Advanced Computer Graphics
CS 563: Project Proposal

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Introduction

- Terrain Rendering
- Not using model
  - Too much complexity
- Using texture instead
  - Easy to rendering
  - More detail
  - Real time!!!
Background

- Lindstrom et al.
Technique Detail

- First splat is dirt.

- After the first splat, the grass layer is added on top
Technique Detail

- We need to render everything in same order
- Otherwise......

- The first should be opaque
- Otherwise....
Technique Detail

- If texture splatting has a downfall
  - Two neighboring splats come together
- Tiling four of the example splats from before
Implement Challenge

- Splatting with the fixed function pipeline
  - One texture unit for alphamap
  - One texture unit for texture
  - Correct blending states
- Splatting with a pixel shader
  - Using all channels available in a texture
  - Rendering four splats in a single pass
Milestones

- April 1\textsuperscript{st} week, do some sort of terrain representation, such as HeightMap, LightMap, etc.
- April 2\textsuperscript{nd} week, a set of texture to be rendered on the terrain
- April 3\textsuperscript{rd} week, make the alphamap for each texture
- April 4\textsuperscript{th} week, final done
Add-on

- If it is possible might add ocean rendering to make scene greater!!!
References

- Terrain Texture Compositing by Blending in the Frame-Buffer by Charles Bloom
- http://www.gamedev.net/page/resources/_/technical/game-programming/texture-splatting-in-direct3d-r2238