

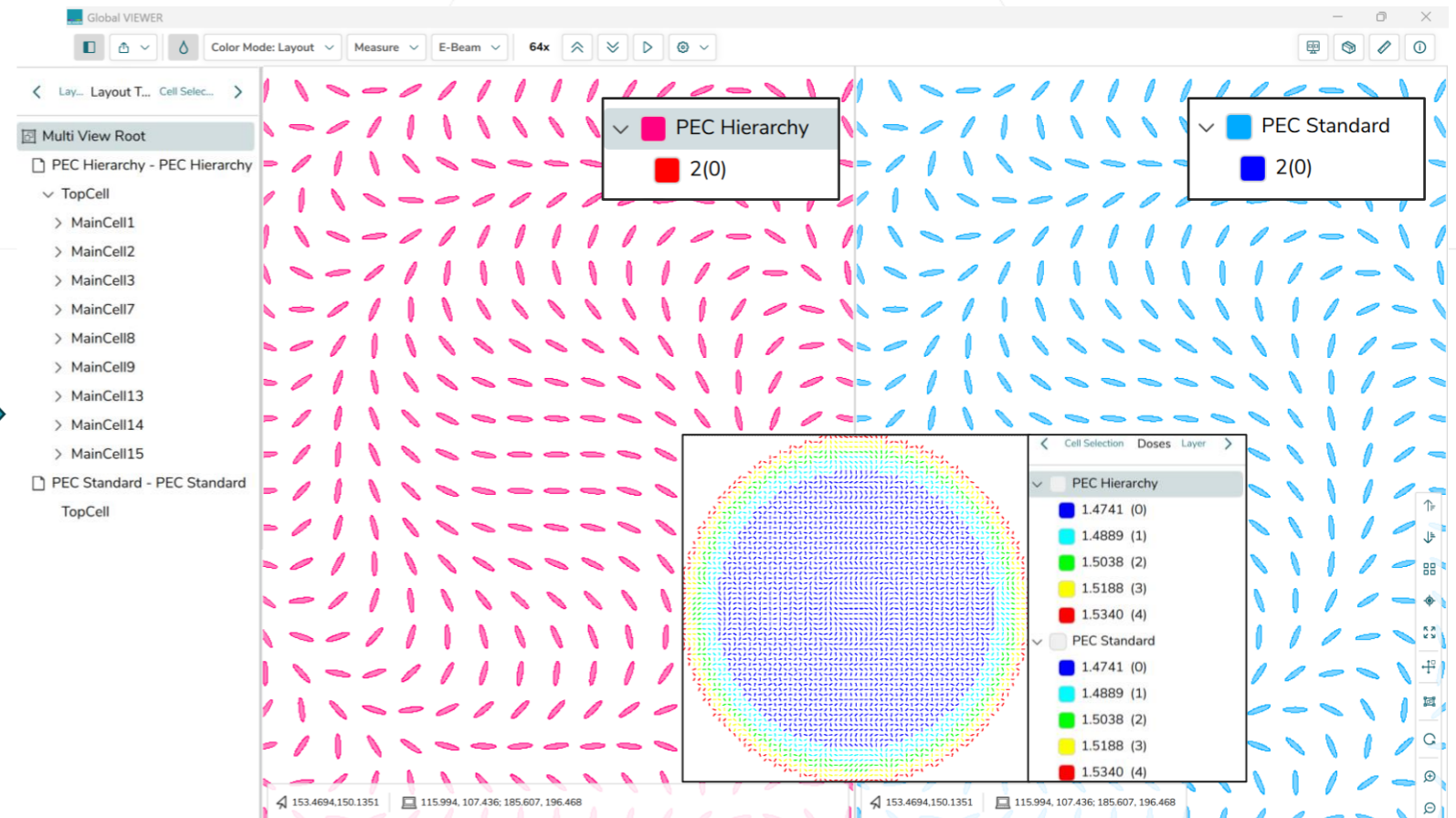
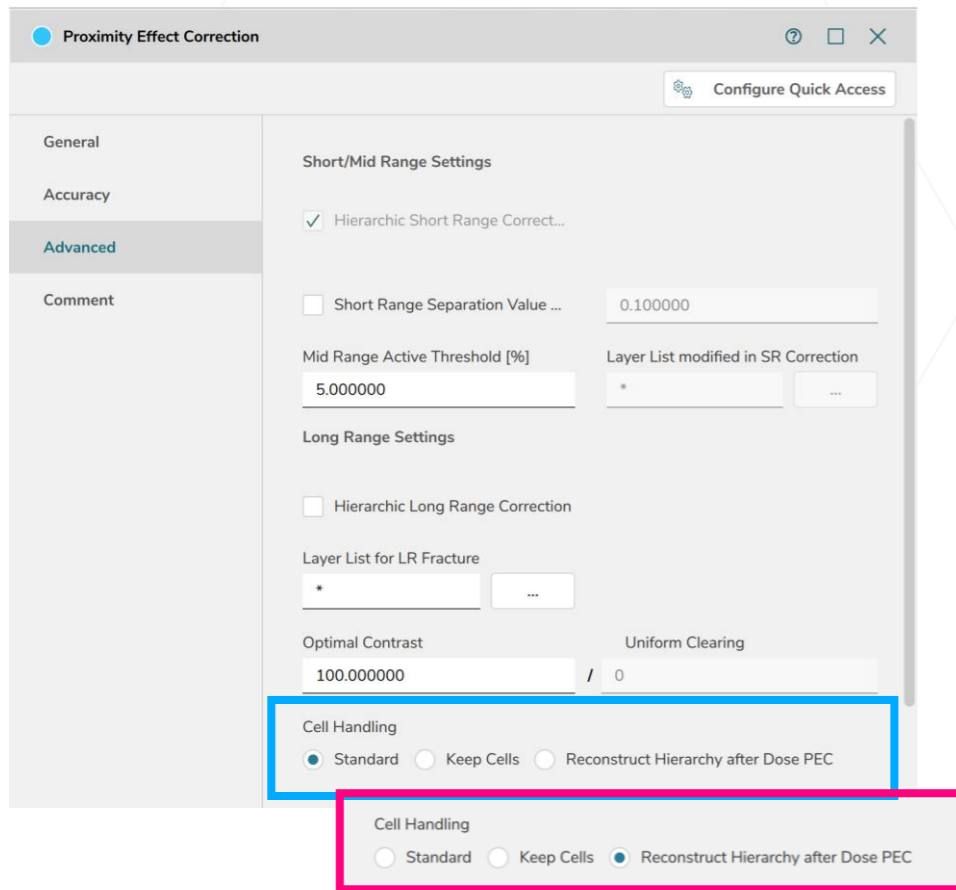
BEAMER

What's new v7.4

PEC Module

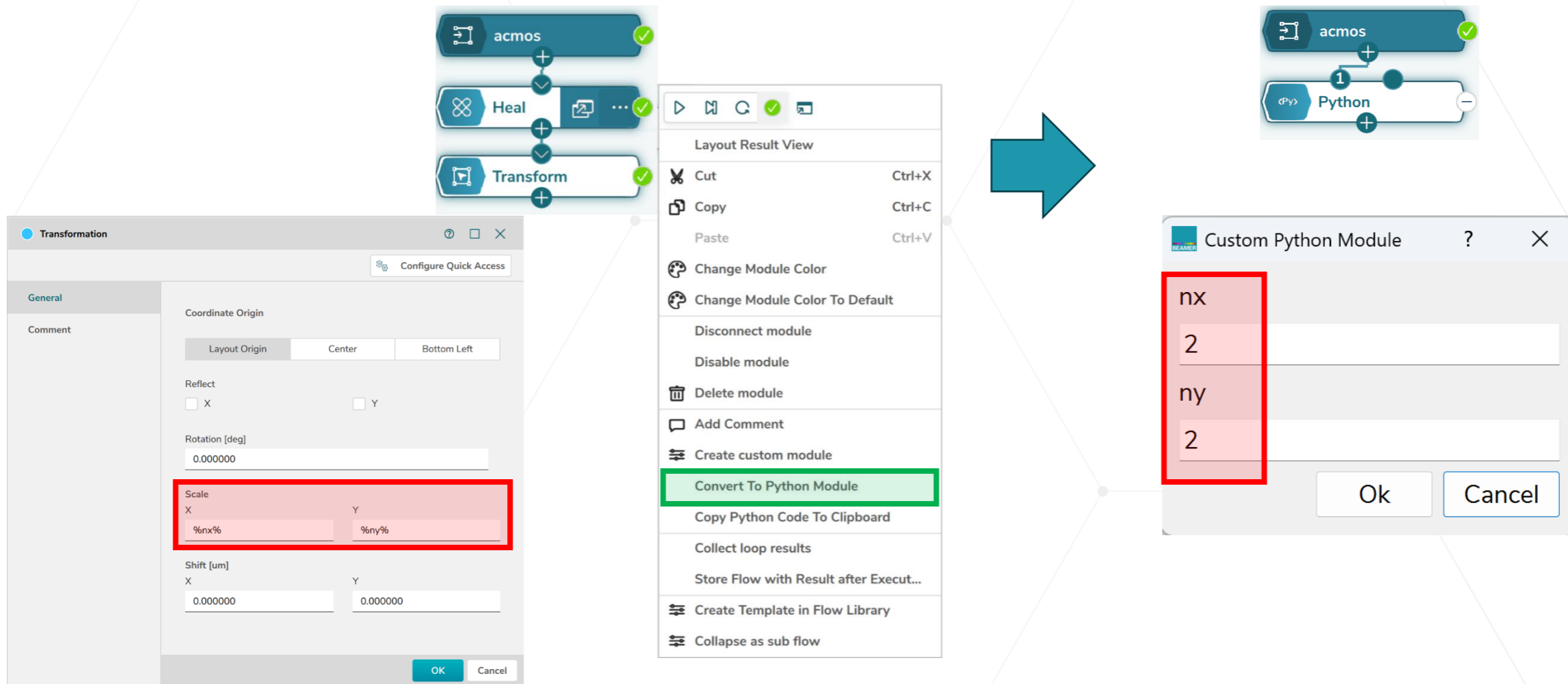
Reconstructed Hierarchy after PEC

PEC preserves **Hierarchy** maintaining field order and allowing to use *Cell To Field* during layout export



Python

Two or more **modules** can be **converted** to a useable script in a **Python module** where **variables** in modules **activate** the Py-GUI scripting **features**



The image illustrates the process of converting a flowchart module into a Python module. On the left, a flowchart contains three modules: 'acmos', 'Heal', and 'Transform'. A context menu is open over the 'Transform' module, with the 'Convert To Python Module' option highlighted in green. A large blue arrow points to the right, where a 'Custom Python Module' dialog box is shown. This dialog box contains two input fields: 'nx' with the value '2' and 'ny' with the value '2'. Both input fields are highlighted with a red border. The dialog box also has 'Ok' and 'Cancel' buttons at the bottom.

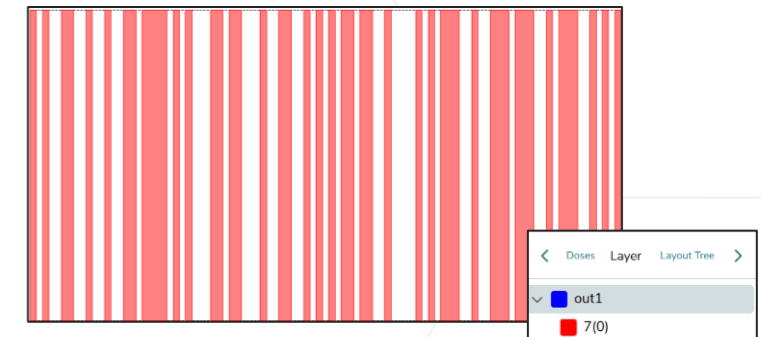
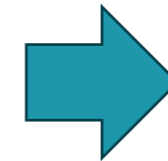
LayoutPy includes **new objects** to create

- **Barcodes** based on **UPC-A** and **EAN-13** schemes
- **QR codes**

Barcodes ✓

```
Python Script
Python GUI Script
Comment
```

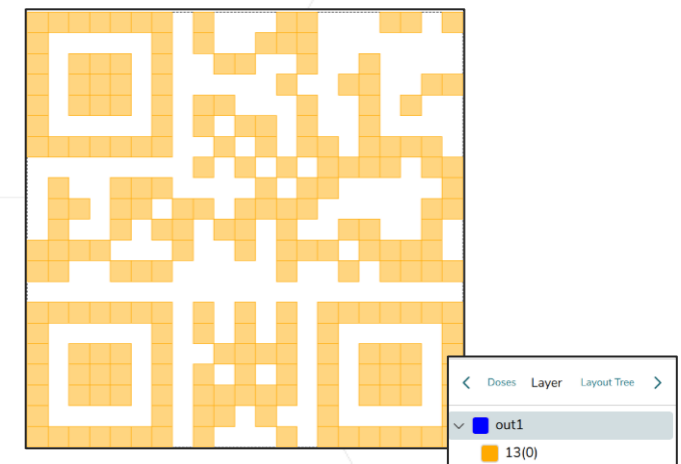
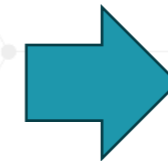
```
1 from LAYOUTpy import *
2
3 db = Database()
4 with Transaction(db) as txn :
5     txn.insert(Barcode((-2900, 1200), (-2600, 1300), '0123451234500', encoding = 'EAN-13', layer = 7))
6 db.close()
7 out1 = db.togobject()
```



QR code ✓

```
Python Script
Python GUI Script
Comment
```

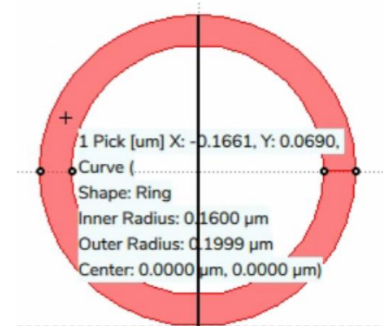
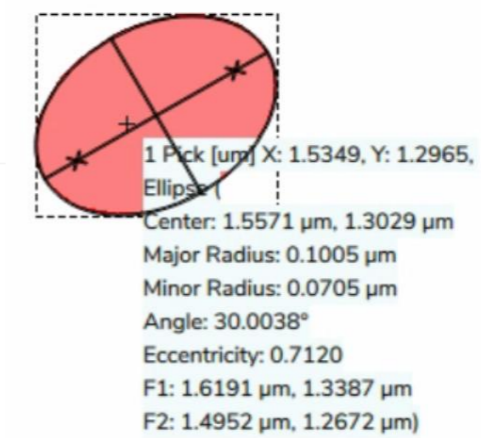
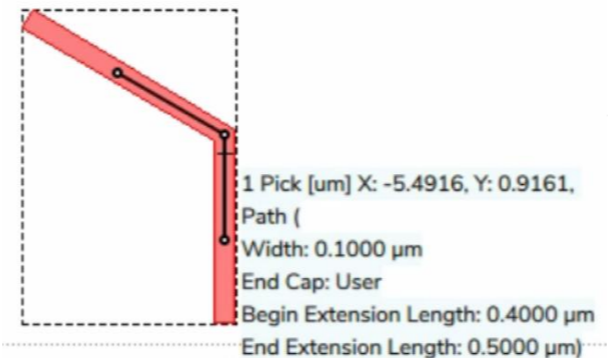
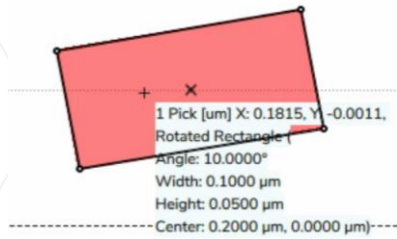
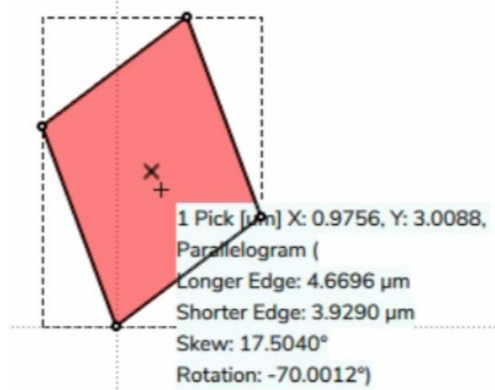
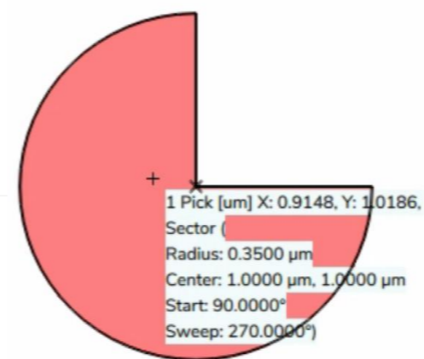
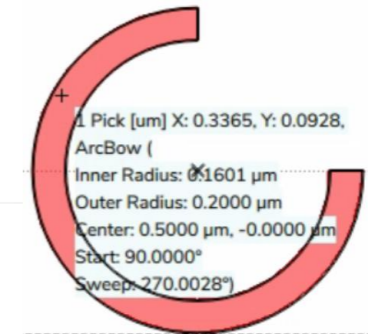
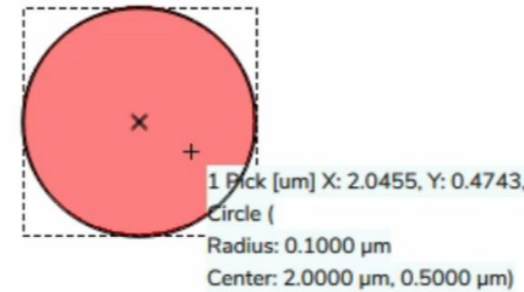
```
1 from LAYOUTpy import *
2
3 db = Database()
4 with Transaction(db) as txn :
5     txn.insert(QRcode((-2900, 1200), 100, 'GenISys GmbH', layer = 13))
6 db.close()
7 out1 = db.togobject()
```



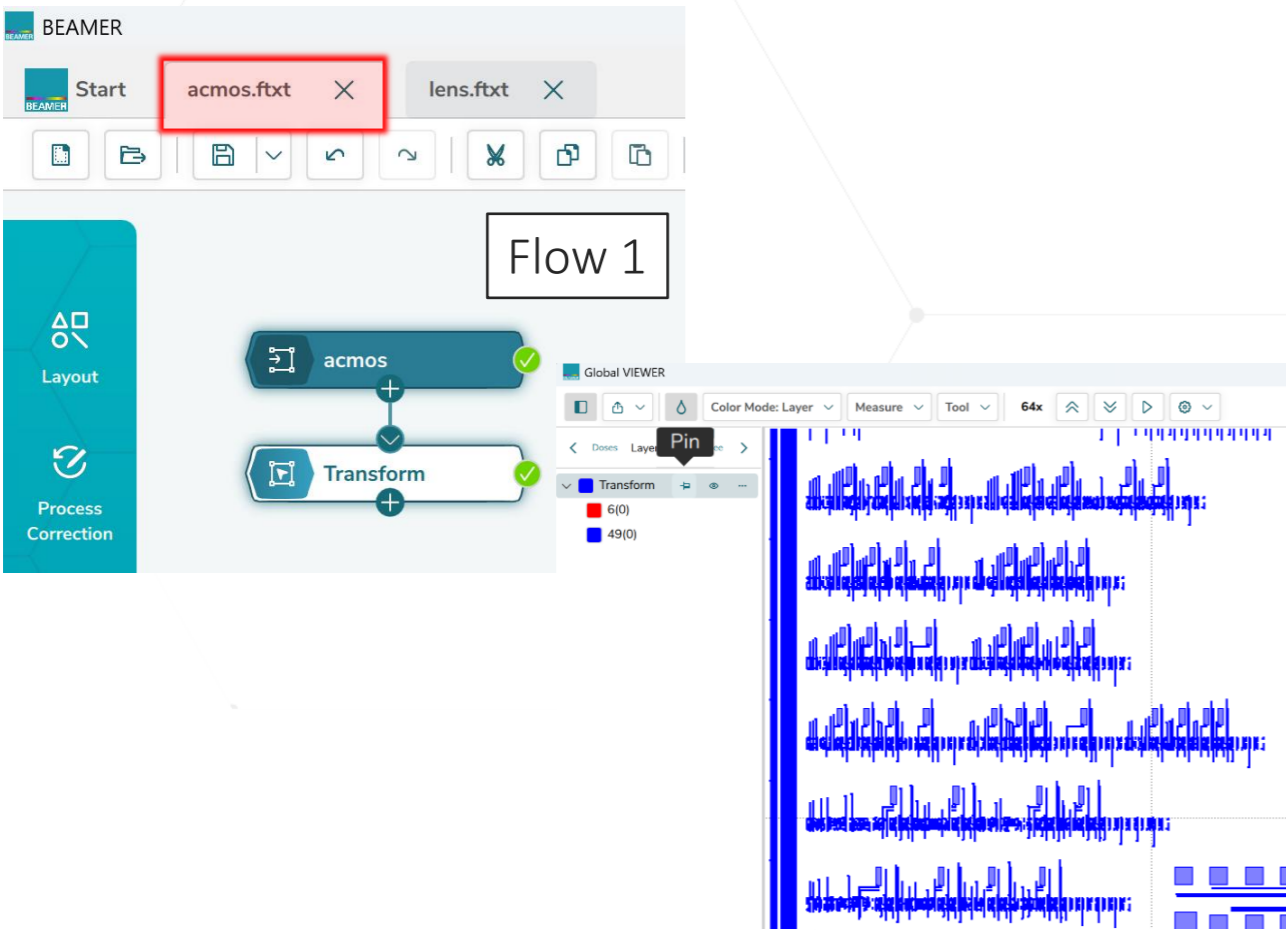
Viewer

Pick shapes in **Viewer** shows relevant information of **specific primitives**:

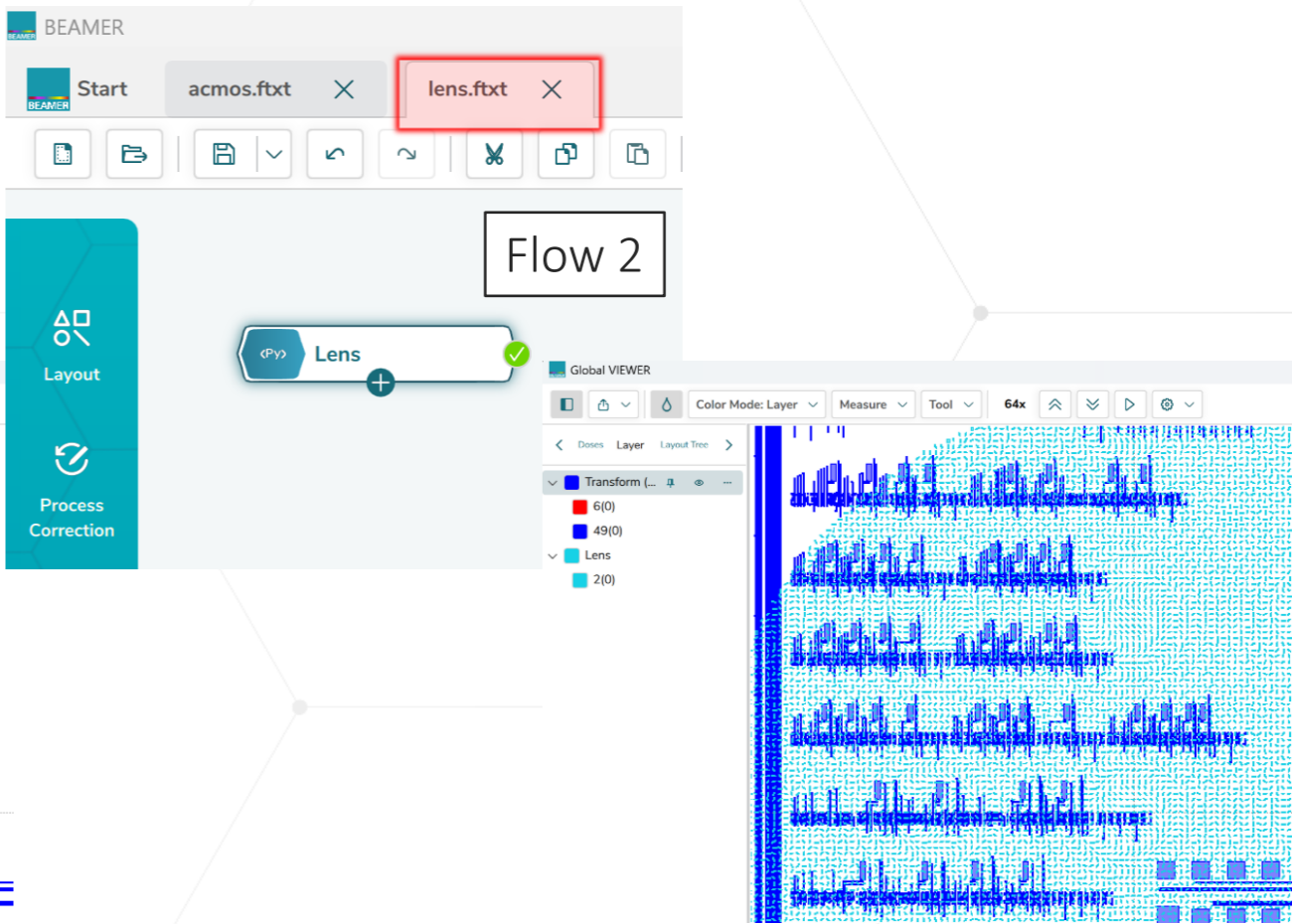
Primitives	Information shown in Viewer
Circle	Radius, Centre
Sector	Radius, Centre, Start, Sweep
Ring	Inner Radius, Outer Radius, Centre
Arc Bow	Inner Radius, Outer Radius, Start, Sweep, Centre
Rotated Rectangle	Angle, Width, Height, Centre
Parallelogram	Longer Edge, Shorter Edge, Skew, Rotation
Ellipse	Major Radius, Minor Radius, Angle, Eccentricity, Centre...
Path	Width, End Cap, Extension Length



The **Pin** feature in the global **Viewer** allows comparing two or more **layouts across different flows**



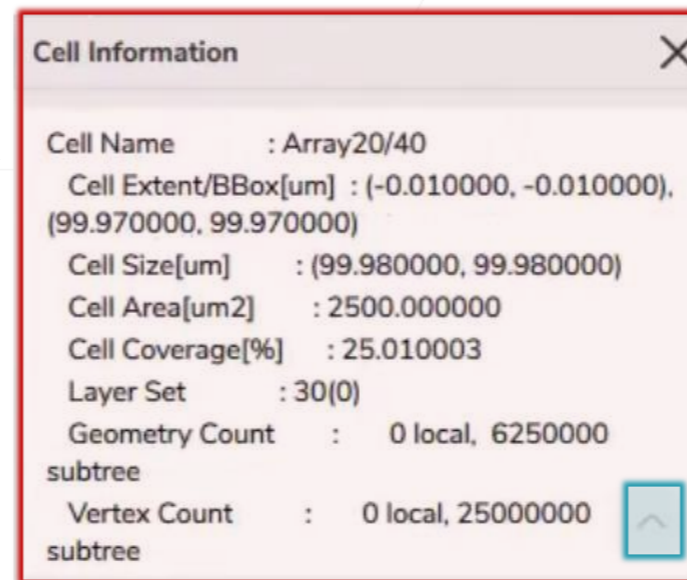
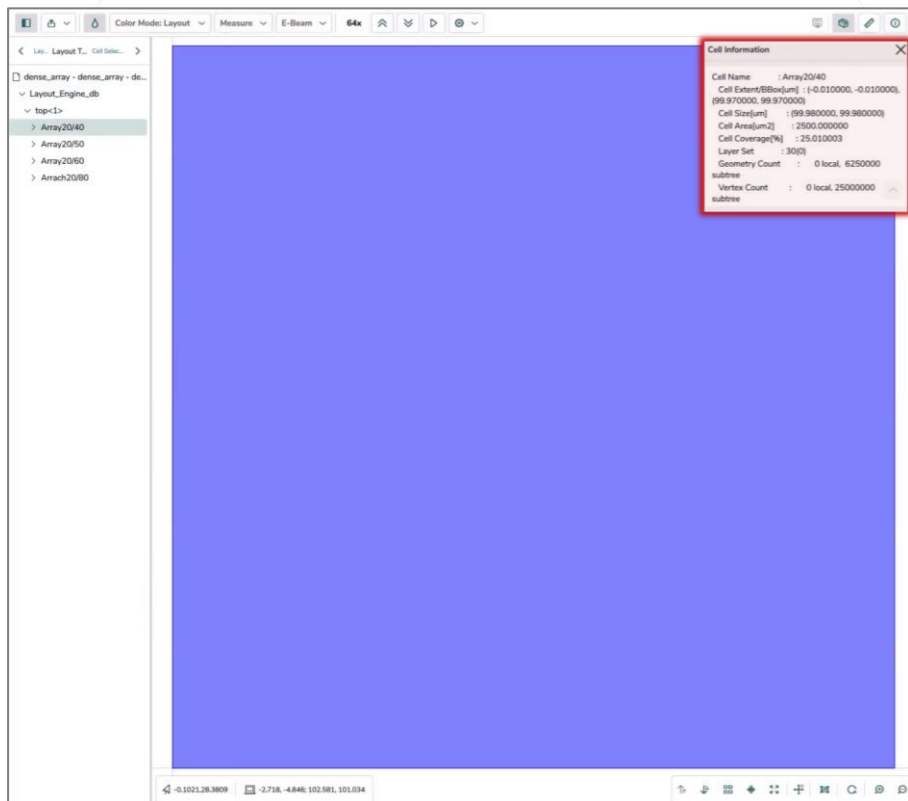
This screenshot shows the BEAMER interface for 'Flow 1'. The top toolbar includes a file explorer and a red box highlighting the 'acosm.ftxt' file tab. The main workspace contains a flow diagram with 'acosm' and 'Transform' blocks. A 'Global VIEWER' window is open at the bottom, displaying a 'Pin' button and a data plot. The plot shows a blue signal with a red vertical line indicating a specific time point.



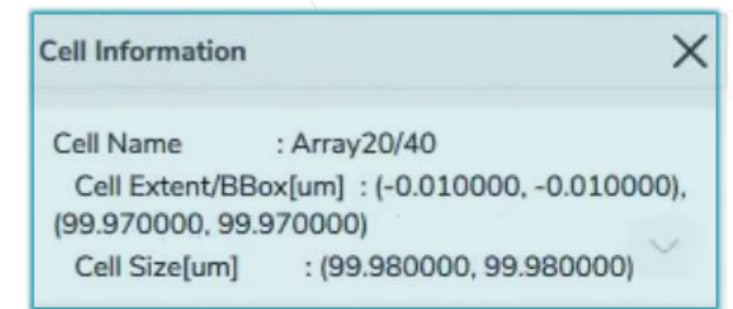
This screenshot shows the BEAMER interface for 'Flow 2'. The top toolbar includes a file explorer and a red box highlighting the 'lens.ftxt' file tab. The main workspace contains a flow diagram with a 'Lens' block. A 'Global VIEWER' window is open at the bottom, displaying a 'Pin' button and a data plot. The plot shows a blue signal with a red vertical line indicating a specific time point.

The Cell Information in Viewer

- provides **full** (default) or **extent only details**
- **preserves** its opened or closed status after closing the viewer

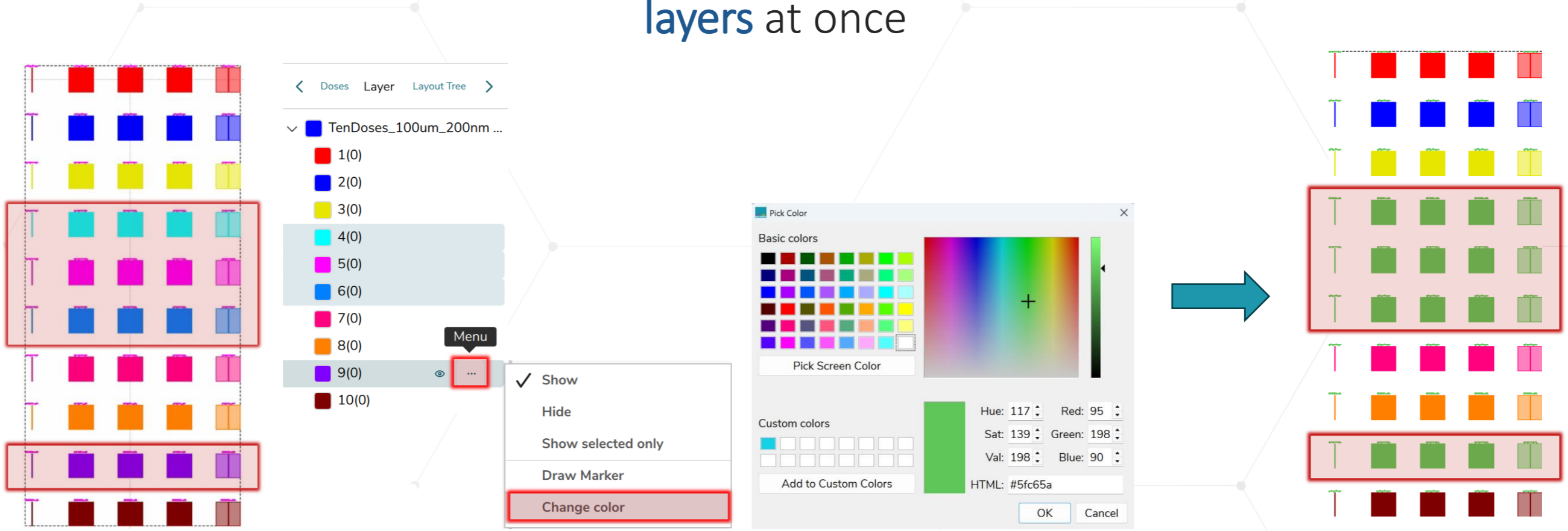


Cell Information: **full**



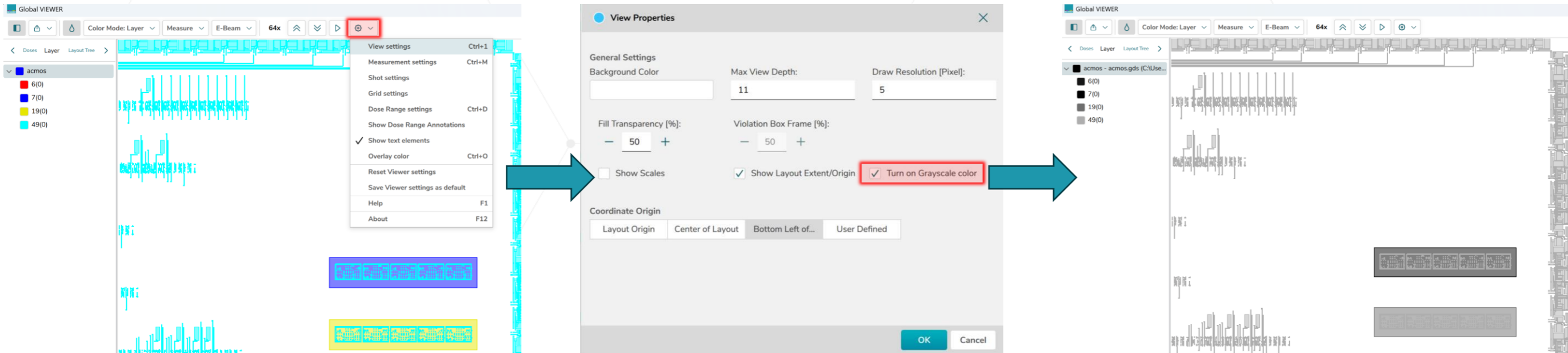
Cell Information: **extent only**

BEAMER allows **changing** the **colour** of **multiple layers** at once



The screenshot illustrates the process of changing the color of multiple layers in BEAMER. It shows a grid of colored squares representing different layers. A red box highlights a specific section of the grid. The 'Layer' panel on the left lists 10 layers, with layer 9(0) selected. A context menu is open over the menu button for layer 9(0), and the 'Change color' option is highlighted. The 'Pick Color' dialog box is shown, displaying a color picker and a green color selected. The final result on the right shows the highlighted section of the grid now colored green.

Color by Layer and Layout use shades of grey when activating the setting **Turn on Grayscale color**



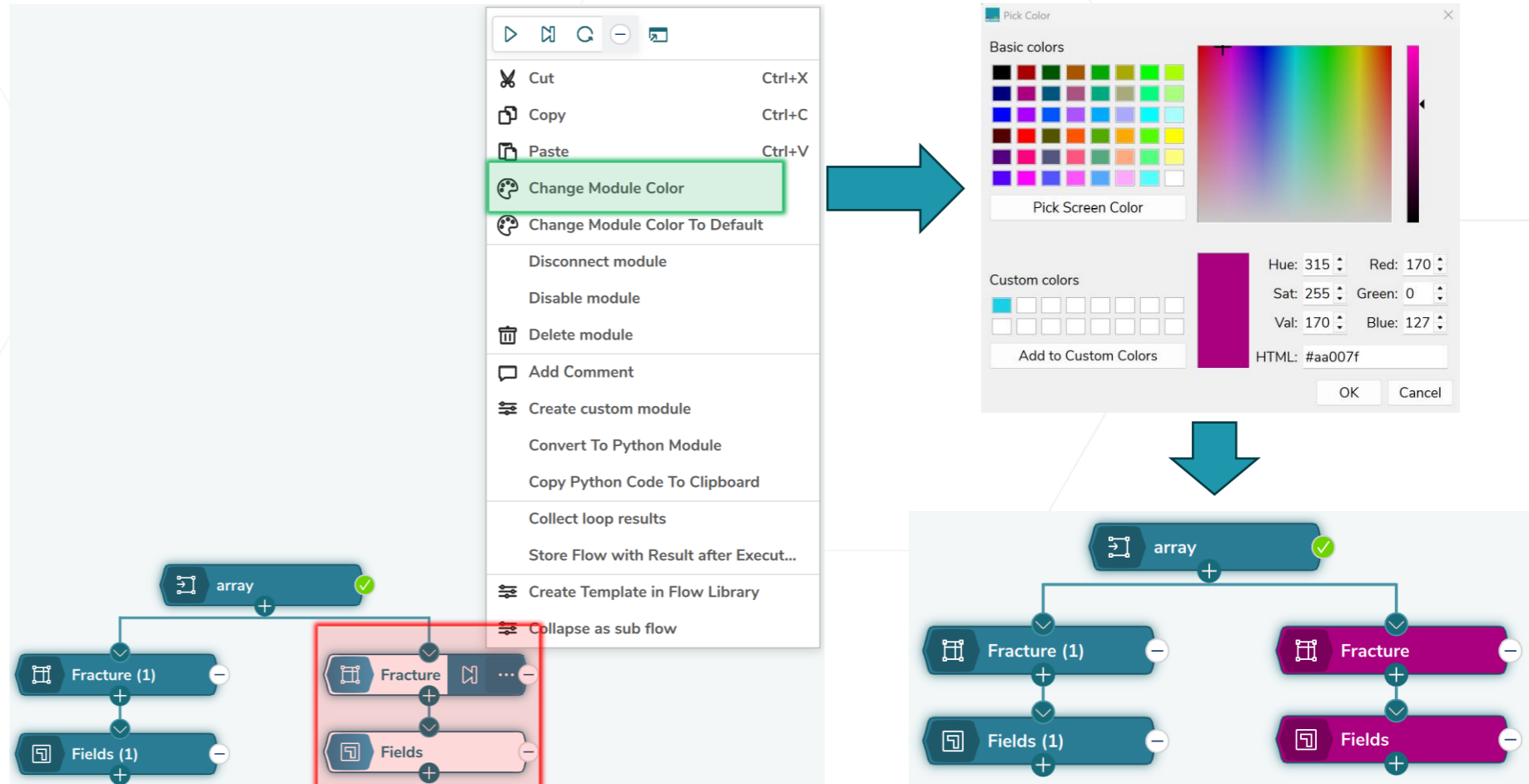
The image illustrates the process of enabling grayscale color in the GenISys Global VIEWER. It consists of three main parts:

- Left Panel:** The Global VIEWER interface with the 'Color Mode' dropdown set to 'Layer'. A context menu is open over the layout, showing options like 'View settings', 'Measurement settings', and 'Show text elements'. A red box highlights the 'Turn on Grayscale color' option in the menu.
- Middle Panel:** The 'View Properties' dialog box. The 'Turn on Grayscale color' checkbox is checked and highlighted with a red box. Other settings like 'Background Color', 'Max View Depth', and 'Draw Resolution' are visible.
- Right Panel:** The Global VIEWER interface showing the layout with grayscale overlays. The 'Color Mode' dropdown is still set to 'Layer'. A red box highlights the 'Turn on Grayscale color' option in the 'View Properties' dialog box.

Usability

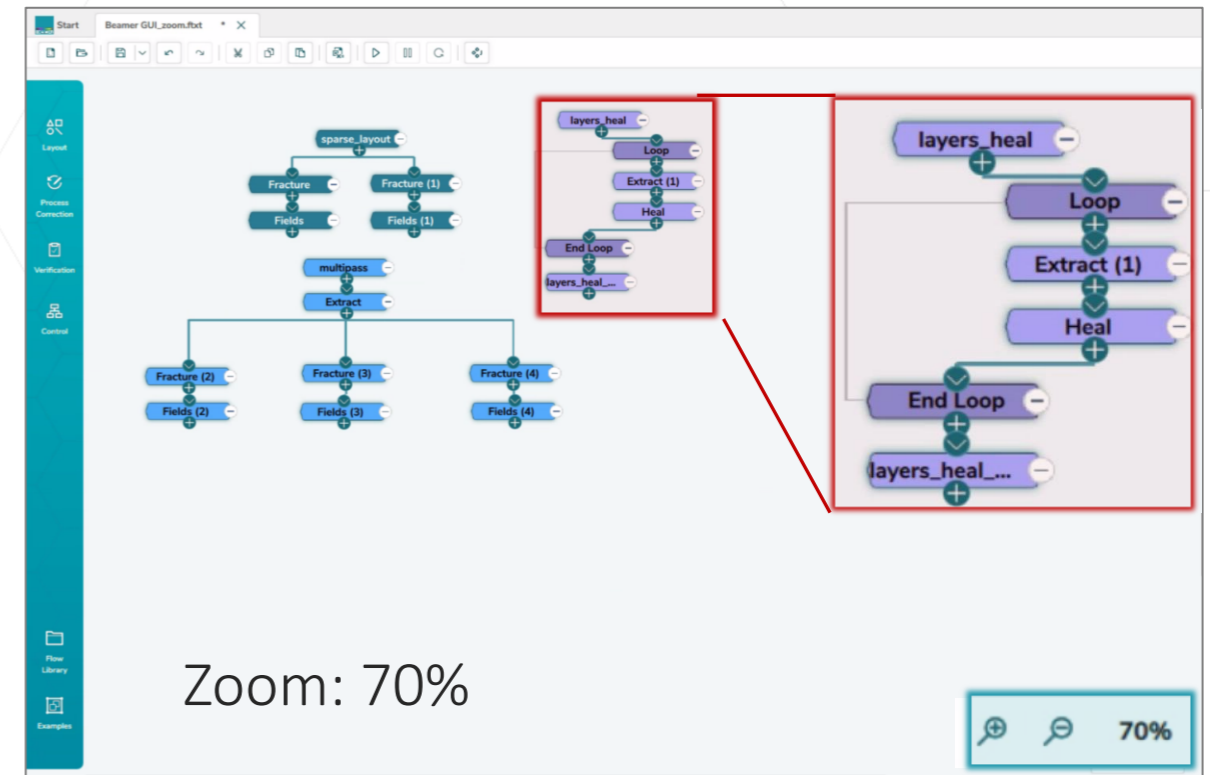
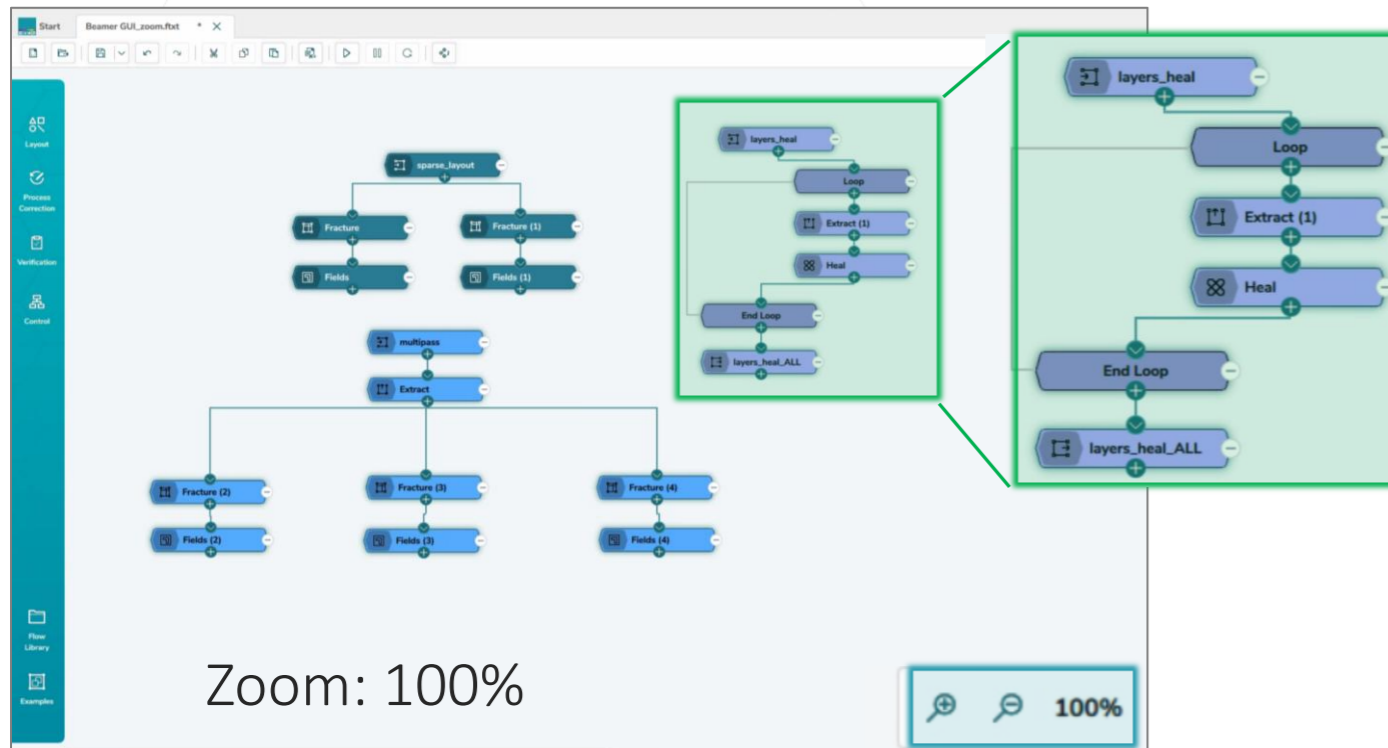
Customise the **colour** of modules to

- **differentiate** flow branches
- **highlight** special modules
- **enhance** contrast and readability



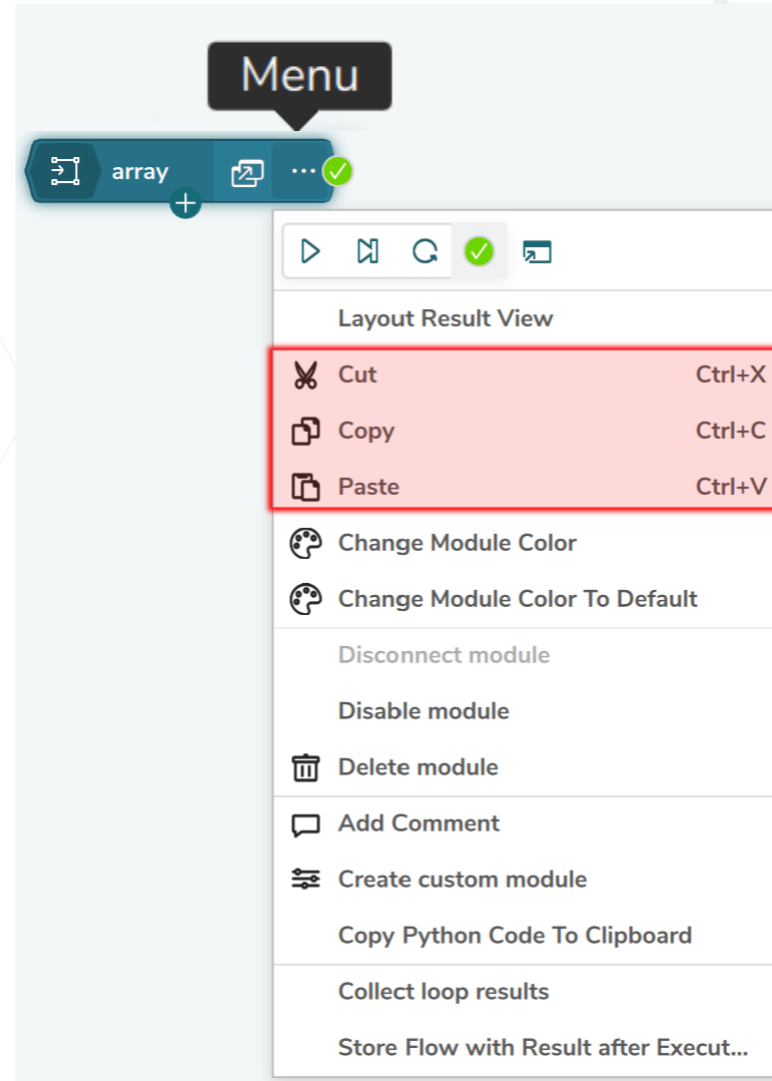
Zooming in a flow area **enhances** module **visibility** by:

- keeping the **same font size, connectors** and **ports** regardless of zoom level
- **skipping icons** on modules



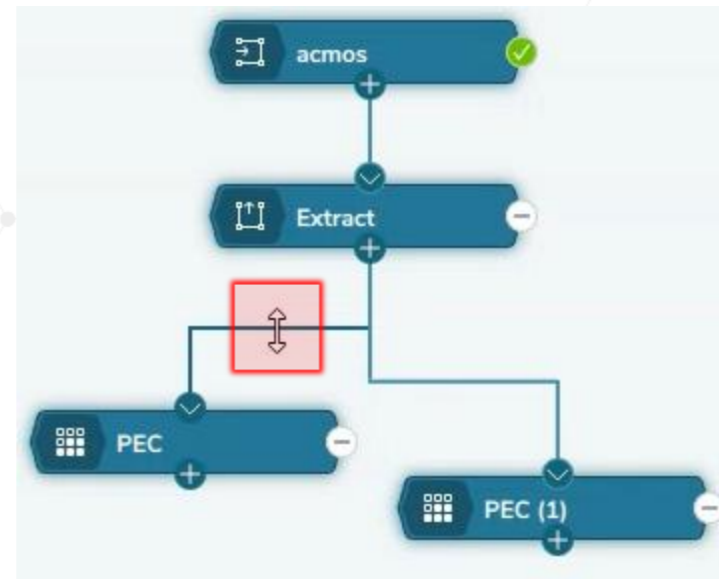
Cut, Copy and Paste Commands

The features **Cut**, **Copy** & **Paste** are included in each module's context menu

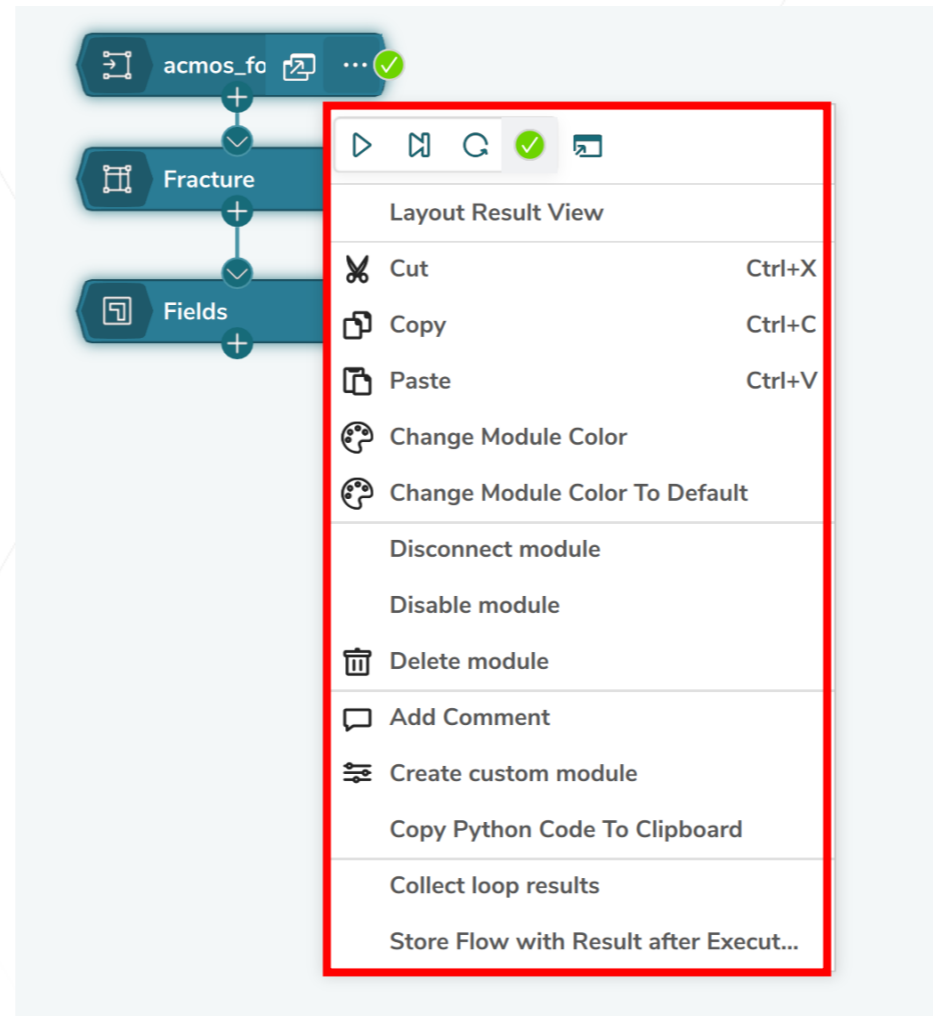


Movable Manhattan Connections

Manhattan connection **style** allows to **move up** and **down** the **junctions** using the mouse



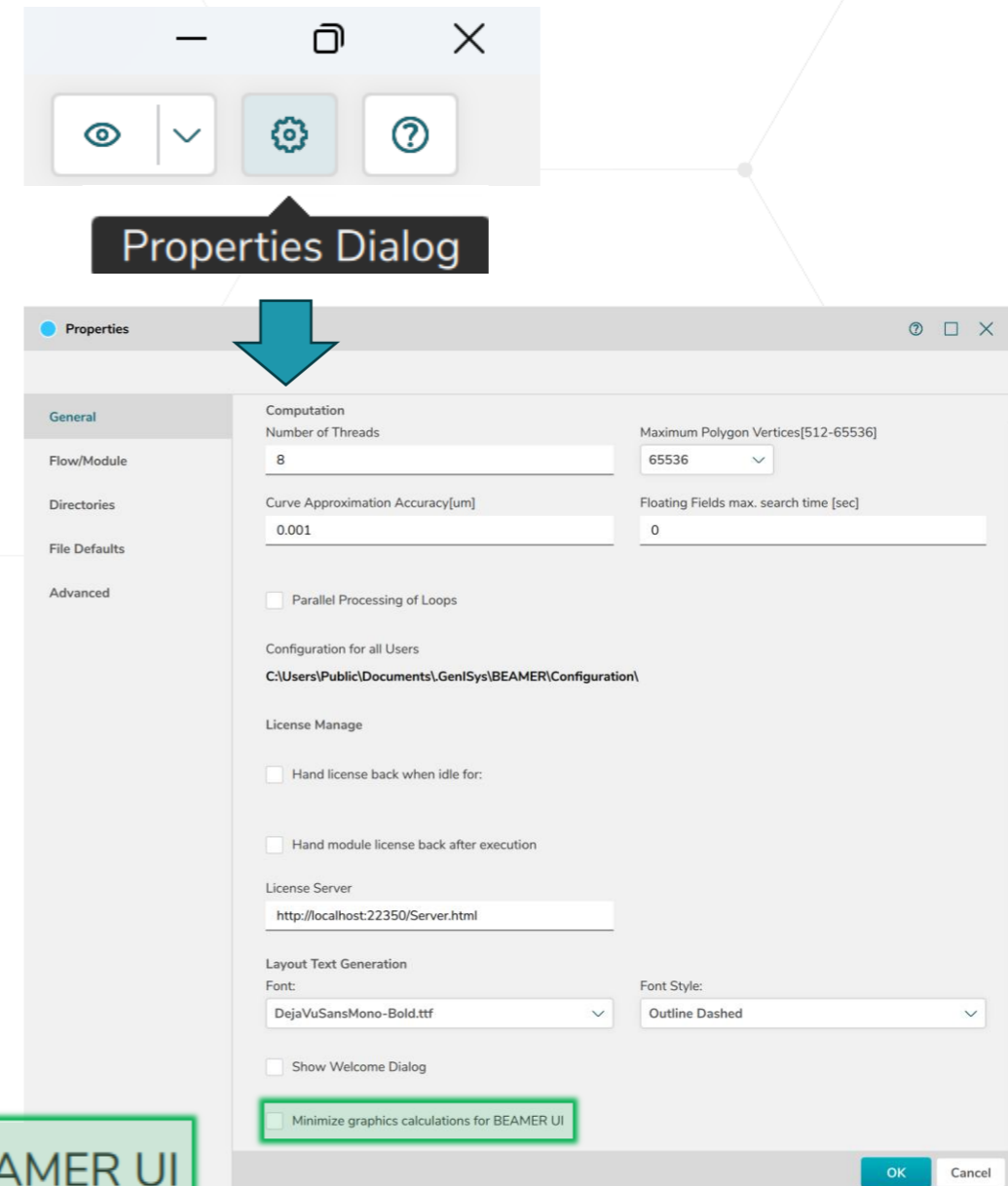
Mouse right-clicking on a module also opens the **context menu**



Properties

Minimising Graphics Calculations

Minimize graphics calculations for BEAMER UI is available: switching to this mode minimises the compute intensive graphics display, like shadowing, colour gradients...

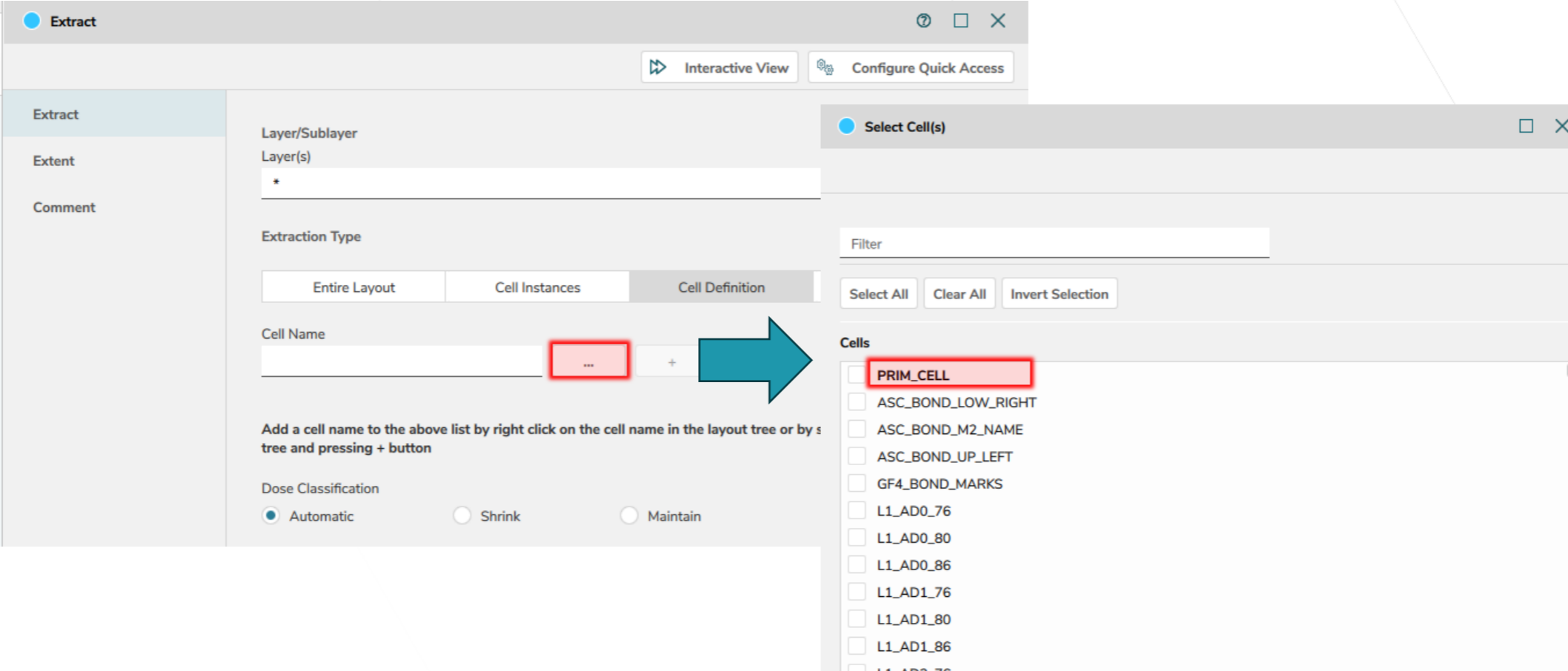


Minimize graphics calculations for BEAMER UI

Extract Module

Improving top-level cell visibility

The Extract module highlights the **highest-level cell** of a layout by **bolding** and **placing** it at the top



The screenshot shows the 'Extract' module interface. The 'Extract' panel is active, showing 'Layer/Sublayer' set to 'Layer(s)' with a '*' in the input field. The 'Extraction Type' is set to 'Cell Definition'. The 'Cell Name' field is empty, and a red box highlights the '+' button next to it. A blue arrow points from this button to the 'Select Cell(s)' dialog box. In the 'Select Cell(s)' dialog, the 'PRIM_CELL' is selected and highlighted in red in the 'Cells' list. Other cells in the list include ASC_BOND_LOW_RIGHT, ASC_BOND_M2_NAME, ASC_BOND_UP_LEFT, GF4_BOND_MARKS, L1_AD0_76, L1_AD0_80, L1_AD0_86, L1_AD1_76, L1_AD1_80, and L1_AD1_86.

Thank You!

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