Faculty of Science

Using textures with OpenGL 3.3

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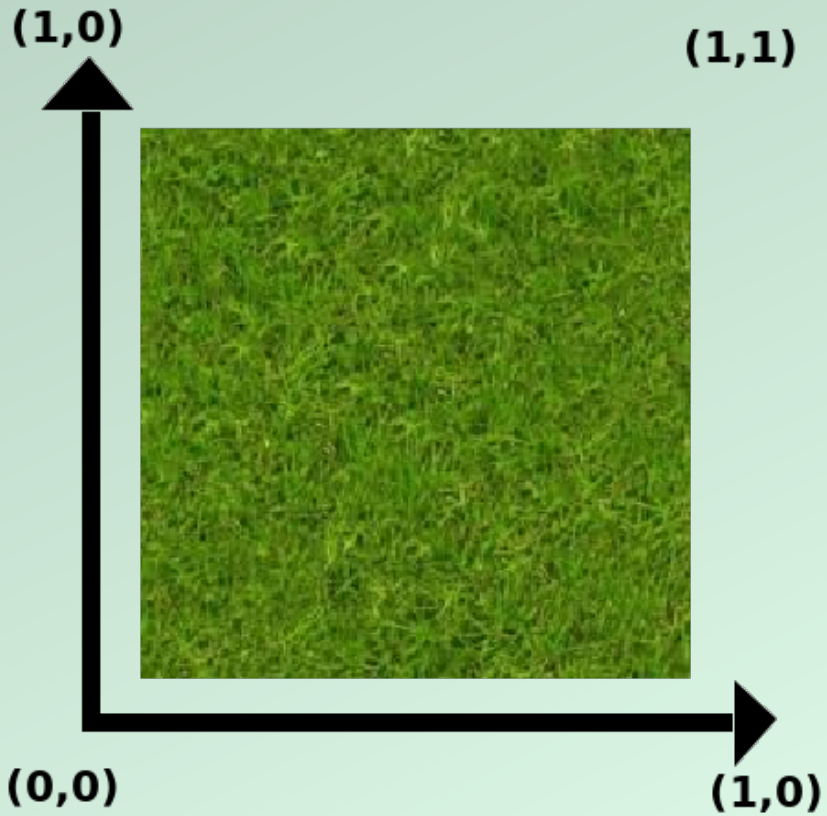
Overview

Texture Coordinates

We define a normalized coordinate system $T : \mathbb{R}^2$. A coordinate in a texture is called a *texel*, and is a discrete value. To get a texel given real coordinates (u, v) we can apply a filtering function $f(u, v) \ : \ \mathbb{R}^2 \mapsto \mathbb{N}^2$.



Texture Coordinates - Filtering

Figure: filtering

Define a function for interpolating between texture coordinates:

`GL_NEAREST` : choose nearest texel.

`GL_LINEAR` : linearly interpolate over neibhbouring texels.

Setting parameters - Wrapping

Setting parameters - Clamping

Setting parameters - Mipmapping

columns

Some item on column 1

Some item on column 2

Summary

Text 1

Text 2

Text 3

References

The geforce 6 series gpu architecture.
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Rendering pipeling overview.
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https://learnopengl.com/Getting-started/Textures.
Accessed: 2019-01-19.