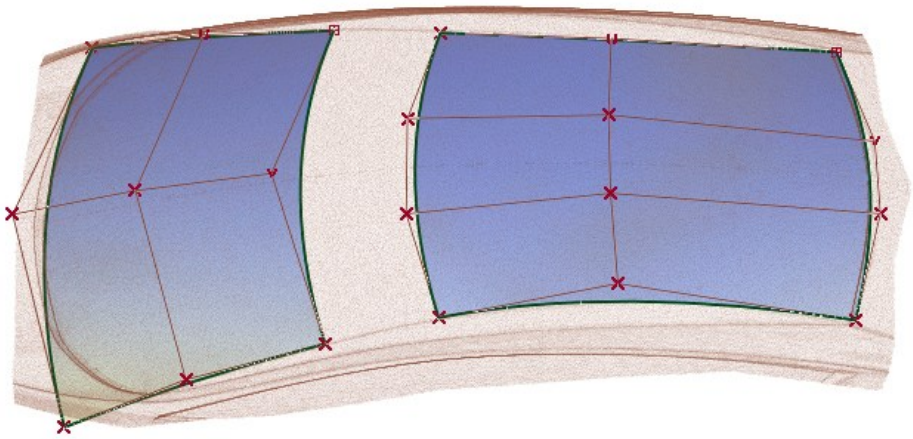
A1.5 Fitting Primary Surfaces to a Mesh

OVERVIEW

A scanned mesh of a roof and windscreen is provided, and the tutorial covers how to create primary NURBS surfaces to match the mesh, using Direct Modelling techniques.



KEY CONCEPTS

Single Surface Across the Centre-Line

Barry builds the primary surfaces to cover both sides of the design, and keeps it exactly symmetrical using the Object Edit > Symmetric Modelling tool. The benefit is that centre-line continuity is perfectly smooth without any extra effort.

Direct Modelling 'v' Curves & Surfaces

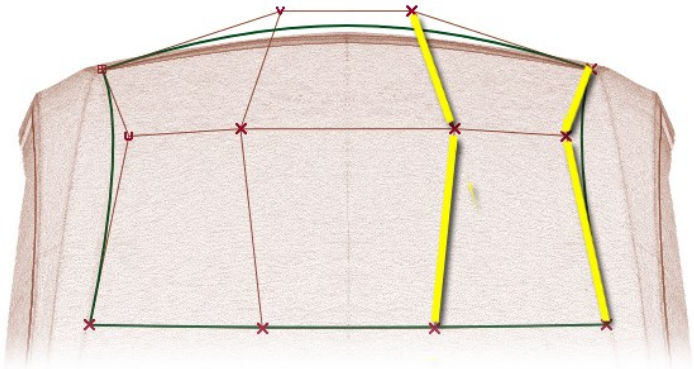
Many users are fixed in workflow that always starts with curves and uses surafce tools to create the shape from the curve boundaries. Barry starts by creating a simple surface and so doesn't use curves. However, he treats each of the four boundaries and the centre-line as if they were CVs on boundary curves. This is one approach to the discipline of working on hulls rather than individual CVs, to maintain control over the surface.

Balancing Hull Polygon Shapes

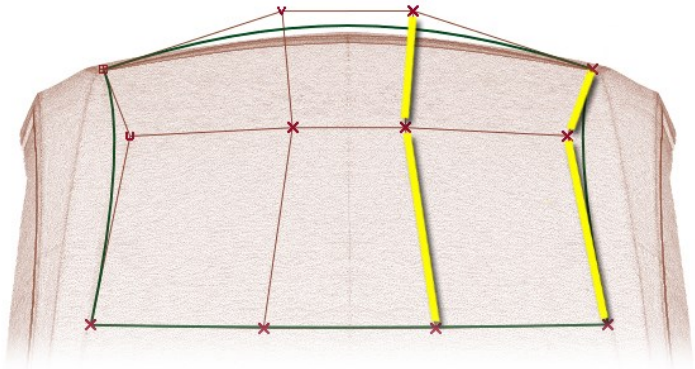
Always watch for the shape of the Hull lines and keep them flowing in sympathy with each other.

Note:

You may want to increase the patch precision on the surfaces so that you can see the centre-line clearly in the side view.



Unsympathetic Hull Flow



Sympathetic Hull Flow

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