

Echtzeitgrafik

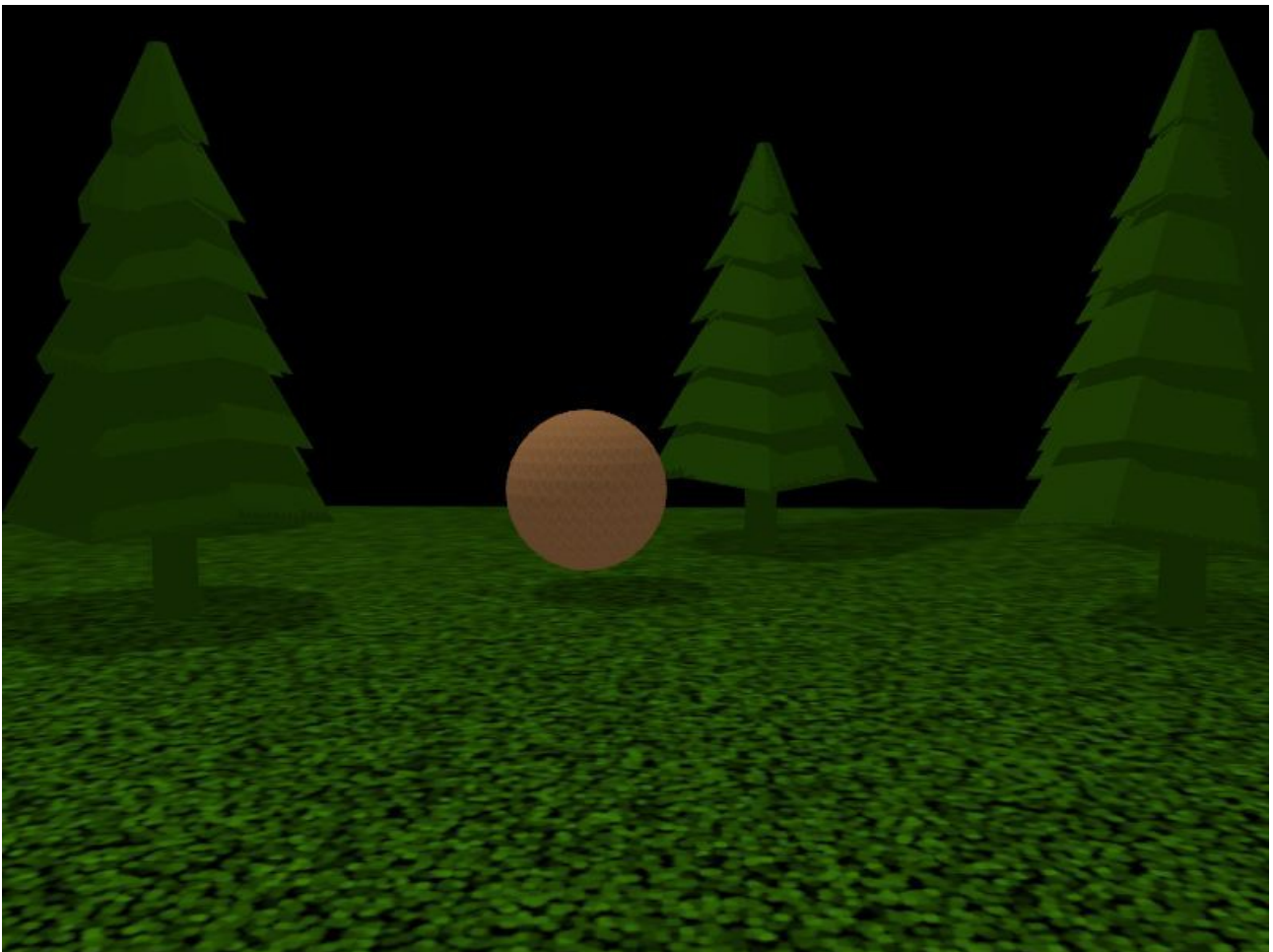
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Treatment:

Das Demo stellt eine einfache Outdoor-Szene dar, die eine Landschaft mit bewegten Objekten zeigt.

Effekte und Details:

Als Effekte sollen Level of Detail für das Terrain verwendet werden und der räumliche Eindruck durch die Verwendung von Variance Shadow Maps hergestellt werden.



Quellen:

Level of Detail:

GPU based dynamic geometry LOD

<http://rastergrid.com/blog/2010/10/gpu-based-dynamic-geometry-lod/>

Stitching and LoD Using Tessellation Shaders for Terrain Rendering

<http://in2gpu.com/2014/06/27/stitching-and-lod-using-tessellation-shaders-for-terrain-rendering/>

Fast Terrain Rendering Using Geometrical MipMapping

http://www.flipcode.com/archives/Fast_Terrain_Rendering_Using_Geometrical_MipMapping.shtml

Continuous Distance-Dependent Level of Detail for Rendering Heightmaps

<http://vertexasylum.com/2010/07/11/oh-no-another-terrain-rendering-paper/>

Terrain Rendering Using GPU-Based Geometry Clipmaps

http://http.developer.nvidia.com/GPUGems2/gpugems2_chapter02.html

Tessellation Shader Tutorial

<http://voxels.blogspot.it/2011/09/tesselation-shader-tutorial-with-source.html>

Basic Tessellation

<http://ogldev.atspace.co.uk/www/tutorial30/tutorial30.html>

Shadow Maps

Variance Shadow Maps (Donnelly, Lauritzen)

<http://www.punkuser.net/vsm/>

GPU Gems 3: Summed-Area Variance Shadow Maps

https://developer.nvidia.com/gpugems/GPUGems3/gpugems3_ch08.html

Variance Soft Shadow Mapping (Yang et al.)

http://web4.cs.ucl.ac.uk/staff/j.kautz/publications/VSSM_PG2010.pdf

Softshadow with GLUT, GLSL and VSM

<http://fabiansanglard.net/shadowmappingVSM/>

Soft Shadow Mapping

<http://codeflow.org/entries/2013/feb/15/soft-shadow-mapping/#antialiased-and-filtered-vsm>

Shadow Mapping

<http://www.opengl-tutorial.org/intermediate-tutorials/tutorial-16-shadow-mapping/>

Modelle:

<http://tf3dm.com/3d-model/low-poly-pine-tree-98845.html>

grass texture: http://farm5.static.flickr.com/4027/4532337301_53b9e99a72_o.jpg