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Ray Portal BSDF

Cycles Only

The *Ray Portal BSDF* node transports rays that enter to another location in the scene. It can be used to render portals for visual effects, and other production rendering tricks.

It acts much like a [Transparent BSDF](#): render passes are passed through, and it is affected by light path max transparent bounces.

Note

- The *Ray Portal BSDF* only allows rays to pass through it in one direction. Add a second portal at the target location to make rays go in the other direction as well.
- Light sampling does not work efficiently through portals. This can lead to increased noise from lights on the other side of portals. Particularly small lights may be very noisy, or not pass through at all.

Inputs

Color

Tint rays passing through the portal.

Position

Ray start position at new location. Defaults to the current position, matching the Position output of the [Geometry node](#).

Direction

Ray direction at the new location. Defaults to the current view direction, which is the same as the negation of the Incoming output of the [Geometry node](#).

Properties

This node has no properties.

Outputs

BSDF

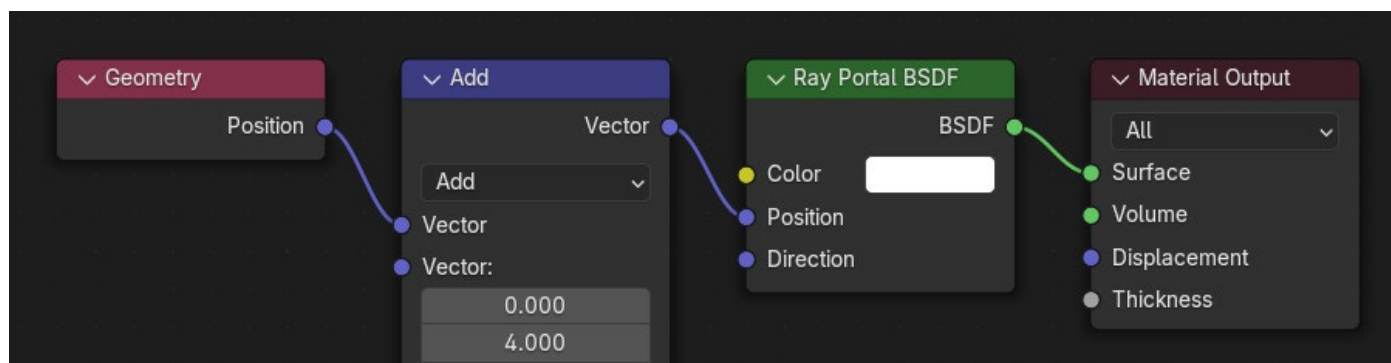
Standard shader output.

Examples

One use case for the *Ray Portal BSDF* is to connect two spaces together to create effects like a portal to an alternative dimension, or “impossible space” where something is bigger or smaller on the inside than expected.

To set up a *Ray Portal BSDF* for a technique like this, augment the *Position* and *Incoming* outputs of the [Geometry node](#) to set the exit point and direction of the ray through the portal. Here are some examples:

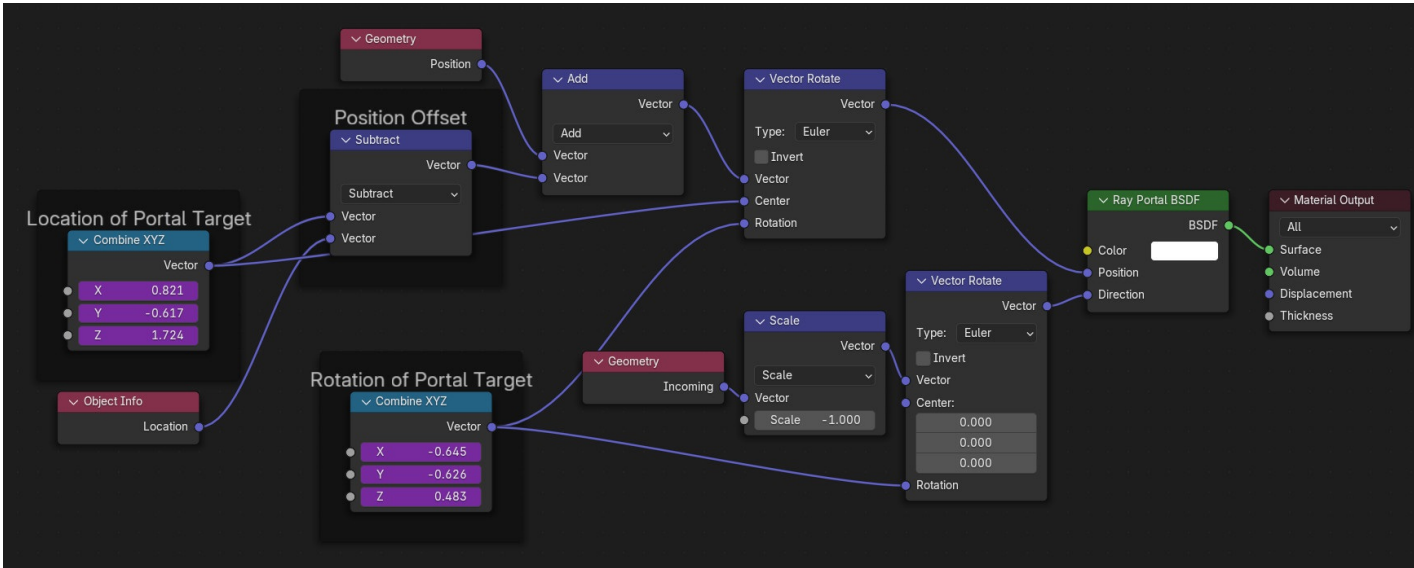
Simple Offset





This simple node setup offsets the ray position. In this example, the ray is offset 0 units along the X axis, 4 units along the Y axis, and 5 units along the Z axis.

Portal



In this example, the *Location of Portal Target* and *Rotation of Portal Target* vectors are obtained from a target portal object using [Drivers](#).

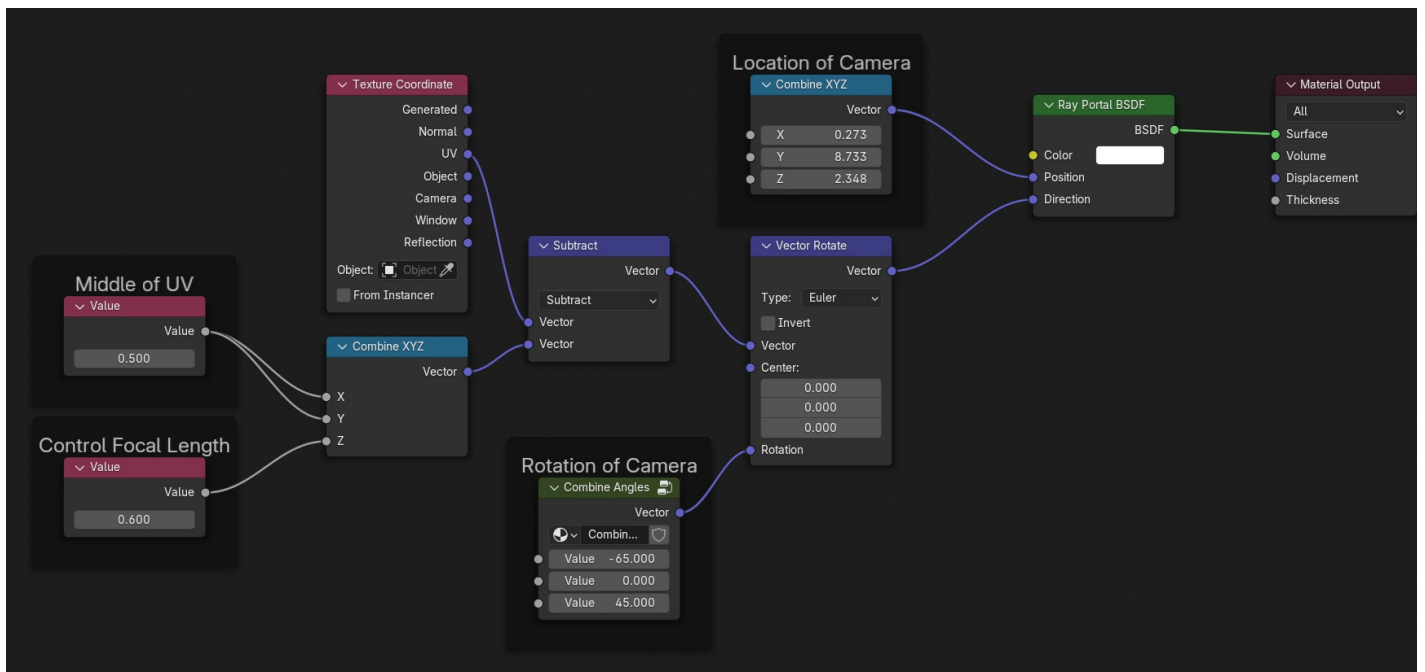
Camera Feed

Along with augmenting rays, the ray position and ray direction can be replaced, for effects like a camera feed on a screen.





Using the Ray Portal BSDF to replicate the effect of a camera feed on a screen.



Node setup for replicating a camera feed like effect on a screen.