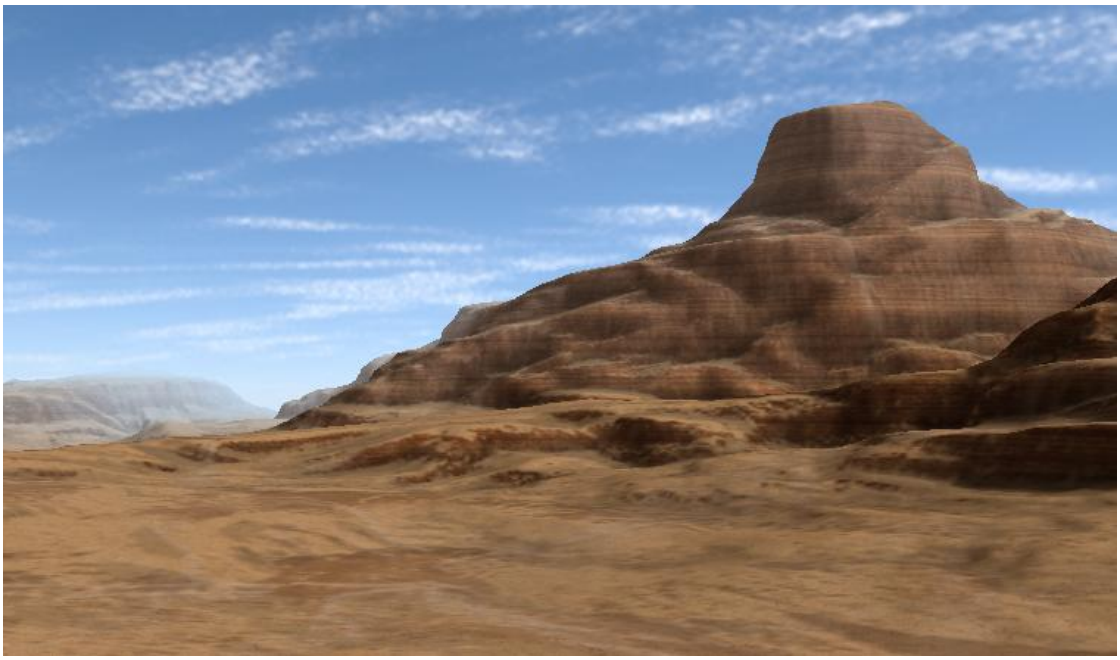

Canyon Landscape

User’s Manual

Serj’s projects 2014

Contents

Landscape features 3
Installation 4
Light mapping notes 4
Terrain LOD 4
Performance 5
Support 5

Landscape features

- 10x10 km real scale;
- Realtime shadows support;
- Unity light maps support;
- 2 LOD levels per terrain mesh;
- Integrated LOD scheduler script;
- Normal maps;
- Custom shader, new optimized shading technique;
- Highly optimized for mobiles. The scenery can run smoothly on the low-end hardware (Power VR SGX 543 GPU and higher).

Installation

1. Unpack and install all components of the asset.
2. Place “Canyon” prefab to your scene or open demoScene.

If you planning to deploy to mobile platforms, please uncheck “Use DX11” checkbox in player settings! It is mandatory! There is bug in lightmaps without this. All lightmaps will be heavily overlighted.

Light mapping notes

If you need to do your own lightmapping you can do it with no pain. Custom shader can handle Unity’s built-in light maps. You can use normal maps to improve lighting quality.

Steps to do lightmapping (all scripts run from *Component/Canyon/*):

1. Select all materials and set shaders with (UnityLM) suffix in shader’s caption;
2. Run “/Lighting/Assign Normals To Shader” script. This script will assign normal maps to shader;
3. Select parent landscape game object and bake lightmaps;
4. Run “/Lighting/Remove Normals From Shader” script. The normal maps needed only for light baking, not for realtime bumping. You can see the difference between baked lightmaps with normals and without. Removing normal map from shader will reduce an apk size. Normal maps textures will not included in the package.
5. Run “/Lighting/Assign Lightmaps To low LODs”. It’s needed to assign the same lightmap index to low and high mesh.
6. Test your lighting.

Terrain LOD

To setup LOD distances open *“TerrainLOD.cs”* script and adjust DistanceLOD1 variable.

Fog settings

Shader has its own property *_FogColor*. Do not touch it, it will be adjusted automatically depending of your global fog settings.

Performance

The high LOD shader is 3-pass, but don't worry about, it has the same performance compared to 1-pass shader. I done it 3-pass because it is impossible to have more than eight texture samplers per pass in OpenGL ES 2.0. Also, I done a much of test and got that three simplified passes in shader has the same performance as one-pass complex shader with a little overhead (about 1-2 fps).

The low LOD shader is a much simpler. It is one-pass.

The scenery was tested in iPad2 hardware. Tris at runtime is varying from 20k to 50k, draw calls not more than 16. It's most heavy conditions.

Support

If you need support or have questions feel free to contact me:
sergey.r2d2@gmail.com

Any customizations are possible, please contact.

Please, provide your invoice ID.