

Velocity RE

This page provides information about the Velocity Render Element in V-Ray for Cinema 4D.

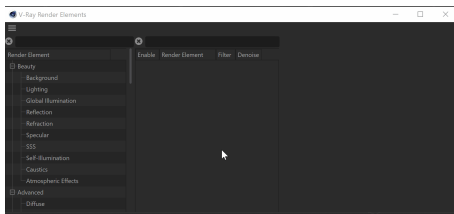
Overview

The Velocity Render Element is a color or grayscale image that stores velocity information about objects that have moved between the current frame and the next frame. It stores surface velocity for moving objects in the scene with different colors representing different velocities. Each moving object is rendered with a flat color or gradient. It is commonly used to create mattes for adding motion blur in a composite.

The shading in the Velocity Render Element is determined by the degree of motion for each object's pivot point. The object's motion between the current frame and the next frame on the X, Y, and Z axes is mapped to R, G, and B components, with movement along the negative axis as 0 and movement along the positive axis as the maximum value. For example, a white object has moved at the maximum velocity on all three axes in a positive direction, while a black object has moved at the maximum velocity in a negative direction on all three axes. A pale yellow object has moved greatly on all three axes in the positive direction, but mostly on X and Y, while a dark purple object has moved on the -X and -Z axes. A medium gray color indicates no motion.

Because of the relationship between XYZ motion and RGB colors, the Velocity Render Element can be easily split into R, G, and B components during the compositing process. Each direction can be handled separately or together to add motion blur.

UI Path: ||V-Ray|| > **Render Elements** > **Velocity**



How to add a render element to a scene

Properties

Enable Deep Output – Specifies whether to include this render element in deep images.

Clamp Velocity – Sets the limit for **Max Velocity**. When enabled, this option limits the max velocity value to 1 for floating point images, 255 for 8-bit images, or 65535 for 16-bit images. This option is useful only when writing to an 8-bit or 16-bit file format.

Max Velocity – Used to scale the velocity values written to the render element so that they fit within the range specified by the **Clamp Velocity** parameter. This is only useful if writing to an 8-bit or 16-bit file format.

Max Velocity Last Frame – Shows the maximum velocity value that was found while rendering the last image. This is a read-only parameter and can be used as a guide for setting the **Max Velocity** parameter.

Ignore Z – Disregards motion along the Z axis.

Filtering – Applies the image filter to this channel.

Properties

Enable Deep Output ☒

Clamp Velocity ☒

Max Velocity

Max Velocity Last Frame

Ignore Z ☒

Filtering ☒