Project 3 : Procedural Animation
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Houdini Version : 20.5.278

Important Statistics:

Average Render Time : 2.5 mins / frame
Resolution : 1920x1080
Render Engine : Karma XPU
Path Traced Samples : 625
Number of Lights in Scene : Two (Area Light and Dome Light)

This Houdini setup creates a procedural dandelion system, combining seed buds and stems, and scattering them across a terrain. The workflow begins by generating a base seed shape using a sphere, which is transformed multiple times and grouped for organization. This seed geometry is marked with a group node and exported via a null (OUT_Seedbud). Simultaneously, a curved stem is created by bending a line and sweeping it along a circular profile, with orientation maintained using orientalongcurve . Color and attribute nodes are used to stylize or mark the geometry, and unnecessary components are deleted to keep the geometry clean.

The stem and seed geometries are merged and prepared for placement using a copypoints node. Separately, a terrain or base surface is imported and processed using a scatter node to generate points where the dandelions will be placed. These scattered points are looped through using a foreach block, where each iteration places a copy of the complete dandelion structure onto the terrain. A transform node at the end adjusts the final orientation or scale of each copy. The network concludes with organized null outputs, such as OUT_Dandelion making the system modular and ready for export or rendering.