

CMPM 163 - Final

Deteriorated Science Lab with
toxic waste river

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Overview



Quick sketch of Scene

Plasma Orb
Pouring Pipe
Flowing Fluid
Ground Fog
Steam
God Rays
Rain
Overgrown Grass

Plasma Orb



Reference



What I made so far

Using a bunch of layers of Radial UV disks with UV distortion and Panning Textures to make the orb



Plasma Orb

Multiply Noise with Alpha
Thresholding applied to an
Ico-sphere for static
surrounding Orb



What I made so far



Static around orb



Lightning Bolts

Floor Fog

Used by having 'sheets' of transparent textures that layer on top of each other based on their RGB values on a noise texture, with dark areas being the 'floor' and white areas being the 'top' of the fog



Reference



What we got

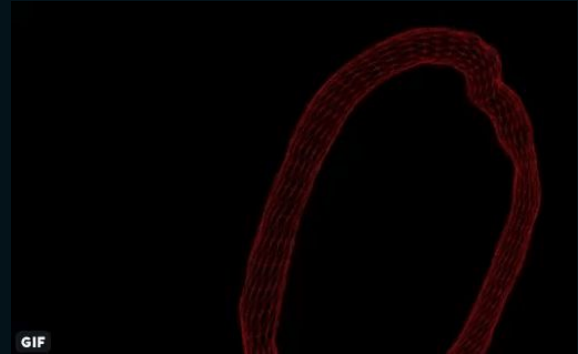
Pouring Pipe

-Vertex Deformation using Noise on spinning Torus, with world space radial gradient to gradually deform away from the nozzle

-Radial Pulse vertex displacement for ripple effect in pool below stream



Reference



Breakdown

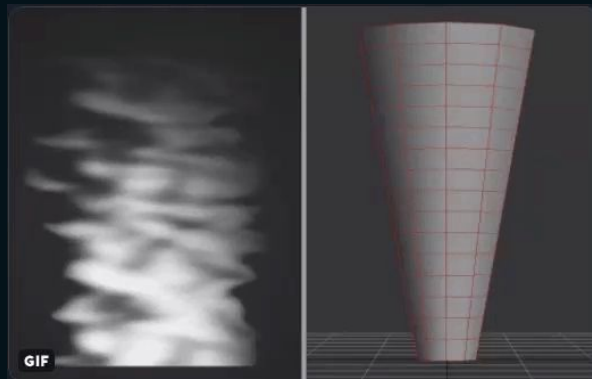
Steam

Panning Noise Texture on curved cone mesh. Vertex deformation on the mesh.

Directional Lighting needs more research, said to be using the dot product of a direction vector and a normal map



Reference



Breakdown

Windy Grass

- Panning noise texture that feeds into a vertex displacement on the vertex shader
- Possibly use another noise texture as a mask to mix in a color to simulate brown spots (dying grass)

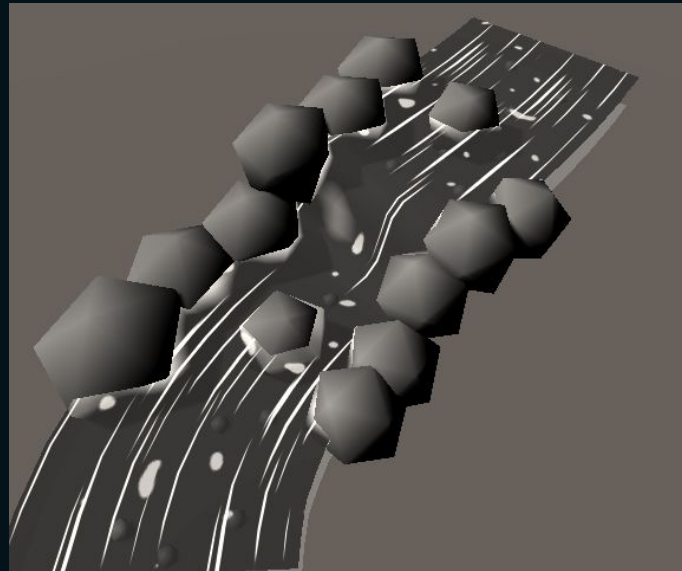


Reference

<https://jesshiderue4.wordpress.com/materials/stylized-wind-blown-grass/>

Flowing Fluid

The river will be done by panning the toxic waste texture. In order to get a smooth bend we will have to create a custom mesh in the proper shape. The bubbles will be done with a particle system. dongus



Reference

Smaller Effects



Rain: Simple Particle System



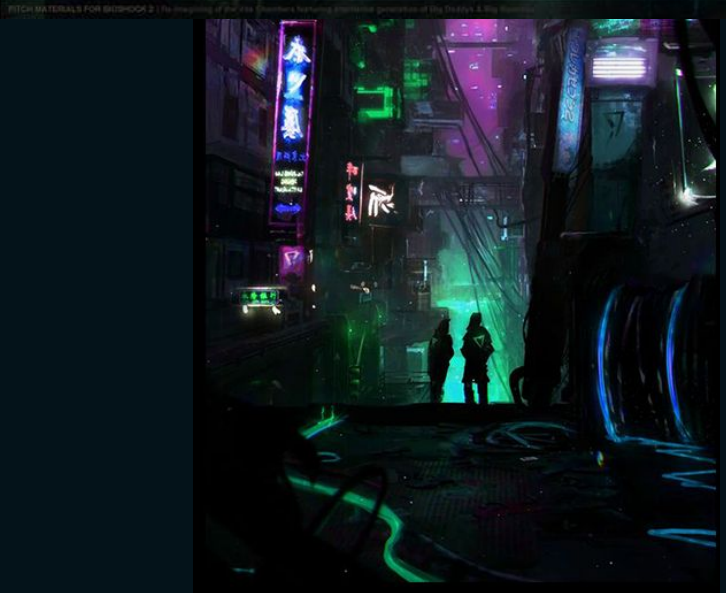
God Rays (ignore the crystal):
Panning Textures on Mesh



Toxic Bubbles: Spheres moving through Particle system along river's path



Opus 2 - vrtz



That's the Plan

Thank you for your time!