

# Hints, Tips and Solutions

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**Q: I would like to highlight two nodes at the same time in Expert. I currently use Verification->Node Probing->Pick Node to highlight a node, but I don't see how I can have 2 nets highlighted at the same time.**

A: If the <Shift> key is depressed while the Probe Node or Find Net by Name tools are activated, the picked net becomes highlighted and available for inspection, and the previously selected nets stay highlighted on the screen. When multiple nets are highlighted simultaneously, the active one is highlighted in yellow, all nets previously picked are highlighted in green.

**Q: When Probe Node or Find Net by Name tools are activated for power or ground nets, big highlighted objects from substrate layers often make other node objects hard to see. Is there a way to hide these substrate objects during Node Probing?**

A: Node objects from non-selectable layers are always displayed in a wireframe mode in Expert V.3.6.6.R and above. To see power and ground nets' objects clearly, set substrate layers non-selectable by pressing "Ctrl" when click on layer name, or using layer plan, where substrate layers not included or not selectable. Now all non-selectable layers' objects displayed in wireframe mode independently from filling mode of the probed node set by Verification>>Node Probing>>Node Filling submenu: wireframe, solid or stipple.

**Q: We were wondering if we have a layout with many P-cells, is there a way to simply export all the P-cell commands to either a single .xis file or multiple .xis files?**

A: Parameterized Cell Panel > PCell > Save saves P-cell as \*.xis. The following code is automatically written at the beginning of the XI script:

```
DEFINE PCELL "MNL" /REPLACE
  PARAMETER gates /TYPE = (Integer) /DEFAULT = (1)
  PARAMETER W /TYPE = (Double) /DEFAULT = (0.7)
  PARAMETER L /TYPE = (Double) /DEFAULT = (0.25)
  BODY BEGIN
! TODO: Add code here
....
```

If you run this script from XI Script Panel, P-cell "MNL" will be created in current project.

**Q: The DRC command Angle Check with Type=non45 is for region boundary segments with slope not divisible by 45°. The Angle Check with Type=acute checks input layer regions for adjacent edges creating acute inner angles. How can I find segments with slope between say 0 and 10 degrees or regions with acute inner angles within specified limits?**

A: The SLOPE command selects edges with slopes within specified limits. The limits are specified in degrees, with values between 0 and 90.

Slope: Layer=<name>, LayerR=<name>, Limits <range>;

The output is an edge layer. The input layer may be shape or edge layer.

Example:

Slope: layer= M1, layerR=M1Acute, limits >0 <=35;

The SELECT\_EDGES: Relation=CORNERS, command selects edges basing on the parameters of the adjacent corners: angles and side lengths. Convex specifies limits for the number of convex angles adjacent to the edge; length specifies limits for the length of the segment itself angle1,2 specify limits for the first/second adjacent angle, in range between 0 and 360 degrees. length1, 2 specify limits for length of the first/second adjacent side.

```
Select_Edges: Relation=Corners,
[convex=<0|2-limits>] [length <limits>]
[angle1 <0.0-360.0>][Length1 <limits>]
[angle2 <0.0-360.0>][Length2 <limits>]
layer=<shape-layer>, layerR=<edge-layer>;
```

Examples:

```
Select_Edges: Relation=Corners, convex <2, length >10,
layer=m1, layerr = outbendM1;
```

```
Select_Edges: Relation=Corners, angle1 < 10, layer=m1,
layerr = m1Loop;
```

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