

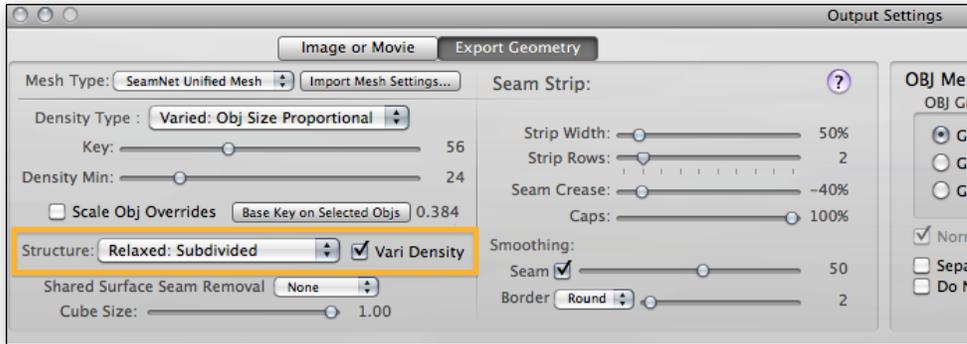
New Unified SeamNet Mesh Export Options GroBoto Release 10.10.11 (v3.1.4 OSX - v3.0.7 Windows)

This release offers new unified mesh generation options, both to improve mesh quality and reduce polygon count. The unified mesh output dialog box — which is found...

OS X - Main Menu>Window>Output Panel Mesh
Windows - Main Menu>File>Export)

...now has two new items:

- **Mesh Structure Popup Menu.**
- **Variable Density Checkbox.**



The PopUp has Four Options: (see examples page 2)

1. Rigid - The original v3 unified mesh structure.

Vertices of this mesh type have fixed predefined positions on the surface of each primitive object - other than very close to intersection seams, where vertices are arranged in rows parallel to the seam.

2. Relaxed - Mesh Relaxation near Seams.

This option allows the vertices near the seams to move along the surface to generate a mesh with more uniform quads.

3. Relaxed: Extra Seam Row - Mesh Relaxation near Seams, Extra Quad Row

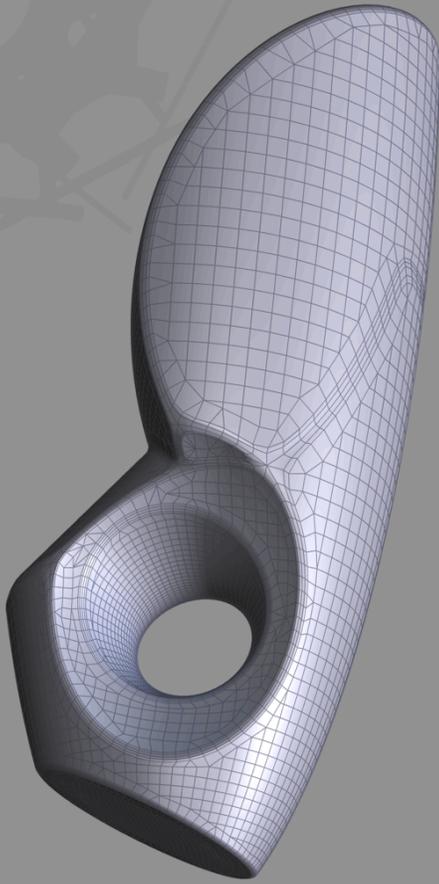
This Option creates an even more relaxed and uniform mesh (at the price of inserting one extra row of relaxed vertices along the seam). It is very useful in tight spots and narrow crevices between the seams, where both Rigid and simple Relaxed options tend to produce badly shaped quads due to lack of available vertices.

4. Relaxed: Subdivision - One level of Global Subdivision

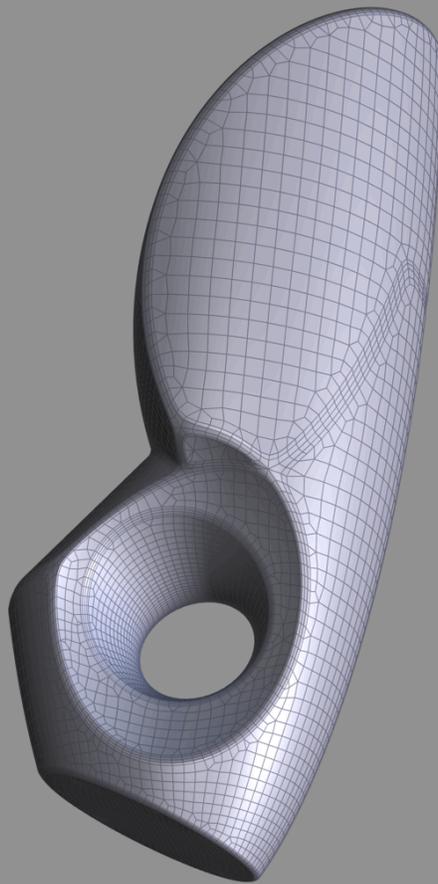
This is the most expensive as far as the number of added vertices, but it is the only one that produces quad-only mesh. All other options produce meshes with some triangles, although the number of triangles is typically small.

Variable Density Checkbox - Adaptive Mesh Density

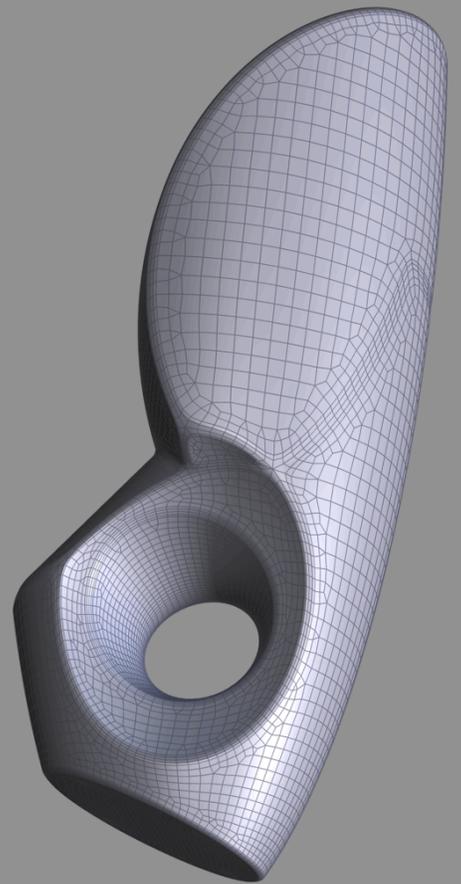
With any of these options (except Rigid) you can also check the Variable Density checkbox. This creates larger quads on the parts of the surface farther away from the seams, by combining 2x2 sets of original density quads into larger quads. This can reduce the total polygon count considerably, especially when using higher density. These larger quads are never generated near intersection seams, so they do not create any mesh quality problems in tight spaces between the seams and near corners. However, if you plan to further manipulate the mesh after exporting it from GroBoto, reducing mesh density on some parts of the surface with this option might reveal it's polygonated nature when using certain types of tools.



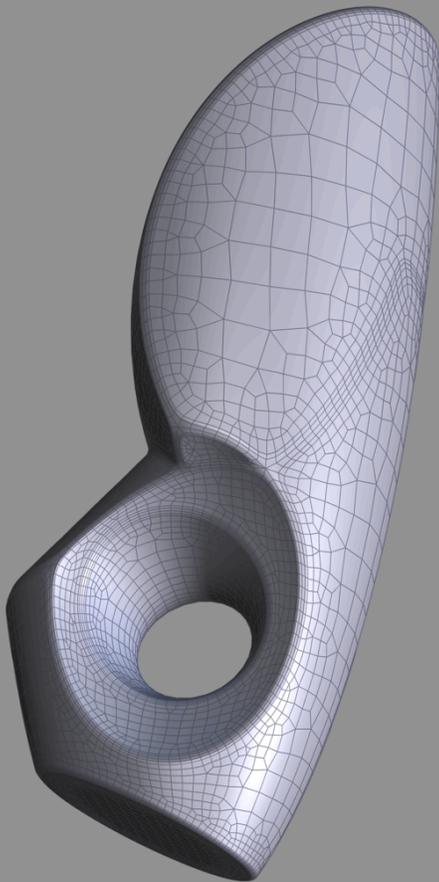
1. Rigid



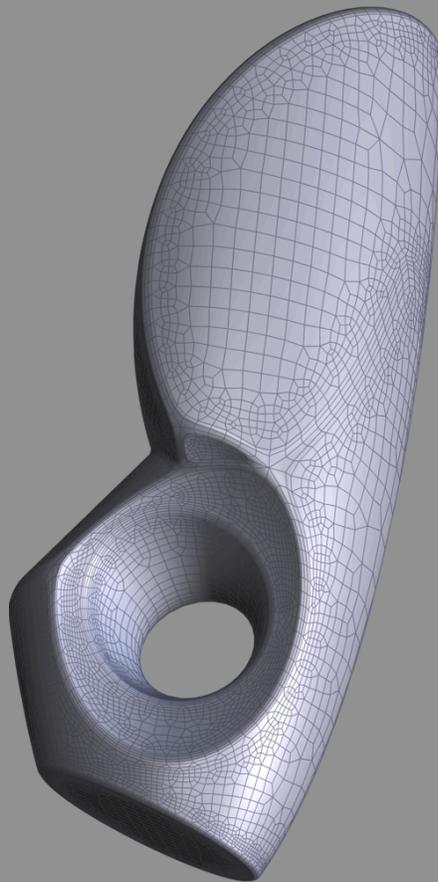
2. Relaxed



3. Relaxed - Extra Row



3. Relaxed - Extra Row - Variable Density



4. Subdivided-Variable Density