Smooth Corrective Modifier

The *Smooth Corrective* modifier is used to reduce highly distorted areas of a mesh by smoothing the deformations.

This is typically useful *after* an Armature modifier, where distortion around joints may be hard to avoid, even with careful weight painting.

To use this modifier effectively, it is important to understand the basics of how it works.

Rest State

Used as a reference to detect highly distorted areas. The original vertex locations are used by default.

Smoothing

Many options for this modifier relate to smoothing which is used internally to correct the distorted regions.

Options

Factor

The factor to control the smoothing amount. Higher values will increase the effect.

Values outside expected range (above 1.0 or below 0.0) will distort the mesh.

Repeat

The number of smoothing iterations, equivalent to executing the *Smooth* tool multiple times.

Scale

Additional scaling factor to increase the size of the mesh. This is useful because sometimes the Smooth Corrective modifier will introduce volume loss, especially when used with a rig.

Smooth Type

Select the smoothing method used.

The Smooth Corrective modifier.

Simple

This simply relaxes vertices to their connected edges.

Length Weight

Uses a method of relaxing that weights by the distance of surrounding vertices. This option can give higher quality smoothing in some cases, by better preserving the shape of the original form.

Vertex Group

If set, restrict the effect to the only vertices in that vertex group. This allows for selective, real-time smoothing, by painting vertex weights.

Only Smooth

This option is included to preview the smoothing used, before correction is applied.

Pin Boundaries

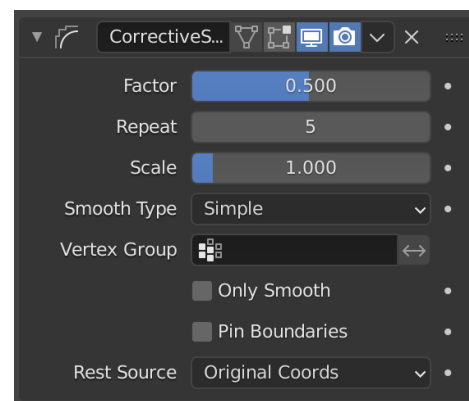Prevent boundary vertices from smoothing.

Rest Source

Select the source for reference vertex positions that defines the non-deformed state.

Original Coordinates

Use the original input vertex positions. This relies on the original mesh having the same number of vertices as the input, modified mesh.

Bind Coordinates

Optionally you may bind the modifier to a specific state. This is required when there are constructive modifiers such as *Subdivision Surface* or *Mirror* in the stack before this modifier.
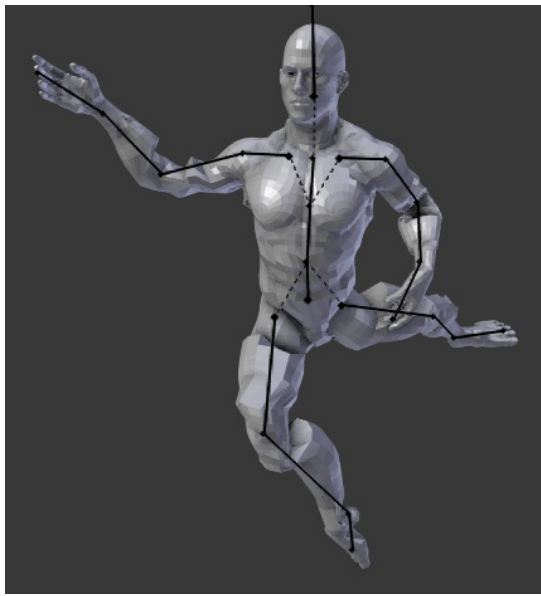
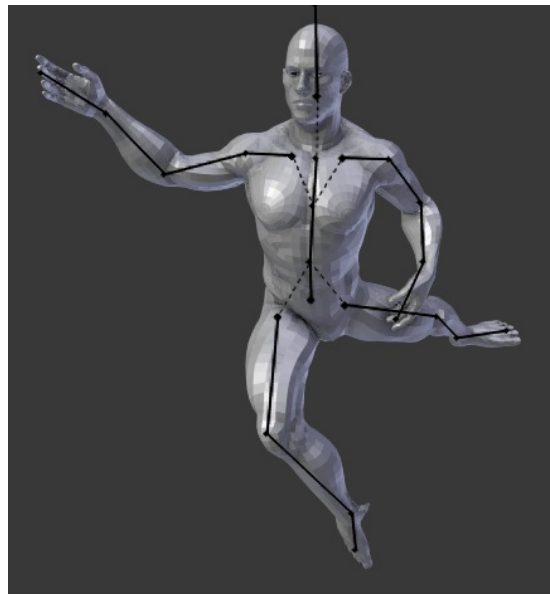## Example

An example of a rig using bone envelopes and not weight painting.

Armature only.

Armature and Corrective Smooth.