

5.8.4.5 Modeling - Modifiers - 04 Generate - 05 Decimate Modifier

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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 subsurf/multires modifiers, the Decimate modifier can be used to reduce the polygon count for a performance increase, or simply remove unnecessary vertices and edges.

The Decimate modifier is a quick and easy way of reducing the polygon count of a mesh non-destructively. This modifier demonstrates the advantages of a mesh modifier system because it shows how an operation which is normally permanent and destroys original mesh data, can be done interactively and safely using a modifier.

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

## Options



decimate modifier

### Decimate Type Collapse

Merge 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.

#### 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, the number of remaining faces will be larger than expected, because quads remain unchanged if their edges are not collapsed.

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

## Un-Subdivide

Can be thought of as the reverse of subdivide. Attempts to remove edges that were the result of a subdivide operation. 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 one subdivide operation, so you will usually want to use even numbers.

## Planar

Dissolve geometry on the same plane.

### Angle Limit

Dissolve geometry which form angles lower than this setting.

### All Boundaries

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

### 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.

## Face Count

This field shows the number of remaining faces as a result of applying the Decimate modifier.

## Known Limitations

### N-Gons

N-Gons are currently not supported when collapsing edges, the operation will still succeed, but edges attached aren't considered for reduction.