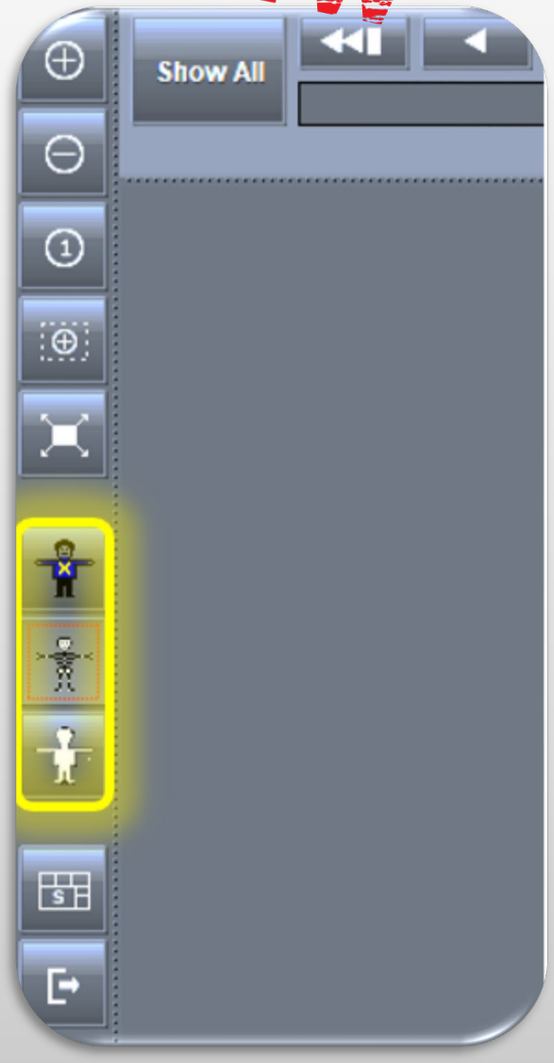
- Bring up one or more layers in the color(s) of your choice
- Choose one of 3 data display modes that best your needs
  - **Filled** mode (regular view)
  - **Skeleton** mode
    with trace center lines





Outline mode
with trace width display

- 3 dedicated icons, conveniently located on a separate toolbar to the left of the main graphics area



Integr8tor

V2019.03

Enhancements

64 Bit

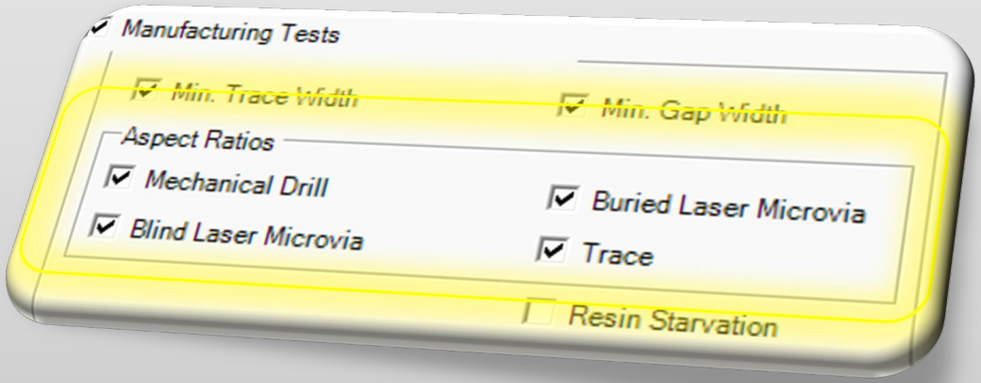
Multi Core

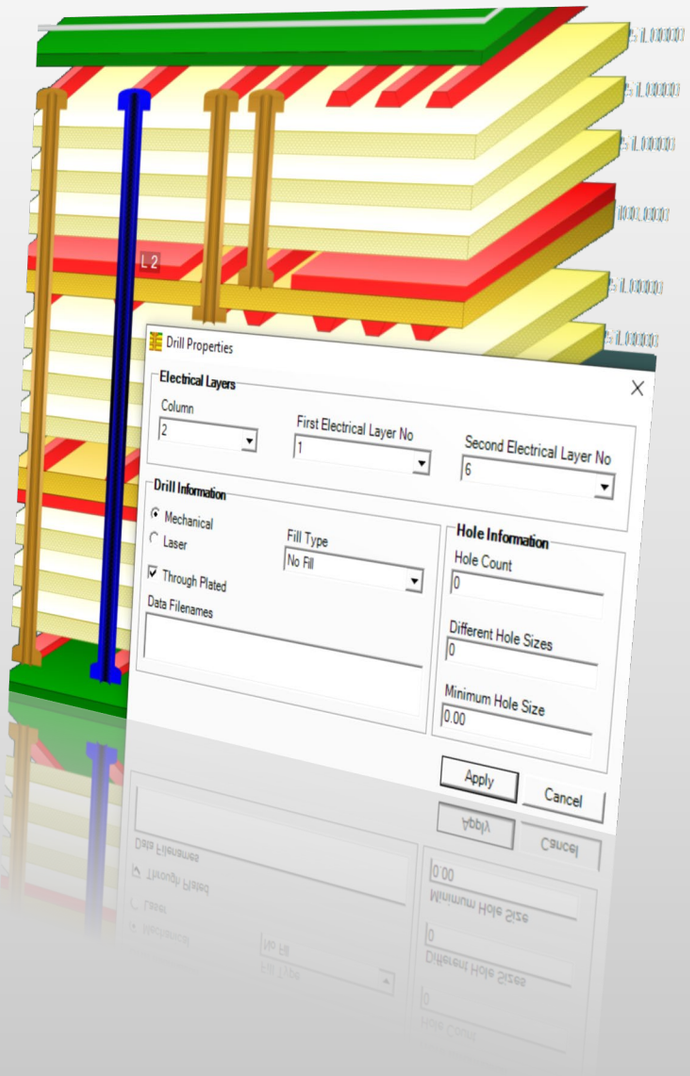
Integr8tor v2019.03

Enhancements – More robust Ustack workflow

ENHANCED

- Upgrade of the Integr8tor / Ustack stackup builder solution with important drill program properties:
  - Minimum Hole Size
    - To allow Ustack to run highly accurate aspect ratio calculations as part of its manufacturing constraints DRCs
    - To warn in real-time during stackup design when the buildup's thickness becomes incompatible with aspect ratio limitations





Integr8tor v2019.03

Enhancements – More robust Ustack workflow

ENHANCED

- The Minimum hole size data field can feature either the **end diameter** or the **tool diameter**
- A ucam.db setting is available to trigger the desired behavior:

  polar.export.minholesize: 1

  Value = 1 → end diameter is used (default)

  Value = 2 → tool diameter; if no tool diameter has been defined, a value of zero is output

  Value = 3 → tool diameter; if no tool diameter has been defined, the end diameter is output

```
15  polar.export.minholesize: 3
16  polar.tooldia.policy: loose
17  #
```

Integr8tor v2019.03

Enhancements – More robust Ustack workflow

- A second ucam.db key is available to define whether it is imperative that ALL drill diameters have their tool size set, or it is enough for THE SMALLEST ONE ONLY to have a drill diameter

polar.tooldia.policy: loose

Value = loose

it is enough for the smallest drill hole to have a tool size defined

Value = strict

All drill diameters must have their tool size set. If not and tool size is requested as the minimum hole size for Ustack, a value of zero will be output to flag the inconsistency

```
15  polar.export.minholesize: 3
16  polar.tooldia.policy: loose
17  #
```

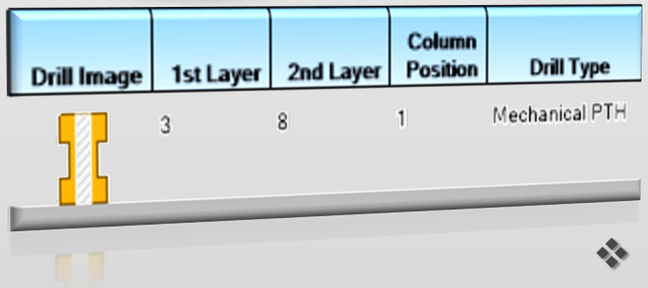
Contact the Ucamco helpdesk if you are unfamiliar with setting up ucam.db customizations in Integr8tor…

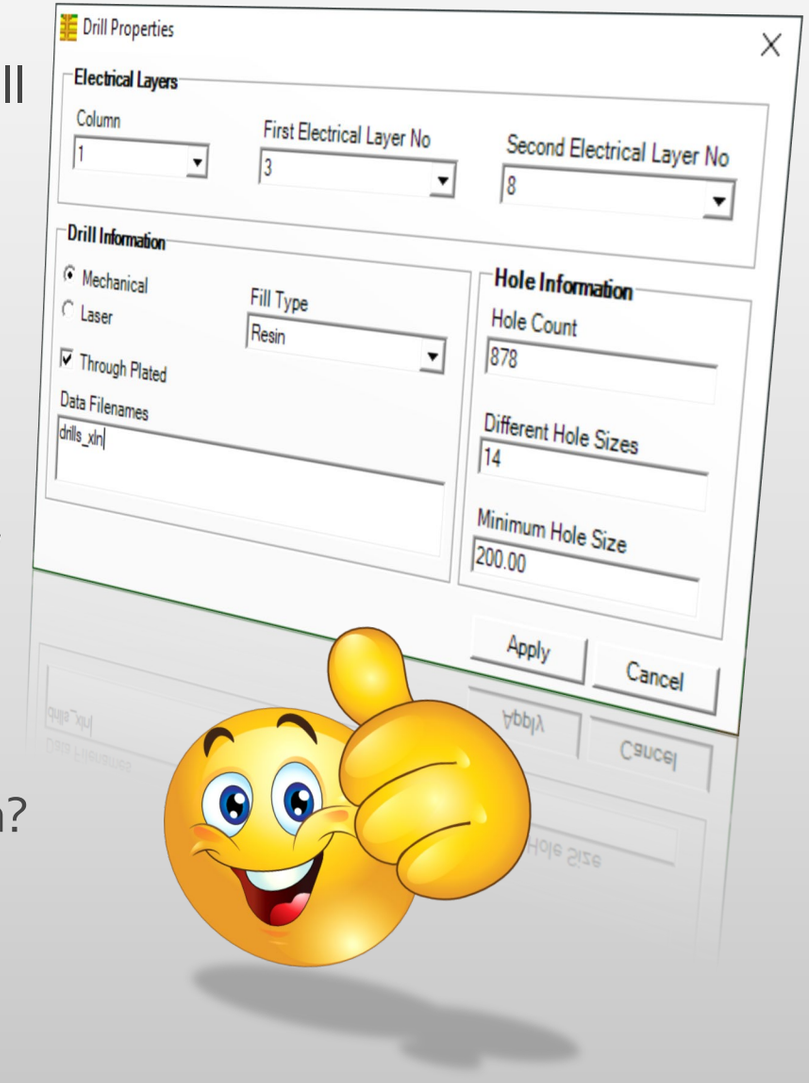
Integr8tor v2019.03

Enhancements – More robust Ustack workflow

ENHANCED

- **Different Hole Sizes**
  - How many different drill diameters in a drill program?
  - To go as an information item in Ustack's documentation module and as a measure for board complexity and cost
- **Hole Count**
  - The total number of drill hits in a program, again for documentation and internal use later in the drill department
- **Drill hole creation method**
  - Is this a mechanical or a laser drill program?





Integr8tor v2019.03

Enhancements – More robust Ustack workflow

ENHANCED

- **Fill Type**

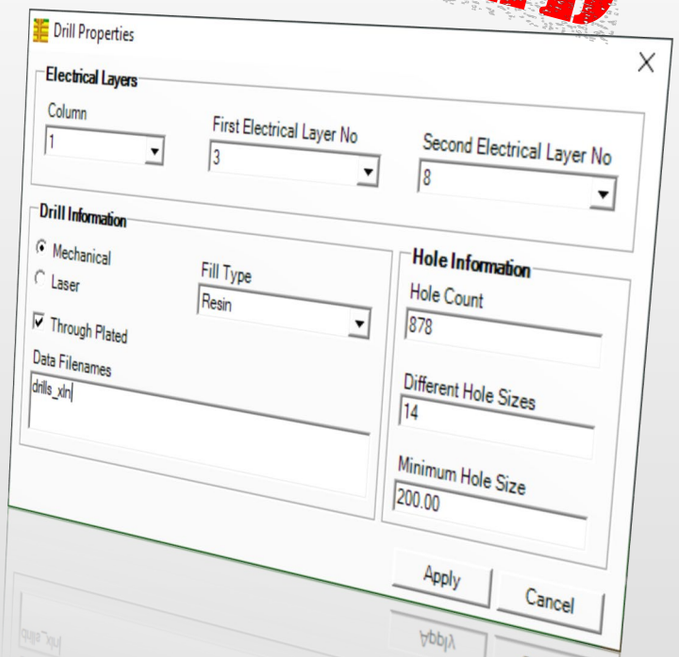
  Do drill holes require to be filled and if so with what material to use?

- **SSX version to be used**

  Integr8tor / Ustack integration is based on Polar Instruments' SSX format. Several revisions of the format exist, each adding extra functionality to the previous version.
  Integr8tor 2019.03 allows you to select the SSX revision that matches the Polar software you may already have on site

  Add this key to your Integr8tor ucam.db with the desired SSX version number to activate the appropriate SSX revision for your environment

  polar.export.ssx.version: 4.00 (default)



```
#
#Polar SSX version number for Ustack link
#=========================================
polar.export.ssx.version: 4.00
```

Integr8tor v2019.03

Enhancements – More robust Ustack workflow

ENHANCED

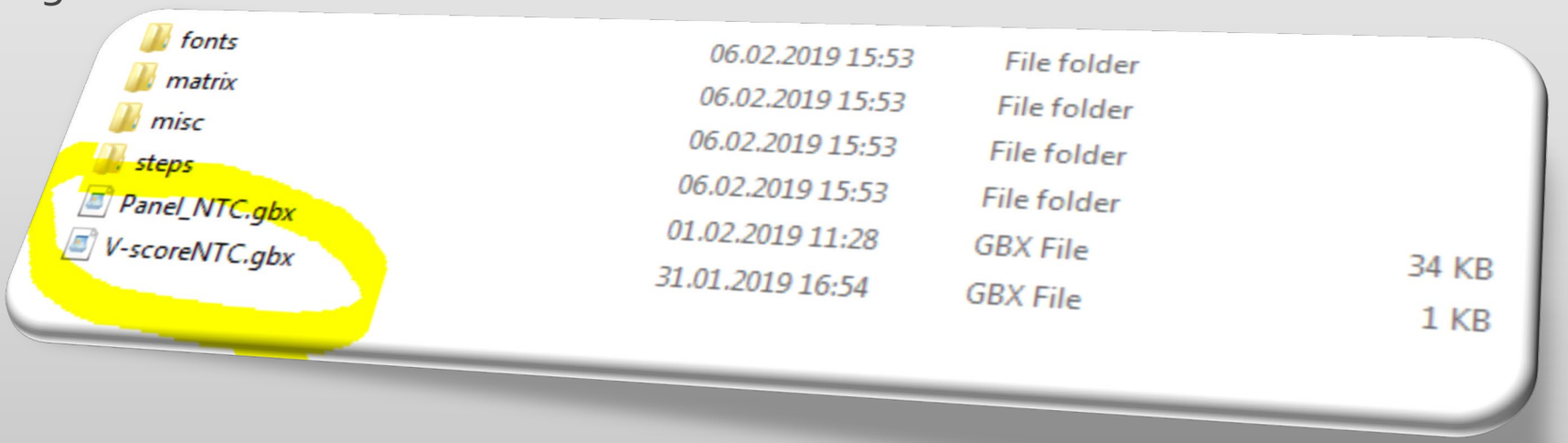
- A consistent, bi-directional exchange of all relevant drill information significantly contributes to a uniform system of quotation and documentation and helps you do a better job…

Integr8tor v2019.03

Enhancements – Support for advanced ODB++ features

ENHANCED

- ODB++ import
  - Gerber Files included in an ODB++ file structure
    - ODB++ archives can contain non-ODB++ files within their structure.
    - Integr8tor 2019.03 features improved support for this type of archive: if located in the top level of the structure, Integr8tor adds the non-ODB++ files to the list of files in Cockpit and makes them available for viewing

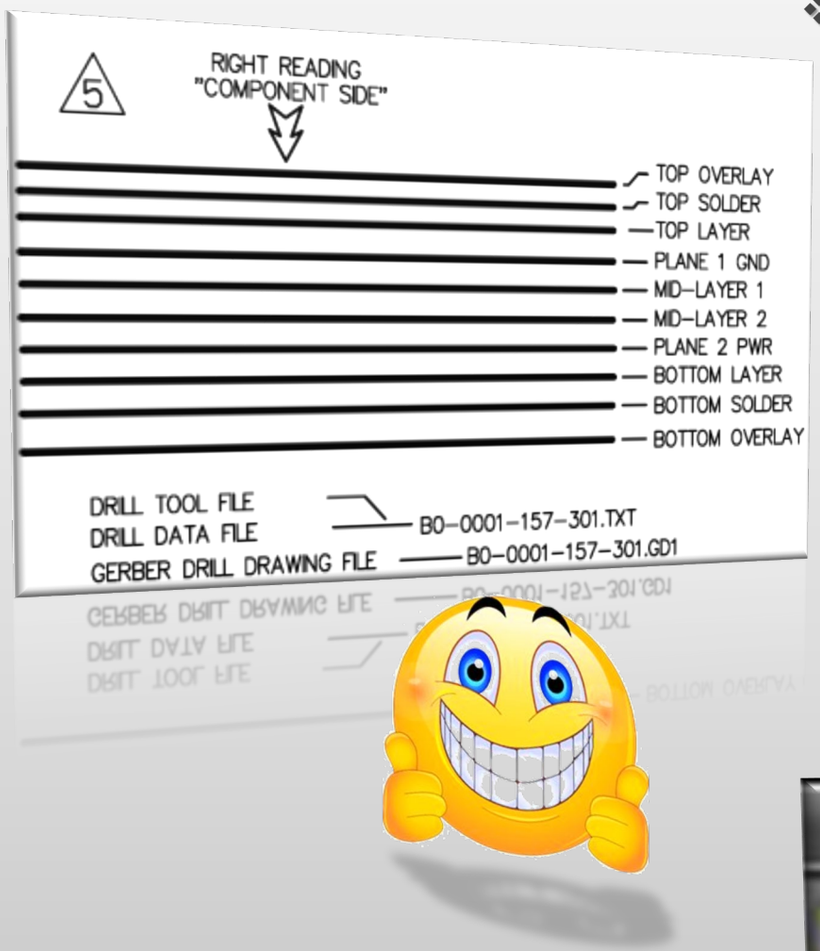


Integr8tor v2019.03

Enhancements – Support for advanced ODB++ features

ENHANCED

- ODB++ import
  - Duplicate file names in an ODB++ file structure
    - An ODB++ matrix file defines the layers and their physical order in a job
    - The ODB++ format specification disallows multiple occurrence of the same layer name within a matrix file
    - Nonetheless, a number of systems generate ODB++ archives that do not observe this rule
    - Integr8tor 2019.03 offers full support for this type of archive: if needed, it suffixes duplicate layer names from the matrix file in order to make them unique so that all layers can find their way into the Cockpit file list and board stackup…



Integr8tor v2019.03

Enhancements – Support for advanced ODB++ features

ENHANCED

- ODB++ Export
  - Configurable step names in Integr8tor's ODB++ output
    - The UserPreferences.xml file in …\Integr8tor\webapps\ROOT\WEB-INF\prefs now provides for the setup of customer-definable step names for the ODB++ output

```
<entry key="exportODBStepAliasForOriginalJob" value="cust"/>
<entry key="exportODBStepAliasForRebuiltJob" value="edit"/>
<entry key="exportODBStepAliasForCleanJob" value="clean"/>
```

Integr8tor v2019.03

Enhancements – Support for advanced ODB++ features

ENHANCED

- ODB++ Export
  - System Attributes export
    - DPF Padtype attributes are available in the Integr8tor Rebuilt job and Clean jobs
    - Integr8tor 2019.03 includes default support for translating these attributes into the corresponding ODB++ system attributes during ODB++ output (.smd,.bga,.via_pad)

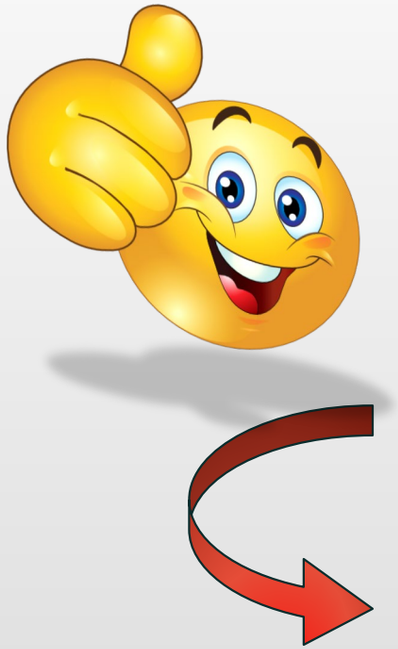
  - User Attributes export
    - DPF attributes that do not have a system attribute match in ODB++ can be transferred as non-system attributes
    - An optional custom userattr file can be placed in Integr8tor's <ETSCAM_CFG>\output\odbxx folder

```
# Feature attribute names
#
@0 .geometry
@1 .pad_usage
@2 .smd
@3 uPadReconstructed
@4 .drill
@5 uPadIsFreeOfMask
@6 uFlashType
@7 .via_pad
#
# Feature text strings
#
&0 SMD_RectX62.9921Y70.8661
&1 SMD_RectX80.0000Y26.0000
&2 SMD_RectX26.0000Y80.0000
…
&20 Pad_Simple_X90.0000Y90.0000H55.0000C82.5000
&21 Pad_Simple_X200.0000Y200.0000H125.0000C187.5000
&22 Pad_Simple_X85.0000Y85.0000H51.0000C76.5000
&23 VIA_RoundD28.0000H14.0000C54.0000
&24 toeprint
&25 via
&26 non_plated
&27 1
&28 NoPad
&29 WasherPad
&30 UnknownPad
#
# Layer features
#
L -1.0250000 -1.2250000 16.7250000 -1.2250000 0 P 12
…
P -0.4900000 -1.0200000 1 P 3 0;6=28
P -0.2700000 -1.0200000 1 P 3 0;2
P -0.0500000 -1.0200000 1 P 3 0;2,5=27
```

Integr8tor v2019.03

Enhancements – Support for advanced ODB++ features

ENHANCED



- If present, it is included as misc\userattr in the job's ODB++ output.
- The contents of the userattr can be extended to wish to transfer any of Integr8tor's DPF attributes into ODB++

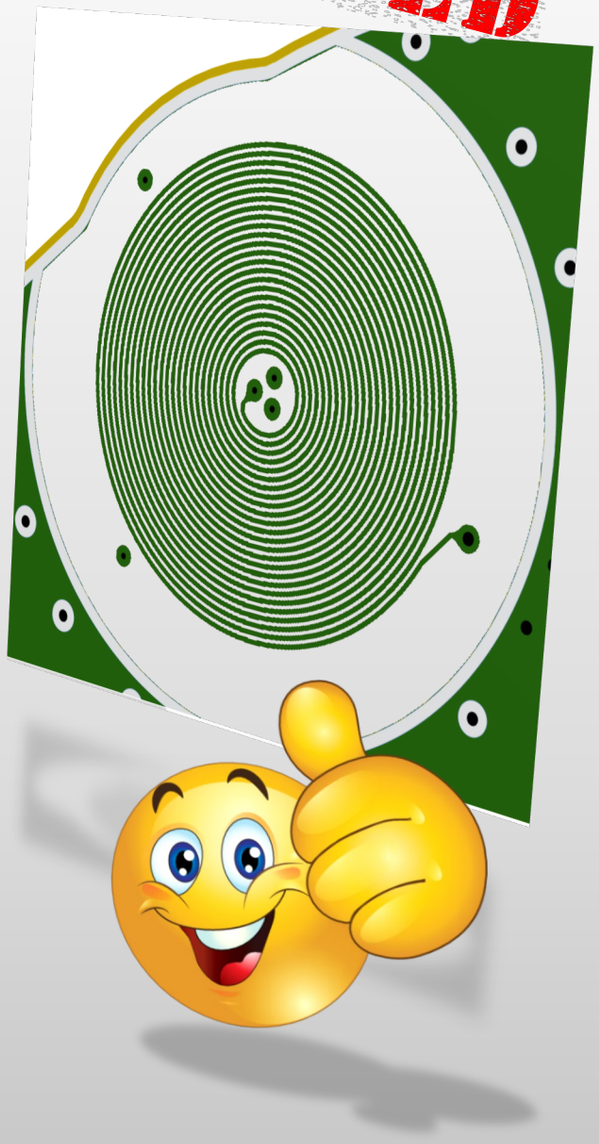
```
TEXT {
    NAME     = uFlashType
    ENTITY   = FEATURE
    MIN_LEN  = 0
    MAX_LEN  = 64
    PROMPT   = Flash Type
    CATEGORY= FEATURE
}

TEXT {
    NAME     = uTool_Type
    ENTITY   = FEATURE
    MIN_LEN  = 0
    MAX_LEN  = 64
    PROMPT   = Tool Type
    CATEGORY= FEATURE
}
```

- All knowledge Integr8tor has built into the data can finds its way into the Rebuilt or Clean job ODB++ outputs automatically
- No duplicated work in CAM saves time and money
- Consistent job information between Sales, Pre-CAM, Engineering and CAM
- A smoother and better integrated workflow

Integr8tor v2019.03

Enhancements – Various performance increases

- Same net spacing calculation on coils
  - Various optimizations of the same net spacing algorithm cater for a substantial performance increase
  - On data sets featuring large coils, gains of up to 300% have been witnessed
- Heavily painted data sets
  - Further improvements to painted data detection significantly reduces the run-time of heavily painted jobs
- Hatched/crosshatched copper pours
  - A more intelligent approach to hatching and cross-hatching further reduces the job processing time on layers
- Rename script redundancy elimination
  - After refactoring part of the workflow, a number of redundant executions of the rename script could be eliminated and contributes to a further optimization of the processing time



Integr8tor v2019.03

Enhancements – Various performance increases

- Improved recognition and input of rout files
  - Extended support for better format recognition
  - Tool header recognition improvements
- Compensation recognition for better board outline detection
  - More jobs with an automatically recognized outline
  - Fewer stops and less operator intervention required

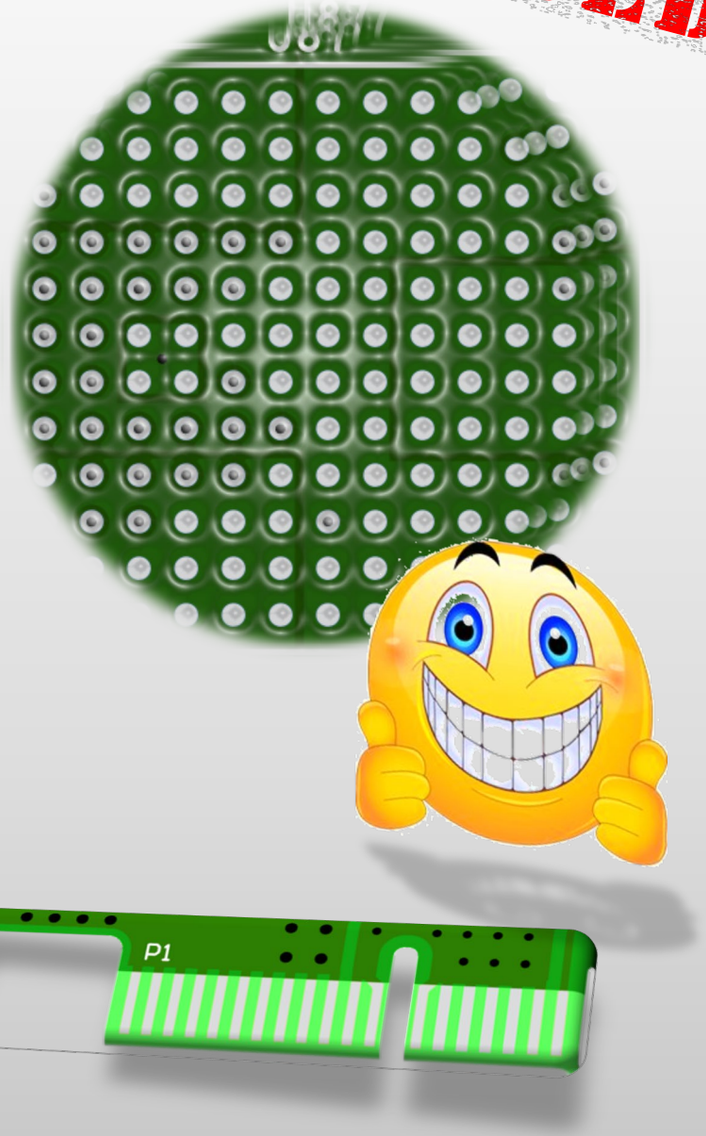
- Integr8tor 2019.03 bundles various performance improvements to help achieve noticeable processing time reduction and increased throughput

Integr8tor v2019.03

Enhancements - Miscellaneous

ENHANCED

- Aliasing of the integr8tor layer subclass “drawing”
  - The system layer subclass “drawing” can now be customized to an alternative subclass name for better localization or integration with other sytems
  - Extend the <subClassMap> node in UserPreferences.xml with
    <entry key="extra.drawing" value=“zeichnung"/>

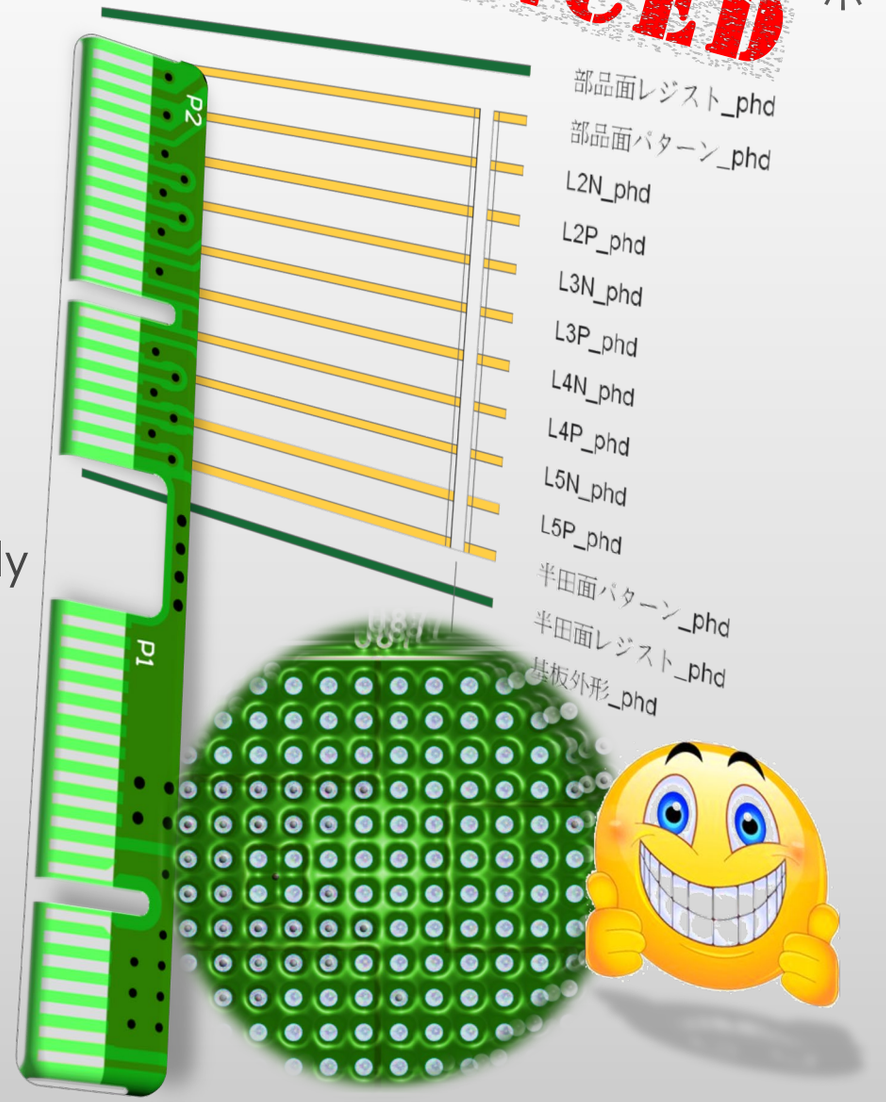


- Integr8tor 2019.03 comes with the most recent versions of the Eagle.dtd XML specification
  - Enhanced input of Eagle CAD database files

Integr8tor v2019.03

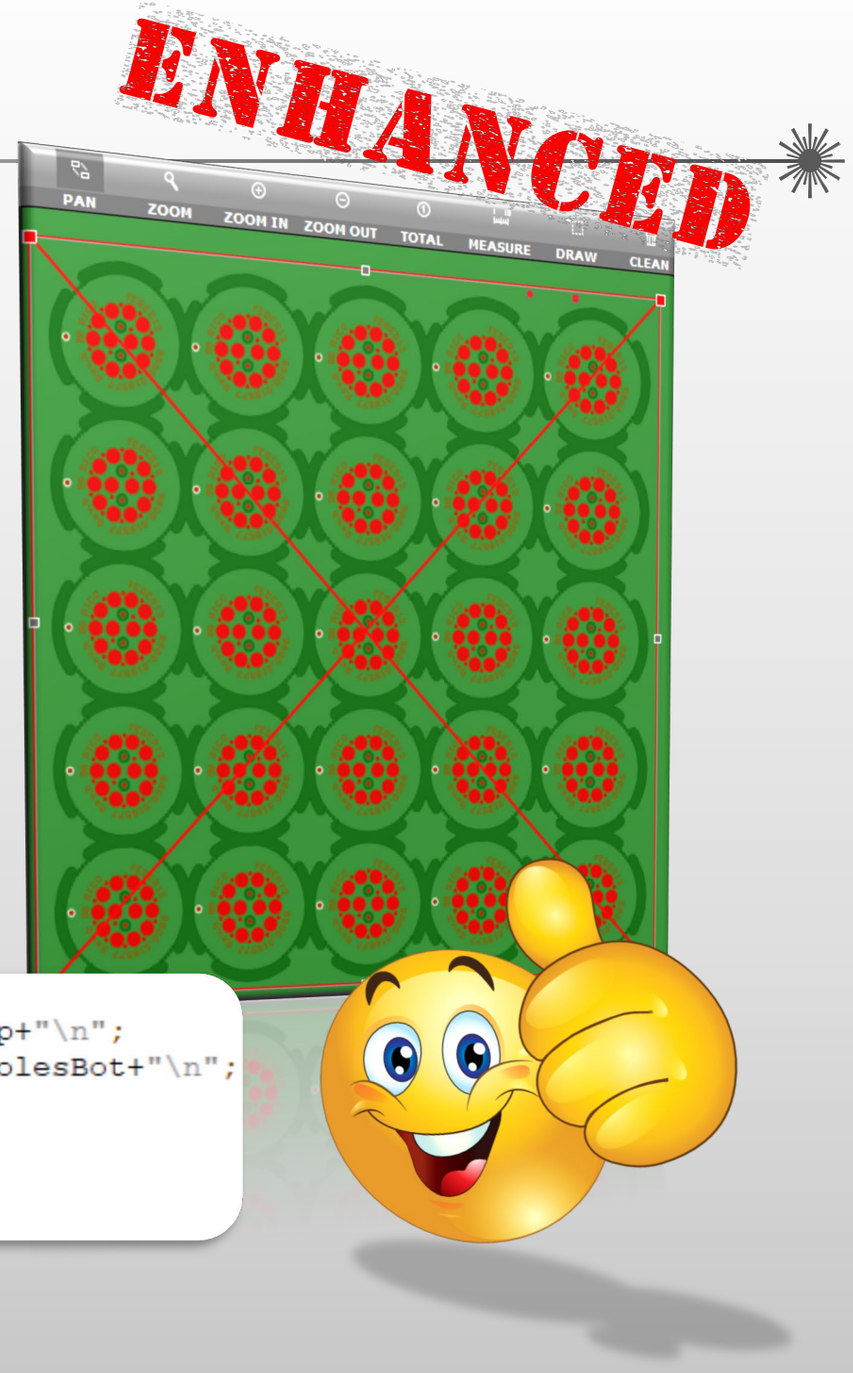
Enhancements - Miscellaneous

- Automatic stackup recognition improvements
  - As part of our ongoing effort to achieve maximum automation, Integr8tor 2019.03 comes with an extended rule set for optimum automatic stackup recognition
- Edge connector recognition enhancements
  - Their costly surface finish makes it essential to be recognized properly at quotation stage…
- BGA recognition improvements
  - An ever-increasing number of boards features BGAs, PBGAs, FPGAs and other sophisticated on-board devices.
  - Their recognition is of paramount importance for Sales, Engineering and CAM alike…



Integr8tor v2019.03

Enhancements - Miscellaneous



- More consistent drill hole density calculation
  - The drill hole density on the QED report is now also calculated in case of an enveloped outline defined in Sizes Editor. This was previously not the case
- Adding job comments from tray scripts
  - A new method has been implemented for adding comments to an Integr8tor job from within tray script

```
142     sComments="Copper Area \n";
143     sComments=sComments+"Top Copper = "+CuAreaTop+" / Top Holes = "+CuAreaHolesTop+"\n";
144     sComments=sComments+"Bottom Copper = "+CuAreaBot+" / Bottom Holes = "+CuAreaHolesBot+"\n";
145     sComments=sComments+"Drill Barrel  = "+dExposedCopperBarrel+"\n";
146     // Set comments
147     print(sComments);
148     i8Job.jobSetComments(sComments);
```

Integr8tor v2019.03

Enhancements - Miscellaneous

ENHANCED

- Japanese regionalization for Cockpit
  - As part of the global deployment of world's favorite quotation and engineering data analysis tool, Cockpit is now also available in Japanese language
- More robust QEDLayout.xml inconsistency handling
  - Integr8tor 2019.03 features a number of improvements to make it less vulnerable to inconsistencies that may have inadvertently been introduced while editing QEDLayout.xml

Integr8tor

V2019.03

Code Fixes

64 Bit

Multi Core

Integr8tor v2019.03

Code fixes

We have taken great care in fixing the items below for you and hope this will contribute to an even better user experience…

- An issue has been fixed with finding the closest matching Eagle.dtd file to validate the incoming Eagle data base
- There was a fix to solve a false positive Sieb und Meyer 3000 format recognition, causing a crash during input conversion later on
- Imperial material thickness values on the QED stackup image resulting from a sidestep to Ustack were not rounded or truncated and were cluttering the image
- SMD pads could remain unrecognized in case of negative mask layer polarity. This has been addressed.
- There was a flaw in the workflow where material was added from Ustack during a “To Ucam” session. This has been corrected and all material info and images are now correctly available in Integr8tor after return from a “To Ucam”
- Under circumstances, the QED parameter Electrical test single-sided / double-sided could be incorrect

Integr8tor v2019.03

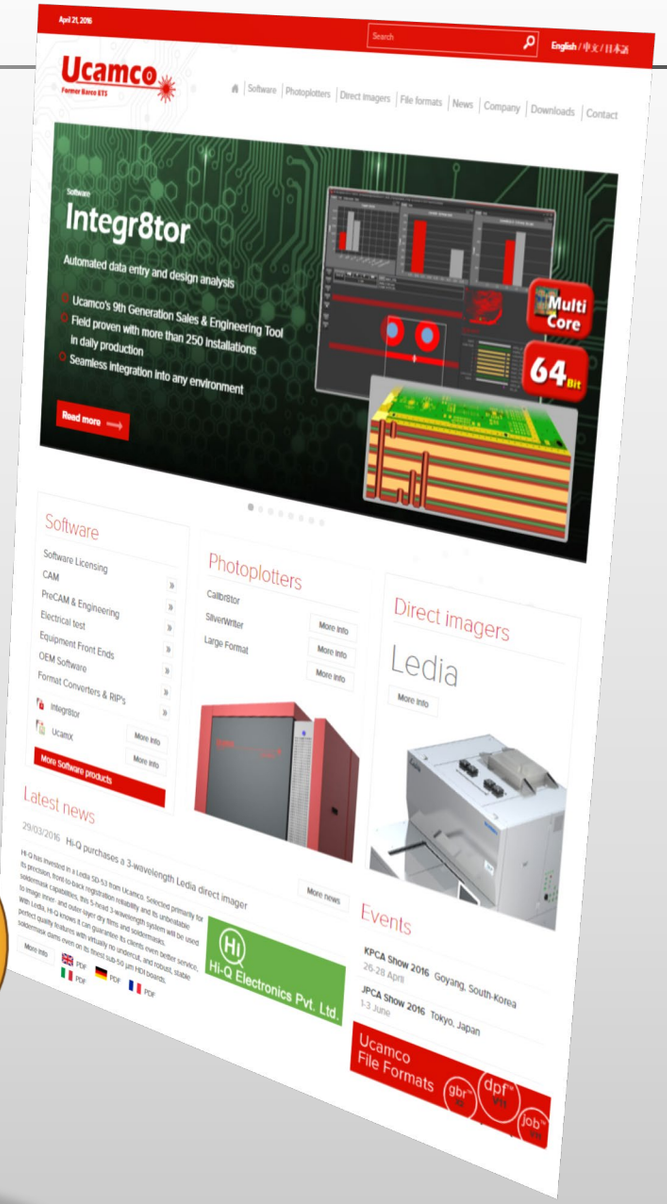
Code fixes

- A problem in the recognition and normalization of complex aperture shapes into standard box-shaped apertures has been fixed
- An occasional problem occurred recognizing Protel-conventional mechanical GMx layers as inners. This has been solved
- Applying a stackup template from the library to a job could corrupt the job's drill file configuration. This has been remedied
- Gerber files attached to a PDF document were seen to cause a system null pointer exception during archive processing. This problem has been fixed
- There has been a fix to ensure that layer stackup edits in the Job Editor are correctly propagated to Ustack later on. This was not always the case
- A correction has been implemented to solve an issue with incorrect stackup/drillspan recognition in case of drill layers with double digit .Txdd file extensions
- When the fingers of an edge connector were too small, the connector could remain unrecognized. This is no longer the case
- The recognition of layer polarity has been substantially improved

Integr8tor v2019.03

Download information

- The installer can be downloaded from ftp://ftp.ucamco.com/Integr8tor
- We recommend that you install this update at your earliest convenience
- For any further questions you may have, please contact our local business partner or the Ucamco helpdesk
- We thank you for choosing a Ucamco product



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