ART DIRECTED SPHERES REFLECTION

Process:

Grid, paint density attribute

Scatter points, then randomize pscale. Relax based on pscale so we don’t get overlapping points

Use VOP to modify y coordinate of each sphere

Randomize color

Copy sphere to points generated by above stream

@ accesses an attribute passed down the geometry stream

$FF refers to the frame number (to animate wrt time)

* The difference between FF and F is that FF is floating point frame number, F only refers to the integer count of the frames

**MMB onto a VOP attribute > Promote parameter** allows the parameter to be used one level above the node network

Why the VOP node?

We originally intended to offset the mountain texture to animate the up and down motion of the spheres. But this took too long to calculate in real time.

**Why?** This is because the scatter node and relax node had to recalculate every time the geometry of the mesh was deformed due to the mountain texture. It took too long to “cook” in between each frame.

To be more efficient, we could instead plug in our custom VOP node by multiplying the normal vectors of the grid by the position of each point (a 3D vector input, which outputs a scalar via simplex noise) created by the scatter node. We then add this product to the position of each point.

This creates motion for each point along the y direction, because the grid was aligned in the XZ plane, and as such, the normals of the plane all strictly had a y component.

Now, the scattering and relaxation step happens only once, as we no longer deform the geometry at each frame.