

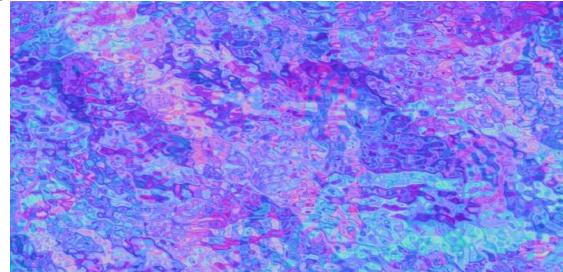
Report 2

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The landscape and noise map we are going to combine are:



landscape



noise map

We use every pixel on the noise map as a vector displacement. We use the color information of noise map as vector displacement as following the rule:

Red from (0-255) to receive X (-1.0, 1.0)

Green from (0-255) to receive X (-1.0, 1.0)

Blue from (0-255) to receive X (0.0, 1.0).

We use

`noisevec = normalize(texture(texture_foreground, pass_TexCoord).xy)`

to generate the displacement vector and scale it by

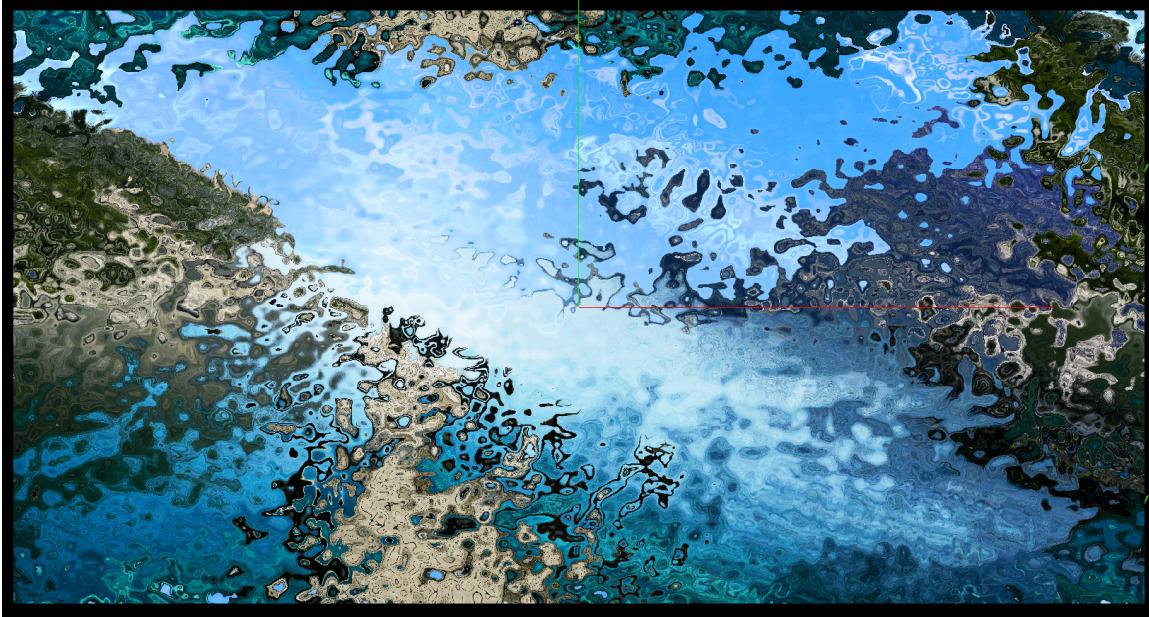
`noisevec = (noisevec * 2.0 - 1.0) * 0.02,`

since the coordinates of texture is in (0,1). By `(noisevec * 2.0 - 1.0)` it is scaled into (-1,1). Then we use a factor to control how large the displacement is.

So if we scale it as “`noisevec = (noisevec * 2.0 - 1.0) * 0.02`”, the result is:



If we scale it as “noisevec = (noisevec * 2.0 - 1.0) * 0.2”, the result is:



The larger value we use to scale the noisevec, we give the coordinates of texture a large displacement.