7.1.8 Editors - 3D Viewport - Header - Object menu

Table of content

Detailed Table of content....3
Object menu....11
Transform....11
To Sphere....11
Shear....12
Bend....13
Push/Pull....13
Move Texture Space....14
Scale Texture Space....15
Align to Transform Orientation....16
Randomize Transform....17
Align Objects....18
Set Origin....18
Geometry to Origin....18
Origin to Geometry....18
Origin to 3D cursor....18
Origin to Center of Mass(Surface)....18
Origin to Center of Mass(Volume)....18
Mirror....19
Interactive Mirror....19
X Y Z Global....19
X Y Z Local....19
Clear....20
Clear....20
Apply....21
Apply....21
Visual Transform....22
Make Instances Real....22
Parent Inverse....22
Snap....23
Selection to Cursor....23
Selection to Cursor(Keep Offset)....23
Selection to Active....23
Selection to Grid....23
Cursor to Selected....23
Cursor to World Origin....23
Cursor to Active....23
Cursor to Grid....23
From Duplicate ... to Paste....24
Duplicate Objects....24
Duplicate Linked....25
Join....26
Delete....27
Delete Global....27
Copy....27
Paste....27
Asset....27

Mark as asset....27
Clear Asset....27
Clear Asset(Set Fake User)....28
Library Override....28
Make....28
Reset....28
Clear....28
Relations....29
Make Instance Face....29
Make Local....29
Make Single User....30
Parent....30
Object....30
Object (Keep Transform)....30
Object (Without Inverse)....30
Object (Keep Transform Without Inverse)....30
Armature Deform....31
With empty Groups....31
With automatic Weights....31
Bone....31
Bone Relative....31
Curve Deform....31
Follow Path....32
Path Constraint....33
Lattice Deform....33
Vertex....34
Vertex (Triangle)....34
Last Operator Make Parent....34
Object (Without Inverse)....34
Object (Keep Transform Without Inverse)....35
Object (Attach Curves to Surface)....35
Clear Parent....35
Clear and Keep Transformation....35
Clear Parent Inverse....35
Constraints....35
Track....37
Damped Track Constraint....37
Track to Constraint....37
Lock Track Constraint....37
Link / Transfer Data....38
Link Object to Scene....38
Object Data, Materials .. etc....39
Copy UV Maps....39
Transfer Mesh Data....39
Transfer Mesh Data Layout....41
Collection....42
Move to Collection....42
Link to Collection....42
Remove From Collection....43
Remove From all Unlinked Collections....43
Add selected To Active Collection....43
Remove Selected From Active Collection....43
Shade Smooth, Shade Smooth and Shade Flat....43

Shade Smooth.....43
Shade Auto Smooth.....44
Shade Flat.....44
Animation.....44
Insert Keyframe.....44
Delete Key frame.....45
Clear Key frames.....45
Change Keying set.....45
Bake Action.....45
Bake Mesh to Grease Pencil.....47
Bake Mesh Animation to Grease Pencil.....47
Bake Object Transform to Grease Pencil.....48
Rigid Body.....49
Add Active.....49
Add Passive.....49
Remove.....49
Change shape.....49
Calculate Mass.....50
Quick Effects.....50
Quick Fur.....50
Quick Explode.....50
Quick Smoke.....51
Quick Fluid.....51
Subdivide.....51
Last Operator Subdivision Set.....52
Convert to.....52
General.....52
Grease pencil object.....52
Image object.....53
Hair curve.....53
Show/Hide.....53
Show Hidden.....54
Hide Selected.....54
Hide Unselected.....54
Clean Up.....54
Clean Vertex Groups.....54
Limit Total Vertex Groups.....54
Remove Unused Material Slots.....54

Detailed Table of content

Detailed table of content

Detailed Table of content.....3
Object menu.....11
Transform.....11
To Sphere.....11
Usage.....11
Last Operator To Sphere.....11
Factor.....11

Proportional editing....12
Proportional Falloff....12
Proportional Size....12
Connected....12
Projected(2D)....12
Shear....12
Last Operator Shear....12
Offset....12
Shear Axis....12
Axis....12
Axis Ortho....12
Orientation....12
Proportional editing....13
Proportional Falloff....13
Proportional Size....13
Connected....13
Projected(2D)....13
Bend....13
Push/Pull....13
Last Operator Push/Pull....13
Factor....13
Proportional editing....13
Proportional Falloff....14
Proportional Size....14
Connected....14
Projected(2D)....14
Move Texture Space....14
Last Operator Move....14
Move....14
Orientation....14
Proportional editing....15
Proportional Falloff....15
Proportional Size....15
Connected....15
Projected(2D)....15
Scale Texture Space....15
Last Operator Resize....15
Move....15
Orientation....15
Proportional editing....15
Proportional Falloff....15
Proportional Size....15
Connected....16
Projected(2D)....16
Align to Transform Orientation....16
Last Operator Transform....16
Values....16
Axis....16
Orientation....16
Proportional editing....16
Proportional Falloff....16
Proportional Size....16
Connected....16

Projected(2D)....17
Randomize Transform....17
Last Operator Randomize Transform....17
Random Seed....17
Transform Delta....17
Randomize Location checkbox....17
Location edit boxes....17
Randomize Rotation checkbox....17
Rotation edit boxes....17
Randomize Scale checkbox....17
Scale Even....17
Scale edit boxes....17
Align Objects....18
Last Operator Align Objects....18
High Quality....18
Align Mode....18
Relative To....18
Align....18
Set Origin....18
Geometry to Origin....18
Origin to Geometry....18
Origin to 3D cursor....18
Origin to Center of Mass(Surface)....18
Origin to Center of Mass(Volume)....18
Last Operator Set Origin....19
Type....19
Center....19
Mirror....19
Interactive Mirror....19
Usage:....19
X Y Z Global....19
X Y Z Local....19
Last Operator Mirror....19
Orientation....19
Proportional editing....19
Proportional Falloff....19
Proportional Size....19
Connected....20
Projected(2D)....20
Clear....20
Clear....20
Location....20
Last Operator Clear Location....20
Clear Delta....20
Rotation....20
Last Operator Clear Rotation....20
Clear Delta....20
Scale....20
Last Operator Clear Scale....20
Clear Delta....20
Origin....21
Apply....21
Apply....21

Location, Rotation, Scale, All Transforms and Rotation&Scale....21
Last Operator Apply Object Transform....21
Location....21
Rotation....21
Scale....21
Apply Properties....21
Location, Rotation, Scale and All Transforms to Deltas....21
Last Operator Transforms to Deltas....22
Mode....22
Reset Values....22
Animated Transform to Deltas....22
Visual Transform....22
Make Instances Real....22
Last Operator Make Instances Real....22
Parent....22
Keep Hierarchy....22
Parent Inverse....22
Snap....23
Selection to Cursor....23
Selection to Cursor(Keep Offset)....23
Last operator Snap Selection to Cursor....23
Offset....23
Selection to Active....23
Selection to Grid....23
Cursor to Selected....23
Cursor to World Origin....23
Cursor to Active....23
Cursor to Grid....23
From Duplicate ... to Paste....24
Duplicate Objects....24
Last Operator Duplicate....24
Duplicate Objects....24
Linked....24
Move X , Y , Z....24
Orientation....24
Proportional editing....24
Proportional Falloff....24
Proportional Size....24
Connected....24
Projected(2D)....24
Duplicate Linked....25
Last Operator Duplicate Linked....26
Duplicate Objects....26
Linked....26
Move X, Y, Z....26
Orientation....26
Proportional editing....26
Proportional Falloff....26
Proportional Size....26
Connected....26
Projected(2D)....26
Join....26
Delete....27

Delete Global....27
Copy....27
Paste....27
Last Operator Paste Selection from Buffer....27
Select....27
Active Collection....27
Asset....27
Mark as asset....27
Clear Asset....27
Clear Asset(Set Fake User)....28
Library Override....28
Make....28
Reset....28
Clear....28
Relations....29
Make Instance Face....29
Usage:....29
Make Local....29
Make Single User....30
Parent....30
Object....30
Object (Keep Transform)....30
Object (Without Inverse)....30
Object (Keep Transform Without Inverse)....30
Armature Deform....31
With empty Groups....31
With automatic Weights....31
Bone....31
Bone Relative....31
Curve Deform....31
Follow Path....32
Path Constraint....33
Lattice Deform....33
Vertex....34
Vertex (Triangle)....34
Last Operator Make Parent....34
Type....34
Object (Without Inverse)....34
Object (Keep Transform Without Inverse)....35
Object (Attach Curves to Surface)....35
Clear Parent....35
Clear and Keep Transformation....35
Clear Parent Inverse....35
Last Operator Clear Parent....35
Constraints....35
Add Constraints (With Targets)....36
Last Operator Add Constraints (with Target)....36
Type....36
Copy Constraints to Selected Objects....37
Clear Object Constraints....37
Track....37
Damped Track Constraint....37
Track to Constraint....37

Lock Track Constraint....37
Clear Track....38
Last Operator Clear track....38
Type....38
Clear Track - Keep Transformation....38
Last Operator Clear track....38
Type....38
Link / Transfer Data....38
Link Object to Scene....38
Object Data, Materials .. etc....39
Last Operator Link Data....39
Type....39
Copy UV Maps....39
Transfer Mesh Data....39
Last Operator Transfer Mesh Data....39
Freeze Operator....39
Data Type....39
Create Data....40
Edge Mapping....40
Topology....40
Nearest Vertice....40
Nearest Edge....40
Nearest Face Edge....40
Projected Edge Interpolation....40
Auto Transform....40
Only Neighbor Geometry....40
Max Distance....40
Ray Radius....40
Mix Mode....40
Below Threshold....40
Above Threshold....41
Replace....41
Mix Factor....41
Transfer Mesh Data Layout....41
Last Operator Transfer Mesh Data Layout....41
Data Type....41
Exact Match....41
Source Layers Selection....41
Mygroup....41
Active Layer....41
All Layers....41
Destination Layers Matching....42
By Name....42
By Order....42
Active Layer....42
Collection....42
Move to Collection....42
Last Operator Move to Collection....42
Name....42
Link to Collection....42
Last Operator Link to Collection....43
Name....43
Remove From Collection....43

Remove From all Unlinked Collections....43
Add selected To Active Collection....43
Remove Selected From Active Collection....43
Shade Smooth, Shade Smooth and Shade Flat....43
Shade Smooth....43
Shade Auto Smooth....43
Last Operator Shade Smooth by angle....44
Auto Smooth....44
Angle....44
Shade Flat....44
Animation....44
Insert Keyframe....44
Insert Keyframe with keying set....44
Delete Key frame....45
Clear Key frames....45
Change Keying set....45
Bake Action....45
Last Operator Bake Action....46
Start Frame....46
End Frame....46
Frame Step....46
Only Selected Bones....46
Visual Keying....46
Clear Constraints....46
Clear Parents....46
Overwrite current Action....46
Clean Curves....46
Bake Data....46
Channels....46
Bake Mesh to Grease Pencil....46
Bake Mesh Animation to Grease Pencil....47
Target Object....47
Start Frame....47
End Frame....47
Step....47
Thickness....47
Threshold Angle....47
Stroke Offset....47
Only Seam Edges....47
Export Faces....47
Only Selected Keyframes....47
Target Frame....47
Projection Type....48
OK....48
Last Operator Bake Mesh Animation to Grease Pencil....48
Bake Object Transform to Grease Pencil....48
Bake Transform to Grease Pencil panel....48
Start Frame....48
End Frame....48
Only selected Keyframes....48
Target Frame....48
Projection Type....48
Last Operator Bake Transform to Grease Pencil panel....49

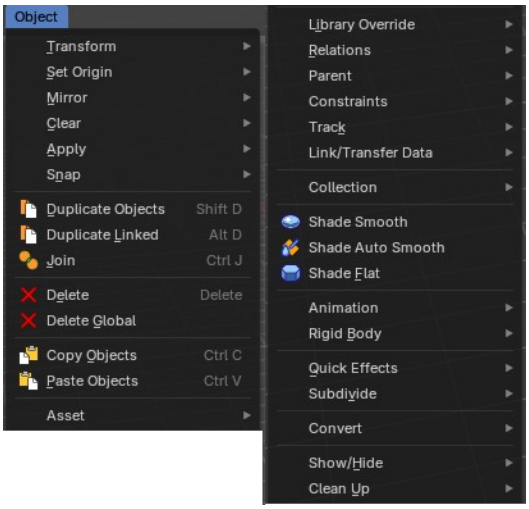
Rigid Body....49
Add Active....49
Add Passive....49
Last Operator Add Rigid bodies....49
Remove....49
Change shape....49
Last Operator Change Collision shape....50
Calculate Mass....50
Last Operator Calculate Mass....50
Material Preset....50
Density....50
Quick Effects....50
Quick Fur....50
Quick Explode....50
Quick Smoke....51
Quick Fluid....51
Subdivide....51
Last Operator Subdivision Set....52
Level....52
Relative....52
Convert to....52
General....52
Mesh....52
Curve....52
Curves....52
Grease Pencil....52
Grease pencil object....52
Path....52
Bezier Curve....53
Polygon Curve....53
Image object....53
Convert to Mesh Plane....53
Trace Image to Grease Pencil....53
Hair curve....53
Particle System....53
Last Operator Convert to....53
Target....53
Target Point Cloud, Mesh, Curve....53
Keep Original....53
Show/Hide....53
Show Hidden....54
Hide Selected....54
Last Operator Hide Selected....54
Unselected....54
Hide Unselected....54
Clean Up....54
Clean Vertex Groups....54
Limit Total Vertex Groups....54
Remove Unused Material Slots....54

Object menu

The object menu in Object mode provides you with tools to work at Object level.

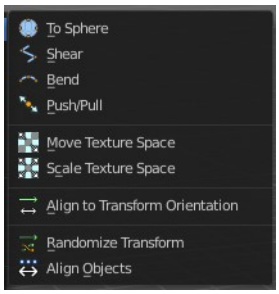
It contains things like undo redo, copy and paste, delete and other general tools. But also some object specific tools, like the Convert to menu. Or Transform items, and many more.

There are lots of tools in this menu. And some content just shows with specific object types. So we will divide it into sub chapters.



Transform

The transform sub menu contains functionality for some kind of transformations.



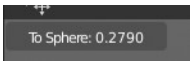
To Sphere

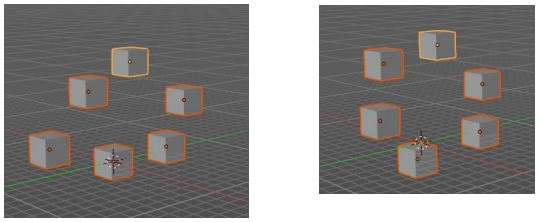
Shapes a selection of objects into the shape of a sphere. The calculation happens with the object origins.

In Object mode this tools requires to have more than one object selected.

Usage

Select the objects, activate the tool, then drag the mouse in the 3D viewport. In the header you will read the current factor then. Which tells you how close you are towards the sphere shape.



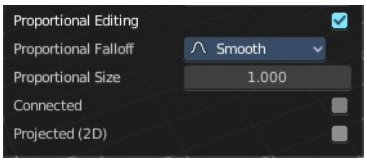


Last Operator To Sphere

Factor

The factor to transform the selection into a shape form.

Proportional editing



Enables proportional editing. Activating proportional editing reveals further settings.

Proportional Falloff

Adjust the falloff methods.

Proportional Size

See and adjust the falloff radius.

Connected

The proportional falloff gets calculated for connected parts only.

Projected(2D)

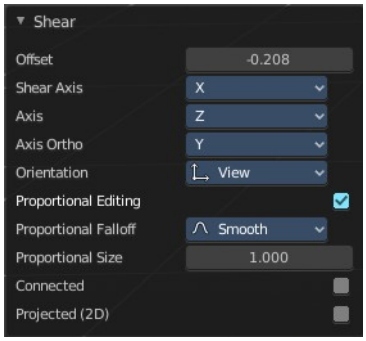
The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius, then it gets calculated.

Shear

Shear shears the selection.

In Object mode this tools requires to have more than one object selected.

Last Operator Shear



Offset

Adjust an offset.

Shear Axis

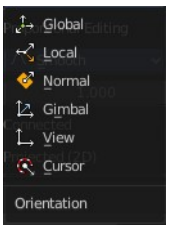
The shear tool works along a imaginary 2d plane. The shear axis controls if the items are sheared along the x or the y axes of this plane. This is the plane along which the transformation happens. You can shear along the x or the y axis of this plane.

To make things even more complicated, the orientation of this imaginary plane is defined by the Axis and Axis Ortho items below.

Axis

Defines one axis of the imaginary shear axis plane.

Axis Ortho



Defines the other axis of the imaginary shear axis plane.

Orientation

Choose the orientation for the shear action.

Proportional editing

Enables proportional editing. Activating proportional editing reveals further settings.

Proportional Falloff

Adjust the falloff methods.

Proportional Size

See and adjust the falloff radius.

Connected

The proportional falloff gets calculated for connected parts only.

Projected(2D)

The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius, then it gets calculated.

Bend

Bends the selection.

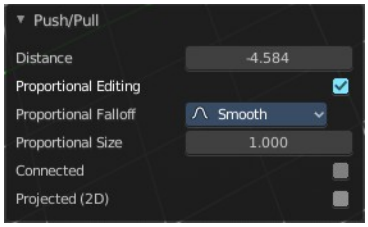
In Object mode this tools requires to have more than one object selected.

Push/Pull

It pushes or pulls the object positions relative to the center of the selection.

In Object mode this tool requires to have more than one object selected.

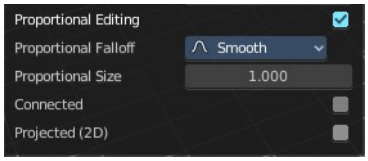
Last Operator Push/Pull



Factor

Adjust the strength of influence of the tool.

Proportional editing



Enables proportional editing. Activating proportional editing reveals further settings.

Proportional Falloff

Adjust the falloff methods.

Proportional Size

See and adjust the falloff radius.

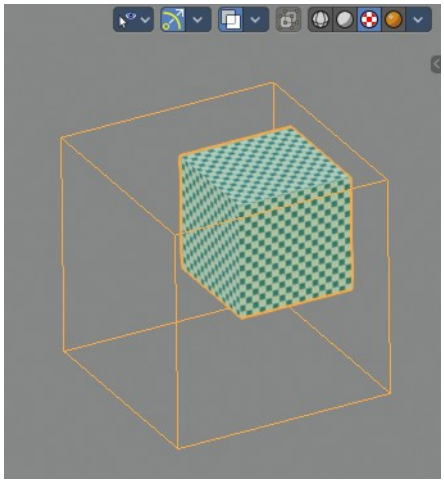
Connected

The proportional falloff gets calculated for connected parts only.

Projected(2D)

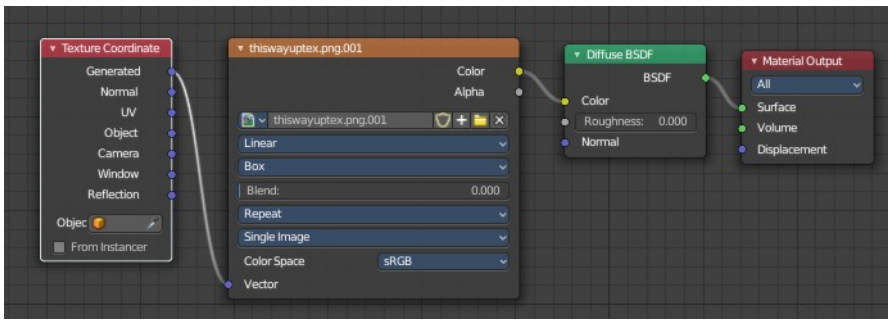
The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius, then it gets calculated.

Move Texture Space

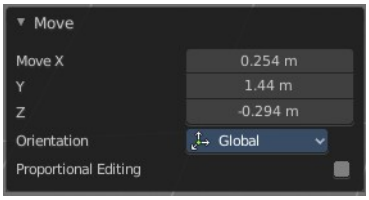


This tool relies at the move tool. With the difference that it moves the texture space instead of the object. It has also a very special use case, and just works with a material with a Texture Coordinate / Generated node. And requires to have the shading at Material or Rendered to see a result in the viewport.

The yellow cage represents the texture space. The actual UV mapping does not change.



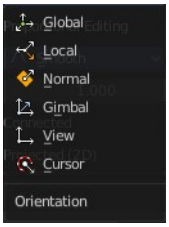
Last Operator Move



Move

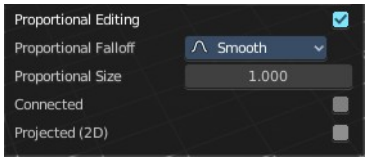
Adjust in which directions you want to transform.

Orientation



Choose the orientation.

Proportional editing



Enables proportional editing. Activating proportional editing reveals further settings.

Proportional Falloff

Adjust the falloff methods.

Proportional Size

See and adjust the falloff radius.

Connected

The proportional falloff gets calculated for connected parts only.

Projected(2D)

The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius, then it gets calculated.

Scale Texture Space

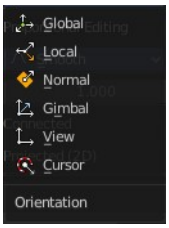
Scale Texture space is similar to the Move texture Space. With the only difference that it scales the UV space instead of moving it.

Last Operator Resize

Move

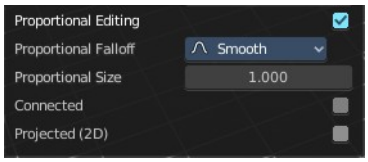
Adjust in which directions you want to transform.

Orientation



Choose the orientation.

Proportional editing



Enables proportional editing. Activating proportional editing reveals further settings.

Proportional Falloff

Adjust the falloff methods.

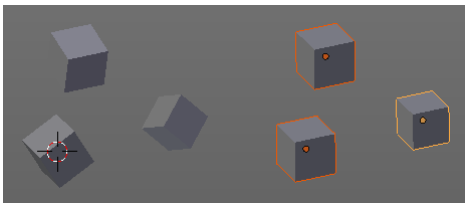
Proportional Size

See and adjust the falloff radius.

Connected
The proportional falloff gets calculated for connected parts only.

Projected(2D)
The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius, then it gets calculated.

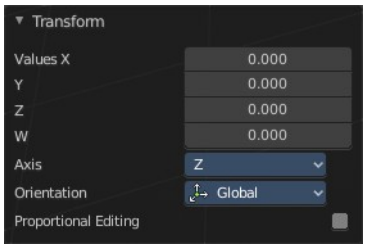
Align to Transform Orientation



Align to Transform Orientation rotates the selected objects so that their local orientation matches the active transform orientation in the Transform orientation panel or the Orientation selection in the Transform Operator panels.

For example when you have a few cubes that are rotated differently, then perform align to transform orientation with Global coordinates, then the cubes rotations gets set back to 0/0/0

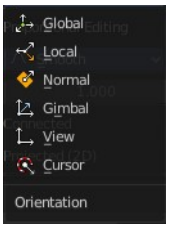
Last Operator Transform



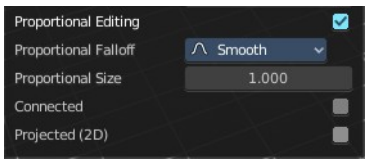
Values
These values can't be edited. The tool aligns to zero, so the values turns to zero.

Axis
These values doesn't matter. Changing them does nothing.

Orientation
Choose the orientation in which the transform should happen.



Proportional editing
Enables proportional editing. Activating proportional editing reveals further settings.



Proportional Falloff
Adjust the falloff methods.

Proportional Size
See and adjust the falloff radius.

Connected
The proportional falloff gets calculated for connected parts only.

Projected(2D)

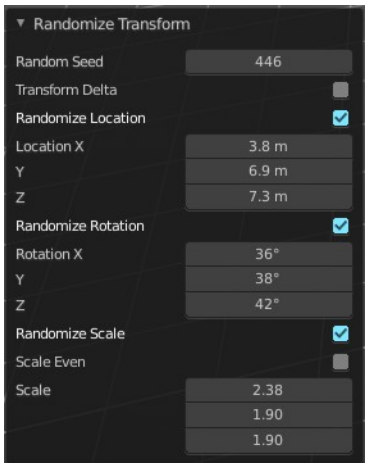
The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius, then it gets calculated.

Randomize Transform

This tool allows to randomize position rotation and scale of selected objects. Each object gets threaten individually by a random value.

It starts with zeroed values. You need to adjust the values in the last operator.

Last Operator Randomize Transform



Random Seed

Adjust the random seed value.

Transform Delta

Randomize Delta transform values instead of the regular transform values.

Randomize Location checkbox

With this checkbox ticked the location of the selected objects gets randomize

Location edit boxes

Adjust the strength of the transform for the single axis.

Randomize Rotation checkbox

With this checkbox ticked the rotation of the selected objects gets randomize

Rotation edit boxes

Adjust the strength of the transform for the single axis.

Randomize Scale checkbox

With this checkbox ticked the scale of the selected objects gets randomized.

Scale Even

Use the same scale values for all axis.

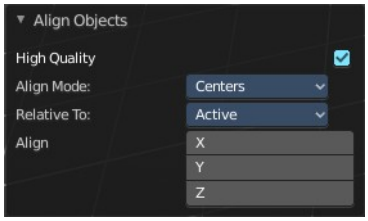
Scale edit boxes

Adjust the strength of the transform for the single axis.

Align Objects

Align Objects allows you to align the selected objects in various ways. You need to adjust the settings in the Last operator panel. The align operation happens in world coordinates.

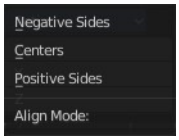
Last Operator Align Objects



High Quality

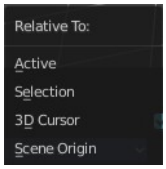
When ticked the calculation gets performed in a higher precision.

Align Mode



Align Mode is a drop-down box choose between different align modes.

Relative To



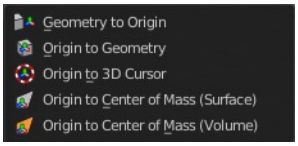
Relative to is a drop-down box. Here you adjust in what method the alignment happens.

Relative to the active object, to the center of selection, to the 3D cursor or to the scene origin.

Align

Turn on or off the single axis for the align operation.

Set Origin



Set origin sets the origin of the selected objects to a chosen location.

Geometry to Origin

Sets the geometry to origin.

Origin to Geometry

Sets the origin to geometry.

Origin to 3D cursor

Sets the origin to the 3D cursor.

Origin to Center of Mass(Surface)

Sets the origin to the center of mass, calculating it from the center of the surface area.

Origin to Center of Mass(Volume)

Sets the origin to the center of mass, calculating from the center of the Volume. It must be manifold geometry with consistent normals.

Last Operator Set Origin

The last operator is the same for all set origin methods.

Type

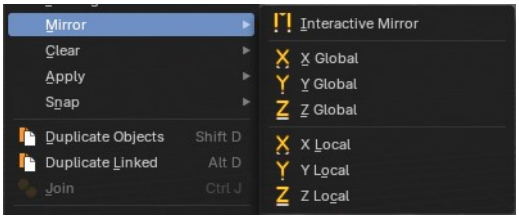
Choose the method again.

Center

Use the median center or the bounds center for calculation.

Mirror

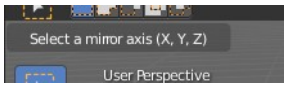
Mirrors the selection.



Interactive Mirror

Mirrors the selection.

Usage:



Activate the tool. In the header you will now see further instructions. Which is: type in the axis at which you want to mirror. Interactive mirroring starts in Global space. You can change the orientation in the last operator.

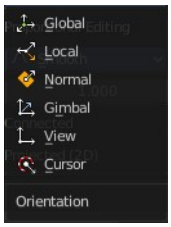
X Y Z Global

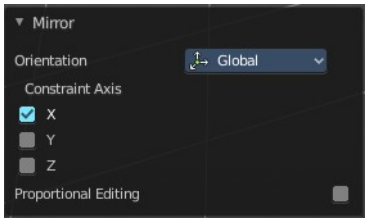
Mirrors along the global axis.

X Y Z Local

Mirrors along the object axis.

Last Operator Mirror

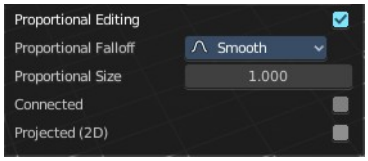




Orientation

Choose the orientation in which the transform should happen.

Proportional editing



Enables proportional editing. Activating proportional editing reveals further settings.

Proportional Falloff

Adjust the falloff methods.

Proportional Size

See and adjust the falloff radius.

Connected

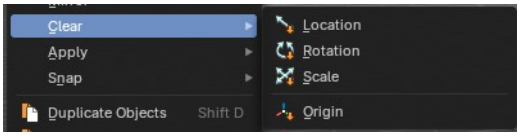
The proportional falloff gets calculated for connected parts only.

Projected(2D)

The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius, then it gets calculated.

Clear

Clear



Clear Transform is a menu where you can clear the transform for location, rotation, scale and Origin. Clear means in this conjunction that the values gets reset.

When you have for example a cube at X 5, and clear the location, then the cube gets positioned at position X 0.

Location

Resets the location of the selected object(s).

Last Operator Clear Location

Clear Delta

With Clear Delta ticked it clears the delta transform instead of the transform.

Rotation

Resets the rotation of the selected object(s).

Last Operator Clear Rotation

Clear Delta

With Clear Delta ticked it clears the delta transform instead of the transform.

Scale

Resets the scaling of the selected object(s).

Last Operator Clear Scale

Clear Delta

With Clear Delta ticked it clears the delta transform instead of the transform.

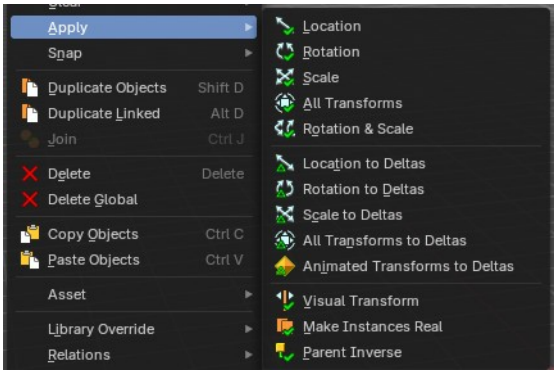
Origin

Clear Origin requires to have a parent child relationship selected. It sets the child object to the position of the parent object.

Apply

Apply

Apply is a menu where you can apply transforms in various combinations. For example, when you create a cube, then move it to let's say 3, then apply the location, then the origin gets set to 0. The position is "applied". Of special Interest is apply scale, since it resets the scale factor to 1.



Apply just works with single user objects. And it does **not apply to pose position, animation curves or constraints. These tools should be used before rigging and animation.**

Location, Rotation, Scale, All Transforms and Rotation&Scale

This applies the location, rotation and scale of the object.

Last Operator Apply Object Transform.

Location

Applies the position, and resets origin to 0

Rotation

Applies the rotation.

Scale

Applies the Scale.

Apply Properties

Properties such as Curve Vertex Radius. Font Size and bone envelope gets applied.

Location, Rotation, Scale and All Transforms to Deltas

Transforms are absolute to the world coordinates. Delta Transforms are relative to the current transformation.

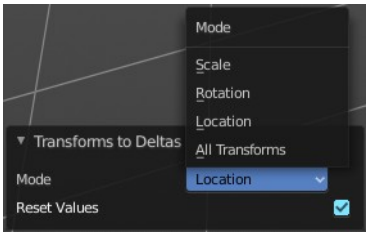
The delta transform values can be found in the Object properties, in the Delta Transform Panel.

Example use case:

Key frame a object rotation from 0 to 90 degrees. Rotate the object by 45 degrees. When you play the animation it will still rotate from 0 to 90 degrees.

Now key frame a delta rotation from 0 to 90 degrees and rotate the object by 45 degrees. When you playback the animation it will rotate from 45 to 135 degrees now. (a 90 degree difference from the current state)

Last Operator Transforms to Deltas



Mode

Mode is a drop-down box choose the transform mode again.

Reset Values

Clears the transform values after transferring to Deltas.

Animated Transform to Deltas

Converts the “normal” transformation animations to Delta transforms. This tool requires to have key frames at the object.

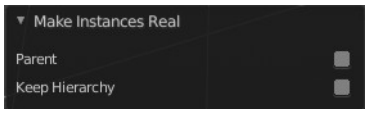
Visual Transform

Applies (set) the result of a constraint, and applies this back to the Object’s location, rotation and scale.

Make Instances Real

Make Instances real makes any duplicates attached to this Object real so that they can be edited.

Last Operator Make Instances Real



Parent

Parent newly created objects to the original duplicator.

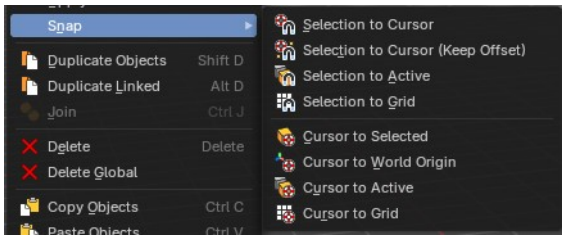
Keep Hierarchy

Keep Parent Child relationship.

Parent Inverse

Applys the objects parent inverse to its data.

Snap



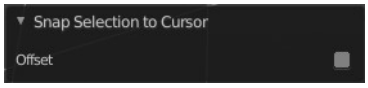
Selection to Cursor

Snaps the currently selected object(s) to the cursor location.

Selection to Cursor(Keep Offset)

Snaps the currently selected object(s) to the cursor location, but keeps the offset of the selected objects to each other. Means the center of the current selection goes to cursor position. Not every individual object.

Last operator Snap Selection to Cursor



Offset

Keep the offset of the selected objects to each other.

Selection to Active

Snaps the currently selected object(s) to the active object.

Selection to Grid

Snaps the currently selected object(s) to the nearest grid point.

Cursor to Selected

Moves the cursor to the center of the selected object(s).

Cursor to World Origin

Moves the cursor to the world origin.

Cursor to Active

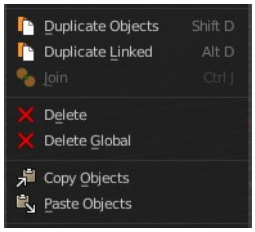
Moves the cursor to the center of the active object.

Cursor to Grid

Moves the cursor to the nearest grid point.

From Duplicate ... to Paste

Duplicate Objects

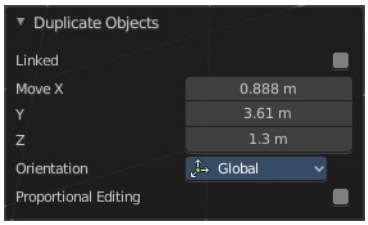


Duplicates selected objects. The copy is completely independent. All containing data gets duplicated too. And you can edit the object instances completely independent. then.

You are automatically in grab mode, and so you can easily move the object out of position. Which is sometimes wanted, since you can position the duplicate then. But sometimes this is unwanted. A right click after releasing the mouse lets the object snap back into its creation position.

When you drag the duplicate around you will see the position values in the header.

Last Operator Duplicate



Duplicate Objects

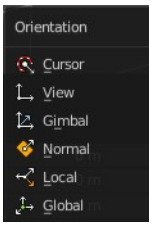
Linked

With this option ticked the duplication happens with linked data.

Move X , Y , Z

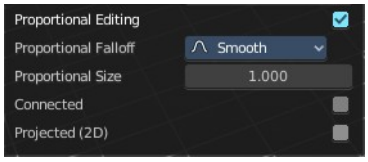
The Position of the duplicated object.

Orientation



Orientation is a drop-down box choose the type of orientation for the duplicate action.

Proportional editing



Enables proportional editing. Activating proportional editing reveals further settings.

Proportional Falloff

Adjust the falloff methods.

Proportional Size

See and adjust the falloff radius.

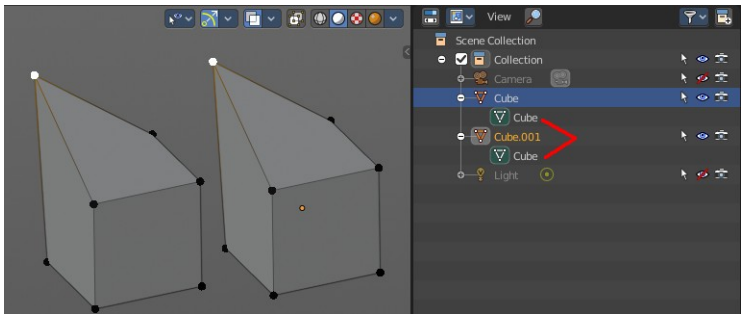
Connected

The proportional falloff gets calculated for connected parts only.

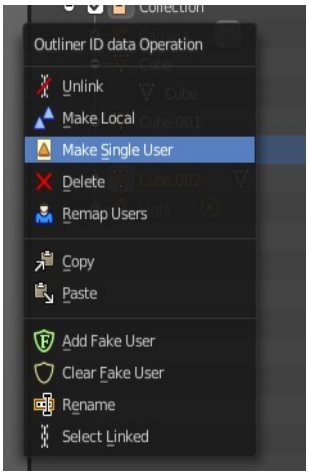
Projected(2D)

The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius, then it gets calculated.

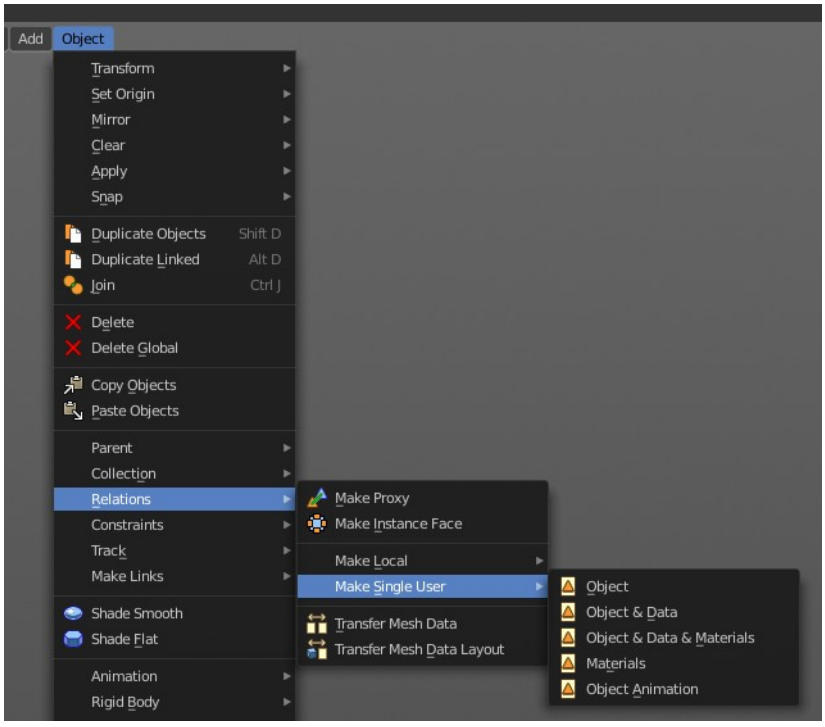
Duplicate Linked



Duplicates selected objects. The instance has its own transforms. But the duplicate shares some data with the first instance. This means when you for example edit the mesh of one of the instances, then the other instance gets modified too. As you can see this in the screenshot. Here you can also see that the mesh name is the same. The object name is different though.



If you want to make changes to an object in the new linked duplicate independently of the original object, then you will have to manually make the object a “single-user” . This can be done for example in the Outliner, in the right click menu of the object. (Currently broken). Or in the Object menu. Choose what attached data you want to make single user.



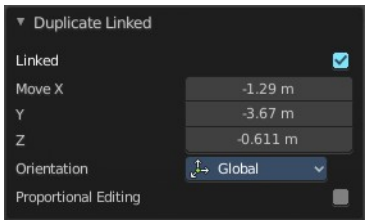
When you duplicate an object, then you are automatically in grab mode. And so you can easily move the object out of position. which is sometimes wanted, since you can position the duplicate then. But sometimes this is unwanted. A right click after releasing the mouse lets the object snap back into its creation position.

Duplicate linked instances the object data.

Explanation: Each Bforartists object type (mesh, lamp, curve, camera *etc.) is composed from two parts: an Object and Object Data (sometimes abbreviated to ObData):*

Object - Holds information about the position, rotation and size of a particular element.
Object Data - Holds everything else. For example. Meshes stores geometry, material lists, vertex groups, etc. . Cameras stores focal length, depth of field, sensor size, etc. .
Each object has a link to its associated object-data, and a single object-data, like a material, may be shared by many objects.

Last Operator Duplicate Linked



Duplicate Objects

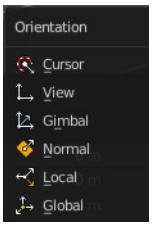
Linked

With this option ticked the duplication happens with linked data.

Move X, Y, Z

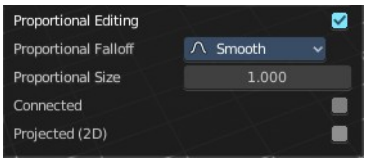
The Position of the duplicated object.

Orientation



Orientation is a drop-down box choose the type of orientation for the duplicate action.

Proportional editing



Enables proportional editing. Activating proportional editing reveals further settings.

Proportional Falloff

Adjust the falloff methods.

Proportional Size

See and adjust the falloff radius.

Connected

The proportional falloff gets calculated for connected parts only.

Projected(2D)

The proportional falloff gets calculated in the screen space. Depth doesn't play a role. When it's in the radius, then it gets calculated.

Join

Joins two independent objects together and makes them one object.

This works with mesh objects and with curve objects. What does not work is to try to join mesh objects with curve objects. They are of different type.

Delete

Delete deletes the selected object(s).

Delete Global

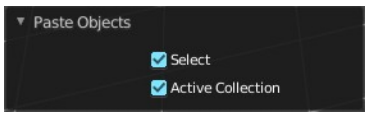
It can be that you have more than one scene open. Delete deletes the selected object(s) in all scenes.

Copy

Copies the selected object(s).

Paste

Pastes copied object(s).



Last Operator Paste Selection from Buffer

Select

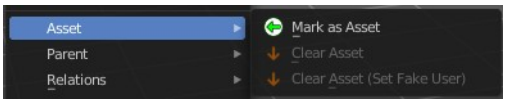
Select pasted object(s).

Active Collection

Put the pasted objects into the active collection.

Asset

Asset related menu.



Mark as asset

Marks the selected object as an asset. It will be inserted in the asset library.

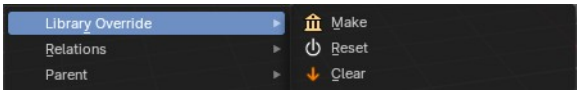
Clear Asset

Removes the selected object from the asset library.

Clear Asset(Set Fake User)

Removes the selected object from the asset library. But adds a fake user to it, so that it remains in the scene.

Library Override



Make

Add a local library override to this collection or selected object.

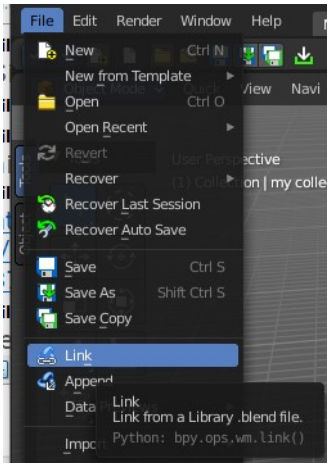
This tool works different from Add Override in the outliner. It iterates through the hierarchy of objects and collections based on the selection. And tries to override everything linked.

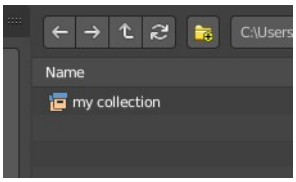
To work properly, it is important that all the collections needed by the character are children of the root object Both, linked and instantiated. Otherwise the automated overriding may fail.

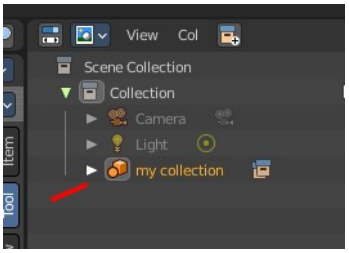
Library Overrides is the new system designed to replace and supersede Proxies. Most types of linked data-blocks can be overridden, and the properties of those overrides can then be edited. When the library data change, unmodified properties of the override one will be updated accordingly.

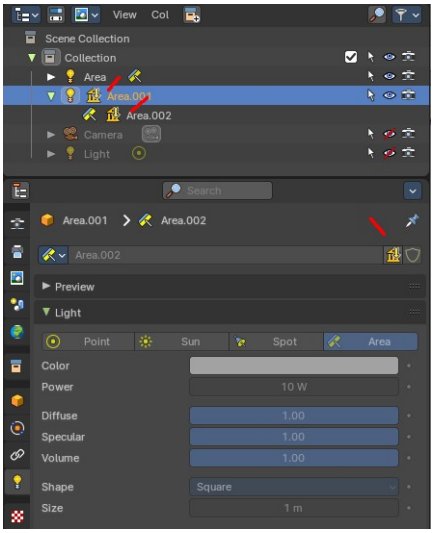
You need to link a collection or object from another file for example to set the Make Library Override tool active.

Assets with a library override have the override icon in the outliner.









Reset

Resets the library override to their initial state.

Clear

Delete the selected local overrides and relink their usages to the linked data if possible. Else reset them and mark them as not editable.

Relations

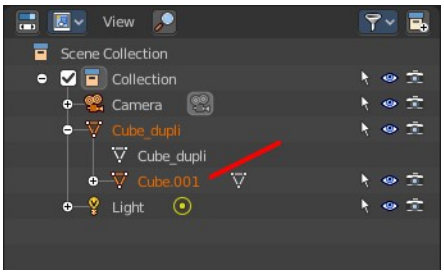
This sub menu contains relations related functionality.

Make Instance Face

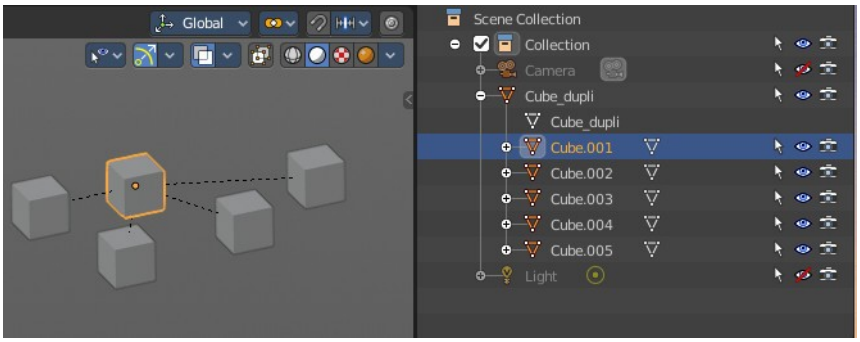
Make Instance Face, formerly Make Dupli Face, is a relict from the past, when there was no instancing or parenting feature available in Blender. When you turn an object into a Dupli Face object, then this object becomes an instancing container for this object. All objects in this container just exists once in ram when you duplicate it. No matter how often you duplicate it. This allows to plant whole forests without to run into a memory problem. Since the tree object just loads once into ram. And gets just drawn at different screen positions then.

Usage:

Create an object. Make Instance Face. The name will be extended by a _dupli term.

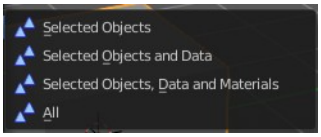


Now in the outliner go into the hierarchy of the dupli object. And duplicate the Cube.001 object inside of it. This is the parent object that you can duplicate. You will see that the duplicated copies will now be connected by a dotted line with the parent object.



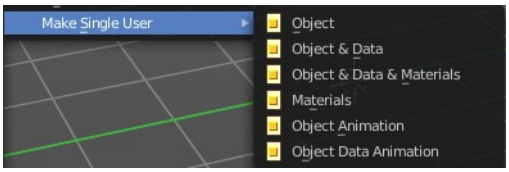
Make Local

You need to have a linked object for that. Make library linked data blocks local to this file. The link to the library object will be lost. And the object acts like you would have created it in the current scene.



There are four different methods available. With which you can also make the dependencies of the library object local. Materials for example.

Make Single User

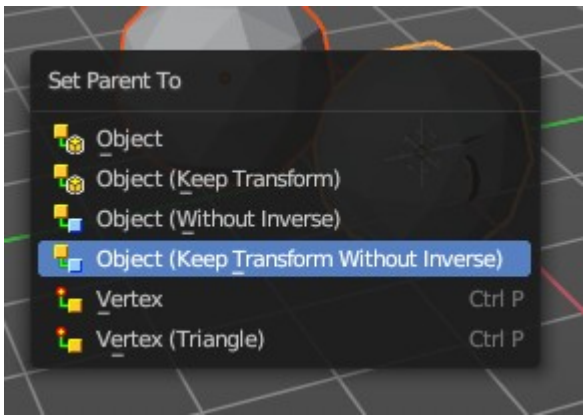


Make linked data local to each object. Additionally, it can also make single-user copies of its dependencies, like meshes, curves, materials, animations…

Parent

The parent menu provides you with all parenting methods at object level.

To use parenting you first have to select the source object, hold down shift, then select the target object so that both are selected. This also works in the outliner (here you can also simply hold down shift and drag the source object at the target object to make it a child). The source object becomes the child object then.



The methods are object type dependent. The armature methods requires to have a mesh and an armature. The path methods a curve. The available methods for the current selection can also be found out by pressing the hotkey ctrl P. This calls the parenting menu with just the available methods.

Object

Sets the parent to selected object.

Object (Keep Transform)

Sets the parent to selected object, but applies all transform before the operation.

Object (Without Inverse)

Set the object's parenting without setting the inverse parent correction. This preserves all transforms before the operation.

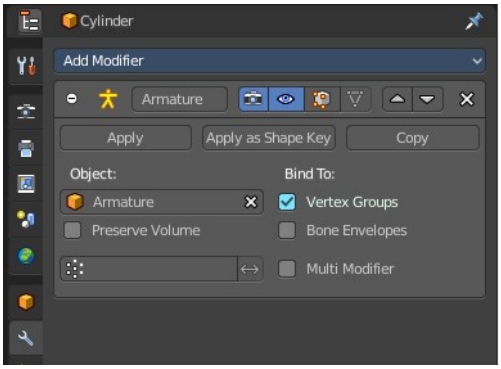
Object (Keep Transform Without Inverse)

Set the object's parenting without setting the inverse parent connections and applies all transform before the operation.

Armature parenting creates an armature modifier at the mesh.

#

Armature Deform



Sets the parent to selected Armature.

With empty Groups

Sets the parent to selected Armature, using empty groups.

With Envelope Weights

Sets the parent to selected Armature, using envelope weights

With automatic Weights

Sets the parent to selected Armature, with automatic weights.

Bone

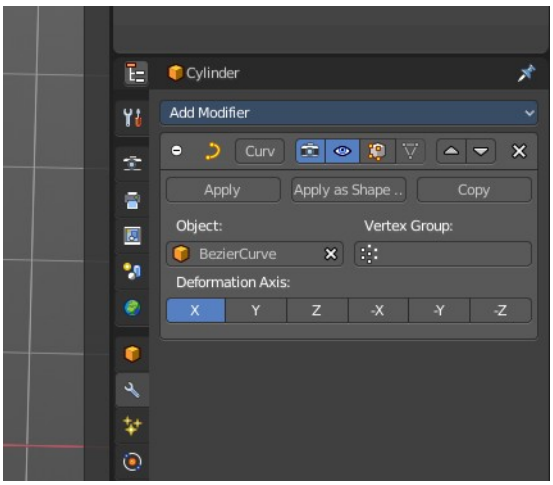
Sets the parent absolute to selected Bone.

Bone Relative

Sets the parent relative to selected Bone.

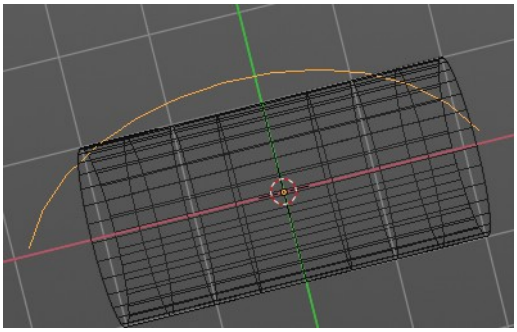
Curve Deform

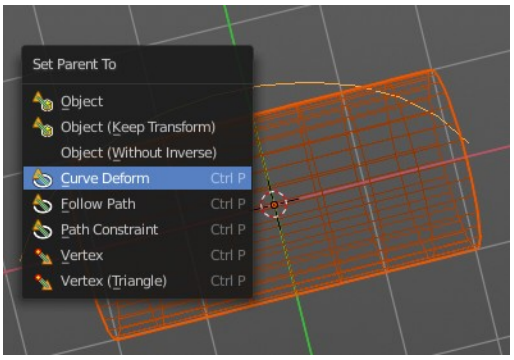
Curve Deform allows you to deform a mesh by a curve shape. It adds a curve modifier at the mesh.

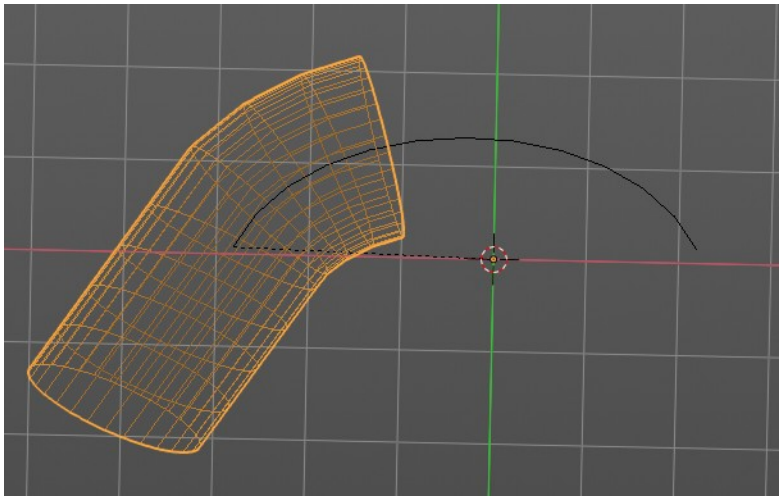


Usage:

Create a curve. Bend it in edit mode to your needs. Create a mesh. I have for demonstration purposes created a cylinder with several subdivisions.

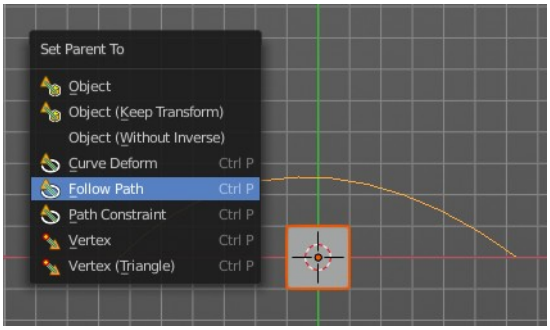






To demonstrate the only pitfall, by parenting the center of the object goes to the start point of the curve. So you better put the origin at the bottom of the cylinder before parenting.

Follow Path



Attaches an object to a curve. The curve then gets used to animate the object position. Every vertice of the curve is one key frame.

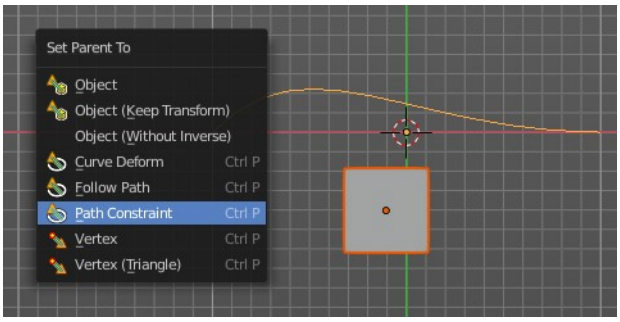
Create a curve, create an object, hold down shift and select the curve, make parent ...

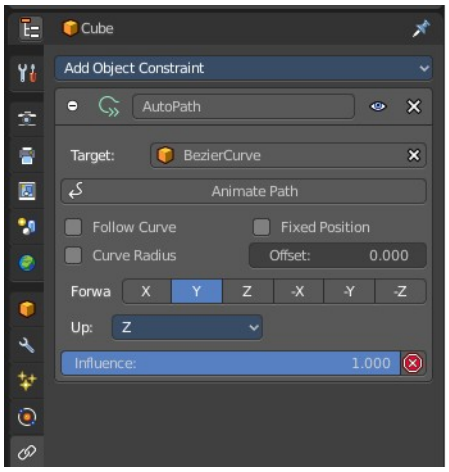
Take care of the position and rotation of the object before parenting it to the curve. It influences how the object behaves.

There is a constraint with the same name and functionality. But parenting with follow path will not create such a constraint.

Path Constraint

Path constraint adds a AutoPath constraint at the mesh object, which is most probably a wrong labeled path constraint. It is not documented by the Blender developers.

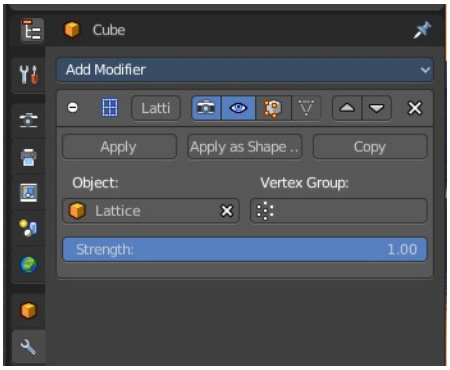




Create a curve, create an object, hold down shift and select the curve, make parent ...

Take care of the position and rotation of the object before parenting it to the curve. It influences how the object behaves.

Lattice Deform



Parents a lattice object to the object.

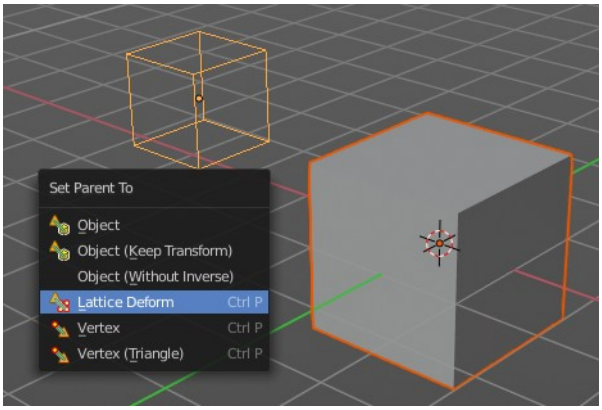
You need a lattice object and a mesh object. Lattice deformations just works with mesh objects.

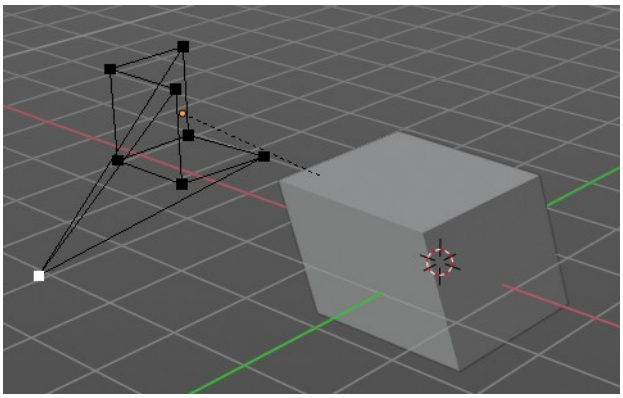
Create a lattice, create an object, hold down shift and select the lattice, make parent ...

Parent the mesh object to the lattice object with method Lattice Deform. A Lattice Deform constraint will be added at the mesh object.

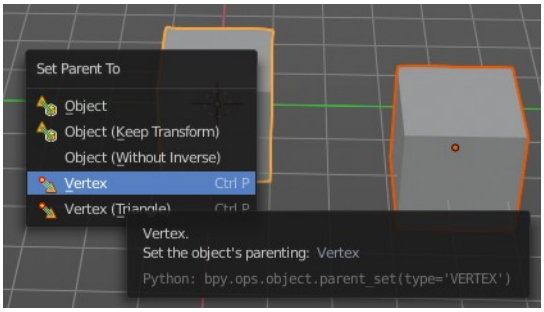
Take care of the position and size of the lattice object. It influences how the deformation works.

Enter Edit Mode with the lattice object. Deform it. The mesh object will follow the deformation.





Vertex



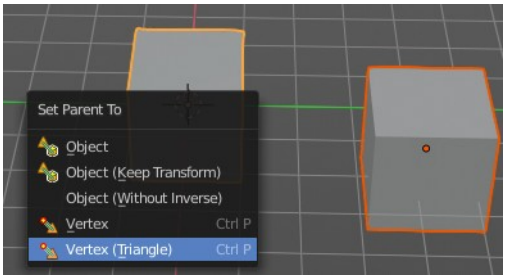
Vertex parents the current object to a vertex of the target object. The vertex will be chosen automatically, it's the

closest vertice of the parent object. When you want to assign the object to a specific vertice, then you have to do

The vertex parenting in Edit mode. You need to have an object type that has vertices. Mesh or curve.

Create a mesh or curve object, create an object, hold down shift and select the mesh object, make parent ...

Vertex (Triangle)



Vertex (Triangle) parents the current object to a face of the target object. The face will be chosen automatically.

It's the closest face of the parent object. When you want to assign the object to a specific face, then you have to

Do the vertex parenting in Edit mode. You need to have an object type that has vertices. Mesh or curve.

Create a mesh or curve object, create an object, hold down shift and select the mesh object, make parent ...

Last Operator Make Parent

Type

Choose the make parent method again. This last operator counts for most of the parent actions.

Keep Transform

Apply transform before parenting.

Object (Without Inverse)

With normal parenting the child object keeps its world transformation.

Without inverse parenting the child object uses the coordinate system of the parent object. As one of the effects you will see that the child objects will jump to the origin of the parent object when parenting.

Object (Keep Transform Without Inverse)

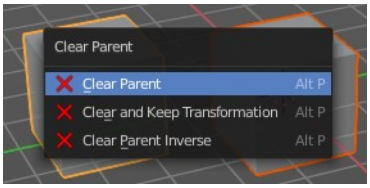
Set the object's parenting without setting the inverse parent connections and applies all transform before the operation. Without inverse parenting the child object uses the coordinate system of the parent object. By keeping the transform, the origin of the parent and child object stay in position.

Object (Attach Curves to Surface)

Parent a Hair Curve to the surface of a new object.

Clear Parent

Clear Parent clears the parent relation completely, including involved modifiers.



Clear and Keep Transformation

Clear Parent clears the parent relation completely, including involved modifiers.

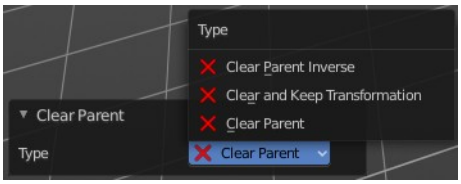
But keeps the current visual transformation.

Clear Parent Inverse

Clear Parent Inverse resets the transform corrections applied to the parenting relationship. It does not remove the parenting itself.

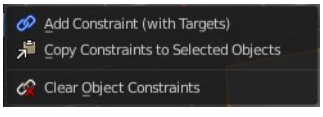
Last Operator Clear Parent

Change the type of clearing.



Constraints

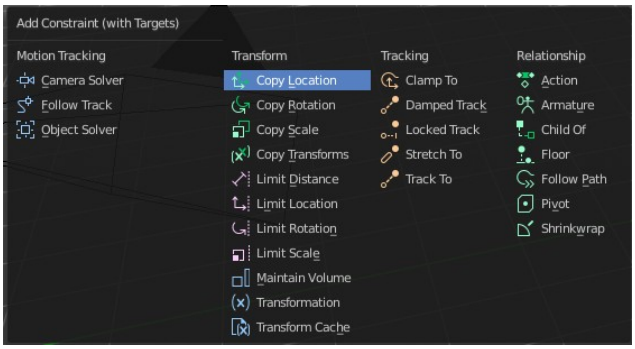
The constraints menu contains some functionality that could also be done in the constraints tab in the Properties editor. Those buttons provides a quicker access though.

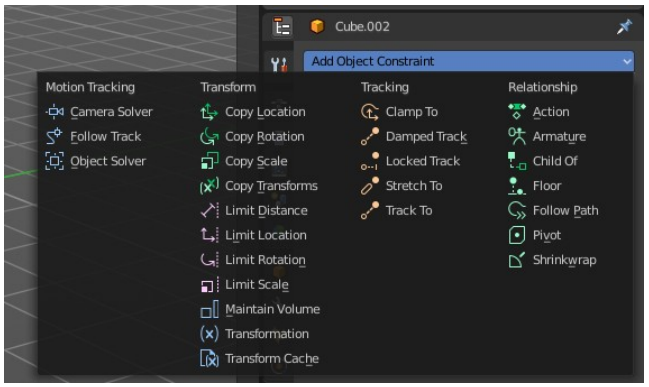


Constraints provides you with various limitation methods connected to a target object. For example, you can limit the X position of an object to the X position of the target object. And when you move the target object, then the object will change its X position too.

Add Constraints (With Targets)

Add Constraints (With Targets) calls a menu choose the constraints type. It's the same content than in the Constraints tab in the Properties editor.





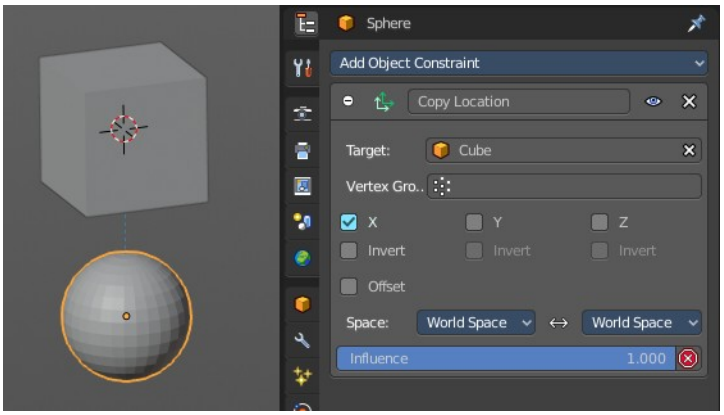
We will not explain every single constraint type here. Please have a look at the constraint types in the manual part for the Properties editor.

Usage:

Select the target object. Hold down Shift key. Now select the object where you want to add the constraints to. Both should be selected. Then choose the constraints type in the menu that you want to add.

As a result a constraints panel gets created in the Constraints tab in the Properties editor. Tweak the settings further if required. In our example we wanted to limit the X axis. So we added a Copy Location constraint, and unticked Y and Z axis. And when we move the cube around then the sphere will follow in X axis. But not in Y and Z.

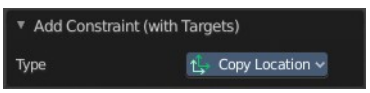
In the 3D view a dotted line indicates the relationship.



Last Operator Add Constraints (with Target)

Type

Type is a drop-down box choose the constraints type again.



Copy Constraints to Selected Objects

Copy Constraints to Selected Objects copies a constraint from one object to another.

Useage:

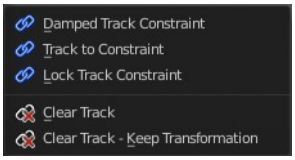
Select the object where you want to copy the constraint to. Hold down Shift and select the object with the constraint. Both should be selected. Then click at Copy Constraints to Selected Objects. This copies the constraint to the object.

Clear Object Constraints

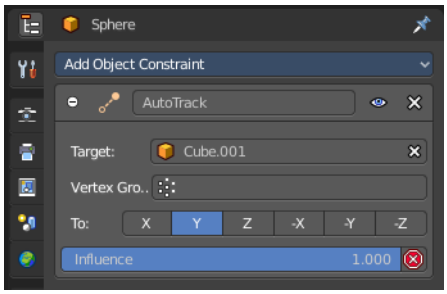
Removes all constraints from the object.

Track

Track constraints are constraints. And adding them could also be done in the constraints tab in the Properties editor. Those buttons provides a quicker access though.



Damped Track Constraint

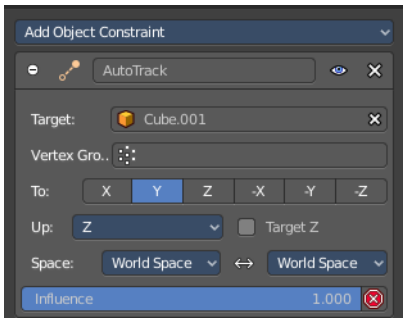


The Damped Track constraint constrains one local axis of the owner to always point towards Target. It is a Look At constraint.

Usage: select the source object, hold down shift, select the target object, add Damped Track Constraint.

The wrong constraint name called AutoTrack is a Blender bug.

Track to Constraint

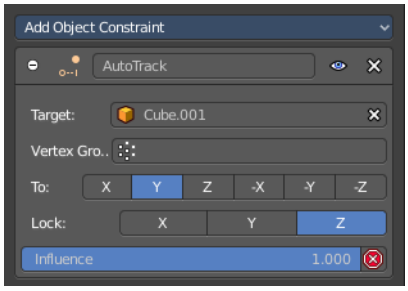


This constraint is similar to Damped Track constraints, but provides some more control.

Usage: select the source object, hold down shift, select the target object, add Damped Track Constraint. Constraint will be added at source object.

The wrong constraint name called AutoTrack is a Blender bug.

Lock Track Constraint



The Locked Track constraint is basically a Track To constraint. But with a locked axis. Means an axis that cannot rotate. So the constraint can just follow in one defined axis.

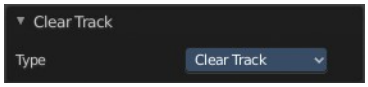
The wrong constraint name called AutoTrack is a Blender bug.

Usage: select the source object, hold down shift, select the target object, add Track Constraint. Constraint will be added at source object.

Clear Track

You need to have a Track constraint applied. It removes the track constraint.

Last Operator Clear track



Type

Type is a drop-down box choose between Clear Track and Clear Track Keep

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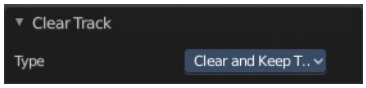
Clear Track - Keep Transformation

This menu item is just relevant when you have a Track constraint applied. Removes the track constraint. But keeps the current position.

Last Operator Clear track

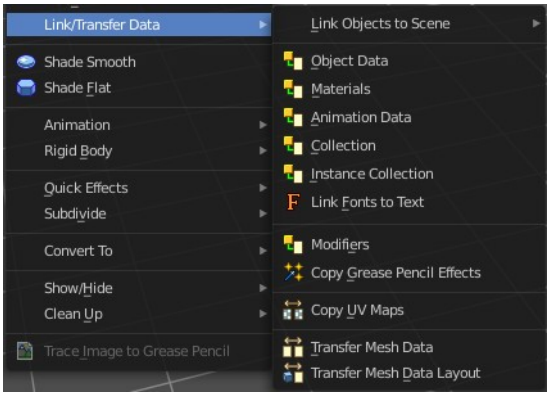


Type

Type is a drop-down box choose between Clear Track and Clear Track Keep

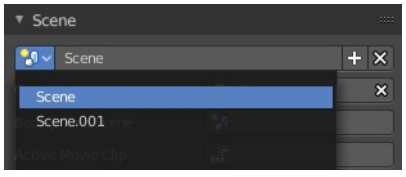
Link / Transfer Data

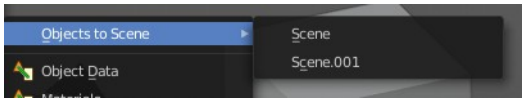
Links objects between scenes or data of the active object to all selected objects. In some case (i.e. Object Data, Modifier) the target objects must be of the same type than the active one or capable of receiving the data. If targets already have some data linked to them, it will be unlinked first.



Link Object to Scene

In Bforartists you can have more than one scene in the blend file. See Scenes tab. The make links menu allows you to link or copy objects between those scenes.





Object to Scene makes the selected object available in the chosen scene. This makes the object exist in two different scenes at once, including position and animation data.

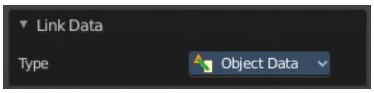
When you want the object not to be shared across two scenes anymore, then you have to make it single user again, which can be done in the relations menu.

Object Data, Materials .. etc

Link this specific data blocks between selected objects.

Select the source object, hold down shift, select the target objects. Perform the action.

Last Operator Link Data



Type

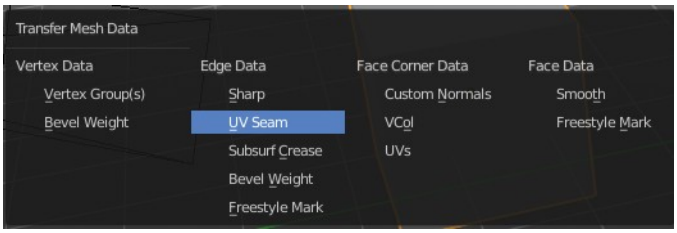
Choose the data type again that you want to transfer.

Copy UV Maps

Copies the UV map from one object to another. If the selected object doesn't have any UV maps, then it is created. The Objects must be of type mesh and must have a matching topology.

Select the source object, hold down shift, select the target object. Perform Transfer UV Map.

Transfer Mesh Data

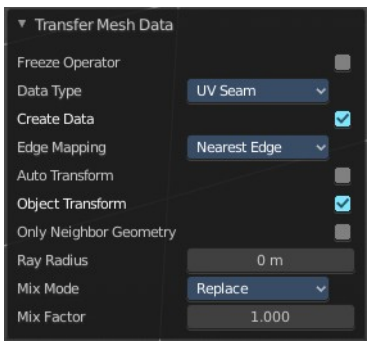


Transfers mesh data from active to selected object.

Select the object that you want to copy the data to, hold down shift, select the source object with the modifications at it. Choose Transfer Mesh Data. A popup with the available methods will appear. Choose what you want to do.

The caveat here is that the operator works in object mode. When you switch modes then the operator quits. And so you can't check if the UV seam transfer for example arrives as it should. This means that you sometimes end in trial and error with the last operator setting until you have your desired result.

Last Operator Transfer Mesh Data



Freeze Operator

Prevent changes to settings to re-run the operator. This is useful if you are editing several settings at once with heavy geometry.

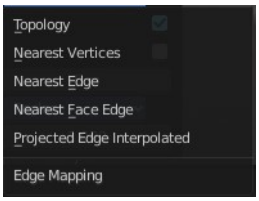
Data Type

The popup from above. Choose again what you want to do.

Create Data

Add data layers on destination meshes if needed.

Edge Mapping



Edge mapping determines how edge data gets transferred.

Topology

This method expects to have the same number of items at both objects. Identical objects that got deformed differently for example.

Nearest Vertice

Uses the nearest vertice of the source object for calculation.

Nearest Edge

Uses the nearest edge of the source object for calculation.

Nearest Face Edge

Uses the nearest edge of sources nearest face of the source object for calculation.

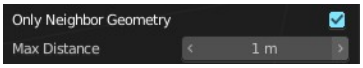
Projected Edge Interpolation

A sampling process that casts several rays from along the destination's edge for calculation.

Auto Transform

Automatically computes the transformation to get the best possible match between source and destination meshes.

Only Neighbor Geometry



Source elements must be closer than given distance from destination one.
Turning this on reveals further settings.

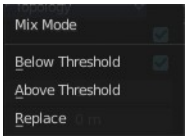
Max Distance

Maximum allowed distance between source and destination element (for non-topology mappings).

Ray Radius

The width of rays.

Mix Mode



How to affect destination elements with source values.

Below Threshold

Only replaces destination value if it is below given threshold Mix Factor. How that threshold is interpreted depends on data type, note that for Boolean values this option fakes a logical OR.

Above Threshold

Only replaces destination value if it is above given threshold Mix Factor. How that threshold is interpreted depends on data type, note that for Boolean values this option fakes a logical AND.

Replace

Replaces everything in destination (note that Mix Factor is still used).

Mix Factor

How much of the transferred data gets mixed into existing one (not supported by all data types).

Transfer Mesh Data Layout

Transfers the layout of data layer(s) from active to selected meshes.

Select the object that you want to copy the data to, hold down shift, select the source object with the modifications at it. Choose Transfer Mesh Data Layout. A popup with the available methods will appear. Choose what you want to do.

The menu has basically the same menu items like Transfer Mesh Data. The difference is in what you can do in the last operator. It transfers the whole data layer.

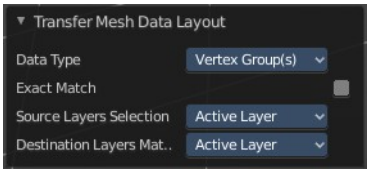
Last Operator Transfer Mesh Data Layout

Data Type

Choose again what you want to do.

Exact Match

Also Delete some data layers from destination if necessary, so that it matches the source exactly.



Source Layers Selection

Which layers to transfer, in case of multi-layer types.

Mygroup

Mygroup is in this case a vertex group i have created for demonstration purposes.

Active Layer

Only transfer the active data layer.

All Layers

Transfer all data layers.

Destination Layers Matching

How to match source and destination layers.

By Name

Match target data layers to affect by name.

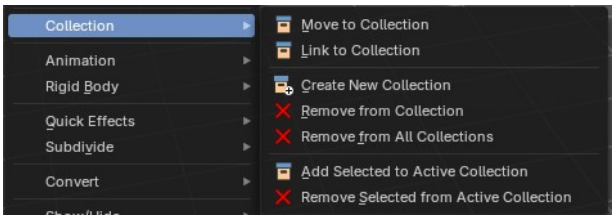
By Order

Match target data layers to affect by order (indices).

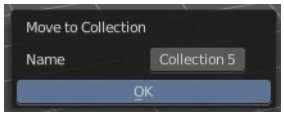
Active Layer

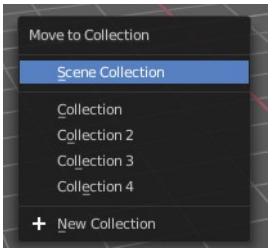
Only transfer the active data layer.

Collection



Move to Collection





Moves the selected object to a collection. The object is removed from the collection it was in. And moved to the target collection.

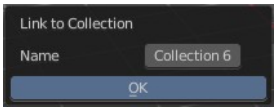
By clicking at this menu item a popup will appear to choose the new collection. Allows also to create a new collection. Once done, the object will be moved to this new created collection.

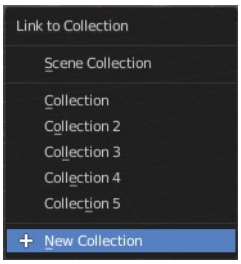
Last Operator Move to Collection

Name

Set a name for your new collection. When you haven't created a new collection, then this name stays blank.

Link to Collection

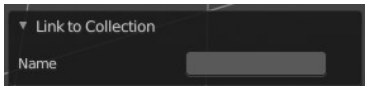




Links the object to a collection. The object remains in the collection it was in.

By clicking at this menu item a popup will appear to choose the collection. Here you can also create a new collection. Once done, the object will be linked to this new created collection.

Last Operator Link to Collection



Name

Set a name for your new collection. When you haven't created a new collection, then this name stays blank.

Remove From Collection

Objects can be in more than one collection. Remove from collection removes the selected object from the current collection.

When the object is in no collection anymore, then it gets removed.

Remove From all Unlinked Collections

Objects can be in more than one collection. Remove from all unlinked collection removes the selected object from all unlinked collections.

When the object is in no collection anymore, then it gets removed.

Add selected To Active Collection

Objects can be in more than one collection. Adds the selected object to the active collection.

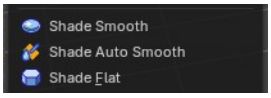
Remove Selected From Active Collection

Objects can be in more than one collection. Removes the selected object from the active collection.

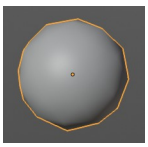
When the object is in no collection anymore, then it gets removed.

Shade Smooth, Shade Smooth and Shade Flat

Shade Smooth



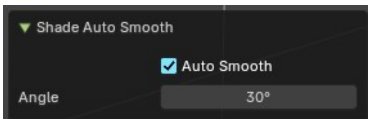
Shows with a mesh object. Sets the shading for the object to smooth. Smooth means that the sharp edges are no longer seen.



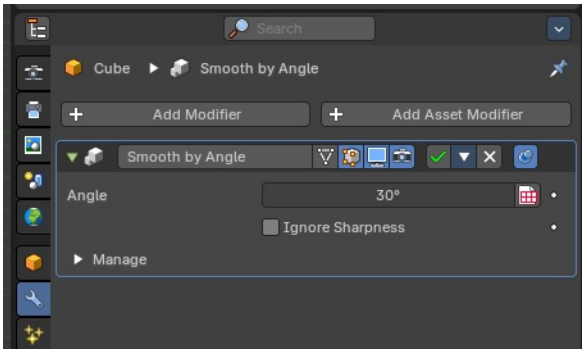
Shade Auto Smooth

Sets the shading for the object to smooth with Autosmooth activated. Autosmooth means that sharp edges above an angle threshold will have sharp faceted faces, meanwhile angles under the threshold will be smooth.

Last Operator Shade Smooth by angle



Auto Smooth



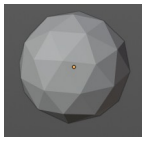
Creates a auto smooth modifier for auto smoothing in the modifier stack. Where you can adjust the settings at any further step. Else it applies the current auto smooth to the mesh normals.

Angle

Maximum angle between face normals that will be considered as smooth.

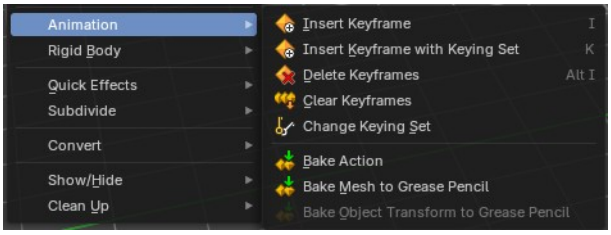
Shade Flat

Sets the shading for the object to flat. Flat means that every face of the object shows faceted, with a sharp edge.



Animation

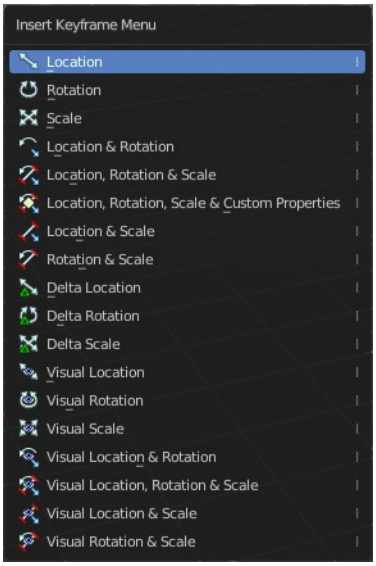
Insert Keyframe



Inserts a key frame.

When your object does have a active keying set, then a click at the button inserts the key frame directly. When a keying set is missing then you will see a Insert Key frame menu choose the keying method.

Insert Keyframe with keying set



Calls the insert keyframe menu.

The keying set defines what kind of key frames gets recorded. When you start with an animation, and your object does not have a keying set yet, then you will be prompted with a menu choose the proper keying set. The Insert Key frame menu.

Note that this just adds a keying set to the current key frame. And not to the whole object. That's why the keying set menu down right stays empty when you add a key frame this way. And the insert keyframe menu also misses the Whole Character keying set.

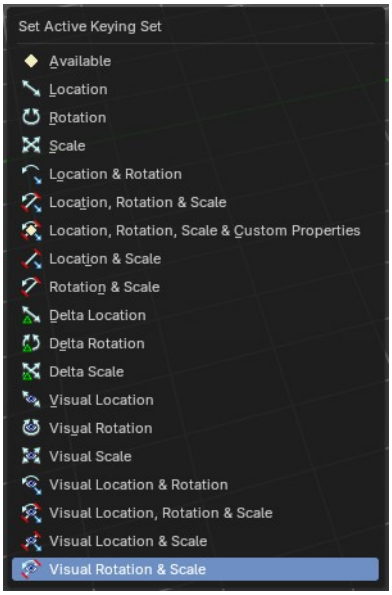
Delete Key frame

Removes the current active key frame for the selected object. You will get a confirmation dialogue.

Clear Key frames

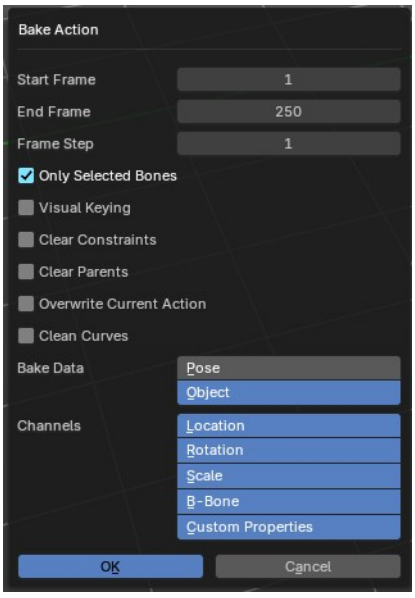
Clears all animation, and removes all key frames for the selected object.

Change Keying set



Calls the set active keying set menu in which you can change the active keying set.

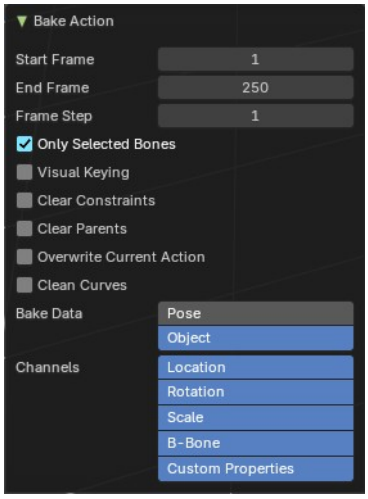
Bake Action



Bake Action bakes the object animation to a new action. Bake action calls a panel adjust the settings for the new action.

The upcoming panel has the same settings than the last operator panel.

Last Operator Bake Action



Start Frame

Defines the start frame for baking.

End Frame

Defines the end frame for baking.

Frame Step

Defines the frame step for baking.

Only Selected Bones

Pose Baking only.

Visual Keying

Key frame from the final transform.

Clear Constraints

Remove all constraints from keyed objects / bones, and do visual keying.

Clear Parents

Bake animation onto the object, then clear parents (objects only)

Overwrite current Action

Bake Action into current action instead of creating a new one.

Clean Curves

After baking curves, remove redundant keys.

Bake Data

Which data transformations to bake to. You have the choice between Pose and Object here.

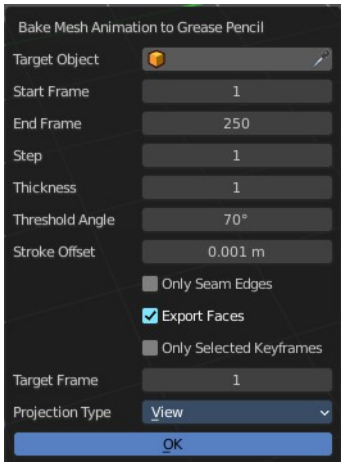
Channels

Which channels to bake to.

Bake Mesh to Grease Pencil

Bakes mesh animation to grease pencil strokes.

Bake Mesh Animation to Grease Pencil



When you use the Bake Mesh to Grease Pencil tool then a menu pops up with further settings.

Target Object

Target grease pencil object. Leave emtpy to create a new stroke.

Start Frame

The start frame of the animation.

End Frame

The end frame of the animation.

Step

Step between generated frames.

Thickness

The thickness of the grease pencil stroke.

Threshold Angle

Threshold to determine the end of the strokes.

Stroke Offset

Stroke offset from fill.

Only Seam Edges

Convert only seam edges.

Export Faces

Export faces as filled strokes.

Only Selected Keyframes

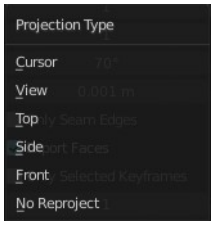
Convert only selected keyframes.

Target Frame

The destination frame.

Projection Type

How to project the grease pencil stroke.

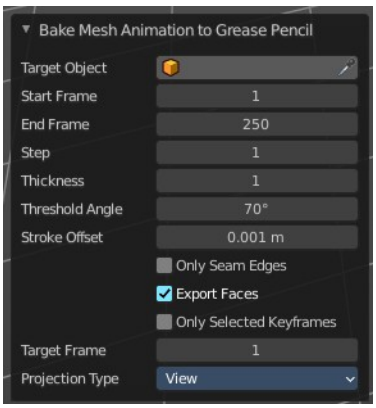


OK

Accept the settings.

Last Operator Bake Mesh Animation to Grease Pencil

In the last operator you can again adjust the settings. It is the same settings than in the settings dialog. So we won't cover it again.

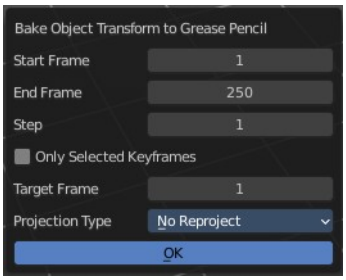


Bake Object Transform to Grease Pencil

Bakes grease pencil object transforms into single grease pencil keyframes. You need to have a keyframe animation recorded already. The result can then be found in the dopesheet editor in grease pencil mode.

When you perform this tool then an option panel will open up.

Bake Transform to Grease Pencil panel



Start Frame

The start frame to calculate.

End Frame

The end frame to calculate.

Step

The steps between generated frames

Only selected Keyframes

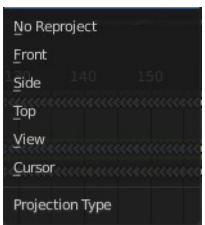
Convert only selected keyframes.

Target Frame

The destination frame.

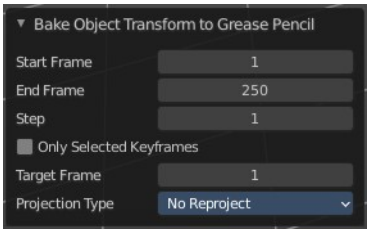
Projection Type

If the grease pencil object should be reprojected, and with what method.

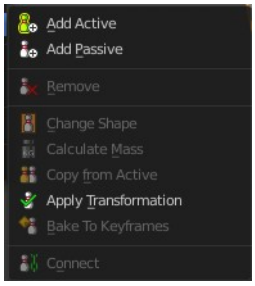


Last Operator Bake Transform to Grease Pencil panel

The last operator contains the same settings than the settings panel.



Rigid Body



Rigid Bodies belongs to physics. And can be added and modified in the physics tab in the Properties editor. This menu items here is just a quick way to add and modify the most basic things from within the 3D view.

The greyed out menu items becomes active when a rigid body is at the object.

Add Active

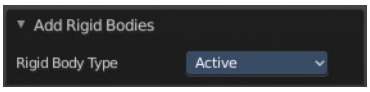
Add Active adds a rigid body to the selected object. The type of this rigid body is active. This is useful for any actively moving object. Characters, bullets, etc.

Add Passive

Add Active adds a rigid body to the selected object. The type of this rigid body is passive. This is useful for any static object, like ground for example.

Last Operator Add Rigid bodies

The rigid body type is a drop-down box choose if the type of the rigid body is active or passive.

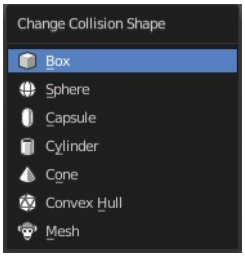


Remove

Remove simply removes the rigid body from the current object.

Change shape

Change Shape opens a pop-up menu change the shape of your rigid body.

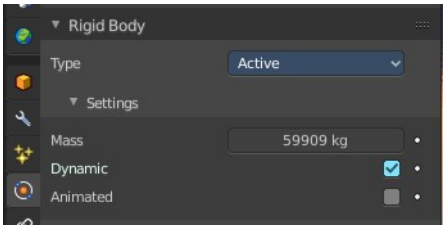


Last Operator Change Collision shape

Rigid Body Shape is a pop-up menu change the shape of your rigid body again.

Calculate Mass

Calculate Mass does NOT calculate the mass. But gives you a long pop-up menu list choose between different predefined mass set-ups. The corresponding value will then be set in the physics settings in the Rigid Body settings.



Last Operator Calculate Mass

Material Preset

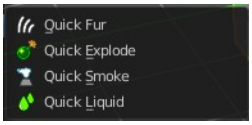
Material Preset is a pop-up menu choose the type of preset again.

Density

Set a custom density for the material preset.

Quick Effects

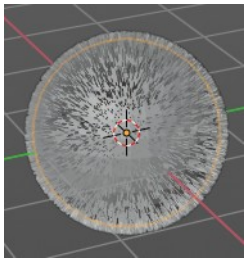
The quick effects menu contains some predefined basic Particle effects. They can be tweaked further in the Properties editor then.



You need to have a mesh object selected.

Quick Fur

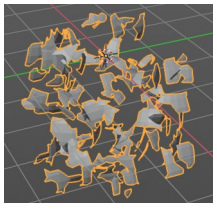
Adds a particle system with Fur settings.



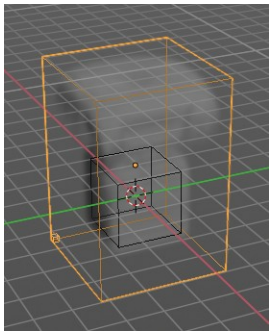
Quick Explode

Adds a particle system that lets the selected object explode into pieces.

Hit play to play the animation.



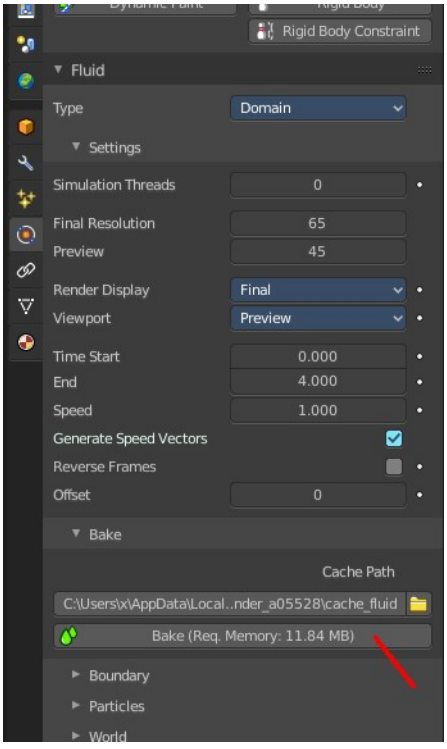
Quick Smoke



Adds a particle system with a simple smoke.

Hit play to play the animation.

Quick Fluid



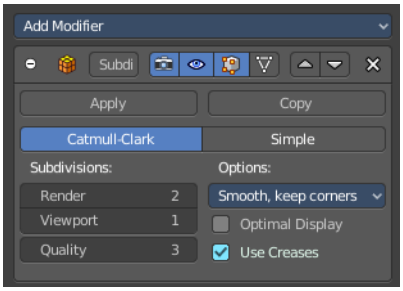
Adds a particle system with Fluid settings.

This feature does not completely work out of the box. You need to bake the animation first. This can be done in the Properties Editor, Particles Tab, Fluid Panel in the Bake sub panel.

Subdivide

Subdivide is a menu where you can quickly set the subdivision level of the selection. What it does is to add a SDS modifier in the Properties Editor if required. And set the SDS level to the needed value. Crtrl 0 sets SDS to level 0. Ctrl 1 sets SDS level to 1 , and so on.

SDS happens at Object mode level. Even when you apply it in the Edit Mode! And it happens at the whole object.



Last Operator Subdivision Set

Level

Adjust the SDS level.

Relative

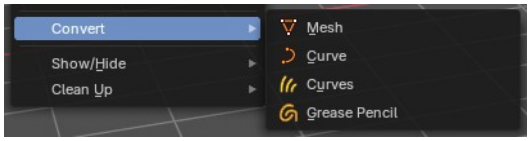
Applies the Subsurf Level as an offset relative to the current level.

Convert to

Convert to is a menu to convert object types to other object types. Not every object type can be converted to every object type though. A mesh cannot be converted to a grease pencil for example.

Note that different objects shows different content.

General



Mesh

Converts a selected object to a Mesh Object.

Curve

Converts a selected object to a Curve Object.

Curves

Converts a selected curve to a Hair curves object.

Grease Pencil

Converts a selected curve to a grease pencil stroke.

Grease pencil object

Converts a selected curve to a grease pencil stroke.

Path

Converts a selected grease pencil object to a path.

Bezier Curve

Converts a selected grease pencil object to a bezier curve.

Polygon Curve

Converts a selected grease pencil object to a polygon curve.

Image object

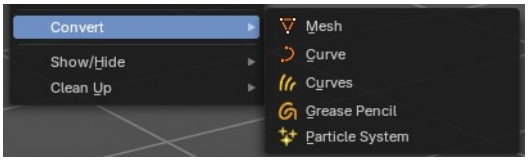
Convert to Mesh Plane

Converts a selected image object to a mesh plane.

Trace Image to Grease Pencil

Extract Grease Pencil strokes from an image.

Hair curve



Particle System

Convert a curves hair object to a particle system.

Last Operator Convert to

Target

Target is a drop-down box that allows you to choose the convert method again.

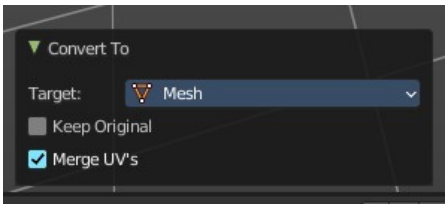
Target Point Cloud, Mesh, Curve

Keep Original

With this option ticked the original object gets kept. And a new object gets created.

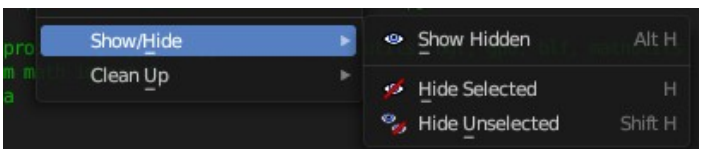
Merge UV's

Merge UV coordinates that share a vertex to account for imprecision in some modifiers.



Show/Hide

Sub-menu with shows or hide selection, unselected or hidden operators.



Show Hidden

Makes all geometry in the scene visible again.

Hide Selected

Hides the selected geometry.

Last Operator Hide Selected

Unselected

Hides the not selected geometry.

Hide Unselected

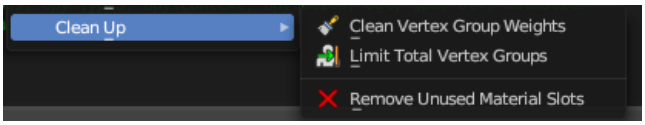
Hides the not selected geometry. The selected geometry stays visible.

Clean Up

Sub-Menu with clean up operators to help do some house keeping when it comes to vertex groups, weights and material slots.

Clean Vertex Groups

Remove vertex assignments that are not required. This will delete any zero influence vertex groups.



Limit Total Vertex Groups

Limit deform weights associated with a vertex to a specified number by removing lowest weights. This will set a total amount of vertex group influences per vertice.

Remove Unused Material Slots

Removed unused material slots on the selected object.