PxrStylizedHatching

Visualizer

- **Beauty** - turns this node off, and shows the previous beauty of the daisy chain if another DisplayFilter connected before this one, or just the regular beauty render if no other DisplayFilter node connected.
- **Hatching Final** - auto composite that adds the hatching to the previous beauty
- **Hatching Blend** - grayscale showing just the hatching texture blending (if shows up red your hatching textures need to be 3 color RGB not single channel float)
- **Hatching On Color** - Ignore albedo color for base color and use a given color for all objects.
    - Hatch On Color - Use this color for all objects.
    - Hatch On Background - Use background color or texture for object albedo color. The texture will swim if there is movement.
    - Add Spec - Add specular contribution to hatching
- **Hatching Camera Range** - if using hatching frequency based on camera distance option, shows the result here
- **Diffuse** - standard diffuse AOV, to see one of the signals its using for troubleshooting
- **Diffuse Luminance** - correct RGB weighting for converting color to grayscale, currently not used in any modes, just a visualizer
- **Signal Energy** - the internal "white shader pass" that this node creates and uses to blend the hatching
- **Triplanar Test Colors** - preview of triplanar blending, with solid colors

Signal AOV

Name of a color AOV to use for the signal to hatching. Typically diffuse can put any light AOV here. This AOV has to be set up in Maya/Katana/Houdini or DisplayFilter will exit.

Signal Energy From

Under the hood a white shader approximation is created based off the Signal AOV to drive the Hatching. By default using average of RGB components of Signal AOV, but can also divide Signal AOV lighting results with a pure albedo from NPRalbedo AOV or albedo AOV. If NPRalbedo AOV chosen, must set Albedo Color in Stylized Controller Pattern node.

Hatch Color From

Select which AOV to determine the coloring of the hatching

Hatching Color

Hatching color, if Hatch Color From selected Color Swatch

Background Color

Background color outside of alpha

Background Tex

Provide BG texture, if blank uses BG Color

Light Mask Switch

Use light aov defined in signal_aov_string above as mask for previously daisy-chained Stylized shaders and/or physically based lighting

Alpha Hatch Switch

When using Light Mask, black areas of hatch are transparent to previously daisy-chained or physically based layers

NPR Mix

0: disables this Hatching Node and shows previous node if daisy chained, or original beauty if no previous Stylized Looks nodes. 1: full Hatching from this node.

Camera Range Page

Camera Range Mask Switch

Mask out regular hatching (When Visualizer on Hatching On Color, Hatching Final) by Camera Range defined by Z_min and Z_max below

Z Depth Mode

Slightly different Z depth data from these 2 sources

Cam Dist Z Min

Linstep Min on Z (blue channel from lineNZ)

Cam Dist Z Max

Linstep Max on Z (blue channel from lineNZ)

Remap Spline Swatch Select to use the Ramp spline below

Z Min Hatch Frequency

Frequency at Cam Dist Z Min

Z Max Hatch Frequency

Frequency at Cam Dist Z Max

Hatching Page

Hatching Gamma

Gamma to final hatching, smaller numbers make it higher contrast. Try 0.5

Rainbox Test

Replace tex1-tex8 with RED, ORANGE, YELLOW, GREEN, BLUE, INDIGO, VIOLET, TURQUOISE for previewing blending

Blending Mode

Select between Mix and Weighted blending. Mix is an auto blend between all textures. Weighted uses custom weighting functions with a Blending Hold and Blending Overlap

Blend Black Darkest

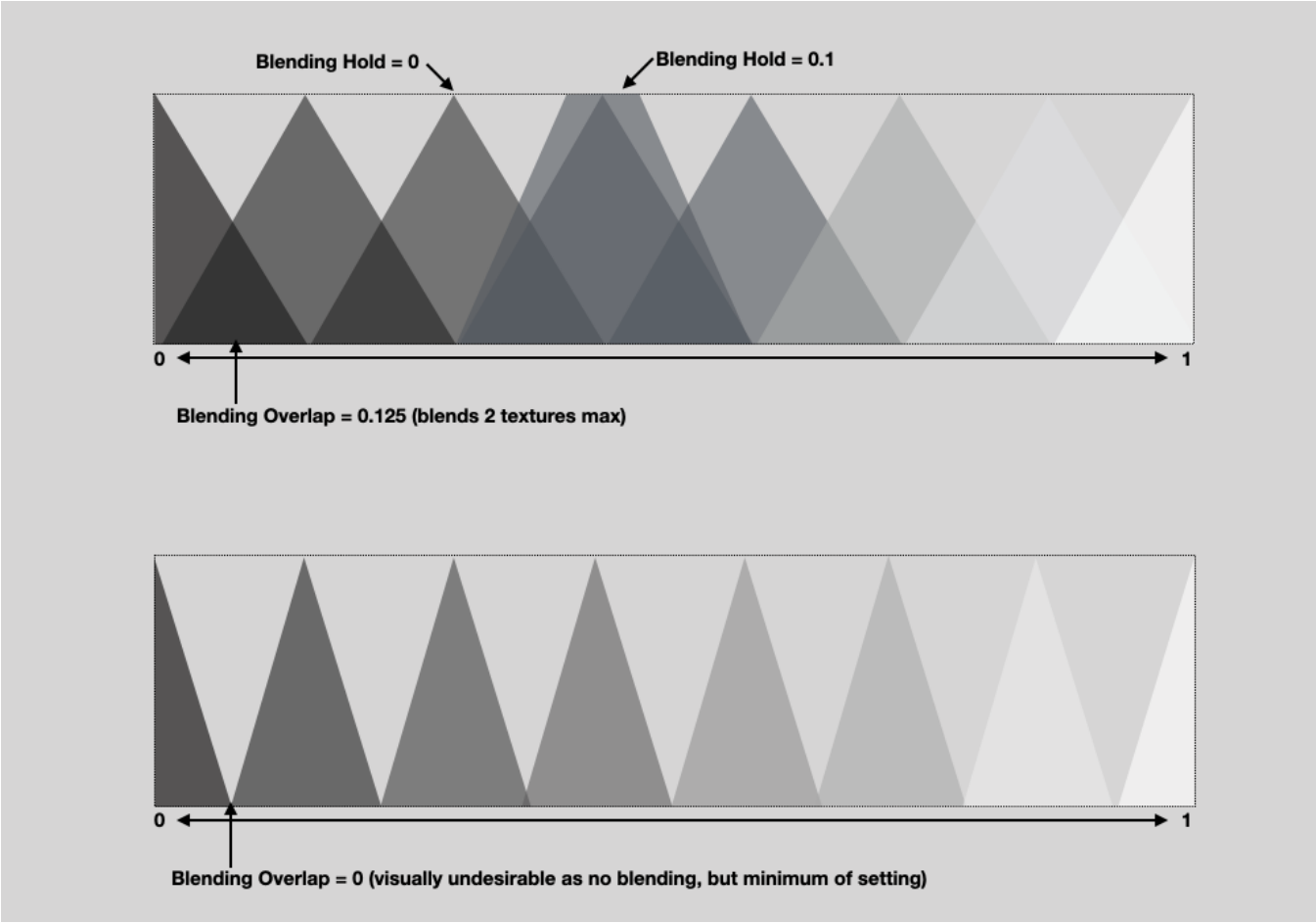
After the darkest texture, tex8, add solid color black

Blending Hold

Values above 0 keep each texture more prominent

Blending Overlap

Overlap of the Bell Curve weighting function. 0.125 is minimum and blends 2 textures, higher values blend more up to 8 textures.



Projection

Triplanar P AOV

Name of a color AOV to use for the triplanar blending of P. If set to "NPRPtriplanar": need to plug PxrManifold3d into LS_Pattern_NPR node to provide custom co-ordinate system. Can also be factory "P" "__Pref" "Pworld" if those AOVs are setup.

Triplanar N AOV

Name of a color AOV to use for the triplanar blending of N. If set to "NPRNtriplanar": need to plug PxrManifold3d into PxrStylizedControl node to provide custom co-ordinate system. Can also be factory "N" "__Nref" if those AOVs are setup.

In the video above, the column on the left, N, shows the texture "swimming" through the triplanar Normal mask because the object is deformed. The column on the right, __Nref, shows the original N on the surface of the deforming geo, thus having the same texture even as the face orients in different directions. The only hatching texture changes are when the object goes in and out of shadow, as the hatching is based on lighting.

Triplanar Blending

A value of 0 has no blending, through to 1 for full blending.

Hatch Freq Mode

Higher numbers, higher frequency. For screen start at 1. For triplanar start at 0.005.

Progressive Tex Switch

Hatching Freq Mode

Hatch Tex Color Mix

Select a coordinated set of hatching textures from the predefined collection. Or specify the directory name of your own custom set (will be expanded as dirname/dirname-01.tex, etc). Or pick 8 individual textures separately.

Hatching Frequency

Higher numbers, higher frequency. For screen start at 1. For triplanar start at 0.005.

Texture Set

Select hatching from several presets