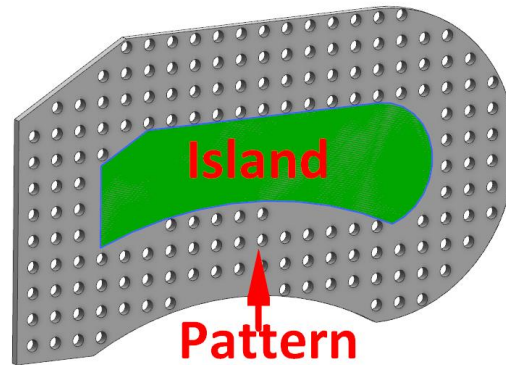


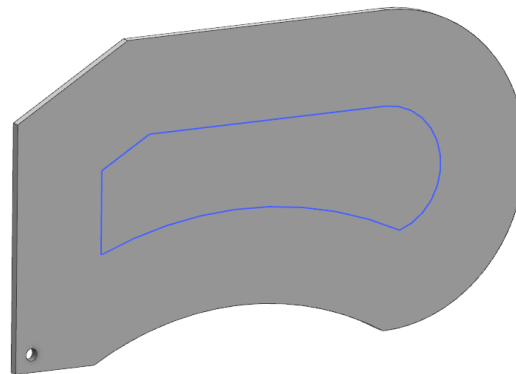
Pattern Feature with Region Boundary Curves

In this NX Smart Tip, I'll show you step by step how to efficiently pattern a feature and precisely control its placement using a region constraint.

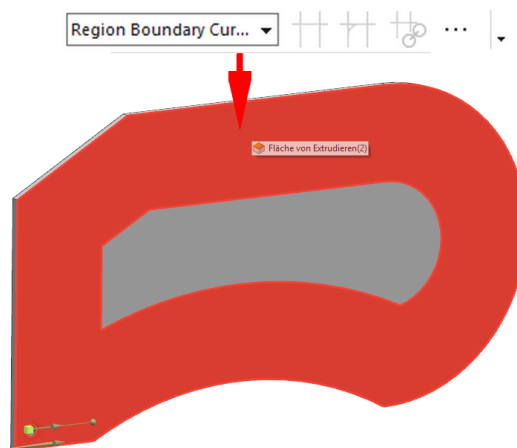
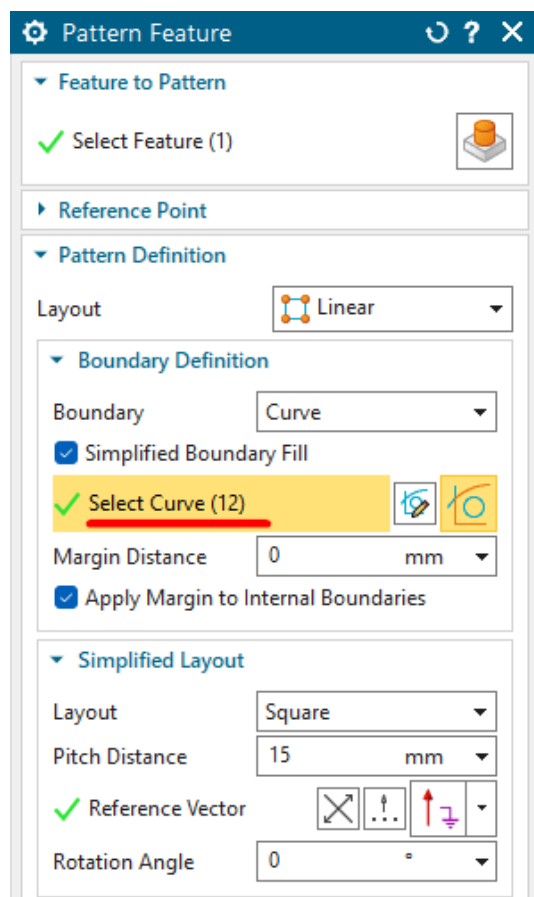
In the example shown in the image on the right, a hole is patterned on a flat surface of a solid around an island (sketch curves)..



The starting point is the gray solid shown on the right in the image, which has blue sketch curves on its surface that represent a cutout for the pattern to be created.



The hole at the bottom left is the one to be patterned across the surface of the body, but not within the area marked by the blue sketch lines..

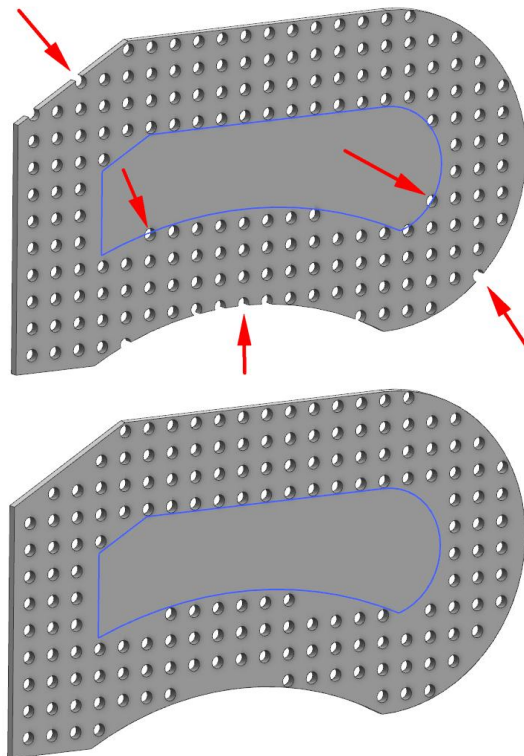
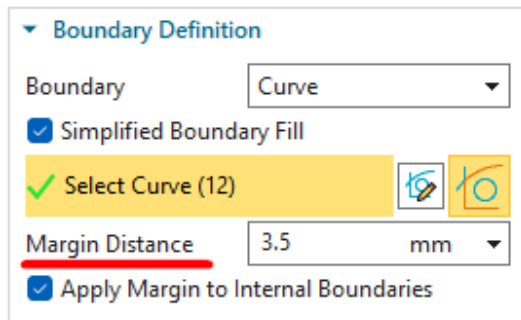


In the "Feature to Pattern" section, the hole at the bottom left is selected.

In the "Boundary Definition" section, select the "Curve" option for the boundary.

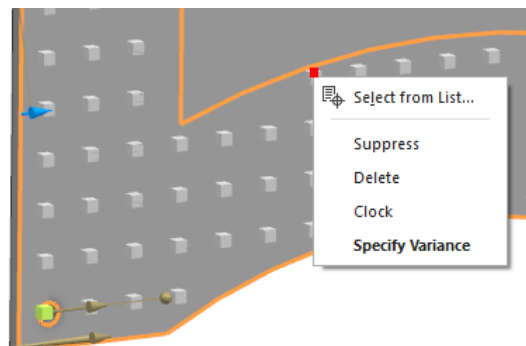
When you enter "Select Curve," the options window for the selection appears in the upper center of the graph screen. In this specific case, we select the "Region Boundary Curves" option. The area shown in red in the image above is identified.

The preview shows several places where the pattern extends beyond the edges of the surfaces and creates open holes. This is due to NX's internal calculation; NX only checks whether the reference point of the geometry lies inside or outside the selected surface. The configuration of the element to be patterned is not taken into account. In our case, the reference point was the exact center of the hole.



Using the **"Margin Distance"** option, you can define an offset around the selected edge curves for the internal calculation. In our case, the hole diameter is 7 mm, so we'll try 3.5 mm and evaluate the result (see image on the right). Now we no longer have any open holes, and the surface area is utilized optimally.

If necessary, you can now suppress, delete, or reposition individual instances of the pattern in edit mode (see image on the right), or define variations.



I would be delighted if this NX Smart tip was useful to you. Do you have any questions?
Just get in touch with me.



Your NX trainer, consultant and service provider

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