



What are they?

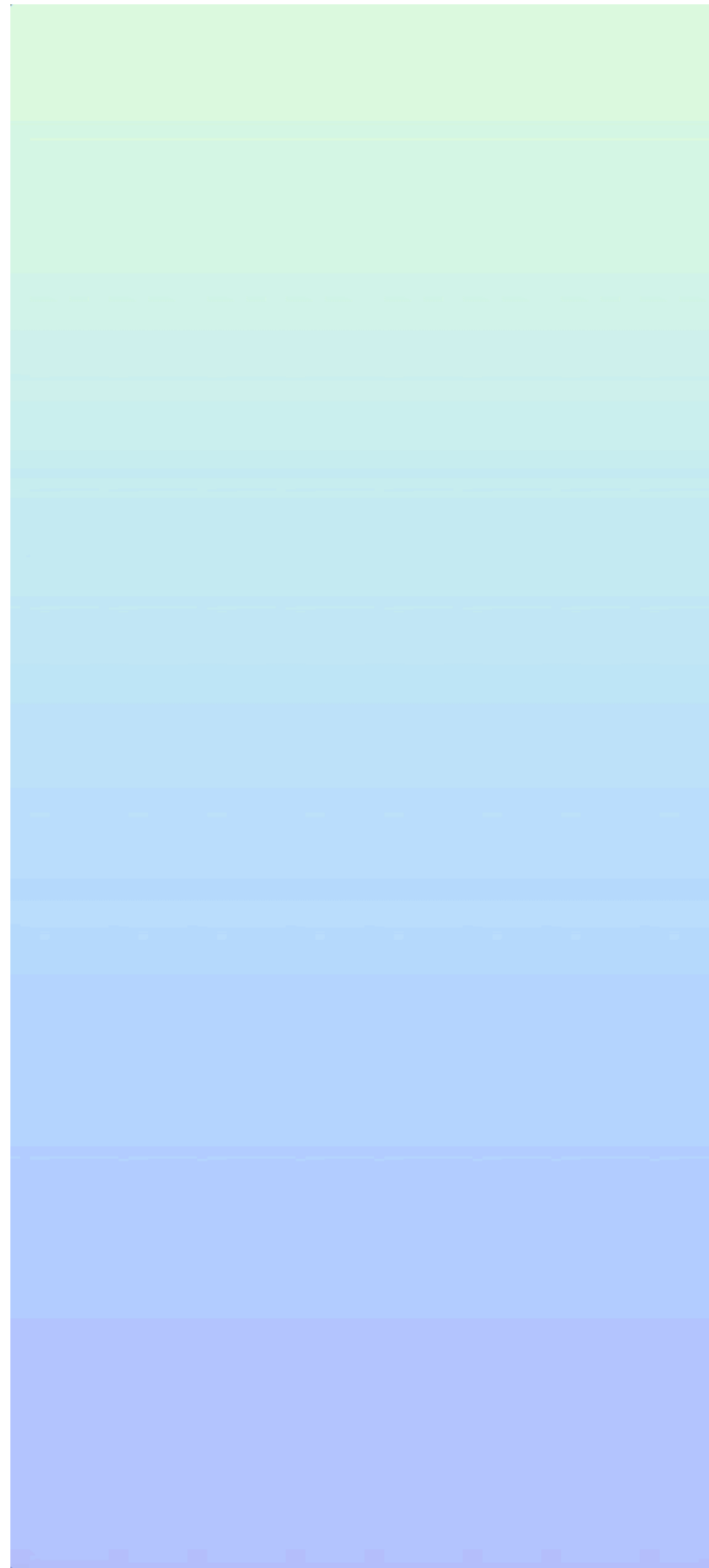
- programs mapping a pixel's position to a color
- they run per pixel on the screen, in parallel
- they only have info about "the current" pixel and its position
- cant access neighboring pixels



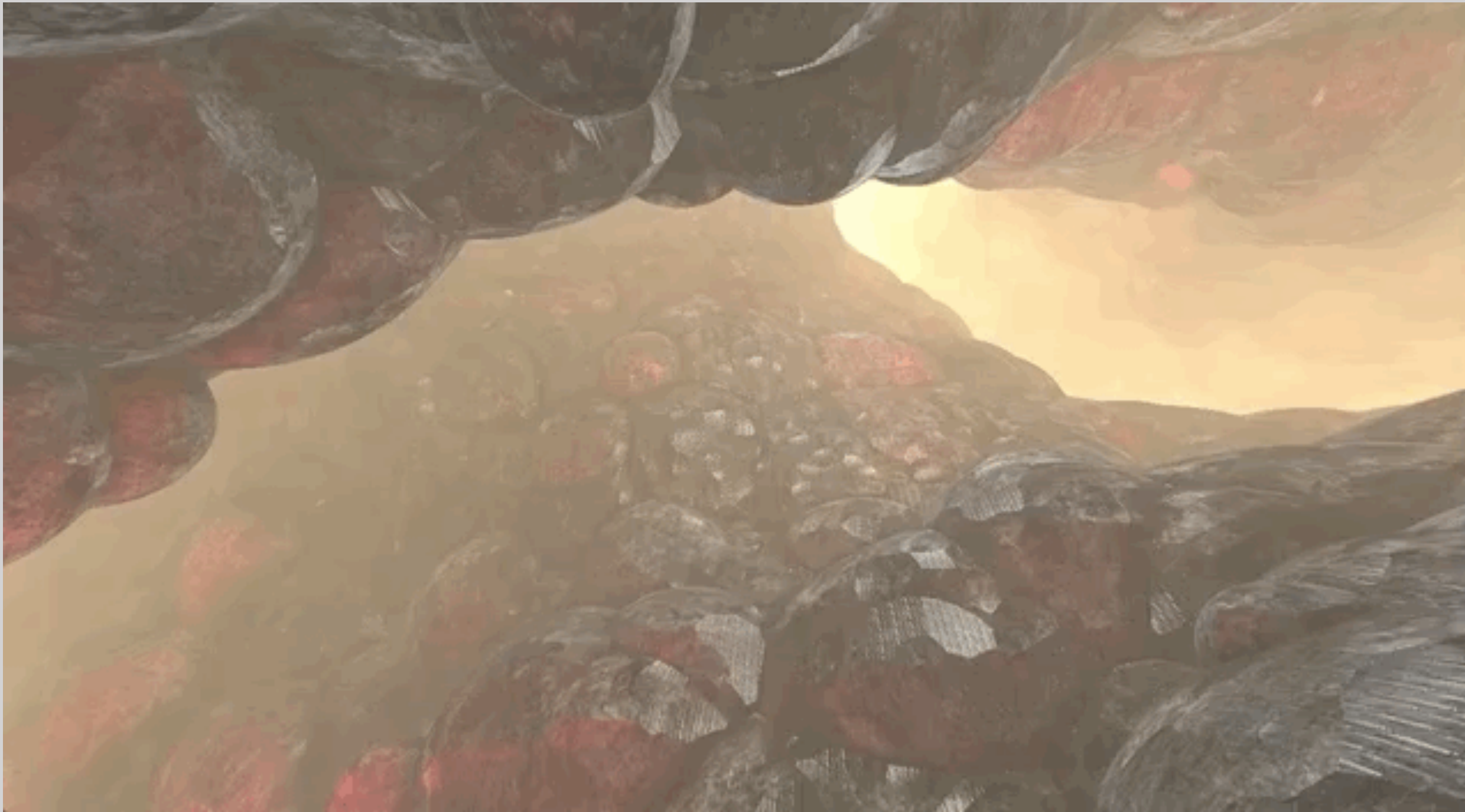




# What are they?



- programs mapping a pixel's position to a color
- they run per pixel on the screen, in parallel
- they only have info about “the current” pixel and its position
- cant access neighboring pixels



3D Cellular Tiling Created by **Shane** in 2016-04-17

```
4 Shader Inputs
uniform vec3    iResolution;    // viewport resolution (in pixels)
uniform float   iTime;          // shader playback time (in seconds)
uniform float   iTimeDelta;     // render time (in seconds)
uniform int     iFrame;         // shader playback frame
uniform float   iChannelTime[4]; // channel playback time (in seconds)
uniform vec3    iChannelResolution[4]; // channel resolution (in pixels)
uniform vec4    iMouse;         // mouse pixel coords. xy: current (if MLB down), zw: click
uniform samplerXX iChannel0..3; // input channel. XX = 2D/Cube
uniform vec4    iDate;          // (year, month, day, time in seconds)
uniform float   iSampleRate;    // sound sample rate (i.e., 44100)

586     float tanHi = abs(mod(per*.5 + t + iTime, per) - per*.5);
587     vec3 tanHiCol = vec3(0, .2, 1)*(1./tanHi*.2);
588     sceneCol += tanHiCol;
589     */
590
591
592     //vec3 refCol = vec3(.5, .7, 1)*smoothstep(.2, 1., noise3D((sp + ref*2.)*2.)*.66 + nois
593     //sceneCol += refCol*.5;
594
595
596     // Shading.
597     sceneCol *= atten*shading*ao;
598
599     //sceneCol = vec3(ao);
600
601
602 }
603
604 // Blend the scene and the background with some very basic, 4-layered fog.
605 float mist = getMist(camPos, rd, light_pos, t);
606 vec3 sky = vec3(2.5, 1.75, .875)* mix(1., .72, mist)*(rd.y*.25 + 1.);
607 sceneCol = mix(sceneCol, sky, min(pow(t, 1.5)*.25/FAR, 1.));
608
609 // Clamp, perform rough gamma correction, then present the pixel to the screen.
610 fragColor = vec4(sqrt(clamp(sceneCol, 0., 1.)), 1.0);
611
612 }
```