

NeuroFractals Pack

Changelog

v1.0

- initial release

Features overview

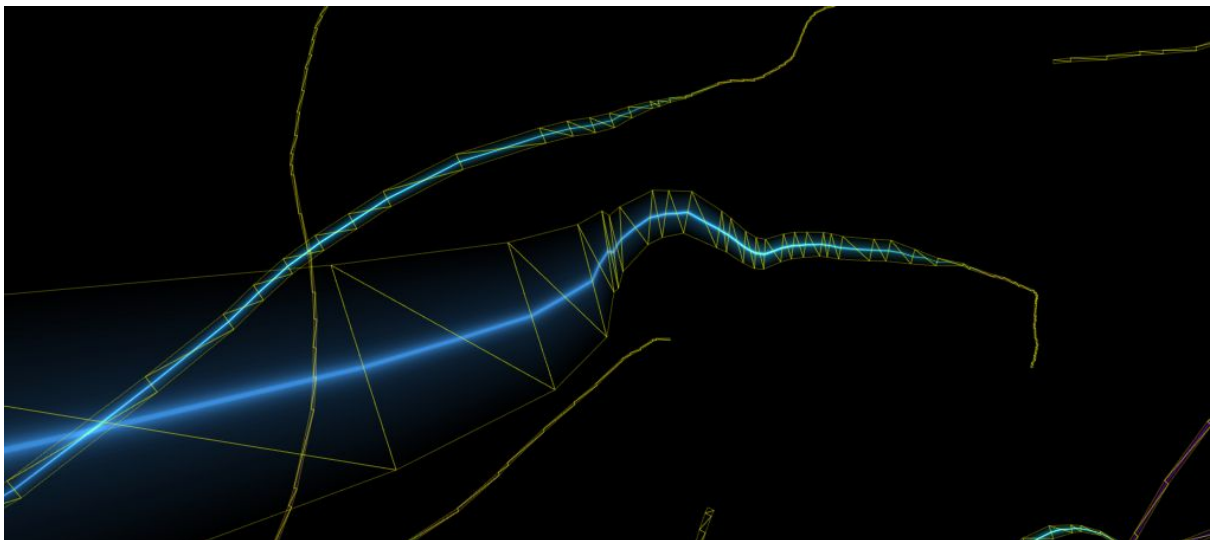
In this pack you can find 12 different types of models. This little guide will help you to understand how to use them.

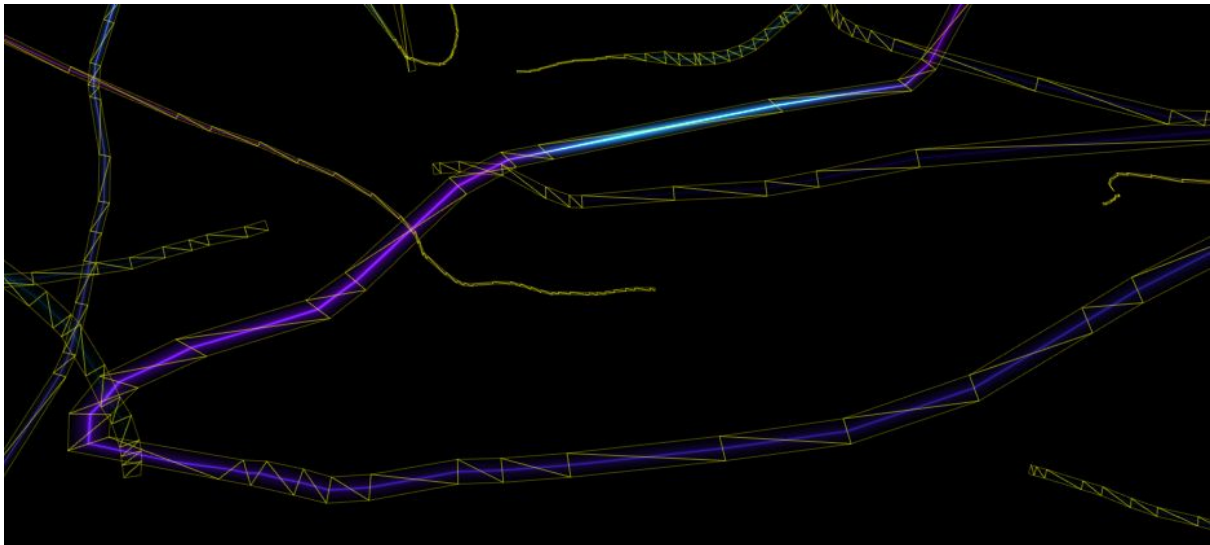
- Brain
- CPU
- Curls
- Directional
- DirectSpread
- Flow
- Landscape
- Lightning
- Noise
- Spread
- Turbulence
- Vortex

Each of these types has its own variations.

All these models should be used with shader “NeuroFractalsPack/LinesShader” which ships with this pack.

All these models are optimized in special way. There is more or less segments depending on line curvature. The shader controls the thickness of each line.





Shader parameters

AutoTime



If this option is enabled, the shader begins to shift the textures:

Shape ThicknessModifier - only if **Thickness OverTime** is enabled.

Color - only if **Color OverTime** is enabled.

Impulse - only if **Impulse OverTime** is enabled.

AutoTime Speed



Inactive by default. Becomes active if **AutoTime** parameter is enabled.

Determines the texture shift speed if **AutoTime** is enabled.

Animation Time



Determines the texture shift distance if **AutoTime** is disabled.

Animation JitterTime



Determines variation of texture shift distance.

If **AutoTime** parameter is disabled and **Animation Time** is not changing then you will not see any effect from changing this value.

Animation InvertDirection



Inverts texture shift direction if enabled.


If **AutoTime** parameter is disabled and **Animation Time** is not changing then you will not see any effect from changing this value.

Shape Thickness

Shape Thickness	0.7
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Determines the thickness of the lines.

Shape ThicknessProfile

Shape ThicknessProfile				 Select	
Tiling	X	1	Y		1
Offset	X	0	Y		0

Determines the transparency of the surface across each line. You can use any monochrome texture in this parameter. You can find special textures in “*NeuroFractalsPack\Textures\ThicknessProfile*”

Shape ThicknessModifier

Shape ThicknessModifier				 Select	
Tiling	X	1	Y		1
Offset	X	0	Y		0

This texture will change thickness of the lines. You can use any monochrome texture in this parameter.

Shape ThicknessModifierValue

Shape ThicknessModifierValue	2
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Controls ***ThicknessModifier*** texture effect strength.

Thickness OverTime

Thickness OverTime	<input type="checkbox"/>
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Allows the ***ThicknessModifier*** texture to shift along U coordinate with time.

ThicknessModifier Offset

ThicknessModifier Offset	0
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Shifts ***ThicknessModifier*** texture if ***Thickness OverTime*** is disabled.

Shape LengthProfile

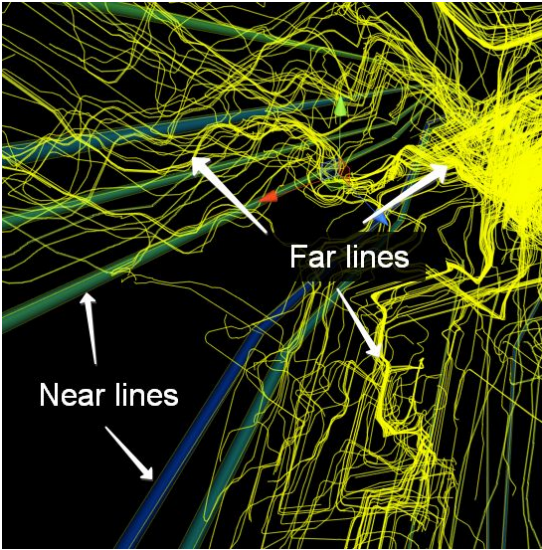
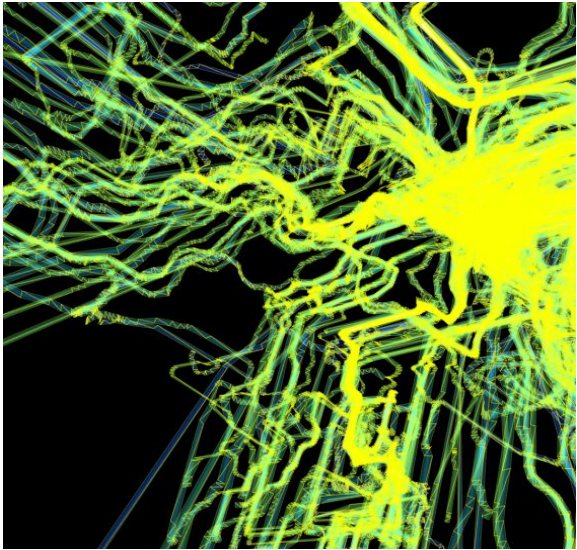
Shape LengthProfile				 Select	
Tiling	X	1	Y		1
Offset	X	0	Y		0

Determines the transparency of the surface along each line. You can use any monochrome texture in this parameter. You can find special textures in “*NeuroFractalsPack\Textures\LengthProfile*”

Shape CompensateDistance

Shape CompensateDistance

1

<p>If this parameter is set to 0, then thickness of each line will decrease depending on the distance to the camera.</p>	<p>If this parameter is set to 1, then thickness of all lines on the screen will be the same.</p>
	

Intermediate values will be interpolated. You can use this parameter to avoid the flickering caused by very thin lines far in the distance.

Shape Crop to Start/End

Shape Crop to Start/End

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If this enabled then **Shape Start** and **Shape End** parameters determines the distance on which the line will appear and disappear.

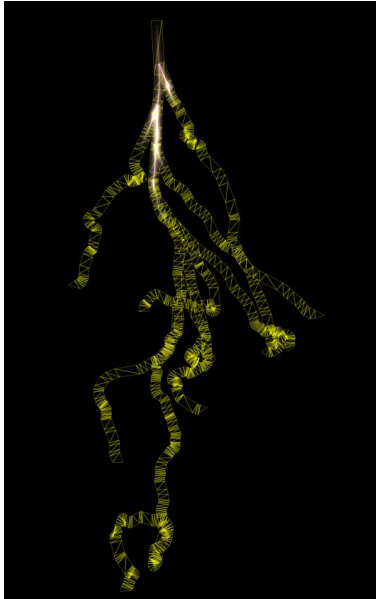
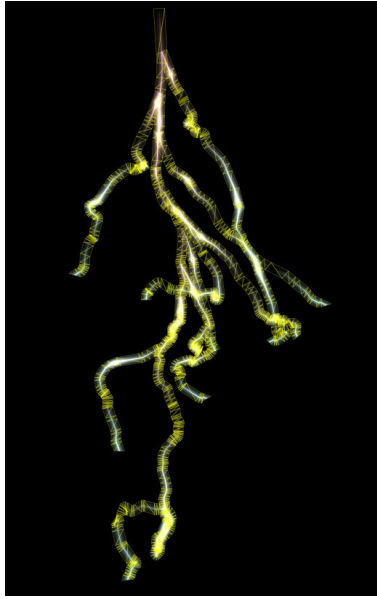
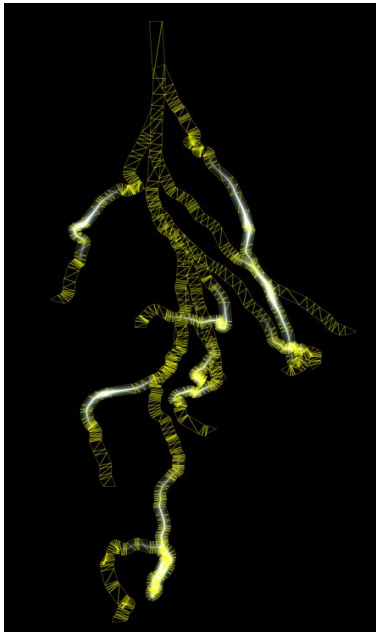

Shape Start, Shape End

Shape Start

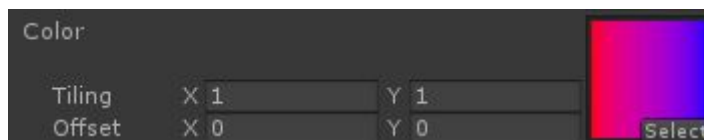
0

Shape End

1

	Shape Crop to Start/End Enabled	Shape Crop to Start/End Disabled
<p>Shape Start = 0 Shape End = 0.3</p> <p>LengthProfile texture will be remapped from 0-1 U texture coordinate to 0 and 0.3 respectively.</p> <p>If Shape Crop to Start/End enabled then LengthProfile texture tiling will be turned off. Otherwise the texture will be repeated.</p>		
<p>Shape Start = 0.6 Shape End = 0.9</p> <p>LengthProfile texture will be remapped from 0-1 U texture coordinate to 0.6 and 0.9 respectively.</p> <p>If Shape Crop to Start/End enabled then LengthProfile texture tiling will be turned off. Otherwise the texture will be repeated.</p>		

ColorRamp



Color from this texture will be mapped on the lines along their lengths. You can use any color ramp texture here. You can find special textures in *"NeuroFractalsPack\Textures\ColorRamp"*

ColorRamp Offset

A dark grey rectangular control bar. On the left, the text "ColorRamp Offset" is displayed in a light grey font. On the right, there is a small, light grey rectangular box containing the number "0".

ColorRamp texture will be shifted along U coordinate by this value

Color OverTime

A dark grey rectangular control bar. On the left, the text "Color OverTime" is displayed in a light grey font. On the right, there is a small, light grey square containing a white checkmark.

Allows the **ColorRamp** texture to shift along U coordinate with time.

Color Hue

A dark grey rectangular control bar. On the left, the text "Color Hue" is displayed in a light grey font. On the right, there is a small, light grey rectangular box containing the value "-0.25".

You can change color hue using his multiplier.

Color Saturation

A dark grey rectangular control bar. On the left, the text "Color Saturation" is displayed in a light grey font. On the right, there is a small, light grey rectangular box containing the value "0.9".

You can change color saturation using his multiplier.

Color Multiplier

A dark grey rectangular control bar. On the left, the text "Color Multiplier" is displayed in a light grey font. On the right, there is a small, light grey rectangular box containing the value "1".

You can multiply color by this value.

Color JitterHue

A dark grey rectangular control bar. On the left, the text "Color JitterHue" is displayed in a light grey font. In the center, there is a horizontal slider with a small circular knob. On the right, there is a small, light grey rectangular box containing the value "0.09".

This parameter can randomize hue values across all lines. Value determines the strength of randomization.

Color JitterSaturation

A dark grey rectangular control bar. On the left, the text "Color JitterSaturation" is displayed in a light grey font. In the center, there is a horizontal slider with a small circular knob. On the right, there is a small, light grey rectangular box containing the value "0.54".

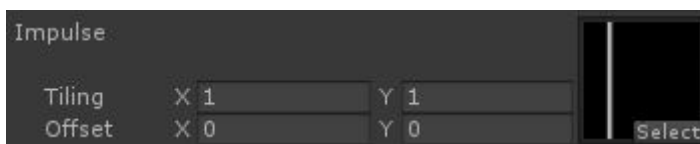
This parameter can randomize saturation values across all lines. Value determines the strength of randomization.

ColorTint

A dark grey rectangular control bar. On the left, the text "ColorTint" is displayed in a light grey font. On the right, there is a small, light grey rectangular box containing a white square, which is a color picker.

Final color values will be multiplied by this color.

Impulse

A dark grey rectangular control bar. On the left, the text "Impulse" is displayed in a light grey font. Below it, there are two rows of controls. The first row has the text "Tiling" followed by two small, light grey rectangular boxes containing the values "X 1" and "Y 1". The second row has the text "Offset" followed by two small, light grey rectangular boxes containing the values "X 0" and "Y 0". On the right, there is a small, light grey rectangular box containing a white square, which is a color picker, and a small, light grey rectangular box containing the text "Select".

This texture will change intensity and color of the lines. You can use any monochrome texture in this parameter.

Impulse Color



Impulse texture will be multiplied by this color.

Impulse Multiplier



Impulse texture will be multiplied by this value.

FadeIn



If enabled then lines will decrease their transparency when they will be near the camera.

FadeIn Distance



Inactive by default. Becomes active if **FadeIn** parameter is enabled.

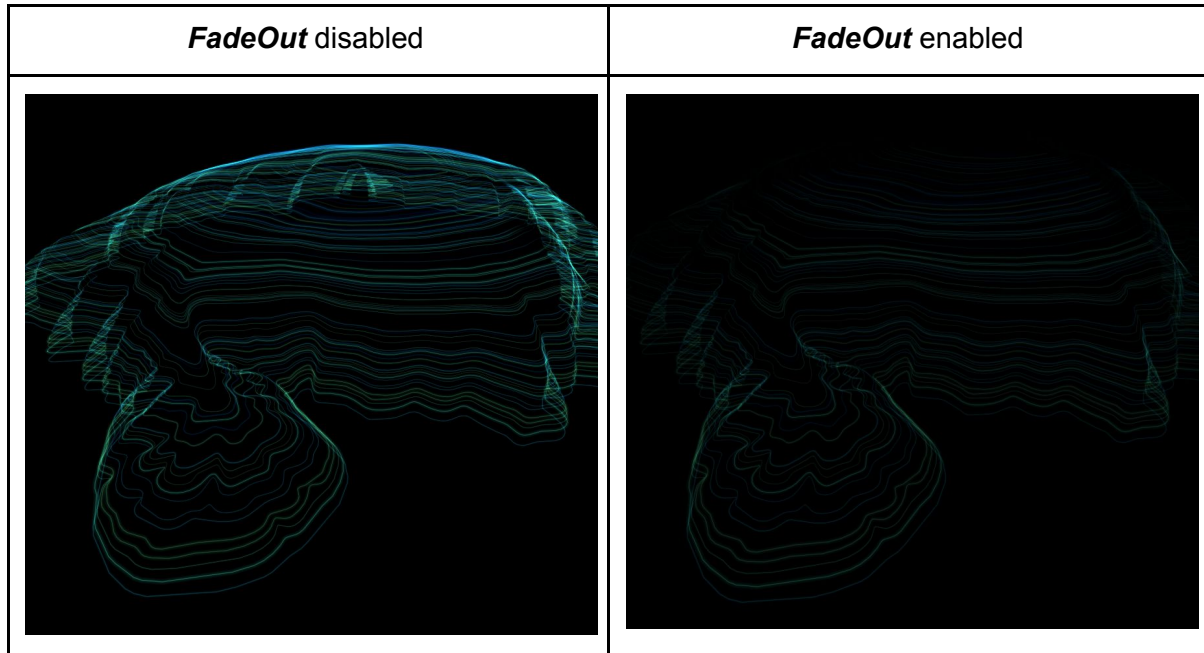
Lines begin to disappear if distance to their surface is less than this value. Helps to hide geometry clipped by near clipping plane of the camera.

	FadeIn enabled	FadeIn disabled
FadeIn Distance = 0.05		
FadeIn Distance = 1.5		

FadeOut

FadeOut ☐

If enabled then lines will decrease their transparency by distance.



FadeOut Distance

FadeOut Distance 5

Inactive by default. Becomes active if ***FadeOut*** parameter is enabled.

Lines becomes fully transparent when distance to their surface will be equal to this value.

FadeOut Exponent

FadeOut Exponent 2

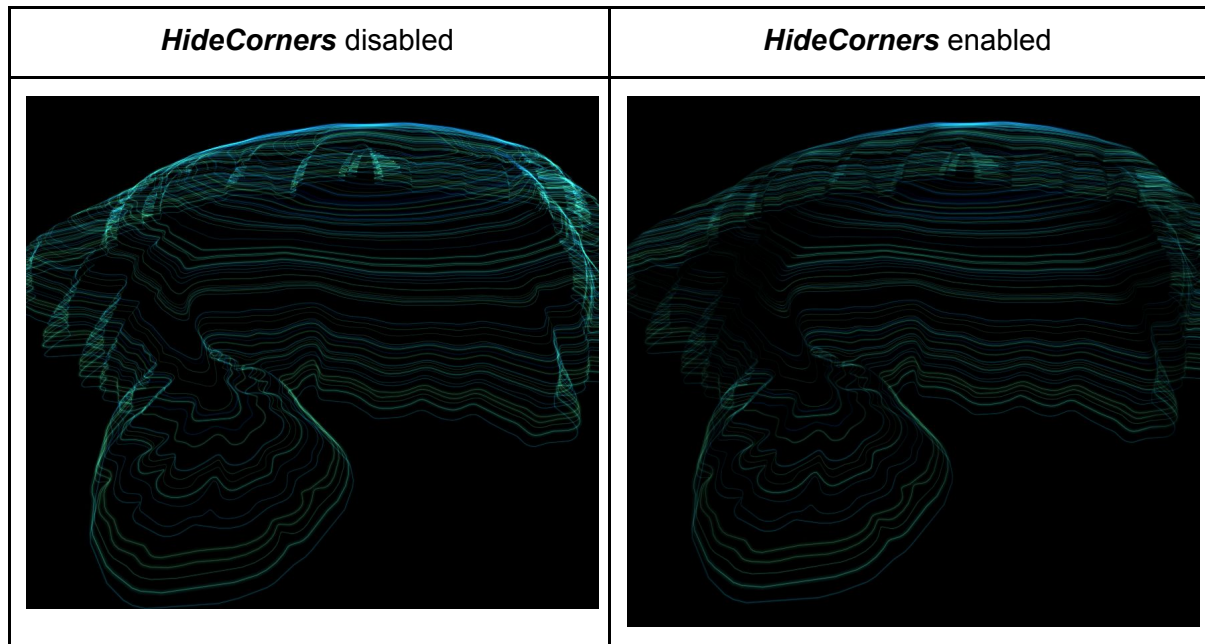
Inactive by default. Becomes active if ***FadeOut*** parameter is enabled.

Lines attenuation by distance has a linear effect if this value is equal to 1. Otherwise you can get exponential attenuation. This value determines the exponent.

HideCorners



If enabled then lines will decrease their transparency when they pass parallel to the direction of the camera's view.



HideCorners Size



Inactive by default. Becomes active if **HideCorners** parameter is enabled.

It is changing lines transparency depending on its direction relative to the camera.

If this parameter is set to 0, then all parts of lines surface are visible.

If this parameter is set to 1, then only lines that are perpendicular to the direction of the camera are visible. Intermediate values will be interpolated.

Using NeuroFractals with Unity particle system

You can find examples in “*NeuroFractalsPack\Prefabs\ParticleSistemExamples*”

This shader will acquire particles alpha channel.

If you use **Color over Lifetime** feature, you can change NeuroFractal's models transparency per particle.

