

CS 148 Final Project

Isabel Papadimitriou

isabelvp - SID: 06275345 - December 3, 2020

My project is an image of a rocky coastline, where we are placed behind the sea wall and can see two beach towels draped on it, as well as a cracked mirror that shows some island houses positioned behind us.

The assets I made myself are:

- I sculpted the rocky coastline from a plane
- The towels are made from scratch (from a solidified plane), using shaders and also a particle system of a million short hairs. I baked the shape of the towel mesh from a cloth simulation where I dropped it on the concrete wall.
- The mirror is made from scratch, and cracked using knife/rotations (and alternating mirror material with a greenish glass material to make it look more realistically cracked)
- I made the ocean using Blender's ocean modifier

The assets that I downloaded from the internet are:

- The concrete wall (and its texture) is from Quixel megascans
- The dust/grime on the mirror (this is screen mixed on top of my glossy mirror texture, after being colorramped to be less distracting) is from Poliigon (liquid stains generic <https://www.poliigon.com/texture/stains-liquid-generic-003>)
- The mirror is resting on an asphalt road (this does not play a huge part in in the image, given how the final camera angle ended up being). The asphalt road texture is from Poliigon

I used various blender tutorials to get acquainted with many of the features I used. The only tutorial that I followed closely to make one of the end products is this beach towel tutorial <https://www.youtube.com/watch?v=FSYLUL3Cf54>

Requirements

- The only geometry which I have downloaded is the concrete wall. All other objects are sculpted/simulated from scratch
- I UV unwrapped the sculpted rocky coastline that I made. I then added a procedural rock texture, using a voronoi noise node for the normal map.

- The other places where I have used non-shader nodes are:

In the two background image planes (horizon hills, and island village houses), I have used coloramp nodes so that only the light parts of the image are emissive, and then used multiply nodes to mix this with the diffuse colors of the image

For the mirror, I have added a screen mixing node to add the grime/dust onto the mirror, and also used a coloramp here to make the grime less uniformly grey and more contrastive.

For the towels, I use a Fresnel node

- I have used depth of field to put the towels into focus

In terms of technical contributions, the towels required cloth simulation. I took a plane, applied a solidify modifier and folded it manually along a diagonal (so it would fall more naturally as if someone threw the towel over the wall), placed it over the concrete wall and ran a cloth simulation (using mostly the denim presets, though I tweaked around a bit). The towels also have a hair particle system of a million short hairs each, to simulate terry cloth.