Gen\_tree

The inputs are tree canopy diameter, the triangle vertex count, and the vertically measured gap fraction. It can generate a unique tree (.rad and .obj output) in about 2-3 minutes with 30,000-40,000 triangles. Different canopy types and shapes will be added to the tool, and the tool will eventually be open sourced.

**gen\_tree -g 0.24 -w 3.2 -m tree\_mat -o Mandana\_Test**  
status: 20000 points generated on a hemisphere in 0.206 seconds.  
status: 39711 mesh faces created through Delaunay triangulation in 137.379 seconds.  
status: 20838 of 39711 original faces kept in 15.421 seconds.  
status: Mesh written to Mandana\_Test.rad in 0.252 seconds.  
status: Mandana\_Test.rad converted to Mandana\_Test.obj in 0.155 seconds.

-g, Vertically Measured Gap Fraction

-w, Width of Tree Canopy in Meters

-m, Radiance Material Modifier (used only in the .rad file output. If you will load the OBJ into Rhino, just use any material name)

-o, Prefix of file names output

There is an optional parameter,

-v, Vertex count of trees (minimum 5000)