

Final Project - Raytracer

Philipp Krähenbühl

February 14, 2008

This is a proposal for a simple raytracer project, using Map-Reduce and Hadoop to generate nice looking images of 3D scenes.

1 Idea #1

Build a simple raytracer using Map-Reduce. The raytracer may include:

- Phong shading
- Whitted raytracing model
 - reflection
 - refraction
 - Shadow, light rays directly casted to the lightsource

I guess the most time we will spend on building a raytracer and not on Map Reduce. As far as I can estimate this raytracer will more be a prove of concept rather than a real raytracer.

2 Idea #2

Use a Open Source Java raytracer and make it work with map reduce. This approach has clearly the big advantage that we don't need to reinvent the wheel. This way we can get nice looking results without spending multiple weeks on writing the raytracer.