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# **Getting Started**

1.	Add Translucent Image Source to your main camera.
2.	Create a <i>Blur Config</i> asset (or assign an existing one).
3.	Create a <i>UI &gt; Translucent Image</i> , as you would with normal Image.
4.	That's it!
/arn	ing

#### W

By default, Translucent Image will use a default Material. To make sure your Translucent Image are not affected by asset update, create your own Material. See Customize section for more info.

#### Note

Sometime the effect does not shown up immediately. If that happen, just switch to play mode. The effect will continue to show even when exit play

#### **Customize**

Translucent Image requires 2 components in a scene: 1 or more Source that control the blur amount, and multiple Translucent Image that replace the builtin Image component.

# **Translucent Image Source**

Translucent Image Source generate the blurred background. Its let you controls how much blur is present, the quality of blur and thus the performance trade-off.

#### **Blur Amount**

There are too two methods of controlling the amount of blur, Simple and Advanced:

#### Simple:

• Strength. Using this single property, you can (kinda) smoothly change the blur amount at runtime.

#### Advanced:

- Size: Increase blur amount without affecting performance, but will look bad if set too high or too low. Reduce flickering when increased. Allow smoothly interpolating between blur amount, but can't go down to 0.
- Iteration: Increase blur quality and blurriness. Affect performance slightly. Animating this will create noncontinuous change in blur amount.

#### Performance:

These allow you to fine-tune the performance-quality trade-off. This is more useful for less capable mobile devices or high resolution tablet.

- Max Depth: Increasing this property will:
  - Improves performance
  - o Increases blur amount if Iteration is high.
  - Cause flickering when the background moving.
- Downsample: Decrease the resolution before processing to increase performance. Side effects includes increased blurriness and flickering.
- Blur Region: Limit the blur effect to a region of the screen. If your UI does not span the entire screen, it is a good idea to use this to increase performance and reduce power usage.

Tip

You can visualize and visually edit this by turning on preview. The number here work the same as the Camera component Viewport. It easier to weld if you change x and y before w and h.

• Max Update Rate: How many times the screen is blurred per second. Use this to improve performance and decrease power usage.

Tip

Setting this to 0 will pause the effect completely. This can reduce power usage/ prevent overheat when you don't need a dynamically updating background, for example, in a pause menu.

• Preview: Show the effect in full-screen without creating a Translucent Image. It also show the Blur Region as a resizable white rectangle.

# **Translucent Image**

- Source Image, Color, Raycast Target, Image Type: same as built-in Image.
- Material: Multiple Translucent Images using the same material share some settings. They will batch dynamically into a single draw call.

#### Warning

- Material used here must use the shader UI/TranslucentImage.
- You should create your own Material instead of the default to avoid changes to look after asset updates.
- Source: a Translucent Image Source component. Will be automatically set to the first one found, so you should make sure there one in your scene before creating any Translucent Image. You can change this to select which camera will provide the background.

• Sprite Blending: Mix between Source Image property and the blurred background. This should be where you would use the alpha channel of the Color property in a normal Image component.

#### **Shared settings**

The following settings are shared across Translucent Images using the same material:

- Vibrancy: Colorful-ness of the background. 0 mean monochrome, and a negative value will invert the color.
- Brightness: Brighten or darken the background.
- Flatten: Reduce the background contrast. Useful when you can't predict the color of the background, but want to keep the content on top of it legible.

# **Controls Translucent Image from script**

You can control all of the settings available in the inspector in C# through the exposed properties. See: <u>TranslucentImage</u> and <u>TranslucentImageSource</u>

The blur settings can't be accessed directly from the TranslucentImageSource class. They're are stored in a ScriptableObject. An easy way to access these settings is to create a public/serialized field. You can then assign the setting asset to it in the inspector:

public ScalableBlurConfig blurSettings;

Alternatively, if you have a reference to a TranslucentImageSource component, you can access the blur settings by casting it to a ScalableBlurConfig

```
void Start(){
   var theSource = FindObjectOfType<TranslucentImageSource>();
   var blurSettings = (ScalableBlurConfig) theSource.BlurConfig; // No other blur algorithms are available at the moment, so the cast will always success
   blurSettings.Strength = 42;
}
```

# **Universal Render Pipeline**

# Requirements

Only non-preview, non-beta version of URP and Unity will be supported.

The files required to support URP can be imported from the unitypackage at: TranslucentImage/UniversalRP support. They're not included by default, as that would produce errors in projects without URP.

Some demo scene does not work in URP. You can find demo scenes dedicated for URP under TranslucentImage/Demo/UniversalRP, after you import the support package.

Setuj	p		
1. Ir	mport the package at TranslucentImage/UniversalRP support.		
2. F	2. Find your Forward Renderer Assets, and add TranslucentImageBlurSource to its list of Renderer Features:		
Note			
You ma	y have multiple Forward Renderer Assets. In which case you have to add the Renderer Feature to all of them.		
Findin	ng the Forward Renderer Assets		
1. Y	1. You can find the Forward Renderer asset(s) you're using by finding the Render Pipeline Settings asset in Graphic Settings:		
2. Y	You may also have more <b>Quality Setting</b> . Be sure to check all Quality Levels that you use:		
	Oouble click the field under the cursor in the above images will take you to the <b>Render Pipeline Settings asset</b> , where you can find your <b>Corward Renderer asset(s)</b> in the list of <b>Renderer</b> :		

# **Blurring other UI elements**

Sometimes, you not only want to blur the scene, but also other UI elements. A common use case for this is for popup. Translucent Image does not support blurring UI elements in arbitrary order for performance reason. However, by using 2 different Cameras and Canvases, Translucent Images from the upper Canvas can blur UIs in the lower Canvas.

#### **TLDR**

If you don't like reading, check out the included demo scene at:

- For Builtin Render Pipeline: Demo/ Scenes/Demo.unity
- For Universal Render Pipeline: Demo/UniversalRP/UniversalRP Demo UI Blur.unity

#### **Desired outcome**

To understand the required setup, it is useful to understand how Translucent Image work.

For performance reasons, Translucent Images does not perform any blurring. The Translucent Image Source component blurs the entire "screen" at once, and shares the result with multiple Translucent Images.

The Camera with the Source control what exactly is in the blurred background: what it renders is what is blurred. If the Camera "see" the Translucent Images, they will be included in their own background, causing them to quickly become opaque.

So, to blur UIs, what you want to do is to have 2 Canvases: one contains the UIs to be blurred, the other contains the Translucent Images. Then you make it so that the Camera with Translucent Image Source only "sees" the Canvas to be blurred.

The next section describes this setup in detail. You can also look at the demo scene mentioned above to quickly see how it work.

# The setup

Here is a typical setup: Example setup			
Here's what the hierarchy can look like:			
Hierarchy Popup Canvas Layer: UI Render Mode: Screen Space - Overlay			
Main Canvas Layer: UI Render Mode: Screen Space - Camera Render Camera: UI Camera			
UI Camera — Clear Flags: Depth only — Culling Mask: UI — Depth: 2			
Main Camera Clear Flags: any Culling Mask: Everything but UI Depth: 1			

# Performance implication

You can stacks as many cameras and canvases as you like. However, with each extra Translucent Image Source you use, the GPU will have to do more work. A workaround is to disable the Source that is not the top-most. In fact, both Windows 10 and macOS do this: *Windows 10 only use blur on the top-most UI* 

# **World Space UI**

World Space UI face the same <u>problem</u> as blurring other UIs - if we want to batch blurring operations to achieve high performance, we cannot have Translucent Images interleaved between what they want to blur. If you simply put Translucent Images in world space, they will continuously blur themselves, causing an "overexposed" effect.

To work around this, use a separated Camera for Translucent Images, an example of this setup available at: Le Tai Asset/TranslucentImage/Demo/World Space UI. Particularly, the World UI Camera should:

- Have higher Depth than your Main Camera.
- Have Culling Mask set to UI layer only.
- Have Depth only clear Flags.
- Other properties should match your Main Camera setting.
- Be in the same position as your Main Camera setting it as children with position and rotation of (0,0,0) is the simplest way.

Also, your Main Camera should have Culling Mask set to exclude UI layer.

Now, your Translucent Images should appear on top of scene geometry all the time, even if they are further away. While this is not ideal, it satisfies many use case, for example, world-space HUD, and allow for far better performance.

# **Frequently Asked Questions**

# Will this asset works well on my device?

The asset should run on any device. Performance-wise, it depends on your project's existing GPU consumption, but here some general rule of thumb:

- PC/Mac/Console: Should run well on almost everything except very old integrated GPU.
- Android: There're too many of them with too much difference in capability. The only way to know for sure is to test the demo on your target devices. On a Samsung Galaxy S7 Edge, the demo run at 60FPS with any setting.
- IOS:
  - Iphone: Apple A8 and later should hit 60FPS. A7 can hit 30FPS.
  - o Ipad: Because of the higher pixel count, you'll need to use the resolution scale features to hit 60 fps on A9 and below.

# The blur does not work. UI in the demo scene just all white.

This usually due to one of the following:

- Sometime the effect only so up after switching to Play mode.
- If you're using URP, you have to do some setup, as detailed in the Universal Render Pipeline section first.
- Sometime Unity's import process break some random things. Try delete the whole folder and re-import the asset.

# Can I smoothly animate the blur level?

The way the blur algorithm work make it difficult to smoothly animate the blur amount. The Strength property allows for mostly smooth change of blurriness, but there will still be some abrupt jump that is noticeable when interpolating slowly.

If you just need to fade in and out, you can use the alpha component of the Color property. You can also use Canvas Group as with normal Images.

# Have another question?

Contact me

# Support

If you need assistance regarding the asset or have a feature request, feel free to contact me by the form below or through my support email.

Support request

Search Articles

# Namespace LeTai.Asset.TranslucentImage Classes BlurConfig Extensions ScalableBlur

**Scalable Blur Config** 

**ShaderId** 

**TranslucentImage** 

Dynamic blur-behind UI element

**TranslucentImageSource** 

Common source of blur for Translucent Images.

**Interfaces** 

**IBlurAlgorithm** 

Enums

**BlurAlgorithmType** 

# Enum BlurAlgorithmType

 $Name space: \underline{LeTai. Asset. Translucent Image}$ 

Assembly: LeTai. Translucent Image. dll

Syntax

public enum BlurAlgorithmType

# **Fields**

Name Description

ScalableBlur

# **Class BlurConfig**

#### Inheritance

System.Object UnityEngine.Object UnityEngine.ScriptableObject BlurConfig ScalableBlurConfig

#### Inherited Members

UnityEngine.ScriptableObject.SetDirty()

UnityEngine.ScriptableObject.CreateInstance(System.String)
UnityEngine.ScriptableObject.CreateInstance(System.Type)

UnityEngine.ScriptableObject.CreateInstance<T>()

UnityEngine.Object.GetInstanceID()
UnityEngine.Object.GetHashCode()
UnityEngine.Object.Equals(System.Object)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Vector3, UnityEngine.Quaternion)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Vector3, UnityEngine.Quaternion, UnityEngine.Transform)

UnityEngine.Object.Instantiate(UnityEngine.Object)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Transform)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Transform, System Boolean)

UnityEngine.Object.Instantiate<T>(T)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Vector3, UnityEngine.Quaternion)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Vector3, UnityEngine.Quaternion, UnityEngine.Transform)

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UnityEngine.Object.Instantiate<T>(T, UnityEngine.Transform, System.Boolean)

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UnityEngine.Object.DontDestroyOnLoad(UnityEngine.Object)
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Unity Engine. Object. Find Objects Of Type Including Assets (System Type)

UnityEngine.Object.FindObjectsOfType<T>()
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UnityEngine.Object.FindObjectsOfTypeAll(SystemType)

UnityEngine.Object.FindObjectOfType(System.Type)

UnityEngine.Object.ToString() UnityEngine.Object.name UnityEngine.Object.hideFlags

SystemObject. Equals(SystemObject, SystemObject)

System.Object.GetType()

System.Object.MemberwiseClone()

SystemObject, ReferenceEquals(SystemObject, SystemObject)

Namespace: <u>LeTai.Asset.TranslucentImage</u>

Assembly: LeTai.TranslucentImage.dll

#### Syntax

public class BlurConfig: ScriptableObject

#### **Class Extensions**

#### Inheritance

System Object Extensions

#### Inherited Members

SystemObject.Equals(SystemObject)
SystemObject.Equals(SystemObject, SystemObject)
SystemObject.GetHashCode()
SystemObject.GetType()
SystemObject.MemberwiseClone()
SystemObject.ReferenceEquals(SystemObject, SystemObject)
SystemObject.ToString()

Namespace: <u>LeTai.Asset.TranslucentImage</u>

Assembly: LeTai.TranslucentImage.dll

**Syntax** 

public static class Extensions

#### Methods

#### BlitFullscreenTriangle(CommandBuffer, RenderTargetIdentifier, RenderTargetIdentifier, Material, Int32)

#### Declaration

public static void BlitFullscreenTriangle(this CommandBuffer cmd, RenderTargetIdentifier source, RenderTargetIdentifier destination, Material material, int pass)

#### **Parameters**

Type Name Description

UnityEngine.Rendering.CommandBuffer cmd
UnityEngine.Rendering.RenderTargetIdentifier source
UnityEngine.Rendering.RenderTargetIdentifier destination
UnityEngine.Material material
System.Int32 pass

#### ToMinMaxVector(Rect)

#### Declaration

public static Vector4 ToMinMaxVector(this Rect self)

#### Parameters

#### Type Name Description

UnityEngine.Rect self

#### Returns

#### **Type Description**

UnityEngine.Vector4

#### ToVector4(Rect)

#### Declaration

public static Vector4 To Vector4(this Rect self)

#### **Parameters**

Type Name Description

UnityEngine.Rect self

Returns

Type Description

UnityEngine.Vector4

# Interface IBlurAlgorithm

Namespace: <u>LeTai.Asset.TranslucentImage</u>

Assembly: LeTai.TranslucentImage.dll

Syntax

public interface IBlurAlgorithm

#### Methods

# Blur(RenderTexture, Rect, ref RenderTexture)

Declaration

void Blur(RenderTexture source, Rect sourceCropRegion, ref RenderTexture blurredTexture)

Parameters

Type Name Description

UnityEngine.RenderTexture source

UnityEngine.Rect sourceCropRegion UnityEngine.RenderTexture blurredTexture

Init(BlurConfig)

Declaration

void Init(BlurConfig config)

**Parameters** 

Type Name Description

BlurConfig config

#### Class ScalableBlur

#### Inheritance

SystemObject ScalableBlur

#### **Implements**

#### **IBlur**Algorithm

#### Inherited Members

SystemObject.Equals(SystemObject)
SystemObject.Equals(SystemObject, SystemObject)
SystemObject.GetHashCode()
SystemObject.GetType()
SystemObject.MemberwiseClone()
SystemObject.ReferenceEquals(SystemObject, SystemObject)
SystemObject.ToString()

Namespace: <u>LeTai.Asset.TranslucentImage</u>

Assembly: LeTai.TranslucentImage.dll

**Syntax** 

public class ScalableBlur: IBlurAlgorithm

#### Methods

#### Blur(RenderTexture, Rect, ref RenderTexture)

#### Declaration

 $public\ void\ Blur(Render Texture\ source, Rect\ source Crop Region, ref\ Render Texture\ blurred Texture)$ 

#### **Parameters**

#### Type Name Description

UnityEngine.RenderTexture source

UnityEngine.Rect sourceCropRegion
UnityEngine.RenderTexture blurredTexture

#### BlurAtDepth(Int32, ref RenderTexture, ref RenderTexture)

#### Declaration

protected virtual void BlurAtDepth(int depth, ref RenderTexture baseTexture, ref RenderTexture target)

#### Parameters

#### Type Name Description

System.Int32 depth
UnityEngine.RenderTexture baseTexture
UnityEngine.RenderTexture target

#### ConfigMaterial(Single, Vector4)

#### Declaration

protected void ConfigMaterial(float radius, Vector4 cropRegion)

#### **Parameters**

# Type Name Description

System.Single radius
UnityEngine.Vector4 cropRegion

# Init(BlurConfig)

Declaration

public void Init(BlurConfig config)

Parameters

Type Name Description

BlurConfig config

# **Implements**

<u>IBlurAlgorithm</u>

# Class ScalableBlurConfig

#### Inheritance

System.Object
UnityEngine.Object
UnityEngine.ScriptableObject
BlurConfig

ScalableBlurConfig

#### Inherited Members

UnityEngine.ScriptableObject.SetDirty()

UnityEngine.ScriptableObject.CreateInstance(System.String)
UnityEngine.ScriptableObject.CreateInstance(System.Type)

UnityEngine.ScriptableObject.CreateInstance<T>()

UnityEngine.Object.GetInstanceID()
UnityEngine.Object.GetHashCode()
UnityEngine.Object.Equals(System.Object)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Vector3, UnityEngine.Quaternion)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Vector3, UnityEngine.Quaternion, UnityEngine.Transform)

UnityEngine.Object.Instantiate(UnityEngine.Object)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Transform)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Transform, System Boolean)

UnityEngine.Object.Instantiate<T>(T)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Vector3, UnityEngine.Quaternion)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Vector3, UnityEngine.Quaternion, UnityEngine.Transform)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Transform)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Transform, System.Boolean)

UnityEngine.Object.Destroy(UnityEngine.Object, System.Single)

UnityEngine.Object.Destroy(UnityEngine.Object)

UnityEngine.Object.DestroyImmediate(UnityEngine.Object, System.Boolean)

UnityEngine.Object.DestroyImmediate(UnityEngine.Object)
UnityEngine.Object.FindObjectsOfType(System Type)
UnityEngine.Object.DontDestroyOnLoad(UnityEngine.Object)
UnityEngine.Object.DestroyObject(UnityEngine.Object, System.Single)

UnityEngine.Object.DestroyObject(UnityEngine.Object)

UnityEngine.Object.FindSceneObjectsOfType(System.Type)

UnityEngine.Object.FindObjectsOfTypeIncludingAssets(System Type)

UnityEngine.Object.FindObjectsOfType<T>()
UnityEngine.Object.FindObjectOfType<T>()

UnityEngine.Object.FindObjectsOfTypeAll(SystemType) UnityEngine.Object.FindObjectOfType(SystemType)

UnityEngine.Object.ToString() UnityEngine.Object.name UnityEngine.Object.hideFlags

SystemObject.Equals(SystemObject, SystemObject)

System.Object.GetType()

System.Object.MemberwiseClone()

System Object. Reference Equals (System Object, System Object)

Namespace: LeTai.Asset.TranslucentImage

Assembly: LeTai. Translucent Image. dll

#### Syntax

[CreateAssetMenu(fileName = "New Scalable Blur Config", menuName = "Translucent Image/ Scalable Blur Config")] public class ScalableBlurConfig : BlurConfig

#### **Properties**

#### **Iteration**

Half the number of time to process the image. It is half because the real number of iteration must alway be even. Using half also make calculation

simpler				
Declaration				
<pre>public int Iteration { get; set; }</pre>				
Property Value				
Type Description				
System.Int32 Must be non-negative				
MaxDepth				
Clamp the minimum size of the intermediate texture. Reduce flickering and blur				
Declaration				
<pre>public int MaxDepth { get; set; }</pre>				
Property Value				
Type Description				
System.Int32 Must larger than 0				
Radius				
Distance between the base texel and the texel to be sampled.				
Declaration				
<pre>public float Radius { get; set; }</pre>				
Property Value				
Type Description System Single				
Strength				
User friendly property to control the amount of blur				
Declaration				
<pre>public float Strength { get; set; }</pre>				
Property Value				
Type Description				
System Single Must be non-negative				
Methods				

SetAdvancedFieldFromSimple()

Calculate size and iteration from strength

Declaration



# Class ShaderId

#### Inheritance

System.Object ShaderId

#### Inherited Members

SystemObject.Equals(SystemObject)
SystemObject.Equals(SystemObject, SystemObject)
SystemObject.GetHashCode()
SystemObject.GetType()
SystemObject.MemberwiseClone()
SystemObject.ReferenceEquals(SystemObject, SystemObject)
SystemObject.ToString()

 $Name space: \underline{LeTai. Asset. Translucent Image}$ 

Assembly: LeTai.TranslucentImage.dll

**Syntax** 

public static class ShaderId

**Fields** 

# CROP\_REGION

**Declaration** 

public static readonly int CROP\_REGION

Field Value

Type Description

System.Int32

# **RADIUS**

Declaration

public static readonly int RADIUS

Field Value

Type Description

System.Int32

# Class TranslucentImage

#### Dynamic blur-behind UI element

#### Inheritance

SystemObject UnityEngine.Object UnityEngine.Component UnityEngine.Behaviour UnityEngine.MonoBehaviour UnityEngine.EventSystems.UIBehaviour UnityEngine.UI.Graphic UnityEngine.UI.MaskableGraphic

TranslucentImage

UnityEngine.UI.Image

#### Implements

UnityEngine.UI.ICanvasElement UnityEngine.UI.IClippable UnityEngine.UI.IMaskable UnityEngine.UI.IMaterialModifier UnityEngine.ISerializationCallbackReceiver UnityEngine.UI.ILayoutElement UnityEngine.ICanvasRaycastFilter UnityEngine.UI.IMeshModifier

#### Inherited Members

UnityEngine.UI.Image.s\_ETC1DefaultUI

UnityEngine.UI.Image.DisableSpriteOptimizations()

UnityEngine.UI.Image.OnBeforeSerialize()

UnityEngine.UI.Image.OnAfterDeserialize()

UnityEngine.UI.Image.SetNativeSize()

UnityEngine.UI.Image.OnPopulateMesh(UnityEngine.UI.VertexHelper)

UnityEngine.UI.Image.UpdateMaterial()

UnityEngine.UI.Image.OnCanvasHierarchyChanged() UnityEngine.UI.Image.CalculateLayoutInputHorizontal() UnityEngine.UI.Image.CalculateLayoutInputVertical()

UnityEngine.UI.Image.IsRaycastLocationValid(UnityEngine.Vector2, UnityEngine.Camera)

UnityEngine.UI.Image.OnValidate() UnityEngine.UI.Image.sprite

UnityEngine.UI.Image.overrideSprite

UnityEngine.UI.Image.type

UnityEngine.UI.Image.preserveAspect

UnityEngine.UI.Image.fillCenter UnityEngine.UI.Image.fillMethod UnityEngine.UI.Image.fillAmount

UnityEngine.UI.Image.fillClockwise

UnityEngine.UI.Image.fillOrigin

UnityEngine.UI.Image.eventAlphaThreshold

UnityEngine.UI.Image.alphaHitTestMinimumThreshold

UnityEngine.UI.Image.useSpriteMesh

UnityEngine.UI.Image.defaultETC1GraphicMaterial

UnityEngine.UI.Image.mainTexture UnityEngine.UI.Image.hasBorder

UnityEngine.UI.Image.pixelsPerUnitMultiplier

UnityEngine.UI.Image.pixelsPerUnit

UnityEngine.UI.Image.multipliedPixelsPerUnit

UnityEngine.UI.Image.material UnityEngine.UI.Image.minWidth UnityEngine.UI.Image.preferredWidth UnityEngine.UI.Image.flexibleWidth UnityEngine.UI.Image.minHeight

UnityEngine.UI.Image.preferredHeight

UnityEngine.UI.Image.flexibleHeight

UnityEngine.UI.Image.layoutPriority

UnityEngine.UI.MaskableGraphic.m ShouldRecalculateStencil

UnityEngine.UI.MaskableGraphic.m MaskMaterial UnityEngine.UI.MaskableGraphic.m StencilValue

UnityEngine.UI.MaskableGraphic.GetModifiedMaterial(UnityEngine.Material)

UnityEngine.UI.MaskableGraphic.Cull(UnityEngine.Rect, System.Boolean)

UnityEngine.UI.MaskableGraphic.SetClipRect(UnityEngine.Rect, System.Boolean)

UnityEngine.UI.MaskableGraphic.SetClipSoffness(UnityEngine.Vector2)

UnityEngine.UI.MaskableGraphic.OnTransformParentChanged()

UnityEngine.UI.MaskableGraphic.RecalculateClipping()

UnityEngine.UI.MaskableGraphic.RecalculateMasking()

UnityEngine.UI.MaskableGraphic.UnityEngine.UI.IClippable.get gameObject()

UnityEngine.UI.MaskableGraphic.onCullStateChanged

UnityEngine.UI.MaskableGraphic.maskable

UnityEngine.UI.MaskableGraphic.isMaskingGraphic

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Unity Engine UI Graphic m Matarial

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UnityEngine.UI.Graphic.m OnDirtyMaterialCallback

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UnityEngine.UI.Graphic.m CachedUvs

UnityEngine.UI.Graphic.SetAllDirty()

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UnityEngine.UI.Graphic.SetMaterialDirty()

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UnityEngine.UI.Graphic.OnBeforeTransformParentChanged()

UnityEngine.UI.Graphic.OnDestroy()

UnityEngine.UI.Graphic.OnCullingChanged()

UnityEngine.UI.Graphic.Rebuild(UnityEngine.UI.CanvasUpdate)

UnityEngine.UI.Graphic.LayoutComplete()

UnityEngine.UI.Graphic.GraphicUpdateComplete()

UnityEngine.UI.Graphic.UpdateGeometry()

UnityEngine.UI.Graphic.OnPopulateMesh(UnityEngine.Mesh)

UnityEngine.UI.Graphic.OnRebuildRequested()

UnityEngine.UI.Graphic.Reset()

UnityEngine.UI.Graphic.Raycast(UnityEngine.Vector2, UnityEngine.Camera)

UnityEngine.UI.Graphic.PixelAdjustPoint(UnityEngine.Vector2)

UnityEngine.UI.Graphic.GetPixelAdjustedRect()

UnityEngine.UI.Graphic.CrossFadeColor(UnityEngine.Color, SystemSingle, SystemBoolean, SystemBoolean)

UnityEngine.UI.Graphic.CrossFadeColor(UnityEngine.Color, System.Single, System.Boolean, System

UnityEngine.UI.Graphic.CrossFadeAlpha(SystemSingle, SystemSingle, SystemBoolean)

Unity Engine. UI. Graphic. Register Dirty Layout Callback (Unity Engine. Events. Unity Action)

UnityEngine.UI.Graphic.UnregisterDirtyLayoutCallback(UnityEngine.Events.UnityAction)

Unity Engine. UI. Graphic. Register Dirty Vertices Callback (Unity Engine. Events. Unity Action)

Unity Engine. UI. Graphic. Unregister Dirty Vertices Callback (Unity Engine. Events. Unity Action)

UnityEngine.UI.Graphic.RegisterDirtyMaterialCallback(UnityEngine.Events.UnityAction)

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UnityEngine.UI.Graphic.UnityEngine.UI.ICanvasElement.get transform()

UnityEngine.UI.Graphic.defaultGraphicMaterial

UnityEngine.UI.Graphic.color

UnityEngine.UI.Graphic.raycastTarget

UnityEngine.UI.Graphic.useLegacyMeshGeneration

UnityEngine.UI.Graphic.depth

UnityEngine.UI.Graphic.rectTransform

UnityEngine.UI.Graphic.canvas

UnityEngine.UI.Graphic.canvasRenderer

UnityEngine.UI.Graphic.defaultMaterial

UnityEngine.UI.Graphic.materialForRendering

UnityEngine.UI.Graphic.workerMesh

UnityEngine.EventSystems.UIBehaviour.Awake()

UnityEngine.EventSystems.UIBehaviour.IsActive()

UnityEngine.EventSystems.UIBehaviour.OnCanvasGroupChanged()

UnityEngine.EventSystems.UIBehaviour.IsDestroyed()

UnityEngine.MonoBehaviour.IsInvoking()

UnityEngine.MonoBehaviour.CancelInvoke()

UnityEngine.MonoBehaviour.Invoke(System.String, System.Single)

UnityEngine.MonoBehaviour.InvokeRepeating(SystemString, SystemSingle, SystemSingle)

UnityEngine.MonoBehaviour.CancelInvoke(System.String)

UnityEngine.MonoBehaviour.IsInvoking(System.String)

UnityEngine.MonoBehaviour.StartCoroutine(System.String)

UnityEngine.MonoBehaviour.StartCoroutine(System.String, System.Object)

UnityEngine.MonoBehaviour.StartCoroutine(System.Collections.IEnumerator)

UnityEngine.MonoBehaviour.StartCoroutine Auto(SystemCollections.IEnumerator)

UnityEngine.MonoBehaviour.StopCoroutine(System.Collections.IEnumerator)

UnityEngine.MonoBehaviour.StopCoroutine(UnityEngine.Coroutine)

UnityEngine.MonoBehaviour.StopCoroutine(System.String)

UnityEngine.MonoBehaviour.StopAllCoroutines()

UnityEngine.MonoBehaviour.print(System.Object)

UnityEngine.MonoBehaviour.useGUILayout

UnityEngine.MonoBehaviour.runInEditMode

UnityEngine.Behaviour.enabled

UnityEngine.Behaviour.isActiveAndEnabled

UnityEngine.Component.GetComponent(System.Type)

UnityEngine.Component.GetComponent<T>()

UnityEngine.Component.TryGetComponent(System.Type, UnityEngine.Component)

UnityEngine.Component.TryGetComponent<T>(T)

UnityEngine.Component.GetComponent(System.String)

UnityEngine.Component.GetComponentInChildren(System.Type, System.Boolean)

UnityEngine.Component.GetComponentInChildren(System.Type)

UnityEngine.Component.GetComponentInChildren<T>(System.Boolean)

UnityEngine.Component.GetComponentInChildren<T>()

UnityEngine.Component.GetComponentsInChildren(System.Type, System.Boolean)

UnityEngine.Component.GetComponentsInChildren(System.Type)

UnityEngine.Component.GetComponentsInChildren<T>(System.Boolean)

UnityEngine.Component.GetComponentsInChildren<T>(System.Boolean, System.Collections.Generic.List<T>)

UnityEngine.Component.GetComponentsInChildren<T>()

UnityEngine.Component.GetComponentsInChildren<T>(System.Collections.Generic.List<T>)

UnityEngine.Component.GetComponentInParent(System.Type)

UnityEngine.Component.GetComponentInParent<T>()

UnityEngine.Component.GetComponentsInParent(System.Type, System.Boolean)

UnityEngine.Component.GetComponentsInParent(System Type)

UnityEngine.Component.GetComponentsInParent<T>(System.Boolean)

UnityEngine.Component.GetComponentsInParent<T>(System Boolean, System.Collections.Generic.List<T>)

UnityEngine.Component.GetComponentsInParent<T>()

UnityEngine.Component.GetComponents(System.Type)

UnityEngine. Component. GetComponents (System Type, System Collections. Generic. List<UnityEngine. Component>)

UnityEngine.Component.GetComponents<T>(System.Collections.Generic.List<T>)

UnityEngine.Component.GetComponents<T>()

UnityEngine.Component.CompareTag(System.String)

UnityEngine. Component. SendMessageUpwards(System. String, System. Object, UnityEngine. SendMessageOptions)

UnityEngine.Component.SendMessageUpwards(System.String, System.Object)

UnityEngine.Component.SendMessageUpwards(System.String)

UnityEngine.Component.SendMessageUpwards(System.String, UnityEngine.SendMessageOptions)

UnityEngine.Component.SendMessage(System.String, System.Object)

UnityEngine.Component.SendMessage(System.String)

UnityEngine.Component.SendMessage(System.String, System.Object, UnityEngine.SendMessageOptions)

UnityEngine.Component.SendMessage(System.String, UnityEngine.SendMessageOptions)

Unity Engine. Component. Broadcast Message (System String, System Object, Unity Engine. Send Message Options)

UnityEngine.Component.BroadcastMessage(System.String, System.Object)

UnityEngine.Component.BroadcastMessage(System.String)

UnityEngine.Component.BroadcastMessage(System.String, UnityEngine.SendMessageOptions)

UnityEngine.Component.transform

UnityEngine.Component.gameObject

UnityEngine.Component.tag

UnityEngine.Object.GetInstanceID()

UnityEngine.Object.GetHashCode()

UnityEngine.Object.Equals(System.Object)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Vector3, UnityEngine.Quaternion)

UnityEngine. Object. Instantiate (UnityEngine. Object, UnityEngine. Vector3, UnityEngine. Quaternion, UnityEngine. Transform)

UnityEngine.Object,Instantiate(UnityEngine.Object)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Transform)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Transform, System.Boolean)

UnityEngine.Object.Instantiate<T>(T)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Vector3, UnityEngine.Quaternion)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Vector3, UnityEngine.Quaternion, UnityEngine.Transform)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Transform)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Transform, System.Boolean)

UnityEngine.Object.Destroy(UnityEngine.Object, System.Single)

UnityEngine.Object.Destroy(UnityEngine.Object)

UnityEngine.Object.DestroyImmediate(UnityEngine.Object, System.Boolean)

UnityEngine.Object.DestroyImmediate(UnityEngine.Object)

UnityEngine.Object.FindObjectsOfType(System.Type)

UnityEngine.Object.DontDestroyOnLoad(UnityEngine.Object)

UnityEngine.Object.DestroyObject(UnityEngine.Object, System.Single)

UnityEngine.Object.DestroyObject(UnityEngine.Object)

UnityEngine.Object.FindSceneObjectsOfType(System.Type)

Unity Engine. Object. Find Objects Of Type Including Assets (System Type)

UnityEngine.Object.FindObjectsOfType<T>()

UnityEngine.Object.FindObjectOfType<T>()

UnityEngine.Object.FindObjectsOfTypeAll(System.Type)

UnityEngine.Object.FindObjectOfType(System.Type)

UnityEngine.Object.ToString()

UnityEngine.Object.name

UnityEngine.Object.hideFlags

SystemObject.Equals(SystemObject, SystemObject)

System.Object.GetType()

System.Object.MemberwiseClone()

System Object. Reference Equals (System Object, System Object)

 $Name space: \underline{LeTai. Asset. Translucent Image}$ 

Assembly: LeTai.TranslucentImage.dll

#### Syntax

[HelpURL("https://leloctai.com/asset/translucentimage/docs/articles/customize.html#translucent-image")]
public class TranslucentImage : Image, ICanvasElement, IClippable, IMaskable, IMaterialModifier, ISerializationCallbackReceiver, ILayoutElement, ICanvasRaycastFilter, IMeshModifier

#### **Fields**

#### brightness

Brighten/darken them image

#### Declaration

[Tooltip("Brighten/darken them image")] [Range(-1F, 1F)] public float brightness

Field Value

#### Type Description

System.Single

#### flatten

Flatten the color behind to help keep contrast on varying background

#### Declaration

[Tooltip("Flatten the color behind to help keep contrast on varying background")] [Range(0F, 1F)] public float flatten

Field Value

# Type Description

System.Single

#### m spriteBlending

# Declaration

[Tooltip("Blend between the sprite and background blur")]
[Range(0F, 1F)]
[Formerly Serialized As ("sprite Blending")]
public float m\_sprite Blending

#### Field Value

#### Type Description

System.Single

# source Source of blur for this image Declaration public TranslucentImageSource source Field Value **Type** Description **TranslucentImageSource** vibrancy (De)Saturate them image, 1 is normal, 0 is grey scale, below zero make the image negative Declaration $[Tooltip("(De)Saturate\ them\ image,\ 1\ is\ normal,\ 0\ is\ black\ and\ white,\ below\ zero\ make\ the\ image\ negative")]$ [Range(-1F, 3F)] public float vibrancy Field Value Type Description System.Single **Properties** spriteBlending Declaration public float spriteBlending { get; set; } Property Value Type Description System.Single Methods ModifyMesh(Mesh) Declaration public virtual void ModifyMesh(Mesh mesh) Parameters Type Name Description UnityEngine.Mesh mesh ModifyMesh(VertexHelper) Declaration public virtual void ModifyMesh(VertexHelper vh) Parameters Type Name Description UnityEngine.UI.VertexHelper vh OnDidApplyAnimationProperties()

protected override void OnDidApplyAnimationProperties()

Declaration

#### Overrides

Unity Engine. UI. Image. On Did Apply Animation Properties ()

#### OnDisable()

#### Declaration

protected override void OnDisable()

#### Overrides

UnityEngine.UI.Image.OnDisable()

#### OnEnable()

#### Declaration

protected override void OnEnable()

#### Overrides

UnityEngine.UI.Image.OnEnable()

#### Start()

#### Declaration

protected override void Start()

#### Overrides

UnityEngine.EventSystems.UIBehaviour.Start()

# **Implements**

UnityEngine. UI. ICanvas Element UnityEngine. UI. IClippable UnityEngine. UI. IMaskable UnityEngine. UI. IMaterial Modifier UnityEngine. ISerialization Callback Receiver

UnityEngine.UI.ILayoutElement UnityEngine.ICanvasRaycastFilter UnityEngine.UI.IMeshModifier

# Class TranslucentImageSource

Common source of blur for Translucent Images.

#### Inheritance

System Object
UnityEngine.Object
UnityEngine.Component
UnityEngine.Behaviour
UnityEngine.MonoBehaviour
TranslucentImageSource

#### **Inherited Members**

UnityEngine.MonoBehaviour.IsInvoking()

UnityEngine.MonoBehaviour.CancelInvoke()

UnityEngine.MonoBehaviour.Invoke(System.String, System.Single)

UnityEngine.MonoBehaviour.InvokeRepeating(System.String, System.Single, System.Single)

UnityEngine.MonoBehaviour.CancelInvoke(System String)
UnityEngine.MonoBehaviour.IsInvoking(System String)

UnityEngine.MonoBehaviour.StartCoroutine(System.String)

UnityEngine.MonoBehaviour.StartCoroutine(System String, System Object)
UnityEngine.MonoBehaviour.StartCoroutine(System Collections.IEnumerator)
UnityEngine.MonoBehaviour.StartCoroutine Auto(System.Collections.IEnumerator)

UnityEngine.MonoBehaviour.StopCoroutine(System.Collections.IEnumerator)

UnityEngine.MonoBehaviour.StopCoroutine(UnityEngine.Coroutine)

UnityEngine. MonoBehaviour. StopCoroutine (System String)

UnityEngine.MonoBehaviour.StopAllCoroutines()

UnityEngine.MonoBehaviour.print(System.Object)

UnityEngine.MonoBehaviour.useGUILayout

UnityEngine.MonoBehaviour.runInEditMode

UnityEngine.Behaviour.enabled

UnityEngine.Behaviour.isActiveAndEnabled

UnityEngine.Component.GetComponent(System.Type)

UnityEngine.Component.GetComponent<T>()

UnityEngine.Component.TryGetComponent(System.Type, UnityEngine.Component)

UnityEngine.Component.TryGetComponent<T>(T)
UnityEngine.Component.GetComponent(System.String)

UnityEngine.Component.GetComponentInChildren(System Type, System Boolean)

UnityEngine.Component.GetComponentInChildren(System.Type)

UnityEngine.Component.GetComponentInChildren<T>(System.Boolean)

UnityEngine.Component.GetComponentInChildren<T>()

UnityEngine.Component.GetComponentsInChildren(System Type, System Boolean)

UnityEngine.Component.GetComponentsInChildren(System Type)

UnityEngine.Component.GetComponentsInChildren<T>(System.Boolean)

UnityEngine.Component.GetComponentsInChildren<T>(System.Boolean, System.Collections.Generic.List<T>)

UnityEngine.Component.GetComponentsInChildren<T>()

UnityEngine.Component.GetComponentsInChildren<T>(System.Collections.Generic.List<T>)

UnityEngine.Component.GetComponentInParent(System.Type)

UnityEngine.Component.GetComponentInParent<T>()

Unity Engine. Component. Get Components In Parent (System. Type, System. Boolean)

UnityEngine.Component.GetComponentsInParent(System.Type)

UnityEngine.Component.GetComponentsInParent<T>(System Boolean)

UnityEngine.Component.GetComponentsInParent<T>(System Boolean, System Collections.Generic.List<T>)

UnityEngine.Component.GetComponentsInParent<T>()

UnityEngine.Component.GetComponents(System.Type)

UnityEngine.Component.GetComponents(System Type, System Collections.Generic.List<UnityEngine.Component>)

UnityEngine.Component.GetComponents<T>(System.Collections.Generic.List<T>)

UnityEngine.Component.GetComponents<T>()

UnityEngine.Component.CompareTag(System.String)

UnityEngine.Component.SendMessageUpwards(System.String, System.Object, UnityEngine.SendMessageOptions)

UnityEngine.Component.SendMessageUpwards(System.String, System.Object)

UnityEngine.Component.SendMessageUpwards(System.String)

UnityEngine.Component.SendMessageUpwards(System.String, UnityEngine.SendMessageOptions)

UnityEngine.Component.SendMessage(SystemString, SystemObject)

UnityEngine.Component.SendMessage(System.String)

UnityEngine.Component.SendMessage(System.String, System.Object, UnityEngine.SendMessageOptions)

UnityEngine.Component.SendMessage(System.String, UnityEngine.SendMessageOptions)

UnityEngine.Component.BroadcastMessage(System.String, System.Object, UnityEngine.SendMessageOptions)

UnityEngine.Component.BroadcastMessage(System.String, System.Object)

UnityEngine.Component.BroadcastMessage(System.String)

UnityEngine.Component.BroadcastMessage(System.String, UnityEngine.SendMessageOptions)

UnityEngine.Component.transform UnityEngine.Component.gameObject

UnityEngine.Component.tag

UnityEngine.Object.GetInstanceID()

UnityEngine.Object.GetHashCode()

UnityEngine.Object.Equals(System.Object)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Vector3, UnityEngine.Quaternion)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Vector3, UnityEngine.Quaternion, UnityEngine.Transform)

UnityEngine.Object.Instantiate(UnityEngine.Object)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Transform)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Transform, System Boolean)

UnityEngine.Object.Instantiate<T>(T)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Vector3, UnityEngine.Quaternion)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Vector3, UnityEngine.Quaternion, UnityEngine.Transform)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Transform)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Transform, System.Boolean)

UnityEngine.Object.Destroy(UnityEngine.Object, System.Single)

UnityEngine.Object.Destroy(UnityEngine.Object)

UnityEngine.Object.DestroyImmediate(UnityEngine.Object, System.Boolean)

UnityEngine.Object.DestroyImmediate(UnityEngine.Object)
UnityEngine.Object.FindObjectsOfType(System Type)

Litt Fraire Object.PortPortray Or Lord UnityEngine.Object

Unity Engine. Object. Dont Destroy On Load (Unity Engine. Object)

UnityEngine.Object.DestroyObject(UnityEngine.Object, SystemSingle)

UnityEngine.Object.DestroyObject(UnityEngine.Object)
UnityEngine.Object.FindSceneObjectsOfType(System Type)

UnityEngine.Object.FindObjectsOfTypeIncludingAssets(System Type)

UnityEngine.Object.FindObjectsOfType<T>()
UnityEngine.Object.FindObjectOfType<T>()

UnityEngine.Object.FindObjectsOfTypeAll(System.Type)

UnityEngine.Object.FindObjectOfType(System.Type)

UnityEngine.Object.ToString() UnityEngine.Object.name UnityEngine.Object.hideFlags

SystemObject, SystemObject, SystemObject)

System.Object.GetType()

System.Object.MemberwiseClone()

SystemObject.ReferenceEquals(SystemObject, SystemObject)

Namespace: LeTai.Asset.TranslucentImage

Assembly: LeTai.TranslucentImage.dll

#### **Syntax**

[ExecuteAlways]

[RequireComponent(typeof(Camera))]

[AddComponentMenu("Image Effects/Tai Le Assets/Translucent Image Source")]

[HelpURL("https://leloctai.com/asset/translucentimage/docs/articles/customize.html#translucent-image-source")]

public class TranslucentImageSource : MonoBehaviour

#### Remarks

It is an Image effect that blur the render target of the Camera it attached to, then save the result to a global read-only Render Texture

#### **Fields**

#### maxUpdateRate

Maximum number of times to update the blurred image each second		
Declaration		
public float maxUpdateRate		
Field Value		
Type Description System Single		
preview		
Render the blurred result to the render target		
Declaration		
public bool preview		
Field Value		
<b>Type Description</b> System Boolean		
Properties		
BlurAlgorithmSelection		
Declaration		
<pre>public BlurAlgorithmType BlurAlgorithmSelection { get; set; }</pre>		
Property Value		
Type Description BlurAlgorithmType		
BlurConfig		
Declaration		
<pre>public BlurConfig { get; set; }</pre>		
Property Value		
Type Description  BlurConfig		
BlurredScreen		
Result of the image effect. Translucent Image use this as their content (read-only)		
Declaration		
<pre>public RenderTexture BlurredScreen { get; set; }</pre>		
Property Value		
Type Description UnityEngine.RenderTexture		

BlurRegion

Define the rectangular area on screen that will be blurred.				
Declaration				
public Rect BlurRegion { get; se	t; }			
Property Value				
Type Descrip	ption			
UnityEngine.Rect Between (	0 and 1			
BlurRegionNormalizedScr	reenSpace			
Declaration				
public Rect BlurRegionNormalize	edScreenSpace { get; set; }			
Property Value				
Type Description UnityEngine.Rect	ion			
Downsample				
The rendered image will be s	shrinked by a factor of $2^{\{\text{this}\}}$ before bluring to reduce processing time			
Declaration				
public int Downsample { get; set	t; }			
Property Value				
Type De	escription			
System Int32 Must be non-negative. Default to 0				
Methods				
CreateNewBlurredScreen	10			
Declaration				
protected virtual void CreateNewBlurredScreen()				
OnBeforeBlur()				
Declaration				
public void OnBeforeBlur()				
OnRenderImage(RenderI	Texture, RenderTexture)			
Declaration				
protected virtual void OnRenderImage(RenderTexture source, RenderTexture destination)				
Parameters				
Туре	Name Description			

UnityEngine.RenderTexture source UnityEngine.RenderTexture destination

# should Update Blur()

Declaration

public bool shouldUpdateBlur()

Returns

**Type Description** 

System.Boolean

Start()

Declaration

protected virtual void Start()

# Namespace LeTai.Asset.TranslucentImage.UniversalRP Classes Extensions ScalableBlur ShaderId TranslucentImageBlurRenderPass TranslucentImageBlurSource Utilities Interfaces

Enums

BlurAlgorithmType

**IBlurAlgorithm** 

# Enum BlurAlgorithmType

 $Name space: \underline{LeTai. Asset. Translucent Image. Universal RP}$ 

Assembly: LeTai. Translucent Image. Universal RP. dll

Syntax

 $[MovedFrom ("LeTai. Asset. Translucent Image. LWRP")] \\ public enum Blur Algorithm Type$ 

#### **Fields**

Name Description

ScalableBlur

# **Class Extensions**

#### Inheritance

System Object Extensions

#### Inherited Members

SystemObject.Equals(SystemObject)
SystemObject.Equals(SystemObject, SystemObject)
SystemObject.GetHashCode()
SystemObject.GetType()
SystemObject.MemberwiseClone()
SystemObject.ReferenceEquals(SystemObject, SystemObject)
SystemObject.ToString()

 $Name space: \underline{LeTai. Asset. Translucent Image. Universal RP}$ 

Assembly: LeTai. Translucent Image. Universal RP. dll

Syntax

public static class Extensions

#### Methods

#### BlitProcedural(CommandBuffer, RenderTargetIdentifier, RenderTargetIdentifier, Material, Int32)

#### Declaration

public static void BlitProcedural(this CommandBuffer cmd, RenderTargetIdentifier source, RenderTargetIdentifier destination, Material material, int passIndex)

#### **Parameters**

Type Name Description

UnityEngine.Rendering.CommandBuffer cmd
UnityEngine.Rendering.RenderTargetIdentifier source
UnityEngine.Rendering.RenderTargetIdentifier destination
UnityEngine.Material material
System.Int32 passIndex

# **Interface IBlurAlgorithm**

 $Name space: \underline{LeTai. Asset. Translucent Image. Universal RP}$ 

Assembly: LeTai.TranslucentImage.UniversalRP.dll

Syntax

 $[MovedFrom("LeTai.Asset.TranslucentImage.LWRP")] \\ public interface IBlurAlgorithm$ 

#### Methods

#### Blur(CommandBuffer, RenderTargetIdentifier, Rect, RenderTexture)

#### Declaration

void Blur(CommandBuffer cmd, RenderTargetIdentifier src, Rect srcCropRegion, RenderTexture target)

#### **Parameters**

Type Name Description

UnityEngine.Rendering.CommandBuffer cmd UnityEngine.Rendering,RenderTargetIdentifier src

UnityEngine.Rect srcCropRegion

UnityEngine.RenderTexture target

# Init(BlurConfig)

Declaration

void Init(BlurConfig config)

**Parameters** 

Type Name Description

BlurConfig config

#### Class ScalableBlur

#### Inheritance

System.Object ScalableBlur

#### **Implements**

#### **IBlur**Algorithm

#### Inherited Members

SystemObject.Equals(SystemObject)
SystemObject.Equals(SystemObject, SystemObject)
SystemObject.GetHashCode()
SystemObject.GetType()
SystemObject.MemberwiseClone()
SystemObject.ReferenceEquals(SystemObject, SystemObject)
SystemObject.ToString()

Namespace: LeTai.Asset.TranslucentImage.UniversalRP

Assembly: LeTai. Translucent Image. Universal RP. dll

#### **Syntax**

 $[MovedFrom("LeTai.Asset.TranslucentImage.LWRP")] \\ public class ScalableBlur: IBlurAlgorithm$ 

#### Methods

#### Blur(CommandBuffer, RenderTargetIdentifier, Rect, RenderTexture)

#### Declaration

public void Blur(CommandBuffer cmd, RenderTargetIdentifier src, Rect srcCropRegion, RenderTexture target)

#### Parameters

Type Name Description
UnityEngine.Rendering.CommandBuffer cmd
UnityEngine.Rendering,RenderTargetIdentifier src

UnityEngine.Rect srcCropRegion

UnityEngine.RenderTexture target

#### BlurAtDepth(CommandBuffer, Int32, RenderTexture)

#### Declaration

protected virtual void BlurAtDepth(CommandBuffer cmd, int depth, RenderTexture baseTexture)

#### Parameters

Type Name Description

UnityEngine.Rendering.CommandBuffer cmd
System.Int32 depth
UnityEngine.RenderTexture baseTexture

#### ConfigMaterial(Single, Vector4)

#### Declaration

protected void ConfigMaterial(float radius, Vector4 cropRegion)

#### **Parameters**

Type Name Description

System.Single radius
UnityEngine.Vector4 cropRegion

# Init(BlurConfig)

Declaration

public void Init(BlurConfig config)

**Parameters** 

Type Name Description

BlurConfig config

# **Implements**

**IBlurAlgorithm** 

# Class ShaderId

#### Inheritance

System.Object ShaderId

#### **Inherited Members**

SystemObject.Equals(SystemObject)
SystemObject.Equals(SystemObject, SystemObject)
SystemObject.GetHashCode()
SystemObject.GetType()
SystemObject.MemberwiseClone()
SystemObject.ReferenceEquals(SystemObject, SystemObject)
SystemObject.ToString()

 $Name space: \underline{LeTai. Asset. Translucent Image. Universal RP}$ 

Assembly: LeTai. Translucent Image. Universal RP. dll

**Syntax** 

public static class ShaderId

**Fields** 

#### intermediateRT

Declaration

public static int[] intermediateRT

Field Value

Type Description

System.Int32[]

#### MAIN\_TEX

Declaration

public static readonly int MAIN\_TEX

Field Value

Type Description

System.Int32

#### Methods

Init(Int32)

Declaration

public static void Init(int stackDepth)

**Parameters** 

Type Name Description

System.Int32 stackDepth

# Class TranslucentImageBlurRenderPass

#### Inheritance

System.Object UnityEngine.Rendering,Universal.ScriptableRenderPass

Translucent Image Blur Render Pass

#### Inherited Members

UnityEngine. Rendering, Universal. ScriptableRenderPass. ConfigureTarget(UnityEngine. Rendering, RenderTargetIdentifier,

UnityEngine.Rendering.RenderTargetIdentifier)

UnityEngine.Rendering.Universal.ScriptableRenderPass.ConfigureTarget(UnityEngine.Rendering.RenderTargetIdentifier[],

UnityEngine.Rendering.RenderTargetIdentifier)

UnityEngine.Rendering.Universal.ScriptableRenderPass.ConfigureTarget(UnityEngine.Rendering.RenderTargetIdentifier)

UnityEngine.Rendering,Universal.ScriptableRenderPass.ConfigureTarget(UnityEngine.Rendering,RenderTargetIdentifier[])

UnityEngine.Rendering.Universal.ScriptableRenderPass.ConfigureClear(UnityEngine.Rendering.ClearFlag, UnityEngine.Color)

UnityEngine.Rendering.Universal.ScriptableRenderPass.Configure(UnityEngine.Rendering.CommandBuffer, UnityEngine.RenderTextureDescriptor)

UnityEngine.Rendering.Universal.ScriptableRenderPass.FrameCleanup(UnityEngine.Rendering.CommandBuffer)

UnityEngine. Rendering. Universal. ScriptableRenderPass. Blit(UnityEngine. Rendering. CommandBuffer, UnityEngine. Rendering. Rendering. Rendering. CommandBuffer, UnityEngine. Rendering. CommandBuffer. CommandBu

UnityEngine.Rendering.RenderTargetIdentifier, UnityEngine.Material, System.Int32)

UnityEngine.Rendering.Universal.ScriptableRenderPass.RenderPostProcessing(UnityEngine.Rendering.CommandBuffer,

UnityEngine. Rendering. Universal. CameraData, UnityEngine. RenderTextureDescriptor, UnityEngine. Rendering. RenderTargetIdentifier,

UnityEngine.Rendering.RenderTargetIdentifier, System.Boolean, System.Boolean)

UnityEngine. Rendering. Universal. Scriptable Render Pass. Create Drawing Settings (UnityEngine. Rendering, Shader TagId,

UnityEngine.Rendering.Universal.RenderingData, UnityEngine.Rendering.SortingCriteria)

UnityEngine.Rendering.Universal.ScriptableRenderPass.CreateDrawingSettings(System.Collections.Generic.List<UnityEngine.Rendering.ShaderTagId>,

UnityEngine.Rendering.Universal.RenderingData, UnityEngine.Rendering.SortingCriteria)

UnityEngine.Rendering.Universal.ScriptableRenderPass.renderPassEvent

UnityEngine.Rendering.Universal.ScriptableRenderPass.colorAttachments

Unity Engine. Rendering. Universal. Scriptable Render Pass. color Attachment

UnityEngine.Rendering.Universal.ScriptableRenderPass.depthAttachment

UnityEngine.Rendering.Universal.ScriptableRenderPass.clearFlag

UnityEngine.Rendering,Universal.ScriptableRenderPass.clearColor

System.Object.Equals(System.Object)

SystemObject.Equals(SystemObject, SystemObject)

System.Object.GetHashCode()

System.Object.GetType()

System.Object.MemberwiseClone()

SystemObject, ReferenceEquals(SystemObject, SystemObject)

System.Object.ToString()

Namespace: LeTai.Asset.TranslucentImage.UniversalRP

Assembly: LeTai.TranslucentImage.UniversalRP.dll

#### Syntax

[MovedFrom("LeTai.Asset.TranslucentImage.LWRP")] public class TranslucentImageBlurRenderPass : ScriptableRenderPass

#### **Properties**

#### **PreviewMaterial**

#### Declaration

public Material PreviewMaterial { get; }

#### **Property Value**

Type Description

UnityEngine.Material

#### Methods

Execute(ScriptableRenderContext, ref RenderingData)

#### Declaration

public override void Execute(ScriptableRenderContext context, ref RenderingData renderingData)

#### **Parameters**

# Type Name Description

UnityEngine.Rendering.ScriptableRenderContext context UnityEngine.RenderingUniversal.RenderingData renderingData

#### Overrides

UnityEngine.Rendering.Universal.ScriptableRenderPass.Execute(UnityEngine.Rendering.ScriptableRenderContext, UnityEngine.Rendering.Universal.RenderingData)

#### Finalize()

#### Declaration

protected void Finalize()

# Class TranslucentImageBlurSource

#### Inheritance

System.Object UnityEngine.Object

UnityEngine.ScriptableObject

UnityEngine.Rendering.Universal.ScriptableRendererFeature

TranslucentImageBlurSource

#### Inherited Members

UnityEngine.Rendering.Universal.ScriptableRendererFeature.SetActive(System.Boolean)

UnityEngine.Rendering.Universal.ScriptableRendererFeature.isActive

UnityEngine.ScriptableObject.SetDirty()

UnityEngine.ScriptableObject.CreateInstance(System.String)

UnityEngine.ScriptableObject.CreateInstance(System.Type)

UnityEngine.ScriptableObject.CreateInstance<T>()

UnityEngine.Object.GetInstanceID()

UnityEngine.Object.GetHashCode()

UnityEngine.Object.Equals(System.Object)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Vector3, UnityEngine.Quaternion)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Vector3, UnityEngine.Quaternion, UnityEngine.Transform)

UnityEngine.Object.Instantiate(UnityEngine.Object)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Transform)

UnityEngine.Object.Instantiate(UnityEngine.Object, UnityEngine.Transform, System Boolean)

UnityEngine.Object.Instantiate<T>(T)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Vector3, UnityEngine.Quaternion)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Vector3, UnityEngine.Quaternion, UnityEngine.Transform)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Transform)

UnityEngine.Object.Instantiate<T>(T, UnityEngine.Transform, System.Boolean)

UnityEngine.Object.Destroy(UnityEngine.Object, System.Single)

UnityEngine.Object.Destroy(UnityEngine.Object)

UnityEngine.Object.DestroyImmediate(UnityEngine.Object, System.Boolean)

UnityEngine.Object.DestroyImmediate(UnityEngine.Object)

UnityEngine.Object.FindObjectsOfType(System.Type)

UnityEngine.Object.DontDestroyOnLoad(UnityEngine.Object)

UnityEngine.Object.DestroyObject(UnityEngine.Object, System Single)

UnityEngine.Object.DestroyObject(UnityEngine.Object)

UnityEngine.Object.FindSceneObjectsOfType(System.Type)

UnityEngine.Object.FindObjectsOfTypeIncludingAssets(System Type)

UnityEngine.Object.FindObjectsOfType<T>()

UnityEngine.Object.FindObjectOfType<T>()

UnityEngine.Object.FindObjectsOfTypeAll(System.Type)

UnityEngine.Object.FindObjectOfType(System.Type)

UnityEngine.Object.ToString()

UnityEngine.Object.name

UnityEngine.Object.hideFlags

SystemObject, SystemObject, SystemObject)

System.Object.GetType()

System.Object.MemberwiseClone()

SystemObject.ReferenceEquals(SystemObject, SystemObject)

Namespace: <u>LeTai.Asset.TranslucentImage.UniversalRP</u>

Assembly: LeTai.TranslucentImage.UniversalRP.dll

#### **Syntax**

[MovedFrom("LeTai.Asset.TranslucentImage.LWRP")]

 $public\ class\ Translucent Image Blur Source: Scriptable Renderer Feature$ 

#### Methods

AddRenderPasses(ScriptableRenderer, ref RenderingData)

#### Declaration

public override void AddRenderPasses(ScriptableRenderer renderer, ref RenderingData renderingData)

#### **Parameters**

Type Name Description

UnityEngine.Rendering.Universal.ScriptableRenderer renderer UnityEngine.Rendering.Universal.RenderingData renderingData

#### Overrides

UnityEngine.Rendering.Universal.ScriptableRendererFeature.AddRenderPasses(UnityEngine.Rendering.Universal.ScriptableRenderer, UnityEngine.Rendering.Universal.RenderingData)

#### Create()

#### Declaration

public override void Create()

#### Overrides

UnityEngine.Rendering.Universal.ScriptableRendererFeature.Create()

#### RegisterSource(TranslucentImageSource)

When adding new Translucent Image Source to existing Camera at run time, the new Source must be registered here

#### Declaration

public void RegisterSource(TranslucentImageSource source)

#### Parameters

# Type Name Description

<u>TranslucentImageSource</u> source

# **Class Utilities**

#### Inheritance

System.Object Utilities

#### **Inherited Members**

SystemObject. Equals(SystemObject)
SystemObject. Equals(SystemObject, SystemObject)
SystemObject. GetHashCode()
SystemObject. GetType()
SystemObject. MemberwiseClone()
SystemObject. ReferenceEquals(SystemObject, SystemObject)
SystemObject. ToString()

 $Name space: \underline{LeTai. Asset. Translucent Image. Universal RP}$ 

Assembly: LeTai. Translucent Image. Universal RP. dll

#### **Syntax**

 $[MovedFrom("LeTai.Asset.TranslucentImage.LWRP")] \\ public static class Utilities$ 

#### Methods

# SimplePingPong(Int32, Int32)

#### Declaration

public static int SimplePingPong(int t, int max)

#### **Parameters**

#### Type Name Description

System.Int32 t System.Int32 max

#### Returns

#### Type Description

System.Int32