

Modeling Systems based on Marching Cubes Algorithm

Jiang Lan

The traditional modeling systems based on surface representations require a complex mechanism for enabling topological changes. Furthermore, it is hard to provide physical features such as interaction with constant volume deformation in real-time. This research focuses on modeling system in volumetric representations. It permits easy modeling of topological change. It is defined by scalar field, which describes the shape of clay by voxel data (grid). The surface of clay is implemented in an isosurface of this filed data.