CS 563 Advanced Topics in Computer Graphics
Procedural Textures
by Nik Deapen
What are Procedural Textures?

- A texture not already stored
Advantages

- No mapping is required
- No data storage
- No aliasing problems
- Easy to produce carved look
- Easy continuity
Disadvantages

- Can be slower
Axis-Aligned Boxes for Checkers (see code)
- Jitter box by small negative amount
  - see code

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Procedural Textures on Certain Objects
Sphere

- He did plane, I’ll do the rest,
- Sphere
  - rho, theta, radius?
- Cylinder
  - rho, theta
- Disk
  - rho, theta, radius
- Cone
  - rho, theta, radius
Intrinsic Transforms

- Scaling
  - scaling the size of the box does not always work
- How to do it
  - Un-transform the hit point
  - Continue as Normal
Transforms
More transforms

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Further Reading

- Start at
  - Peachey (1985)
  - Perlin (1985)