

A short presentation on my background in computer graphics

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December 9, 2016

Outline

- 1 Introduction
- 2 Master Thesis
- 3 Ray tracing revisited for rendering CSG models consisting of higher order primitives

About Me...

- My name is **Morteza Mostajab** [BAM14] [CW14]
- Bachelor studies:
Hamedan University of Technology, Iran
- Master studies:
Technische Universität München
- Present:
Researcher at Fraunhofer IGD, Darmstadt
- Research interests:
*Real-time physically-based rendering
(Rasterization-based or Ray-tracing)*
Virtual reality
Computer graphics and visualization
Game Programming



Inspiration

- Games, Animations, Movies with Special Effects,...



(a) Last Ninja 3



(b) Gears of War



(c) Ratatouille



(d) The lord of the rings

- My firsts...



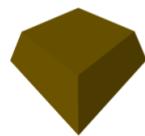
(e) First Computer



(f) First IBM
(g) First Console
compatiable PC (Atari 2600)



Higher order primitives



Pyramid



Box



Circular torus



Rectangular torus



Spherical dish



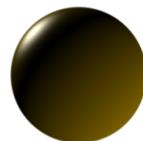
Elliptical dish



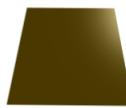
Snout



Cylinder



Sphere



Plane



Triangulated mesh

References I

-  Rasmus Barringer and Tomas Akenine-Möller, *Dynamic ray stream traversal*, ACM Trans. Graph. **33** (2014), no. 4, 151:1–151:9.
-  Matthias G. Chajdas and Rüdiger Westermann, *Quantitative Analysis of Voxel Raytracing Acceleration Structures*, Pacific Graphics Short Papers (John Keyser, Young J. Kim, and Peter Wonka, eds.), The Eurographics Association, 2014.