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Decimate Modifier

The *Decimate* modifier allows you to reduce the vertex/face count of a mesh with minimal shape changes.

This is not usually used on meshes which have been created by modeling carefully and economically (where all vertices and faces are necessary to correctly define the shape). But if the mesh is the result of complex modeling, sculpting and/or applied [Subdivision Surface](#)/ [Multiresolution](#) modifiers, the *Decimate* one can be used to reduce the polygon count for a performance increase, or simply remove unnecessary vertices and edges.

Unlike the majority of existing modifiers, this one does not allow you to visualize your changes in Edit Mode.

The modifier displays the number of remaining faces as a result of the *Decimate* modifier.

Options

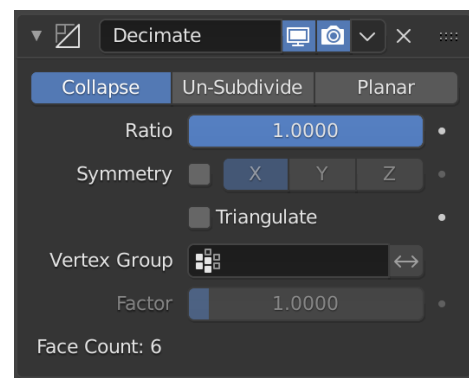
Collapse

Merges vertices together progressively, taking the shape of the mesh into account.

Ratio

The ratio of faces to keep after decimation.

- On 1.0: the mesh is unchanged.
- On 0.5: edges have been collapsed such that half the number of faces remain (see note below).
- On 0.0: all faces have been removed.



The Decimate modifier in Collapse mode.

Note

Although the *Ratio* is directly proportional to the number of remaining faces, triangles are used when calculating the ratio.

This means that if your mesh contains quads or other polygons, the number of remaining faces will be larger than expected, because those will remain unchanged if their edges are not collapsed.

This is only true if the *Triangulate* option is disabled.

Symmetry

Maintains symmetry on a single axis.

Triangulate

Keeps any resulting triangulated geometry from the decimation process.

Vertex Group

A vertex group that controls what parts of the mesh are decimated.

Factor

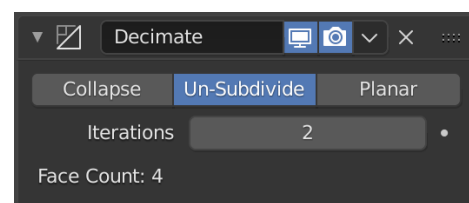
The amount of influence the *Vertex Group* has on the decimation.

Un-Subdivide

It can be thought of as the reverse of subdivide. It attempts to remove edges that were the result of a subdivide operation. It is intended for meshes with a mainly grid-based topology (without giving uneven geometry). If additional editing has been done after the subdivide operation, the results may be unexpected.

Iterations

The number of times to perform the un-subdivide operation. Two iterations is the same as



The Decimate modifier in Un-Subdivide mode.

one subdivide operation, so you will usually want to use even numbers.

The Decimate modifier in Un-Subdivide mode.

Planar

It reduces details on forms comprised of mainly flat surfaces.

Angle Limit

Dissolve geometry which form angles (between surfaces) higher than this setting.

Delimit

Prevent dissolving geometry in certain places.

Normal

Does not dissolve edges on the borders of areas where the face normals are reversed.

Material

Does not dissolve edges on the borders of where different materials are assigned.

Seam

Does not dissolve edges marked as seams.

Sharp

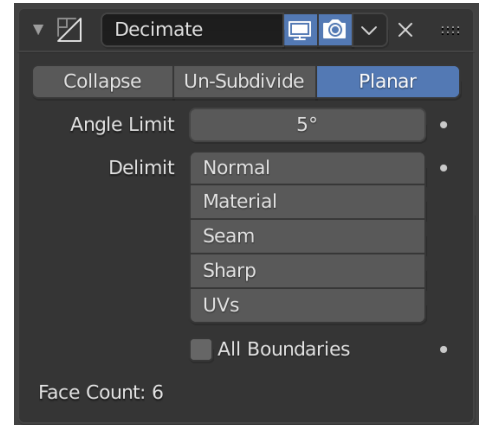
Does not dissolve edges marked as sharp.

UVs

Does not dissolve edges that are part of a UV map.

All Boundaries

When enabled, all vertices along the boundaries of faces are dissolved. This can give better results when using a high *Angle Limit*.



The Decimate modifier in Planar mode.

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