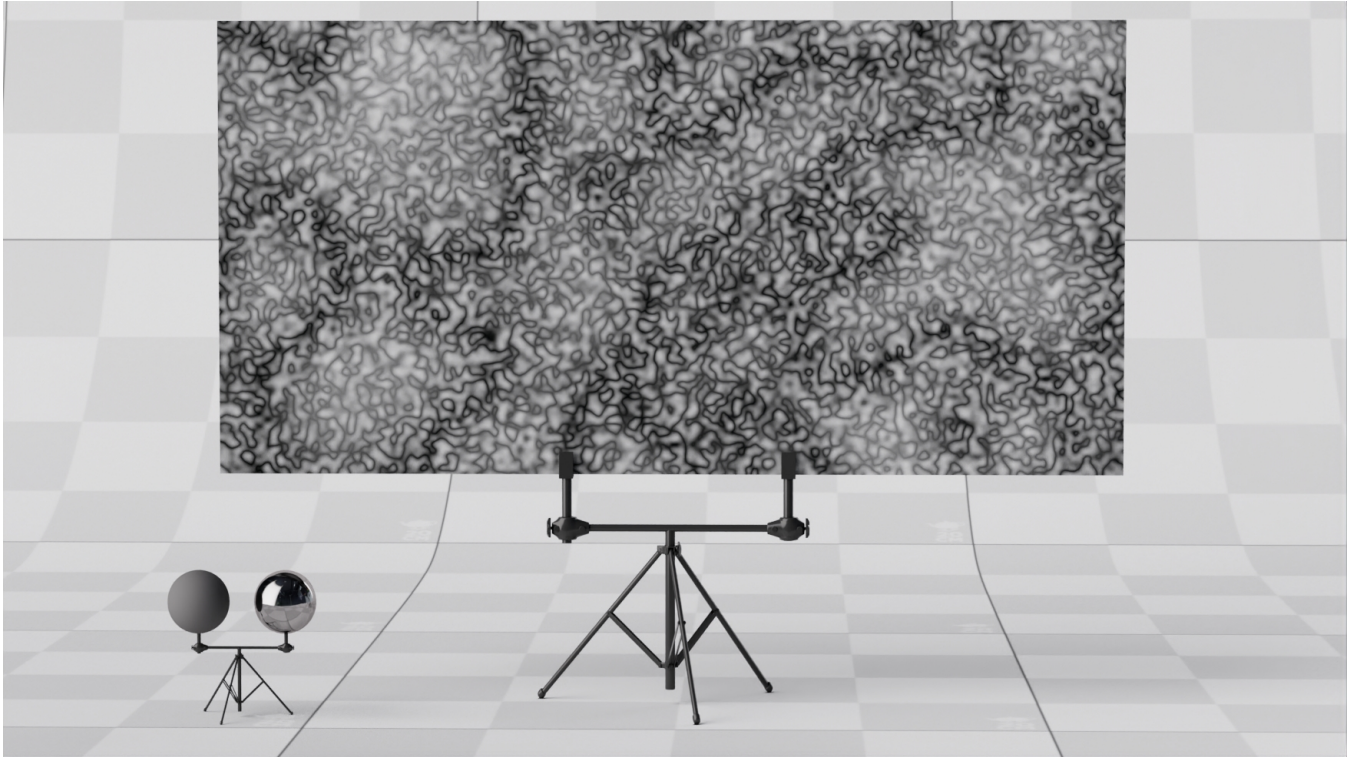


PxrVoronoise



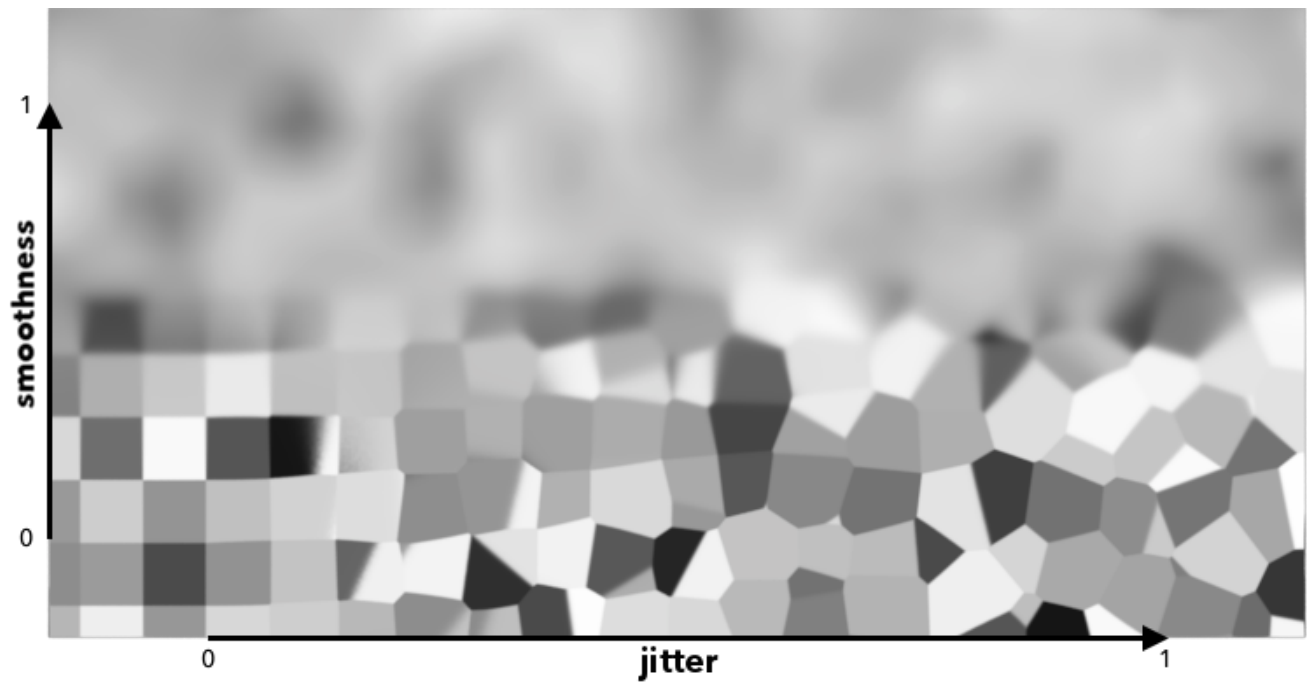
Like all texture style nodes, this node takes a manifold that describes either a 2D or 3D domain to apply a voronoise texture to. The default behavior if no manifold is attached is to apply over P in 3D. This node computes the voronoise function, which is a blend of noise and [Voronoi](#) as described by Inigo Quilez.

The jitter and smoothness parameters allow you to create different types of patterns.

- jitter=0,smoothness=0 produces a minimum distance non-jittered grid of values, like RSL's cellnoise.
- jitter=0,smoothness=1 gives a noise function, similar to perlin's.
- jitter=1,smoothness=0 produces a jittered, minimum distance Voronoi pattern.
- jitter=1,smoothness=1 produces a combination of jittered Voronoi and noise : "voronoise" !



Compared to Inigo's code, this version also adds fractal octaves and turbulence



Manifold

The manifold over which to apply the noise. (The default is P).

Global

Surface Position

Frequency

Sets the lowest (starting) frequency of the noise layers.

Octaves

The number of noise octaves used. More octaves add successively more noise.

Inner Loop

Gain

Also known as persistence. Used to shrink or expand the amplitude of each successive octave of noise. $1/f$ noise is achieved when $\text{gain} = 1/\text{lacunarity}$

Lacunarity

The scaler used to determine the frequency of each successive octave of noise. Smaller numbers will cause the layers to be more closely spaced in frequency. Larger values will space them further apart.

Jitter

Controls the amount of jitter applied. 0 gives a regular grid, 1 gives a Voronoi like grid

Smoothness

Using 0 produces a voronoi/cellnoise pattern, 1 results in smooth noise.

Turbulent

Should the noise be turbulent

Better Contrast

Improve contrast when smoothness increases

Octaves

Smoothness Offset

Increase/decrease smoothness per octave

Smoothness Offset Wrap

Wrap the smoothness range (0-1) or just clamp

Advanced

Filter

Change the filter size

Adjust Output

Color Scale

A multiplier for the color values in a texture can be used to adjust brightness or manipulate individual color channels

Color Offset

Apply an offset to the result, shifting the colors of the result

Float Scale

Scalar float value

Float Offset

Float Offset value

Output Parameters

resultF

The result of voronoise texture.

resultRGB

The voronoise texture as a monochromatic color.