

UIShaderEffects-EdgeEffects UIToolkit

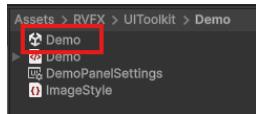
Description

High-quality UI edge shaders designed **exclusively for Unity 6.3+ and UI Toolkit (URP only)**.

Currently in **beta**, and **mobile platforms are not supported yet**.

Includes multiple customizable shaders, example effects, and textures.

Demo Scene

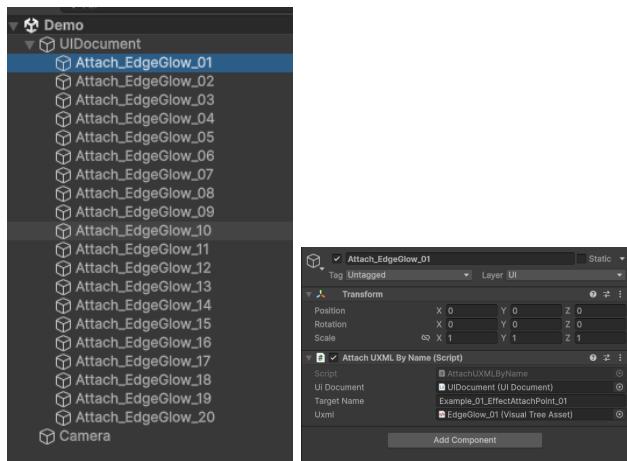


Scene Location:

Assets/RVFX/UIToolkit/Demo/Demo.scene

Scene Structure:

Inside the demo scene, you'll find the following hierarchy:

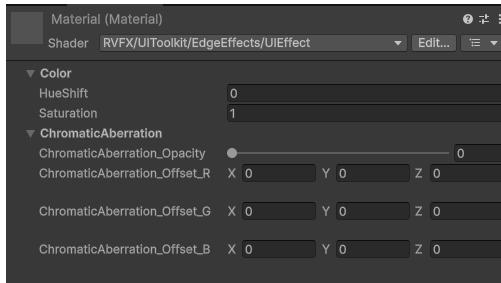


Each child object (e.g., `Attach_EdgeGlow_01`, `Attach_EdgeGlow_02`, etc.) contains an **AttachUXMLByName** component, which attaches a UXML effect to a target element inside the **Demo.uxml** file assigned to the **UIDocument**.

This setup is provided **for demonstration purposes**, and you can adapt or integrate it in your own way depending on your project's requirements.

Shaders

UIEffect



HueShift:

Applies a hue shift to the color's RGB values.

Saturation:

Adjust color values (RGB) by desaturating or saturating them. A value of 1.0 represents the neutral point, with values below 1.0 indicating desaturation and values above 1.0 indicating increased saturation.

ChromaticAberration_Opacity:

Controls the opacity of chromatic aberration, ranging from 0 to 1.0.

ChromaticAberration_Offset_R:

Adjusts the UV coordinate offset for the red color channel. Use the `.x` and `.y` values to control the offset in horizontal and vertical directions, respectively.

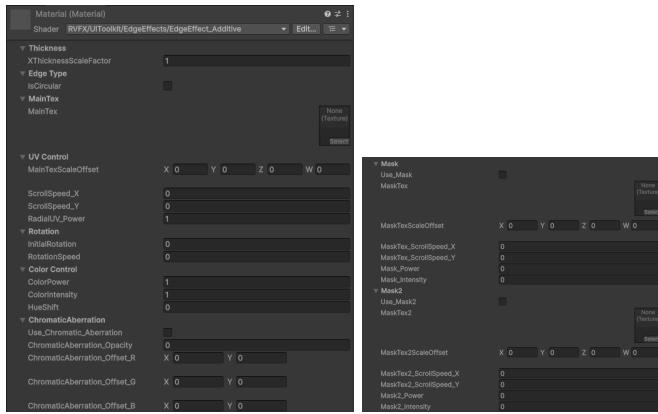
ChromaticAberration_Offset_G:

Adjusts the UV coordinate offset for the green color channel. Use the `.x` and `.y` values to control the offset in horizontal and vertical directions, respectively.

Chromatic_Aberration_Offset_B:

Adjusts the UV coordinate offset for the blue color channel. Use the `.x` and `.y` values to control the offset in horizontal and vertical directions, respectively.

EdgeEffect_Additive & EdgeEffect_Multiplicative



XThicknessScaleFactor:

Controls the thickness along the x-axis. Useful for creating rectangular edge effects.

IsCircular:

Choose the edge type. When selected, it sets the edge to a circular type; otherwise, it defaults to a square edge.

MainTex:

Specifies the texture for the edge.

MainTexScaleOffset:

Adjusts the UV tiling and offset for the main texture. Use `.xy` to control the tiling and `.zw` to set the offset.

ScrollSpeed_X:

Controls the scrolling speed of the main texture along the UV.x axis.

ScrollSpeed_Y:

Controls the scrolling speed of the main texture along the UV.y axis.

RadialUV_Power:

Applies a power function to the radial UV coordinates. A higher value makes the lines tighter, while a lower value makes them wider.

InitialRotation:

Initial UV Rotation value along z axis.

RotationSpeed:

UV Rotation speed along z axis.

ColorPower:

Adjusts the intensity of the color(RGB) using a power function. The color is modified as `pow(color.rgb, colorPower)`.

Color Intensity:

Multiplies the color's RGB values to adjust its intensity.

HueShift:

Applies a hue shift to the color's RGB values.

Use_Chromatic_Aberration:

Enable or disable the chromatic aberration feature.

ChromaticAberration_Opacity:

Controls the opacity of chromatic aberration, ranging from 0 to 1.0.

ChromaticAberration_Offset_R:

Adjusts the UV coordinate offset for the red color channel. Use the `.x` and `.y` values to control the offset in horizontal and vertical directions, respectively.

ChromaticAberration_Offset_G:

Adjusts the UV coordinate offset for the green color channel. Use the `.x` and `.y` values to control the offset in horizontal and vertical directions, respectively.

Chromatic Aberration_Offset_B:

Adjusts the UV coordinate offset for the blue color channel. Use the `.x` and `.y` values to control the offset in horizontal and vertical directions, respectively.

UseMask: Enables the opacity masking feature.

MaskTex: Specifies the texture used for masking.

MaskTexScaleOffset: Adjusts the tiling and offset for the mask texture. Use `.xy` for tiling and `.zw` for offset.

MaskTex_ScrollSpeed_X:

Controls the scrolling speed of the mask texture in the uv.x direction.

MaskTex_ScrollSpeed_Y:

Controls the scrolling speed of the mask texture in the uv.y direction.

Mask_Power:

Applies a power function to the mask texture value, computed as `pow(maskTex.r, Mask_Power)`.

Mask_Intensity:

Mask value intensity multiplier.

UseMask2: Enables the secondary opacity masking feature.

MaskTex2: Specifies the texture used for second masking.

MaskTex2ScaleOffset: Adjusts the tiling and offset for the second mask texture. Use `.xy` for tiling and `.zw` for offset.

MaskTex2_ScrollSpeed_X:

Controls the scrolling speed of the second mask texture in the uv.x direction.

MaskTex2_ScrollSpeed_Y:

Controls the scrolling speed of the second mask texture in the uv.y direction.

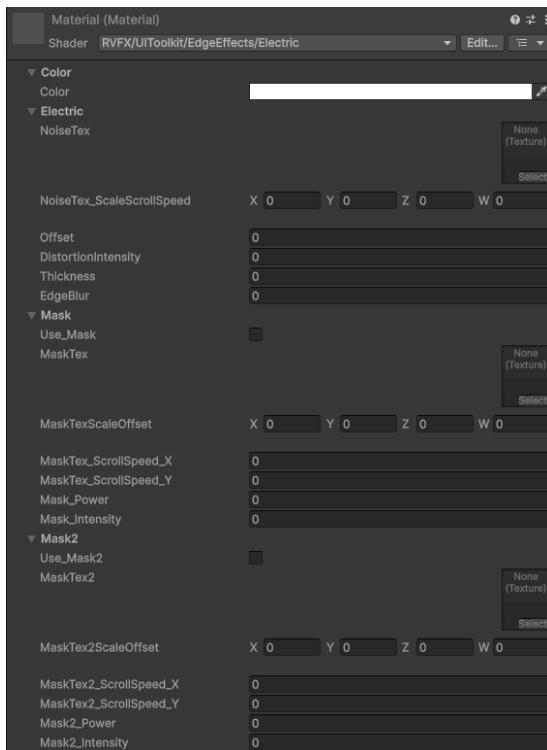
Mask2_Power:

Applies a power function to the second mask texture value, computed as `pow(maskTex2.r, Mask2_Power)`.

Mask2_Intensity:

Second mask value intensity multiplier.

Electric & Electric_Multiplicative



Color: The color applied to the electric effect.

NoiseTex: The texture used to generate the electric pattern.

NoiseTex_ScaleScrollSpeed: `.xy` controls the tiling of the **NoiseTex**, while `.zw` adjusts the scroll speed.

Offset: The positional offset of the electric line.

DistortionIntensity: The amplitude of distortion applied to the electric line.

Thickness: The thickness of the electric line.

EdgeBlur: The intensity of the blur effect applied to the edges of the electric line.

UseMask: Enables the opacity masking feature.

MaskTex: Specifies the texture used for masking.

MaskTexScaleOffset: Adjusts the tiling and offset for the mask texture. Use `.xy` for tiling and `.zw` for offset.

MaskTex_ScrollSpeed_X:

Controls the scrolling speed of the mask texture in the uv.x direction.

MaskTex_ScrollSpeed_Y:

Controls the scrolling speed of the mask texture in the uv.y direction.

Mask_Power:

Applies a power function to the mask texture value, computed as `pow(maskTex.r, Mask_Power)`.

Mask_Intensity:

Mask value intensity multiplier.

UseMask2: Enables the secondary opacity masking feature.

MaskTex2: Specifies the texture used for second masking.

MaskTex2ScaleOffset: Adjusts the tiling and offset for the second mask texture. Use `.xy` for tiling and `.zw` for offset.

MaskTex2_ScrollSpeed_X:

Controls the scrolling speed of the second mask texture in the uv.x direction.

MaskTex2_ScrollSpeed_Y:

Controls the scrolling speed of the second mask texture in the uv.y direction.

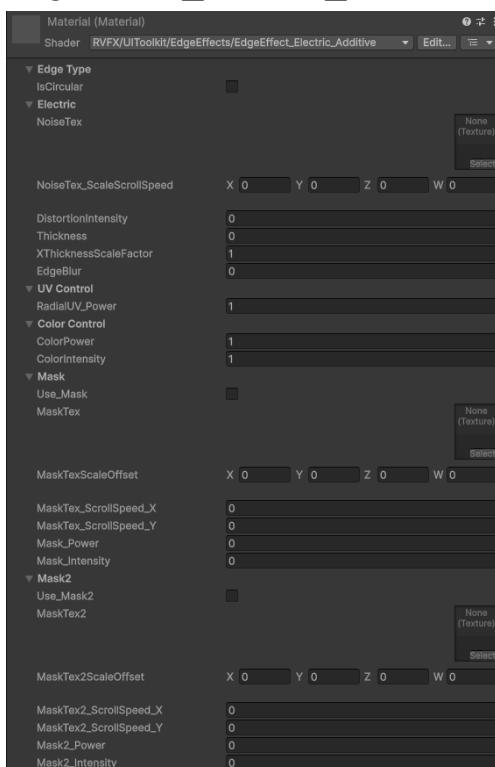
Mask2_Power:

Applies a power function to the second mask texture value, computed as $\text{pow}(\text{maskTex2}.r, \text{Mask2}_\text{Power})$.

Mask2_Intensity:

Second mask value intensity multiplier.

EdgeEffect_Electric_Additive & EdgeEffect_Electric_Multiplicative



IsCircular:

Choose the edge type. When selected, it sets the edge to a circular type; otherwise, it defaults to a square edge.

NoiseTex: The texture used to generate the electric pattern.

NoiseTex_ScaleScrollSpeed: `.xy` controls the tiling of the **NoiseTex**, while `.zw` adjusts the scroll speed.

Offset: The positional offset of the electric line.

DistortionIntensity: The amplitude of distortion applied to the electric line.

Thickness: The thickness of the electric line.

XThicknessScaleFactor:

Controls the thickness along the x-axis. Useful for creating rectangular edge effects.

EdgeBlur: The intensity of the blur effect applied to the edges of the electric line.

RadialUV_Power:

Applies a power function to the radial UV coordinates. A higher value makes the lines tighter, while a lower value makes them wider.

ColorPower:

Adjusts the intensity of the color(RGB) using a power function. The color is modified as

`pow(color.rgb, colorPower)`.

Color Intensity:

Multiplies the color's RGB values to adjust its intensity.

UseMask: Enables the opacity masking feature.

MaskTex: Specifies the texture used for masking.

MaskTexScaleOffset: Adjusts the tiling and offset for the mask texture. Use `.xy` for tiling and `.zw` for offset.

MaskTex_ScrollSpeed_X:

Controls the scrolling speed of the mask texture in the uv.x direction.

MaskTex_ScrollSpeed_Y:

Controls the scrolling speed of the mask texture in the uv.y direction.

Mask_Power:

Applies a power function to the mask texture value, computed as `pow(maskTex.r, Mask_Power)`.

Mask_Intensity:

Mask value intensity multiplier.

UseMask2: Enables the secondary opacity masking feature.

MaskTex2: Specifies the texture used for second masking.

MaskTex2ScaleOffset: Adjusts the tiling and offset for the second mask texture. Use `.xy` for tiling and `.zw` for offset.

MaskTex2_ScrollSpeed_X:

Controls the scrolling speed of the second mask texture in the uv.x direction.

MaskTex2_ScrollSpeed_Y:

Controls the scrolling speed of the second mask texture in the uv.y direction.

Mask2_Power:

Applies a power function to the second mask texture value, computed as `pow(maskTex2.r, Mask2_Power)`.

Mask2_Intensity:

Second mask value intensity multiplier.