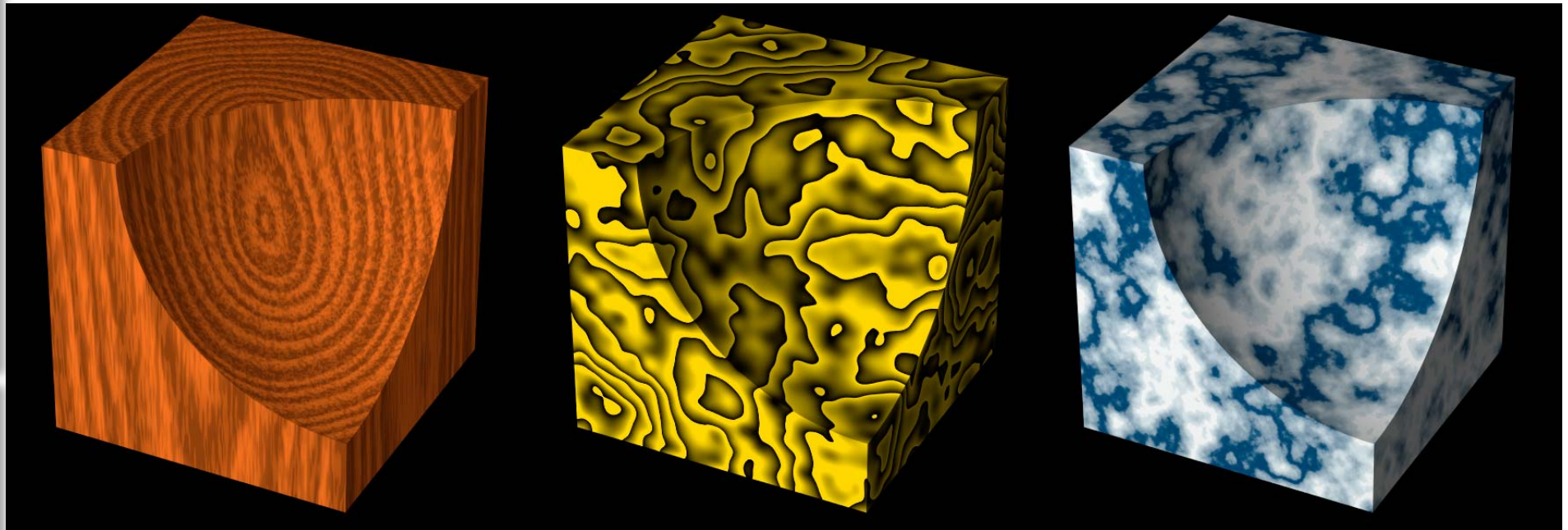


CS 563 Advanced Topics in Computer Graphics Procedural Textures

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

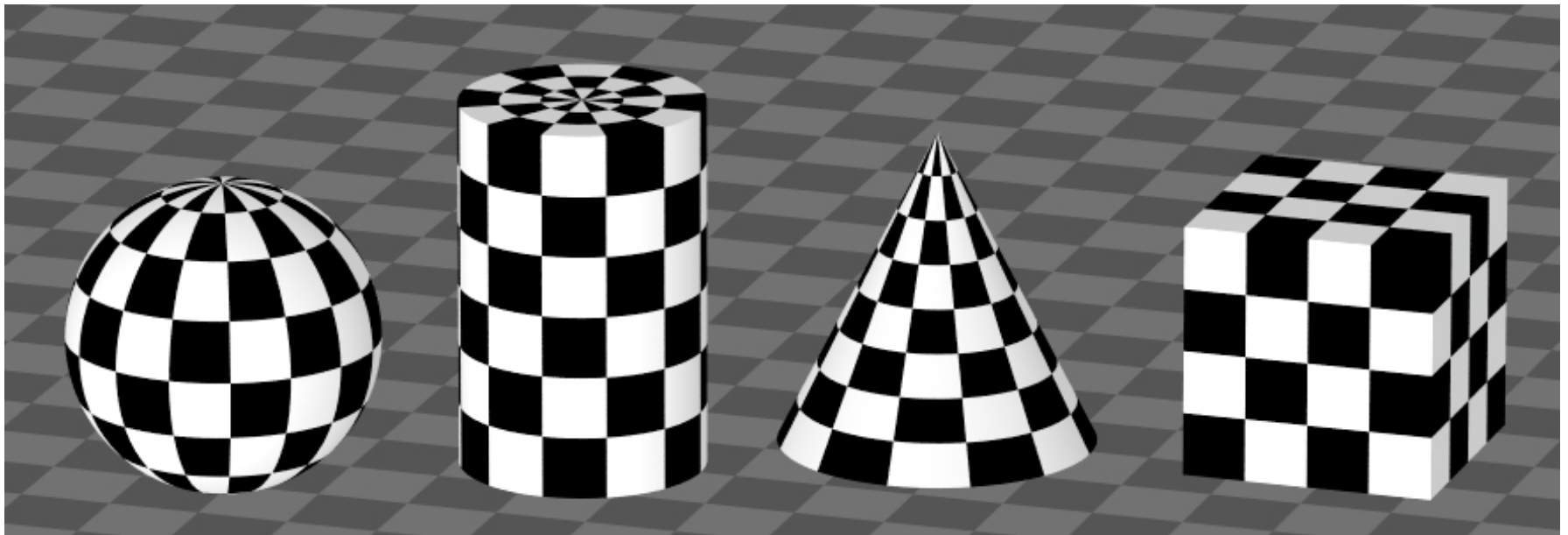
Axis-Aligned Boxes for Checkers (see code)

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- Jitter box by small negative amount
 - see code

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Procedural Textures on Certain Objects

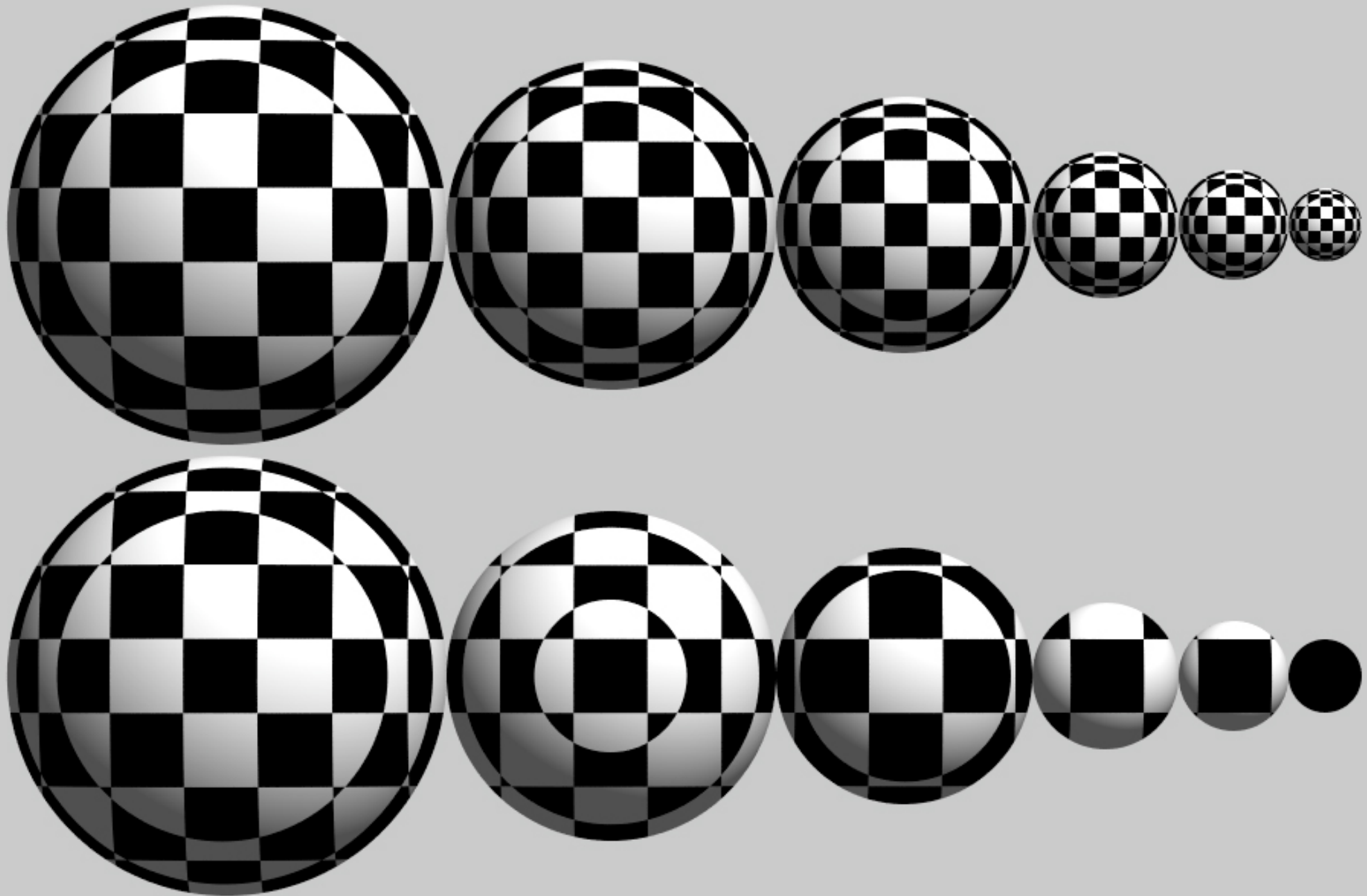


- He did plane, I'll do the rest,
- Sphere
 - $\rho, \theta, \text{radius?}$
- Cylinder
 - ρ, θ
- Disk
 - $\rho, \theta, \text{radius}$
- Cone
 - $\rho, \theta, \text{radius}$


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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Deapen\Desktop\Chapter30\Chapter30\
Traced Images 30\Figure30.11(d).jpg

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Traced Images 30\Figure30.11(a).jpg

 C:\Users\Nik
Deapen\Desktop\Chapter30\Chapter30\
Traced Images 30\Figure30.11(b).jpg

Further Reading

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