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论文

可调表面上的曲线插值

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摘要：

提出一个带有多特征的曲线插值可调表面算法。引入形状相似形参数，拓扑地修改初始控制网格。这样使得满足曲线插值的同时，结果表面与初始控制网格有不同的相似性；引入双边控制调节参数，更新插值曲线两边位置，调节插值曲线的弯曲程度；形成求解满足控制曲率的公式。实验结果表明此算法使得曲线插值在可调表面上可行，能够表现出多样性。

关键词： Catmull-Clark细分   曲线插值   可调表面   曲率控制

Curves interpolating on adjustable surface

Abstract:

An algorithm with multi-features for curves interpolation on adjustable surface was proposed. Similarity parameter of the result surfaces was introduced and the control mesh was modified topologically so as to meet the requirement of curves interpolation and maintain the different similarities between result surface and initial control networks at the same time. Two-side adjustable parameters were introduced. It used the predefined curvature to adjust the bended degree of the curves and created the curvature control formula. The result shows it is available to the curve interpolating adjustable surfaces and the extremely surfaces are diverse.

Keywords: Catmull-Clark subdivision   curves interpolating   adjustable surface   curvature control

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