



The game “Vignettes” by Skeleton Business has a myriad of interesting visuals, but one that stuck me was this kaleidoscope effect that takes over the background once the player obtains “The Ring”. I enjoy it because the shape, velocity, and coloring of the patterning is controlled by the player rotating the ring, allowing the player to toy with the effect as they please. While the camera is stationary, the background mimics subtle optical illusions to create the appearance of changing depth. It seems this visual effect merely alters the color of the pixels, though this may be an entirely different texture from the normal background texture. I believe the “kaleidoscope” effect was made in a similar fashion to our “Mouse Input” shader from class, with the addition of clever geometric math done to effect the colors of one quadrant; this effect seems to be then mirrored up/down and left/right for a “trippier” and symmetric effect. Because it’s a relatively new game and the creators haven’t done any sort of public post-mortem, I couldn’t find any info

on how the team Skeleton Business created the effect. But I found an example of a very similar kaleidoscope effect built using GLSL:

```
GLSLPROGRAM
#ifdef VERTEX
varying vec2 position;
uniform float _Multiply;
uniform vec2 _Offset;
void main()
{
    gl_Position = gl_ModelViewProjectionMatrix * gl_Vertex;
    vec2 tex = vec2(gl_MultiTexCoord0);

    vec2 p = tex.xy - 0.5;
    float r = length(p);
    float a = atan(p.y, p.x);
    float sides = _Multiply;
    float tau = 2.0 * 3.1416;
    a = mod(a, tau/sides);
    a = abs(a - tau/sides/2.0);
    position = r * vec2(cos(a), sin(a)) + 0.5 + _Offset;
}
#endif
#ifdef FRAGMENT
varying vec2 position;
uniform sampler2D _MainTex;
void main(void)
{
    gl_FragColor = texture2D(_MainTex, position);
}
#endif
ENDGLSL
```

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edited Dec 11 '12 at 20:55

answered Dec 6 '12 at 11:39



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While this shader doesn't seem capable of the input-to-kaleidoscope effect, it would be interesting to mimic this in HLSL and combine it with our mouse input, and see if I can achieve something close to the effect in "Vignettes".