Class

AVAssetReader

An object that reads media data from an asset.

iOS 4.1+ | iPadOS 4.1+ | Mac Catalyst 13.1+ | macOS 10.7+ | tvOS 9.0+ | visionOS 1.0+

```
class AVAssetReader
```

Overview

Use an asset reader to read media data from instances of AVAsset. The assets you read may represent file-based media like QuickTime movies or MPEG-4 files, or media that you compose from multiple sources using AVComposition.

Topics

Creating an asset reader

init(asset: AVAsset) throws

Creates an object to read media data from an asset.

Managing outputs

func canAdd(AVAssetReaderOutput) -> Bool

Determines whether you can add the output to the asset reader.

func add(AVAssetReaderOutput)

Adds an output to the reader.

```
var outputs: [AVAssetReaderOutput]
```

The outputs from which you read media data.

Accessing output providers

```
func outputProvider(for: AVAssetReaderOutput) -> sending AVAssetReader
Output.Provider<CMReadySampleBuffer<CMSampleBuffer.DynamicContent>>
```

Attaches the output to the reader and returns an output provider for reading sample buffers.

```
func outputProviderWithRandomAccess(for: AVAssetReaderOutput) ->
sending (AVAssetReaderOutput.Provider<CMReadySampleBuffer<CMSample
Buffer.DynamicContent>>, AVAssetReaderOutput.RandomAccessController)
```

Attaches the output to the reader and returns a tuple with an output provider for reading sample buffers, and an associated random access controller.

```
func outputCaptionProvider(for: AVAssetReaderTrackOutput, validation
Delegate: (any AVAssetReaderCaptionValidationHandling)?) -> sending
AVAssetReaderOutput.Provider<AVCaptionGroup>
```

Attaches the output to the reader and returns an output provider for reading caption groups.

```
func outputCaptionProviderWithRandomAccess(for: AVAssetReaderTrack
Output, validationDelegate: (any AVAssetReaderCaptionValidationHandling
)?) -> sending (AVAssetReaderOutput.Provider<AVCaptionGroup>, AVAsset
ReaderOutput.RandomAccessController)
```

Attaches the output to the reader and returns a tuple with an output provider for reading caption groups, and an associated random access controller.

```
func outputMetadataProvider(for: AVAssetReaderTrackOutput) -> sending
AVAssetReaderOutput.Provider<AVTimedMetadataGroup>
```

Attaches the output to the reader and returns an output provider for reading timed metadata groups.

```
func outputMetadataProviderWithRandomAccess(for: AVAssetReaderTrack
Output) -> sending (AVAssetReaderOutput.Provider<AVTimedMetadataGroup>,
AVAssetReaderOutput.RandomAccessController)
```

Attaches the output to the reader and returns a tuple with an output provider for timed metadata groups buffers, and an associated random access controller.

Configuring reading

var **timeRange**: `CMTimeRange`

> The time range within the asset to read.

var **status**: `AVAssetReader.Status`

> The status of reading sample buffers from the asset.

enum **Status**

> Values that represent the possible states of an asset reader.

var **error**: `(any Error)?`

> An error that describes the reason for a failure.

Controlling reading

func **start()** throws

> Prepares the reader to read media data from the asset.

func **startReading()** -> Bool

> Prepares the asset reader to start reading sample buffers from the asset.

func **cancelReading()**

> Cancels any background work and stops the reader's outputs from reading more samples.

Inspecting the asset

var **asset**: `AVAsset`

> The asset from which to read media data.

Relationships

Inherits From

NSObject

Conforms To

CVarArg
CustomDebugStringConvertible

CustomStringConvertible
Equatable
Hashable
NSObjectProtocol

See Also

Media reading

{} Reading multiview 3D video files

Render single images for the left eye and right eye from a multiview High Efficiency Video Coding format file by reading individual video frames.

class AVAssetReaderOutput

An abstract class that defines the interface to read media samples from an asset reader.

class AVAssetReaderTrackOutput

An object that reads media data from a single track of an asset.

class AVAssetReaderAudioMixOutput

An object that reads audio samples that result from mixing audio from one or more tracks.

class AVAssetReaderVideoCompositionOutput

An object that reads composited video frames from one or more tracks of an asset.

class AVAssetReaderSampleReferenceOutput

An object that reads sample references from an asset track.

class AVAssetReaderOutputMetadataAdaptor

An object that creates timed metadata group objects for an asset track.