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Leica Cyclone 7.0: Modeling Non-Rectangular Patches

This workflow will show you how to model non-rectangular patches in Leica's Cyclone.
Hint: You can click on any image to see a larger version.

THE 2D DRAWING TOOLBAR

Modeling a Non-Rectangular Patch

Quick Discussion on 2D Drawing and Reference Planes

To create a non-rectangular patch, you use the tools on the 2D drawing toolbar. If the drawing toolbar is not enabled, RC anywhere in the Toolbar area and add the Drawing toolbar. As a good rule of thumb, I always dock it on the right side of the screen.

IMPORTANT: All 2D drawings in Cyclone are constrained to a base plane. To view the active reference plane, go to Tools -> Reference Plane -> Show Active Plane. All cyclone projects come with a default XY plane (Z normal) - shown to the below.

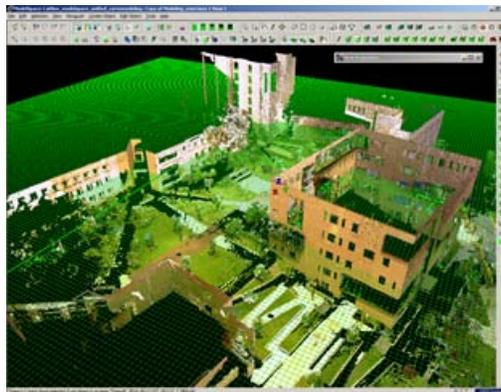


Figure 12: The base XY plane in all Cyclone projects.

You can add numerous reference planes to a project **Tools -> Reference Plane -> Add/Edit**. You can also move reference planes and assign them to selected objects **Select Object -> RC -> Set on Object**. If you are not working in a specific coordinate system, it is easiest just to move the active reference plane to the object that you are trying to model.

MODEL A NON-RECTANGULAR PATCH

Model a Non Rectangular Patch

To model a non-rectangular patch such as a unique outline of a wall, first fence and create a small patch on the wall. Next, go to Tools -> Reference Plane -> Set on Object to align the reference plane along the same direction as the newly created patch. Select the patch, select ViewPoint -> Align to Selection, this constrains the view to be directly perpendicular to the

patch. At this point, it is important not to rotate the view, if necessary choose View -> View Lock -> Rotate.

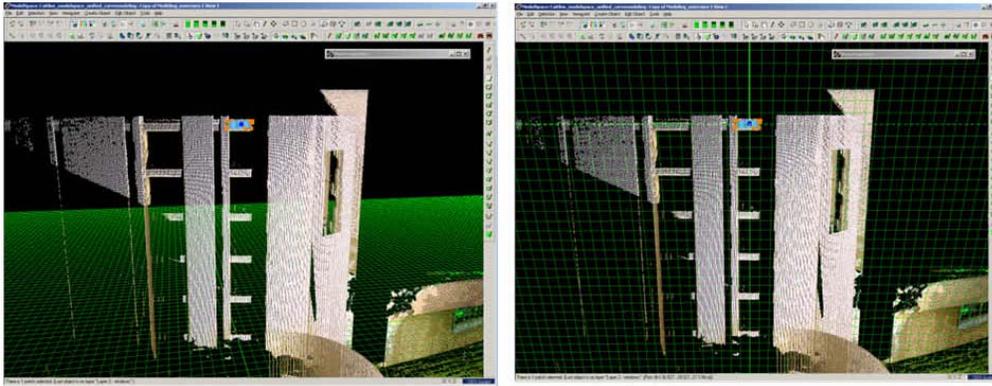


Figure 13: (Left) Drawing a small patch along a section of wall and (Right) Aligning the base reference plane to that patch in order to use the 2D drawing tools

Note: viewing orthogonally or perspectively affects visibility and clarity of features; toggle between views with hot key 'O'.

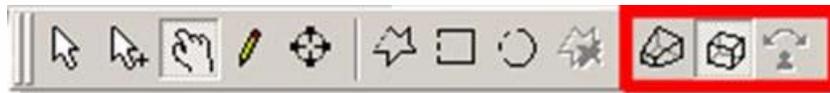


Figure 14: Mode Toolbar shows whether current view is orthogonal or perspective

Next choose the appropriate 2D drawing tool, in this case **Draw Polygon tool** -> Trace the feature of interest -> **Accept/Create the drawing by either clicking the green check button at the top of the Drawing Toolbar or RC -> Create**. The 2D sketch should turn bright green with orange handle at the intersections. Edit the sketch as needed. Next to create a patch from the 2D sketch, **select the sketch -> Create Object -> From Curves -> Patch**.

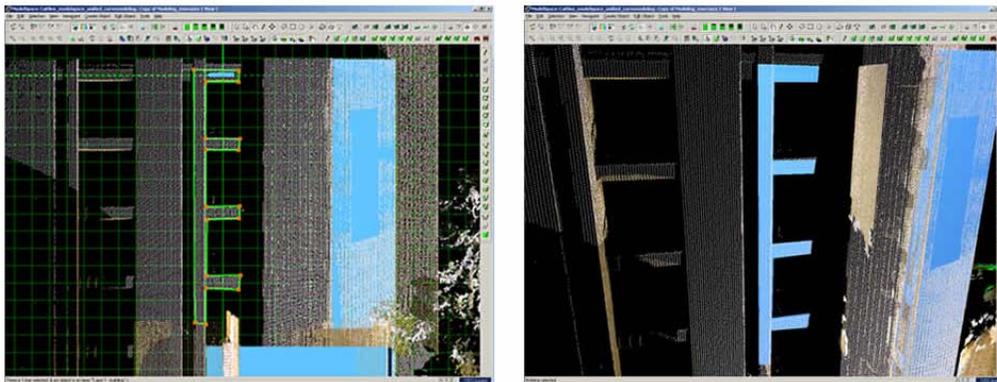
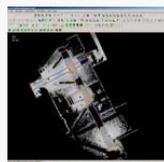


Figure 15: (Left) 2D Curve sketched on building feature profile (Right) Patch fit to the curve

You have Finished!

You have finished the Leica Cyclone 7.0: Introduction to Modeling workflow!



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