Expressive Rendering of Mountainous Terrain
UUCS-07-001

MARGARITA BRATKOVA
University of Utah
and
PETER SHIRLEY
University of Utah
and
WILLIAM B. THOMPSON
University of Utah

Abstract

Painters and cartographers have developed artistic landscape rendering techniques for centuries. Such renderings can visualize complex three-dimensional landscapes in a pleasing and understandable way. In this work we examine a particular type of artistic depiction, panorama maps, in terms of function and style, and we develop methods to automatically generate panorama map reminiscent renderings from GIS data. In particular, we develop image-based procedural surface textures for mountainous terrain. Our methods use the structural information present in the terrain and are developed with perceptual metrics and artistic considerations in mind.