

Photon Voice
v2.1

Generated by Doxygen 1.8.10

Thu Nov 8 2018 15:54:36

Contents

1	Photon Voice Doxygen Readme	1
2	Namespace Documentation	3
2.1	Photon Namespace Reference	3
2.2	Photon.Voice Namespace Reference	3
2.3	Photon.Voice.PUN Namespace Reference	3
2.4	Photon.Voice.Unity Namespace Reference	3
2.5	Photon.Voice.Unity.UtilityScripts Namespace Reference	4
3	Class Documentation	5
3.1	ConnectAndJoin Class Reference	5
3.2	ILoggable Interface Reference	5
3.3	Recorder.PhotonVoiceCreatedParams Class Reference	6
3.4	PhotonVoiceLagSimulationGui Class Reference	6
3.4.1	Member Data Documentation	6
3.4.1.1	Visible	6
3.4.1.2	WindowId	6
3.4.1.3	WindowRect	6
3.4.2	Property Documentation	7
3.4.2.1	Peer	7
3.5	PhotonVoiceNetwork Class Reference	7
3.5.1	Detailed Description	7
3.5.2	Member Function Documentation	8
3.5.2.1	ConnectAndJoinRoom()	8
3.5.2.2	Disconnect()	8
3.5.3	Member Data Documentation	8
3.5.3.1	AutoConnectAndJoin	8
3.5.3.2	AutoCreateSpeakerIfNotFound	8
3.5.3.3	AutoLeaveAndDisconnect	8
3.5.3.4	VoiceRoomNameSuffix	8
3.5.4	Property Documentation	8
3.5.4.1	Instance	8

3.6	PhotonVoiceView Class Reference	8
3.6.1	Detailed Description	9
3.6.2	Member Data Documentation	9
3.6.2.1	AutoCreateRecorderIfNotFound	9
3.6.2.2	SetupDebugSpeaker	9
3.6.2.3	UsePrimaryRecorder	9
3.6.3	Property Documentation	10
3.6.3.1	IsRecorder	10
3.6.3.2	IsRecording	10
3.6.3.3	IsSetup	10
3.6.3.4	IsSpeaker	10
3.6.3.5	IsSpeaking	10
3.6.3.6	RecorderInUse	10
3.6.3.7	SpeakerInUse	10
3.7	Recorder Class Reference	10
3.7.1	Detailed Description	12
3.7.2	Member Function Documentation	12
3.7.2.1	Init(VoiceClient voiceClient, object customObj=null)	12
3.7.2.2	ReInit()	12
3.7.2.3	VoiceDetectorCalibrate(int durationMs)	12
3.7.3	Property Documentation	13
3.7.3.1	AudioClip	13
3.7.3.2	AudioGroup	13
3.7.3.3	Bitrate	13
3.7.3.4	DebugEchoMode	13
3.7.3.5	Encrypt	13
3.7.3.6	FrameDuration	13
3.7.3.7	InputFactory	13
3.7.3.8	IsCurrentlyTransmitting	13
3.7.3.9	IsInitialized	13
3.7.3.10	LevelMeter	13
3.7.3.11	LoopAudioClip	14
3.7.3.12	MicrophoneType	14
3.7.3.13	PhotonMicrophoneDeviceId	14
3.7.3.14	PhotonMicrophoneEnumerator	14
3.7.3.15	ReliableMode	14
3.7.3.16	RequiresInit	14
3.7.3.17	SamplingRate	14
3.7.3.18	SourceType	14
3.7.3.19	TransmitEnabled	14

3.7.3.20	TypeConvert	14
3.7.3.21	UnityMicrophoneDevice	14
3.7.3.22	UserData	14
3.7.3.23	VoiceDetection	15
3.7.3.24	VoiceDetectionDelayMs	15
3.7.3.25	VoiceDetectionThreshold	15
3.7.3.26	VoiceDetector	15
3.7.3.27	VoiceDetectorCalibrating	15
3.8	Speaker Class Reference	15
3.8.1	Detailed Description	15
3.8.2	Property Documentation	16
3.8.2.1	Actor	16
3.8.2.2	IsPlaying	16
3.8.2.3	Lag	16
3.8.2.4	OnRemoteVoiceRemoveAction	16
3.9	TestTone Class Reference	16
3.10	ToneAudioReader Class Reference	16
3.11	VoiceAudioPreprocessor Class Reference	16
3.12	VoiceComponent Class Reference	17
3.13	VoiceConnection Class Reference	17
3.13.1	Detailed Description	18
3.13.2	Member Function Documentation	18
3.13.2.1	ConnectUsingSettings(AppSettings overwriteSettings=null)	18
3.13.3	Member Data Documentation	19
3.13.3.1	PrimaryRecorder	19
3.13.3.2	Settings	19
3.13.3.3	SpeakerFactory	19
3.13.4	Property Documentation	19
3.13.4.1	Client	19
3.13.4.2	ClientState	19
3.13.4.3	FramesLostPercent	19
3.13.4.4	FramesLostPerSecond	19
3.13.4.5	FramesReceivedPerSecond	19
3.13.4.6	Logger	19
3.13.4.7	LogLevel	19
3.13.4.8	SpeakerPrefab	19
3.13.4.9	VoiceClient	20
3.13.5	Event Documentation	20
3.13.5.1	SpeakerLinked	20
3.14	VoiceLogger Class Reference	20

Index	21
-----------------------	----

Chapter 1

Photon Voice Doxygen Readme

Offline Docs

Manual Generation

To manually generate doxygen offline files:

```
"doxygen .\Docs\doxygen\voice-doxxygen-offline.config"
```

Automatic Generation

Simply run "Docs\generate_offline.bat". Open the file and edit DOXYGEN_PATH accordingly. Also you need a LaTeX distribution installed and some packages/dependencies.

This script will also copy the offline files to their respective locations and then clean up.

Files

HTML

It is not possible to disable HTML files generation. So those are just ignored or cleaned up after generation.

CHM

"PhotonVoice-Documentation.chm" should be copied

to "Assets\Photon\PhotonVoice-Documentation.chm"

from "Docs\TempOutputDocs\VOICE_OFFLINE_HTML\PhotonVoice-Documentation.chm".

PDF

"PhotonVoice-Documentation.pdf" should be copied

to "Assets\Photon\PhotonVoice-Documentation.pdf"

from "Docs\TempOutputDocs\latex\refman.pdf".

Online Docs

To manually generate doxygen online files:

```
"doxygen .\Docs\doxygen\voice-doxxygen-online.config"
```


Chapter 2

Namespace Documentation

2.1 Photon Namespace Reference

Namespaces

- namespace [Voice](#)

2.2 Photon.Voice Namespace Reference

Namespaces

- namespace [PUN](#)
- namespace [Unity](#)

2.3 Photon.Voice.PUN Namespace Reference

Classes

- class [PhotonVoiceNetwork](#)
This class can be used to automatically sync client states between [PUN](#) and [Voice](#). It also sets a custom [PUN](#) Speaker factory to find the Speaker component for a character's voice. For this to work attach a [PhotonVoiceView](#) next to the PhotonView of your player's prefab.
- class [PhotonVoiceView](#)
Component that should be attached to a networked [PUN](#) prefab that has PhotonView. It will bind remote Recorder with local Speaker of the same networked prefab. This component makes automatic voice stream routing easy for players' characters/avatars.

2.4 Photon.Voice.Unity Namespace Reference

Namespaces

- namespace [UtilityScripts](#)

Classes

- interface [ILoggable](#)

- class [Recorder](#)
Component representing outgoing audio stream in scene.
- class [Speaker](#)
Component representing remote audio stream in local scene.
- class [VoiceAudioPreprocessor](#)
- class [VoiceComponent](#)
- class [VoiceConnection](#)
Component that represents a client voice connection to [Photon](#) Servers.
- class [VoiceLogger](#)

2.5 Photon.Voice.Unity.UtilityScripts Namespace Reference

Classes

- class [ConnectAndJoin](#)
- class [PhotonVoiceLagSimulationGui](#)
- class [TestTone](#)
- class [ToneAudioReader](#)

Chapter 3

Class Documentation

3.1 ConnectAndJoin Class Reference

Inherits MonoBehaviour, IConnectionCallbacks, and IMatchmakingCallbacks.

Public Member Functions

- void **ConnectNow** ()
- void **OnCreatedRoom** ()
- void **OnCreateRoomFailed** (short returnCode, string message)
- void **OnFriendListUpdate** (List< FriendInfo > friendList)
- void **OnJoinedRoom** ()
- void **OnJoinRandomFailed** (short returnCode, string message)
- void **OnJoinRoomFailed** (short returnCode, string message)
- void **OnLeftRoom** ()
- void **OnConnected** ()
- void **OnConnectedToMaster** ()
- void **OnDisconnected** (DisconnectCause cause)
- void **OnRegionListReceived** (RegionHandler regionHandler)
- void **OnCustomAuthenticationResponse** (Dictionary< string, object > data)
- void **OnCustomAuthenticationFailed** (string debugMessage)

Public Attributes

- bool **RandomRoom** = true
- string **RoomName**

Properties

- bool **IsConnected** [get]

3.2 ILoggable Interface Reference

Inherited by [VoiceComponent](#), and [VoiceConnection](#).

Properties

- DebugLevel **LogLevel** [get, set]
- [VoiceLogger](#) **Logger** [get]

3.3 Recorder.PhotonVoiceCreatedParams Class Reference

Properties

- LocalVoice **Voice** [get, set]
- IAudioDesc **AudioSource** [get, set]

3.4 PhotonVoiceLagSimulationGui Class Reference

Inherits MonoBehaviour.

Public Member Functions

- void **Start** ()
- void **OnGUI** ()

Public Attributes

- Rect [WindowRect](#) = new Rect(0, 100, 120, 100)
Positioning rect for window.
- int [WindowId](#) = 101
Unity GUI Window ID (must be unique or will cause issues).
- bool [Visible](#) = true
Shows or hides GUI (does not affect settings).

Properties

- PhotonPeer [Peer](#) [get, set]
The peer currently in use (to set the network simulation).

3.4.1 Member Data Documentation

3.4.1.1 bool Visible = true

Shows or hides GUI (does not affect settings).

3.4.1.2 int WindowId = 101

[Unity](#) GUI Window ID (must be unique or will cause issues).

3.4.1.3 Rect WindowRect = new Rect(0, 100, 120, 100)

Positioning rect for window.

3.4.2 Property Documentation

3.4.2.1 PhotonPeer Peer [get], [set]

The peer currently in use (to set the network simulation).

3.5 PhotonVoiceNetwork Class Reference

This class can be used to automatically sync client states between [PUN](#) and [Voice](#). It also sets a custom [PUN](#) Speaker factory to find the Speaker component for a character's voice. For this to work attach a [PhotonVoiceView](#) next to the PhotonView of your player's prefab.

Inherits [VoiceConnection](#).

Public Member Functions

- bool [ConnectAndJoinRoom](#) ()
Connect voice client to [Photon](#) servers and join a [Voice](#) room
- void [Disconnect](#) ()
Disconnect voice client from all [Photon](#) servers

Public Attributes

- const string [VoiceRoomNameSuffix](#) = "_voice_"
Suffix for voice room names appended to [PUN](#) room names.
- bool [AutoConnectAndJoin](#) = true
Auto connect voice client and join a voice room when [PUN](#) client is joined to a [PUN](#) room
- bool [AutoLeaveAndDisconnect](#) = true
Auto disconnect voice client when [PUN](#) client is not joined to a [PUN](#) room
- bool [AutoCreateSpeakerIfNotFound](#) = true
Auto instantiate a [GameObject](#) and attach a [Speaker](#) component to link to a remote audio stream if no candidate could be found

Protected Member Functions

- override void **Awake** ()
- override void **OnDestroy** ()

Properties

- static [PhotonVoiceNetwork Instance](#) [get, set]
Singleton instance for [PhotonVoiceNetwork](#)

Additional Inherited Members

3.5.1 Detailed Description

This class can be used to automatically sync client states between [PUN](#) and [Voice](#). It also sets a custom [PUN](#) Speaker factory to find the Speaker component for a character's voice. For this to work attach a [PhotonVoiceView](#) next to the PhotonView of your player's prefab.

3.5.2 Member Function Documentation

3.5.2.1 `bool ConnectAndJoinRoom ()`

Connect voice client to [Photon](#) servers and join a [Voice](#) room

Returns

If true, connection command send from client

3.5.2.2 `void Disconnect ()`

Disconnect voice client from all [Photon](#) servers

3.5.3 Member Data Documentation

3.5.3.1 `bool AutoConnectAndJoin = true`

Auto connect voice client and join a voice room when [PUN](#) client is joined to a [PUN](#) room

3.5.3.2 `bool AutoCreateSpeakerIfNotFound = true`

Auto instantiate a `GameObject` and attach a `Speaker` component to link to a remote audio stream if no candidate could be found

3.5.3.3 `bool AutoLeaveAndDisconnect = true`

Auto disconnect voice client when [PUN](#) client is not joined to a [PUN](#) room

3.5.3.4 `const string VoiceRoomNameSuffix = "_voice_"`

Suffix for voice room names appended to [PUN](#) room names.

3.5.4 Property Documentation

3.5.4.1 `PhotonVoiceNetwork Instance` `[static], [get], [set]`

Singleton instance for [PhotonVoiceNetwork](#)

3.6 PhotonVoiceView Class Reference

Component that should be attached to a networked [PUN](#) prefab that has `PhotonView`. It will bind remote `Recorder` with local `Speaker` of the same networked prefab. This component makes automatic voice stream routing easy for players' characters/avatars.

Inherits [VoiceComponent](#).

Public Attributes

- `bool` [AutoCreateRecorderIfNotFound](#)

If true, a Recorder component will be added to the same GameObject if not found already.

- bool [UsePrimaryRecorder](#)

If true, [PhotonVoiceNetwork.PrimaryRecorder](#) will be used by this [PhotonVoiceView](#)

- bool [SetupDebugSpeaker](#)

If true, a Speaker component will be setup to be used for the DebugEcho mode

Protected Member Functions

- override void **Awake** ()

Properties

- [Recorder RecorderInUse](#) [get, set]

The Recorder component currently used by this [PhotonVoiceView](#)

- [Speaker SpeakerInUse](#) [get, set]

The Speaker component currently used by this [PhotonVoiceView](#)

- bool [IsSetup](#) [get, protected set]

If true, this [PhotonVoiceView](#) is setup and ready to be used

- bool [IsSpeaker](#) [get, protected set]

If true, this [PhotonVoiceView](#) has a Speaker setup for playback of received audio frames from remote audio source

- bool [IsSpeaking](#) [get]

If true, this [PhotonVoiceView](#) has a Speaker that is currently playing received audio frames from remote audio source

- bool [IsRecorder](#) [get, protected set]

If true, this [PhotonVoiceView](#) has a Recorder setup for transmission of audio stream from local audio source

- bool [IsRecording](#) [get]

If true, this [PhotonVoiceView](#) has a Recorder that is currently transmitting audio stream from local audio source

Additional Inherited Members

3.6.1 Detailed Description

Component that should be attached to a networked [PUN](#) prefab that has PhotonView. It will bind remote Recorder with local Speaker of the same networked prefab. This component makes automatic voice stream routing easy for players' characters/avatars.

3.6.2 Member Data Documentation

3.6.2.1 bool AutoCreateRecorderIfNotFound

If true, a Recorder component will be added to the same GameObject if not found already.

3.6.2.2 bool SetupDebugSpeaker

If true, a Speaker component will be setup to be used for the DebugEcho mode

3.6.2.3 bool UsePrimaryRecorder

If true, [PhotonVoiceNetwork.PrimaryRecorder](#) will be used by this [PhotonVoiceView](#)

3.6.3 Property Documentation

3.6.3.1 `bool IsRecorder` `[get]`, `[protected set]`

If true, this [PhotonVoiceView](#) has a Recorder setup for transmission of audio stream from local audio source

3.6.3.2 `bool IsRecording` `[get]`

If true, this [PhotonVoiceView](#) has a Recorder that is currently transmitting audio stream from local audio source

3.6.3.3 `bool IsSetup` `[get]`, `[protected set]`

If true, this [PhotonVoiceView](#) is setup and ready to be used

3.6.3.4 `bool IsSpeaker` `[get]`, `[protected set]`

If true, this [PhotonVoiceView](#) has a Speaker setup for playback of received audio frames from remote audio source

3.6.3.5 `bool IsSpeaking` `[get]`

If true, this [PhotonVoiceView](#) has a Speaker that is currently playing received audio frames from remote audio source

3.6.3.6 `Recorder RecorderInUse` `[get]`, `[set]`

The Recorder component currently used by this [PhotonVoiceView](#)

3.6.3.7 `Speaker SpeakerInUse` `[get]`, `[set]`

The Speaker component currently used by this [PhotonVoiceView](#)

3.7 Recorder Class Reference

Component representing outgoing audio stream in scene.

Inherits [VoiceComponent](#).

Classes

- class [PhotonVoiceCreatedParams](#)

Public Types

- enum `InputSourceType`
- enum `MicType`
- enum `SampleTypeConv`

Public Member Functions

- void **Init** (VoiceClient voiceClient, object customObj=null)
Initializes the [Recorder](#) component to be able to transmit audio.
- void **Relnit** ()
Reinitializes the [Recorder](#) if something has changed that requires this.
- void **VoiceDetectorCalibrate** (int durationMs)
Trigger voice detector calibration process. While calibrating, keep silence. [Voice](#) detector sets threshold basing on measured background noise level.

Protected Member Functions

- virtual void **SendPhotonVoiceCreatedMessage** ()

Properties

- static AudioInEnumerator **PhotonMicrophoneEnumerator** [get]
Enumerator for the available microphone devices gathered by the [Photon](#) plugin.
- bool **IsInitialized** [get]
If true, this [Recorder](#) has been initialized and is ready to transmit to remote clients.
- bool **RequiresInit** [get]
Returns true if something has changed in the [Recorder](#) after initialization that won't take effect unless re initialized.
- bool **TransmitEnabled** [get, set]
If true, audio transmission is enabled.
- bool **Encrypt** [get, set]
If true, voice stream is sent encrypted.
- bool **DebugEchoMode** [get, set]
If true, outgoing stream routed back to client via server same way as for remote client's streams.
- bool **ReliableMode** [get, set]
If true, stream data sent in reliable mode.
- bool **VoiceDetection** [get, set]
If true, voice detection enabled.
- float **VoiceDetectionThreshold** [get, set]
[Voice](#) detection threshold (0..1, where 1 is full amplitude).
- int **VoiceDetectionDelayMs** [get, set]
Keep detected state during this time after signal level dropped below threshold. Default is 500ms
- object **UserData** [get, set]
Custom user object to be sent in the voice stream info event.
- Func< IAudioDesc > **InputFactory** [get, set]
Set the method returning new Voice.IAudioDesc instance to be assigned to a new voice created with Source set to Factory
- AudioUtil.IVoiceDetector **VoiceDetector** [get]
Returns voice activity detector for recorder's audio stream.
- string **UnityMicrophoneDevice** [get, set]
Set or get [Unity](#) microphone device used for streaming.
- int **PhotonMicrophoneDeviceId** [get, set]
Set or get photon microphone device used for streaming.
- byte **AudioGroup** [get, set]
Target interest group that will receive transmitted audio.
- bool **IsCurrentlyTransmitting** [get]
Returns true if audio stream broadcasts.

- AudioUtil.ILevelMeter [LevelMeter](#) [get]
Level meter utility.
- bool [VoiceDetectorCalibrating](#) [get]
If true, voice detector calibration is in progress.
- ILocalVoiceAudio **voiceAudio** [get]
- InputSourceType [SourceType](#) [get, set]
Audio data source.
- MicType [MicrophoneType](#) [get, set]
Which microphone API to use when the Source is set to Microphone.
- SampleTypeConv [TypeConvert](#) [get, set]
Force creation of 'short' pipeline and convert audio data to short for 'float' audio sources.
- AudioClip [AudioClip](#) [get, set]
Source audio clip.
- bool [LoopAudioClip](#) [get, set]
Loop playback for audio clip sources.
- POpusCodec.Enums.SamplingRate [SamplingRate](#) [get, set]
Outgoing audio stream sampling rate.
- OpusCodec.FrameDuration [FrameDuration](#) [get, set]
Outgoing audio stream encoder delay.
- int [Bitrate](#) [get, set]
Outgoing audio stream bitrate.

Additional Inherited Members

3.7.1 Detailed Description

Component representing outgoing audio stream in scene.

3.7.2 Member Function Documentation

3.7.2.1 void Init (VoiceClient *voiceClient*, object *customObj* = null)

Initializes the [Recorder](#) component to be able to transmit audio.

Parameters

<i>voiceClient</i>	The VoiceClient to be used with this Recorder .
<i>customObj</i>	Optional user data object to be transmitted with the voice stream info

3.7.2.2 void Relnit ()

Reinitializes the [Recorder](#) if something has changed that requires this.

3.7.2.3 void VoiceDetectorCalibrate (int *durationMs*)

Trigger voice detector calibration process. While calibrating, keep silence. [Voice](#) detector sets threshold basing on measured background noise level.

Parameters

<i>durationMs</i>	Duration of calibration in milliseconds.
-------------------	--

3.7.3 Property Documentation

3.7.3.1 AudioClip AudioClip [get], [set]

Source audio clip.

3.7.3.2 byte AudioGroup [get], [set]

Target interest group that will receive transmitted audio.

If AudioGroup != 0, recorders's audio data is sent only to clients listening to this group.

3.7.3.3 int Bitrate [get], [set]

Outgoing audio stream bitrate.

3.7.3.4 bool DebugEchoMode [get], [set]

If true, outgoing stream routed back to client via server same way as for remote client's streams.

3.7.3.5 bool Encrypt [get], [set]

If true, voice stream is sent encrypted.

3.7.3.6 OpusCodec.FrameDuration FrameDuration [get], [set]

Outgoing audio stream encoder delay.

3.7.3.7 Func<IAudioDesc> InputFactory [get], [set]

Set the method returning new Voice.IAudioDesc instance to be assigned to a new voice created with Source set to Factory

3.7.3.8 bool IsCurrentlyTransmitting [get]

Returns true if audio stream broadcasts.

3.7.3.9 bool IsInitialized [get]

If true, this [Recorder](#) has been initialized and is ready to transmit to remote clients.

3.7.3.10 AudioUtil.ILevelMeter LevelMeter [get]

Level meter utility.

3.7.3.11 `bool LoopAudioClip` `[get], [set]`

Loop playback for audio clip sources.

3.7.3.12 `MicType MicrophoneType` `[get], [set]`

Which microphone API to use when the Source is set to Microphone.

3.7.3.13 `int PhotonMicrophoneDeviceId` `[get], [set]`

Set or get photon microphone device used for streaming.

3.7.3.14 `AudiolnEnumerator PhotonMicrophoneEnumerator` `[static], [get]`

Enumerator for the available microphone devices gathered by the [Photon](#) plugin.

3.7.3.15 `bool ReliableMode` `[get], [set]`

If true, stream data sent in reliable mode.

3.7.3.16 `bool RequiresInit` `[get]`

Returns true if something has changed in the [Recorder](#) after initialization that won't take effect unless re initialized.

3.7.3.17 `POpusCodec.Enums.SamplingRate SamplingRate` `[get], [set]`

Outgoing audio stream sampling rate.

3.7.3.18 `InputSourceType SourceType` `[get], [set]`

Audio data source.

3.7.3.19 `bool TransmitEnabled` `[get], [set]`

If true, audio transmission is enabled.

3.7.3.20 `SampleTypeConv TypeConvert` `[get], [set]`

Force creation of 'short' pipeline and convert audio data to short for 'float' audio sources.

3.7.3.21 `string UnityMicrophoneDevice` `[get], [set]`

Set or get [Unity](#) microphone device used for streaming.

3.7.3.22 `object UserData` `[get], [set]`

Custom user object to be sent in the voice stream info event.

3.7.3.23 `bool VoiceDetection` `[get], [set]`

If true, voice detection enabled.

3.7.3.24 `int VoiceDetectionDelayMs` `[get], [set]`

Keep detected state during this time after signal level dropped below threshold. Default is 500ms

3.7.3.25 `float VoiceDetectionThreshold` `[get], [set]`

Voice detection threshold (0..1, where 1 is full amplitude).

3.7.3.26 `AudioUtil.IVoiceDetector VoiceDetector` `[get]`

Returns voice activity detector for recorder's audio stream.

3.7.3.27 `bool VoiceDetectorCalibrating` `[get]`

If true, voice detector calibration is in progress.

3.8 Speaker Class Reference

Component representing remote audio stream in local scene.

Inherits [VoiceComponent](#).

Public Attributes

- `int PlayDelayMs` = 200

Protected Member Functions

- override void **Awake** ()

Properties

- `bool IsPlaying` `[get]`
Is the speaker playing right now.
- `int Lag` `[get]`
Smoothed difference between (jittering) stream and (clock-driven) audioOutput.
- `Action< Speaker > OnRemoteVoiceRemoveAction` `[get, set]`
Register a method to be called when remote voice removed.
- `Realtime.Player Actor` `[get, set]`
Per room, the connected users/players are represented with a Realtime.Player, also known as Actor.

Additional Inherited Members

3.8.1 Detailed Description

Component representing remote audio stream in local scene.

3.8.2 Property Documentation

3.8.2.1 `Realtime.Player Actor` `[get]`, `[set]`

Per room, the connected users/players are represented with a `Realtime.Player`, also known as Actor.

[Photon Voice](#) calls this Actor, to avoid a name-clash with the `Player` class in [Voice](#).

3.8.2.2 `bool IsPlaying` `[get]`

Is the speaker playing right now.

3.8.2.3 `int Lag` `[get]`

Smoothed difference between (jittering) stream and (clock-driven) audioOutput.

3.8.2.4 `Action<Speaker> OnRemoteVoiceRemoveAction` `[get]`, `[set]`

Register a method to be called when remote voice removed.

3.9 TestTone Class Reference

Inherits `MonoBehaviour`.

3.10 ToneAudioReader Class Reference

Inherits `IAudioReader< float >`.

Public Member Functions

- void **Dispose** ()
- bool **Read** (float[] buf)

Properties

- int **Channels** `[get]`
- int **SamplingRate** `[get]`
- string **Error** `[get]`

3.11 VoiceAudioPreprocessor Class Reference

Inherits `MonoBehaviour`.

Public Attributes

- bool **AEC**
- int **ReverseStreamDelayMs** = 120
- bool **AECMobile**

- bool **HighPass**
- bool **NoiseSuppression** = true
- bool **AGC** = true
- bool **VAD** = true
- bool **Bypass**

3.12 VoiceComponent Class Reference

Inherits MonoBehaviour, and [ILoggable](#).

Inherited by [PhotonVoiceView](#), [Recorder](#), and [Speaker](#).

Protected Member Functions

- virtual void **Awake** ()

Protected Attributes

- DebugLevel **LogLevel** = DebugLevel.ERROR

Properties

- [VoiceLogger](#) **Logger** [get, protected set]
- DebugLevel **LogLevel** [get, set]

3.13 VoiceConnection Class Reference

Component that represents a client voice connection to [Photon](#) Servers.

Inherits ConnectionHandler, and [ILoggable](#).

Inherited by [PhotonVoiceNetwork](#).

Public Member Functions

- bool [ConnectUsingSettings](#) (AppSettings overwriteSettings=null)
Connect to [Photon](#) server using [Settings](#)

Public Attributes

- AppSettings [Settings](#)
Settings to be used by this voice connection
- [Recorder](#) **PrimaryRecorder**
Main [Recorder](#) to be used for transmission by default
- Func< int, byte, object, [Speaker](#) > [SpeakerFactory](#)
Special factory to link [Speaker](#) components with incoming remote audio streams

Protected Member Functions

- override void **Awake** ()
- virtual void **Update** ()
- override void **OnDestroy** ()
- override void **OnApplicationQuit** ()
- void **CalcStatistics** ()

Properties

- [VoiceLogger](#) [Logger](#) [get, protected set]
Logger used by this component
- DebugLevel [LogLevel](#) [get, set]
Log level for this component
- new LoadBalancingFrontend [Client](#) [get]
Returns underlying [Photon](#) LoadBalancing client.
- VoiceClient [VoiceClient](#) [get]
Returns underlying [Photon](#) Voice client.
- ClientState [ClientState](#) [get]
Returns [Photon](#) Voice client state.
- float [FramesReceivedPerSecond](#) [get]
Number of frames received per second.
- float [FramesLostPerSecond](#) [get]
Number of frames lost per second.
- float [FramesLostPercent](#) [get]
Percentage of lost frames.
- GameObject [SpeakerPrefab](#) [get, set]
Prefab that contains [Speaker](#) component to be instantiated when receiving a new remote audio source info

Events

- Action< [Speaker](#) > [SpeakerLinked](#)
Fires when a speaker has been linked to a remote audio stream

3.13.1 Detailed Description

Component that represents a client voice connection to [Photon](#) Servers.

3.13.2 Member Function Documentation

3.13.2.1 bool ConnectUsingSettings (AppSettings *overwriteSettings* = null)

Connect to [Photon](#) server using [Settings](#)

Parameters

<i>overwriteSettings</i>	Overwrites Settings before connecting
--------------------------	---

Returns

If true voice connection command was sent from client

3.13.3 Member Data Documentation

3.13.3.1 Recorder PrimaryRecorder

Main [Recorder](#) to be used for transmission by default

3.13.3.2 AppSettings Settings

Settings to be used by this voice connection

3.13.3.3 Func<int, byte, object, Speaker> SpeakerFactory

Special factory to link [Speaker](#) components with incoming remote audio streams

3.13.4 Property Documentation

3.13.4.1 new LoadBalancingFrontend Client [get]

Returns underlying [Photon](#) LoadBalancing client.

3.13.4.2 ClientState ClientState [get]

Returns [Photon Voice](#) client state.

3.13.4.3 float FramesLostPercent [get]

Percentage of lost frames.

3.13.4.4 float FramesLostPerSecond [get]

Number of frames lost per second.

3.13.4.5 float FramesReceivedPerSecond [get]

Number of frames received per second.

3.13.4.6 VoiceLogger Logger [get], [protected set]

Logger used by this component

3.13.4.7 DebugLevel LogLevel [get], [set]

Log level for this component

3.13.4.8 GameObject SpeakerPrefab [get], [set]

Prefab that contains [Speaker](#) component to be instantiated when receiving a new remote audio source info

3.13.4.9 VoiceClient VoiceClient [get]

Returns underlying [Photon Voice](#) client.

3.13.5 Event Documentation

3.13.5.1 Action<Speaker> SpeakerLinked

Fires when a speaker has been linked to a remote audio stream

3.14 VoiceLogger Class Reference

Inherits ILogger.

Public Member Functions

- **VoiceLogger** (Object context, string tag, DebugLevel level=DebugLevel.ERROR)
- **VoiceLogger** (string tag, DebugLevel level=DebugLevel.ERROR)
- void **LogError** (string fmt, params object[] args)
- void **LogWarning** (string fmt, params object[] args)
- void **LogInfo** (string fmt, params object[] args)
- void **LogDebug** (string fmt, params object[] args)

Properties

- string **Tag** [get, set]
- DebugLevel **LogLevel** [get, set]
- bool **IsErrorEnabled** [get]
- bool **IsWarningEnabled** [get]
- bool **IsInfoEnabled** [get]
- bool **IsDebugEnabled** [get]

Index

- Actor
 - Photon::Voice::Unity::Speaker, 16
- AudioClip
 - Photon::Voice::Unity::Recorder, 13
- AudioGroup
 - Photon::Voice::Unity::Recorder, 13
- AutoConnectAndJoin
 - Photon::Voice::PUN::PhotonVoiceNetwork, 8
- AutoCreateRecorderIfNotFound
 - Photon::Voice::PUN::PhotonVoiceView, 9
- AutoCreateSpeakerIfNotFound
 - Photon::Voice::PUN::PhotonVoiceNetwork, 8
- AutoLeaveAndDisconnect
 - Photon::Voice::PUN::PhotonVoiceNetwork, 8
- Bitrate
 - Photon::Voice::Unity::Recorder, 13
- Client
 - Photon::Voice::Unity::VoiceConnection, 19
- ClientState
 - Photon::Voice::Unity::VoiceConnection, 19
- ConnectAndJoin, 5
- ConnectAndJoinRoom
 - Photon::Voice::PUN::PhotonVoiceNetwork, 8
- ConnectUsingSettings
 - Photon::Voice::Unity::VoiceConnection, 18
- DebugEchoMode
 - Photon::Voice::Unity::Recorder, 13
- Disconnect
 - Photon::Voice::PUN::PhotonVoiceNetwork, 8
- Encrypt
 - Photon::Voice::Unity::Recorder, 13
- FrameDuration
 - Photon::Voice::Unity::Recorder, 13
- FramesLostPerSecond
 - Photon::Voice::Unity::VoiceConnection, 19
- FramesLostPercent
 - Photon::Voice::Unity::VoiceConnection, 19
- FramesReceivedPerSecond
 - Photon::Voice::Unity::VoiceConnection, 19
- ILoggable, 5
- Init
 - Photon::Voice::Unity::Recorder, 12
- InputFactory
 - Photon::Voice::Unity::Recorder, 13
- Instance
 - Photon::Voice::PUN::PhotonVoiceNetwork, 8
- IsCurrentlyTransmitting
 - Photon::Voice::Unity::Recorder, 13
- IsInitialized
 - Photon::Voice::Unity::Recorder, 13
- IsPlaying
 - Photon::Voice::Unity::Speaker, 16
- IsRecorder
 - Photon::Voice::PUN::PhotonVoiceView, 10
- IsRecording
 - Photon::Voice::PUN::PhotonVoiceView, 10
- IsSetup
 - Photon::Voice::PUN::PhotonVoiceView, 10
- IsSpeaker
 - Photon::Voice::PUN::PhotonVoiceView, 10
- IsSpeaking
 - Photon::Voice::PUN::PhotonVoiceView, 10
- Lag
 - Photon::Voice::Unity::Speaker, 16
- LevelMeter
 - Photon::Voice::Unity::Recorder, 13
- LogLevel
 - Photon::Voice::Unity::VoiceConnection, 19
- Logger
 - Photon::Voice::Unity::VoiceConnection, 19
- LoopAudioClip
 - Photon::Voice::Unity::Recorder, 13
- MicrophoneType
 - Photon::Voice::Unity::Recorder, 14
- OnRemoteVoiceRemoveAction
 - Photon::Voice::Unity::Speaker, 16
- Peer
 - Photon::Voice::Unity::UtilityScripts::PhotonVoice↔LagSimulationGui, 7
- Photon, 3
- Photon.Voice, 3
- Photon.Voice.PUN, 3
- Photon.Voice.Unity, 3
- Photon.Voice.Unity.UtilityScripts, 4
- Photon::Voice::PUN::PhotonVoiceNetwork
 - AutoConnectAndJoin, 8
 - AutoCreateSpeakerIfNotFound, 8
 - AutoLeaveAndDisconnect, 8
 - ConnectAndJoinRoom, 8
 - Disconnect, 8
 - Instance, 8

- VoiceRoomNameSuffix, 8
- Photon::Voice::PUN::PhotonVoiceView
 - AutoCreateRecorderIfNotFound, 9
 - IsRecorder, 10
 - IsRecording, 10
 - IsSetup, 10
 - IsSpeaker, 10
 - IsSpeaking, 10
 - RecorderInUse, 10
 - SetupDebugSpeaker, 9
 - SpeakerInUse, 10
 - UsePrimaryRecorder, 9
- Photon::Voice::Unity::Recorder
 - AudioClip, 13
 - AudioGroup, 13
 - Bitrate, 13
 - DebugEchoMode, 13
 - Encrypt, 13
 - FrameDuration, 13
 - Init, 12
 - InputFactory, 13
 - IsCurrentlyTransmitting, 13
 - IsInitialized, 13
 - LevelMeter, 13
 - LoopAudioClip, 13
 - MicrophoneType, 14
 - PhotonMicrophoneDeviceId, 14
 - PhotonMicrophoneEnumerator, 14
 - RelInit, 12
 - ReliableMode, 14
 - RequiresInit, 14
 - SamplingRate, 14
 - SourceType, 14
 - TransmitEnabled, 14
 - TypeConvert, 14
 - UnityMicrophoneDevice, 14
 - UserData, 14
 - VoiceDetection, 14
 - VoiceDetectionDelayMs, 15
 - VoiceDetectionThreshold, 15
 - VoiceDetector, 15
 - VoiceDetectorCalibrate, 12
 - VoiceDetectorCalibrating, 15
- Photon::Voice::Unity::Speaker
 - Actor, 16
 - IsPlaying, 16
 - Lag, 16
 - OnRemoteVoiceRemoveAction, 16
- Photon::Voice::Unity::UtilityScripts::PhotonVoiceLag↔
 - SimulationGui
 - Peer, 7
 - Visible, 6
 - WindowId, 6
 - WindowRect, 6
- Photon::Voice::Unity::VoiceConnection
 - Client, 19
 - ClientState, 19
 - ConnectUsingSettings, 18
 - FramesLostPerSecond, 19
 - FramesLostPercent, 19
 - FramesReceivedPerSecond, 19
 - LogLevel, 19
 - Logger, 19
 - PrimaryRecorder, 19
 - Settings, 19
 - SpeakerFactory, 19
 - SpeakerLinked, 20
 - SpeakerPrefab, 19
 - VoiceClient, 19
- PhotonMicrophoneDeviceId
 - Photon::Voice::Unity::Recorder, 14
- PhotonMicrophoneEnumerator
 - Photon::Voice::Unity::Recorder, 14
- PhotonVoiceLagSimulationGui, 6
- PhotonVoiceNetwork, 7
- PhotonVoiceView, 8
- PrimaryRecorder
 - Photon::Voice::Unity::VoiceConnection, 19
- RelInit
 - Photon::Voice::Unity::Recorder, 12
- Recorder, 10
- Recorder.PhotonVoiceCreatedParams, 6
- RecorderInUse
 - Photon::Voice::PUN::PhotonVoiceView, 10
- ReliableMode
 - Photon::Voice::Unity::Recorder, 14
- RequiresInit
 - Photon::Voice::Unity::Recorder, 14
- SamplingRate
 - Photon::Voice::Unity::Recorder, 14
- Settings
 - Photon::Voice::Unity::VoiceConnection, 19
- SetupDebugSpeaker
 - Photon::Voice::PUN::PhotonVoiceView, 9
- SourceType
 - Photon::Voice::Unity::Recorder, 14
- Speaker, 15
- SpeakerFactory
 - Photon::Voice::Unity::VoiceConnection, 19
- SpeakerInUse
 - Photon::Voice::PUN::PhotonVoiceView, 10
- SpeakerLinked
 - Photon::Voice::Unity::VoiceConnection, 20
- SpeakerPrefab
 - Photon::Voice::Unity::VoiceConnection, 19
- TestTone, 16
- ToneAudioReader, 16
- TransmitEnabled
 - Photon::Voice::Unity::Recorder, 14
- TypeConvert
 - Photon::Voice::Unity::Recorder, 14
- UnityMicrophoneDevice
 - Photon::Voice::Unity::Recorder, 14

- UsePrimaryRecorder
 - Photon::Voice::PUN::PhotonVoiceView, [9](#)
- UserData
 - Photon::Voice::Unity::Recorder, [14](#)
- Visible
 - Photon::Voice::Unity::UtilityScripts::PhotonVoice↔
LagSimulationGui, [6](#)
- VoiceAudioPreprocessor, [16](#)
- VoiceClient
 - Photon::Voice::Unity::VoiceConnection, [19](#)
- VoiceComponent, [17](#)
- VoiceConnection, [17](#)
- VoiceDetection
 - Photon::Voice::Unity::Recorder, [14](#)
- VoiceDetectionDelayMs
 - Photon::Voice::Unity::Recorder, [15](#)
- VoiceDetectionThreshold
 - Photon::Voice::Unity::Recorder, [15](#)
- VoiceDetector
 - Photon::Voice::Unity::Recorder, [15](#)
- VoiceDetectorCalibrate
 - Photon::Voice::Unity::Recorder, [12](#)
- VoiceDetectorCalibrating
 - Photon::Voice::Unity::Recorder, [15](#)
- VoiceLogger, [20](#)
- VoiceRoomNameSuffix
 - Photon::Voice::PUN::PhotonVoiceNetwork, [8](#)
- WindowId
 - Photon::Voice::Unity::UtilityScripts::PhotonVoice↔
LagSimulationGui, [6](#)
- WindowRect
 - Photon::Voice::Unity::UtilityScripts::PhotonVoice↔
LagSimulationGui, [6](#)