The Graphics Process and the Graphics Pipeline

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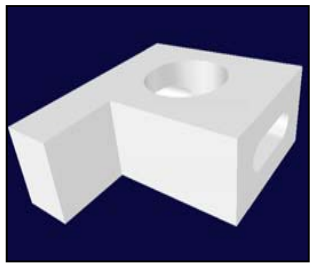
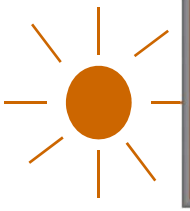
The Graphics Process





Lighting Information

Surface Information

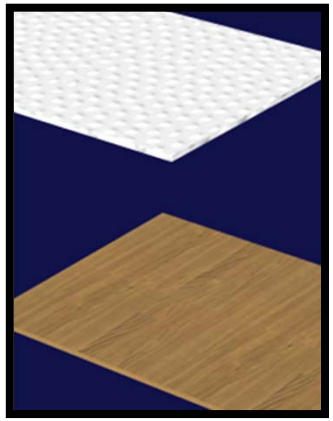
3D Geometric Models

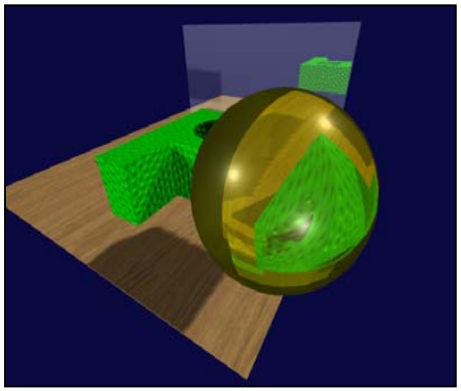
Rendering

Image Storage and Display

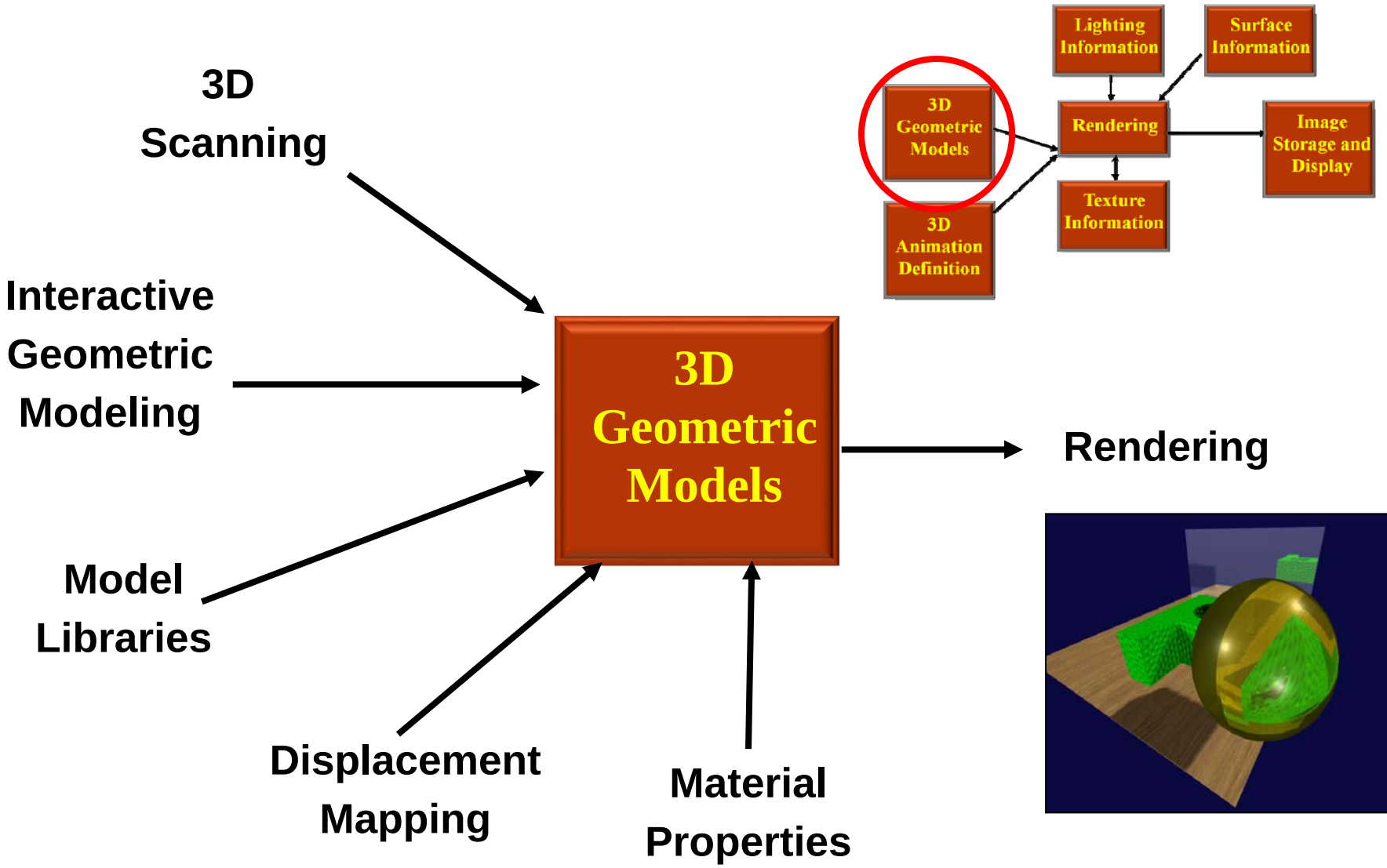
Texture Information

3D Animation Definition

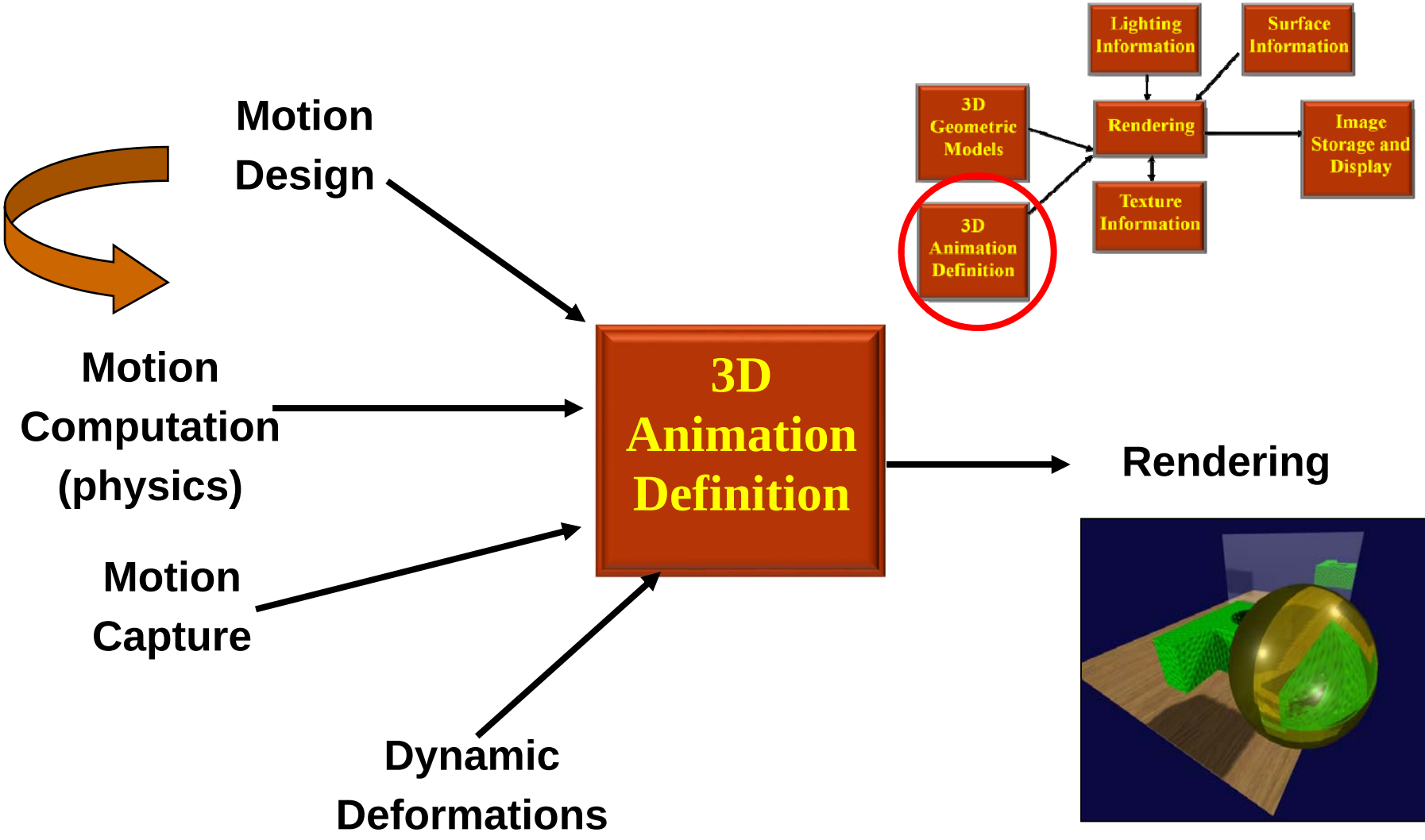




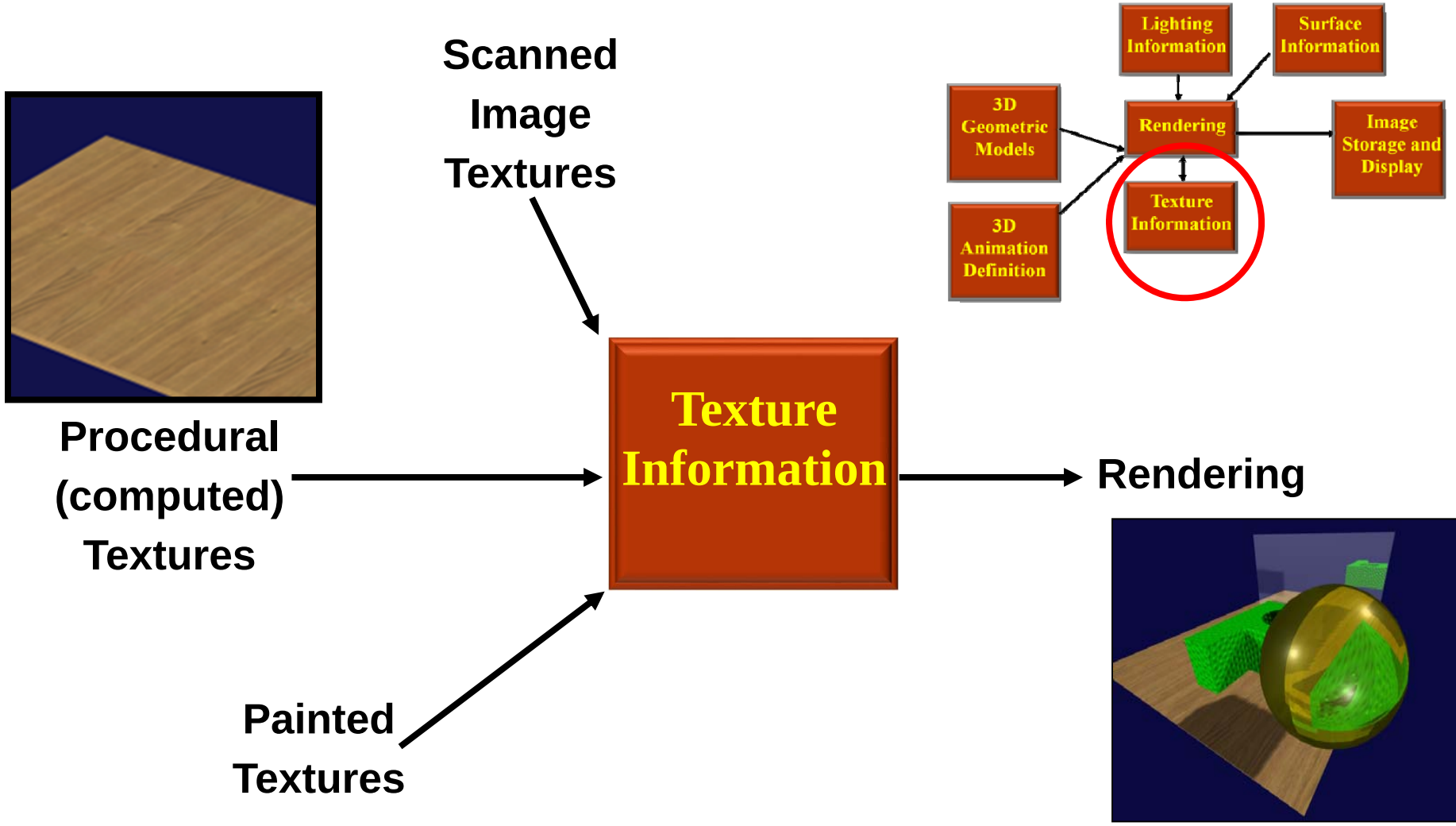
The Graphics Process: Geometric Modeling



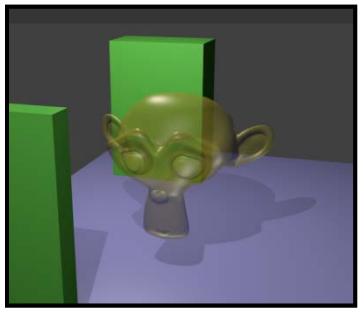
The Graphics Process: 3D Animation



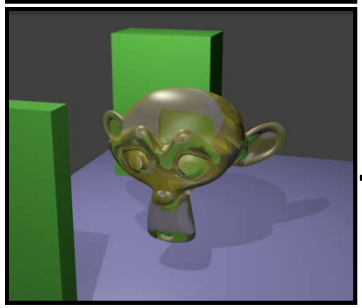
The Graphics Process: Texturing



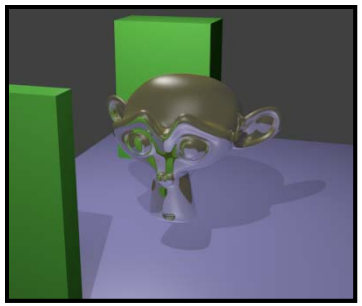
The Graphics Process: Surface Information



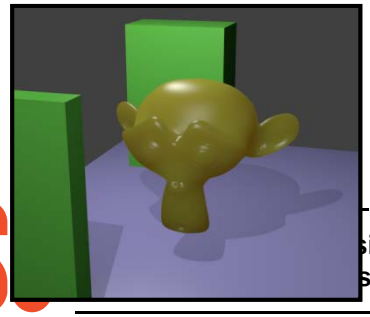
Alpha-Blended Transparency



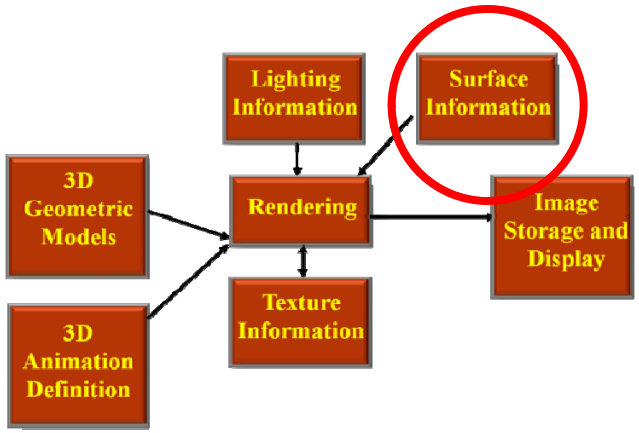
Refractive Transparency



Reflectivity



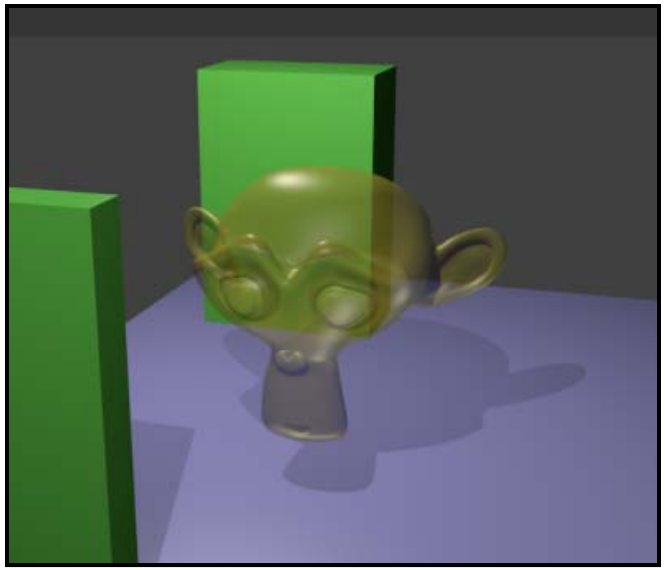
Subsurface Scattering



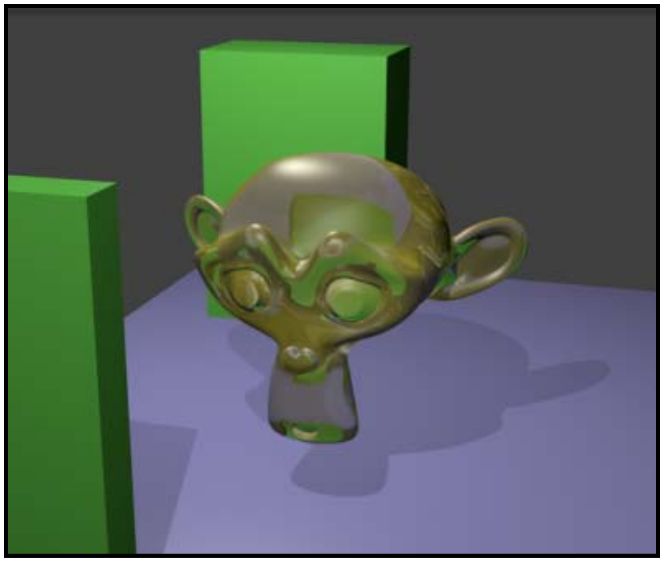
Surface Information

→ Rendering

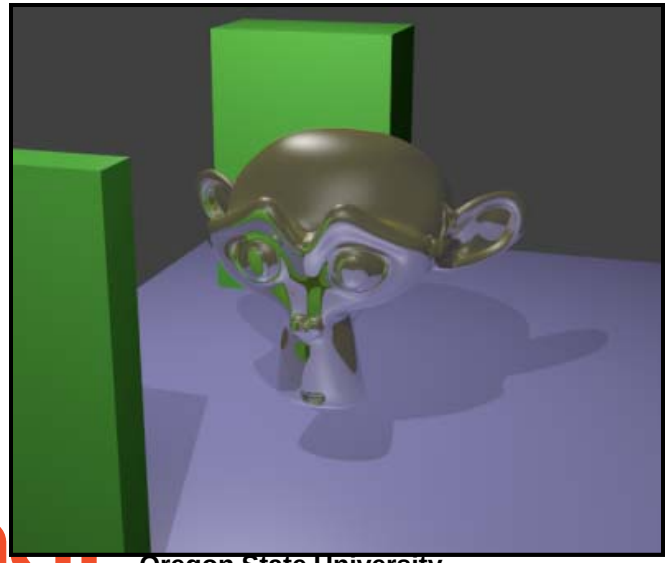
The Graphics Process: Surface Information



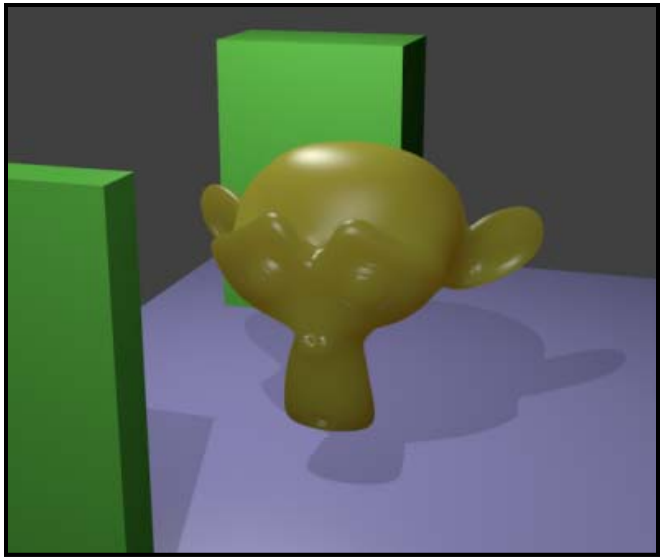
Alpha-Blended Transparency



Refractive Transparency

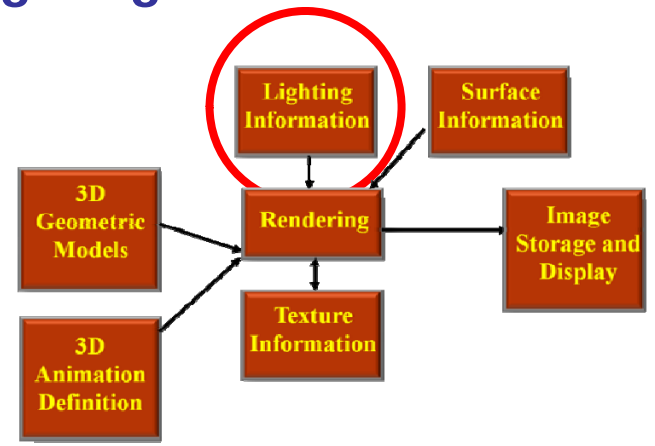


Reflectivity



Subsurface Scattering

The Graphics Process: Lighting

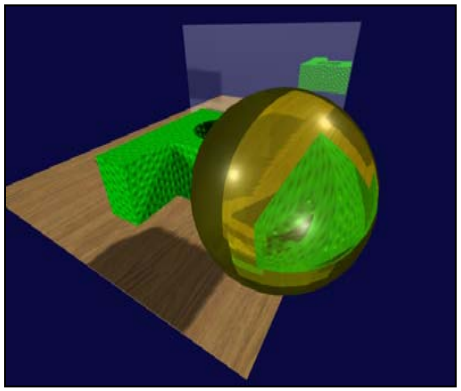


Lighting Types (point, directional, spot, …)

Light Positions

Lighting Information

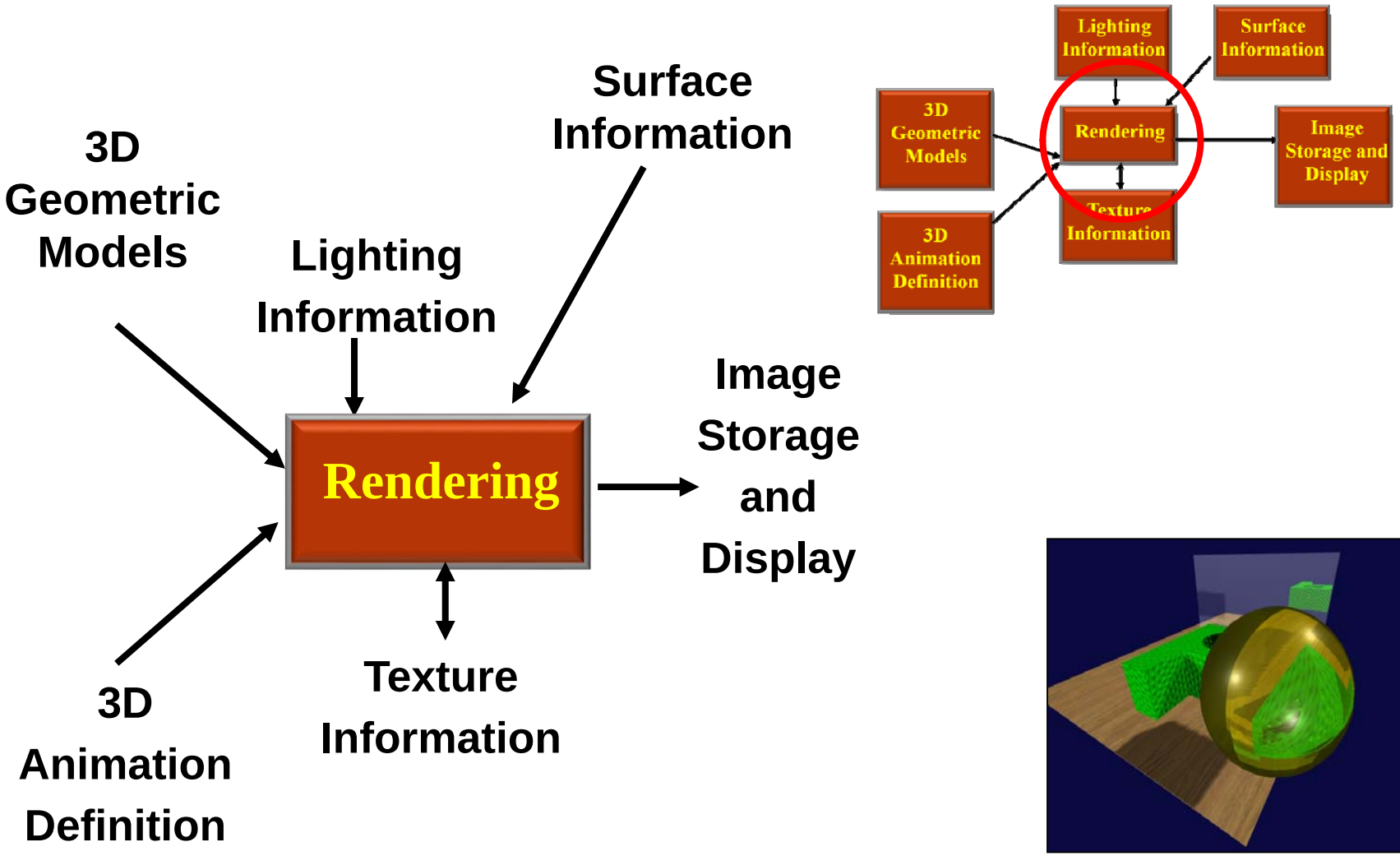
Rendering



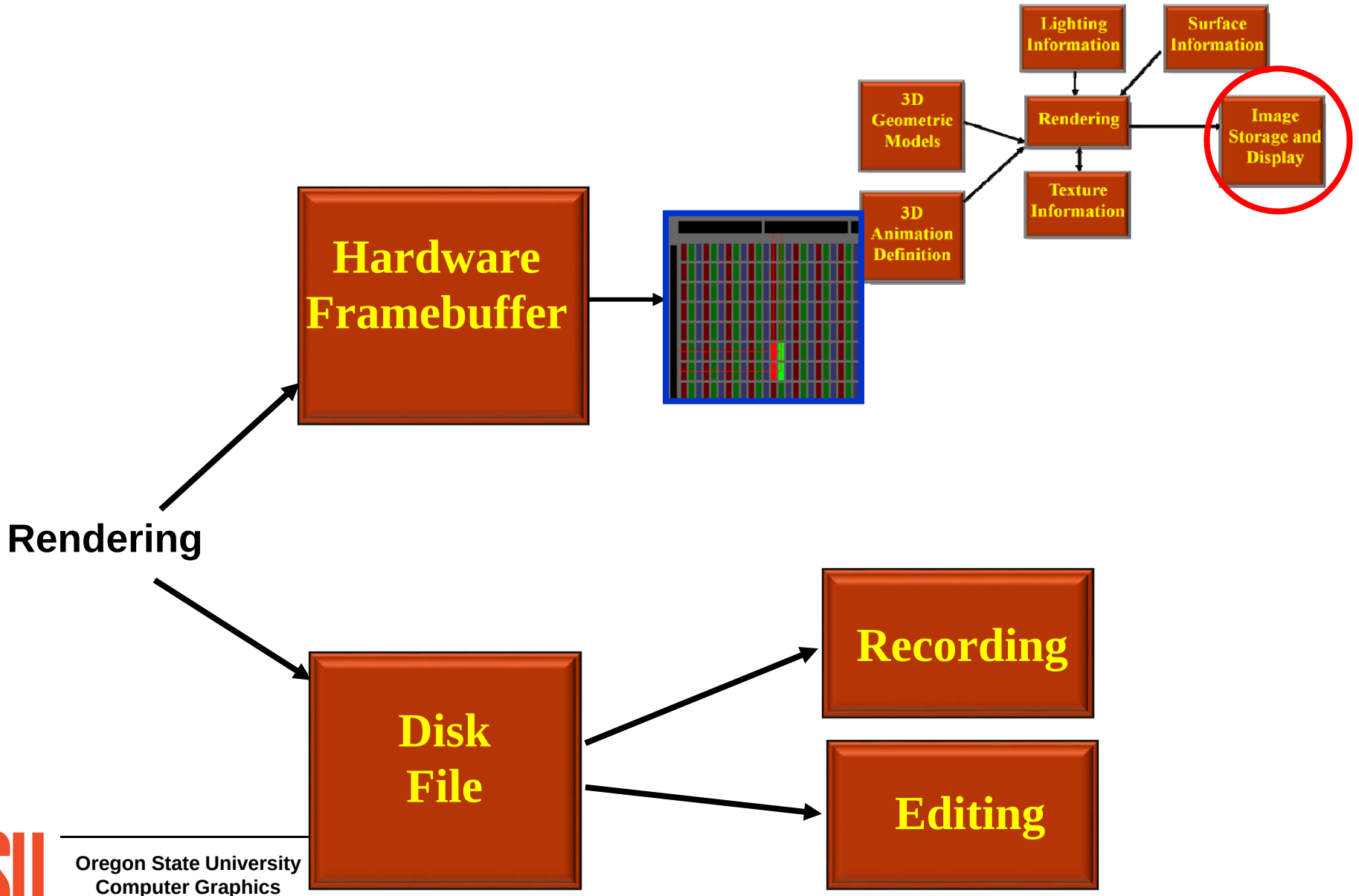
Light Colors

Light Intensities

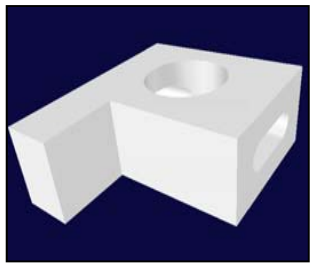
The Graphics Process: Rendering

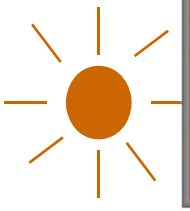


The Graphics Process:
Image Storage and Display



The Graphics Process; Summary





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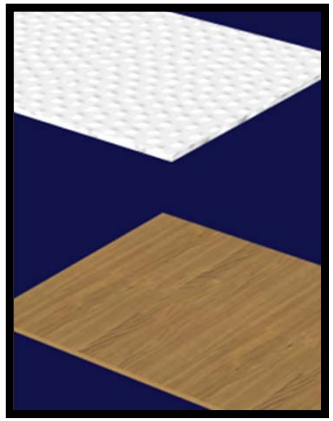
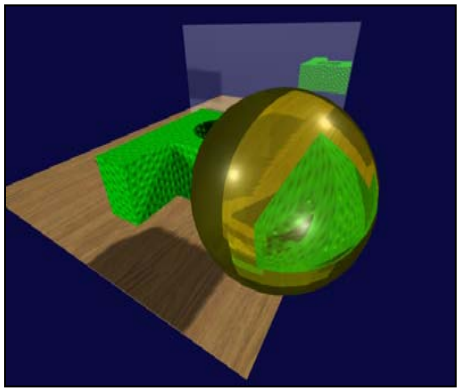
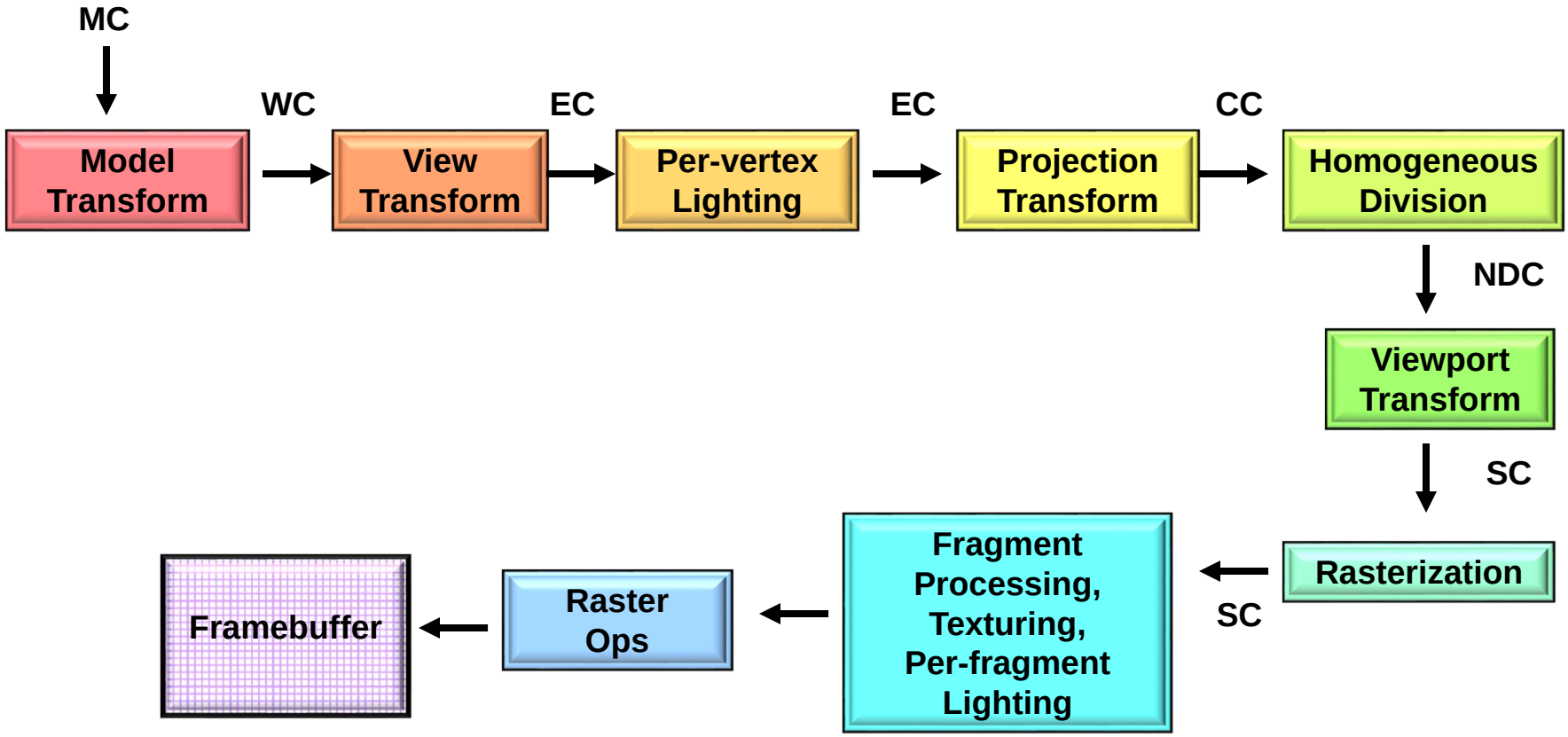
Texture Information





The Basic Computer Graphics Pipeline



MC = Model Coordinates
WC = World Coordinates
EC = Eye Coordinates
CC = Clip Coordinates
NDC = Normalized Device Coordinates
SC = Screen Coordinates