

Demonstration: Explosions!

CMPS 163 - Final Project



Anthony Medina
Jan Yu
Malcolm Riley

The Big Idea:



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The Big Idea:



It's a simple calculus.

What We'll Need

1. Saucer + House
2. Pew Pew
3. Kaboom

4. Oh yeah, and some shaders

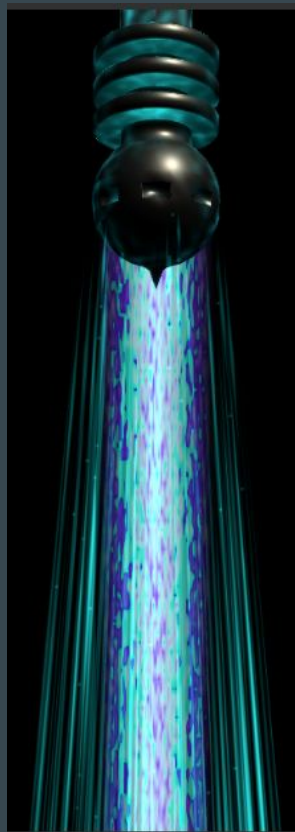
Saucer and House



The end result would be a flying saucer destroying a house.

To make this happen, we will be applying both vertex displacement to make the house fall apart and the explosion particle effect on the house for the juice.

Pew Pew



Emitter Effect:

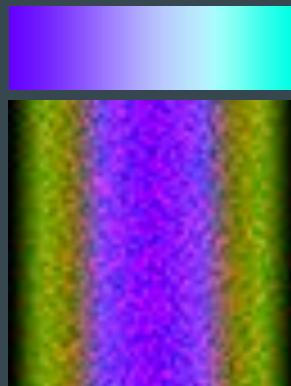
Technique: Rim Shader + Perlin Noise

- Unity Surface Shader used to permit lighting
- Emission is set to the dot product of the view and surface normals
- The Emission level is further modulated by a noise texture
- Noise texture is generated at runtime because why not

Beam Effect:

Technique: Particles + Plane with specialized shader

- Two input textures: “Gradient” and “Control”
- “Gradient” specifies color data
- “Control” texture uses RGB channels as input parameters
- These parameters are used to control color interpolation and alpha of the plane



Kaboom

A fiery explosion will result from the impact of the UFO's attack. The explosion will look realistic, not cartoony, and will cause damage onto the house. Some inspiration for the explosion will come from realistic explosions in movies and games. Will be using particle effects to achieve this effect.

