

Automatic Modeling of Smooth Spline Surfaces

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Spline surfaces are very popular for the modeling of free form surfaces. This is because they are very flexible, conceptually simple and the shape can be easily controlled by manipulating control points. However, for complex shapes one has to deal with an overwhelming number of control points. It is therefore increasingly important to build tools that enable the designer to specify only a few geometric constraints while automatically determining the explicit representation of the surface. In this paper we describe the basic concepts of how such tools can be build.