Delaunay Triangulation

Markus Pawellek November 7, 2020

Abstract

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Contents

Co	ntents		i
1	Intro	duction	1
2	Back	ground	3
	2.1	Graph Theory	3
	2.2	Geometry	3
		2.2.1 Circumcircles and Circumspheres	3
	2.3	Delaunay Triangulation and Tessellation	3
3	Algor	rithms and Data Structures	5
	3.1	Hash Map	5
	3.2	Triangle Mesh	5
	3.3	Quad-Edge Data Structure	5
	3.4	Radix Sort	5
	3.5	Linear Morton Sort	5
	3.6	Linear Floating-Point Quad-Tree	5
	3.7	Bowyer-Watson Algorithm	5
	3.8	Guibas-Stolfi Incremental Algorithm	5
	3.9	Guibas-Stolfi Divide-and-Conquer Algorithm	5
	3.10	Dwyer Algorithm	5
4	Desig	n and Implementation	7
	_	API	7
	4.2	Robustness	7
		Incremental Algorithm	7
		Divide-and-Conquer Algorithm	7
		Multidimensional Tessellation	7
5	Tests	and Testscenes	9
		Uniform Rectangular Distribution	9
		Gaussian Distribution	9
		Robustness Tests	9
6	Bencl	hmarks	11
7	Exam	aples	13
	7.1	Image Mosaic and Tessellation	13
		Fluids for Ray Tracing	13
		Finite Element Method	13
	7.4	Pareto Frontiers	13
8	Resul	ts	15
9	Conc	lusions	17

References 19

1 Introduction

2 Background

- 2.1 Graph Theory
- 2.2 Geometry
- 2.2.1 Circumcircles and Circumspheres
- 2.3 Delaunay Triangulation and Tessellation

Triangulation, Tessellation, Simplicialization, Subdivision, Mesh Generation Two and Three Dimensions

3 Algorithms and Data Structures

- 3.1 Hash Map
- 3.2 Triangle Mesh
- 3.3 Quad-Edge Data Structure
- 3.4 Radix Sort
- 3.5 Linear Morton Sort
- 3.6 Linear Floating-Point Quad-Tree
- 3.7 Bowyer-Watson Algorithm
- 3.8 Guibas-Stolfi Incremental Algorithm
- 3.9 Guibas-Stolfi Divide-and-Conquer Algorithm
- 3.10 Dwyer Algorithm

- 4 Design and Implementation
- 4.1 API
- 4.2 Robustness
- 4.3 Incremental Algorithm
- 4.4 Divide-and-Conquer Algorithm
- **4.5** Multidimensional Tessellation

- **5** Tests and Testscenes
- 5.1 Uniform Rectangular Distribution
- 5.2 Gaussian Distribution
- **5.3** Robustness Tests

6	Benchmarks		

- 7 Examples
- 7.1 Image Mosaic and Tessellation
- 7.2 Fluids for Ray Tracing
- 7.3 Finite Element Method
- **7.4** Pareto Frontiers

8 Results

9 Conclusions

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