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Study on Delaunay Triangulation with the Islets Constraints

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ABSTRACT

Aiming at Delaunay triangulation with islets constrains in terrain simulation. A general Delaunay triangulation algorithm for constrained data set with islets is proposed. The algorithm firstly constructs Constrained Delaunay Triangulation with constraint polygons which are inner boundary of islets, then according to topological relations within edge, surface, arc segment, applies bidirectional search to find the triangle in islet, lastly it carries on certain corresponding processing to complete the Delaunay triangulation algorithm with islets. The analyses show the algorithm simple, fast speed. The algorithm can be used in 3-D terrain vision.

KEYWORDS

Islets Constraints, Bidirectional Search, Delaunay Triangulation

Cite this paper

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