Class

IOUserAudioStream

An audio object that performs I/O for an audio device.

DriverKit 21.0+

```
class IOUserAudioStream;
```

Overview

IOUserAudioStream allocates memory descriptors that the host uses for running I/O. An IOUserAudioDevice uses an IOUserAudioStream instance to perform I/O. Changes to the device that owns a stream may update formats on the underlying stream, which you handle by overriding HandleChangeCurrentStreamFormat and HandleChangeStreamIsActive.

Topics

Creating an Audio Stream

`Create`

Allocates and initializes an instance of the audio stream class.

`init`

Initializes an instance of the audio stream class.

`IOUserAudioDriver`

A DriverKit provider object that manages communications with an audio device.

Freeing an Audio Stream

`free`

Frees the audio stream.

Getting Information About the Class

`GetClassID`

Gets the audio class identifier of the object.

`GetBaseClassID`

Gets the audio class identifier of the base class object.

`IOUserAudioClassID`

An identifier for the type of audio object.

Performing I/O

`StartIO`

Tells the stream to start I/O.

`StopIO`

Tells the stream to stop I/O.

`IOUserAudioStartStopFlags`

Values that indicate I/O starts or stops.

Working with Stream Formats

`SetCurrentStreamFormat`

Sets the current stream format to a given audio stream basic description.

`GetCurrentStreamFormat`

Returns the current stream format, as an audio stream basic description.

`SetAvailableStreamFormats`

Sets the available stream formats to an array of audio stream basic descriptions.

`GetAvailableStreamFormats`

Returns the available stream formats as an array of audio stream basic descriptions.

`GetNumberAvailableStreamFormats`

Returns the number of available stream formats.

`IOUserAudioStreamBasicDescription`

A structure that encapsulates all of the information for describing the basic format properties of a stream of audio data.

`GetStreamDirection`

Gets the direction of the stream: input or output.

`IOUserAudioStreamDirection`

A type representing the direction of audio flow.

`SetStreamIsActive`

Sets a Boolean value that indicates whether the stream is active and doing I/O.

`GetStreamIsActive`

Gets a value that indicates whether the stream is active and doing I/O.

Working with Stream Terminals

`SetTerminalType`

Sets the terminal type of the stream.

`GetTerminalType`

Gets the terminal type of the stream.

`IOUserAudioStreamTerminalType`

Constants that describe the terminal type of an audio stream.

Working with Memory Descriptors

`GetIOMemoryDescriptor`

Gets the memory descriptor the stream uses for I/O.

`SetIOMemoryDescriptor`

Sets the memory descriptor the stream uses for I/O.

Managing Stream Changes

HandleChangeCurrentStreamFormat

    Tells the stream the format is changing.

HandleChangeStreamIsActive

    Tells the stream the activity state is changing.

DeviceSampleRateChanged

    Updates stream formats, in response to the owning audio device changing its sample rate.

Instance Methods

GetLatency

GetStartingChannel

SetLatency

SetStartingChannel

Relationships

Inherits From

IOUserAudioObject