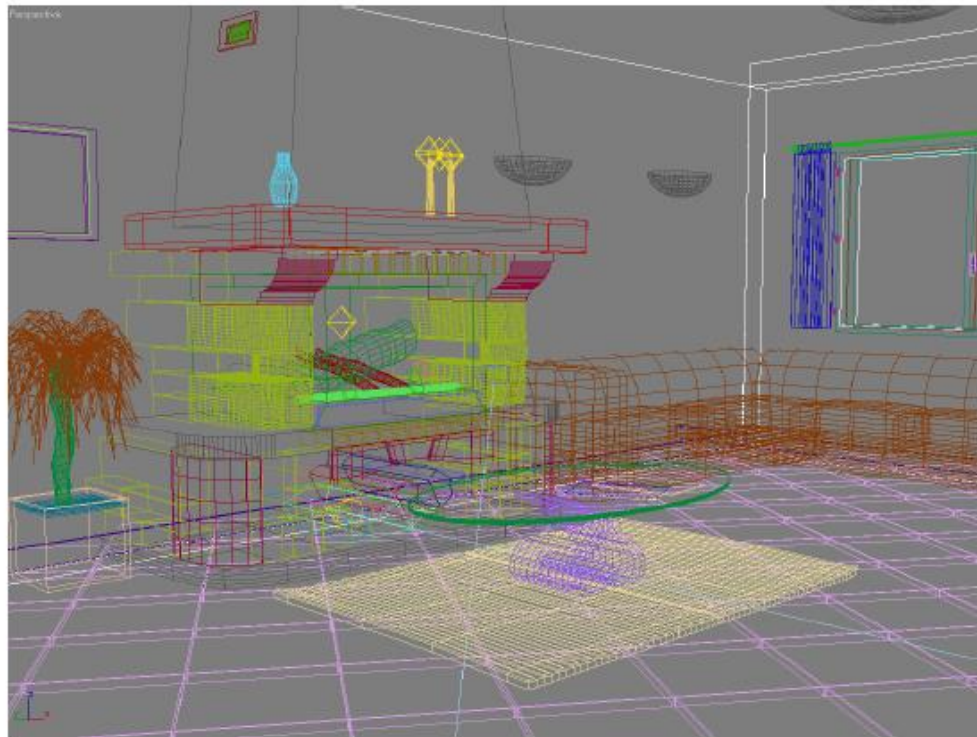


RayCaster based rendering framework

Martin Štýs, Robin Hub

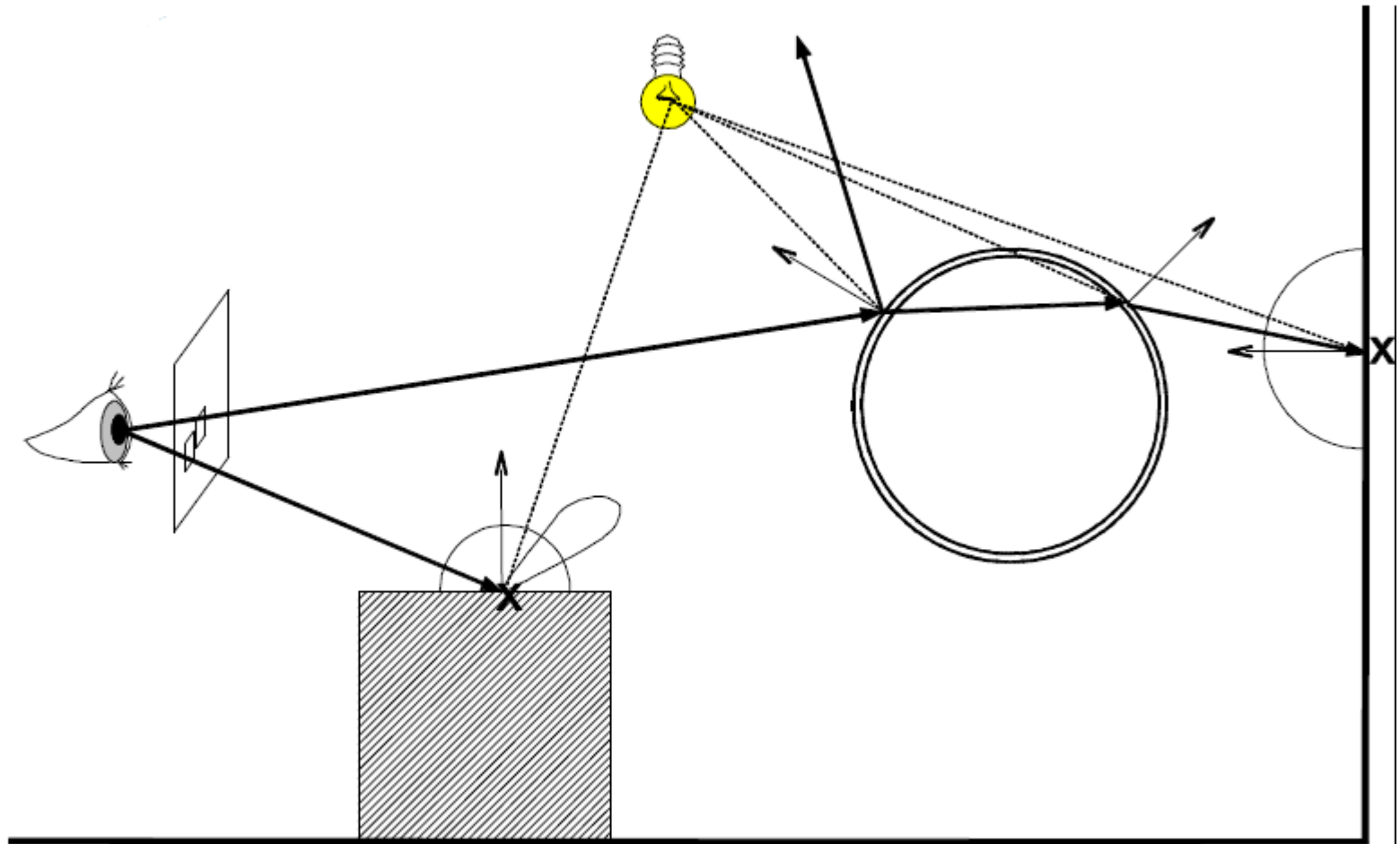
Goal



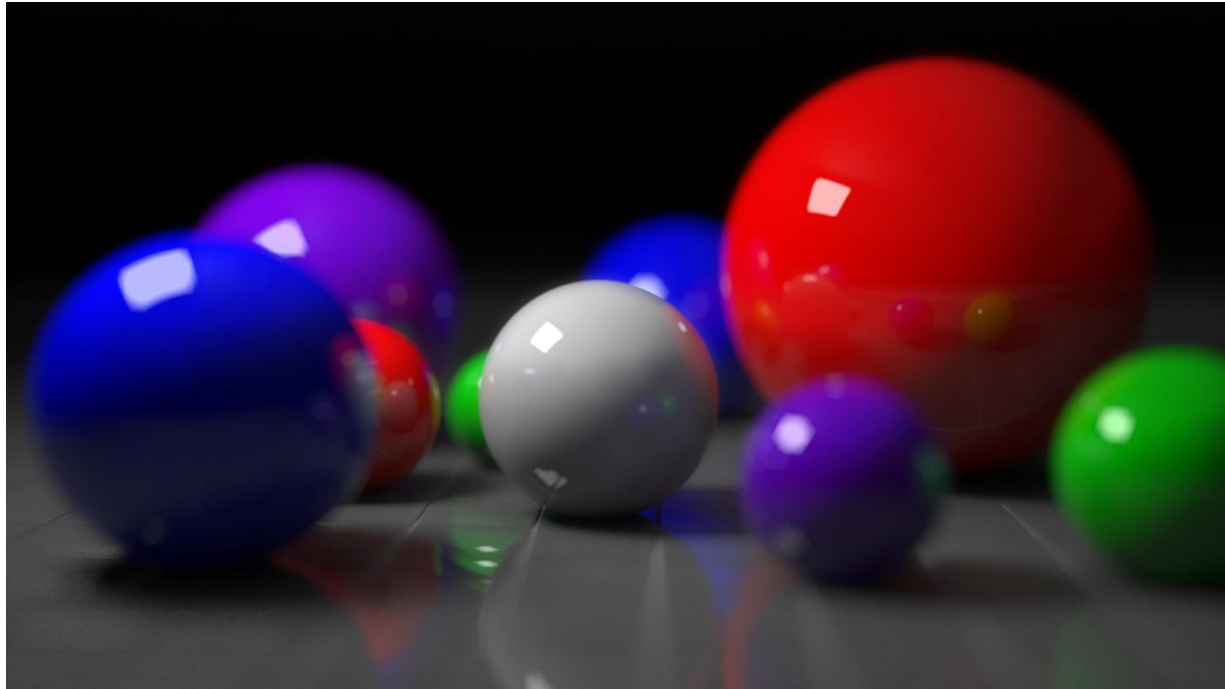
Physically correct rendering



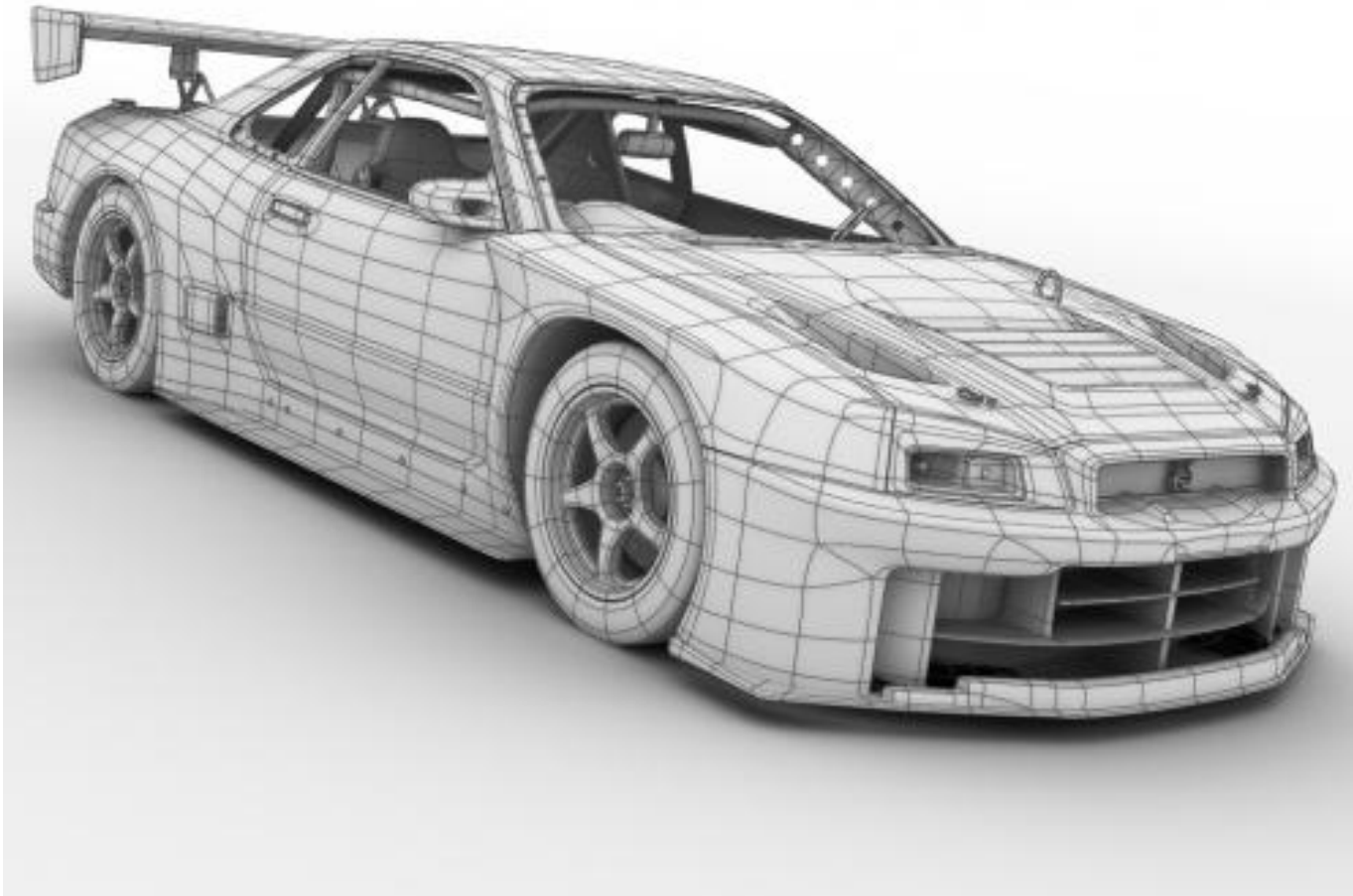
RayTracing



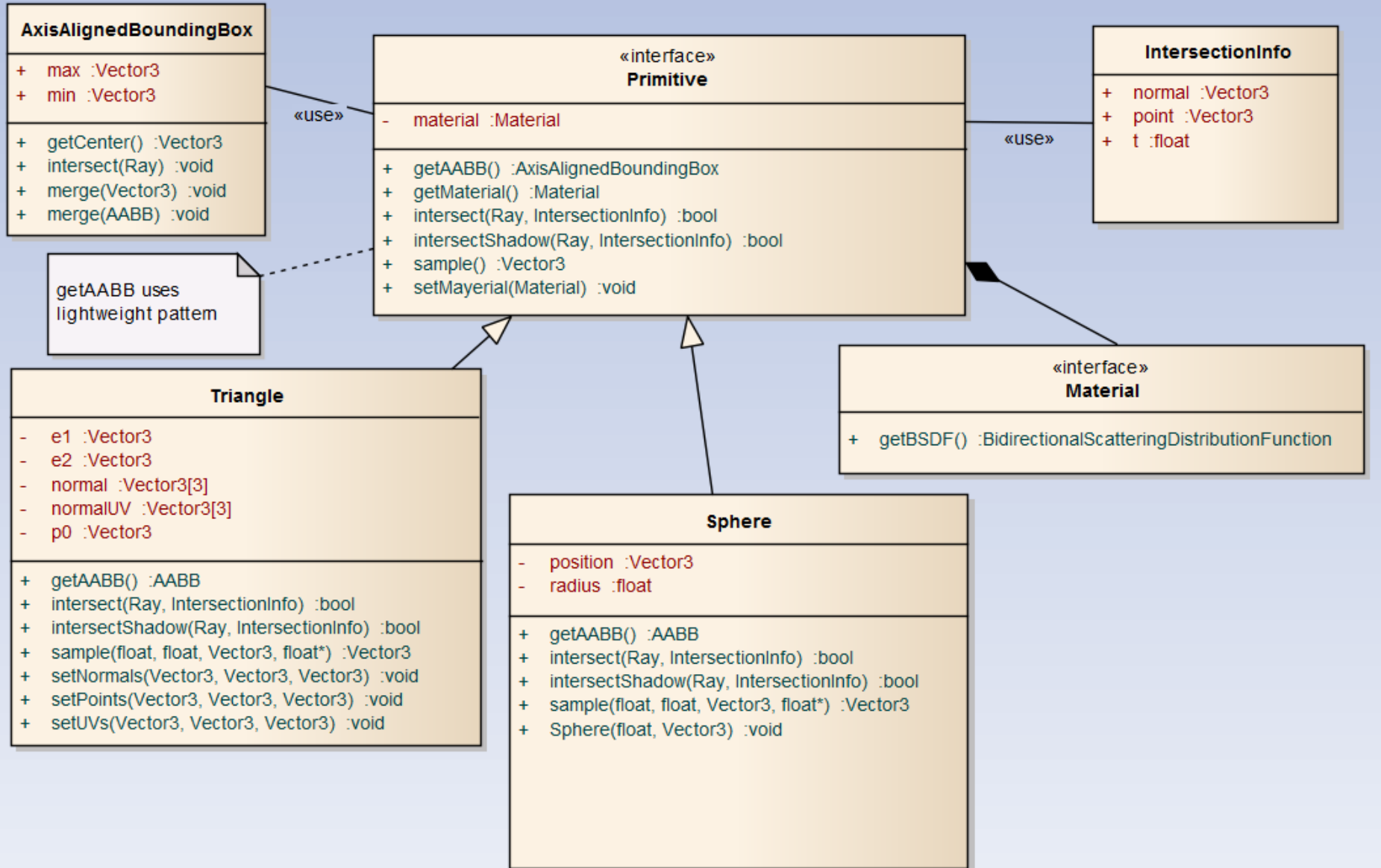
Primitives



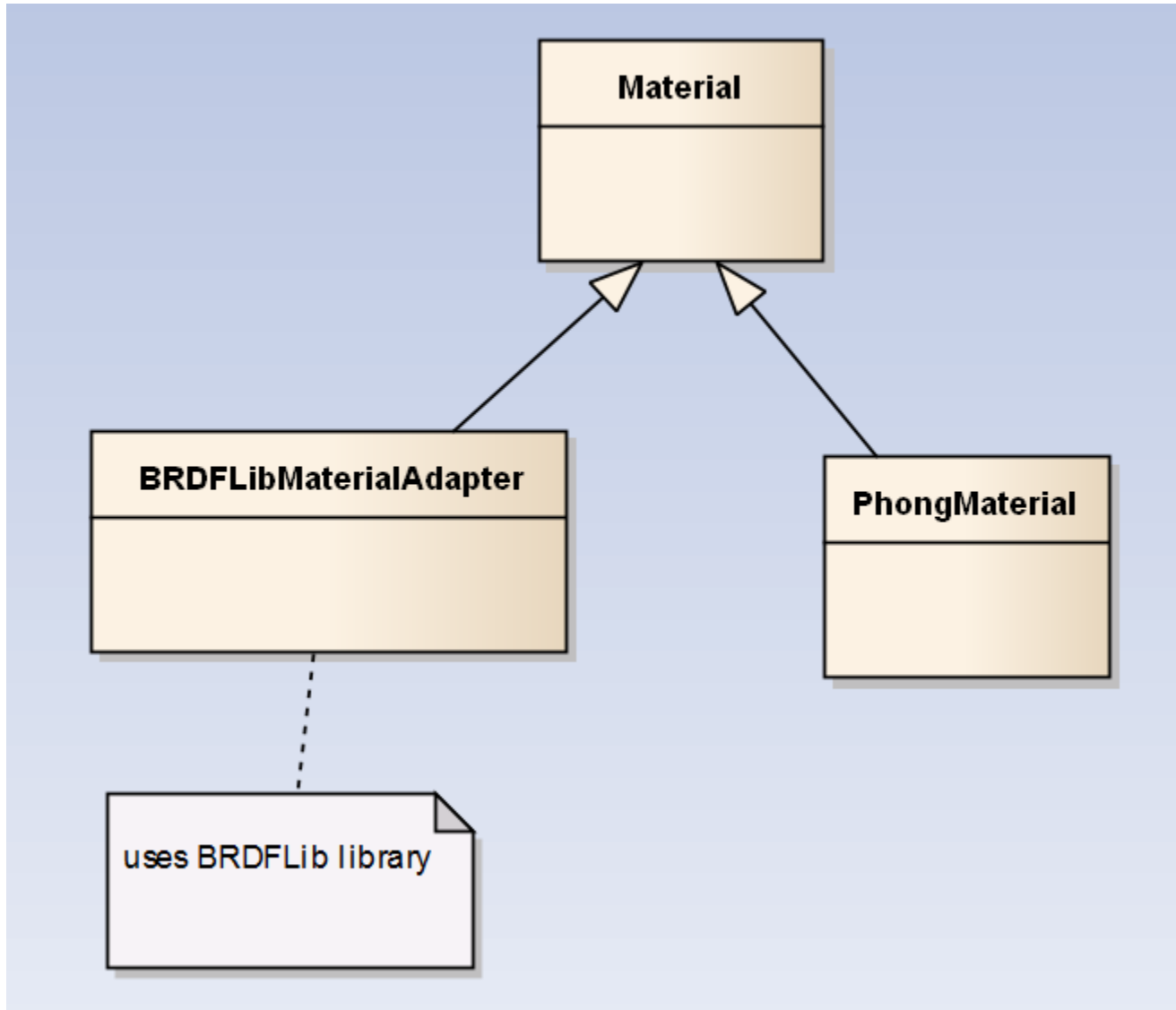
Primitives



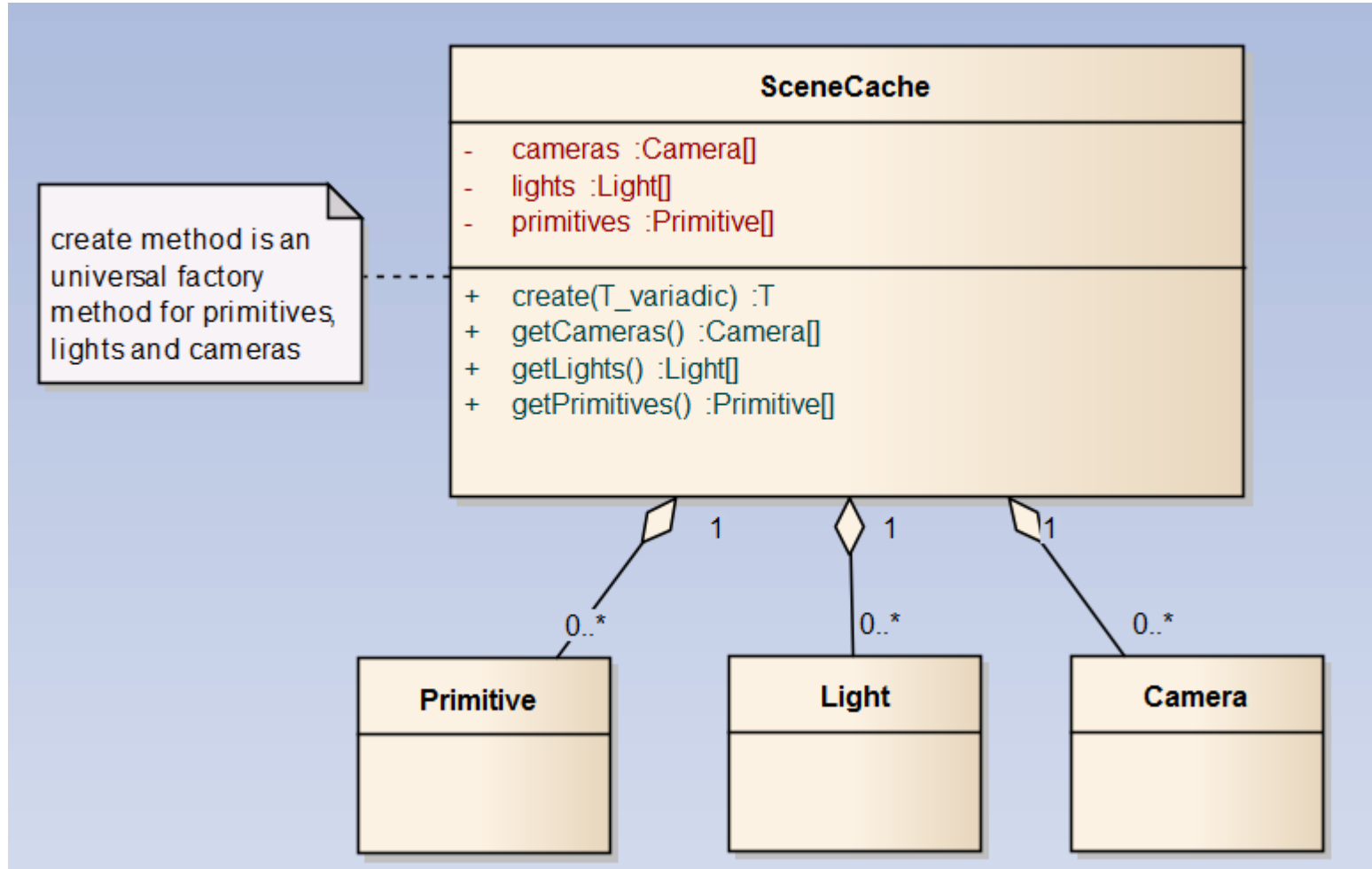
Primitives



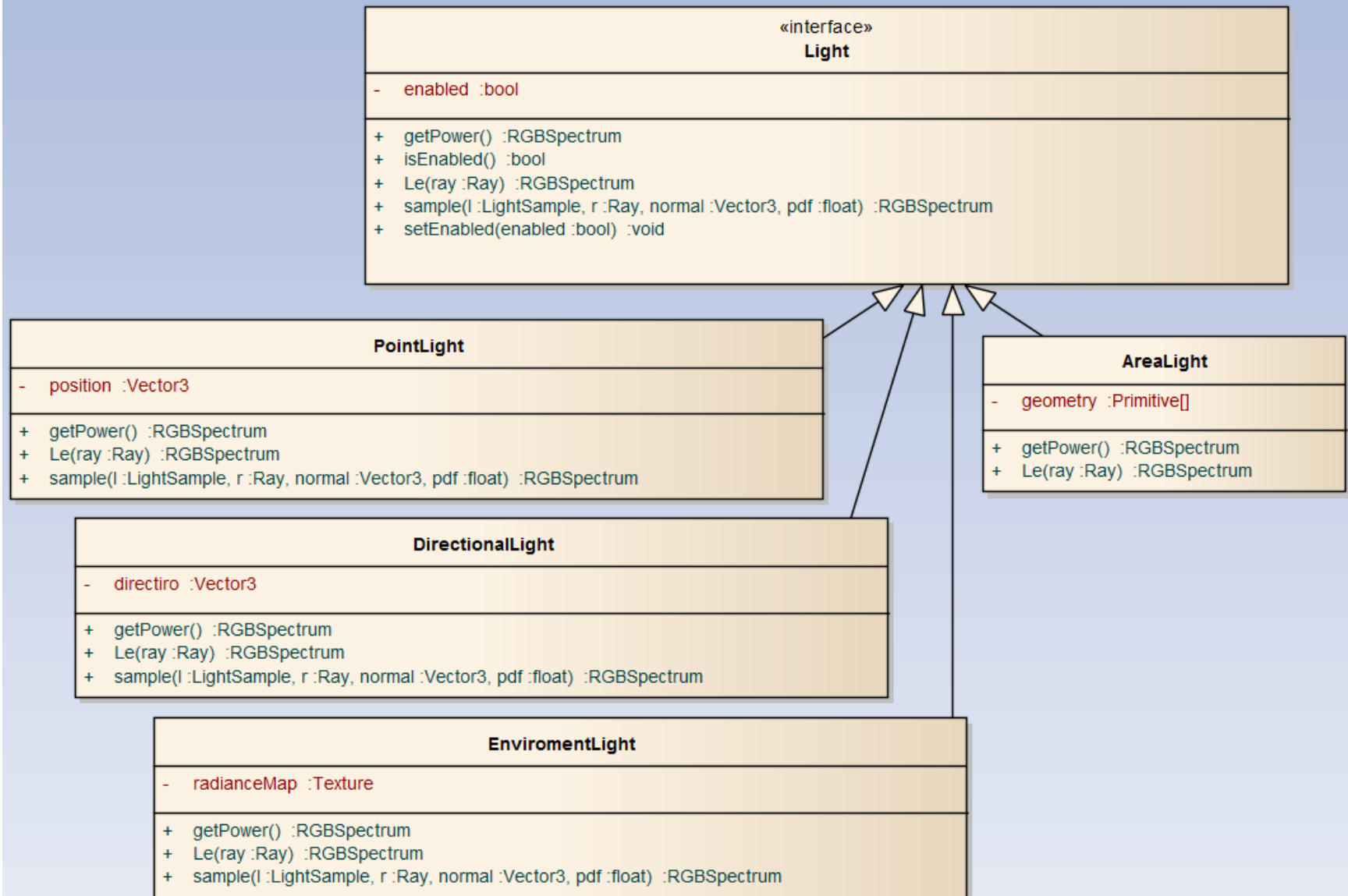
Materials



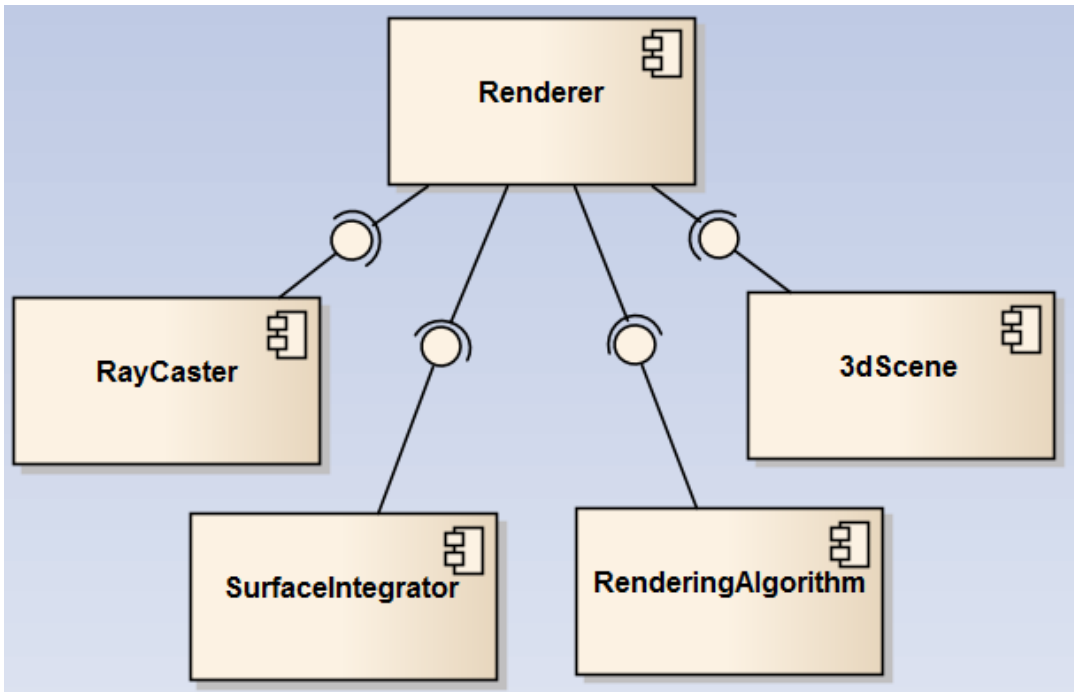
3DScene



Lights

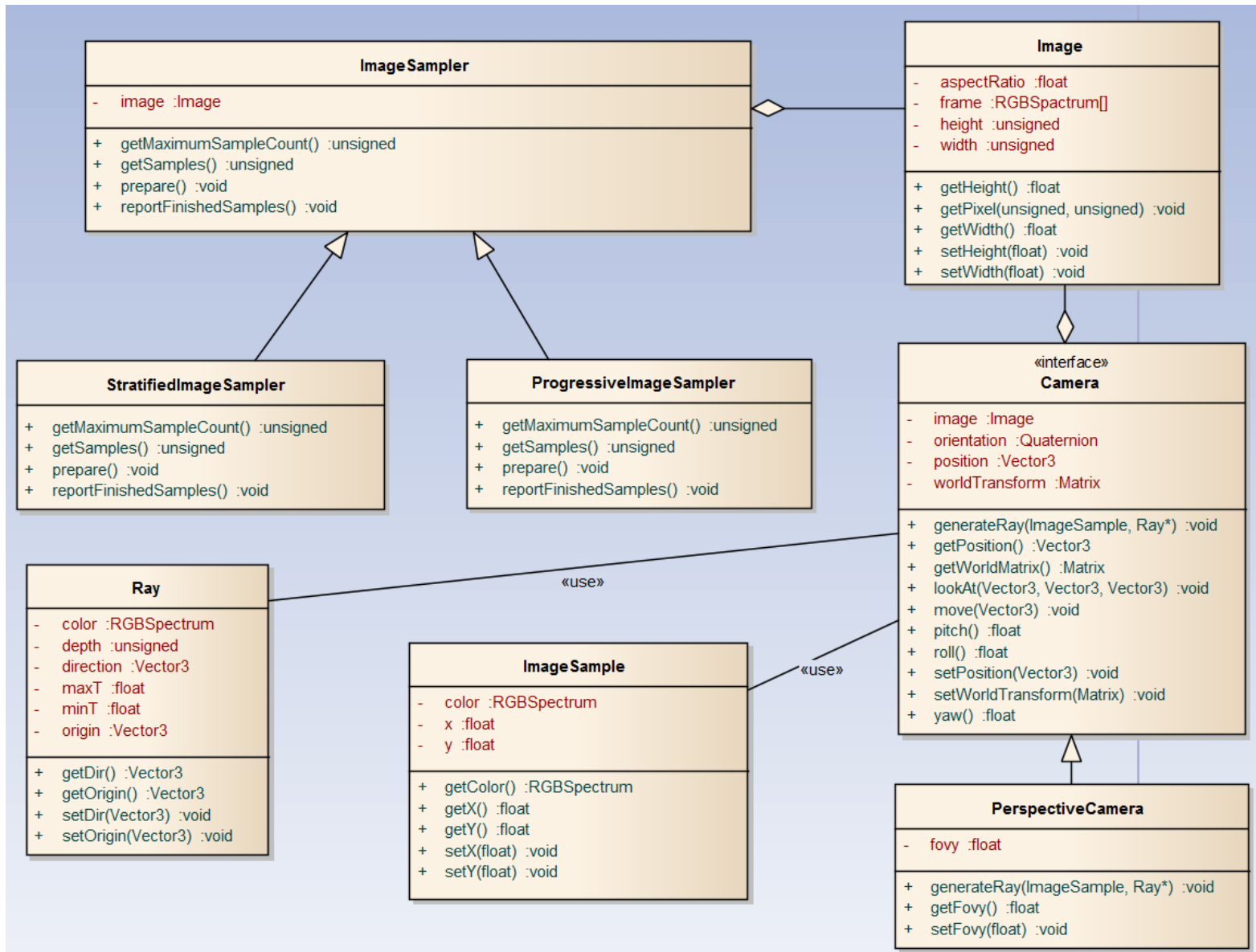


Renderer

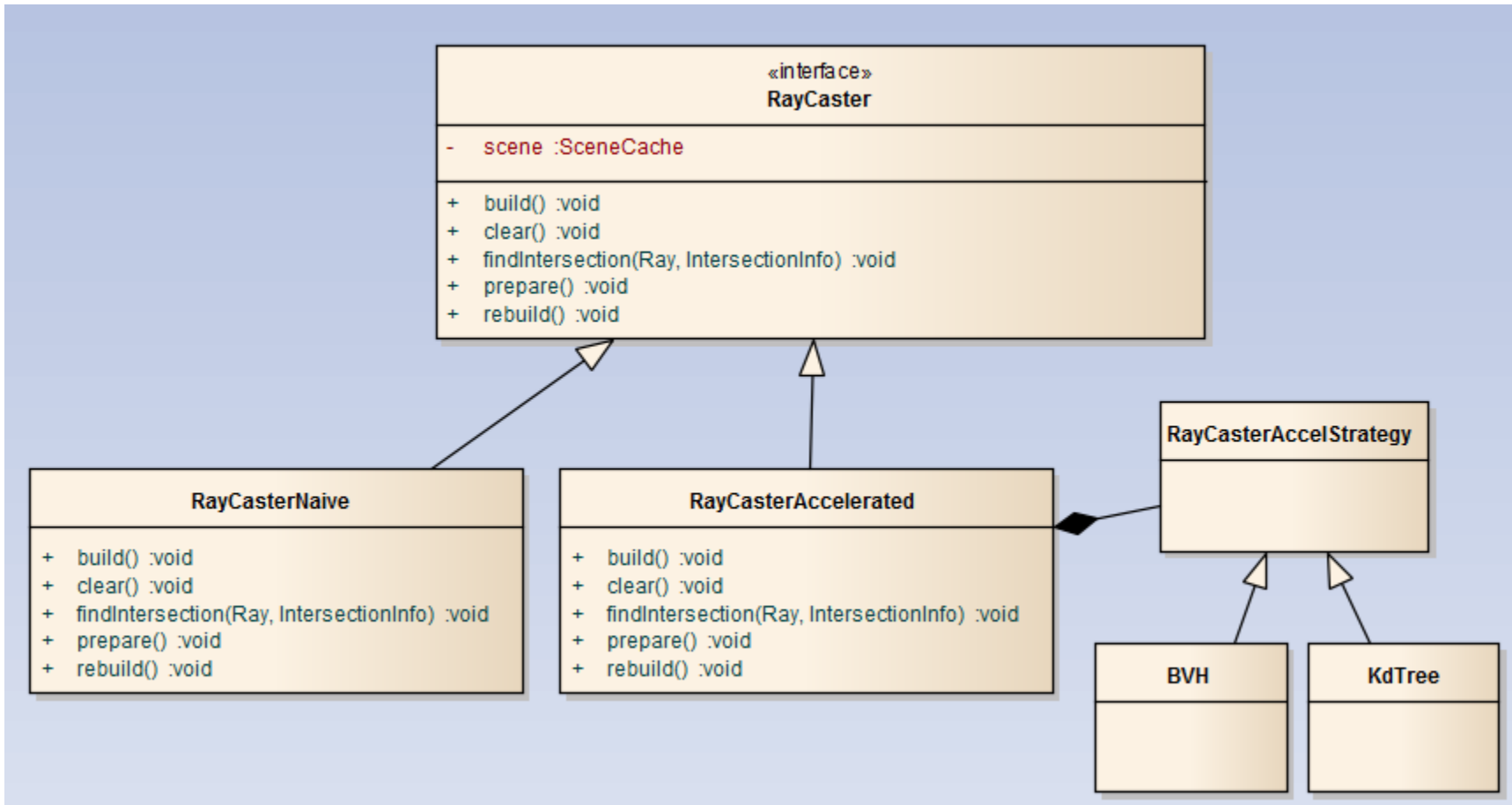


Renderer
<ul style="list-style-type: none">- camera :Camera- image :Image- imageSampler :ImageSampler- rayCaster :RayCaster- sceneCache :SceneCache- surfaceIntegrator :SurfaceIntegrator- tasks :RenderTask
<ul style="list-style-type: none">+ cancelRendering() :void- destroyTasks() :void+ getImage() :Image+ getImageSampler() :ImageSampler- initTasks() :void+ isReadyForRender() :void+ render() :void+ setCamera(Camera) :void+ setImageSampler(ImageSampler) :void+ setRayCaster(RayCaster) :void+ setSceneCache(SceneCache) :void+ setSurfaceIntegrator(SurfaceIntegrator) :void- waitForAllTaskIdle() :void+ waitForRender() :void

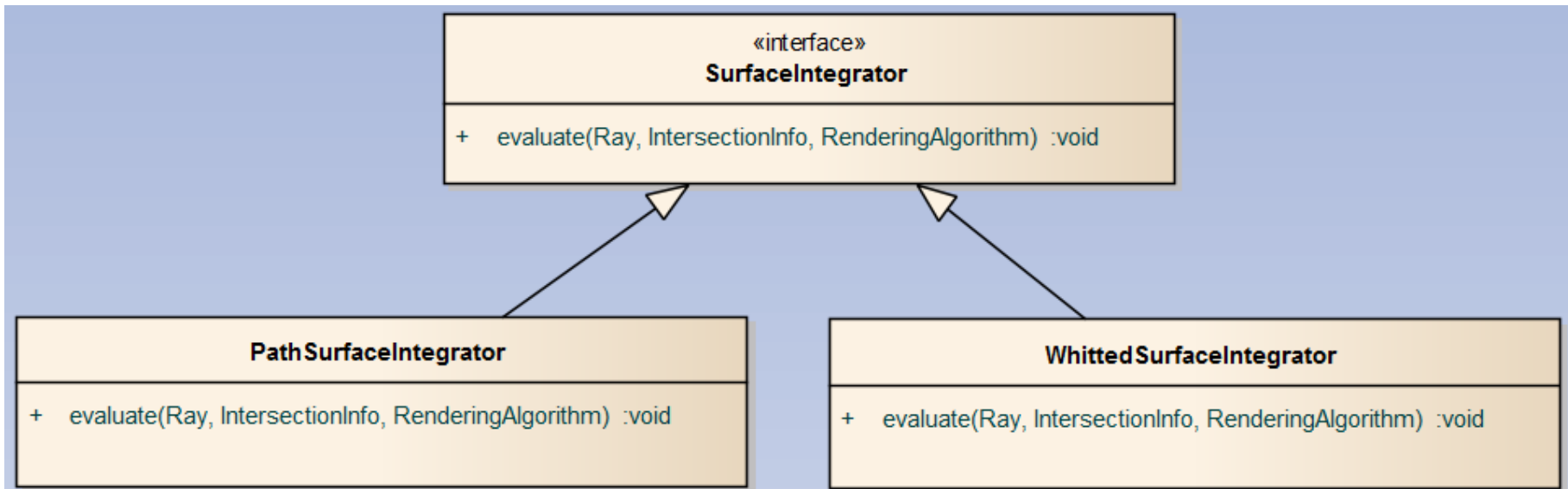
Ray Generating



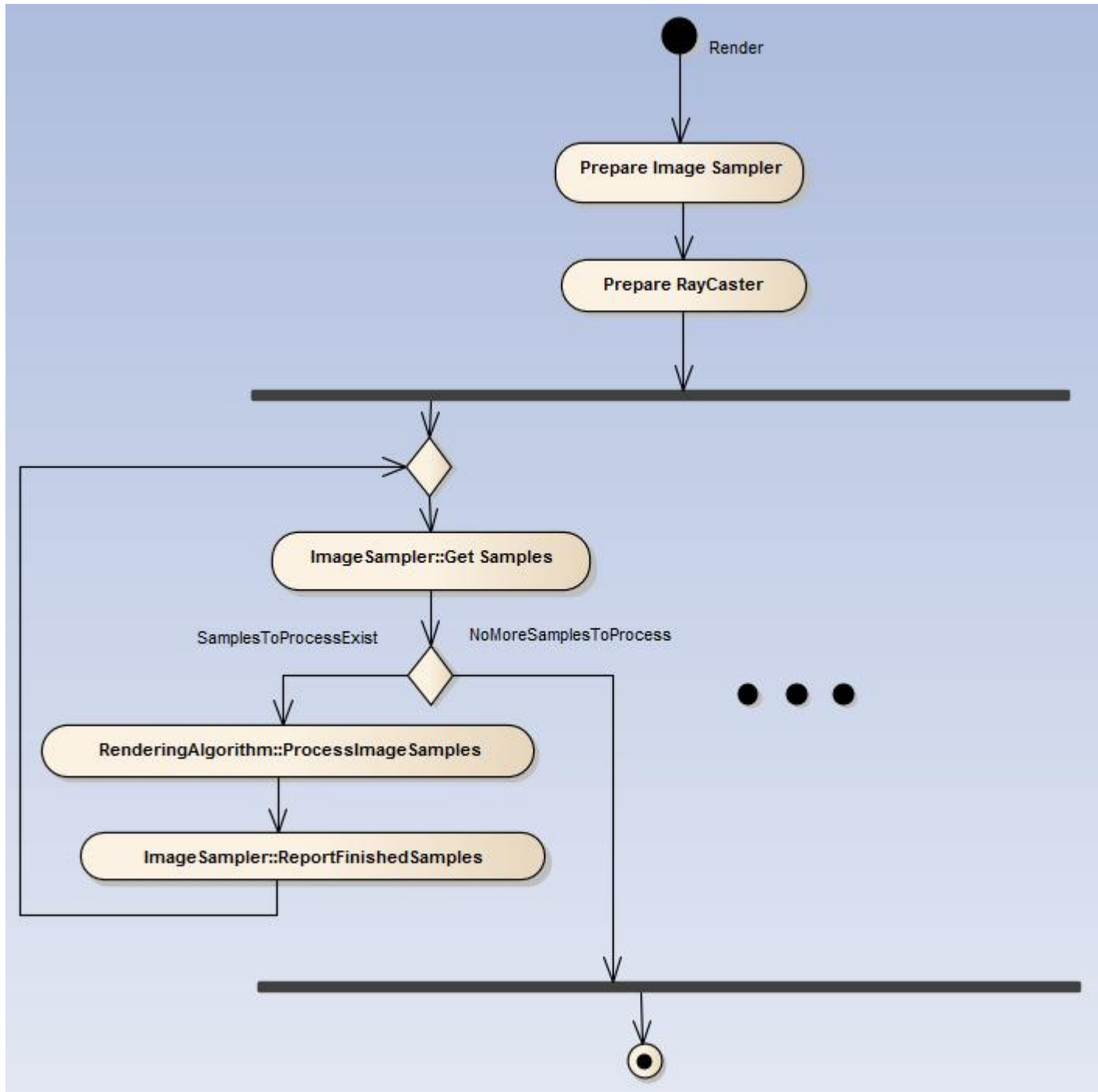
RayCasting



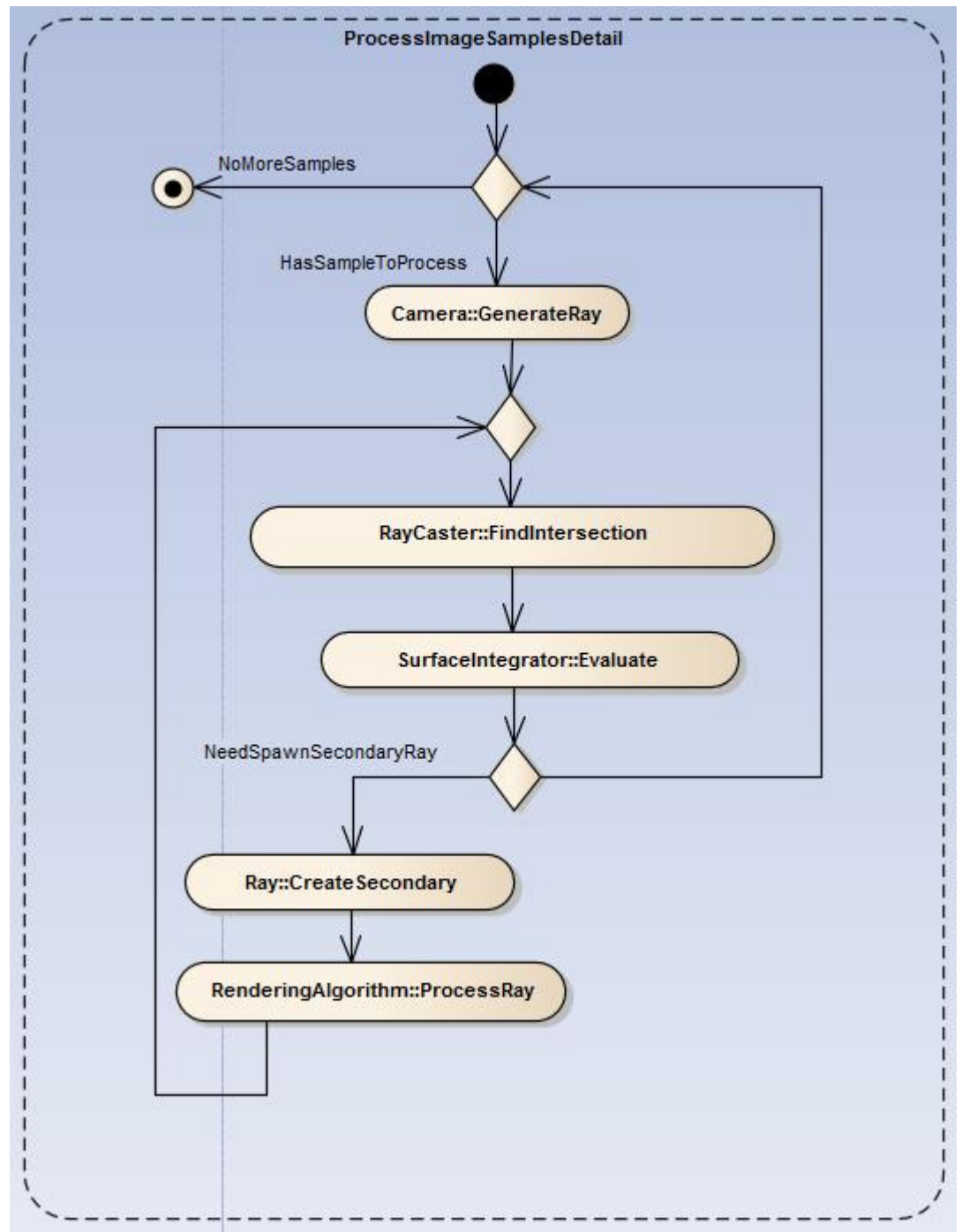
Shading



Dataflow



ProcessImage Samples Detail



Thank you for your attention