



Infinite Spheres Ray Marching

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Views: 451, Tags: raymarching, spheres

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Image

Shader Inputs

```
1 #define MAXSTEPS 100
2 #define MINDIST .01
3
4 float DistanceEstimator(vec3 pos) {
5
6     // translate
7     pos = pos + 1. * vec3(0,-0.5*iTime,iTime);
8
9     float d1 = distance(mod(pos, 2.), vec3(1,1,1))-.54321;
10
11     return d1;
12 }
13
14 float trace(vec3 from, vec3 direction) {
15     float totalDistance = 0.0;
16     int steps;
17     for (steps=0; steps < MAXSTEPS; steps++) {
18         vec3 p = from + totalDistance * direction;
19         float dist = DistanceEstimator(p);
20         totalDistance += dist;
21         if (dist < MINDIST) break;
22     }
23     return 1.0-float(steps)/float(MAXSTEPS);
24 }
25
26 void mainImage( out vec4 fragColor, in vec2 fragCoord ) {
27
28     vec2 uv = (fragCoord - 0.5*iResolution.xy) / iResolution.y;
29
30     vec3 camPos = vec3(0, 2, 0);
31     vec3 camViewDir = normalize(vec3(uv.xy, 1));
32
33     float dist = trace(camPos, camViewDir);
34
35     fragColor = vec4(dist, dist, dist, 1.0);
36 }
37
```

Compiled in 0.0 secs

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`mod(position*(1,2,1), 2)`

