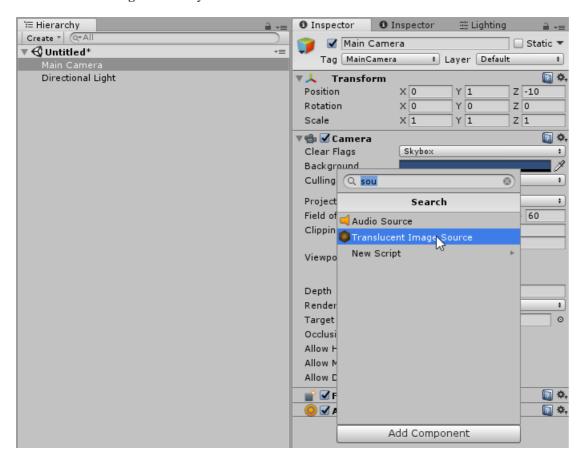
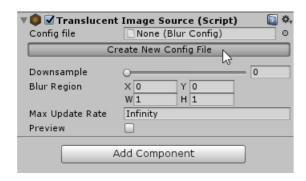
Table of Contents

Getting Started

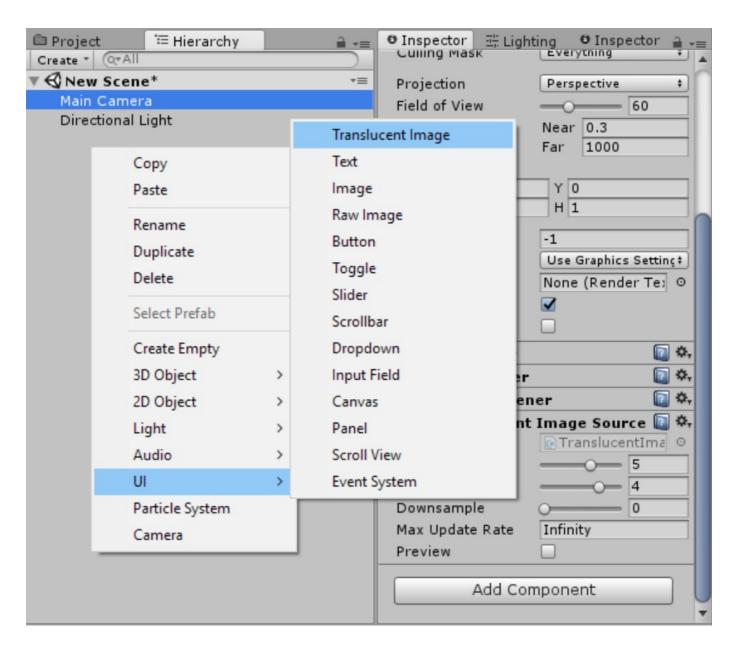
- 0. If you are using URP, follow the setup steps first.
- 1. Add Translucent Image Source to your main camera.



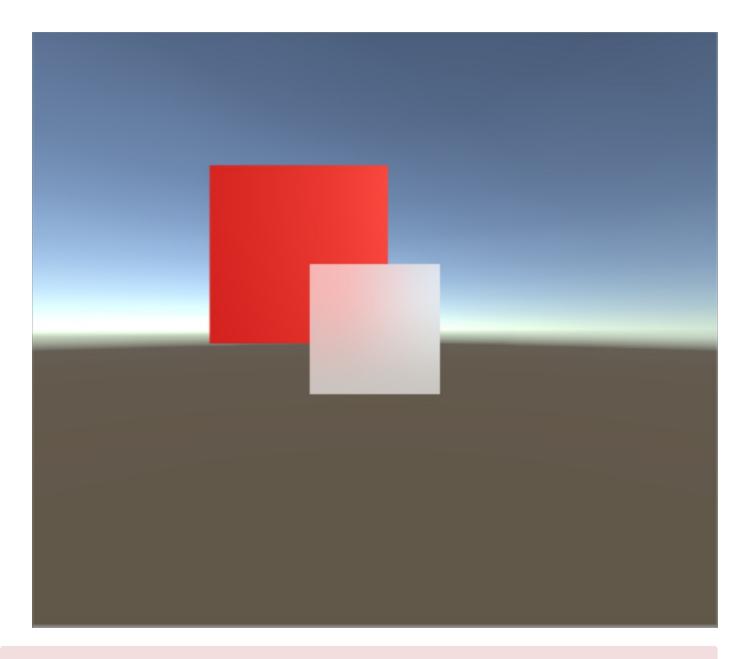
2. Create a Blur Config asset (or assign an existing one).



3. Create a *UI* > *Translucent Image*, as you would with normal Image.



4. That's it!



WARNING

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 mode.

Customize

Translucent Image requires 2 components in a scene: 1 or more Sources that control the blur amount, and multiple Translucent Images that replace the built-in Image component.

Translucent Image Source

Translucent Image Source generate the blurred background. It lets you control how much blur is present, the quality of blur, and thus the performance trade-off.

Blur Amount

There are 2 methods of controlling the amount of blur, Simple and Advanced:

Simple:

• Strength. Using this single property, you can (mostly) 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 smooth interpolating between blur amounts, but can't go down to 0.
- Iteration: Increase blur quality and blurriness. Affects performance slightly. Animating this will create noncontinuous change in blur amount.

Performance:

These allow you to fine-tune the performance-quality trade-off. They're more useful for less capable mobile devices or high-resolution tablets.

- Max Depth: Increasing this property will:
 - Improves performance.
 - o Increases blur amount if Iteration is high.
 - · May cause flickering when the background moves.
- Downsample: Increasing to reduce the internal resolution and improve performance. At the cost of reduced quality, and may cause 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 works the same as the Camera component Viewport. It's easier to wield 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.

Other:

- Background Fill: Fill the background where the frame buffer alpha is 0. Useful for VR Underlay and Passthrough, where these areas would otherwise be black.
- Preview: Preview the effect in full-screen. It also shows the Blur Region as a resizable 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

- Materials used here must use the shader Ul/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's 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 the Source Image and the blurred background. This should be what you would use instead of the alpha channel of the Color property most of the time.

Shared settings

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

- Vibrancy: Colorfulness of the background. 0 means 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: TranslucentImage and TranslucentImageSource

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

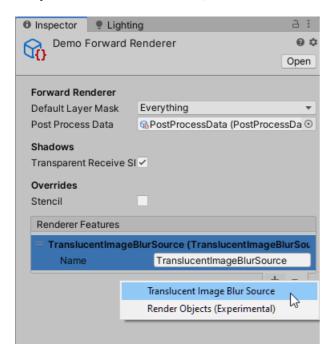
Only non-preview, non-beta version of URP and Unity will be supported.

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.

Setup

- 1. Import the package at TranslucentImage/UniversalRP support.
- 2. Find your Forward Renderer Assets, and add TranslucentImageBlurSource to its list of Renderer Features:

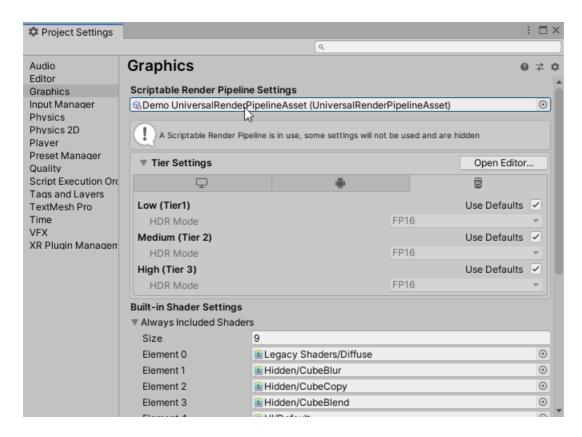


NOTE

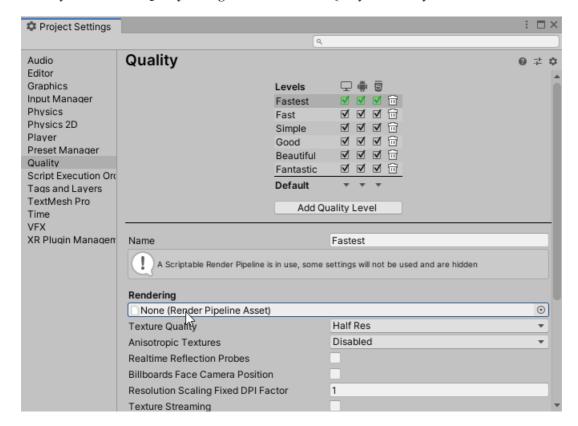
You may have multiple Forward Renderer Assets. In which case you have to add the Renderer Feature to all of them.

Finding the Forward Renderer Assets

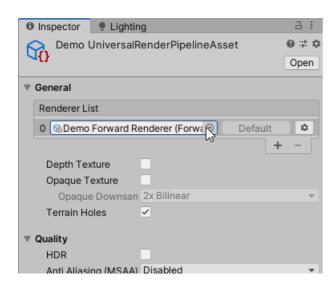
1. You can find the Forward Renderer asset(s) you're using by finding the Render Pipeline Settings asset in Graphic Settings:



2. You may also have more Quality Setting. Be sure to check all Quality Levels that you use:



3. Double click the field under the cursor in the above images will take you to the **Render Pipeline Settings asset**, where you can find your **Forward Renderer asset(s)** in the list of **Renderer**:



Blurring other UI elements

To achieve the best possible performance, Translucent Image does not support blurring UI elements in arbitrary order. However, UIs in a Canvas can blur UIs in different Canvas, by using additional Cameras.

TIP

The best way to learn is by example! Check out the included demo scenes that contain examples of blurring Uls:

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

The idea

To understand the setup, it's useful to understand how Translucent Image works.

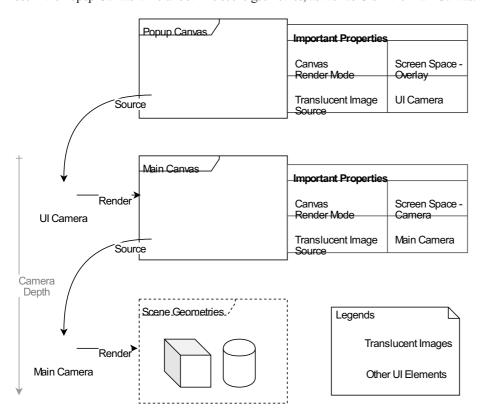
Translucent Images do not blur things by themselves. Instead, the Translucent Image Source component blurs the entire "screen" at once, then shares the result with multiple Translucent Images. This massively reduces the number of pixels that have to be blurred. It's one reason why Translucent Image is so fast.

The Translucent Image Source component "see" and blur what the Camera they attached to render. If the Source "sees" the Translucent Images, these Images will appear in their own background, causing a feedback loop and making the Images fade to opaque. It's important to make sure Translucent Images are **not** "seen" by their own Source.

So, to blur UIs, you need at least 2 Canvases: a lower one containing the UIs to be blurred, an upper one for the Translucent Images. Then, set the Camera with the Translucent Image Source to only render the lower Canvas.

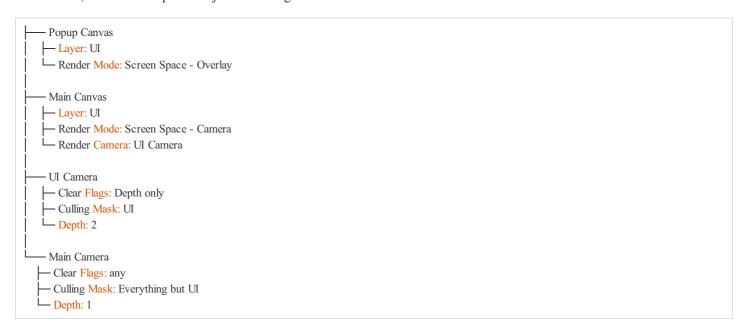
An example setup

A common use of UI blurring is for pop-up panels. The following setup lets the Translucent Images in the Main Canvas blur the scene geometries. Those in the Popup Canvas will blur both the scene geometries, as well as UIs in the Main Canvas.



An example setup. What a Camera render can be controlled using its Culling Mask property

For reference, these are the important objects and settings:



Performance implication

You can stack 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 problem 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/TranlucentImage/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.
 - · 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 at: https://letai.freshdesk.com/support/tickets/new

Support request Search Articles

Namespace LeTai.Asset.TranslucentImage

ScalableBlur
Scalable Blur Config
ShaderId
Shims
TranslucentImage
Dynamic blur-behind UI element
TranslucentImageSource
Common source of blur for Translucent Images.
Interfaces
IBlurAlgorithm
Enums
BackgroundFillMode
BlurAlgorithmType

Classes

BackgroundFill

BlurConfig

Extensions

Class BackgroundFill			
Inheritance			
abject State of the Control of the C			
BackgroundFill			
Inherited Members			
object.Equals(object)			
object.Equals(object, object)			
object.GetHashCode()			
object.GetType()			
object.MemberwiseClone()			
object.ReferenceEquals(object, object)			
object.ToString()			
Namespace: Le Tai. Asset. Translucent Image			
Assembly: LeTai.TranslucentImage.dll			
Syntax			
[Serializable]			
public class BackgroundFill			
Fields			
color			
Declaration	Declaration		
public Color color			
Field Value			
ТҮРЕ	DESCRIPTION		
Color			
mode			
Declaration			
public BackgroundFillMode mode			
Field Value			
ТҮРЕ		DESCRIPTION	

BackgroundFillMode

Enum BackgroundFillMode

Namespace: Le Tai. Asset. Translucent Image Assembly: Le Tai. Translucent Image.dll

Syntax

public enum BackgroundFillMode	
--------------------------------	--

Fields

NAME	DESCRIPTION
Color	
None	

Enum BlurAlgorithmType

Namespace: Le Tai. Asset. Translucent Image Assembly: Le Tai. Translucent Image.dll

Syntax

public enum BlurAlgorithmType

Fields

NAME	DESCRIPTION
ScalableBlur	

Class BlurConfig Inheritance object Object ScriptableObject BlurConfig ScalableBlurConfig **Inherited Members** ScriptableObject.SetDirty() ScriptableObject.CreateInstance(string) ScriptableObject.CreateInstance(Type) ScriptableObject.CreateInstance<T>() Object.GetInstanceID() Object.GetHashCode() Object.Equals(object) Object.Instantiate(Object, Vector3, Quaternion) Object.Instantiate(Object, Vector3, Quaternion, Transform) Object.Instantiate(Object) Object.Instantiate(Object, Transform) Object.Instantiate(Object, Transform, bool) Object.Instantiate<T>(T) Object.Instantiate<T>(T, Vector3, Quaternion) Object.Instantiate<T>(T, Vector3, Quaternion, Transform) Object.Instantiate<T>(T, Transform) Object.Instantiate<T>(T, Transform, bool) Object.Destroy(Object, float) Object.Destroy(Object) Object.DestroyImmediate(Object, bool) Object.DestroyImmediate(Object) Object.FindObjectsOfType(Type) Object.DontDestroyOnLoad(Object) Object.DestroyObject(Object, float) Object.DestroyObject(Object) Object.FindSceneObjectsOfType(Type) Object.FindObjectsOfTypeIncludingAssets(Type) Object.FindObjectsOfType<T>() Object.FindObjectOfType<T>() Object.FindObjectsOfTypeAll(Type) Object.FindObjectOfType(Type) Object.ToString() Object.name Object.hideFlags object. Equals (object, object) object.GetType() object.MemberwiseClone()

Namespace: Le Tai. Asset. Translucent Image
Assembly: Le Tai. Translucent Image.dll
Syntax

object.ReferenceEquals(object, object)

public class BlurConfig : ScriptableObject

Class Extensions

Inheritance

object

Extensions

Inherited Members

object.Equals(object)

object. Equals (object, object)

object.GetHashCode()

object.GetType()

object.MemberwiseClone()

object.ReferenceEquals(object, object)

object.ToString()

Namespace: Le Tai. Asset. Translucent Image Assembly: Le Tai. Translucent Image.dll

Syntax

public static class Extensions

Methods

BlitCustom(CommandBuffer, RenderTargetIdentifier, RenderTargetIdentifier, Material, int, bool)

Declaration

public static void BlitCustom(this CommandBuffer cmd, RenderTargetIdentifier source, RenderTargetIdentifier destination, Material material, int passIndex, bool useBuiltin = false)

Parameters

ТҮРЕ	NAME	DESCRIPTION
CommandBuffer	cmd	
RenderTargetIdentifier	source	
RenderTargetIdentifier	destination	
Material	material	
int	passIndex	
bool	useBuiltin	

BlitFullscreenTriangle(CommandBuffer, RenderTargetIdentifier, RenderTargetIdentifier, Material, int)

Declaration

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

Parameters

ТҮРЕ	NAME	DESCRIPTION
CommandBuffer	cmd	

ТҮРЕ	NAME	DESCRIPTION
RenderTargetIdentifier	source	
RenderTargetIdentifier	destination	
Material	material	
int	pass	

Blit Procedural (Command Buffer, Render Target I dentifier, Render Target I dentifier, Material, int)

Declaration

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

Parameters

ТҮРЕ	NAME	DESCRIPTION
CommandBuffer	cmd	
RenderTargetIdentifier	source	
RenderTargetIdentifier	destination	
Material	material	
int	passIndex	

ToMinMaxVector(Rect)

Declaration

public static Vector4 ToMinMaxVector(this Rect self)

Parameters

ТҮРЕ	NAME	DESCRIPTION
Rect	self	

Returns

ТҮРЕ	DESCRIPTION
Vector4	

ToVector4(Rect)

Declaration

public static Vector4 ToVector4(this Rect self)

Parameters

ТҮРЕ	NAME	DESCRIPTION
Rect	self	

Returns

ТҮРЕ	DESCRIPTION
Vector4	

Interface IBlurAlgorithm

Namespace: Le Tai. Asset. Translucent Image Assembly: Le Tai. Translucent Image.dll

Syntax

public interface IBlurAlgorithm

Methods

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

Declaration

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

Parameters

ТҮРЕ	NAME	DESCRIPTION
CommandBuffer	cmd	
RenderTargetIdentifier	src	
Rect	srcCropRegion	
BackgroundFill	backgroundFill	
RenderTexture	target	

Init(BlurConfig, bool)

Declaration

void Init(BlurConfig config, bool isBirp)

Parameters

ТҮРЕ	NAME	DESCRIPTION
BlurConfig	config	
bool	isBirp	

Class ScalableBlur

Inheritance

object

ScalableBlur

Implements

IBlurAlgorithm

Inherited Members

object.Equals(object)

object. Equals (object, object)

object.GetHashCode()

object.GetType()

object.MemberwiseClone()

object.ReferenceEquals(object, object)

object.ToString()

Namespace: Le Tai. Asset. Translucent Image Assembly: Le Tai. Translucent Image.dll

Syntax

public class ScalableBlur: IBlurAlgorithm

Methods

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

Declaration

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

Parameters

ТҮРЕ	NAME	DESCRIPTION
CommandBuffer	cmd	
RenderTargetIdentifier	src	
Rect	srcCropRegion	
BackgroundFill	backgroundFill	
RenderTexture	target	

BlurAtDepth(CommandBuffer, int, RenderTexture)

Declaration

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

Parameters

ТҮРЕ	NAME	DESCRIPTION
CommandBuffer	cmd	

ТҮРЕ	NAME	DESCRIPTION
int	depth	
RenderTexture	baseTexture	

ConfigMaterial(float, Vector4, BackgroundFill)

Declaration

protected void ConfigMaterial(float radius, Vector4 cropRegion, BackgroundFill) backgroundFill)

Parameters

ТҮРЕ	NAME	DESCRIPTION
float	radius	
Vector4	cropRegion	
BackgroundFill	backgroundFill	

Init(BlurConfig, bool)

Declaration

public void Init(BlurConfig config, bool isBirp)

Parameters

ТҮРЕ	NAME	DESCRIPTION
BlurConfig	config	
bool	isBirp	

Simple Ping Pong(int, int)

Declaration

public static int SimplePingPong(int t, int max)

Parameters

ТҮРЕ	NAME	DES CRIPTION
int	t	
int	max	

Returns

ТҮРЕ	DESCRIPTION
int	

Implements

IBlurAlgorithm

Class ScalableBlurConfig Inheritance object Object ScriptableObject BlurConfig ScalableBlurConfig **Inherited Members** ScriptableObject.SetDirty() ScriptableObject.CreateInstance(string) ScriptableObject.CreateInstance(Type) ScriptableObject.CreateInstance<T>() Object.GetInstanceID() Object.GetHashCode() Object.Equals(object) Object.Instantiate(Object, Vector3, Quaternion) Object.Instantiate(Object, Vector3, Quaternion, Transform) Object.Instantiate(Object) Object.Instantiate(Object, Transform) Object.Instantiate(Object, Transform, bool) Object.Instantiate<T>(T) Object.Instantiate<T>(T, Vector3, Quaternion) Object.Instantiate<T>(T, Vector3, Quaternion, Transform) Object.Instantiate<T>(T, Transform) Object.Instantiate<T>(T, Transform, bool) Object.Destroy(Object, float) Object.Destroy(Object) Object.DestroyImmediate(Object, bool) Object.DestroyImmediate(Object) Object.FindObjectsOfType(Type) Object.DontDestroyOnLoad(Object) Object.DestroyObject(Object, float) Object.DestroyObject(Object) Object.FindSceneObjectsOfType(Type) Object.FindObjectsOfTypeIncludingAssets(Type) Object.FindObjectsOfType<T>() Object.FindObjectOfType<T>() Object.FindObjectsOfTypeAll(Type) Object.FindObjectOfType(Type) Object.ToString() Object.name Object.hideFlags object. Equals (object, object) object.GetType() object.MemberwiseClone() object.ReferenceEquals(object, object) Namespace: Le Tai. Asset. Translucent Image

Syntax

Assembly: LeTai.TranslucentImage.dll

[CreateAssetMenu(fileName = "New Scalable Blur Config", menuName = "Translucent Image/ Scalable Blur Config", order = 100)] 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

public int Iteration { get; set; }

Property Value

ТҮРЕ	DESCRIPTION
int	Must be non-negative

MaxDepth

Clamp the minimum size of the intermediate texture. Reduce flickering and blur

Declaration

public int MaxDepth { get; set; }

Property Value

ТУРЕ	DESCRIPTION
int	Must larger than 0

Radius

Distance between the base texel and the texel to be sampled.

Declaration

public float Radius { get; set; }

Property Value

ТҮРЕ	DESCRIPTION
float	

Strength

User friendly property to control the amount of blur

Declaration

public float Strength { get; set; }

Property Value

ТҮРЕ	DESCRIPTION
float	Must be non-negative

Methods

Set Advance d Field From Simple ()

Calculate size and iteration from strength

Declaration

 $protected\ virtual\ void\ SetAdvancedFieldFromSimple()$

Class ShaderId

Inheritance object ShaderId Inherited Members object.Equals(object) object.Equals(object, object) object.GetHashCode() object.GetType() object.MemberwiseClone() object.ReferenceEquals(object, object) object.ToString() Namespace: Le Tai. Asset. Translucent Image Assembly: LeTai.TranslucentImage.dll **Syntax** public static class ShaderId **Fields** BACKGROUND_COLOR Declaration public static readonly int BACKGROUND_COLOR Field Value **TYPE DESCRIPTION** int **COLOR** Declaration public static readonly int COLOR

Field Value

ТҮРЕ	DESCRIPTION
int	

CROP_REGION

Declaration

public static readonly int CROP_REGION

Field Value

ТҮРЕ	DESCRIPTION
int	

Declaration

public s	static	readonly	int	MAIN	TEX
----------	--------	----------	-----	------	-----

Field Value

ТҮРЕ	DESCRIPTION
int	

RADIUS

Declaration

public static readonly int RADIUS

Field Value

ТҮРЕ	DESCRIPTION
int	

intermediateRT

Declaration

public static int[] intermediateRT

Field Value

ТҮРЕ	DESCRIPTION
int[]	

Methods

Init(int)

Declaration

public static void Init(int stackDepth)

Parameters

ТҮРЕ	NAME	DESCRIPTION
int	stackDepth	

Class Shims

III	п	e	r	1	ta	п	C

object

Shims

Inherited Members

object.Equals(object)

object.Equals(object, object)

object.GetHashCode()

object.GetType()

object.MemberwiseClone()

object.ReferenceEquals(object, object)

object.ToString()

Namespace: Le Tai. Asset. Translucent Image Assembly: Le Tai. Translucent Image.dll

Syntax

public static class Shims

Methods

FindObjectOfType<T>(bool, bool)

Declaration

public static T FindObjectOfType<T>(bool includeInactive = false, bool sorted = true) where T : Object

Parameters

ТҮРЕ	NAME	DESCRIPTION
bool	includeInactive	
bool	sorted	

Returns

ТҮРЕ	DESCRIPTION
Т	

Type Parameters

NAME	DESCRIPTION
Т	

FindObjectsOfType<T>(bool)

Declaration

public static T[] FindObjectsOfType<T>(bool includeInactive = false) where T : Object

Parameters

ТҮРЕ	NAME	DESCRIPTION
bool	includeInactive	

Returns

ТҮРЕ	DESCRIPTION
T[]	

Type Parameters

NAME	DESCRIPTION
Т	

Class TranslucentImage

Dynamic blur-behind UI element

Inheritance

object

Object

Component

Behaviour

MonoBehaviour

UIBehaviour

Graphic

MaskableGraphic

Image

TranslucentImage

Implements

ICanvasElement

IClippable

IMaskable

IMaterialModifier

ISerializationCallbackReceiver

ILayoutElement

ICanvasRaycastFilter

IMeshModifier

Inherited Members

Image.s ETC1DefaultUI

Image.sprite

Image.DisableSpriteOptimizations()

Image.overrideSprite

Image.type

Image.preserveAspect

Image.fillCenter

Image.fillMethod

Image.fillAmount

Image.fillClockwise

Image.fillOrigin

Image.eventAlphaThreshold

Image. alpha Hit Test Minimum Threshold

Image.useSpriteMesh

Image. de fault ETC1 Graphic Material

Image.mainTexture

Image.hasBorder

Image.pixelsPerUnitMultiplier

Image.pixelsPerUnit

Image.multipliedPixelsPerUnit

Image.material

Image.OnBeforeSerialize()

Image.OnAfterDeserialize()

Image.SetNativeSize()

Image.OnPopulateMesh(VertexHelper)

Image.UpdateMaterial()

Image.OnCanvasHierarchyChanged()

Image.CalculateLayoutInputHorizontal()

Image.CalculateLayoutInputVertical()

Image.minWidth

Image.preferredWidth

Image.flexibleWidth

Image.minHeight

Image.preferredHeight

Image.flexibleHeight

Image.layoutPriority

Image.IsRaycastLocationValid(Vector2, Camera)

MaskableGraphic.m_ShouldRecalculateStencil

MaskableGraphic.m MaskMaterial

MaskableGraphic.onCullStateChanged

MaskableGraphic.maskable

MaskableGraphic.isMaskingGraphic

MaskableGraphic.m_StencilValue

MaskableGraphic.GetModifiedMaterial(Material)

MaskableGraphic.Cull(Rect, bool)

MaskableGraphic.SetClipRect(Rect, bool)

MaskableGraphic.SetClipSoftness(Vector2)

MaskableGraphic.OnTransformParentChanged()

MaskableGraphic.RecalculateClipping()

MaskableGraphic.RecalculateMasking()

Graphic.s_DefaultUI

Graphic.s WhiteTexture

Graphic.defaultGraphicMaterial

Graphic.m_Material

Graphic.m SkipLayoutUpdate

Graphic.m SkipMaterialUpdate

Graphic.color

Graphic.raycastTarget

Graphic.m OnDirtyLayoutCallback

Graphic.m OnDirtyVertsCallback

Graphic.m OnDirtyMaterialCallback

Graphic.s Mesh

Graphic.m CachedMesh

Graphic.m CachedUvs

Graphic.useLegacyMeshGeneration

Graphic.SetAllDirty()

Graphic.SetLayoutDirty()

Graphic.SetVerticesDirty()

Graphic.SetMaterialDirty()

Graphic.OnRectTransformDimensionsChange()

Graphic.OnBeforeTransformParentChanged()

Graphic.depth

Graphic.rectTransform

Graphic.canvas

Graphic.canvasRenderer

Graphic.defaultMaterial

Graphic.materialForRendering

Graphic.OnDestroy()

Graphic.OnCullingChanged()

Graphic.Rebuild(CanvasUpdate)

Graphic.LayoutComplete()

Graphic.GraphicUpdateComplete()

Graphic.UpdateGeometry()

Graphic.workerMesh

Graphic.OnPopulateMesh(Mesh)

Graphic.Raycast(Vector2, Camera)

Graphic.PixelAdjustPoint(Vector2)

Graphic.GetPixelAdjustedRect()

Graphic.CrossFadeColor(Color, float, bool, bool)

Graphic.CrossFadeColor(Color, float, bool, bool, bool)

Graphic.CrossFadeAlpha(float, float, bool)

Graphic.RegisterDirtyLayoutCallback(UnityAction)

Graphic.UnregisterDirtyLayoutCallback(UnityAction)

Graphic.RegisterDirtyVerticesCallback(UnityAction)

Graphic.UnregisterDirtyVerticesCallback(UnityAction)

Graphic.RegisterDirtyMaterialCallback(UnityAction)

Graphic.UnregisterDirtyMaterialCallback(UnityAction)

UIBehaviour.Awake()

UIBehaviour.IsActive()

UIBehaviour.OnCanvasGroupChanged()

UIBehaviour.IsDestroyed()

MonoBehaviour.IsInvoking()

MonoBehaviour.CancelInvoke()

MonoBehaviour.Invoke(string, float)

MonoBehaviour.InvokeRepeating(string, float, float)

MonoBehaviour.CancelInvoke(string)

MonoBehaviour.IsInvoking(string)

MonoBehaviour.StartCoroutine(string)

MonoBehaviour.StartCoroutine(string, object)

MonoBehaviour.StartCoroutine(IEnumerator)

MonoBehaviour.StartCoroutine Auto(IEnumerator)

MonoBehaviour.StopCoroutine(IEnumerator)

MonoBehaviour.StopCoroutine(Coroutine)

MonoBehaviour.StopCoroutine(string)

MonoBehaviour.StopAllCoroutines()

MonoBehaviour.print(object)

MonoBehaviour.useGUILayout

MonoBehaviour.runInEditMode

Behaviour.enabled

Behaviour.isActiveAndEnabled

Component.GetComponent(Type)

Component.GetComponent<T>()

Component.TryGetComponent(Type, out Component)

Component.TryGetComponent<T>(out T)

Component.GetComponent(string)

Component.GetComponentInChildren(Type, bool)

Component.GetComponentInChildren(Type)

Component.GetComponentInChildren<T>(bool)

Component.GetComponentInChildren<T>()

ComponentsInChildren(Type, bool)

Components.GetComponentsInChildren(Type) ComponentsInChildren<T>(bool) Component.GetComponentsInChildren<T>(bool, List<T>) ComponentsInChildren<T>() Component.GetComponentsInChildren<T>(List<T>) Component.GetComponentInParent(Type) Component.GetComponentInParent<T>() ComponentsInParent(Type, bool) ComponentsInParent(Type) ComponentsInParent<T>(bool) Component.GetComponentsInParent<T>(bool, List<T>) ComponentsInParent<T>() Components.GetComponents(Type) Components.GetComponents(Type, List<Component>) ComponentsGetComponentsGT>(ListGT>) ComponentsGetComponentsT>() Component.CompareTag(string) Component. SendMessageUpwards(string, object, SendMessageOptions) Component.SendMessageUpwards(string, object) Component.SendMessageUpwards(string) Component.SendMessageUpwards(string, SendMessageOptions) Component.SendMessage(string, object) Component.SendMessage(string) Component.SendMessage(string, object, SendMessageOptions) Component.SendMessage(string, SendMessageOptions) Component.BroadcastMessage(string, object, SendMessageOptions) Component.BroadcastMessage(string, object) Component.BroadcastMessage(string) Component.BroadcastMessage(string, SendMessageOptions) Component.transform Component.gameObject Component.tag Object.GetInstanceID() Object.GetHashCode() Object.Equals(object) Object.Instantiate(Object, Vector3, Quaternion) Object.Instantiate(Object, Vector3, Quaternion, Transform) Object.Instantiate(Object) Object.Instantiate(Object, Transform) Object.Instantiate(Object, Transform, bool) Object.Instantiate<T>(T) Object.Instantiate<T>(T, Vector3, Quaternion) Object.Instantiate<T>(T, Vector3, Quaternion, Transform) Object.Instantiate<T>(T, Transform) Object.Instantiate<T>(T, Transform, bool) Object.Destroy(Object, float) Object.Destroy(Object) Object.DestroyImmediate(Object, bool)

Object.DestroyImmediate(Object)
Object.FindObjectsOfType(Type)
Object.DontDestroyOnLoad(Object)
Object.DestroyObject(Object, float)

Object.DestroyObject(Object)

Object.FindSceneObjectsOfType(Type)

Object.FindObjectsOfTypeIncludingAssets(Type)

Object.FindObjectsOfType<T>()

Object.FindObjectOfType<T>()

Object.FindObjectsOfTypeAll(Type)

Object.FindObjectOfType(Type)

Object.ToString()

Object.name

Object.hideFlags

object. Equals (object, object)

object.GetType()

object.MemberwiseClone()

object.ReferenceEquals(object, object)

Namespace: Le Tai. Asset. Translucent Image Assembly: Le Tai. Translucent Image.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(-1, 1)]

public float brightness

Field Value

ТҮРЕ	DESCRIPTION
float	

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(0, 1)] public float flatten

Field Value

ТҮРЕ	DESCRIPTION
float	

m_spriteBlending

Declaration

[Tooltip("Blend between the sprite and background blur")]
[Range(0, 1)]
[FormerlySerializedAs("spriteBlending")]
public float m_spriteBlending

Field Value

ТҮРЕ	DESCRIPTION
float	

source

Source of blur for this image

Declaration

public TranslucentImageSource source

Field Value

ТҮРЕ	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(-1, 3)]
public float vibrancy

Field Value

ТҮРЕ	DESCRIPTION
float	

Properties

spriteBlending

Declaration

public float spriteBlending { get; set; }

Property Value

ТҮРЕ	DESCRIPTION
float	

Methods

ModifyMesh(Mesh)

Declaration

public virtual void ModifyMesh(Mesh mesh)

Parameters

ТҮРЕ	NAME	DESCRIPTION
Mesh	mesh	

ModifyMesh(VertexHelper)

Call used to modify mesh. Place any custom mesh processing in this function.

Declaration

public virtual void ModifyMesh(VertexHelper vh)

Parameters

ТҮРЕ	NAME	DESCRIPTION
VertexHelper	vh	

OnDidApplyAnimationProperties()

Declaration

protected override void OnDidApplyAnimationProperties()

Overrides

UnityEngine.UI.Image.OnDidApplyAnimationProperties()

OnDisable()

Clear references.

Declaration

protected override void OnDisable()

Overrides

UnityEngine.UI.Image.OnDisable()

OnEnable()

Mark the Graphic and the canvas as having been changed.

Declaration

protected override void OnEnable()

Overrides

UnityEngine.UI.Image.OnEnable()

Start()

Declaration

protected override void Start()

Overrides

UnityEngine.EventSystems.UIBehaviour.Start()

Implements

UnityEngine.UI.ICanvasElement

UnityEngine.UI.IClippable UnityEngine.UI.IMaskable

UnityEngine.UI.IMaterialModifier

Unity Engine. I Serialization Callback Receiver

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

Class TranslucentImageSource

Common source of blur for Translucent Images.

Inheritance

object

Object

Component

Behaviour

MonoBehaviour

TranslucentImageSource

Inherited Members

MonoBehaviour.IsInvoking()

MonoBehaviour.CancelInvoke()

MonoBehaviour.Invoke(string, float)

MonoBehaviour.InvokeRepeating(string, float, float)

MonoBehaviour.CancelInvoke(string)

MonoBehaviour.IsInvoking(string)

MonoBehaviour.StartCoroutine(string)

MonoBehaviour.StartCoroutine(string, object)

MonoBehaviour.StartCoroutine(IEnumerator)

MonoBehaviour.StartCoroutine_Auto(IEnumerator)

MonoBehaviour.StopCoroutine(IEnumerator)

MonoBehaviour.StopCoroutine(Coroutine)

MonoBehaviour. Stop Coroutine (string)

MonoBehaviour.StopAllCoroutines()

MonoBehaviour.print(object)

MonoBehaviour.useGUILayout

MonoBehaviour.runInEditMode

Behaviour.enabled

Behaviour.isActiveAndEnabled

Component.GetComponent(Type)

Component.GetComponent<T>()

Component.TryGetComponent(Type, out Component)

Component.TryGetComponent<T>(out T)

Component.GetComponent(string)

Component.GetComponentInChildren(Type, bool)

Component.GetComponentInChildren(Type)

Component.GetComponentInChildren<T>(bool)

Component.GetComponentInChildren<T>()

ComponentsInChildren(Type, bool)

ComponentsInChildren(Type)

ComponentsInChildren<T>(bool)

Component.GetComponentsInChildren<T>(bool, List<T>)

ComponentsInChildren<T>()

Component.GetComponentsInChildren<T>(List<T>)

Component.GetComponentInParent(Type)

Component.GetComponentInParent<T>()

Components In Parent (Type, bool)

ComponentsInParent(Type)

ComponentsInParent<T>(bool)

Component.GetComponentsInParent<T>(bool, List<T>)

ComponentsInParent<T>() Components.GetComponents(Type) Components.GetComponents(Type, List<Component>) ComponentsGetComponentsT>(List<T>) ComponentsGetComponentsT>() Component.CompareTag(string) Component.SendMessageUpwards(string, object, SendMessageOptions) Component.SendMessageUpwards(string, object) Component.SendMessageUpwards(string) Component.SendMessageUpwards(string, SendMessageOptions) Component.SendMessage(string, object) Component.SendMessage(string) Component.SendMessage(string, object, SendMessageOptions) Component.SendMessage(string, SendMessageOptions) Component.BroadcastMessage(string, object, SendMessageOptions) Component.BroadcastMessage(string, object) Component.BroadcastMessage(string) Component.BroadcastMessage(string, SendMessageOptions) Component.transform Component.gameObject Component.tag Object.GetInstanceID() Object.GetHashCode() Object.Equals(object) Object.Instantiate(Object, Vector3, Quaternion) Object.Instantiate(Object, Vector3, Quaternion, Transform) Object.Instantiate(Object) Object.Instantiate(Object, Transform) Object.Instantiate(Object, Transform, bool) Object.Instantiate<T>(T) Object.Instantiate<T>(T, Vector3, Quaternion) Object.Instantiate<T>(T, Vector3, Quaternion, Transform) Object.Instantiate<T>(T, Transform) Object.Instantiate<T>(T, Transform, bool) Object.Destroy(Object, float) Object.Destroy(Object) Object.DestroyImmediate(Object, bool) Object.DestroyImmediate(Object) Object.FindObjectsOfType(Type) Object.DontDestroyOnLoad(Object) Object.DestroyObject(Object, float) Object.DestroyObject(Object) Object.FindSceneObjectsOfType(Type) Object.FindObjectsOfTypeIncludingAssets(Type) Object.FindObjectsOfType<T>() Object.FindObjectOfType<T>() Object.FindObjectsOfTypeAll(Type) Object.FindObjectOfType(Type) Object.ToString() Object.name Object.hideFlags

object. Equals (object, object)

object.GetType()
object.MemberwiseClone()
object.ReferenceEquals(object, object)

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

Properties

BackgroundFill

Declaration

public BackgroundFill BackgroundFill { get; set; }

Property Value

ТҮРЕ	DESCRIPTION
BackgroundFill	

BlurAlgorithmSelection

Declaration

public BlurAlgorithmType BlurAlgorithmSelection { get; set; }

Property Value

ТҮРЕ	DESCRIPTION
BlurAlgorithmType	

BlurConfig

Declaration

public BlurConfig { get; set; }

Property Value

ТУРЕ	DESCRIPTION
BlurConfig	

BlurRegion

Define the rectangular area on screen that will be blurred.

Declaration

public Rect BlurRegion { get; set; }

Property Value

ТҮРЕ	DESCRIPTION
Rect	Between 0 and 1

Blur Region Normalized Screen Space

Blur Region rect is relative to Camrect. This is relative to the full screen

Declaration

public Rect BlurRegionNormalizedScreenSpace { get; set; }

Property Value

ТҮРЕ	DESCRIPTION
Rect	

BlurredScreen

Result of the image effect. Translucent Image use this as their content (read-only)

Declaration

public RenderTexture BlurredScreen { get; set; }

Property Value

ТУРЕ	DESCRIPTION
RenderTexture	

CamRectOverride

Set in SRP to provide Camrect for overlay cameras

Declaration

public Rect CamRectOverride { get; set; }

Property Value

ТҮРЕ	DESCRIPTION
Rect	

Downsample

The rendered image will be shrinked by a factor of $2^{\{\{\text{this}\}\}}$ before bluring to reduce processing time

Declaration

public int Downsample { get; set; }

Property Value

ТҮРЕ	DESCRIPTION
int	Must be non-negative. Default to 0

MaxUpdateRate

Maximum number of times to update the blurred image each second

Declaration

public float MaxUpdateRate { get; set; }

Property Value

ТҮРЕ	DESCRIPTION
float	

Preview

Render the blurred result to the render target

Declaration

public bool Preview { get; set; }

Property Value

ТҮРЕ	DESCRIPTION
bool	

Methods

CreateNewBlurredScreen(Vector2Int)

Declaration

protected virtual void CreateNewBlurredScreen(Vector2Int camPixelSize)

Parameters

ТҮРЕ	NAME	DESCRIPTION
Vector2Int	camPixelSize	

OnBeforeBlur(Vector2Int)

Declaration

public void OnBeforeBlur(Vector2Int camPixelSize)

Parameters

ТҮРЕ	NAME	DESCRIPTION
Vector2Int	camPixelSize	

Request(bool)

Declaration

public void Request(bool isForOverlayCanvas)

Parameters

ТҮРЕ	NAME	DESCRIPTION
bool	isForOverlayCanvas	

Start()

Declaration

protected virtual void Start()

shouldUpdateBlur()

Declaration

public bool shouldUpdateBlur()

Returns

ТҮРЕ	DESCRIPTION
bool	

$Name space\ Le Tai. As set. Translucent Image. Universal RP$

Classes

Translucent Image Blur Render Pass

Translucent Image Blur Source

Enums

RenderOrder

Enum RenderOrder

 $Name space: \textbf{LeTai.Asset.TranslucentImage.UniversalRP} \\ Assembly: \textbf{LeTai.TranslucentImage.UniversalRP.dll} \\$

Syntax

public enum RenderOrder

Fields

NAME	DESCRIPTION
AfterPostProcessing	
BeforePostProcessing	

Class TranslucentImageBlurRenderPass

Inheritance

object

ScriptableRenderPass

TranslucentImageBlurRenderPass

Inherited Members

ScriptableRenderPass.ConfigureTarget(RenderTargetIdentifier, RenderTargetIdentifier)

ScriptableRenderPass.ConfigureTarget(RenderTargetIdentifier[], RenderTargetIdentifier)

ScriptableRenderPass.ConfigureTarget(RenderTargetIdentifier)

ScriptableRenderPass.ConfigureTarget(RenderTargetIdentifier[])

ScriptableRenderPass.ConfigureClear(ClearFlag, Color)

ScriptableRenderPass.Configure(CommandBuffer, RenderTextureDescriptor)

ScriptableRenderPass.FrameCleanup(CommandBuffer)

ScriptableRenderPass.Blit(CommandBuffer, RenderTargetIdentifier, RenderTargetIdentifier, Material, int)

ScriptableRenderPass.RenderPostProcessing(CommandBuffer, ref CameraData, RenderTextureDescriptor, RenderTargetIdentifier,

RenderTargetIdentifier, bool, bool)

ScriptableRenderPass.CreateDrawingSettings(ShaderTagId, ref RenderingData, SortingCriteria)

ScriptableRenderPass.CreateDrawingSettings(List<ShaderTagId>, ref RenderingData, SortingCriteria)

ScriptableRenderPass.renderPassEvent

ScriptableRenderPass.colorAttachments

ScriptableRenderPass.colorAttachment

ScriptableRenderPass.depthAttachment

ScriptableRenderPass.clearFlag

ScriptableRenderPass.clearColor

object.Equals(object)

object. Equals (object, object)

object.GetHashCode()

object.GetType()

object.MemberwiseClone()

object.ReferenceEquals(object, object)

object.ToString()

Namespace: Le Tai. Asset. Translucent Image. Universal RP Assembly: Le Tai. Translucent Image. Universal RP.dll

Syntax

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

public class TranslucentImageBlurRenderPass : ScriptableRenderPass

Properties

PreviewMaterial

Declaration

public Material PreviewMaterial { get; }

Property Value

ТҮРЕ	DESCRIPTION
Material	

Methods

$Execute (Scriptable Render Context, ref\ Rendering Data)$

Declaration

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

Parameters

ТҮРЕ	NAME	DESCRIPTION
ScriptableRenderContext	context	
RenderingData	renderingData	

Overrides

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

${\sim} Translucent Image Blur Render Pass ()$

Declaration

 $protected \sim TranslucentImageBlurRenderPass()$

Class TranslucentImageBlurSource

Inheritance object Object ScriptableObject ScriptableRendererFeature TranslucentImageBlurSource **Inherited Members** ScriptableRendererFeature.SetActive(bool) ScriptableRendererFeature.isActive ScriptableObject.SetDirty() ScriptableObject.CreateInstance(string) ScriptableObject.CreateInstance(Type) ScriptableObject.CreateInstance<T>() Object.GetInstanceID() Object.GetHashCode() Object.Equals(object) Object.Instantiate(Object, Vector3, Quaternion) Object.Instantiate(Object, Vector3, Quaternion, Transform) Object.Instantiate(Object) Object.Instantiate(Object, Transform) Object.Instantiate(Object, Transform, bool) Object.Instantiate<T>(T) Object.Instantiate<T>(T, Vector3, Quaternion) Object.Instantiate<T>(T, Vector3, Quaternion, Transform) Object.Instantiate<T>(T, Transform) Object.Instantiate<T>(T, Transform, bool) Object. Destroy(Object, float) Object.Destroy(Object) Object.DestroyImmediate(Object, bool) Object.DestroyImmediate(Object) Object.FindObjectsOfType(Type) Object.DontDestroyOnLoad(Object) Object.DestroyObject(Object, float) Object.DestroyObject(Object) Object.FindSceneObjectsOfType(Type) Object.FindObjectsOfTypeIncludingAssets(Type) Object.FindObjectsOfType<T>() Object.FindObjectOfType<T>() Object.FindObjectsOfTypeAll(Type) Object.FindObjectOfType(Type) Object.ToString() Object.name Object.hideFlags object. Equals (object, object) object.GetType() object.MemberwiseClone() object.ReferenceEquals(object, object)

Namespace: Le Tai. Asset. Translucent Image. Universal RP Assembly: LeTai.TranslucentImage.UniversalRP.dll

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

public class TranslucentImageBlurSource : ScriptableRendererFeature

Fields

canvas Disappear Workaround

Declaration

public bool canvasDisappearWorkaround

Field Value

ТҮРЕ	DESCRIPTION
bool	

Methods

AddRenderPasses(ScriptableRenderer, ref RenderingData)

Declaration

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

Parameters

ТҮРЕ	NAME	DESCRIPTION
ScriptableRenderer	renderer	
RenderingData	renderingData	

Overrides

Unity Engine. Rendering. Universal. Scriptable Renderer Feature. Add Render Passes (Unity Engine. Rendering. Universal. Scriptable Renderer, ref Unity Engine. Rendering. Universal. Rendering Data)

Create()

Declaration

public override void Create()

Overrides

UnityEngine.Rendering.Universal.ScriptableRendererFeature.Create()

GetPixelSize(CameraData)

Declaration

public Rect GetPixelSize(CameraData cameraData)

Parameters

ТҮРЕ	NAME	DESCRIPTION
CameraData	cameraData	

Returns

ТҮРЕ	DESCRIPTION
Rect	

Register Source (Translucent Image Source)

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

ТҮРЕ	NAME	DESCRIPTION
TranslucentImageSource	source	