Computer Graphics II
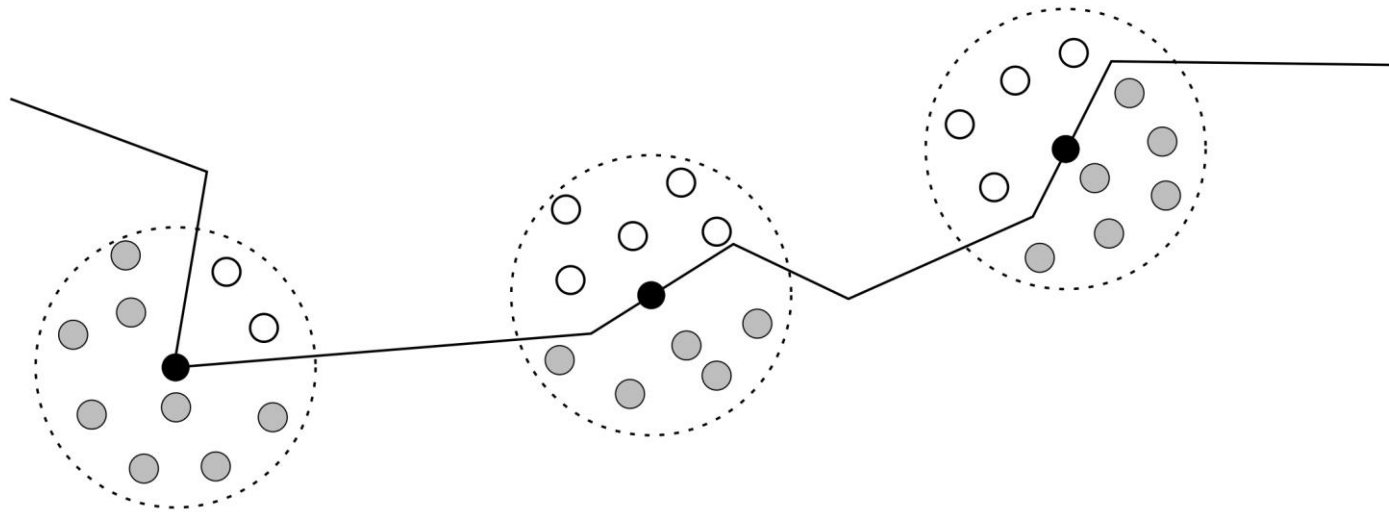## – SSAO (Questions)

Kai Lawonn

Possible Questions

Explain the idea of SSAO with a sketch.

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Explain the idea of SSAO with a sketch.

- Gray depth samples are inside geometry contribute to the total occlusion factor

- The more samples we find inside geometry, the less ambient lighting the fragm

Possible Questions

Complete the list of requirements for SSAO:

- A per-fragment position vector
-
- A per-fragment albedo color
-
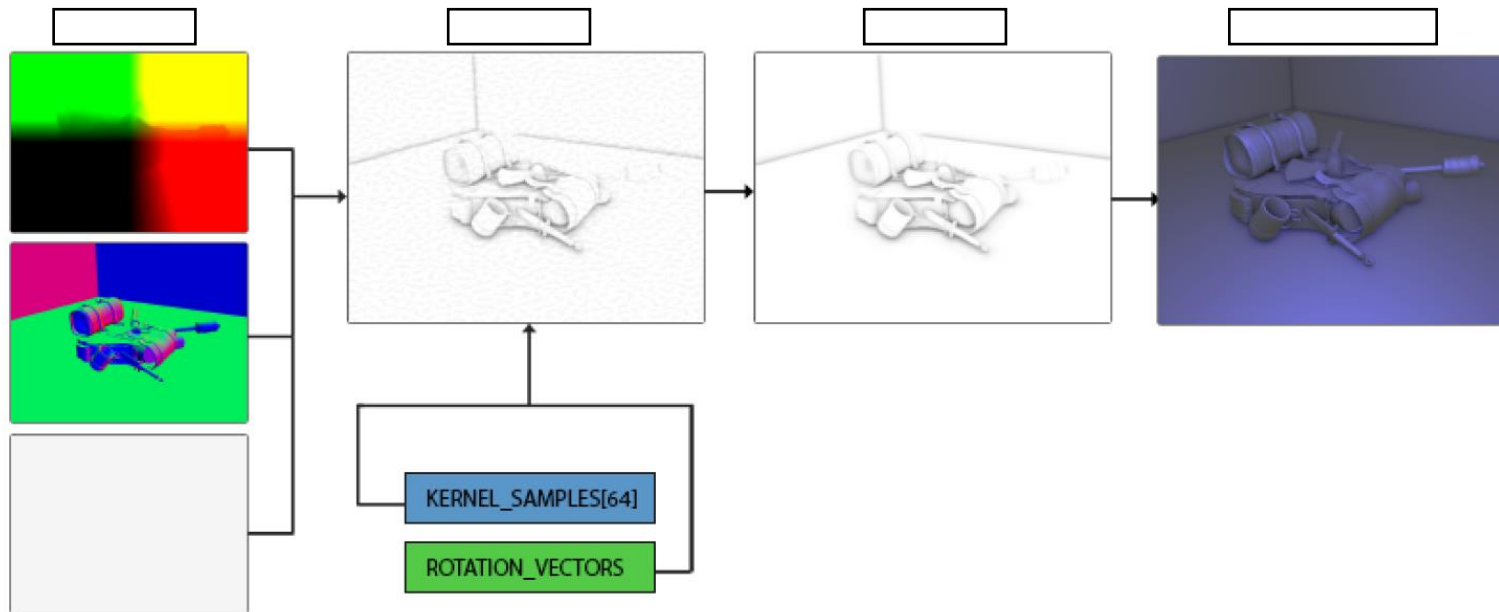- A per-fragment random rotation vector used to rotate the sample kernel

Possible Questions

Complete the list of requirements for SSAO:

- A per-fragment position vector
- A per-fragment normal vector
- A per-fragment albedo color
- A sample kernel
- A per-fragment random rotation vector used to rotate the sample kernel
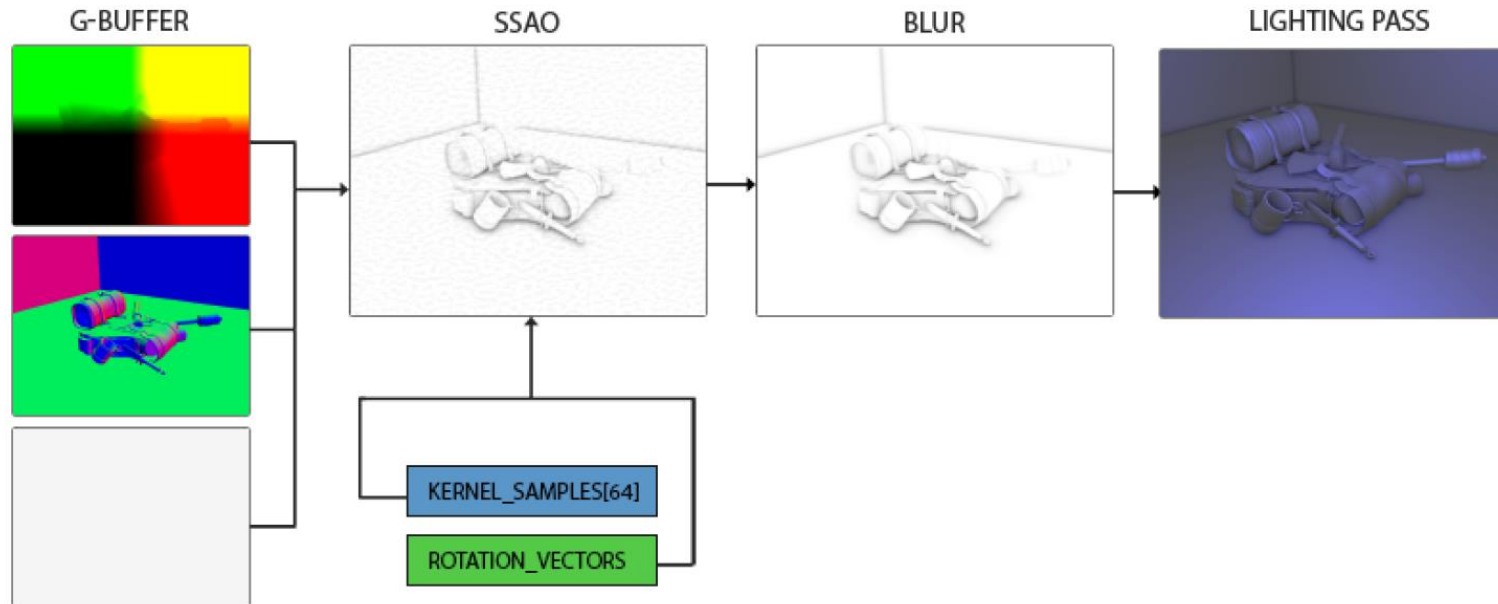
Possible Questions

Complete the steps:

KERNEL_SAMPLES[64]

ROTATION_VECTORS

Possible Questions

Complete the steps:

Possible Questions

Complete the ambient occlusion blur:

```glsl
#version 330 core
out float FragColor;

in vec2 TexCoords;

uniform sampler2D ssaoInput;

void main()
{
    vec2 texelSize = 1.0 / vec2(textureSize(ssaoInput, 0));
    float result = 0.0;
    for (int x = -2; x < 2; ++x)
    {
        for (int y = -2; y < 2; ++y)
        {
            vec2 offset = vec2(float(x), float(y)) * [        ];
            result += texture([        ], TexCoords + offset).r;
        }
    }
    FragColor = result [            ];
}
```

Possible Questions

Complete the ambient occlusion blur:

```glsl
#version 330 core
out float FragColor;

in vec2 TexCoords;

uniform sampler2D ssaoInput;

void main()
{
    vec2 texelSize = 1.0 / vec2(textureSize(ssaoInput, 0));
    float result = 0.0;
    for (int x = -2; x < 2; ++x)
    {
        for (int y = -2; y < 2; ++y)
        {
            vec2 offset = vec2(float(x), float(y)) * texelSize;
            result += texture(ssaoInput, TexCoords + offset).r;
        }
    }
    FragColor = result / (4.0 * 4.0);
}
```