Game Engines

CMPM 164, F2019

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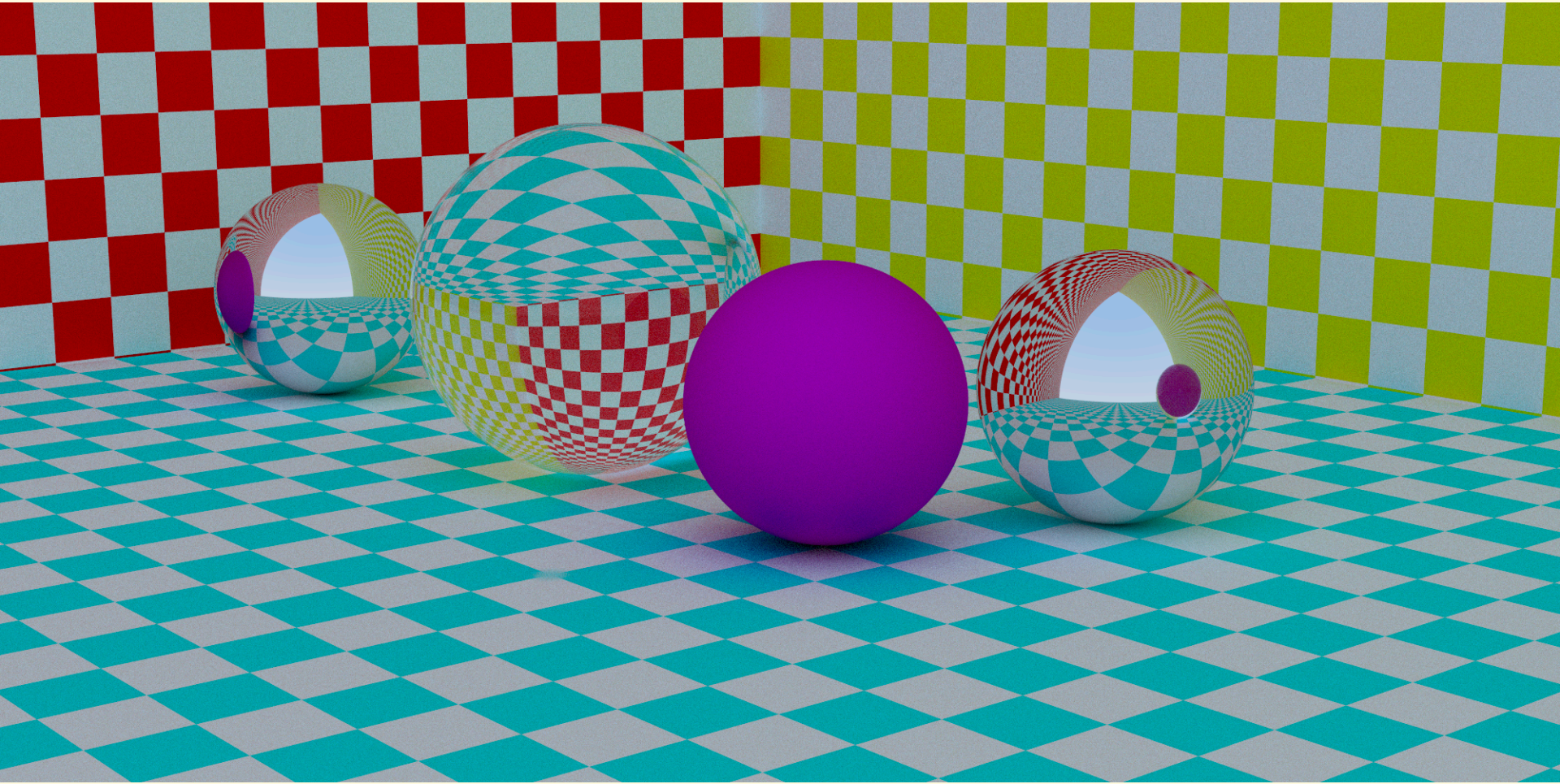
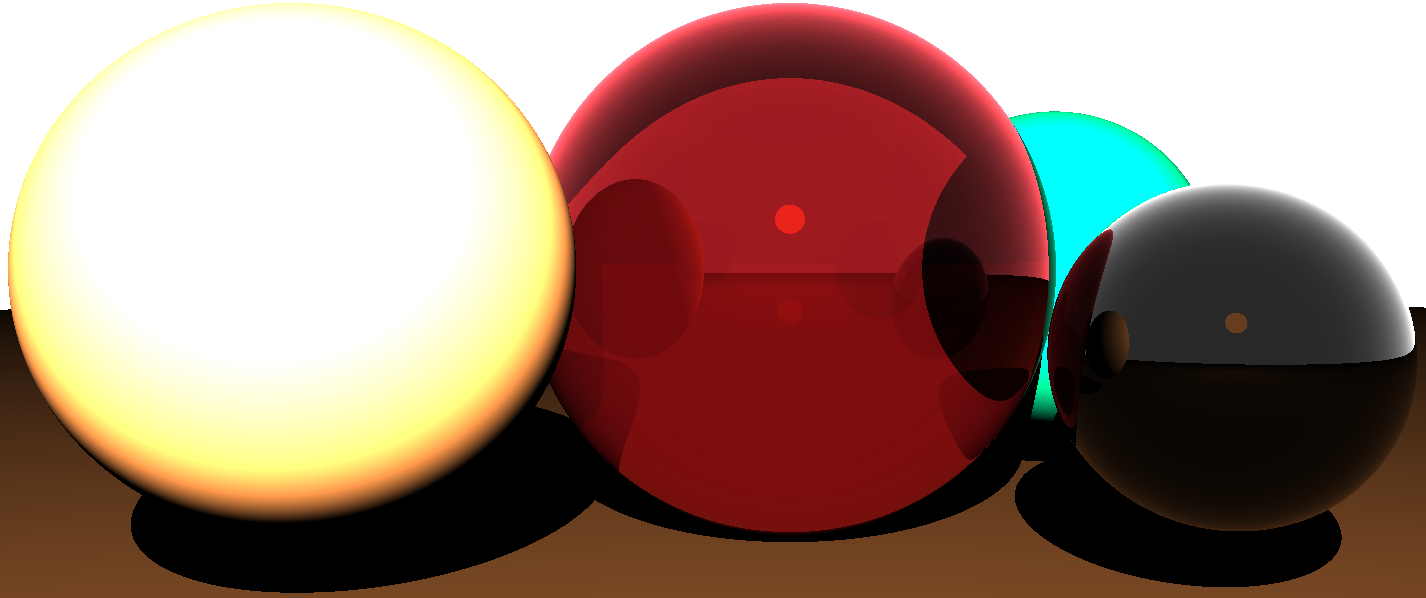
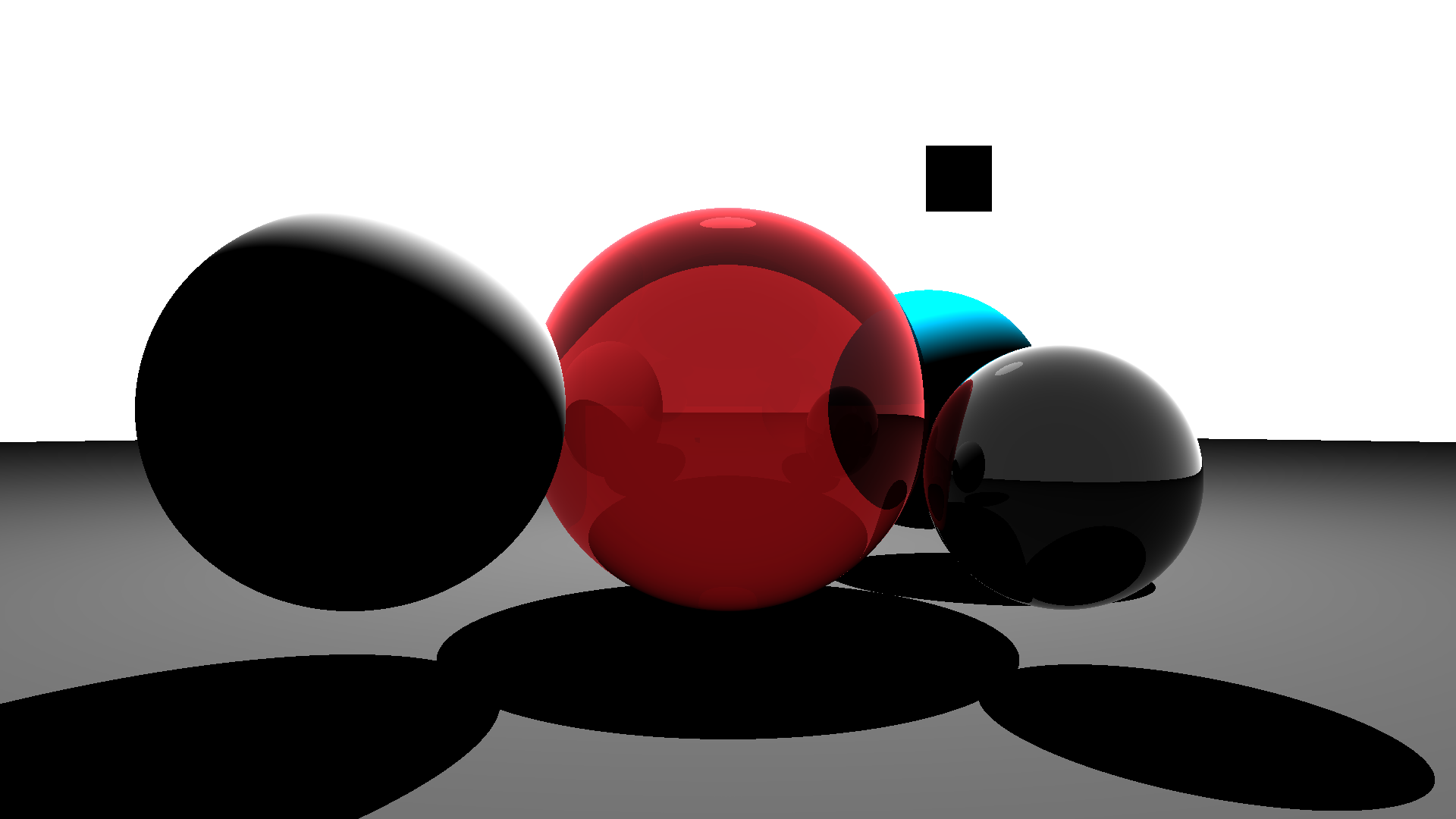
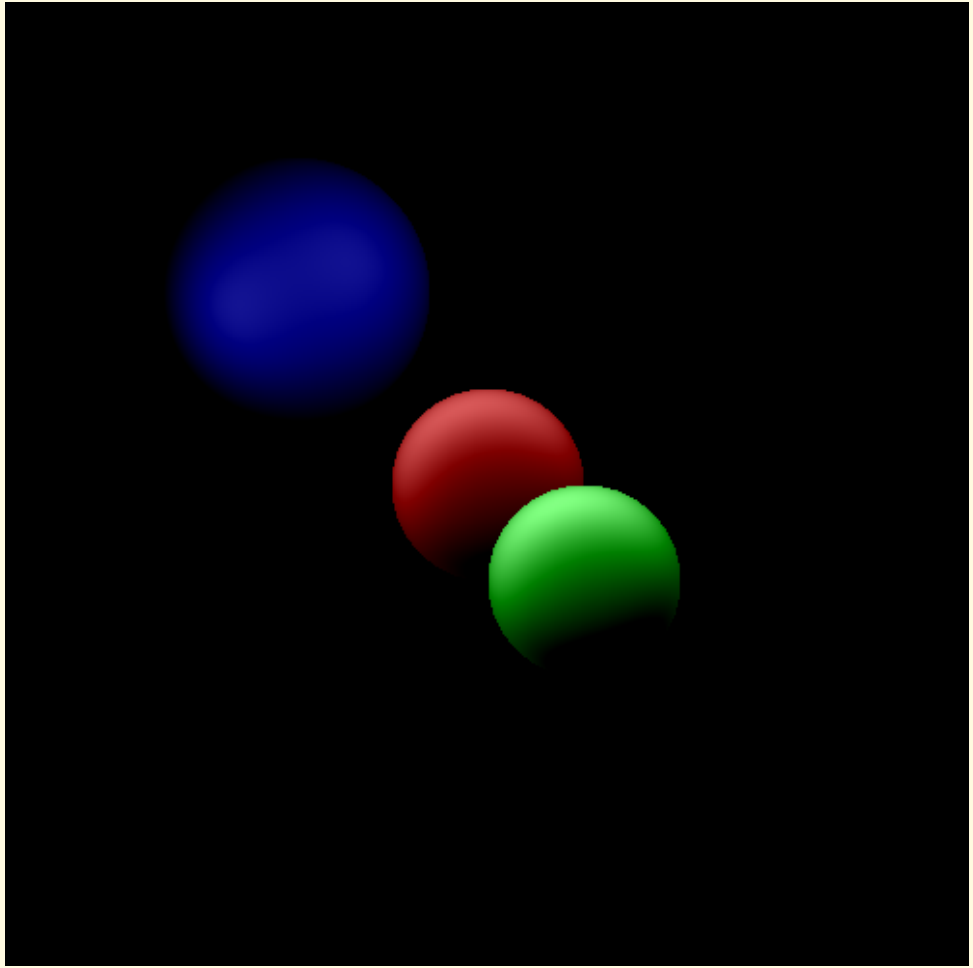
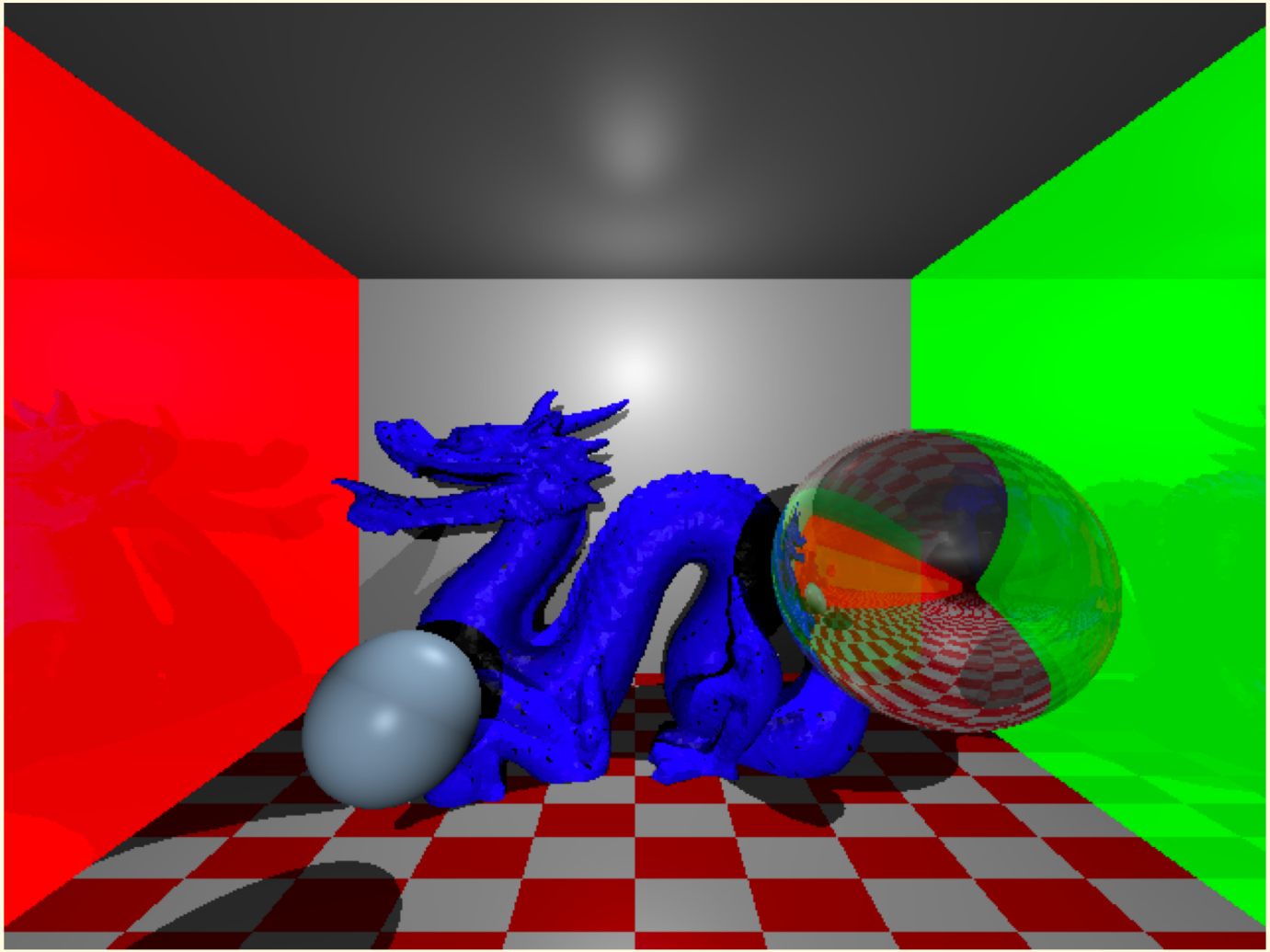
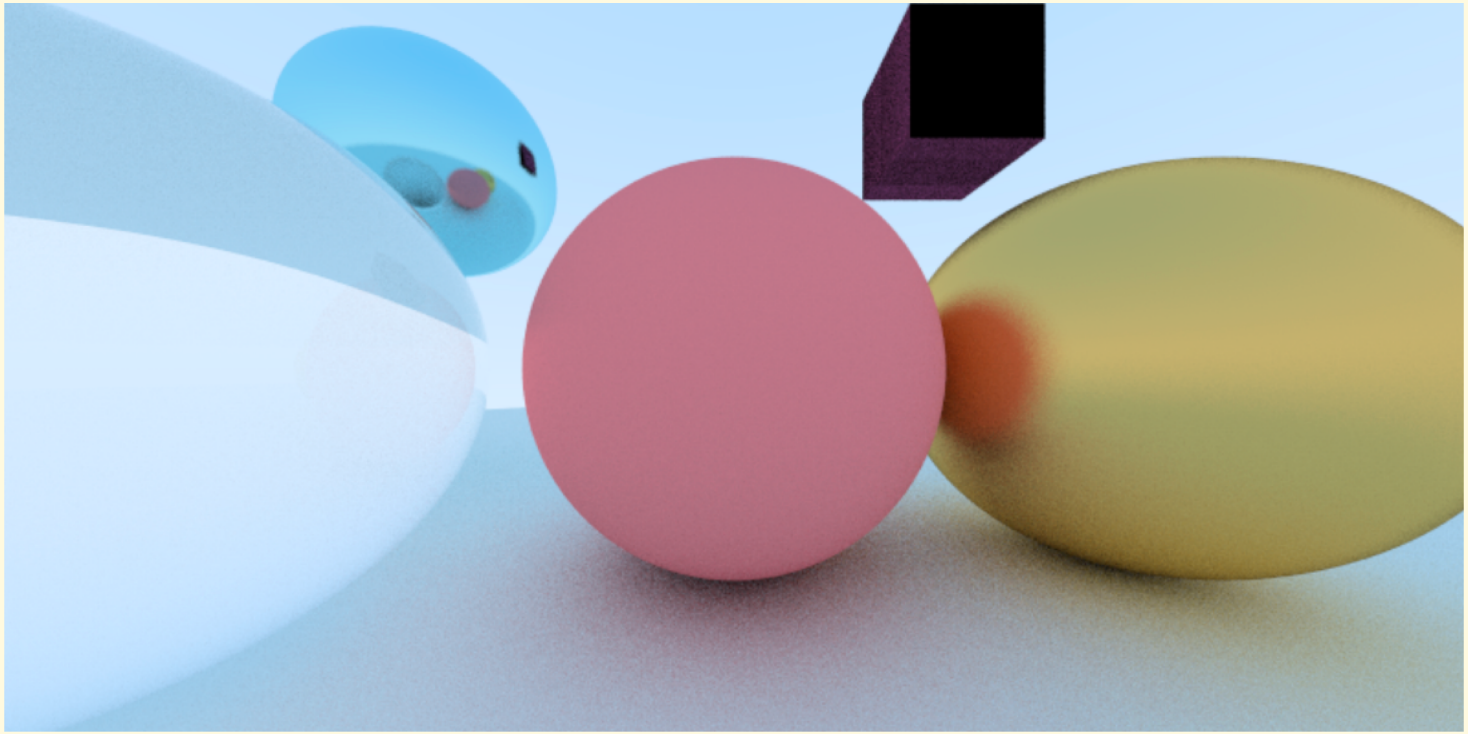


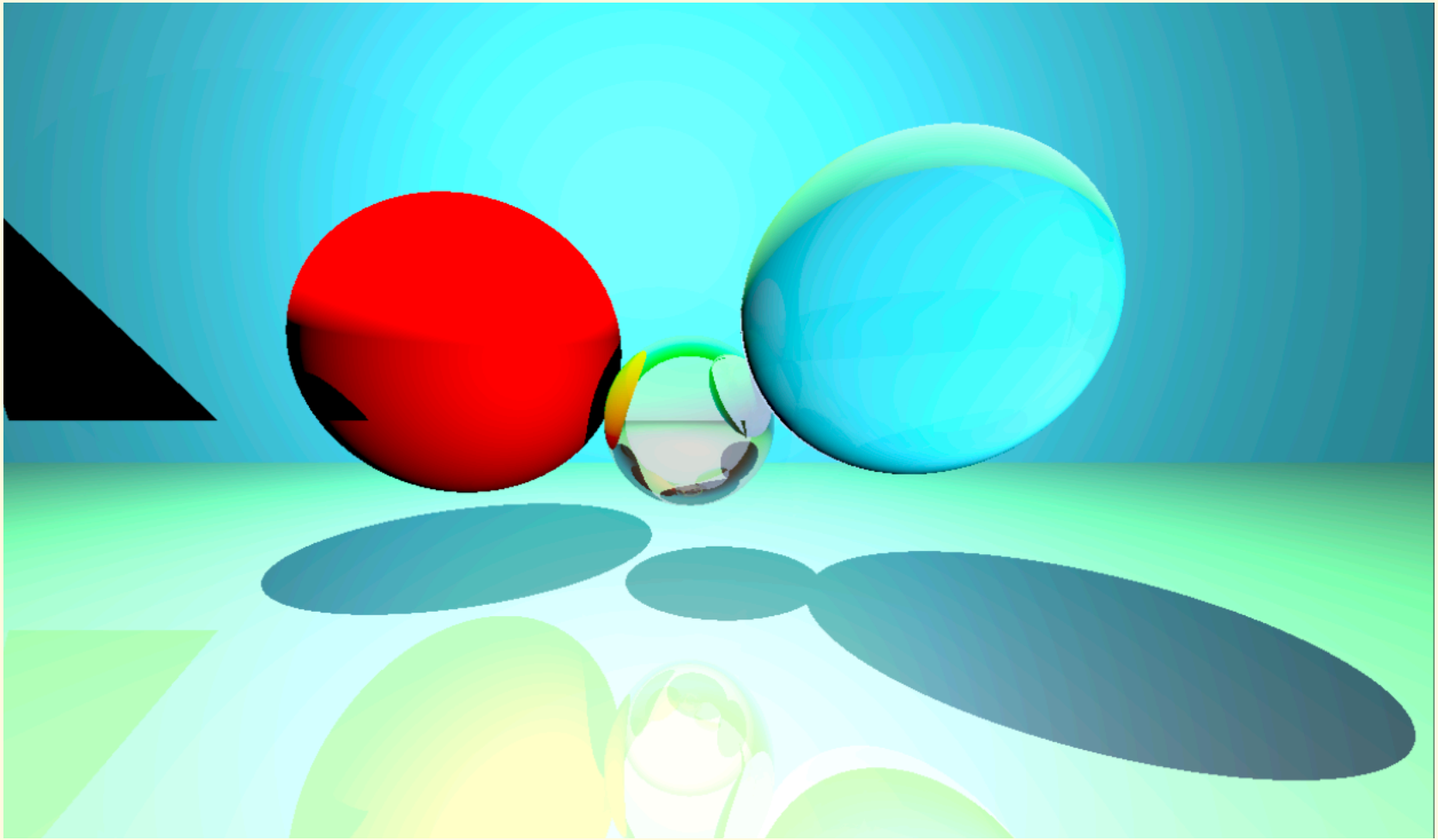


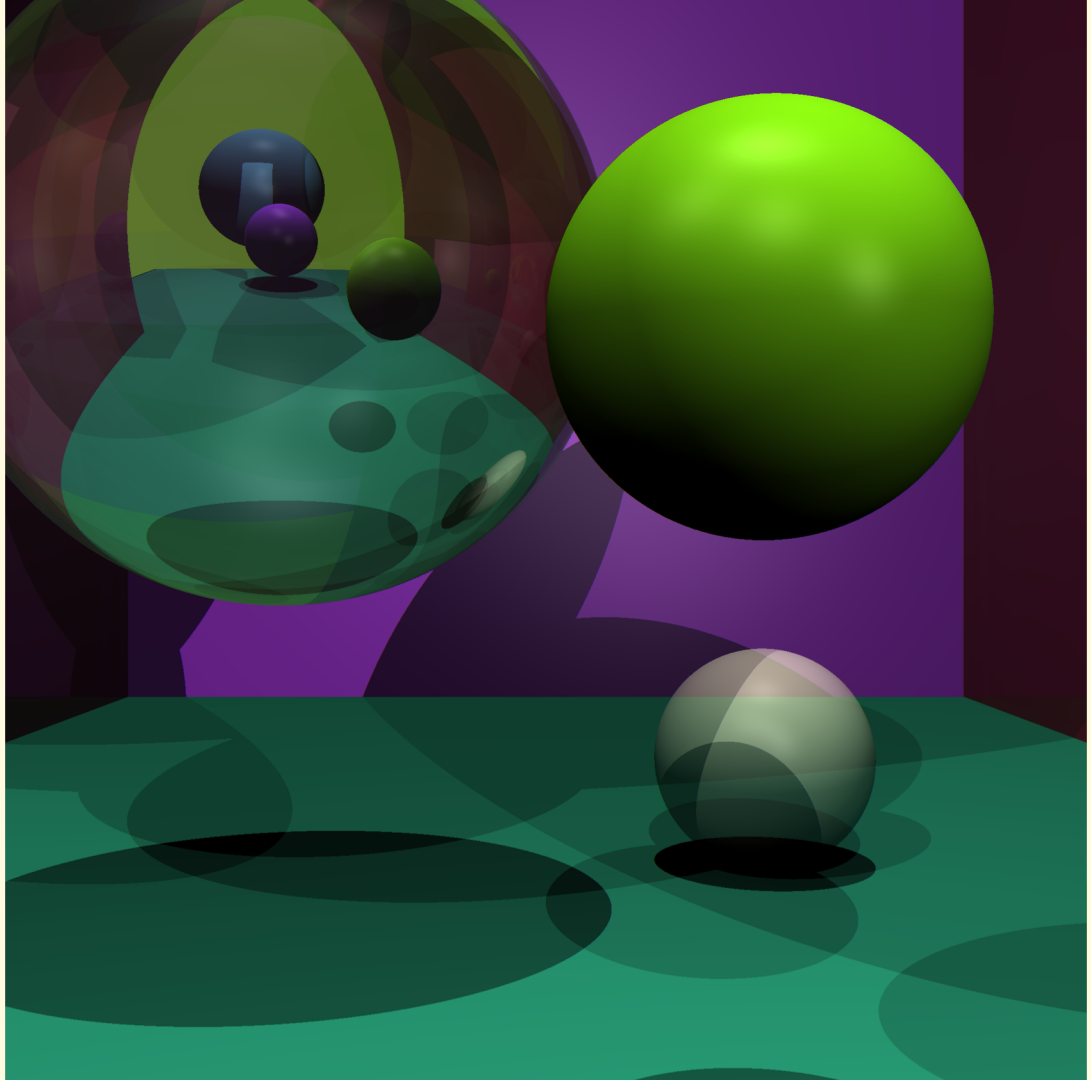


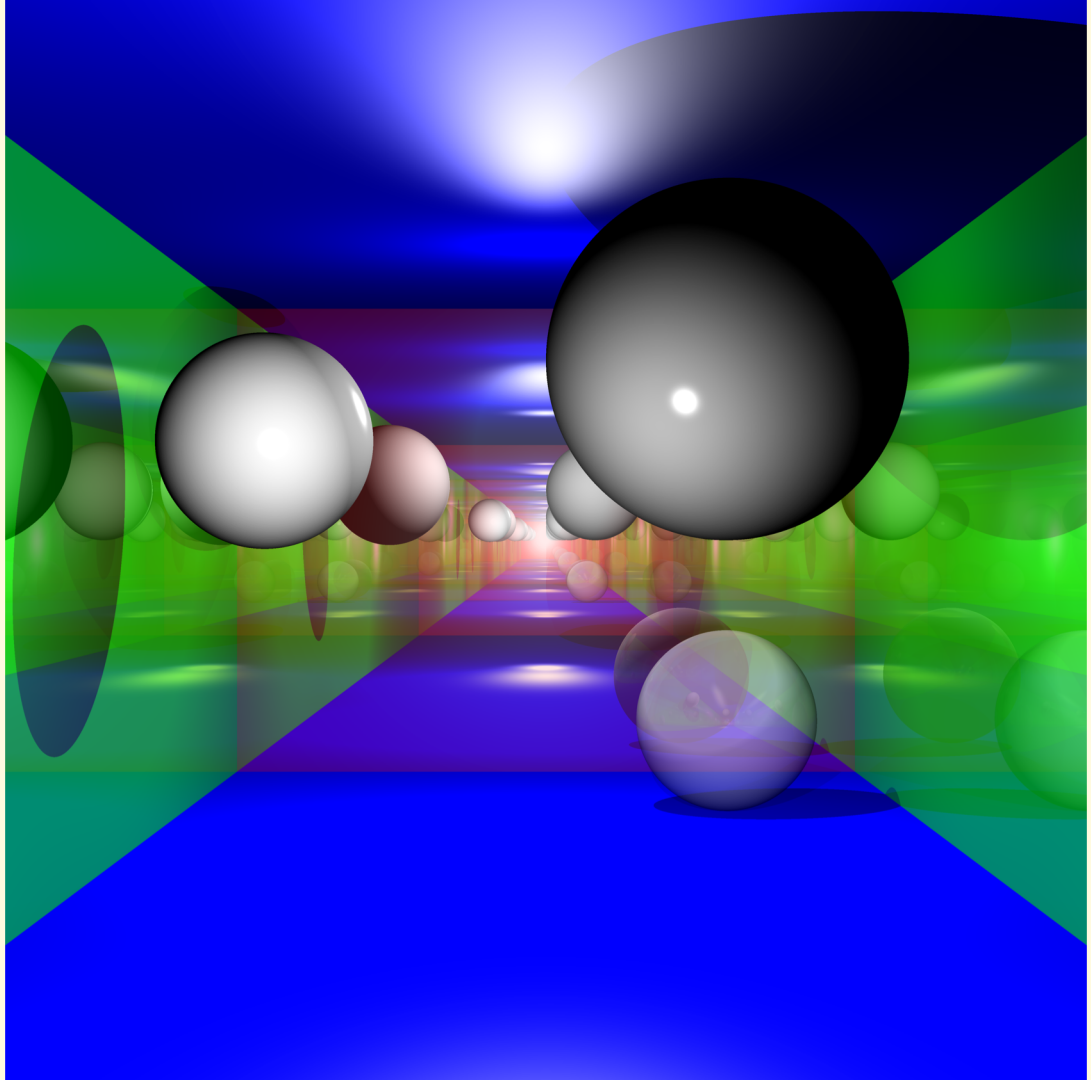












Homework 3

Choose a real-time rendering topic to investigate:

Bump Mapping / Parallax Mapping
Acceleration Algorithms
Billboarding
Halos / God Rays
Shadow Maps
Ambient Occlusion
Motion Blur

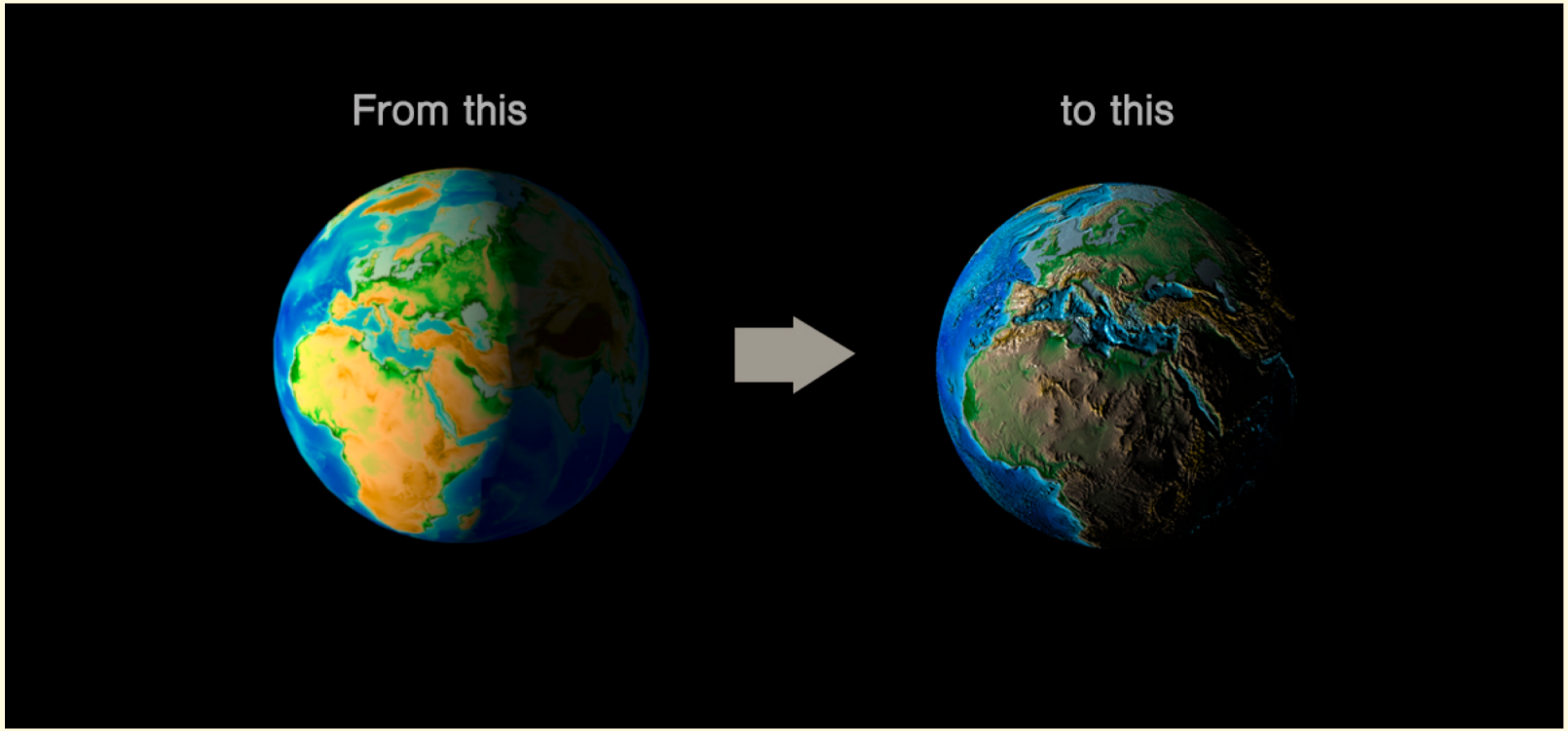
Homework 3

Prepare a presentation to share with the class:

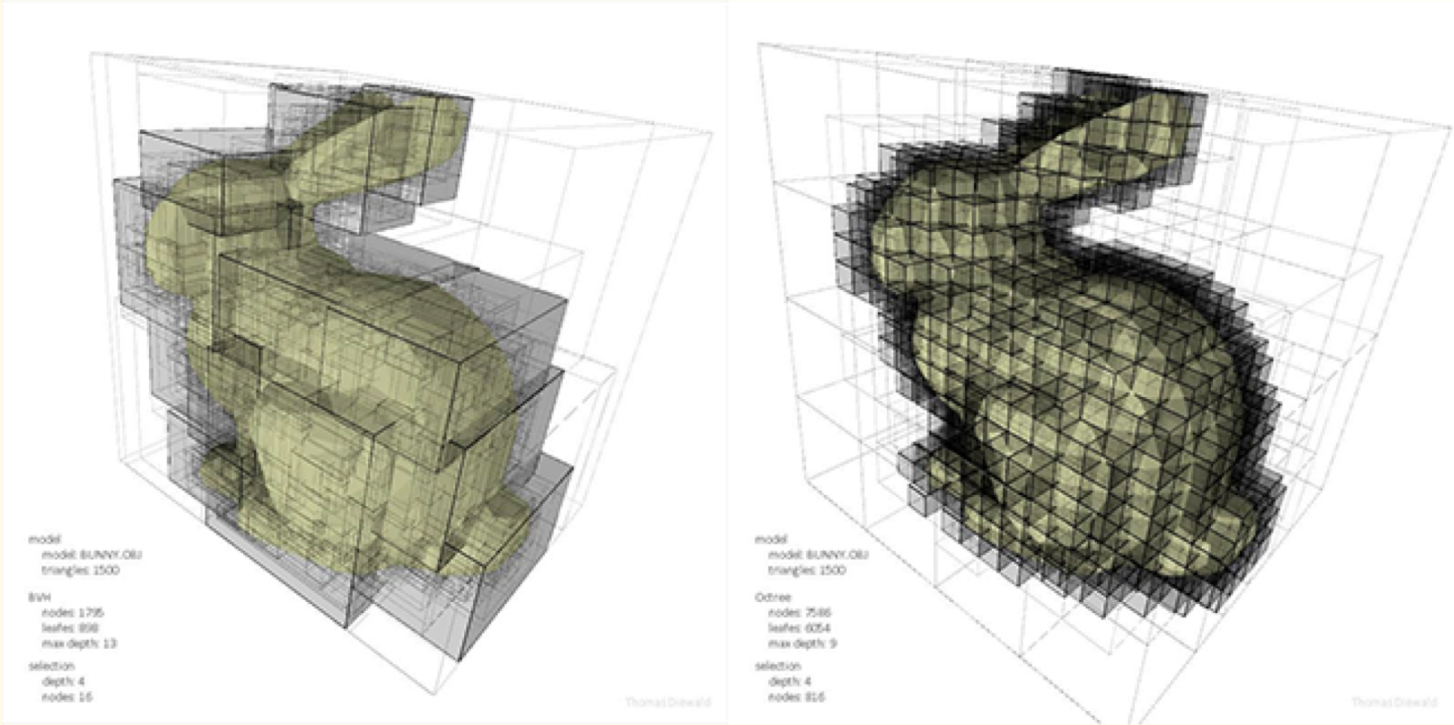
- Explain the technique(s)
- Provide lots of visual examples (images and videos from games, tutorials, blogs, etc.)
- Describe how Unreal Engine supports these techniques
- You don’t have to create your own implementation
- Identify any confusion you have about how the technique works
- Aim for 20-30 minute presentation that is fun and informative

We will send you excerpts from textbooks, but also you are encouraged to look for other online tutorials, videos, blogs that explain the concepts.

Bump Mapping



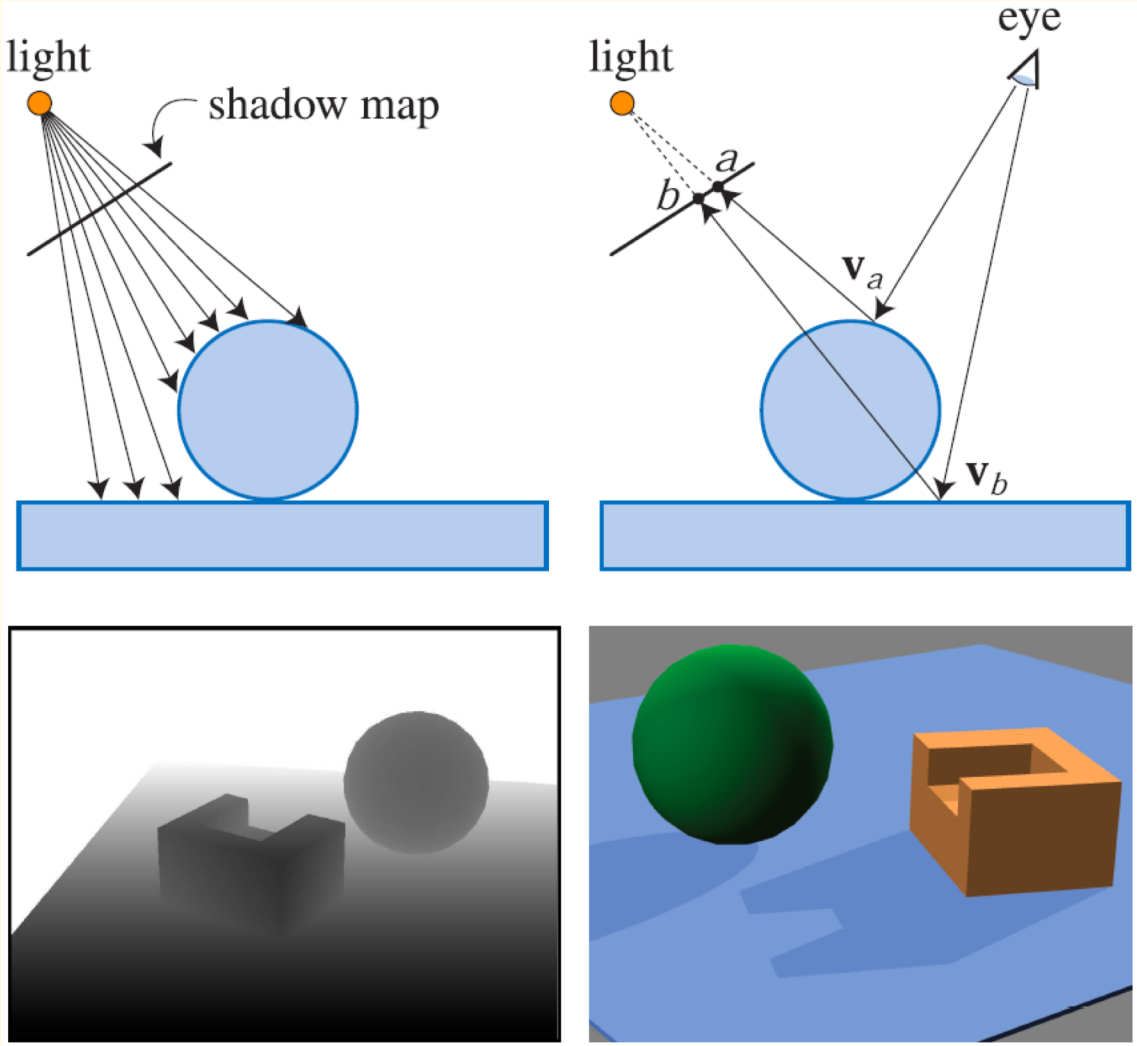
Bounding Volume Hierarchies



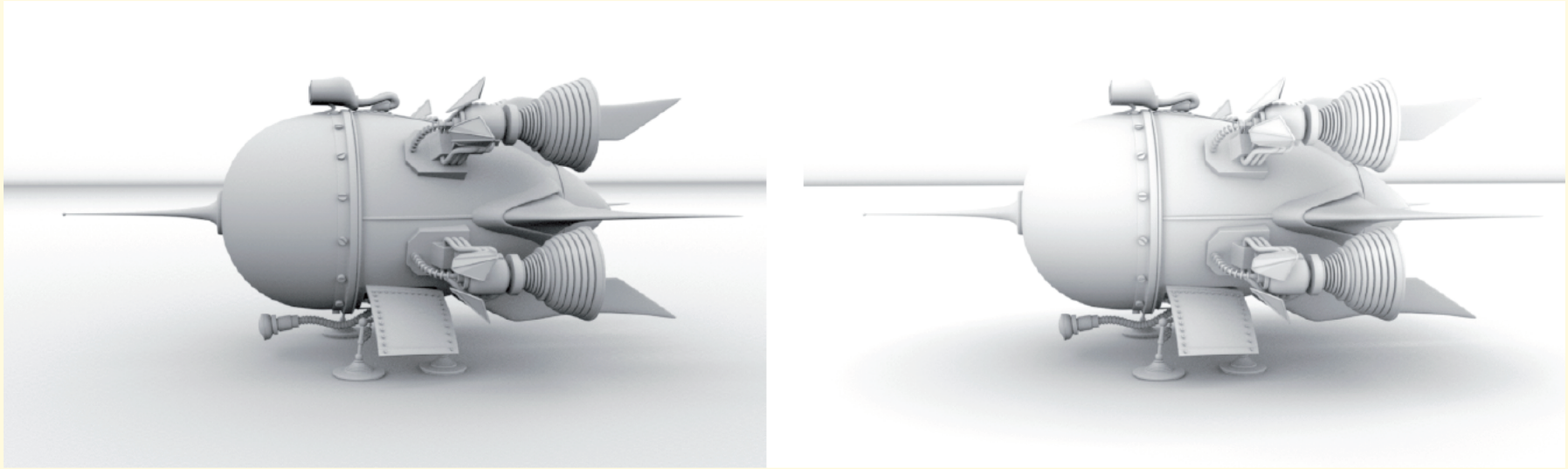
Billboards

God Rays

Shadow Maps



Ambient Occlusion



Motion Blur