

Continuity Mapping for Multi-Chart Textures

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It is well known that multi-chart parameterizations introduce seams over meshes, causing serious problems for applications like texture filtering, relief mapping and simulations in the texture domain. Here we present two techniques, collectively known as Continuity Mapping, that together make any multi-chart parameterization seamless: Traveler's Map is used for solving the spatial discontinuities of multi-chart parameterizations in texture space thanks to a bidirectional mapping between areas outside the charts and the corresponding areas inside; and Sewing the Seams addresses the sampling mismatch at chart boundaries using a set of stitching triangles that are not true geometry, but merely evaluated on a perfragment basis to perform consistent linear interpolation between non-adjacent texel values. Continuity Mapping does not require any modification of the artist-provided textures or models, it is fully automatic, and achieves continuity with small memory and computational costs.

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