PxrDirt

PxrDirt renders local geometric occlusion. This is useful for applying shading effects to nooks and crevices.

> ⚠ A traditional ambient occlusion effect can be accomplished by setting the occluded color to black and unoccluded color to white.

Parameters

Occluded and Unoccluded

Resulting colors for occluded and unoccluded shading.

Occluded white, Unoccluded black
Occluded red, Unoccluded black
Occluded red, Unoccluded green

Num Samples

Controls the number of occlusion samples per camera hit point. More samples reduces can the noise at the cost of increased render time.

Num Samples = 1
Num Samples = 16

Sample Distribution

Possible values are *uniform* and *cosine* (Lambertian).

Distribution Uniform
Distribution Cosine

	Description
Uniform	Rays are not weighted in any particular direction in the hemisphere above the shading point.
Cosine	Cosine distribution is commonly used to render ambient occlusion.

Cosine Spread

Sample spread of rays when using *cosine* distribution. A value of 1.0 gives a perfect Lambertian distribution.

Cosine Spread = 0.5
Cosine Spread = 1.0
Cosine Spread = 2.0

Falloff

Falloff can be used to control the softness of the occlusion effect.

Falloff = 0.25
Falloff = 0.5

Max Distance

The max distance at which objects may occlude. Zero is infinite (all objects occlude).

Max Distance = 0.0 (infinite)
Max Distance = 2.0
Max Distance = 4.0

Direction

Trace rays in the direction of the surface normal (*outside*), inverse to the normal (*inside*), or in *both* directions.

Direction Outside
Direction Inside
Distribution Both

Bias Normal

Add a directional bias to the normal vector. Values must be specified in world space.

No Bias Normal
Bias Normal in Y
Bias Normal in X