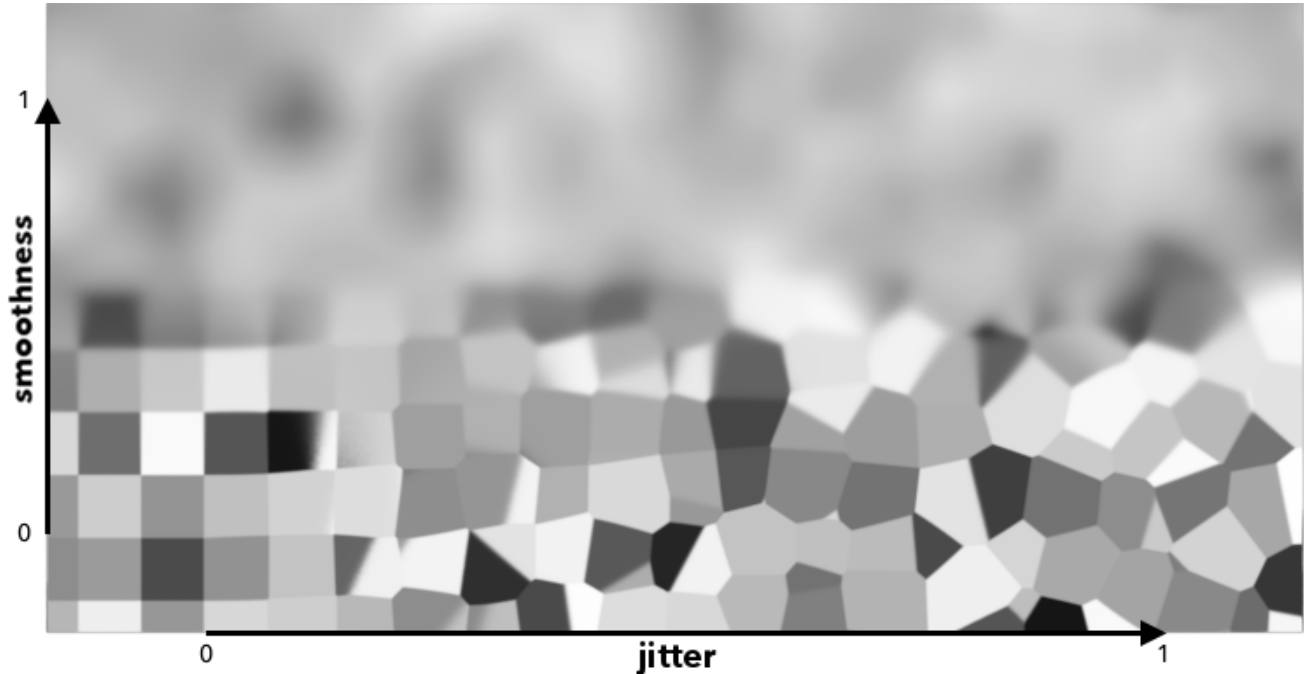


# PxrVoronoise



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

## Input Parameters

### Frequency

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

### Octaves

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

### Gain

Also known as persistence. Used to shrink or expand the amplitude of each successive octave of noise.  $1/f$  noise is achieved when 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 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

**Manifold**

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

**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

**Alpha Scale**

A multiplier for the alpha channel, useful when the alpha is used to drive a parameter

**Alpha Offset**

An offset for the alpha channel, useful when the alpha is used to drive a parameter

**Output Parameters****resultF**

The result of voronoi texture.

**resultRGB**

The voronoi texture as a monochromatic color.