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Mesh Cache Modifier

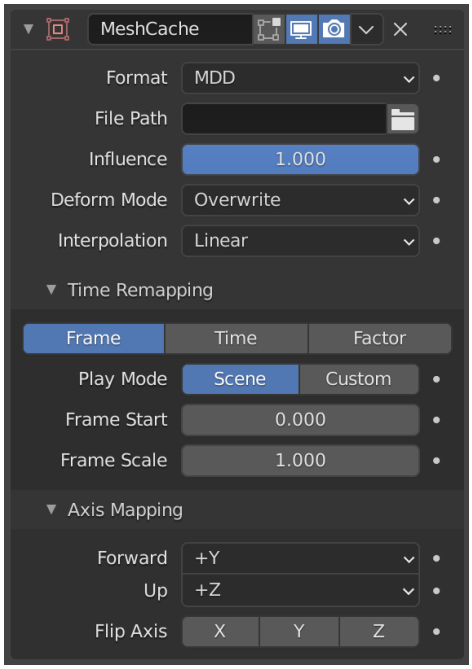
The *Mesh Cache* modifier applies animated mesh data from an external file to a mesh, allowing it to deform over time. It is commonly used for importing animations from other applications, enabling smooth playback of cached deformations.

This modifier functions similarly to shape keys, but is specifically designed for playback of externally stored animations rather than keyframe-based deformations.

Important

Both `.mdd` and `.pc2` file formats rely on a consistent vertex order throughout the animation. Adding, removing, or reordering vertices after this modifier may cause unintended results.

Options



Mesh Cache Modifier.

Format

Specifies the input file format. The modifier currently supports `.mdd` and `.pc2`.

File Path

Path to the external cache file containing the animation data.

Influence

Controls the strength of the deformation. Lower values blend the cached animation with the original mesh shape.

Deform Mode

Determines how the cache data influences the mesh:

Overwrite:
Replaces vertex positions with those from the cache file.

Integrate:
Blends the cache deformation with existing deformations, such as shape keys or modifiers.

Note

This mode is best suited for minor, localized adjustments. Large transformations, such as reposing limbs, may not work as expected.

Interpolation

Controls how frames between cache data are handled:

None:
Uses only the raw frame data from the cache without interpolation.

Linear:
Blends between frames for smoother transitions, useful when cache frames do not align perfectly with the scene frames.

Vertex Group

If set, restrict the effect to the only vertices in that vertex group.

Invert <->

Inverts the influence of the selected vertex group, meaning that the group now represents vertices that will not be deformed by the modifier.

The setting reverses the weight values of the group.

Time Remapping

Time Mode

Defines how animation time is interpreted:

Frame:

Ignores timing data from the cache and plays back frames directly. This mode provides direct control over playback speed.

Time:

Uses the cache's timing data, including offsets and frame durations.

Factor:

Maps the entire animation to a range between `0` and `1` for precise control.

Play Mode

Specifies how playback timing is determined:

Scene:

Uses the scene's current frame for playback.

Frame Start

Defines the starting frame for playback.

Frame Scale

Adjusts the playback speed by scaling time.

Custom:

Allows manual control of animation timing.

Evaluation Value

Determines animation playback position, which can be animated for precise control.

Axis Mapping

Forward/Up Axis

Specifies the forward and up axes of the imported animation, ensuring proper orientation.

Flip Axis

Flips the animation along a chosen axis if the imported data requires correction.