# Terrain Rendering User Guide

## Minimum Requirements

The major requirement to run all modes in this application is a fairly recent graphics card. I have not performed extensive testing but it seems that it at least requires a DirectX10 level GPU. I have also not tested it on ATI graphics cards so to be safe a Geforce 8 series GPU is required (it has been tested to work on a Geforce 8400m). The system needs to support OpenGL 2.0

If the graphics card is not up to the above specifications, it is likely that errors will occur. Switching to the simpler rendering methods (by pressing `/~, 1) should work correctly. If the system does not support OpenGL 2.0, shaders will be disabled. To use multitexturing (by pressing 2) the graphics card will need to support this also.

## Controls

W,A,S,D Move the camera

Arrow Keys Rotate the camera

Mouse Click and drag Rotate the camera

R,F Move up or down

C Toggle view frustrum culling on or off

Q Quit

`/~ Switch to Triangle Grid Rendering (to see individual rendered triangles)

1 Switch to a simple procedural texture rendering

2 Use procedural texture rendering using multitexturing to apply a detail map

3 Use GPU based shaders for texturing and lighting

**Shader Mode Specific Controls**

F1 Toggle Lighting on or off

F2 Toggle Slope Texturing on or off

F3 Toggle main textures on or off

F4 Toggle normal map texture on or off

F5 Toggle detail map on or off

F6 Toggle triplanar texturing on or off

F7 Toggle texture level of detail on or off

F8 Toggle texture slope correction on or off

T,G Move light source up or down (only applicable if lighting is on and not in

daily cycle lighting mode)

N Turn daily cycle lighting on or off

Y,H Move texture blending boundaries up or down

U,J Increase or decrease the slope cutoff for slope texturing

I,K Increase or decrease texture repitition

O,L Increase or decrease detail map repetition

P,; Increase or decrease slope cutoff for triplanar texturing

[,’Increase or decrease water speed