

CSCI-4961/6961: 3D Computer Graphics

Class 21: November 9, 2006

Texture Mapping 3, Fractals

Announcements

- HW 4 is due today.
- Final Exam is on Thursday, December 7 at 9:00am–noon. If you have a schedule conflict with this time, please send me email before Wednesday, Nov 15.

Today's Class

We will complete our discussion of texture mapping techniques.

1. 3D texture mapping, and Procedural texturing

We will then look at *fractals* for modeling natural (and some unnatural) objects.

1. Fractal objects
2. Deterministic self-similar fractals (see `sierpinski2d.cpp` and `sierpinski3d.cpp`)
3. Fractal dimension
4. Statistical self-similarity, and Midpoint subdivision for terrain generation

Reading

Chapters 10.17–10.18, 10.13, and 10.21 and Chapters 8.23–8.24 (Fractals) of Hearn and Baker.

Activity

Play with the MarbleApplet at <http://legakis.net/justin/MarbleApplet/>

For more information on procedural texturing, see <http://www.noisemachine.com/talk1/> and http://freespace.virgin.net/hugo.elias/models/m_perlin.htm .

Next Class

Fractals (Chapter 8.23–8.24 of H & B).