Advanced Scene Manager

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4.82.2.1 OnInitialized()
4.82.3 Property Documentation
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## **Chapter 1**

## **Hierarchical Index**

## 1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

ActionUtility
App
ASMFilePathAttribute
ASMInfo
ASMModel
Profile
Scene
SceneCollection
SceneCollectionTemplate
ASMScriptableSingleton < T >
ASMScriptableSingleton < ASMSettings >
ASMSettings
Assets
AssetSearchUtility
AssetsProxy
Async< T >
BuildOption
Callback
CallbackUtility
CanvasGroupExtensions
CanvasSortOrderUtility
CoroutineUtility
CrossSceneReference
CrossSceneReferenceUtility
DefaultScenes
DictionaryUtility
CoroutineUtility.Events
FallbackSceneUtility
CallbackUtility.FluentInvokeAPI< T >
GlobalCoroutine
GuidReference
GuidReferenceUtility
Scene.lMethods.lEvent
Scene

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1.1 Class Hierarchy 3

ProfileDependent < Scene >
ProfileDependentScene
$\label{eq:profileDependent} ProfileDependent < Scene Collection > \dots                                  $
ProfileDependentCollection
App.Props
$\label{eq:QueueUtility} Queue Utility < T >  .  .  .  .  .  .  .  .  . $
ResolvedCrossReference
ResolvedReference
SceneCollectionExtensions
SceneDataUtility
SceneLoader
SceneLoaderArgsBase
SceneLoadArgs
SceneUnloadArgs
SceneManager
SceneReferenceCollection
SceneUtility
ScriptableObjectUtility
$Serializable Dictionary < TKey, TValue > \dots $
$Serializable Dictionary < Profile, T > \dots \dots$
ProfileDependent< T >.Dict
$Serializable Dictionary < string, Advanced Scene Manager. Models. Input Binding > \dots $
$Serializable Dictionary < string, bool > \dots $
SerializableStringBoolDict
SettingsProxy
SpamCheck

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## **Chapter 2**

## **Class Index**

## 2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

ActionUtility	
Contains utility functions for Action	19
App	
Manages startup and quit	20
ASMFilePathAttribute	
A FilePathAttribute that supports build	21
ASMInfo	
Gets version info about ASM	22
ASMModel	
A base class for Profile, SceneCollection and Scene	22
ASMSceneHelper	
Represents scene helper. Contains functions for opening / closing collections and scenes from	
UnityEngine.Events.UnityEvent	24
ASMScriptableSingleton< T > A ScriptableSingleton <t> that supports build</t>	20
A Scriptable Singleton < 1 > that supports build	26
Contains the core of ASM assets. Contains projectSettings and assets	27
Assets	21
Manages all ASM assets	28
AssetSearchUtility	
Provides utility functions for searching ASM assets	29
AssetsProxy	
Provides access to the scenes, collections and profiles managed by ASM	30
Async< T >	
Represents a async operation that returns a value	30
BuildOption	
Represents an enabled state depending on build context (editor, dev build, non-dev build)	31
Callback	
Represents a callback that can be run on Phase change, or right before loading screen hide (or	
when it would, if it was enabled)	31
CallbackUtility	
An utility class that invokes callbacks (defined in interfaces based on ISceneCallbacks), and	
tracks performance and provides tools for optimizing and diagnosing bottlenecks in these call-	_
backs	34
CanvasGroupExtensions  Provides extension methods for CanvasGroup	3/

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An utility class to manage sort order on canvases	34
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An utility class that helps with running coroutines detached from MonoBehaviour	35
CrossSceneReference	
A reference to a variable that references another object in some other scene	36
CrossSceneReferenceUtility	
An utility for saving and restoring cross-scene references	37
DefaultScenes DefaultScenes	
Provides access to the default ASM scenes	38
ProfileDependent< T >.Dict	
A dictionary of type Profile, $T$	40
DictionaryUtility	
Contains utility functions for working with dictionaries	41
DynamicCollection	
Represents a collection that can take a path and then gather all scenes within, guaranteeing that	
they are all added to build, including non-imported and blacklisted scenes	41
CoroutineUtility.Events	
Provides events for coroutine events	42
FallbackSceneUtility	
An utility class that manages the default scene, called 'AdvancedSceneManager'	44
CallbackUtility.FluentInvokeAPI< T >	
An helper class to facilitate a fluent api	44
GlobalCoroutine	
Represents a IEnumerator coroutine started using CoroutineUtility	45
GuidReference	
Represents a persistent reference to the GameObject that this is attached to, see also Guid←	
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GuidReferenceUtility	
An utility for referencing objects globally	47
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Used to pass arguments from LoadingScreenUtility.FadeIn(LoadingScreen, float, Color?)	54
ILockable Control of the control of	
Specifies a object that can be locked, using LockUtility	54
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InitializeInEditorAttribute	
Initializes a class in editor on recompile	61
InitializeInEditorMethodAttribute	
Initializes a class in editor on recompile	61
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Represents a input binding for InputSystem. Available even when InputSystem is uninstalled .	61
InputButton	00
Specifies a input binding for use with InputSystem	62

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Represents a queueable item	62
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Base interface for ISceneOpen, ISceneClose, ICollectionOpen, ICollectionClose. Does nothing	
on its own, used by CallbackUtility	63
ISceneClose	
Callback for when the scene that a MonoBehaviour is contained within is closed	64
ISceneCloseAsync	65
ISceneCollection	
Represents the core variables of what makes up a scene collection	65
ISceneOpen	~
Callback for when the scene that a MonoBehaviour is contained within is opened	66
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Provides some convinience functions for lerping	67
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A class that contains callbacks for loading screens	67
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A generic base class for loading screens. You probably want to inherit from LoadingScreen	00
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## **Chapter 3**

## **Namespace Documentation**

## 3.1 AdvancedSceneManager Namespace Reference

#### Classes

· class SceneManager

The central Advanced Scene Manager API. Provides access to the most important things in ASM.

## 3.2 AdvancedSceneManager.Callbacks Namespace Reference

#### Classes

· class ActionUtility

Contains utility functions for Action.

· class CallbackUtility

An utility class that invokes callbacks (defined in interfaces based on ISceneCallbacks), and tracks performance and provides tools for optimizing and diagnosing bottlenecks in these callbacks.

- interface ICollectionClose
- interface ICollectionCloseAsync
- interface ICollectionExtraDataCallbacks

Callbacks for a ScriptableObject that has been set as extra data for a collection.

• interface ICollectionExtraDataCallbacksAsync

Callbacks for a ScriptableObject that has been set as extra data for a collection.

- interface ICollectionOpen
- interface ICollectionOpenAsync
- interface ISceneCallbacks

Base interface for ISceneOpen, ISceneClose, ICollectionOpen, ICollectionClose. Does nothing on its own, used by CallbackUtility.

interface ISceneClose

Callback for when the scene that a MonoBehaviour is contained within is closed.

- interface ISceneCloseAsync
- interface ISceneOpen

Callback for when the scene that a MonoBehaviour is contained within is opened.

- interface ISceneOpenAsync
- · class LoadingScreen

A class that contains callbacks for loading screens.

· class LoadingScreenBase

A generic base class for loading screens. You probably want to inherit from LoadingScreen though.

· class ParallelASMCallbacks

Specifies whatever the ASM callbacks should be run in parallel for any callbacks defined in this script.

· class SplashScreen

A class that contains callbacks for splash screens.

## 3.3 AdvancedSceneManager.Core Namespace Reference

#### **Classes**

class App

Manages startup and quit.

class Callback

Represents a callback that can be run on Phase change, or right before loading screen hide (or when it would, if it was enabled).

· class Runtime

Manages runtime functionality for Advanced Scene Manager such as open scenes and collection.

class SceneLoadArgs

Specifies arguments for SceneLoader.LoadScene(Models.Scene, SceneLoadArgs).

· class SceneLoader

Specifies a scene loader.

class SceneLoaderArgsBase

Base class for SceneLoadArgs and SceneUnloadArgs.

class SceneOperation

A scene operation is a queueable operation that can open or close scenes. See also: SceneAction.

• class SceneUnloadArgs

Specifies arguments for SceneLoader.UnloadScene(Models.Scene, SceneUnloadArgs).

#### **Enumerations**

```
    enum Phase {
        CloseCallbacks , UnloadScenes , LoadScenes , OpenCallbacks ,
        CustomActions }
```

The phase that a SceneOperation is currently in.

### 3.3.1 Enumeration Type Documentation

#### 3.3.1.1 Phase

enum Phase

The phase that a SceneOperation is currently in.

#### Enumerator

CloseCallbacks	The scene operation is currently executing close callbacks on the scenes that are being closed, if any.
UnloadScenes	The scene operation is currently unloading the scenes, if any.
LoadScenes	The scene operation is currently loading the scenes, if any.
OpenCallbacks	The scene operation is currently executing open callbacks on the scenes that are being opened, if any.
CustomActions	The scene operation is currently executing custom actions, added through SceneOperation.WithAction(SceneAction[]) or similar methods, if any.

## 3.4 AdvancedSceneManager.Models Namespace Reference

#### Classes

class ASMModel

A base class for Profile, SceneCollection and Scene.

class ASMSceneHelper

Represents scene helper. Contains functions for opening / closing collections and scenes from UnityEngine. Events. ← UnityEvent.

class ASMSettings

Contains the core of ASM assets. Contains projectSettings and assets

· class DynamicCollection

Represents a collection that can take a path and then gather all scenes within, guaranteeing that they are all added to build, including non-imported and blacklisted scenes.

• interface ILockable

Specifies a object that can be locked, using LockUtility.

class InputBinding

Represents a input binding for InputSystem. Available even when InputSystem is uninstalled.

struct InputButton

Specifies a input binding for use with InputSystem.

• interface ISceneCollection

Represents the core variables of what makes up a scene collection.

· class Profile

A profile, contains settings, collections.

• class Scene

Represents a scene.

class SceneCollection

Represents a collection of scenes.

• class SceneCollectionExtensions

Provides utility methods for working with SceneCollection.

• class StandaloneCollection

Represents a collection of standalone scenes. These scenes are guaranteed to be included in build (if the associated Profile is active).

#### **Enumerations**

enum InputBindingInteractionType { Open , Hold , Toggle }

Specifies the interaction type to use for scene bindings.

### 3.4.1 Enumeration Type Documentation

#### 3.4.1.1 InputBindingInteractionType

```
enum InputBindingInteractionType
```

Specifies the interaction type to use for scene bindings.

#### **Enumerator**

Open	Specifies that the scene or collection will be opened automatically, but not closed.
Hold	Specifies that the scene or collection will be opened automatically on button down, then closed on button up.
Toggle	Specifies that the scene or collection will be opened automatically on button down, then closed on next button down.

## 3.5 AdvancedSceneManager.Models.Enums Namespace Reference

#### **Enumerations**

```
    enum CollectionLoadingThreadPriority {
        Auto = -2 , Low = ThreadPriority.Low , BelowNormal = ThreadPriority.BelowNormal , Normal = Thread↔
        Priority.Normal ,
        High = ThreadPriority.High }
```

 ${\it Wrapper for Thread Priority, adds ~Collection Loading Thread Priority. Auto.}$ 

• enum CollectionStartupOption { Auto , Open , DoNotOpen }

Specifies what to do with a SceneCollection during startup.

- enum EditorPersistentOption { Never , WhenAnyOfTheFollowingScenesAreOpened , AnySceneOpened } Specifies whatever a scene should be automatically opened outside of play-mode.
- enum LoadingScreenUsage { DoNotUse , UseDefault , Override }

Specifies what loading screen to use, if any.

enum SceneImportOption { Manual , SceneCreated }

Specifies how to scenes are imported.

```
    enum SceneState {
        Unknown , NotOpen , Queued , Opening ,
        Preloading , Preloaded , Open }
```

Specifies that state of a scene.

#### 3.5.1 Enumeration Type Documentation

#### 3.5.1.1 CollectionLoadingThreadPriority

```
enum CollectionLoadingThreadPriority
```

Wrapper for ThreadPriority, adds CollectionLoadingThreadPriority.Auto.

ThreadPriority:

#### Enumerator

Auto	Automatically decide ThreadPriority based on if loading screen is open.	
Low	Lowest thread priority.	1
BelowNormal	Below normal thread priority.	
Normal	Normal thread priority.	1
High	Highest thread priority.	1

#### 3.5.1.2 CollectionStartupOption

 $\verb"enum CollectionStartupOption"$ 

Specifies what to do with a SceneCollection during startup.

#### Enumerator

Auto	Specifies that ASM should automatically decide if a SceneCollection should be opened during startup. This means that if no collection in the list specifies either Open or OpenAsPersistent, then the first collection in the list that has Auto will be opened.
Open	Specifies that a SceneCollection will open during startup.
DoNotOpen	Specifies that a SceneCollection will not open during startup.

#### 3.5.1.3 EditorPersistentOption

 $\verb"enum EditorPersistentOption"$ 

Specifies whatever a scene should be automatically opened outside of play-mode.

#### Enumerator

Never	Never automatically open scene.
WhenAnyOfTheFollowingScenesAreOpened	Automatically open scene when any specified scene is opened.
AnySceneOpened	Automatically open scene when any scene opens.

#### 3.5.1.4 LoadingScreenUsage

enum LoadingScreenUsage

Specifies what loading screen to use, if any.

#### Enumerator

DoNotUse	Specifies no loading screen.
UseDefault	Specifies default loading screen, defined in profile settings.
Override	Specifies overriden loading screen, defined in SceneCollection.

#### 3.5.1.5 SceneImportOption

enum SceneImportOption

Specifies how to scenes are imported.

#### **Enumerator**

Manual	User will manually import scenes.
SceneCreated	Scenes will be automatically imported when created, otherwise manual.

#### 3.5.1.6 SceneState

enum SceneState

Specifies that state of a scene.

#### Enumerator

Unknown	The state of the scene is unknown. (An issue probably occured while checking state)	
NotOpen	The scene is not open.	
Queued	The scene is in queue to be opened.	
Opening	The scene is currently being opened. Mutually exclusive to Preloading.	
Preloading	loading The scene is currently being preloaded. Mutually exclusive to Opening.	
Preloaded	The scene is currently preloaded.	
Open	The scene is open.	

## 3.6 AdvancedSceneManager.Models.Helpers Namespace Reference

#### Classes

class AssetsProxy

Provides access to the scenes, collections and profiles managed by ASM.

class DefaultScenes

Provides access to the default ASM scenes.

class SettingsProxy

Provides access to ASM settings.

## 3.7 AdvancedSceneManager.Models.Internal Namespace Reference

#### Classes

· class Assets

Manages all ASM assets.

## 3.8 AdvancedSceneManager.Models.Utility Namespace Reference

#### Classes

· class BuildOption

Represents an enabled state depending on build context (editor, dev build, non-dev build).

class ProfileDependent

Specifies a T that changes depending on active Profile.

class ProfileDependentCollection

Represents a SceneCollection that changes depending on active Profile.

class ProfileDependentScene

Represents a Scene that changes depending on active Profile.

class SceneCollectionTemplate

Represents a template for a SceneCollection.

## 3.9 AdvancedSceneManager.Setup Namespace Reference

#### **Classes**

class ASMInfo

Gets version info about ASM.

## 3.10 AdvancedSceneManager.Utility Namespace Reference

#### Classes

· class ASMFilePathAttribute

A FilePathAttribute that supports build.

• class ASMScriptableSingleton

A ScriptableSingleton<T> that supports build.

· class AssetSearchUtility

Provides utility functions for searching ASM assets.

· class Async

Represents a async operation that returns a value.

class CanvasGroupExtensions

Provides extension methods for CanvasGroup.

· class CanvasSortOrderUtility

An utility class to manage sort order on canvases.

· class DictionaryUtility

Contains utility functions for working with dictionaries.

class FallbackSceneUtility

An utility class that manages the default scene, called 'AdvancedSceneManager'.

class GuidReference

Represents a persistent reference to the GameObject that this is attached to, see also GuidReferenceUtility .

· class GuidReferenceUtility

An utility for referencing objects globally.

interface IFadeLoadingScreen

Used to pass arguments from LoadingScreenUtility.FadeIn(LoadingScreen, float, Color?)

· class InitializeInEditorAttribute

Initializes a class in editor on recompile.

· class InitializeInEditorMethodAttribute

Initializes a class in editor on recompile.

• interface |Queueable

Represents a queueable item.

· class LerpUtility

Provides some convinience functions for lerping.

class LoadingScreenUtility

Manager for loading screens.

· class QueueUtility

A utility that provides queuing.

· class SceneDataUtility

A utility for storing scene related data. Data can only be saved to disk in editor.

· class SceneUtility

An utility class to perform actions on scenes.

· class ScriptableObjectUtility

Contains utility methods for ScriptableObject.

· class SerializableDictionary

A serializable dictionary.

class SerializableStringBoolDict

A serializable dictionary of string and bool.

class SpamCheck

Provides an easy way to check for spamming.

# 3.11 AdvancedSceneManager.Utility.CrossSceneReferences Namespace Reference

#### Classes

• class CrossSceneReference

A reference to a variable that references another object in some other scene.

· class CrossSceneReferenceUtility

An utility for saving and restoring cross-scene references.

• class ObjectReference

A reference to an object in a scene.

• struct ResolvedCrossReference

Represents a resolved reference.

• struct ResolvedReference

Represents a resolved ObjectReference.

• class SceneReferenceCollection

A collection of CrossSceneReference for a scene. More...

#### **Enumerations**

• enum ResolveStatus

Specifies the result of a resolve.

enum SceneStatus { Default , Restored , Cleared }

Specifies the state of a scene.

#### 3.11.1 Class Documentation

#### 3.11.1.1 class AdvancedSceneManager::Utility::CrossSceneReferences::SceneReferenceCollection

A collection of CrossSceneReference for a scene.

## 3.11.2 Enumeration Type Documentation

#### 3.11.2.1 SceneStatus

enum SceneStatus

Specifies the state of a scene.

#### **Enumerator**

Default	Cross-scene reference utility has not done anything to this scene.
Restored	Cross-scene reference utility has restored references in this scene.
Cleared	Cross-scene reference utility has cleared references in this scene.

## 3.12 Lazy Namespace Reference

## 3.13 Lazy. Utility Namespace Reference

#### Classes

class CoroutineUtility

An utility class that helps with running coroutines detached from MonoBehaviour.

· class GlobalCoroutine

Represents a IEnumerator coroutine started using CoroutineUtility.

class MainThreadUtility

## **Chapter 4**

## **Class Documentation**

## 4.1 ActionUtility

Contains utility functions for Action.

### **Static Public Member Functions**

• static void LogInvoke (this Action action)

Tries to invoke the action, then logs error to the console if an error occurred.

• static void **Trylnvoke** (this Action action)

Tries to invoke the action, eats the exception.

• static bool TryInvoke (this Action action, [NotNullWhen(false)] out Exception exception)

Tries to invoke the action.

### 4.1.1 Detailed Description

Contains utility functions for Action.

## 4.1.2 Member Function Documentation

#### 4.1.2.1 Trylnvoke()

Tries to invoke the action.

### **Parameters**

action	The action to invoke.
exception The exception that occurred when invoking action. null if true was returned	

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#### Returns

true if invoke succeeded with no exception.

## 4.2 App

Manages startup and quit.

#### Classes

class Props

An object that persists start properties across domain reload, which is needed when configurable enter play mode is set to reload domain on enter play mode.

#### **Public Member Functions**

- void Restart (Props props=null)
- IEnumerator RestartAsync (Props props=null)
- void Start (Props props=null)
- IEnumerator **StartAsync** (Props props=null)
- void RegisterQuitCallback (IEnumerator coroutine)

Register a callback to be called before quit.

• void UnregisterQuitCallback (IEnumerator coroutine)

Unregister a callback that was to be called before quit.

· void CancelQuit ()

Cancels a quit in progress.

• void Quit (bool fade=true, Color? fadeColor=null, float fadeDuration=1)

Quits the game, and calls quitCallbacks, optionally with a fade animation.

#### **Properties**

• bool isBuildMode [get]

Gets whatever we're currently in build mode.

• bool **isStartupFinished** [get]

Gets if startup process is finished.

bool isQuitting [get]

Gets whatever ASM is currently in the process of quitting.

#### **Events**

· Action beforeRestart

Occurs before restart process has begun, but has been initiated.

Action afterRestart

Occurs after restart has been completed.

4.3 ASMFilePathAttribute 21

### 4.2.1 Detailed Description

Manages startup and quit.

Usage: SceneManager.app.

#### 4.2.2 Member Function Documentation

#### 4.2.2.1 CancelQuit()

```
void CancelQuit ( )
```

Cancels a quit in progress.

Only usable during a RegisterQuitCallback(IEnumerator) or while isQuitting is true.

#### 4.2.2.2 Quit()

Quits the game, and calls quitCallbacks, optionally with a fade animation.

#### **Parameters**

fade	Specifies whatever screen should fade out.
fadeColor	Defaults to ProjectSettings.buildUnitySplashScreenColor.
fadeDuration	Specifies the duration of the fade out.

#### 4.2.3 Property Documentation

#### 4.2.3.1 isBuildMode

```
bool isBuildMode [get]
```

Gets whatever we're currently in build mode.

This is true when in build or when play button in scene manager window is pressed.

### 4.3 ASMFilePathAttribute

A FilePathAttribute that supports build.

Inherits Attribute.

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#### **Properties**

• string path [get]

The path to the associated ScriptableSingleton< T>.

#### 4.3.1 Detailed Description

A FilePathAttribute that supports build.

#### 4.4 ASMInfo

Gets version info about ASM.

#### **Static Public Attributes**

• static string version

Gets the current version info.

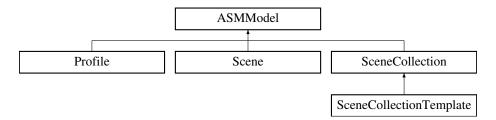
### 4.4.1 Detailed Description

Gets version info about ASM.

#### 4.5 ASMModel

A base class for Profile, SceneCollection and Scene.

Inheritance diagram for ASMModel:



#### **Public Member Functions**

• virtual void Save ()

Saves the scriptable object after modifying.

· void MarkAsDirty ()

Mark scriptable object as dirty after modifying.

• virtual bool IsMatch (string q)

Gets if q matches name.

• override string ToString ()

Gets a text summarization of this model.

virtual string ToString (int indent)

4.5 ASMModel 23

# **Static Protected Member Functions**

static T CreateInternal < T > (string name)

Creates a profile. Throws if name is invalid.

### **Properties**

```
string id [get]
Gets the id of this ASMModel.
new string name [get, protected set]
```

# 4.5.1 Detailed Description

A base class for Profile, SceneCollection and Scene.

### 4.5.2 Member Function Documentation

### 4.5.2.1 MarkAsDirty()

```
void MarkAsDirty ( )
```

Mark scriptable object as dirty after modifying.

Only available in editor.

### 4.5.2.2 Save()

```
virtual void Save ( ) [virtual]
```

Saves the scriptable object after modifying.

Only available in editor.

## 4.5.2.3 ToString()

```
virtual string ToString (
                int indent ) [virtual]
```

### **Parameters**

, used for nested calls.	indent The indentation leve
--------------------------	-----------------------------

Reimplemented in SceneCollection, Profile, and Scene.

# 4.6 ASMSceneHelper

Represents scene helper. Contains functions for opening / closing collections and scenes from UnityEngine. 

Events. UnityEvent.

Inheritance diagram for ASMSceneHelper:



#### **Public Member Functions**

- SceneOperation Open (SceneCollection collection, bool openAll=false)
- SceneOperation OpenAdditive (SceneCollection collection, bool openAll=false)
- SceneOperation ToggleOpen (SceneCollection collection, bool? openState=null, bool openAll=false)
- SceneOperation Close (SceneCollection collection)
- void <u>Open</u> (SceneCollection collection)
- void \_OpenAdditive (SceneCollection collection)
- void \_ToggleOpen (SceneCollection collection)
- void \_Close (SceneCollection collection)
- SceneOperation Open (Scene scene)

Opens the specified scene.

• SceneOperation ToggleOpenState (Scene scene)

Toggles the open state of this scene.

• SceneOperation ToggleOpen (Scene scene, bool? openState=null)

Toggles the open state of the specified scene, or ensures the state specified.

SceneOperation Close (Scene scene)

Closes the specified scene.

• SceneOperation Preload (Scene scene, Action onPreloaded=null)

Preloads the specified scene, to be displayed at a later time. See also: FinishPreload(Scene), DiscardPreload(← Scene).

SceneOperation FinishPreload (Scene scene)

Finishes preloading the specified scene, displaying it.

SceneOperation DiscardPreload (Scene scene)

Discards the specified scene, if preloaded.

• SceneOperation OpenWithLoadingScreen (Scene scene, Scene loadingScene)

Opens the specified scene while a loading screen is open.

void SetActive (Scene scene)

Sets the specified scene as active in heirarchy.

- void **Open** (Scene scene)
- void \_ToggleOpen (Scene scene)
- void \_Close (Scene scene)
- void \_Preload (Scene scene)
- void \_FinishPreload (Scene scene)
- void \_ DiscardPreload (Scene scene)
- void \_SetActive (Scene scene)
- void OpenWhereNameStartsWith (string name)

Open all scenes that starts with the specified name.

- void Quit ()
- void Restart ()
- void RestartCollection ()

4.6 ASMSceneHelper 25

### **Properties**

```
    new string name [get]
    static ASMSceneHelper instance [get]
    Gets a reference to scene helper.
```

# 4.6.1 Detailed Description

Represents scene helper. Contains functions for opening / closing collections and scenes from UnityEngine. 

Events.UnityEvent.

## 4.6.2 Member Function Documentation

### 4.6.2.1 Close()

Closes the specified scene.

Already closed scenes not affected.

Implements Scene.IMethods\_Target.

### 4.6.2.2 FinishPreload()

Finishes preloading the specified scene, displaying it.

Scene must be preloaded beforehand.

Implements Scene.IMethods\_Target.

## 4.6.2.3 Open()

```
SceneOperation Open (
Scene scene)
```

Opens the specified scene.

Already open scenes not affected.

Implements Scene.IMethods\_Target.

#### 4.6.2.4 Preload()

Preloads the specified scene, to be displayed at a later time. See also: FinishPreload(Scene), DiscardPreload(← Scene).

Scene must be closed beforehand.

Implements Scene.IMethods\_Target.

# 4.7 ASMScriptableSingleton < T >

A ScriptableSingleton<T> that supports build.

Inherits ScriptableObject.

#### **Public Member Functions**

• void Save ()

Saves the singleton to disk.

### **Properties**

• virtual bool **editorOnly** [get]

Specifies that build support will not be applied to this ScriptableSingleton<T>.

# 4.7.1 Detailed Description

A ScriptableSingleton<T> that supports build.

**Type Constraints** 

T: ASMScriptableSingleton<T>

## 4.7.2 Member Function Documentation

#### 4.7.2.1 Save()

```
void Save ( )
```

Saves the singleton to disk.

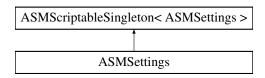
Can be called outside of editor, but has no effect.

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# 4.8 ASMSettings

Contains the core of ASM assets. Contains projectSettings and assets

Inheritance diagram for ASMSettings:



#### **Static Public Member Functions**

· static void OnInitialized (Action action)

Runs the callback when ASMSettings has initialized.

#### **Properties**

Profile defaultProfile [get, set]

The profile to use when none is set.

• Profile forceProfile [get, set]

The profile to force everyone in this project to use.

Profile buildProfile [get]

The profile to use during build.

• bool checkForDuplicateSceneOperations [get, set]

By default, ASM checks for duplicate scene operations, since this is usually caused by mistake, but this will disable that

bool preventSpammingEventMethods [get, set]

By default, ASM will prevent spam calling event methods (i.e. calling Scene.Open() from a button press), but this will disable that.

float spamCheckCooldown [get, set]

Sets the default cooldown for SpamCheck.

• bool enableCrossSceneReferences [get, set]

Gets or sets whatever cross-scene references should be enabled.

SceneImportOption sceneImportOption [get, set]

Gets or sets when to automatically import scenes.

• bool allowExcludingCollectionsFromBuild [get, set]

Specifies whatever collections can be excluded from build.

• bool reverseUnloadOrderOnCollectionClose [get, set]

Specifies whatever collections should unload scenes in the reverse order.

string assetPath [get, set]

Specifies the path where profiles and imported scenes should be generated to.

CustomData customData [get]

Specifies custom data.

Color buildUnitySplashScreenColor [get]

This is the color of the unity splash screen, used to make the transition from unity splash screen to ASM smooth, this is set before building. Color.black is used when the unity splash screen is disabled.

bool allowSceneLocking [get, set]

Specifies whatever asm will allow locking scenes.

bool allowCollectionLocking [get, set]

Specifies whatever asm will allow locking collections.

# Properties inherited from ASMScriptableSingleton < ASMSettings >

virtual bool editorOnly [get]
 Specifies that build support will not be applied to this ScriptableSingleton<T>.

#### **Additional Inherited Members**

# Public Member Functions inherited from ASMScriptableSingleton < ASMSettings >

• void Save ()

Saves the singleton to disk.

# 4.8.1 Detailed Description

Contains the core of ASM assets. Contains projectSettings and assets

Only available in editor.

# 4.8.2 Property Documentation

### 4.8.2.1 allowExcludingCollectionsFromBuild

bool allowExcludingCollectionsFromBuild [get], [set]

Specifies whatever collections can be excluded from build.

When  ${\tt true}$ , a toggle will be shown in scene manager window.

### 4.8.2.2 enableCrossSceneReferences

```
bool enableCrossSceneReferences [get], [set]
```

Gets or sets whatever cross-scene references should be enabled.

Experimental.

### 4.9 Assets

Manages all ASM assets.

### **Properties**

```
    static | Enumerable < Profile > profiles [get]
```

Enumerates all imported profiles.

• static IEnumerable < SceneCollection > collections [get]

Enumerates all imported collections.

• static IEnumerable < SceneCollectionTemplate > collectionTemplates [get]

Enumerates all imported collection templates.

static IEnumerable < Scene > scenes [get]

Enumerates all imported scenes.

• static ASMSceneHelper sceneHelper [get]

Gets scene helper singleton.

static | Enumerable < Object > allAssets [get]

Enumerates all imported assets.

• static string assetPath [get]

Gets the import path.

static string fallbackScenePath [get]

Gets the path to the fallback scene.

### 4.9.1 Detailed Description

Manages all ASM assets.

# 4.9.2 Property Documentation

## 4.9.2.1 assetPath

```
string assetPath [static], [get]
```

Gets the import path.

Can be changed using ProjectSettings.assetPath

# 4.10 AssetSearchUtility

Provides utility functions for searching ASM assets.

### **Static Public Member Functions**

static T Find< T > (string q)

Finds the T with the specified name.

- static bool  $\mathbf{TryFind} < \mathbf{T} > (\mathbf{string}\ \mathbf{q},\ \mathbf{out}\ \mathbf{T}\ \mathbf{result})$ 

Finds the T with the specified name.

- static T Find< T > (this T[] list, string q)
- static bool TryFind< T > (this T[] list, string q, out T result)
- static T Find < T > (this IEnumerable < T > list, string q)
- static bool TryFind < T > (this IEnumerable < T > list, string q, out T result)

# 4.10.1 Detailed Description

Provides utility functions for searching ASM assets.

# 4.11 AssetsProxy

Provides access to the scenes, collections and profiles managed by ASM.

#### **Public Member Functions**

```
    IEnumerable < T > Enumerate < T > ()
    Enumerates T.
```

### **Properties**

```
    IEnumerable < Profile > profiles [get]
        Enumerates all profiles in the project.
    IEnumerable < Scene > scenes [get]
        Enumerates all scenes.
    IEnumerable < Scene Collection > collections [get]
        Enumerates all collections.
    IEnumerable < Scene Collection Template > templates [get]
        Enumerates all templates.
    Default Scenes defaults = new() [get]
        Provides access to the default ASM scenes.
```

# 4.11.1 Detailed Description

Provides access to the scenes, collections and profiles managed by ASM.

# 4.12 Async< T >

Represents a async operation that returns a value.

Inherits CustomYieldInstruction.

#### **Public Member Functions**

void OnComplete (Action < T > callback)
 Calls the callback when the async operation is complete.

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#### **Properties**

```
    static Async< T > complete = new(null) [get]
        Gets a Async<T> that is already completed.
    T value [get, set]
        Gets the value that was produced by the async operation.
```

## 4.12.1 Detailed Description

Represents a async operation that returns a value.

# 4.13 BuildOption

Represents an enabled state depending on build context (editor, dev build, non-dev build).

Inherits INotifyPropertyChanged.

#### **Public Member Functions**

• bool GetIsEnabledInCurrentContext ()

Get whatever we should be enabled in the current context.

### **Properties**

```
• bool enableInEditor [get, set]
```

Gets whatever we should be enabled in editor.

• bool enableInDevBuild [get, set]

Gets whatever we should be enabled in dev build.

bool enableInNonDevBuild [get, set]

Gets whatever we should be enabled in non-dev build.

# 4.13.1 Detailed Description

Represents an enabled state depending on build context (editor, dev build, non-dev build).

### 4.14 Callback

Represents a callback that can be run on Phase change, or right before loading screen hide (or when it would, if it was enabled).

### **Public Types**

• enum When { Before , After }

Specifies when to run the callback on a given Phase.

#### **Public Member Functions**

· Callback Do (Action action)

Performs the specified callback.

Callback **Do** (Func< IEnumerator > enumerator)

Performs the specified callback.

• Callback **Do** (GlobalCoroutine coroutine)

Performs the specified callback.

• Callback Do (float delay)

Performs the specified callback.

#### **Static Public Member Functions**

• static implicit operator Callback (Action action)

Converts to Callback.

static implicit operator Callback (Func< IEnumerator > enumerator)

Converts to Callback.

• static implicit operator Callback (GlobalCoroutine coroutine)

Converts to Callback.

• static Callback AfterLoadingScreenOpen ()

Runs a callback after loading screen would have opened, if one was specified.

static Callback BeforeLoadingScreenClose ()

Runs a callback before loading screen would close, if one was opened.

• static Callback Before (Phase phase, Scene on)

Runs a callback before the specified phase, when processing the specified scene.

• static Callback After (Phase phase, Scene on)

Runs a callback after the specified phase.

• static Callback Before (Phase phase)

Runs a callback before the specified phase, when processing the specified scene.

• static Callback After (Phase phase)

Runs a callback after the specified phase.

#### **Properties**

• Phase? phase [get]

Specifies on what phase this callback should run at.

• When when [get]

Specifies when to run the callback on a given Phase.

Action action [get]

The Action to run.

• Func< |Enumerator > enumerator [get]

The IEnumerator coroutine to run.

• GlobalCoroutine coroutine [get]

The GlobalCoroutine to run.

• Scene scene [get]

Specifies the scene that this callback should run on.

4.14 Callback 33

# 4.14.1 Detailed Description

Represents a callback that can be run on Phase change, or right before loading screen hide (or when it would, if it was enabled).

#### 4.14.2 Member Enumeration Documentation

#### 4.14.2.1 When

```
enum When
```

Specifies when to run the callback on a given Phase.

#### **Enumerator**

Ī	Before	Run callback before any scene actions have started during a given Phase.
Ī	After	Run callback after all scene actions have run during a given Phase.

### 4.14.3 Member Function Documentation

### 4.14.3.1 Before() [1/2]

Runs a callback before the specified phase, when processing the specified scene.

Phase will still have changed to the next though, but scene actions won't run until after callback.

### 4.14.3.2 Before() [2/2]

Runs a callback before the specified phase, when processing the specified scene.

Phase will still have changed to the next though, but scene actions won't run until after callback.

# 4.14.4 Property Documentation

### 4.14.4.1 scene

```
Scene scene [get]
```

Specifies the scene that this callback should run on.

Specify null to run on all scenes.

# 4.15 CallbackUtility

An utility class that invokes callbacks (defined in interfaces based on ISceneCallbacks), and tracks performance and provides tools for optimizing and diagnosing bottlenecks in these callbacks.

#### Classes

class FluentInvokeAPI

An helper class to facilitate a fluent api.

# 4.15.1 Detailed Description

An utility class that invokes callbacks (defined in interfaces based on ISceneCallbacks), and tracks performance and provides tools for optimizing and diagnosing bottlenecks in these callbacks.

# 4.16 CanvasGroupExtensions

Provides extension methods for CanvasGroup.

#### **Static Public Member Functions**

• static IEnumerator **Fade** (this CanvasGroup group, float to, float duration, bool setBlocksRaycasts=true)

Animates the alpha of a CanvasGroup.

### 4.16.1 Detailed Description

Provides extension methods for CanvasGroup.

# 4.17 CanvasSortOrderUtility

An utility class to manage sort order on canvases.

#### **Static Public Member Functions**

static void Remove (Canvas canvas)

Removes this canvas from the managed list.

static void PutOnTop (this Canvas canvas)

Sets the sort order on this canvas to be on top of all other canvases managed by CanvasSortOrderUtility.

static void PutAtBottom (this Canvas canvas)

Sets the sort order on this canvas to be on bottom of all other canvases managed by CanvasSortOrderUtility.

• static void MakeSure (this Canvas canvas, Canvas above=null, Canvas below=null)

Adds a constraint on the sort order of this Canvas based on one or two other canvases.

4.18 CoroutineUtility 35

# 4.17.1 Detailed Description

An utility class to manage sort order on canvases.

#### 4.17.2 Member Function Documentation

### 4.17.2.1 MakeSure()

Adds a constraint on the sort order of this Canvas based on one or two other canvases.

#### **Parameters**

canvas	The canvas to constrain.
above	Makes sure that this canvas is always above this one.
below	Makes sure that this canvas is always below this one.

See parameter comments for more info.

# 4.18 CoroutineUtility

An utility class that helps with running coroutines detached from MonoBehaviour.

#### Classes

class Events

Provides events for coroutine events.

#### **Static Public Member Functions**

• static void **Run** (Action action, TimeSpan after, [CallerFilePath] string callerFile="", [CallerLineNumber] int callerLine=0, [CallerMemberName] string callerName="")

Runs the action after the specified time.

- static void Run (Action action, float? after=null, bool nextFrame=false, Func< bool > when=null, [CallerFile←Path] string callerFile="", [CallerLineNumber] int callerLine=0, [CallerMemberName] string callerName="")
   Runs the action after the specified time.
- static GlobalCoroutine StartCoroutineGlobal (this MonoBehaviour \_, IEnumerator coroutine, Action on ← Complete=null, string description="", [CallerFilePath] string callerFile="", [CallerLineNumber] int callerLine=0)

Runs the coroutine using CoroutineUtility, which means it won't be tied to a MonoBehaviour and will persist through scene close.

- static GlobalCoroutine StartCoroutine (this IEnumerator coroutine, Action onComplete=null, string description="", [CallerFilePath] string callerFile="", [CallerLineNumber] int callerLine=0)
- static GlobalCoroutine Chain (params Func< IEnumerator >[] coroutines)

Runs the coroutines in sequence, wrapped in a single GlobalCoroutine.

• static void **StopCoroutine** (GlobalCoroutine coroutine)

Stops the coroutine.

• static void StopAllCoroutines ()

Stops all global coroutines.

• static IEnumerator WaitAII (params IEnumerator[] coroutines)

Wait for all coroutines to complete.

 static IEnumerator WaitAII (this IEnumerable < IEnumerator > coroutines, Func < bool > isCancelled=null, string debugText=null)

Wait for all coroutines to complete.

• static IEnumerator WaitAII (params GlobalCoroutine[] coroutines)

Wait for all coroutines to complete.

static IEnumerator WaitAII (this GlobalCoroutine[] coroutines, Func< bool > isCancelled=null)

Wait for all coroutines to complete.

# 4.18.1 Detailed Description

An utility class that helps with running coroutines detached from MonoBehaviour.

### 4.18.2 Member Function Documentation

### 4.18.2.1 StartCoroutineGlobal()

Runs the coroutine using CoroutineUtility, which means it won't be tied to a MonoBehaviour and will persist through scene close.

You may yield return this method.

## 4.19 CrossSceneReference

A reference to a variable that references another object in some other scene.

## 4.19.1 Detailed Description

A reference to a variable that references another object in some other scene.

# 4.20 CrossSceneReferenceUtility

An utility for saving and restoring cross-scene references.

#### **Static Public Member Functions**

• static void Initialize (bool? enabled=null)

Initializes cross-scene references, if it is enabled in settings.

• static IEnumerable < ResolvedCrossReference > GetResolvedReferences ()

Gets all references for all scenes.

• static IEnumerable < ResolvedCrossReference > GetResolvedReferences (scene scene)

Gets all references for this scene.

• static IEnumerable < ResolvedCrossReference > GetResolvedReferences (GameObject obj)

Gets all references for this game object.

static IEnumerable < ResolvedCrossReference > GetResolvedReferencesValue (GameObject obj)

Gets all references for this game object.

static bool CanSceneBeSaved (scene scene)

Gets if the cross-scene references can be saved.

static bool GetResolved (CrossSceneReference reference, out ResolvedCrossReference? resolved)

Get the resolve result for a cross scene reference, if it has been resolved.

static ResolvedCrossReference GetResolved (CrossSceneReference reference)

Get the resolve result for a cross scene reference, if it has been resolved.

static SceneReferenceCollection Load (Scene scene)

Loads cross-scene references for a scene.

• static SceneReferenceCollection[] Enumerate ()

Loads cross-scene references for all scenes.

static void ResolveAllScenes ()

Resolves all scenes.

• static IEnumerable < ResolvedCrossReference > ResolveScene (scene scene)

Resolves cross-scene references in the scene.

• static void ResetAllScenes ()

Resets all cross-scene references in all scenes.

static void ResetScene (scene scene)

Resets all cross-scene references in scene.

• static IEnumerable < CrossSceneReference > FindCrossSceneReferences (params scene[] scenes)

Finds all cross-scene references in the scenes.

# 4.20.1 Detailed Description

An utility for saving and restoring cross-scene references.

#### 4.20.2 Member Function Documentation

### 4.20.2.1 CanSceneBeSaved()

Gets if the cross-scene references can be saved.

This would be if status: SceneStatus.Restored and no resolve errors.

#### 4.20.2.2 ResolveAllScenes()

```
static void ResolveAllScenes ( ) [static]
```

Resolves all scenes.

This runs within a single frame.

### 4.21 DefaultScenes

Provides access to the default ASM scenes.

#### **Public Member Functions**

• Scene GetScene (string name)

Gets a default scene.

• IEnumerable < Scene > Enumerate (bool listNulls=false)

Enumerates all default scenes.

#### **Properties**

• Scene splashScreen [get]

Gets the default splash screen.

Scene fadeScreen [get]

Gets the default fade loading screen.

• Scene progressBarScreen [get]

Gets the default progress bar loading screen.

• Scene iconBounceScreen [get]

Gets the default icon bounce loading screen.

• Scene pressAnyButtonScreen [get]

Gets the default press any button loading screen.

• Scene quoteScreen [get]

Gets the default quote loading screen.

• Scene videoScreen [get]

Gets the default video loading screen.

• Scene pauseScreen [get]

Gets the default pause screen.

• Scene inGameToolbar [get]

Gets the default in-game-toolbar scene.

## 4.21.1 Detailed Description

Provides access to the default ASM scenes.

### 4.21.2 Member Function Documentation

### 4.21.2.1 Enumerate()

```
\label{eq:scene} \mbox{ IEnumerable} < \mbox{ Scene } > \mbox{ Enumerate (} \\ \mbox{ bool } \mbox{ listNulls = false )}
```

Enumerates all default scenes.

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#### **Parameters**

$  $ istivulis $  $ Specifies whatever $nu\perp\perp$ will be returned for scenes that could not be found	listNulls	Specifies whatever null will be returned for scenes that could not be found.
---	-----------	--

# 4.21.2.2 GetScene()

```
Scene GetScene (
          string name )
```

Gets a default scene.

May be null if scene has been removed, or is not imported.

# 4.21.3 Property Documentation

### 4.21.3.1 fadeScreen

```
Scene fadeScreen [get]
```

Gets the default fade loading screen.

May be null if scene has been removed, or is not imported.

# 4.21.3.2 iconBounceScreen

```
Scene iconBounceScreen [get]
```

Gets the default icon bounce loading screen.

May be null if scene has been removed, or is not imported.

### 4.21.3.3 inGameToolbar

```
Scene inGameToolbar [get]
```

Gets the default in-game-toolbar scene.

May be null if scene has been removed, or is not imported.

#### 4.21.3.4 pauseScreen

```
Scene pauseScreen [get]
```

Gets the default pause screen.

May be null if scene has been removed, or is not imported.

#### 4.21.3.5 pressAnyButtonScreen

```
Scene pressAnyButtonScreen [get]
```

Gets the default press any button loading screen.

May be null if scene has been removed, or is not imported.

#### 4.21.3.6 progressBarScreen

```
Scene progressBarScreen [get]
```

Gets the default progress bar loading screen.

May be null if scene has been removed, or is not imported.

#### 4.21.3.7 quoteScreen

```
Scene quoteScreen [get]
```

Gets the default quote loading screen.

May be null if scene has been removed, or is not imported.

#### 4.21.3.8 splashScreen

```
Scene splashScreen [get]
```

Gets the default splash screen.

May be null if scene has been removed, or is not imported.

### 4.21.3.9 videoScreen

```
Scene videoScreen [get]
```

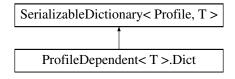
Gets the default video loading screen.

May be null if scene has been removed, or is not imported.

# 4.22 ProfileDependent< T >.Dict

A dictionary of type Profile, T.

Inheritance diagram for ProfileDependent< T >.Dict:



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# 4.22.1 Detailed Description

A dictionary of type Profile, T.

# 4.23 DictionaryUtility

Contains utility functions for working with dictionaries.

#### **Static Public Member Functions**

- static void Add < TKey, TValue > (this Dictionary < TKey, TValue > d, TKey key, TValue value)
   Adds or sets the value of a key.
- static void Add < TKey, TList, TItem > (this Dictionary < TKey, TList > d, TKey key, TItem item)
   Adds the value to the list with the specified key. Creates list automatically if null and adds key if necessary.
- static void AddRange
   TKey, TList, TItem > (this Dictionary
   TKey, TList > d, TKey key, IEnumerable
   TItem > items)

Adds the values to the list with the specified key. Creates list automatically if null and adds key if necessary.

static void AddRange < TKey, TList, TItem > (this Dictionary < TKey, TList > d, TKey key, params TItem[] items)

Adds the values to the list with the specified key. Creates list automatically if null and adds key if necessary.

- static void **Remove**< **TKey, TList, TItem** > (this Dictionary< TKey, TList > d, TKey key, TItem value)

  \*\*Removes the value to the list with the specified key.
- static TValue GetValue < TKey, TValue > (this Dictionary < TKey, TValue > d, TKey key, TValue default Value=default)

Gets the value of the specified key, returns default if it does not exist.

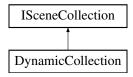
### 4.23.1 Detailed Description

Contains utility functions for working with dictionaries.

# 4.24 DynamicCollection

Represents a collection that can take a path and then gather all scenes within, guaranteeing that they are all added to build, including non-imported and blacklisted scenes.

Inheritance diagram for DynamicCollection:



#### **Public Member Functions**

bool Contains (string path)

Gets if the specified SceneAsset path is tracked by this dynamic collection.

### **Properties**

• string id [get]

Gets the id of this collection.

• Profile profile [get]

Finds the profile associated with this dynamic collection.

• string path [get, set]

Specifies the path that this dynamic collection will gather scenes from.

• string title [get, set]

Gets the title of this collection.

• string description [get, set]

Gets the description of this collection.

IEnumerable < string > scenePaths [get]

Gets the scenes of this collection.

Scene this[int index] [get]

Gets the scene at the specified index.

int count [get]

Gets the scene count of this collection.

## **Properties inherited from ISceneCollection**

# 4.24.1 Detailed Description

Represents a collection that can take a path and then gather all scenes within, guaranteeing that they are all added to build, including non-imported and blacklisted scenes.

Represents a dynamic scene collection.

# 4.25 CoroutineUtility.Events

Provides events for coroutine events.

#### **Public Member Functions**

delegate void CoroutineEvent (GlobalCoroutine coroutine)

#### Parameters

coroutine The coroutine that this event was called for.

- delegate object CoroutineFrameStartEvent (GlobalCoroutine coroutine, object data, int level, object parent
   — UserData, bool isPause)
- delegate void CoroutineFrameEndEvent (GlobalCoroutine coroutine, object userData)

# **Static Public Attributes**

static CoroutineEvent onCreated

Occurs when created. Note that GlobalCoroutine is pooled, the same object instance will be used multiple times, and this event is called when the pooled instance is 'constructed', meaning this event will be called multiple times for the same object instance.

static CoroutineEvent onDestroyed

Occurs when a GlobalCoroutine is 'destroyed'. Note that GlobalCoroutine is pooled, the same object instance will be used multiple times, and this event is called when the pooled instance is 'destroyed', meaning this event will be called multiple times for the same object instance.

static CoroutineEvent onCoroutineStarted

Occurs when a GlobalCoroutine is started.

static CoroutineEvent onCoroutineEnded

Occurs when a GlobalCoroutine is ended.

static CoroutineFrameStartEvent onSubroutineStart

Occurs before a subroutine in an executing GlobalCoroutine is started.

static CoroutineFrameEndEvent onSubroutineEnd

Occurs when a subroutine in an executing GlobalCoroutine has ended.

### **Properties**

• static bool enableEvents [get]

Enables or disables events. Setter not available, and getter always returns false, in build. Default is false.

# 4.25.1 Detailed Description

Provides events for coroutine events.

### 4.25.2 Member Function Documentation

### 4.25.2.1 CoroutineFrameEndEvent()

#### **Parameters**

coroutine	The coroutine that this event was called for.
userData	The userdata that was passed to onSubroutineStart.

### 4.25.2.2 CoroutineFrameStartEvent()

#### **Parameters**

coroutine	The coroutine that this event was called for.
data	The object returned from IEnumerator.Current.
level	The level, or depth, of the current subroutine.
parentUserData	The userdata of the subroutine above this one, depth-wise.
isPause	GlobalCoroutine.Pause is reported as a subroutine, this is true when that is the case.

#### 4.25.3 Member Data Documentation

#### 4.25.3.1 onSubroutineStart

CoroutineFrameStartEvent onSubroutineStart [static]

Occurs before a subroutine in an executing GlobalCoroutine is started.

A user object can be returned, which is then passed to onSubroutineEnd.

# 4.26 FallbackSceneUtility

An utility class that manages the default scene, called 'AdvancedSceneManager'.

# **Static Public Member Functions**

• static bool IsFallbackScene (scene scene)

Gets whatever the specified scene is the default scene.

# 4.26.1 Detailed Description

An utility class that manages the default scene, called 'AdvancedSceneManager'.

The default scene allows us to more easily close all scenes when we need to, since unity requires at least one scene to be open at any time.

# 4.27 CallbackUtility.FluentInvokeAPI< T>

An helper class to facilitate a fluent api.

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#### **Public Member Functions**

FluentInvokeAPI< T > WithCallback (Callback callback)

Specify a callback, this should point to the interface method which provides a IEnumerator.

• FluentInvokeAPI< T > WithParam (object param)

Specify a parameter to use when invoking the callback.

• IEnumerator On (SceneCollection collection, params Scene[] additionalScenes)

Specify the collection scenes to run this callback on and start execution.

• IEnumerator OnAllOpenScenes ()

Specify the collection scenes to run this callback on and start execution..

• IEnumerator **On** (params Scene[] scenes)

Specify the scenes to run this callback on and start execution.

• IEnumerator **On** (params ScriptableObject[] scriptableObjects)

Specify the scenes to run this callback on and start execution.

#### **Properties**

• bool hasDefaultCallback [get]

Gets whatever T has a default callback. All callbacks inheriting from ISceneCallbacks should have one.

### 4.27.1 Detailed Description

An helper class to facilitate a fluent api.

Usage: Invoke<T>

# 4.27.2 Member Function Documentation

### 4.27.2.1 WithCallback()

Specify a callback, this should point to the interface method which provides a IEnumerator.

This is not needed for callback interfaces inheriting from ISceneCallbacks.

### 4.28 GlobalCoroutine

Represents a IEnumerator coroutine started using CoroutineUtility.

Inherits CustomYieldInstruction.

#### **Public Member Functions**

· void Pause ()

Pauses the coroutine. Make sure to not use this from within a coroutine, unless you also make sure to unpause it from outside. No effect if already paused.

• void Resume ()

Resumes a paused coroutine. No effect if not paused.

· void Stop ()

Stops the coroutine.

• override string ToString ()

#### **Public Attributes**

· MethodBase method

Gets the caller info of this coroutine.

# **Properties**

• Action onComplete [get]

The callback that is executed when coroutine is finished.

• bool isPaused [get]

Gets whatever this coroutine is paused.

• bool isComplete [get]

Gets whatever this coroutine is completed.

• bool isRunning [get]

Gets whatever this coroutine is currently running. This will still return true when paused.

• bool wasCancelled [get]

Gets whatever this coroutine was cancelled.

• string description [get, set]

Gets the user defined message that was associated with this coroutine.

• override bool keepWaiting [get]

CustomYieldInstruction.keepWaiting, this is how unity knows if this coroutine is done or not.

### 4.28.1 Detailed Description

Represents a IEnumerator coroutine started using CoroutineUtility.

## 4.29 GuidReference

Represents a persistent reference to the GameObject that this is attached to, see also GuidReferenceUtility .

Inherits MonoBehaviour.

## 4.29.1 Detailed Description

Represents a persistent reference to the GameObject that this is attached to, see also GuidReferenceUtility .

# 4.30 GuidReferenceUtility

An utility for referencing objects globally.

#### **Static Public Member Functions**

• static string AddRuntime (Object obj)

Adds a reference to the object, returns the id that will be used to find it again.

• static void RemoveRuntime (Object obj)

Removes the reference to this object.

• static void RemoveRuntime (string id)

Removes the reference to the object with this id.

• static bool HasReference (string id)

Gets if reference exists.

• static bool **TryFind**< **T** > (string id, out T obj)

Gets if reference exists.

• static Object **TryFind** (string id, out Object obj)

Tries to find the reference.

• static Object Find (string id)

Finds a reference if it exists.

static T Find < T > (string id)

Finds a reference if it exists.

static IEnumerator Find (string id, Action < Object > callback)

Finds a reference if it exists.

• static string GetOrAddPersistent (GameObject obj)

Adds a persistent reference to this GameObject.

• static string GenerateID ()

Generates an id.

• static GameObject FindPersistent (string guid)

Finds the persistent reference in the currently open scenes.

static bool TryFindPersistent (string guid, out GameObject obj)

Finds the persistent reference in the currently open scenes.

## 4.30.1 Detailed Description

An utility for referencing objects globally.

#### 4.30.2 Member Function Documentation

### 4.30.2.1 FindPersistent()

Finds the persistent reference in the currently open scenes.

#### **Parameters**

	guid	The guid of the GameObject to find.
--	------	-------------------------------------

## 4.30.2.2 GenerateID()

```
static string GenerateID ( ) [static]
```

Generates an id.

Uses https://blog.codinghorror.com/equipping-our-ascii-armor.

### 4.30.2.3 GetOrAddPersistent()

```
static string GetOrAddPersistent ( {\tt GameObject}\ obj\ )\ \ [{\tt static}]
```

Adds a persistent reference to this GameObject.

Can only add in editor, returns null otherwise.

## 4.30.2.4 TryFindPersistent()

```
static bool TryFindPersistent ( {\tt string} \ guid, {\tt out} \ {\tt GameObject} \ obj \ ) \quad [{\tt static}]
```

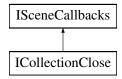
Finds the persistent reference in the currently open scenes.

#### **Parameters**

guid	The guid of the GameObject to find.
obj	The found GameObject.

# 4.31 ICollectionClose

Inheritance diagram for ICollectionClose:



### **Public Member Functions**

• void OnCollectionClose (SceneCollection collection)

# 4.31.1 Detailed Description

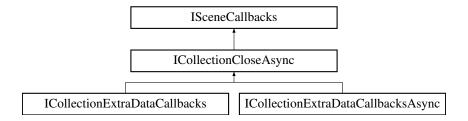
Callback for when a scene in a collection that a MonoBehaviour is contained within is closed.

Called after loading screen has opened, if one is defined, or else just before collection is closed.

See also: ICollectionCloseAsync.

# 4.32 ICollectionCloseAsync

Inheritance diagram for ICollectionCloseAsync:



#### **Public Member Functions**

• IEnumerator OnCollectionClose (SceneCollection collection)

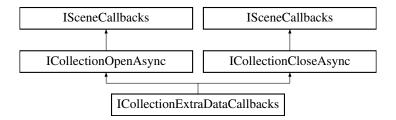
## 4.32.1 Detailed Description

Scene operation will wait for coroutine callback before continuing.

# 4.33 ICollectionExtraDataCallbacks

Callbacks for a ScriptableObject that has been set as extra data for a collection.

Inheritance diagram for ICollectionExtraDataCallbacks:



#### **Additional Inherited Members**

# Public Member Functions inherited from ICollectionOpenAsync

• IEnumerator OnCollectionOpen (SceneCollection collection)

# Public Member Functions inherited from ICollectionCloseAsync

• IEnumerator OnCollectionClose (SceneCollection collection)

## 4.33.1 Detailed Description

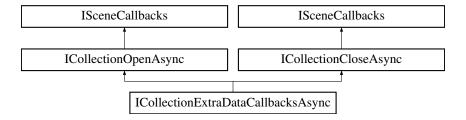
Callbacks for a ScriptableObject that has been set as extra data for a collection.

See also: ICollectionExtraDataCallbacksAsync.

# 4.34 ICollectionExtraDataCallbacksAsync

Callbacks for a ScriptableObject that has been set as extra data for a collection.

Inheritance diagram for ICollectionExtraDataCallbacksAsync:



### **Additional Inherited Members**

## Public Member Functions inherited from ICollectionOpenAsync

• IEnumerator OnCollectionOpen (SceneCollection collection)

## Public Member Functions inherited from ICollectionCloseAsync

• IEnumerator OnCollectionClose (SceneCollection collection)

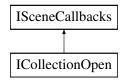
## 4.34.1 Detailed Description

Callbacks for a ScriptableObject that has been set as extra data for a collection.

Scene operation will wait for coroutine callback before continuing.

# 4.35 ICollectionOpen

Inheritance diagram for ICollectionOpen:



#### **Public Member Functions**

• void OnCollectionOpen (SceneCollection collection)

# 4.35.1 Detailed Description

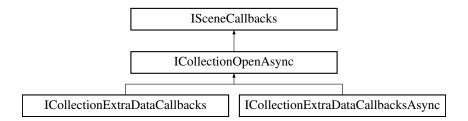
Callback for when a scene in a collection that a MonoBehaviour is contained within is opened.

Called before loading screen is hidden, if one is defined, or else just when collection has opened.

See also: ICollectionOpenAsync.

# 4.36 ICollectionOpenAsync

Inheritance diagram for ICollectionOpenAsync:



### **Public Member Functions**

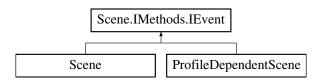
• IEnumerator OnCollectionOpen (SceneCollection collection)

## 4.36.1 Detailed Description

Scene operation will wait for coroutine callback before continuing.

## 4.37 Scene.IMethods.IEvent

Inheritance diagram for Scene.IMethods.IEvent:



#### **Public Member Functions**

• void \_Open ()

Event method. Its meant for UnityEngine.Events.UnityEvent.

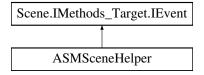
- void \_ToggleOpenState ()
- void \_ToggleOpen (bool? openState=null)
- void \_Close ()
- void \_Preload ()
- void FinishPreload ()
- void \_DiscardPreload ()
- void \_OpenWithLoadingScreen (Scene loadingScene)
- void \_SetActive ()

# 4.37.1 Detailed Description

Specifies methods to be used in UnityEvent, using the scene itself.

# 4.38 Scene.lMethods\_Target.lEvent

Inheritance diagram for Scene.IMethods\_Target.IEvent:



### **Public Member Functions**

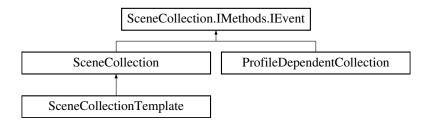
- void **Open** (Scene scene)
- void \_ToggleOpen (Scene scene)
- void \_Close (Scene scene)
- void \_Preload (Scene scene)
- void \_FinishPreload (Scene scene)
- void **DiscardPreload** (Scene scene)
- void \_SetActive (Scene scene)

# 4.38.1 Detailed Description

Specifies methods to be used in UnityEvent, when not using scene itself.

### 4.39 SceneCollection.IMethods.IEvent

Inheritance diagram for SceneCollection.IMethods.IEvent:



#### **Public Member Functions**

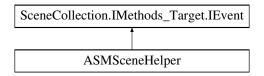
- void \_Open (bool openAll=false)
- void **\_OpenAdditive** (bool openAll=false)
- void \_ToggleOpen (bool? openState=null)
- void \_Close ()
- void \_ToggleOpenState ()

## 4.39.1 Detailed Description

Specifies methods to be used in UnityEvent, using the collection itself.

# 4.40 SceneCollection.IMethods\_Target.IEvent

Inheritance diagram for SceneCollection.IMethods\_Target.IEvent:



### **Public Member Functions**

- void \_Open (SceneCollection collection)
- void \_OpenAdditive (SceneCollection collection)
- void \_ToggleOpen (SceneCollection collection)
- void \_Close (SceneCollection collection)

### 4.40.1 Detailed Description

Specifies methods to be used in UnityEvent, when not using collection itself.

# 4.41 IFadeLoadingScreen

Used to pass arguments from LoadingScreenUtility.FadeIn(LoadingScreen, float, Color?)

### **Properties**

• float fadeDuration [get, set]

Specifies the fade duration.

• Color color [get, set]

Specifies the color of the fade.

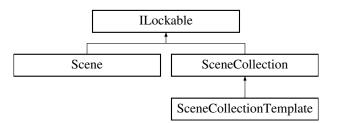
# 4.41.1 Detailed Description

Used to pass arguments from LoadingScreenUtility.FadeIn(LoadingScreen, float, Color?)

# 4.42 ILockable

Specifies a object that can be locked, using LockUtility.

Inheritance diagram for ILockable:



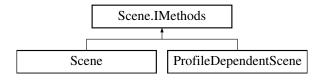
# 4.42.1 Detailed Description

Specifies a object that can be locked, using LockUtility.

Available, but no effect in build.

# 4.43 Scene.IMethods

Inheritance diagram for Scene.IMethods:



4.43 Scene.lMethods 55

#### Classes

interface | Event

## **Public Member Functions**

• SceneOperation Open ()

Opens the scene.

• SceneOperation ToggleOpen (bool? openState=null)

Toggles this scene open or closed.

SceneOperation Close ()

Closes the scene.

SceneOperation Preload (Action onPreloaded=null)

Preloads the scene, to be displayed at a later time. See also: FinishPreload, DiscardPreload.

SceneOperation FinishPreload ()

Finishes preloading the scene, displaying it.

• SceneOperation DiscardPreload ()

Discards the scene, if preloaded.

• SceneOperation OpenWithLoadingScreen (Scene loadingScene)

Opens the scene while a loading screen is open.

· void SetActive ()

Sets the scene as active in heirarchy.

## 4.43.1 Detailed Description

Specified methods to be used programmatically, on the scene itself.

#### 4.43.2 Member Function Documentation

### 4.43.2.1 Close()

```
SceneOperation Close ( )
```

Closes the scene.

No effect if scene is already closed.

Implemented in ProfileDependentScene, and Scene.

### 4.43.2.2 FinishPreload()

```
SceneOperation FinishPreload ( )
```

Finishes preloading the scene, displaying it.

Scene must be preloaded beforehand.

Implemented in ProfileDependentScene, and Scene.

### 4.43.2.3 Open()

```
SceneOperation Open ( )
```

Opens the scene.

No effect if scene is already open.

Implemented in ProfileDependentScene, and Scene.

### 4.43.2.4 Preload()

Preloads the scene, to be displayed at a later time. See also: FinishPreload, DiscardPreload.

Scene must be closed beforehand.

Implemented in ProfileDependentScene, and Scene.

### 4.43.2.5 ToggleOpen()

```
SceneOperation ToggleOpen (
          bool? openState = null )
```

Toggles this scene open or closed.

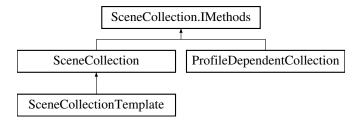
#### **Parameters**

openState	Specifies whatever you have a preferred state to toggle to, this means scene will not be closed if
	true is passed. This can be used to scene collection is open, without having an explicit check
	beforehand. The inverse is also the case for false.

Implemented in ProfileDependentScene, and Scene.

# 4.44 SceneCollection.IMethods

Inheritance diagram for SceneCollection.IMethods:



### Classes

interface IEvent

#### **Public Member Functions**

SceneOperation Open (bool openAll=false)

Opens this collection.

• SceneOperation OpenAdditive (bool openAll=false)

Opens this collection as additive.

• SceneOperation ToggleOpen (bool? openState=null, bool openAll=false)

Toggles this collection open or closed.

• SceneOperation Close ()

Closes this collection.

# 4.44.1 Detailed Description

Specified methods to be used programmatically, on the collection itself.

### 4.44.2 Member Function Documentation

### 4.44.2.1 Close()

```
SceneOperation Close ()
```

Closes this collection.

No effect if collection is already closed. Note that "additive collections" are not actually opened, only its scenes are.

Implemented in SceneCollection, and ProfileDependentCollection.

### 4.44.2.2 Open()

```
SceneOperation Open (
          bool openAll = false )
```

Opens this collection.

#### **Parameters**

openAll Specifies whatever scenes flagged to not open with collection, should.

Reopens all non-persistent scenes.

Implemented in SceneCollection, and ProfileDependentCollection.

### 4.44.2.3 OpenAdditive()

```
SceneOperation OpenAdditive (
          bool openAll = false )
```

Opens this collection as additive.

#### **Parameters**

openAll	Specifies whatever scenes flagged to not open with collection, should.
---------	--

Additive collections are not "opened", all scenes within are merely opened like normal scenes. Mostly intended for convenience.

Implemented in SceneCollection, and ProfileDependentCollection.

## 4.44.2.4 ToggleOpen()

```
SceneOperation ToggleOpen (
          bool? openState = null,
          bool openAll = false )
```

Toggles this collection open or closed.

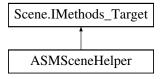
#### **Parameters**

openState	Specifies whatever you have a preferred state to toggle to, this means collection will not be closed
	if true is passed. This can be used to ensure collection is open, without having an explicit check
	beforehand. The inverse is also the case for false.
openAll	Specifies whatever scenes flagged to not open with collection, should.

Implemented in SceneCollection, and ProfileDependentCollection.

# 4.45 Scene.IMethods\_Target

Inheritance diagram for Scene.IMethods\_Target:



# Classes

• interface | Event

#### **Public Member Functions**

SceneOperation Open (Scene scene)

Opens the specified scene.

• SceneOperation ToggleOpenState (Scene scene)

Toggles the open state of this scene.

• SceneOperation ToggleOpen (Scene scene, bool? openState=null)

Toggles the open state of the specified scene, or ensures the state specified.

SceneOperation Close (Scene scene)

Closes the specified scene.

• SceneOperation Preload (Scene scene, Action onPreloaded=null)

Preloads the specified scene, to be displayed at a later time. See also: FinishPreload(Scene), DiscardPreload(← Scene).

SceneOperation FinishPreload (Scene scene)

Finishes preloading the specified scene, displaying it.

SceneOperation DiscardPreload (Scene scene)

Discards the specified scene, if preloaded.

• SceneOperation OpenWithLoadingScreen (Scene scene, Scene loadingScene)

Opens the specified scene while a loading screen is open.

• void **SetActive** (Scene scene)

Sets the specified scene as active in heirarchy.

# 4.45.1 Detailed Description

Specifies methods to be used programmatically, using scene as first parameter.

### 4.45.2 Member Function Documentation

### 4.45.2.1 Close()

```
SceneOperation Close (
Scene scene)
```

Closes the specified scene.

Already closed scenes not affected.

Implemented in ASMSceneHelper.

#### 4.45.2.2 FinishPreload()

Finishes preloading the specified scene, displaying it.

Scene must be preloaded beforehand.

Implemented in ASMSceneHelper.

### 4.45.2.3 Open()

```
SceneOperation Open (
Scene scene)
```

Opens the specified scene.

Already open scenes not affected.

Implemented in ASMSceneHelper.

### 4.45.2.4 Preload()

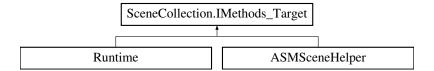
Preloads the specified scene, to be displayed at a later time. See also: FinishPreload(Scene), DiscardPreload( $\leftarrow$  Scene).

Scene must be closed beforehand.

Implemented in ASMSceneHelper.

# 4.46 SceneCollection.lMethods\_Target

Inheritance diagram for SceneCollection.IMethods\_Target:



#### Classes

• interface IEvent

## **Public Member Functions**

- SceneOperation Open (SceneCollection collection, bool openAll=false)
- SceneOperation OpenAdditive (SceneCollection collection, bool openAll=false)
- SceneOperation ToggleOpen (SceneCollection collection, bool? openState=null, bool openAll=false)
- SceneOperation Close (SceneCollection collection)

# 4.46.1 Detailed Description

Specifies methods to be used programmatically, using collection as first parameter.

# 4.47 InitializeInEditorAttribute

Initializes a class in editor on recompile.

Inherits Attribute.

# 4.47.1 Detailed Description

Initializes a class in editor on recompile.

Available in build, but no effect.

# 4.48 InitializeInEditorMethodAttribute

Initializes a class in editor on recompile.

Inherits Attribute.

# 4.48.1 Detailed Description

Initializes a class in editor on recompile.

Available in build, but no effect.

# 4.49 InputBinding

Represents a input binding for InputSystem. Available even when InputSystem is uninstalled.

#### **Properties**

```
• List< InputButton > buttons [get]
```

Specifies the buttons.

bool openCollectionAsAdditive [get, set]

Specifies whatever collection should be opened as a collection.

• InputBindingInteractionType interactionType [get, set]

Specifies the interaction type.

# 4.49.1 Detailed Description

Represents a input binding for InputSystem. Available even when InputSystem is uninstalled.

# 4.50 InputButton

Specifies a input binding for use with InputSystem.

# **Public Attributes**

• string name

Specifies the name of this binding.

string path

Specifies the path of this binding.

## **Properties**

• readonly bool **isValid** [get]

Gets if this binding is valid.

# 4.50.1 Detailed Description

Specifies a input binding for use with InputSystem.

# 4.50.2 Member Data Documentation

### 4.50.2.1 path

string path

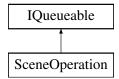
Specifies the path of this binding.

This would be UnityEngine.InputSystem.InputBinding.path.

# 4.51 IQueueable

Represents a queueable item.

Inheritance diagram for IQueueable:



4.52 ISceneCallbacks 63

#### **Public Member Functions**

• void OnTurn (Action onComplete)

Called when it is this queueables turn.

· void OnCancel ()

Called when queueable is cancelled.

• bool CanQueue ()

Called to make sure the item can actually be queued.

# 4.51.1 Detailed Description

Represents a queueable item.

See also QueueUtility<T>.

# 4.51.2 Member Function Documentation

# 4.51.2.1 OnTurn()

Called when it is this queueables turn.

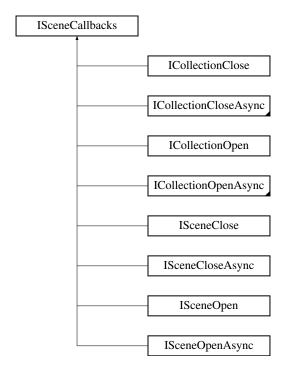
**Parameters** 

onComplete Must be called when operation is done, otherwise queue will be stuck.

# 4.52 ISceneCallbacks

Base interface for ISceneOpen, ISceneClose, ICollectionOpen, ICollectionClose. Does nothing on its own, used by CallbackUtility.

Inheritance diagram for ISceneCallbacks:



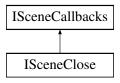
# 4.52.1 Detailed Description

Base interface for ISceneOpen, ISceneClose, ICollectionOpen, ICollectionClose. Does nothing on its own, used by CallbackUtility.

# 4.53 ISceneClose

Callback for when the scene that a MonoBehaviour is contained within is closed.

Inheritance diagram for ISceneClose:



#### **Public Member Functions**

• void OnSceneClose ()

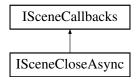
# 4.53.1 Detailed Description

Callback for when the scene that a MonoBehaviour is contained within is closed.

See also: ISceneCloseAsync.

# 4.54 ISceneCloseAsync

Inheritance diagram for ISceneCloseAsync:



#### **Public Member Functions**

• IEnumerator OnSceneClose ()

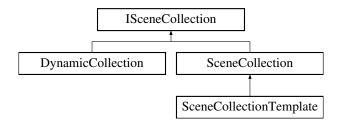
# 4.54.1 Detailed Description

Scene operation will wait for coroutine callback before continuing.

# 4.55 ISceneCollection

Represents the core variables of what makes up a scene collection.

Inheritance diagram for ISceneCollection:



### **Properties**

• IEnumerable < Scene > scenes [get]

Gets the scenes of this collection.

IEnumerable < string > scenePaths [get]

Gets the scenes of this collection.

• string title [get]

Gets the title of this collection.

• string description [get]

Gets the description of this collection.

• int count [get]

Gets the scene count of this collection.

• string id [get]

Gets the id of this collection.

• Scene this[int index] [get]

Gets the scene at the specified index.

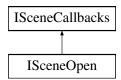
# 4.55.1 Detailed Description

Represents the core variables of what makes up a scene collection.

# 4.56 ISceneOpen

Callback for when the scene that a MonoBehaviour is contained within is opened.

Inheritance diagram for ISceneOpen:



### **Public Member Functions**

• void OnSceneOpen ()

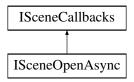
# 4.56.1 Detailed Description

Callback for when the scene that a MonoBehaviour is contained within is opened.

See also: ISceneOpenAsync.

# 4.57 ISceneOpenAsync

Inheritance diagram for ISceneOpenAsync:



# **Public Member Functions**

• IEnumerator OnSceneOpen ()

# 4.57.1 Detailed Description

Scene operation will wait for coroutine callback before continuing.

4.59 LoadingScreen 67

# 4.58 LerpUtility

Provides some convinience functions for lerping.

#### **Static Public Member Functions**

static IEnumerator Lerp (float start, float end, float duration, Action < float > callback, Action on ← Complete=null)

Lerp from start to end over duration seconds.

- static IEnumerator Lerp (Vector3 start, Vector3 end, float duration, Action < Vector3 > callback, Action on ← Complete=null)
- static IEnumerator Lerp (Vector2 start, Vector2 end, float duration, Action < Vector2 > callback, Action on ← Complete=null)

# 4.58.1 Detailed Description

Provides some convinience functions for lerping.

#### 4.58.2 Member Function Documentation

#### 4.58.2.1 Lerp()

Lerp from start to end over duration seconds.

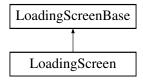
## Parameters

start	The start value.	
end	The end value.	
duration	The duration in seconds to lerp for.	
callback	The callback each lerp interval.	
onComplete	Callback when complete.	

# 4.59 LoadingScreen

A class that contains callbacks for loading screens.

Inheritance diagram for LoadingScreen:



### **Public Member Functions**

virtual void OnProgressChanged (float progress)

Called when progress has changed.

- override IEnumerator OnOpen ()
- override IEnumerator OnClose ()

# Public Member Functions inherited from LoadingScreenBase

• IEnumerator OnOpen ()

Called when the loading screen is opened.

IEnumerator OnClose ()

Called when the loading screen is about to close.

### **Properties**

SceneOperation operation [get, set]

The current scene operation that this loading screen is associated with. May be null for the first few frames, before loading has actually begun.

### **Additional Inherited Members**

## Public Attributes inherited from LoadingScreenBase

Action < LoadingScreenBase > onDestroy

Occurs when loading screen is destroyed.

· Canvas canvas

# 4.59.1 Detailed Description

A class that contains callbacks for loading screens.

SplashScreen and LoadingScreen cannot co-exist within the same scene.

# 4.59.2 Member Function Documentation

### 4.59.2.1 OnClose()

```
override IEnumerator OnClose ( ) [abstract]
```

Use this callback to hide your loading screen.

### 4.59.2.2 OnOpen()

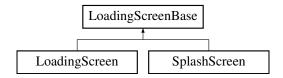
```
override IEnumerator OnOpen ( ) [abstract]
```

Use this callback to show your loading screen, the scene manager will wait until its done.

# 4.60 LoadingScreenBase

A generic base class for loading screens. You probably want to inherit from LoadingScreen though.

Inheritance diagram for LoadingScreenBase:



#### **Public Member Functions**

- IEnumerator OnOpen ()
  - Called when the loading screen is opened.
- IEnumerator OnClose ()

Called when the loading screen is about to close.

#### **Public Attributes**

- Action < LoadingScreenBase > onDestroy
  - Occurs when loading screen is destroyed.
- Canvas canvas

# 4.60.1 Detailed Description

A generic base class for loading screens. You probably want to inherit from LoadingScreen though.

When multiple loading screens exist within the same scene, only the first found one will be used.

### 4.60.2 Member Data Documentation

#### 4.60.2.1 canvas

Canvas canvas

The canvas that this loading screen uses.

This will automatically register canvas with CanvasSortOrderUtility, to automatically manage canvas sort order.

You probably want to set this through the inspector.

# 4.61 LoadingScreenUtility

Manager for loading screens.

#### **Static Public Member Functions**

static bool IsLoadingScreenOpen (Scene scene)

Gets if this scene is a loading screen.

 static Async< T > OpenLoadingScreen< T > (Scene loadingScene, SceneOperation operation=null, Action< T > callbackBeforeBegin=null, Action< float > progress=null)

Shows a loading screen.

- static IEnumerator CloseLoadingScreen (Scene scene)
- static IEnumerator CloseLoadingScreen (LoadingScreenBase loadingScreen, Action < float > progress=null, bool closeScene=true)

Hide the loading screen.

• static IEnumerator CloseLoadingScreenScene (Scene scene, Action< float > progress=null)

Close the scene that contained a loading screen.

• static IEnumerator CloseAll ()

Hide all loading screens.

- static Async< LoadingScreen > FadeOut (float duration=1, Color? color=null, Action< float > progress=null)

  Fades out the screen.
- static IEnumerator Fadeln (LoadingScreenBase loadingScreen, float duration=1, Color? color=null, Action
   float > progress=null)

Fades in the screen.

- static IEnumerator DoAction (Scene scene, Action action, Action < LoadingScreenBase > loadingScreen←
   Callback=null)
- static IEnumerator DoAction (Scene scene, Func< IEnumerator > coroutine, Action< LoadingScreenBase > loadingScreenCallback=null)

Opens loading screen, performs action and hides loading screen again.

static IEnumerator WithProgress (this AsyncOperation asyncOperation, Action < float > onProgress)

Returns a coroutine that returns when AsyncOperation.isDone becomes true. onProgress will be called every frame with AsyncOperation.progress.

static AsyncOperation Preload (this AsyncOperation asyncOperation, out Func< IEnumerator > activate ←
 Callback)

Sets AsyncOperation.allowSceneActivation to false.

#### **Properties**

static bool isAnyLoadingScreenOpen [get]

Gets if any loading screens are open.

• static Scene fade [get]

Finds the default fade loading screen. Will be null if not included in build.

• static Scene defaultLoadingScreen [get]

Gets the current default loading screen.

static IEnumerable < LoadingScreenBase > loadingScreens [get]

The currently open loading screens.

### 4.61.1 Detailed Description

Manager for loading screens.

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### 4.61.2 Member Function Documentation

#### 4.61.2.1 CloseLoadingScreen()

Hide the loading screen.

#### **Parameters**

loadingScreen	The loading screen to hide.
progress	The callback to receive progress.
closeScene	Specifies whatever the scene should be closed afterwards. Use CloseLoadingScreenScene(Scene, Action <float>) if false.</float>

#### 4.61.2.2 DoAction()

Opens loading screen, performs action and hides loading screen again.

# **Parameters**

scene	The loading screen scene.	
coroutine	To coroutine to execute.	
loadingScreenCallback	The callback to perform when loading script is loaded, but before ASM has called LoadingScreenBase.OnOpen().	

# 4.62 MainThreadUtility

### **Static Public Member Functions**

```
    static T Invoke < T > (Func < T > func)
```

Queues the function to be run on the main thread, during the next frame.

• static void Invoke (Action action)

Queues the action to be run on the main thread, during the next frame.

static T Invoke < T > (this Func < T > func, bool mainThread=false)

Invokes the action

• static void Invoke (this Action action, bool mainThread=false)

Invokes the action .

• static void Start ()

Starts main thread utility coroutine.

• static void Stop ()

Stops main thread utility coroutine.

### **Properties**

• static bool isEnabled [get]

Gets whatever MainThreadUtility is enabled, set to false in source code to disable.

• static bool isOnMainThread [get]

Gets if the thread we're currently on is the main thread.

• static bool **IsRunning** [get]

Gets if main thread utility is running.

# 4.62.1 Detailed Description

An utility for running actions on the main thread.

Only usable in play mode.

### 4.62.2 Member Function Documentation

### 4.62.2.1 Invoke() [1/2]

Queues the action to be run on the main thread, during the next frame.

#### **Parameters**

action The action to inv	nke
--------------------------	-----

### 4.62.2.2 Invoke() [2/2]

Invokes the action.

#### **Parameters**

action	The action to invoke.	
mainThread	Queues the action to be run on the main thread, during the next frame.	

### 4.62.2.3 Invoke < T >() [1/2]

```
static T Invoke< T > ( Func< T > func ) [static]
```

Queues the function to be run on the main thread, during the next frame.

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#### **Parameters**

### 4.62.2.4 Invoke < T >() [2/2]

Invokes the action.

#### **Parameters**

func	The action to invoke.	
mainThread	Queues the action to be run on the main thread, during the next frame.	

# 4.63 ObjectReference

A reference to an object in a scene.

Inherits IEqualityComparer< ObjectReference >.

### **Public Member Functions**

• ObjectReference With (Component component)

Adds data about a component.

• ObjectReference With (int? unityEventIndex=null, int? arrayIndex=null)

Adds data about an unity event.

• bool **IsValid** (bool returnTrueWhenSceneIsUnloaded=false)

Returns true if the reference is still valid.

# 4.63.1 Detailed Description

A reference to an object in a scene.

# 4.64 ParallelASMCallbacks

Specifies whatever the ASM callbacks should be run in parallel for any callbacks defined in this script.

Inherits Attribute.

# 4.64.1 Detailed Description

Specifies whatever the ASM callbacks should be run in parallel for any callbacks defined in this script.

### 4.65 Profile

A profile, contains settings, collections.

Inheritance diagram for Profile:



#### **Public Member Functions**

• bool IsStartupCollection (SceneCollection collection)

Gets whatever the specified collection is a startup collection.

• int IndexOf (SceneCollection collection)

Gets the index of the specified collection.

int IndexOf (DynamicCollection collection)

Gets the index of the specified collection.

bool Contains (ISceneCollection collection, bool checkRemoved=false)

Gets whatever this profile contains the specified collection.

IEnumerable < ISceneCollection > FindCollections (Scene scene)

Finds all collection that the scene is included in. Includes dynamic collections.

• override string ToString (int indent)

### **Public Member Functions inherited from ASMModel**

virtual void Save ()

Saves the scriptable object after modifying.

• void MarkAsDirty ()

Mark scriptable object as dirty after modifying.

• virtual bool IsMatch (string q)

Gets if q matches name.

override string ToString ()

Gets a text summarization of this model.

#### **Static Public Member Functions**

static Profile Find (string q)

Finds the profile with the specified name or id.

• static bool **TryFind** (string q, out Profile profile)

Finds the profile with the specified name or id.

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#### **Static Public Attributes**

static readonly string AssetSearchString = "t:" + typeof(Profile).FullName

Gets 't:AdvancedSceneManager.Models.Profile', the string to use in AssetDatabase.FindAssets(string).

#### **Properties**

• static Profile current [get]

Gets the currently active profile.

IEnumerable < Scene > scenes [get]

Gets the scenes managed by this profile.

• IEnumerable < SceneCollection > collections [get]

Gets the collections contained within this profile.

• IEnumerable < DynamicCollection > dynamicCollections [get]

Gets the dynamic collections contained within this profile.

StandaloneCollection standaloneScenes [get]

Gets the standalone scenes contained within this profile.

IEnumerable < Scene > startupScenes [get]

Gets the scenes flagged to open on startup.

• IEnumerable < ISceneCollection > removedCollections [get]

Gets all removed collections in this profile.

• IEnumerable < ISceneCollection > allCollections [get]

Gets collections, standaloneScenes, dynamicCollections.

IEnumerable < Scene > specialScenes [get]

Gets default loading screen, splash screen and startup loading screen.

• IEnumerable < SceneCollection > startupCollections [get]

Gets the collections that will be opened on startup.

• Scene startupScene [get, set]

The startup scene.

Scene startupLoadingScreen [get, set]

The loading screen to use during startup.

• Scene loadingScreen [get, set]

The default loading screen.

Scene splashScreen [get, set]

The splash screen.

• ThreadPriority backgroundLoadingPriority [get, set]

Application.backgroundLoadingPriority setting is not saved, and must be manually set every time build or editor starts, this property persists the value and automatically sets it during startup.

bool enableChangingBackgroundLoadingPriority [get, set]

Enable or disable ASM automatically changing Application.backgroundLoadingPriority.

• bool createCameraDuringStartup [get, set]

Enable or disable ASM automatically creating a camera during startup.

• bool unloadUnusedAssetsForStandalone [get, set]

Enable or disable ASM calling Resources. Unload Unused Assets after standalone scenes has been opened or closed.

# **Properties inherited from ASMModel**

• string id [get]

Gets the id of this ASMModel.

new string name [get, protected set]

### **Additional Inherited Members**

# Static Protected Member Functions inherited from ASMModel

```
    static T CreateInternal < T > (string name)
    Creates a profile. Throws if name is invalid.
```

# 4.65.1 Detailed Description

A profile, contains settings, collections.

#### 4.65.2 Member Function Documentation

# 4.65.2.1 ToString()

```
override string ToString ( int\ indent\ ) \quad [virtual]
```

#### **Parameters**

indent	The indentation level, used for nested calls.
--------	---

### **Parameters**

Reimplemented from ASMModel.

### 4.65.3 Property Documentation

### 4.65.3.1 removedCollections

```
IEnumerable<ISceneCollection> removedCollections [get]
```

Gets all removed collections in this profile.

Removed collections still exist until deleted, and may be manually opened, but they will not be listed in collections or dynamicCollections.

### 4.65.3.2 scenes

```
IEnumerable<Scene> scenes [get]
```

Gets the scenes managed by this profile.

Includes both collection and standalone scenes.

#### 4.65.3.3 specialScenes

```
IEnumerable < Scene > specialScenes [get]
```

Gets default loading screen, splash screen and startup loading screen.

null is filtered out.

# 4.65.3.4 startupCollections

```
IEnumerable<SceneCollection> startupCollections [get]
```

Gets the collections that will be opened on startup.

If no collection is explicitly defined to be opened during startup, then the first available collection in list will be returned.

# 4.66 ProfileDependent < T >

Specifies a *T* that changes depending on active Profile.

Inherits ScriptableObject.

#### Classes

· class Dict

A dictionary of type Profile, T.

#### **Public Member Functions**

• bool GetModel (out T scene)

Gets the selected scene.

• T2 DoAction< T2 > (Func< T, T2 > action)

Performs an action on the scene.

void DoAction (Action< T > action)

Performs an action on the scene.

#### **Public Attributes**

• Dict list = new Dict()

The list of proxies for this  ${\sf T}$  .

### **Properties**

• bool isValid [get]

Gets if the current state of this T is valid.

# 4.66.1 Detailed Description

Specifies a *T* that changes depending on active Profile.

**Type Constraints** 

T: ASMModel

### 4.66.2 Member Function Documentation

### 4.66.2.1 DoAction()

```
void DoAction ( \label{eq:action} \mbox{Action} < \mbox{T} \mbox{$>$ action$ )}
```

Performs an action on the scene.

Does nothing if is Valid is false.

### 4.66.2.2 DoAction< T2 >()

Performs an action on the scene.

Does nothing if is Valid is false.

### 4.66.2.3 GetModel()

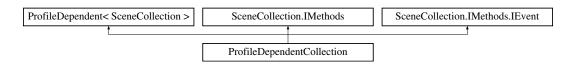
Gets the selected scene.

Returns null if scene something went wrong.

# 4.67 ProfileDependentCollection

Represents a SceneCollection that changes depending on active Profile.

Inheritance diagram for ProfileDependentCollection:



#### **Public Member Functions**

• SceneOperation Open (bool openAll=false)

Opens this collection.

• SceneOperation OpenAdditive (bool openAll=false)

Opens this collection as additive.

• SceneOperation ToggleOpen (bool? openState=null, bool openAll=false)

Toggles this collection open or closed.

• SceneOperation Close ()

Closes this collection.

- void Open (bool openAll=false)
- void \_OpenAdditive (bool openAll=false)
- void \_ToggleOpen (bool? openState=null)
- void \_ToggleOpenState ()
- void Close ()

### Public Member Functions inherited from ProfileDependent < SceneCollection >

• bool GetModel (out T scene)

Gets the selected scene.

• T2 DoAction < T2 > (Func < T, T2 > action)

Performs an action on the scene.

void DoAction (Action< T > action)

Performs an action on the scene.

#### **Additional Inherited Members**

### Public Attributes inherited from ProfileDependent < SceneCollection >

• Dict list

The list of proxies for this T.

### Properties inherited from ProfileDependent < SceneCollection >

• bool isValid [get]

Gets if the current state of this T is valid.

# 4.67.1 Detailed Description

### 4.67.2 Member Function Documentation

### 4.67.2.1 Close()

SceneOperation Close ( )

Closes this collection.

No effect if collection is already closed. Note that "additive collections" are not actually opened, only its scenes are.

Implements SceneCollection.IMethods.

### 4.67.2.2 Open()

```
SceneOperation Open (
          bool openAll = false )
```

Opens this collection.

### **Parameters**

Γ	openAll	Specifies whatever scenes flagged to not open with collection, should.
---	---------	--

Reopens all non-persistent scenes.

Implements SceneCollection.IMethods.

# 4.67.2.3 OpenAdditive()

```
SceneOperation OpenAdditive (
          bool openAll = false )
```

Opens this collection as additive.

#### **Parameters**

openAll Specifies whatever scenes flagged to not open	n with collection, should.
---	----------------------------

Additive collections are not "opened", all scenes within are merely opened like normal scenes. Mostly intended for convenience.

Implements SceneCollection.IMethods.

# 4.67.2.4 ToggleOpen()

```
SceneOperation ToggleOpen (
          bool? openState = null,
          bool openAll = false )
```

Toggles this collection open or closed.

#### **Parameters**

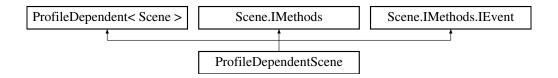
openState	Specifies whatever you have a preferred state to toggle to, this means collection will not be closed	
	if true is passed. This can be used to ensure collection is open, without having an explicit check	
	beforehand. The inverse is also the case for false.	
openAll	Specifies whatever scenes flagged to not open with collection, should.	

Implements SceneCollection.IMethods.

# 4.68 ProfileDependentScene

Represents a Scene that changes depending on active Profile.

Inheritance diagram for ProfileDependentScene:



#### **Public Member Functions**

SceneOperation Open ()

Opens the scene.

• SceneOperation ToggleOpen (bool? openState=null)

Toggles this scene open or closed.

SceneOperation Close ()

Closes the scene.

SceneOperation Preload (Action onPreloaded=null)

Preloads the scene, to be displayed at a later time. See also: FinishPreload, DiscardPreload.

SceneOperation FinishPreload ()

Finishes preloading the scene, displaying it.

• SceneOperation DiscardPreload ()

Discards the scene, if preloaded.

• SceneOperation OpenWithLoadingScreen (Scene loadingScreen)

Opens the scene while a loading screen is open.

• void SetActive ()

Sets the scene as active in heirarchy.

• void \_Open ()

Event method. Its meant for UnityEngine.Events.UnityEvent.

- void \_ToggleOpenState ()
- void \_ToggleOpen (bool? openState=null)
- · void \_Close ()
- void \_Preload ()
- void \_FinishPreload ()
- void DiscardPreload ()
- void \_OpenWithLoadingScreen (Scene loadingScene)
- void \_SetActive ()

### Public Member Functions inherited from ProfileDependent < Scene >

• bool GetModel (out T scene)

Gets the selected scene.

• T2 DoAction < T2 > (Func < T, T2 > action)

Performs an action on the scene.

void DoAction (Action< T > action)

Performs an action on the scene.

### **Additional Inherited Members**

# Public Attributes inherited from ProfileDependent < Scene >

• Dict list

The list of proxies for this T.

# **Properties inherited from ProfileDependent< Scene >**

• bool isValid [get]

Gets if the current state of this T is valid.

# 4.68.1 Detailed Description

Represents a Scene that changes depending on active Profile.

# 4.68.2 Member Function Documentation

### 4.68.2.1 Close()

```
SceneOperation Close ( )
```

Closes the scene.

No effect if scene is already closed.

Implements Scene. IMethods.

### 4.68.2.2 FinishPreload()

```
SceneOperation FinishPreload ( )
```

Finishes preloading the scene, displaying it.

Scene must be preloaded beforehand.

Implements Scene.IMethods.

# 4.68.2.3 Open()

```
SceneOperation Open ()
```

Opens the scene.

No effect if scene is already open.

Implements Scene.IMethods.

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### 4.68.2.4 Preload()

Preloads the scene, to be displayed at a later time. See also: FinishPreload, DiscardPreload.

Scene must be closed beforehand.

Implements Scene. IMethods.

### 4.68.2.5 ToggleOpen()

```
SceneOperation ToggleOpen (
          bool? openState = null)
```

Toggles this scene open or closed.

#### **Parameters**

openState	Specifies whatever you have a preferred state to toggle to, this means scene will not be closed if
	true is passed. This can be used to scene collection is open, without having an explicit check
	beforehand. The inverse is also the case for false.

Implements Scene. IMethods.

# 4.69 App.Props

An object that persists start properties across domain reload, which is needed when configurable enter play mode is set to reload domain on enter play mode.

# **Public Member Functions**

• Props ()

Creates a new props.

• Props (Props props)

Creates a new props, from the specified props, copying its values.

#### **Public Attributes**

• bool? displaySplashScreen = null

Specifies whatever the splash screen should be played.

• bool **forceOpenAllScenesOnCollection** = false

Specifies whatever all scenes on openCollection should be opened.

· Color? fadeColor

The color for the fade out.

• float fadeInDuration = 1f

Specifies the duration for the fade out animation.

• float fadeOutDuration = 1f

Specifies the duration for the fade in animation.

SceneCollection openCollection

Specifies a collection to be opened after startup process is done.

### **Properties**

• static Props defaultProps = new() [get]

Gets the default Props.

• bool runStartupProcessWhenPlayingCollection [get, set]

Specifies whatever startup process should run before openCollection is opened.

• bool runStartupProcess [get]

Gets if startup process should run.

• Color effectiveFadeColor [get]

Gets the effective fade animation color, uses fadeColor if specified, but falls back to ProjectSettings.buildUnity← SplashScreenColor.

# 4.69.1 Detailed Description

An object that persists start properties across domain reload, which is needed when configurable enter play mode is set to reload domain on enter play mode.

#### 4.69.2 Member Data Documentation

#### 4.69.2.1 fadeColor

```
Color? fadeColor
```

The color for the fade out.

Unity splash screen color will be used if null.

#### 4.69.2.2 fadeOutDuration

```
float fadeOutDuration = 1f
```

Specifies the duration for the fade in animation.

This would normally be 0 during first startup, then on restart it would be > 0.

## 4.69.3 Property Documentation

# 4.69.3.1 defaultProps

```
Props defaultProps = new() [static], [get]
```

Gets the default Props.

Cannot be called during Object constructor.

# 4.70 QueueUtility<T>

A utility that provides queuing.

#### **Static Public Member Functions**

• static bool **IsQueued** (T queueable)

Get if the item is queued.

• static bool **IsRunning** (T queueable)

Gets if the item is running.

• static void Stop (T queueable)

Cancels the queuable.

· static void StopAll ()

Cancels all queued and running items.

#### **Properties**

• static bool isBusy [get]

Gets whatever any items in the queue are running.

• static IEnumerable < T > queue [get]

Gets the items currently in queue.

static IEnumerable < T > running [get]

Gets the items that are currently running.

### **Events**

· static Action queueEmpty

Occurs when an queued item finishes and queue is empty.

static Action queueFilled

Occurs when an queued is added.

# 4.70.1 Detailed Description

A utility that provides queuing.

**Type Constraints** 

T: IQueueable

# 4.71 ResolvedCrossReference

Represents a resolved reference.

### **Public Attributes**

• CrossSceneReference reference

The unresolved reference.

• ObjectReference reference

The unresolved and resolved reference to the variable.

• ResolveStatus result

The result when setting value.

# 4.71.1 Detailed Description

Represents a resolved reference.

## 4.71.2 Member Data Documentation

### 4.71.2.1 reference [1/2]

ObjectReference reference

The unresolved reference.

The unresolved and resolved reference to the value.

# 4.71.2.2 reference [2/2]

ObjectReference reference

The unresolved and resolved reference to the variable.

The unresolved and resolved reference to the value.

# 4.72 ResolvedReference

Represents a resolved ObjectReference.

# 4.72.1 Detailed Description

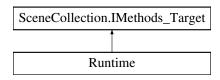
Represents a resolved ObjectReference.

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### 4.73 Runtime

Manages runtime functionality for Advanced Scene Manager such as open scenes and collection.

Inheritance diagram for Runtime:



#### **Public Member Functions**

IEnumerable < SceneLoader > GetToggleableSceneLoaders ()

Gets a list of all added scene loaders that can be toggled scene by scene.

SceneLoader GetLoaderForScene (Scene scene)

Gets the loader for scene .

void AddSceneLoader< T > ()

Adds a scene loader.

void RemoveSceneLoader< T > ()

Removes a scene loader.

- SceneOperation Open (params Scene[] scenes)
- SceneOperation Open (IEnumerable < Scene > scenes)

Opens the scenes.

• SceneOperation OpenWithLoadingScreen (IEnumerable < Scene > scene, Scene loadingScreen)

Opens a scene with a loading screen.

- SceneOperation Close (params Scene[] scenes)
- SceneOperation Close (IEnumerable < Scene > scenes)

Closes the scenes.

SceneOperation FinishPreload ()

Finishes the preload of the currently preloaded scene.

• SceneOperation DiscardPreload (Scene scene)

Discards preload of the scene, if preloaded.

• SceneOperation DiscardPreload ()

Discards the preload of the currently preloaded scene.

- SceneOperation ToggleOpenState (Scene scene)
- SceneOperation ToggleOpen (Scene scene, bool? openState=null)

Toggles the open state of this scene.

• void SetActive (Scene scene)

Sets the scene as active.

- SceneOperation Open (SceneCollection collection, bool openAll=false)
- SceneOperation OpenAdditive (SceneCollection collection, bool openAll=false)

Opens the collection without closing existing scenes.

- SceneOperation Close (SceneCollection collection)
- SceneOperation ToggleOpenState (SceneCollection collection, bool openAll=false)
- SceneOperation ToggleOpen (SceneCollection collection, bool? openState=null, bool openAll=false)
- SceneState GetState (Scene scene)

Gets the current state of the scene.

void Track (Scene scene, UnityEngine.SceneManagement.Scene unityScene)

Tracks the specified scene as open.

- void **Track** (Scene scene)
- bool Untrack (Scene scene)

Untracks the specified scene as open.

void UntrackScenes ()

Untracks all open scenes.

void Track (SceneCollection collection, bool isAdditive=false)

Tracks the collection as open.

void Untrack (SceneCollection collection, bool isAdditive=false)

Untracks the collection.

· void UntrackCollections ()

Untracks all collections.

• bool IsTracked (Scene scene)

Gets whatever this scene is tracked as open.

bool IsTracked (SceneCollection collection)

Gets whatever this collection is tracked as open.

SceneOperation CloseAll (bool exceptLoadingScreens=true, bool exceptUnimported=true, params Scene[] except)

Closes all scenes and collections.

#### **Public Attributes**

Action onAllScenesClosed

Occurs when the last user scene closes.

# **Properties**

• IEnumerable < Scene > openScenes [get]

Gets the scenes that are open.

IEnumerable < SceneCollection > openAdditiveCollections [get]

Gets the collections that are opened as additive.

SceneCollection openCollection [get]

Gets the collection that is currently open.

• Scene preloadedScene [get]

Gets the scene that is currently preloaded.

• Scene activeScene [get]

Gets the active scene.

Scene dontDestroyOnLoad [get]

Gets the dontDestroyOnLoad scene.

• bool isBusy [get]

Gets whatever ASM is busy with any scene operations.

IEnumerable < SceneOperation > runningOperations [get]

The currently running scene operations.

• IEnumerable < SceneOperation > queuedOperations [get]

Gets the current scene operation queue.

• SceneOperation currentOperation [get]

Gets the current active operation in the queue.

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#### **Events**

Action < Scene > sceneOpened

Occurs when a scene is opened.

Action < Scene > sceneClosed

Occurs when a scene is closed.

Action < SceneCollection > collectionOpened

Occurs when a collection is opened.

Action < SceneCollection > collectionClosed

Occurs when a collection is closed.

Action < Scene > scenePreloaded

Occurs when a scene is preloaded.

· Action startedWorking

Occurs when ASM has started working and is running scene operations.

Action stoppedWorking

Occurs when ASM has finished working and no scene operations are running.

# 4.73.1 Detailed Description

Manages runtime functionality for Advanced Scene Manager such as open scenes and collection.

### 4.73.2 Member Function Documentation

### 4.73.2.1 Close()

```
SceneOperation Close ( {\tt IEnumerable < Scene > scenes} \ )
```

Closes the scenes.

Closes persistent scenes.

#### 4.73.2.2 Open()

```
SceneOperation Open ( {\tt IEnumerable} < {\tt Scene} > {\tt scenes} \ )
```

Opens the scenes.

Open scenes will not be re-opened, please close it first.

### 4.73.2.3 OpenAdditive()

Opens the collection without closing existing scenes.

#### **Parameters**

collection	The collection to open.
openAll	Specifies whatever all scenes should open, regardless of open flag.

Implements SceneCollection.IMethods\_Target.

# 4.73.2.4 SetActive()

Sets the scene as active.

No effect if not open.

### 4.73.2.5 Track() [1/2]

Tracks the specified scene as open.

Does not open scene.

# 4.73.2.6 Track() [2/2]

Tracks the collection as open.

Does not open collection.

# 4.73.2.7 Untrack() [1/2]

Untracks the specified scene as open.

Does not close scene.

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### 4.73.2.8 Untrack() [2/2]

Untracks the collection.

Does not close the collection.

#### 4.73.2.9 UntrackCollections()

```
void UntrackCollections ( )
```

Untracks all collections.

Does not close collections.

#### 4.73.2.10 UntrackScenes()

```
void UntrackScenes ( )
```

Untracks all open scenes.

Does not close scenes.

# 4.73.3 Member Data Documentation

### 4.73.3.1 onAllScenesClosed

Action onAllScenesClosed

Occurs when the last user scene closes.

This usually happens by mistake, and likely means that no user code would run, this is your chance to restore to a known state (return to main menu, for example), or crash to desktop.

Returning to main menu can be done like this:

SceneManager.app.Restart()

# 4.73.4 Property Documentation

#### 4.73.4.1 activeScene

```
Scene activeScene [get]
```

Gets the active scene.

Returns null if the active scene is not imported.

#### 4.73.4.2 dontDestroyOnLoad

```
Scene dontDestroyOnLoad [get]
```

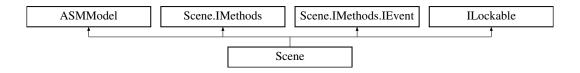
Gets the dontDestroyOnLoad scene.

Returns null outside of play mode.

### **4.74** Scene

Represents a scene.

Inheritance diagram for Scene:



### Classes

- · interface IMethods
- interface IMethods\_Target

### **Public Member Functions**

IEnumerable < GameObject > GetRootGameObjects ()

Gets the root game objects in this Scene.

• T FindObject< T > ()

Finds the object in the hierarchy of this Scene.

- bool FindObject < T > (out T component)
- IEnumerable < T > FindObjects < T > ()

Finds the objects in the hierarchy of this Scene.

• SceneOperation Open ()

Opens the scene.

SceneOperation ToggleOpen (bool? openState=null)

Toggles this scene open or closed.

• SceneOperation Close ()

Closes the scene.

• SceneOperation Preload (Action onPreloaded=null)

Preloads the scene, to be displayed at a later time. See also: FinishPreload, DiscardPreload.

SceneOperation FinishPreload ()

Finishes preloading the scene, displaying it.

SceneOperation DiscardPreload ()

Discards the scene, if preloaded.

SceneOperation OpenWithLoadingScreen (Scene loadingScreen)

Opens the scene while a loading screen is open.

· void SetActive ()

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Sets the scene as active in heirarchy.

• void \_Open ()

Event method. Its meant for UnityEngine.Events.UnityEvent.

- void \_ToggleOpenState ()
- void \_ToggleOpen (bool? openState=null)
- · void \_Close ()
- · void \_Preload ()
- void \_FinishPreload ()
- void \_DiscardPreload ()
- void \_OpenWithLoadingScreen (Scene loadingScene)
- · void \_SetActive ()
- override bool IsMatch (string q)

Gets if q matches ASMModel.name, id, path.

T UserData < T > (T defaultValue=default)

Gets user specified data.

• T UserData < T > (string key, T defaultValue=default)

Gets user specified data.

void SetUserData < T > (T value)

Sets user specified data.

void SetUserData < T > (string key, T value)

Sets user specified data.

void UnsetUserData< T > ()

Unsets user specified data.

void UnsetUserData (string key)

Unsets user specified data.

bool EvalOpenAsPersistent (SceneCollection parentCollection, SceneCollection collectionToOpen=null)

Gets whatever this scene will be opened as persistent.

void SetSceneLoader< T > ()

Specifies the scene loader to use for this scene.

Type GetSceneLoader ()

Gets the scene loader specified for this scene. null if none set.

• SceneLoader GetEffectiveSceneLoader ()

Gets the effective, contextual, scene loader for this scene. null if none found (this means normal ASM loader will be used).

• void ClearSceneLoader ()

Clears custom scene loader for this scene. This means normal ASM functionality will be used.

• override string ToString (int indent)

#### Public Member Functions inherited from ASMModel

· virtual void Save ()

Saves the scriptable object after modifying.

• void MarkAsDirty ()

Mark scriptable object as dirty after modifying.

override string ToString ()

Gets a text summarization of this model.

#### **Static Public Member Functions**

static IEnumerable < Scene > Find (Func < Scene, bool > predicate)

Find scenes by predicate, in the specified collection or profile, if defined.

static Scene Find (string q)

Find scene by name, path, or id, in the specified collection or profile, if defined.

• static bool TryFind (string q, out Scene scene)

#### Static Public Attributes

static readonly string AssetSearchString = "t:" + typeof(Scene).FullName

Gets 't:AdvancedSceneManager.Models.Scene', the string to use in AssetDatabase.FindAssets(string).

#### **Properties**

```
• string path [get, set]
```

Gets the path of the associated SceneAsset.

• bool isLoadingScreen [get, set]

Gets if this scene is a loading screen.

• bool isSplashScreen [get, set]

Gets if this scene is a splash screen.

bool isSpecial [get]

Gets if this is a 'special' scene.

• bool isIncluded [get]

Gets whatever this scene is included in build.

• bool keepOpenWhenCollectionsClose [get, set]

Specifies whatever this scene will remain open when collections close.

• bool keepOpenWhenNewCollectionWouldReopen [get, set]

Specifies whatever this will remain open when a newly opened collection would have reopened it.

bool isNonPersistant [get]

Gets whatever this scene will close normally after a collection closes.

• bool openOnStartup [get, set]

Specifies whatever this scene should be opened on startup.

• bool openOnPlayMode [get, set]

Specifies whatever this scene should be opened when entering playmode.

• EditorPersistentOption autoOpenInEditor [get, set]

Specifies whatever this scene should be opened automatically outside of play-mode.

• List< Scene > autoOpenInEditorScenes [get]

Specifies the scenes that should trigger this scene to open when autoOpenInEditor is set to EditorPersistentOption. ← WhenAnyOfTheFollowingScenesAreOpened.

• bool isLocked [get, set]

Gets if this scene is locked.

• string lockMessage [get, set]

Gets the lock message for this scene.

• bool isActive [get]

Gets if this scene is currently active.

bool isOpenInHierarchy [get]

Gets whatever the scene is open in the hierarchy, this is true if scene is currently loading, if scene is preloaded, if scene is fully open..

• SceneState state [get]

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```
bool isOpen [get]
```

Gets whatever the scene is open.

bool isPreloaded [get]

Gets whatever the scene is preloaded.

• unityScene? internalScene [get, set]

Gets the unityScene that this scene is associated with.

• bool isPersistent [get]

Gets if this scene is opened as persistent.

• bool isDefaultScene [get]

Gets if this is a default ASM scene. These are located in '/AdvancedSceneManager/Defaults/'.

bool isDontDestroyOnLoad [get]

Gets if this scene is the dontDestroyOnLoad scene.

• bool isDynamic [get]

Gets if this scene is dynamic, it is not persisted to disk.

string sceneLoader [get, set]

Specifies what SceneManagement.SceneLoader to use.

## **Properties inherited from ASMModel**

```
• string id [get]
```

Gets the id of this ASMModel.

• new string name [get, protected set]

#### **Additional Inherited Members**

#### Static Protected Member Functions inherited from ASMModel

static T CreateInternal < T > (string name)

Creates a profile. Throws if name is invalid.

## 4.74.1 Detailed Description

Represents a scene.

#### 4.74.2 Member Function Documentation

## 4.74.2.1 Close()

```
SceneOperation Close ( )
```

Closes the scene.

No effect if scene is already closed.

Implements Scene.IMethods.

## 4.74.2.2 EvalOpenAsPersistent()

Gets whatever this scene will be opened as persistent.

#### **Parameters**

parentCollection	Specifies the parent collection that was opened before finalCollection.
collectionToOpen	Specifies the collection that will be opened, if you are not evaluating state after it would
	have opened, pass null. If multiple collections are opened in sequence, then pass the
	final one.

## 4.74.2.3 FindObject< T >()

```
T FindObject< T > ( )
```

Finds the object in the hierarchy of this Scene.

Only works if scene is loaded.

**Type Constraints** 

T: Component

## 4.74.2.4 FindObjects< T >()

```
IEnumerable < T > FindObjects < T > ()
```

Finds the objects in the hierarchy of this Scene.

Only works if scene is loaded.

**Type Constraints** 

T: Component

## 4.74.2.5 FinishPreload()

```
SceneOperation FinishPreload ( )
```

Finishes preloading the scene, displaying it.

Scene must be preloaded beforehand.

Implements Scene.IMethods.

# 4.74.2.6 GetRootGameObjects()

```
{\tt IEnumerable<\ GameObject>\ GetRootGameObjects\ (\ )}
```

Gets the root game objects in this Scene.

Only usable if scene is open.

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## 4.74.2.7 Open()

```
SceneOperation Open ( )
```

Opens the scene.

No effect if scene is already open.

Implements Scene. IMethods.

## 4.74.2.8 Preload()

Preloads the scene, to be displayed at a later time. See also: FinishPreload, DiscardPreload.

Scene must be closed beforehand.

Implements Scene. IMethods.

## 4.74.2.9 SetSceneLoader < T >()

```
void SetSceneLoader< T > ( )
```

Specifies the scene loader to use for this scene.

If the specified scene loader is not registered when scene is opened, then ASM will fallback to other scene loaders, if any (normal ASM functionality is used if not).

**Type Constraints** 

## T: SceneLoader

## 4.74.2.10 ToggleOpen()

```
SceneOperation ToggleOpen (
          bool? openState = null )
```

Toggles this scene open or closed.

#### **Parameters**

openState	Specifies whatever you have a preferred state to toggle to, this means scene will not be closed if
	true is passed. This can be used to scene collection is open, without having an explicit check
	beforehand. The inverse is also the case for false.

Implements Scene. IMethods.

## 4.74.2.11 ToString()

```
override string ToString (
                int indent ) [virtual]
```

#### **Parameters**

indent	The indentation level, used for nested calls.
--------	---

#### **Parameters**

The indentation level, used for nested calls.	
---	--

Reimplemented from ASMModel.

## 4.74.3 Property Documentation

## 4.74.3.1 internalScene

```
unityScene? internalScene [get], [set]
```

Gets the unityScene that this scene is associated with.

null if scene is not open.

## 4.74.3.2 isLoadingScreen

```
bool isLoadingScreen [get], [set]
```

Gets if this scene is a loading screen.

Automatically updated.

If this is false for an actual loading screen, please make sure scene contains a Callbacks.LoadingScreen script.

Scene might sometimes have to be re-saved for this flag to appear.

Might not be 100% reliable.

#### 4.74.3.3 isSpecial

```
bool isSpecial [get]
```

Gets if this is a 'special' scene.

A scene is special if any of the following is true: isSplashScreen, isLoadingScreen or isDontDestroyOnLoad.

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#### 4.74.3.4 isSplashScreen

```
bool isSplashScreen [get], [set]
```

Gets if this scene is a splash screen.

Automatically updated.

If this is false for an actual splash screen screen, please make sure scene contains a Callbacks. Splash Screen script.

Scene might sometimes have to be re-saved for this flag to appear.

Might not be 100% reliable.

#### 4.74.3.5 keepOpenWhenCollectionsClose

```
bool keepOpenWhenCollectionsClose [get], [set]
```

Specifies whatever this scene will remain open when collections close.

You'll have to close it manually, if needed.

## 4.74.3.6 keepOpenWhenNewCollectionWouldReopen

```
bool keepOpenWhenNewCollectionWouldReopen [get], [set]
```

Specifies whatever this will remain open when a newly opened collection would have reopened it.

You'll have to close it manually, if needed.

## 4.74.3.7 openOnPlayMode

```
bool openOnPlayMode [get], [set]
```

Specifies whatever this scene should be opened when entering playmode.

Only effective when scene added to Profile.standaloneScenes.

## 4.74.3.8 openOnStartup

```
bool openOnStartup [get], [set]
```

Specifies whatever this scene should be opened on startup.

Only effective when scene added to Profile.standaloneScenes.

## 4.75 SceneCollection

Represents a collection of scenes.

Inheritance diagram for SceneCollection:



#### Classes

- · interface IMethods
- interface IMethods\_Target

#### **Public Member Functions**

override bool IsMatch (string q)

Gets if q matches ASMModel.name.

• SceneOperation Open (bool openAll=false)

Opens this collection.

SceneOperation OpenAdditive (bool openAll=false)

Opens this collection as additive.

• SceneOperation ToggleOpen (bool? openState=null, bool openAll=false)

Toggles this collection open or closed.

• SceneOperation Close ()

Closes this collection.

- void \_Open (bool openAll=false)
- void \_OpenAdditive (bool openAll=false)
- void \_ToggleOpenState ()
- void \_ToggleOpen (bool? openState=null)
- void Close ()
- bool FindProfile (out Profile profile)

Find the Profile that this collection is associated with.

• Profile FindProfile ()

Find the Profile that this collection is associated with.

• T UserData< T>()

Casts and returns userData as the specified type. Returns null if invalid type.

• bool Contains (Scene scene)

Gets if this collection contains scene .

• bool AutomaticallyOpenScene (Scene scene, bool? value=null)

Gets or sets whatever the scene should automatically open, when this collection is open. Default is true.

• override string ToString (int indent)

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#### Public Member Functions inherited from ASMModel

· virtual void Save ()

Saves the scriptable object after modifying.

· void MarkAsDirty ()

Mark scriptable object as dirty after modifying.

override string ToString ()

Gets a text summarization of this model.

#### **Static Public Member Functions**

static SceneCollection Find (string q, bool activeProfile=true)

Finds a collection based on its title or id.

static bool TryFind (string q, out SceneCollection collection, bool activeProfile=true)

Finds a collection based on its title or id.

#### **Static Public Attributes**

static readonly string AssetSearchString = "t:" + typeof(SceneCollection).FullName
 Gets 't:AdvancedSceneManager.Models.SceneCollection', the string to use in AssetDatabase.FindAssets(string).

#### **Properties**

• int count [get]

Gets the scene count of this collection.

• Scene this[int index] [get]

Gets the scene at the specified index.

• string title [get]

Gets the title of this collection.

• string description [get, set]

Gets the description of this collection.

IEnumerable < string > scenePaths [get]

Gets the scenes of this collection.

IEnumerable < Scene > scenes [get]

Gets the scenes of this collection.

• IEnumerable < Scene > all Scenes [get]

Gets both scenes and loadingScreen.

• bool hasScenes [get]

Gets if this collection has any scenes.

• bool isStartupCollection [get]

Gets if this is a startup collection.

• ScriptableObject userData [get, set]

The extra data that is associated with this collection.

• bool isIncluded [get, set]

Gets whatever this collection should be included in build.

Scene loadingScreen [get, set]

The loading screen that is associated with this collection.

• Scene effectiveLoadingScreen [get]

Gets effective loading screen depending on loadingScreenUsage.

• LoadingScreenUsage loadingScreenUsage [get, set]

Specifies what loading screen to use.

• Scene activeScene [get, set]

Specifies the scene that should be activated after collection is opened.

CollectionStartupOption startupOption [get, set]

Specifies startup option.

• CollectionLoadingThreadPriority loadingPriority [get, set]

Specifies the thread priority to use when opening this collection.

bool openAsPersistent [get, set]

Specifies whatever this collection should be opened as persistent.

• bool openAsDisabled [get, set]

Specifies whatever this collection should be opened as disabled.

bool unloadUnusedAssets [get, set]

Calls Resources. Unload Unused Assets after collection is opened or closed.

List < Scene > scenesThatShouldNotAutomaticallyOpen [get]

Specifies scenes that should not open automatically.

• InputBinding binding [get]

Specifies bindings for this scene.

bool isLocked [get, set]

Gets if this collection is locked.

• string lockMessage [get, set]

Gets the lock message for this collection.

• bool isOpen [get]

Gets if this collection is open.

• bool isOpenAdditive [get]

Gets if this collection is opened additively.

bool isOpenNonAdditive [get]

Gets if this collection is opened additively.

## **Properties inherited from ASMModel**

• string id [get]

Gets the id of this ASMModel.

• new string name [get, protected set]

## Properties inherited from ISceneCollection

• string id [get]

Gets the id of this collection.

#### **Additional Inherited Members**

## Static Protected Member Functions inherited from ASMModel

static T CreateInternal < T > (string name)

Creates a profile. Throws if name is invalid.

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## 4.75.1 Detailed Description

Represents a collection of scenes.

Only one collection can be open at a time.

## 4.75.2 Member Function Documentation

## 4.75.2.1 Close()

```
SceneOperation Close ( )
```

Closes this collection.

No effect if collection is already closed. Note that "additive collections" are not actually opened, only its scenes are.

Implements SceneCollection.IMethods.

## 4.75.2.2 Open()

```
SceneOperation Open (
          bool openAll = false )
```

Opens this collection.

**Parameters** 

openAll	Specifies whatever scenes flagged to not open with collection, should.
---------	--

Reopens all non-persistent scenes.

Implements SceneCollection.IMethods.

## 4.75.2.3 OpenAdditive()

```
SceneOperation OpenAdditive (
          bool openAll = false )
```

Opens this collection as additive.

#### **Parameters**

```
openAll Specifies whatever scenes flagged to not open with collection, should.
```

Additive collections are not "opened", all scenes within are merely opened like normal scenes. Mostly intended for convenience.

Implements SceneCollection.IMethods.

## 4.75.2.4 ToggleOpen()

```
SceneOperation ToggleOpen (
         bool? openState = null,
         bool openAll = false )
```

Toggles this collection open or closed.

## **Parameters**

openState	openState   Specifies whatever you have a preferred state to toggle to, this means collection will not be clos	
	if true is passed. This can be used to ensure collection is open, without having an explicit check	
	beforehand. The inverse is also the case for false.	
openAll	Specifies whatever scenes flagged to not open with collection, should.	

Implements SceneCollection.IMethods.

## 4.75.2.5 ToString()

```
override string ToString (
                int indent ) [virtual]
```

#### **Parameters**

#### **Parameters**

indent	The indentation level, used for nested calls.
--------	---

Reimplemented from ASMModel.

## 4.75.3 Property Documentation

## 4.75.3.1 allScenes

```
IEnumerable < Scene > all Scenes [get]
```

Gets both scenes and loadingScreen.

null is filtered out.

## 4.75.3.2 isStartupCollection

```
bool isStartupCollection [get]
```

Gets if this is a startup collection.

Only available in editor.

#### 4.75.3.3 userData

```
ScriptableObject userData [get], [set]
```

The extra data that is associated with this collection.

Use UserData<T> to cast it to the desired type.

## 4.76 SceneCollectionExtensions

Provides utility methods for working with SceneCollection.

#### **Static Public Member Functions**

```
    static int IndexOf< T > (this T collection, Scene scene)
    Finds the index of scene.
```

## 4.76.1 Detailed Description

Provides utility methods for working with SceneCollection.

#### 4.76.2 Member Function Documentation

## 4.76.2.1 IndexOf< T >()

```
static int IndexOf< T > ( this T collection, Scene scene ) [static]
```

Finds the index of scene.

Returns -1 if it does not exist.

**Type Constraints** 

T: ISceneCollection

## 4.77 SceneCollectionTemplate

Represents a template for a SceneCollection.

Inheritance diagram for SceneCollectionTemplate:



#### **Properties**

• new string name [get]

## Properties inherited from SceneCollection

```
• int count [get]
```

Gets the scene count of this collection.

Scene this[int index] [get]

Gets the scene at the specified index.

• string title [get]

Gets the title of this collection.

• string description [get, set]

Gets the description of this collection.

• IEnumerable < string > scenePaths [get]

Gets the scenes of this collection.

• IEnumerable < Scene > scenes [get]

Gets the scenes of this collection.

• IEnumerable < Scene > all Scenes [get]

Gets both scenes and loadingScreen.

• bool hasScenes [get]

Gets if this collection has any scenes.

• bool isStartupCollection [get]

Gets if this is a startup collection.

• ScriptableObject userData [get, set]

The extra data that is associated with this collection.

• boolisIncluded [get, set]

Gets whatever this collection should be included in build.

Scene loadingScreen [get, set]

The loading screen that is associated with this collection.

• Scene effectiveLoadingScreen [get]

Gets effective loading screen depending on loadingScreenUsage.

• LoadingScreenUsage loadingScreenUsage [get, set]

Specifies what loading screen to use.

• Scene activeScene [get, set]

Specifies the scene that should be activated after collection is opened.

• CollectionStartupOption startupOption [get, set]

Specifies startup option.

• CollectionLoadingThreadPriority loadingPriority [get, set]

Specifies the thread priority to use when opening this collection.

bool openAsPersistent [get, set]

Specifies whatever this collection should be opened as persistent.

bool openAsDisabled [get, set]

Specifies whatever this collection should be opened as disabled.

 $\bullet \ bool \ unload Unused Assets \quad [\texttt{get, set}]$ 

Calls Resources. Unload Unused Assets after collection is opened or closed.

List < Scene > scenesThatShouldNotAutomaticallyOpen [get]

Specifies scenes that should not open automatically.

• InputBinding binding [get]

Specifies bindings for this scene.

```
    bool isLocked [get, set]
```

Gets if this collection is locked.

• string lockMessage [get, set]

Gets the lock message for this collection.

• bool isOpen [get]

Gets if this collection is open.

bool isOpenAdditive [get]

Gets if this collection is opened additively.

bool isOpenNonAdditive [get]

Gets if this collection is opened additively.

## **Properties inherited from ASMModel**

```
• string id [get]
```

Gets the id of this ASMModel.

• new string name [get, protected set]

## Properties inherited from ISceneCollection

• string id [get]

Gets the id of this collection.

#### **Additional Inherited Members**

#### Public Member Functions inherited from SceneCollection

• override bool IsMatch (string q)

Gets if q matches ASMModel.name.

• SceneOperation Open (bool openAll=false)

Opens this collection.

• SceneOperation OpenAdditive (bool openAll=false)

Opens this collection as additive.

• SceneOperation ToggleOpen (bool? openState=null, bool openAll=false)

Toggles this collection open or closed.

• SceneOperation Close ()

Closes this collection.

- void \_Open (bool openAll=false)
- void \_OpenAdditive (bool openAll=false)
- void \_ToggleOpenState ()
- void \_ToggleOpen (bool? openState=null)
- · void Close ()
- bool FindProfile (out Profile profile)

Find the Profile that this collection is associated with.

• Profile FindProfile ()

Find the Profile that this collection is associated with.

T UserData < T > ()

Casts and returns userData as the specified type. Returns null if invalid type.

• bool Contains (Scene scene)

Gets if this collection contains scene .

• bool AutomaticallyOpenScene (Scene scene, bool? value=null)

 $\textit{Gets or sets whatever the scene should automatically open, when this collection is open. \textit{Default is } \texttt{true}.$ 

override string ToString (int indent)

#### Public Member Functions inherited from ASMModel

· virtual void Save ()

Saves the scriptable object after modifying.

void MarkAsDirty ()

Mark scriptable object as dirty after modifying.

• override string ToString ()

Gets a text summarization of this model.

#### Static Public Member Functions inherited from SceneCollection

• static SceneCollection Find (string q, bool activeProfile=true)

Finds a collection based on its title or id.

• static bool **TryFind** (string q, out SceneCollection collection, bool activeProfile=true)

Finds a collection based on its title or id.

#### Static Public Attributes inherited from SceneCollection

static readonly string AssetSearchString = "t:" + typeof(SceneCollection). FullName
 Gets 't:AdvancedSceneManager.Models.SceneCollection', the string to use in AssetDatabase. FindAssets(string).

#### Static Protected Member Functions inherited from ASMModel

static T CreateInternal < T > (string name)

Creates a profile. Throws if name is invalid.

## 4.77.1 Detailed Description

Represents a template for a SceneCollection.

## 4.78 SceneDataUtility

A utility for storing scene related data. Data can only be saved to disk in editor.

## **Static Public Member Functions**

static IEnumerable < (Scene scene, T data) > Enumerate < T > (string key)

Enumerates data using the specified key on all scenes that uses it.

static T Get< T > (Scene scene, string key, T defaultValue=default)

Gets the value with the specified key, for the specified scene.

static T Get < T > (string scene, string key, T defaultValue=default)

Gets the value with the specified key, for the specified scene.

• static string **GetRaw** (Scene scene, string key)

Gets the raw value with the specified key, for the specified scene.

static void Set< T > (Scene scene, string key, T value)

Sets the value with the specified key, for the specified scene.

static void Set< T > (string scene, string key, T value)

Sets the value with the specified key, for the specified scene.

• static void SetRaw (string scene, string key, string value)

Sets the value with the specified key, for the specified scene. This is the direct version, all values are stores as string, which means Get< T>(string, string, T) must convert value beforehand, this method doesn't.

static void Unset (Scene scene, string key)

Unsets the value with the specified key, for the specified scene.

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## 4.78.1 Detailed Description

A utility for storing scene related data. Data can only be saved to disk in editor.

## 4.78.2 Member Function Documentation

#### 4.78.2.1 Set< T>() [1/2]

Sets the value with the specified key, for the specified scene.

Changes will only be persisted in editor.

#### 4.78.2.2 Set < T >() [2/2]

```
static void Set< T > ( string scene, string key, T value ) [static]
```

Sets the value with the specified key, for the specified scene.

Changes will only be persisted in editor.

## 4.78.2.3 SetRaw()

Sets the value with the specified key, for the specified scene. This is the direct version, all values are stores as string, which means Get < T > (string, string, T) must convert value beforehand, this method doesn't.

Changes will only be persisted in editor.

## 4.78.2.4 Unset()

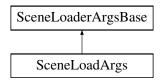
Unsets the value with the specified key, for the specified scene.

Changes will only be persisted in editor.

## 4.79 SceneLoadArgs

Specifies arguments for SceneLoader.LoadScene(Models.Scene, SceneLoadArgs).

Inheritance diagram for SceneLoadArgs:



#### **Public Member Functions**

- void SetCompleted (UnityEngine.SceneManagement.Scene scene)
  - Notifies ASM that the load is done.
- void SetCompleted (UnityEngine.SceneManagement.Scene scene, Func< IEnumerator > preloadCallback)
- void SetCompletedWithoutScene ()

Sets this loader as complete even though no scene was loaded.

• bool CheckIsIncluded (bool logError=true)

Checks if the scene is actually included in build.

• UnityEngine.SceneManagement.Scene GetOpenedScene ()

Gets the UnityEngine.SceneManagement.Scene that was opened by this override.

#### **Properties**

• boolisPreload [get, set]

Specifies if the scene should be preloaded.

## Properties inherited from SceneLoaderArgsBase

• bool isLoadingScreen [get]

Gets if this scene is a loading screen.

• bool isSplashScreen [get]

Gets if this scene is a splash screen.

## 4.79.1 Detailed Description

Specifies arguments for SceneLoader.LoadScene(Models.Scene, SceneLoadArgs).

## 4.79.2 Member Function Documentation

#### 4.79.2.1 GetOpenedScene()

```
UnityEngine.SceneManagement.Scene GetOpenedScene ( )
```

Gets the UnityEngine.SceneManagement.Scene that was opened by this override.

Will return default if not found.

#### 4.79.2.2 SetCompleted() [1/2]

Notifies ASM that the load is done.

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#### **Parameters**

scene	The opened scene.
-------	-------------------

## 4.79.2.3 SetCompleted() [2/2]

#### **Parameters**

scene	Th	e opened scene.
preloadCallb	ack Sp	ecifies a callback that will be called when it is time to activate preloaded scene.

## 4.80 SceneLoader

Specifies a scene loader.

Inherited by RuntimeSceneLoader.

## **Public Member Functions**

• virtual bool CanOpen (Scene scene)

Gets whatever this scene loader can open the scene.

• IEnumerator LoadScene (Scene scene, SceneLoadArgs e)

Loads the scene specified in e.scene.

• IEnumerator UnloadScene (Scene scene, SceneUnloadArgs e)

Unloads the scene specified in e.scene.

## **Static Public Member Functions**

• static string **GetKey**< **T** > ()

Gets the key for the specified scene loader.

static string **GetKey** T > (T obj)

Gets the key for the specified scene loader.

## **Properties**

• string Key [get]

Gets the key for this scene loader.

virtual string sceneToggleText [get]

Specifies the text to display on the toggle in scene popup. Only has an effect if isGlobal is false.

• virtual Indicator indicator [get]

Specifies the indicator on scene fields for this scene loader.

• virtual bool isGlobal = true [get]

Specifies if this scene loader will can be applied to all scenes. Otherwise scenes will have to be explicitly flagged to open with this loader.

virtual bool activeOutsideOfPlayMode [get]

Specifies whatever this loader will run outside of play mode or not.

• virtual bool activeInPlayMode = true [get]

Specifies whatever this loader will run in play mode or not.

bool canBeActivated [get]

Gets whatever this loader may be activated in the current context.

## 4.80.1 Detailed Description

Specifies a scene loader.

## 4.80.2 Property Documentation

## 4.80.2.1 isGlobal

```
virtual bool isGlobal = true [get]
```

Specifies if this scene loader will can be applied to all scenes. Otherwise scenes will have to be explicitly flagged to open with this loader.

To flag a scene to be opened with this loader, the following two methods can be used:

If sceneToggleText is non-empty, a toggle will be displayed in scene popup.

Programmatically Scene.SetSceneLoader<T> can be used.

## 4.80.2.2 Key

```
string Key [get]
```

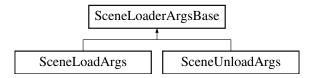
Gets the key for this scene loader.

This is equal to System. Type. Full Name.

# 4.81 SceneLoaderArgsBase

Base class for SceneLoadArgs and SceneUnloadArgs.

Inheritance diagram for SceneLoaderArgsBase:



#### **Properties**

• bool isLoadingScreen [get]

Gets if this scene is a loading screen.

• bool isSplashScreen [get]

Gets if this scene is a splash screen.

## 4.81.1 Detailed Description

Base class for SceneLoadArgs and SceneUnloadArgs.

# 4.82 SceneManager

The central Advanced Scene Manager API. Provides access to the most important things in ASM.

#### **Static Public Member Functions**

• static void OnInitialized (Action action)

Call action when ASM has initialized.

## **Properties**

```
• static AssetsProxy assets = new() [get]
```

- static IEnumerable < Scene > openScenes [get]
- static SceneCollection openCollection [get]
- static Scene preloadedScene [get]
- static Runtime runtime = new() [get]
- static App app = new App() [get]
- static SettingsProxy settings = new() [get]
- static Profile profile [get]
- static bool isInitialized [get]

Gets whatever ASM is initialized. Calling ASM methods may fail if false, this is due to ASMSettings singleton not being loaded yet.

## 4.82.1 Detailed Description

The central Advanced Scene Manager API. Provides access to the most important things in ASM.

## 4.82.2 Member Function Documentation

## 4.82.2.1 OnInitialized()

Call action when ASM has initialized.

Will call immediately if already initialized.

## 4.82.3 Property Documentation

#### 4.82.3.1 isInitialized

```
bool isInitialized [static], [get]
```

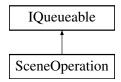
Gets whatever ASM is initialized. Calling ASM methods may fail if false, this is due to ASMSettings singleton not being loaded yet.

See also OnInitialized(Action).

# 4.83 SceneOperation

A scene operation is a queueable operation that can open or close scenes. See also: SceneAction.

Inheritance diagram for SceneOperation:



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#### **Public Member Functions**

SceneOperation WithFriendlyText (string text)

Specifies description for coroutine.

void Cancel ()

Cancel this operation.

• SceneOperation With (SceneCollection collection, bool setActiveScene=false)

Specifies an associated collection.

- SceneOperation Open (SceneCollection collection, bool openAll=false)
- SceneOperation Close (SceneCollection collection)
- SceneOperation Focus (Scene scene)

Sets focus to the specified scene. Overrides selected scene in collections.

SceneOperation Open (params Scene[] scenes)

Specifies the scenes to open.

SceneOperation Close (params Scene[] scenes)

Specifies the scenes to close.

SceneOperation Callback (params Callback[] callbacks)

Specifies user callbacks.

SceneOperation Preload (Scene scene)

Specifies a scene to preload.

- SceneOperation Open (IEnumerable < Scene > scenes)
- SceneOperation Close (IEnumerable < Scene > scenes)
- SceneOperation Callback (IEnumerable < Callback > callbacks)
- SceneOperation With (Scene loadingScene)

Specifies loading screen to use.

SceneOperation With (Action < LoadingScreen > loadingScreenCallback)

Specifies a callback when loading screen is opened, before LoadingScreen.OnOpen is called.

SceneOperation DisableLoadingScreen (bool useLoadingScene=false)

Specifies whatever loading screen should be used.

• SceneOperation **EnableLoadingScreen** (bool useLoadingScene=true)

Specifies whatever loading screen should be used.

• SceneOperation With (ThreadPriority loadingPriority)

Specifies the ThreadPriority to use.

• SceneOperation UnloadUsedAssets ()

Specifies whatever Resources. UnloadUnusedAssets should be called at the end (before loading screen).

SceneOperation With (Progress< float > customProgress)

Specifies custom progress that will be counted as part of progress.

void CloseAll (params Scene[] except)

Closes all scenes prior to opening any scenes.

void CloseAllNonPersistent (params Scene[] except)

Closes all non-persistent scenes prior to opening any scenes.

SceneOperation ReportProgress (Action < float > progress)

Specifies a callback for when progress changes.

#### **Static Public Member Functions**

• static SceneOperation Queue ()

Queues a new scene operation.

• static SceneOperation Start ()

Starts a new scene operation, ignoring queue.

static void AddCallback (Callback callback)

Adds the callback to every scene operation.

static void RemoveCallback (Callback callback)

Removes a callback that was added to every scene operation.

## **Properties**

• static SceneOperation done = new SceneOperation() [get] Gets a SceneOperation that has already completed. • string description [get, protected set] Specifies description for coroutine. • SceneCollection collection [get] Specifies the collection that is being opened or closed. • bool setActiveCollectionScene [get] Specifies whatever active scene should be set when possible. • Scene focus [get] Sets focus to the specified scene. Overrides selected scene in collections. • IEnumerable < Scene > open [get] Gets the scenes specified to open. • IEnumerable < Scene > close [get] Gets the scenes specified to close. • IEnumerable < Callback > callbacks [get] Gets the user defined callbacks. • Scene preload [get] Gets the scene specified to preload. • Scene loadingScene [get] Gets the specified loading screen. Action < LoadingScreen > loadingScreenCallback [get] Gets the specified loading screen callback. • bool useLoadingScene [get] Gets whatever a loading screen should be used. ThreadPriority? loadingPriority [get] Gets the specified ThreadPriority to be used. bool? unloadUnusedAssets [get] Gets whatever Resources. Unload Unused Assets should be called at the end (before loading screen). IEnumerable < Scene > closedScenes [get] Gets the scenes that was closed during this operation. • IEnumerable < Scene > openedScenes [get] Gets the scenes that was opened during this operation. bool isLoadingScreen [get, set] Specifies whatever this scene operation was started by ASM to open a loading screen. override bool keepWaiting [get] Inherited from CustomYieldInstruction. Tells unity whatever the operation is done or not. • Phase phase [get] The phase the this scene operation is currently in. • bool wasCancelled [get] Gets if this scene operation is cancelled. Progress < float > customProgress [get] Gets custom progress, if there is any. Will be counted as part of progress. • LoadingScreen openedLoadingScreen [get] Gets the loading screen that was opened by this operation. • float progress [get] Gets the current progress.

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#### **Events**

• static OnBeforeStart beforeStart

Occurs before operation has started working.

## 4.83.1 Detailed Description

A scene operation is a queueable operation that can open or close scenes. See also: SceneAction.

#### 4.83.2 Member Function Documentation

## 4.83.2.1 Cancel()

```
void Cancel ( )
```

Cancel this operation.

Note that the operation might not be cancelled immediately, if user defined callbacks are currently running.

#### 4.83.2.2 Close()

```
SceneOperation Close (
          params Scene[] scenes )
```

Specifies the scenes to close.

Can be called multiple times to add more scenes.

#### 4.83.2.3 Focus()

```
SceneOperation Focus (
Scene scene )
```

Sets focus to the specified scene. Overrides selected scene in collections.

No effect if preloading.

## 4.83.2.4 Open()

```
SceneOperation Open (
          params Scene[] scenes )
```

Specifies the scenes to open.

Can be called multiple times to add more scenes.

## 4.83.2.5 Preload()

```
SceneOperation Preload (
Scene scene )
```

Specifies a scene to preload.

A scene specified to preload cannot also be added to open or close lists.

## 4.83.2.6 ReportProgress()

```
SceneOperation ReportProgress ( \label{eq:condition} \mbox{Action} < \mbox{float} \ > \mbox{progress} \ )
```

Specifies a callback for when progress changes.

Only one callback can be registered, previous one will be replaced by *progress*.

## 4.83.2.7 With()

Specifies loading screen to use.

Has no effect if useLoadingScene is false.

## 4.83.3 Property Documentation

#### 4.83.3.1 close

```
IEnumerable<Scene> close [get]
```

Gets the scenes specified to close.

List will change depending on when its called (i.e. only open scenes can be closed).

## 4.83.3.2 focus

```
Scene focus [get]
```

Sets focus to the specified scene. Overrides selected scene in collections.

No effect if preloading.

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#### 4.83.3.3 open

```
IEnumerable<Scene> open [get]
```

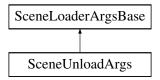
Gets the scenes specified to open.

List will change depending on when its called (i.e. only closed scenes can be opened).

# 4.84 SceneUnloadArgs

Specifies arguments for SceneLoader.UnloadScene(Models.Scene, SceneUnloadArgs).

Inheritance diagram for SceneUnloadArgs:



#### **Public Member Functions**

void SetCompleted ()

Notifies ASM that the unload is done.

#### **Additional Inherited Members**

## Properties inherited from SceneLoaderArgsBase

```
• bool isLoadingScreen [get]
```

Gets if this scene is a loading screen.

bool isSplashScreen [get]

Gets if this scene is a splash screen.

## 4.84.1 Detailed Description

Specifies arguments for SceneLoader.UnloadScene(Models.Scene, SceneUnloadArgs).

# 4.85 SceneUtility

An utility class to perform actions on scenes.

#### **Static Public Member Functions**

static IEnumerable < scene > GetAllOpenUnityScenes ()

Get all open unity scenes.

• static bool IsIncluded (Scene scene)

Gets if the scene is included in build.

- static void Move (this GameObject obj, Scene scene)
- static void Move (this GameObject obj, scene scene)
- static Scene CreateDynamic (string name, UnityEngine.SceneManagement.LocalPhysicsMode local
   — PhysicsMode=UnityEngine.SceneManagement.LocalPhysicsMode.None)

Creates a scene at runtime, that is not saved to disk.

- static bool FindCollection (this Scene scene, out SceneCollection collection)
- static SceneCollection FindCollection (this Scene scene)

Attempts to find best match for collection.

• static IEnumerable < Scene Collection > FindCollections (this Scene scene, bool allProfiles=false)

Finds which collections that this scene is a part of.

• static IEnumerable < Scene Collection > FindCollections (this Scene scene, Profile profile)

Finds which collections that this scene is a part of.

static IEnumerable < Scene > FindOpen (string q)

Find open scenes by name or path.

• static Scene Find (string q)

Find scenes by name or path, in the specified collection or profile, if defined.

static IEnumerable < Scene > FindOpen (Func < Scene, bool > predicate)

Find open scenes by predicate.

• static IEnumerable < Scene > Find (Func < Scene, bool > predicate)

Find scenes by predicate, in the specified collection or profile, if defined.

- static bool ASMScene (this Component component, out Scene scene)
- static Scene ASMScene (this GameObject gameObject, out Scene scene)
- static Scene ASMScene (this Component component)
- static Scene ASMScene (this GameObject gameObject)
- static bool ASMScene (this scene thisScene, out Scene scene)
- static Scene ASMScene (this scene scene)

Gets the associated ASM Scene.

• static IEnumerable < Scene > EvaluateFinalSceneList (Profile profile, App.Props props)

Evaluate the final scene list after startup.

static IEnumerable < Scene > EvaluateFinalSceneList (IEnumerable < SceneCollection > collections)

Evaluate the final scene list after opening a sequence of collections.

• static void SetEnabled (this Scene scene, bool isEnabled)

Sets all root objects as enabled / disabled.

static void Enable (this Scene scene)

Sets all root objects as enabled.

• static void Disable (this Scene scene)

Sets all root objects as disabled.

#### **Properties**

static bool isStartupScene [get]

Gets if current, and only, scene is the startup scene.

static scene dontDestroyOnLoadScene [get]

Gets the dontDestroyOnLoad scene. Returns null if not open.

• static bool hasAnyScenes [get]

Gets if there are any scenes open that are not dynamically created, and not yet saved to disk.

• static int unitySceneCount [get]

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## 4.85.1 Detailed Description

An utility class to perform actions on scenes.

## 4.85.2 Member Function Documentation

## 4.85.2.1 CreateDynamic()

Creates a scene at runtime, that is not saved to disk.

Returns null if scene could not be created.

## 4.85.2.2 Disable()

```
static void Disable ( {\tt this~Scene~\it scene}~)~[{\tt static}]
```

Sets all root objects as disabled.

Only has an effect if scene is open.

#### 4.85.2.3 Enable()

Sets all root objects as enabled.

Only has an effect if scene is open.

## 4.85.2.4 EvaluateFinalSceneList() [1/2]

Evaluate the final scene list after opening a sequence of collections.

## **Parameters**

" "	
collections	The sequence of collections that would be opened.
	The confidence of comments and models are opening

#### 4.85.2.5 EvaluateFinalSceneList() [2/2]

Evaluate the final scene list after startup.

## **Parameters**

profile	The profile that would be used to run startup process with.
props	The startup props that would be used to run process with.

#### 4.85.2.6 FindCollection()

```
static SceneCollection FindCollection ( {\tt this~Scene~\it scene}~)~[{\tt static}]
```

Attempts to find best match for collection.

Only checks current profile.

## 4.85.2.7 SetEnabled()

Sets all root objects as enabled / disabled.

Only has an effect if scene is open.

# 4.86 ScriptableObjectUtility

Contains utility methods for ScriptableObject.

## **Static Public Member Functions**

static void Save (this ScriptableObject obj)
 Saves the ScriptableObject.

## 4.86.1 Detailed Description

Contains utility methods for ScriptableObject.

## 4.86.2 Member Function Documentation

#### 4.86.2.1 Save()

Saves the ScriptableObject.

Safe to call from outside editor, but has no effect.

# 4.87 SerializableDictionary< TKey, TValue >

A serializable dictionary.

Inherits Dictionary < TKey, TValue >, and ISerializationCallbackReceiver.

## 4.87.1 Detailed Description

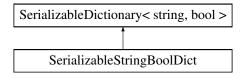
A serializable dictionary.

Older unity versions might need a wrapper class, since they won't support serializing generic types. Don't forget SerializableAttribute on wrapper!

# 4.88 SerializableStringBoolDict

A serializable dictionary of string and bool.

Inheritance diagram for SerializableStringBoolDict:



# 4.88.1 Detailed Description

A serializable dictionary of string and bool.

# 4.89 SettingsProxy

Provides access to ASM settings.

## **Properties**

• ASMSettings project [get]

The project-wide ASM settings.

• Profile profile [get]

The current ASM profile.

## 4.89.1 Detailed Description

Provides access to ASM settings.

## 4.89.2 Property Documentation

## 4.89.2.1 profile

```
Profile profile [get]
```

The current ASM profile.

Could be null.

# 4.90 SpamCheck

Provides an easy way to check for spamming.

## **Public Member Functions**

• bool IsSpam ()

Gets if an action was executed not long enough ago.

void MarkAsExecuted ()

Marks this spam check as executed, disallowing any actions until cooldown has run out.

• void Execute (Action action)

Runs action if allowed.

#### **Properties**

• static SpamCheck Global = new SpamCheck() [get]

Gets the global spam check.

• bool is Enabled [get, set]

Gets or sets if this SpamCheck is enabled.

• float executeCooldown [get, set]

Gets or sets the cooldown.

• float lastExecute [get]

Gets the time an action was executed last.

• float timeSinceLastExecute [get]

Gets the time an action was executed last.

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## 4.90.1 Detailed Description

Provides an easy way to check for spamming.

## 4.90.2 Property Documentation

#### 4.90.2.1 Global

```
SpamCheck Global = new SpamCheck() [static], [get]
```

Gets the global spam check.

Don't worry about conflicts with ASM stuff, we use a separate one.

#### 4.90.2.2 isEnabled

```
bool isEnabled [get], [set]
```

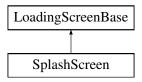
Gets or sets if this SpamCheck is enabled.

When disabled actions will run without checking whatever it is a spam call.

# 4.91 SplashScreen

A class that contains callbacks for splash screens.

Inheritance diagram for SplashScreen:



## **Public Member Functions**

• IEnumerator DisplaySplashScreen ()

Called when scene manager is ready to display the splash screen.

• override IEnumerator OnOpen ()

Called when the splash screen is opened.

• override IEnumerator OnClose ()

Called when the loading screen is about to close.

## Public Member Functions inherited from LoadingScreenBase

• IEnumerator OnOpen ()

Called when the loading screen is opened.

• IEnumerator OnClose ()

Called when the loading screen is about to close.

## **Additional Inherited Members**

## Public Attributes inherited from LoadingScreenBase

Action < LoadingScreenBase > onDestroy
 Occurs when loading screen is destroyed.

· Canvas canvas

## 4.91.1 Detailed Description

A class that contains callbacks for splash screens.

SplashScreen and LoadingScreen cannot coexist within the same scene.

## 4.91.2 Member Function Documentation

#### 4.91.2.1 DisplaySplashScreen()

```
IEnumerator DisplaySplashScreen ( ) [abstract]
```

Called when scene manager is ready to display the splash screen.

Example: yielding new WaitForSeconds(5) will show the splash screen for 5 seconds.

#### 4.91.2.2 OnClose()

```
override IEnumerator OnClose ( )
```

Called when the loading screen is about to close.

Calls DisplaySplashScreen, so make sure to call it manually or call base if overridden.

## 4.92 StandaloneCollection

Represents a collection of standalone scenes. These scenes are guaranteed to be included in build (if the associated Profile is active).

Inherits ISceneCollection.IEditable.

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## **Properties**

```
Gets the id of this collection.
• IEnumerable < Scene > scenes [get]

Gets the scenes of this collection.
```

• IEnumerable < string > scenePaths [get]

Gets the scenes of this collection.

• string title [get]

• string id [get]

Gets the title of this collection.

• string description [get]

Gets the description of this collection.

• IEnumerable < Scene > startupScenes [get]

Gets all scenes that will be opened on startup.

• int count [get]

Gets the scene count of this collection.

• Scene this[int index] [get]

Gets the scene at the specified index.

## 4.92.1 Detailed Description

Represents a collection of standalone scenes. These scenes are guaranteed to be included in build (if the associated Profile is active).

Usage: Profile.standaloneScenes.

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