Conaito VoIP SIP Client SDK

Conaito VoIP SIP Client SDK - a powerful tool to build VoIP SIP applications

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1 Introduction

1.1 Welcome

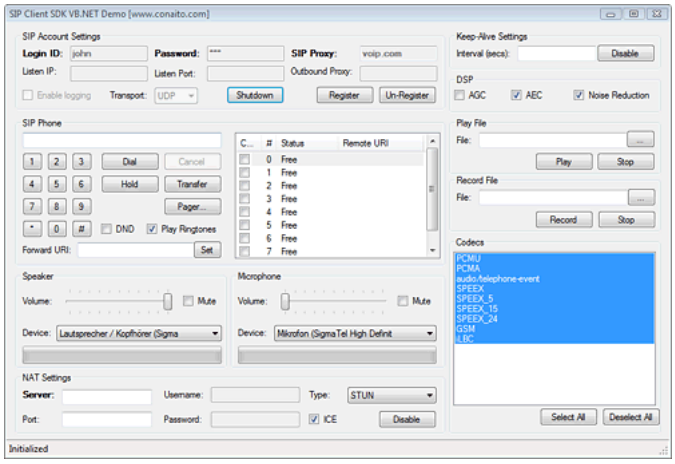
VoIP SIP Client SDK

A powerful and highly versatile VoIP SDK to accelerate development of SIP applications and websites

The VoIP SIP Client SDK provides a powerful and highly versatile solution to add quickly SIP (Session Initiation Protocol) based dial and receive phone calls features in your software applications and websites. It accelerates the development of SIP/RTP compliant soft phone with a fully-customizable user interface and brand name.

The SDK contains a high performance VoIP conferencing client capable of delivering crystal clear sound even for both low and high-bandwidth users and SIP compatible devices (hardware and software). It enables a worldwide communication over the internet or intern networks either and delivers superior voice quality by integrating digital voice processing features including auto gain controller (AGC (see page 66)), acoustic echo suppression (AES) and noise suppression. It supports multiple lines, multi-party voice conference, call hold, call forwarding and transfer, DTMF, Packet Loss Concealment (PLC), adaptive jitter buffer, record and playing WAV and much more!

Conaito VoIP SIP Client SDK is based on IETF standards (SIP, RTP, STUN, TURN, ICE etc.), so it should be compatible with other standard based products such as: SER, Sip EXpress, OpenSER and Asterisk.



New features of the version 1.6:

- Multiple sip accounts registration support (unlimited)
- Recording voice conversation into mp3 (.mp3) file (without or ID3v2.1 tag supported)
- Playing mp3 (.mp3) files to the remote end (without or ID3v2.1 tag supported)
- Codec selection and sorting
- Fixed VB6 example bug
- Fixed STUN event bug
- Additional minor improvements as well file size optimization and performance of the SDK

Key features of the VoIP SIP Client SDK:

- Easily make and receive SIP (Session Initiation Protocol) based phone calls through any SIP gateway or SIP compliant

IP-Telephony service provider

- VoIP conferencing with crystal clear sound even for both low and high-bandwidth users
- Supported audio codec´s: G729, G723, G711 A-Law, G711 U-Law, Speex, Speex-wb, GSM6.10 and iLBC
- Open standards-based and interoperable with all of the major equipment vendors
- UDP and TCP support
- Multi-party voice conference support (Conference split and join, locally mixed conferences)
- Multi-line support (multiple simultaneous calls)
- SIP Instant/Chat Messaging with send/receive controlling
- Integrated STUN, TURN and ICE NAT Traversal
- Comes with SIP Server demo to provide in bundle with the Conaito SIP Client a ready up own SIP VoIP and Instant Messaging network solution.
- P2P support for directly connections between 2 SIP clients without SIP Server
- Outbound proxy server support
- Encrypted SIP account settings (encrypted SIP account settings in your webpage)
- Line Hold (see page 38)/Un-hold support
- Call forwarding and rejection
- Call transfer support
- Select media input/output devices - on-the-fly (as well during a conversation/conference)
- Microphone and Speaker volume with Mute (including level indicator)
- Auto-answer
- DND (Do Not Disturb)
- Adaptive Jitter buffer
- PLC (Packet Lost Concealment)
- AGC (see page 66) (auto gain controller)
- AES (Acoustic echo cancellation or suppression)
- Noise cancellation or suppression
- DTMF tones support (generation/detection)
- Recording voice conversation into PCM WAVE and mp3 (.wav and .mp3) file
- Playing PCM WAVE and mp3 (.wav and .mp3) files to the remote end
- Audio file memory cache
- Extended SIP URL functions
- Registration on SIP Server (SIP Registrar)
- Log file on/off setting
- Keep-alive packets to NAT/firewall
- Fully-customizable user interface
- Production-ready Microsoft Authenticode Certificate certified
- Works with all kind of Internet connections
- Friendly to NAT and other firewalls
- Royalty free licensing
- No Yearly/Monthly fee
- Very easy to incorporate
- SDK comes in bundle with ActiveX control (Webdemo with ready-up signed CAB included), native DLL with .NET Interface for easy usage in .NET development (no ActiveX registration necessary)

- Fully sample applications for various programming languages such as sample source code for C#, VB.NET, C++, VB 6.0, Delphi and HTML/JavaScript (Webdemo) for ActiveX, DLL and .NET version
- For .NET framework as well and all development environments with native DLL, .NET or ActiveX support

Easy, familiar, event-driven call control ActiveX, DLL and .NET

- Easy to use; quick development
- Powerful .NET Interface for easy .NET development (no ActiveX registration necessary)
- Support for .NET framework as well and all development environments with native DLL, .NET or ActiveX support
- Very easy to incorporate

Rich call control feature set

- Multi-party voice conference support (Conference split and join, locally mixed conferences)
- Multi-line support (multiple simultaneous calls)
- SIP Instant messaging
- Locally mixed conferences
- Hold (see page 38)/Mute
- Call transfer and redirect
- Call forwarding and rejection

Industry leading SIP support

- RFC3261 compliant SIP stack
- RFC2833 out-of-band DTMF signaling
- Integrated STUN, TURN and ICE support

Comprehensive configuration support

- Select media input/output devices - on-the-fly (as well during a conversation/conference)
- Configurable ports (RTP, SIP UDP, SIP TCP, STUN, TURN, ICE)
- SIP proxy

Advanced digital voice processing features

- AGC (see page 66) (auto gain controller)
- AES (Acoustic echo cancellation or suppression)
- Noise cancellation or suppression

… and much more!

Having the above features available makes it simple to develop any type of VoIP-enabled application, like e.g. a SIP softphone, IVR solution, teaching tool, live support, voip chat, meeting tool or any other type of application which requires users being able to talk and type messages to each other.

For Conaito VoIP SIP clients to be able to interact with each other they must connect to a SIP gateway or SIP based IP-Telephony service provider.

Just relax!

Please, don't hesitate trying our VoIP SIP Client SDK at once and get yourself, as well as your customers, the exciting experience of easy, fast and high quality standard applications which VoIP-enable your application and website.

We hope you enjoy the new Conaito VoIP SIP Client SDK – A powerful and highly versatile VoIP SDK to accelerate development of SIP applications and websites.

Conaito Technologies

http://www.conaito.com

1.2 Development environment

The Conaito VoIP SIP Client SDK provides the documentation, samples and related libraries you need to integrate with other applications or websites.

It runs on Windows and includes a ActiveX, native DLL with .NET interface that can be used from any programming language like Visual C# .NET, Visual Basic .NET, Visual C++ .NET, Visual C++, Visual Basic and Borland Delphi etc.

The contents and the supported development environments include all of the necessary software components for building systems based on Conaito VoIP SIP Client SDK including documented operational software applications, examples (with source code), explanations as well as necessary service programs, libraries and components.

The supported development environments include:

- Visual C# .NET
- Visual Basic .NET
- Visual C++ .NET
- Visual C++
- Visual Basic
- Borland Delphi
- ASP.NET (ActiveX)
- ASP, JSP, PHP (ActiveX)
- HTML/JavaScript (ActiveX)
- and all development environments with native DLL, .NET or ActiveX support

System requirements: Operating system: Windows

1.3 Licensing

Software Product: Conaito VoIP SIP Client SDK

Author: Conaito Technologies

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Email: support@conaito.com

The Conaito VoIP SIP Client SDK is available as a trial version which expires after 30 days.

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Author: Conaito Technologies

Web: http://www.conaito.com

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recon, reflow, reTurn

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2 Getting Started

With the Conaito VoIP SIP Client SDK you may easily establish calls to regular phones (PSTN) from your desktop and Web applications. You can utilize it to develop IVR or more complex SIP Server/Media center solutions. The SDK comes with new sample SIP Proxy Server to provide in bundle with the Conaito SIP Client a ready up SIP VoIP and Instant Messaging network solution.

Typical scenario - How to make a call:

1. Build SIPActiveX object (specify required properties such as LoginID (see page 72), Password (see page 73), RegistrationProxy (see page 73), LicenseKey etc.)
2. Initialize (see page 35) SIPActiveX.
3. Register (see page 36) with SIP Proxy server. Register (see page 36) method takes no parameters because all SIP user account settings must be set before calling Initialize (see page 35) method.
4. Handle calls.
5. Unregister on SIP Proxy Server (see UnRegister (see page 36) method for more information).
5. Shutdown (see page 35) SIPActiveX.

Usage GUI applications:

1. Register (see page 36) Conaito SIP Client ActiveX control (in Web applications the control is registered automatically - CAB is used).
2. Register (see page 36) the control with your development environment.
3. Put the control on main form. Set it's "Visible" property to "false".

Transports: The core SIP stack provides following transports:

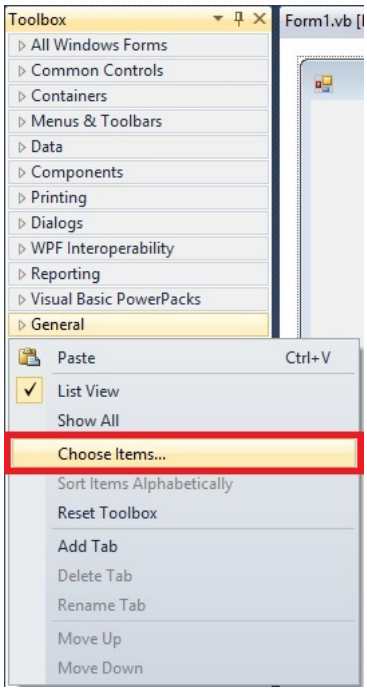
- UDP (configurable by UDPPort (see page 62))
- TCP (configurable by TCPPort (see page 62))

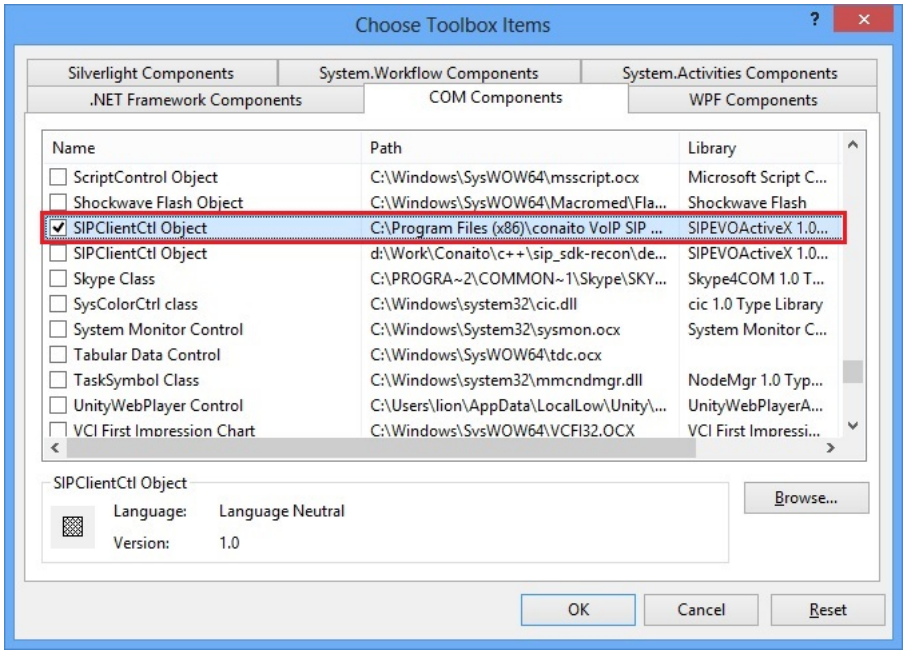
Networking: The Conaito VoIP SIP Client SDK is fully compatible with most typical SIP servers (Asterisk, Sip EXpress e.t.c.). It supports both NAT traversing (STUN, ICE) and reliable TCP for the signaling protocol. Also it's usable for sending text messages, play and record conferences (WAV) and DTMF tones.

Media: You may use 8000/16000 Hz sampling codecs (G711 A-Law, G711 U-Law, Speex, Speex-wb, GSM6.10, iLBC and g729 & g723 Codec support). The SDK also provides sending and receiving of DTMF tones, playing ring-tone is also supported. You can play WAV files and record conversations in WAV format.

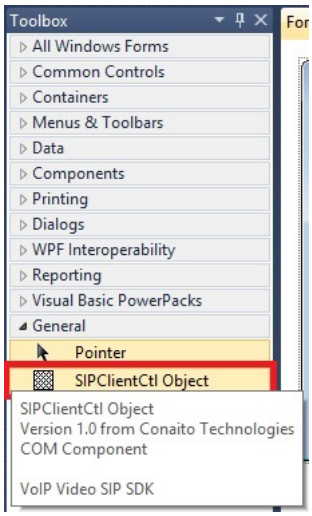
2.1 Microsoft Visual Studio Quick Start

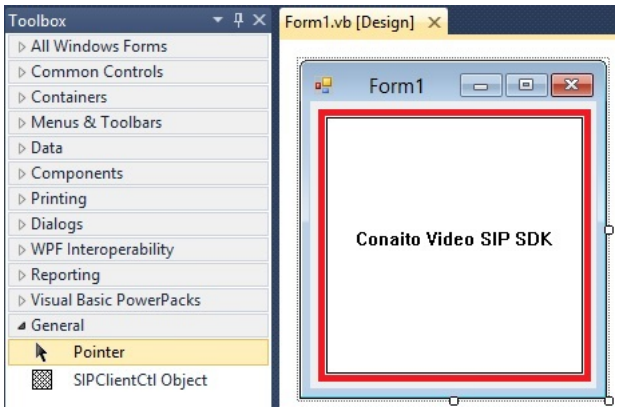
1. Open Microsoft Visual Studio
2. Add VoIP SIP Client SDK ActiveX to Toolbox





3. Now you can place VoIP SIP Client SDK ActiveX at form





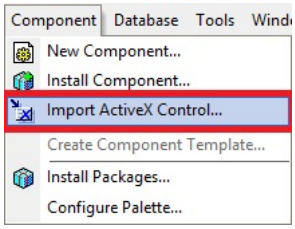
Run application.

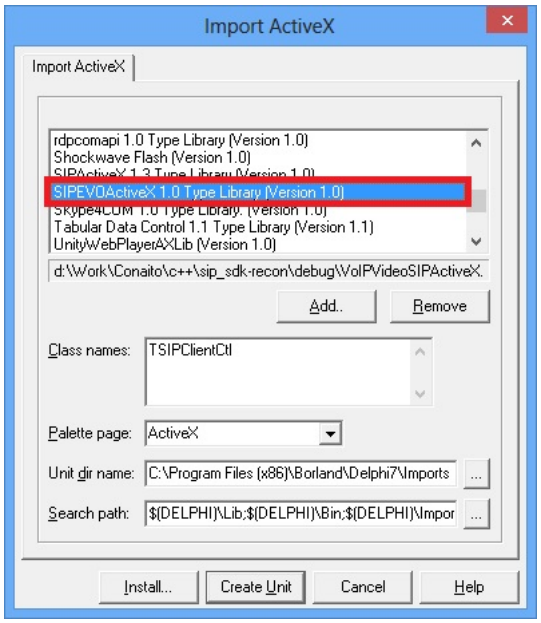
There will be empty form with SDK on it.

That's it. We have added SDK to our application.

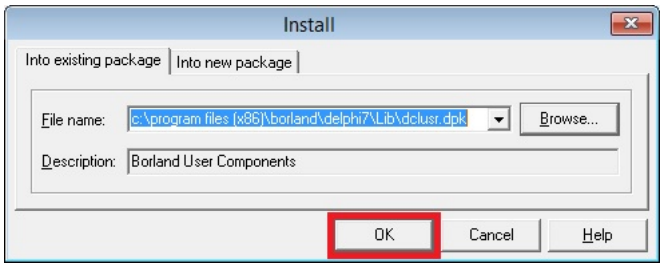
2.2 Borland Delphi Quick Start

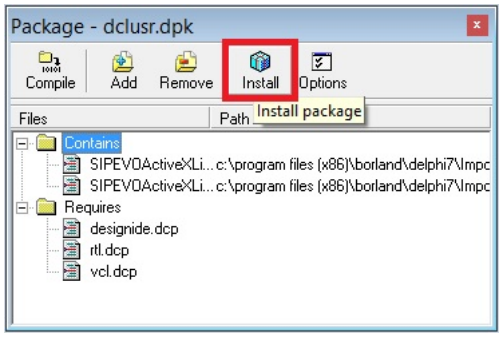
1. Open Borland Delphi
2. Import VoIP SIP Client SDK ActiveX



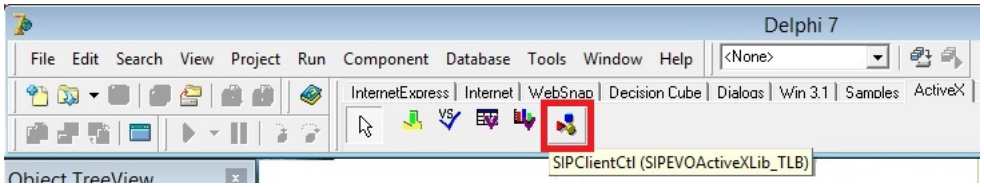


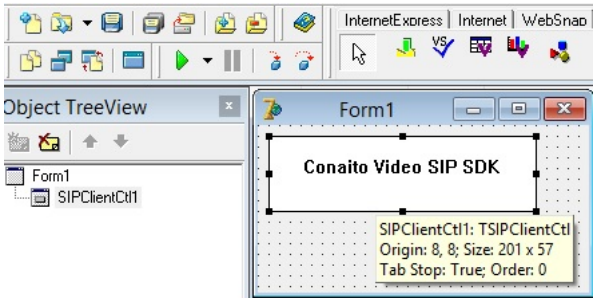
3. Install VoIP SIP Client SDK ActiveX





4. Now you have the component at palette and you can put it on form





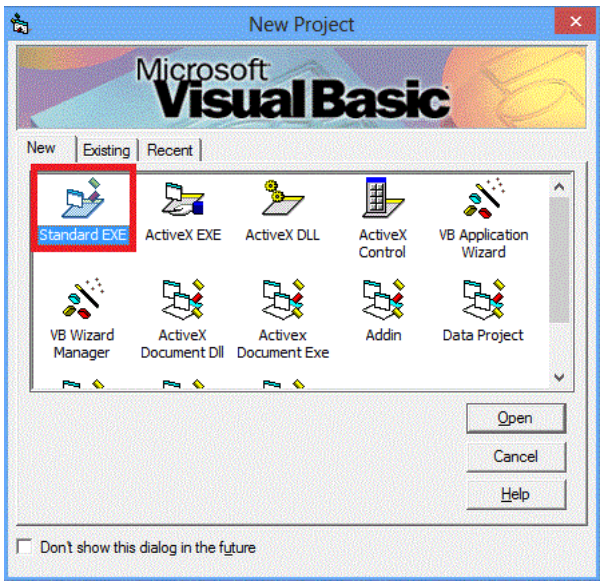
Run application.

There will be empty form with SDK on it.

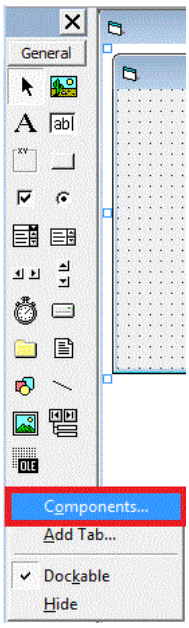
That's it. We have added SDK to our application.

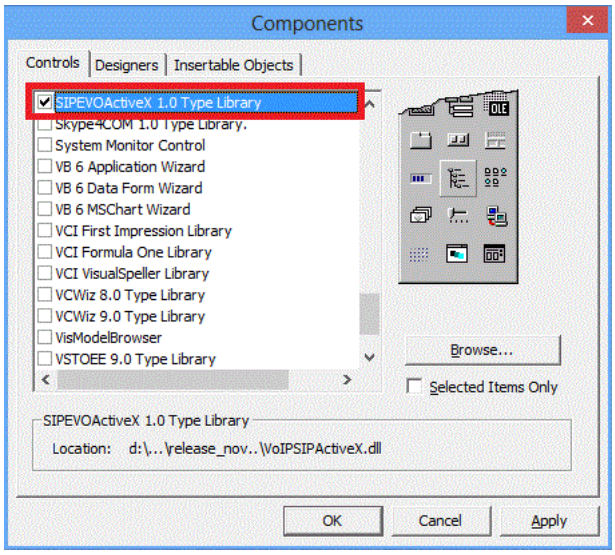
2.3 Microsoft Visual Basic 6.0 Quick Start

1. Open Microsoft Visual Basic 6.0
2. Open new windows project: Standard EXE

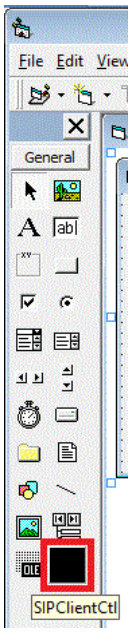


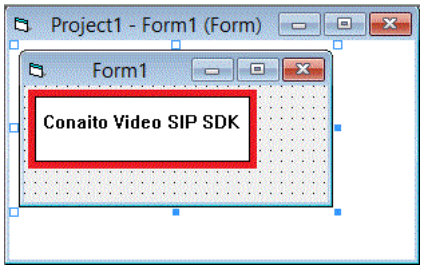
3. Add "VoIP SIP Client SDK" to Toolbox





4. Put VoIP SIP Client ActiveX at form:





Run application.

There will be empty form with SDK on it.

That’s it. We have added SDK to our application.

3 Reference

Conaito VoIP SIP Client SDK

Description

Conaito VoIP SIP Client SDK - a powerful tool to build VoIP SIP applications

See Also

Methods (see page 33) Properties (see page 58) Events (see page 81)

3.1 Methods

SIP SDK methods

Description

SIP SDK methods

- Initialize (see page 35) - Initialize SIP SDK
- WebInitialize (see page 35) - Initialize SIP SDK with encrypted parameters
- Shutdown (see page 35) - Shutdown SIP SDK
- Register (see page 36) - Register with SIP proxy
- UnRegister (see page 36) - Un-register from SIP proxy
- Connect (see page 36) - Make call to remote participant
- Disconnect (see page 37) - Disconnect active call or reject incoming
- AcceptCall (see page 37) - Accept incoming call
- TransferCall (see page 37) - Blind (unattended) transfer active call to given destination
- RedirectCall (see page 38) - Consultative (attended) transfer active call to the target call
- Hold (see page 38) - Place call on hold
- Unhold (see page 39) - Take call off hold
- EnableKeepAlive (see page 39) - Enable Keep-Alive signaling
- DisableKeepAlive (see page 39) - Disable Keep-Alive signaling
- EnableSTUN (see page 40) - Enable STUN
- DisableSTUN (see page 40) - Disable STUN
- EnableTURN (see page 40) - Enable TURN
- DisableTURN (see page 41) - Disable TURN
- SendDTMF (see page 41) - Send DTMF signal
- StartPlaying (see page 41) - Start playing file
- StartPlayingAtLine (see page 42) - Start playing file at given line
- StopPlaying (see page 42) - Stop playing file
- StopPlayingAtLine (see page 42) - Stop playing file at given line
- StartRecording (see page 43) - Record call to file

- StopRecording (see page 43) - Stop recording call to file
- GetOutDevName (see page 44) - Get name for output device at position index
- GetInDevName (see page 44) - Get name for input device at position index
- GetCaptureDevName (see page 53) - Get name for video capture device at position index
- SetLicenseKey (see page 44) - Set license key
- SetWebLicense (see page 45) - Set Web license key
- EncryptSipSettings (see page 45) - Encrypt SIP settings
- SendPagerMessage (see page 46) - Send pager message to the destination URI
- PostPagerMessage (see page 47) - Post pager message to the destination URI asynchronously
- ConferenceJoin (see page 47) - Add call to conference
- ConferenceRemove (see page 47) - Remove call from conference
- SelectAllVoiceCodecs (see page 48) - Select all voice codecs
- SelectVoiceCodec (see page 48) - Select voice codec
- DeselectAllVoiceCodecs (see page 48) - De-select all voice codecs
- DeselectVoiceCodec (see page 49) - De-select voice codec
- GetVoiceCodecName (see page 49) - Get voice codec name
- SelectAllVideoCodecs (see page 53) - Select all video codecs
- SelectVideoCodec (see page 54) - Select video codec
- DeselectAllVideoCodecs (see page 54) - De-select all video codecs
- DeselectVideoCodec (see page 55) - De-select video codec
- GetVideoCodecName (see page 55) - Get video codec name
- StoreConfiguration (see page 49) - Store SIP SDK configuration
- LoadConfiguration (see page 50) - Load SIP SDK configuration
- AddAdditionalDNSServer (see page 50) - Add additional DNS server that will be attempted to be discovered
- AddSipAccount (see page 56) - Add new SIP account
- RemoveSipAccount (see page 56) - Remove current SIP account
- GetSipAccountIndex (see page 56) - Get index of SIP account
- SetAudioCodecIndex (see page 57) - Set audio codec index
- SetVideoCodecIndex (see page 57) - Set video codec index
- StartVideo (see page 58) - Start sending video
- StopVideo (see page 58) - Stop sending video
- GetCaptureDevName (see page 53) - Get name of video capture device
- URLGetDisplayName (see page 51) - Parse display name from SIP URI
- URLGetUserName (see page 51) - Parse user name from SIP URI
- URLGetHost (see page 52) - Parse host name from SIP URI
- URLGetPort (see page 52) - Parse port number from SIP URI
- URLGetAOR (see page 52) - Parse AOR from SIP URI

See Also

VoIP SIP Client SDK (see page 33)

3.1.1 Initialize Method

Initialize SIP SDK

C++

```
HRESULT Initialize(BSTR sListenIP);
```

C#

```
void Initialize(string sListenIP);
```

Parameters

Parameters	Description
sListenIP	Listen IP

Description

Initialize SIP SDK

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.2 WebInitialize Method

Initialize SIP SDK with encrypted parameters

C++

```
HRESULT WebInitialize(BSTR sListenIP, BSTR sEncryptedSettings);
```

C#

```
void WebInitialize(string sListenIP, string sEncryptedSettings);
```

Parameters

Parameters	Description
sListenIP	Listen IP
sEncryptedSettings	Encrypted settings

Description

Initialize SIP SDK with encrypted parameters

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.3 Shutdown Method

Shutdown SIP SDK

C++

```
HRESULT Shutdown();
```

C#

```
void Shutdown();
```

Description

Shutdown SIP SDK

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.4 Register Method

Register with SIP proxy

C++

```
HRESULT Register();
```

C#

```
void Register();
```

Description

Register with SIP proxy

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.5 UnRegister Method

Un-register from SIP proxy

C++

```
HRESULT UnRegister();
```

C#

```
void UnRegister();
```

Description

Un-register from SIP proxy

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.6 Connect Method

Make call to remote participant

C++

```
HRESULT Connect(BSTR sRemoteURI);
```

C#

```
void Connect(string sRemoteURI);
```

Parameters

Parameters	Description
sRemoteURI	Destination SIP URI (example: "john.doe@voip.com")

Description

Make call to remote participant

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.7 Disconnect Method

Disconnect active call or reject incoming

C++

```
HRESULT Disconnect();
```

C#

```
void Disconnect();
```

Description

Disconnect active call or reject incoming

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.8 AcceptCall Method

Accept incoming call

C++

```
HRESULT AcceptCall();
```

C#

```
void AcceptCall();
```

Description

Accept incoming call

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.9 TransferCall Method

Blind (unattended) transfer active call to given destination

C++

```
HRESULT TransferCall(BSTR sDestinationURI);
```

C#

```
void TransferCall(string sDestinationURI);
```

Parameters

Parameters	Description
sDestinationURI	Destination SIP URI (example: "john.doe@voip.com")

Description

Blind (unattended) transfer active call to given destination

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.10 RedirectCall Method

Consultative (attended) transfer active call to the target call

C++

```
HRESULT RedirectCall(INT nDestinationLine);
```

C#

```
void RedirectCall(INT nDestinationLine);
```

Parameters

Parameters	Description
nDestinationLine	Destination line

Description

Consultative (attended) transfer active call to the target call

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.11 Hold Method

Place call on hold

C++

```
HRESULT Hold();
```

C#

```
void Hold();
```

Description

Place call on hold

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.12 Unhold Method

Take call off hold

C++

```
HRESULT Unhold();
```

C#

```
void Unhold();
```

Description

Take call off hold

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.13 EnableKeepAlive Method

Enable Keep-Alive signaling

C++

```
HRESULT EnableKeepAlive(INT nSeconds);
```

C#

```
void EnableKeepAlive(int nSeconds);
```

Parameters

Parameters	Description
nSeconds	Keep-Alive interval in seconds

Description

Enable Keep-Alive signaling

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.14 DisableKeepAlive Method

Disable Keep-Alive signaling

C++

```
HRESULT DisableKeepAlive();
```

C#

```
void DisableKeepAlive();
```

Description

Disable Keep-Alive signaling

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.15 EnableSTUN Method

Enable STUN

C++

```
HRESULT EnableSTUN(BSTR sServer, INT nPort);
```

C#

```
void EnableSTUN(string sServer, int nPort);
```

Parameters

Parameters	Description
sServer	STUN server host name or IP
nPort	STUN server port number

Description

Enable STUN

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.16 DisableSTUN Method

Disable STUN

C++

```
HRESULT DisableSTUN();
```

C#

```
void DisableSTUN();
```

Description

Disable STUN

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.17 EnableTURN Method

Enable TURN

C++

```
HRESULT EnableTURN(BSTR sServer, INT nPort, BSTR sUsername, BSTR sPassword);
```

C#

```
void EnableTURN(string sServer, int nPort, string sUsername, string sPassword);
```

Parameters

Parameters	Description
sServer	TURN server host name or IP

nPort	TURN server port number
sUsername	Username on TURN server
sPassword	Password on TURN server

Description

Enable TURN

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.18 DisableTURN Method

Disable TURN

C++

```
HRESULT DisableTURN();
```

C#

```
void DisableTURN();
```

Description

Disable TURN

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.19 SendDTMF Method

Send DTMF signal

C++

```
HRESULT SendDTMF(BSTR sDigit);
```

C#

```
void SendDTMF(string sDigit);
```

Description

Send DTMF signal

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.20 StartPlaying Method

Start playing file

C++

```
HRESULT StartPlaying(BSTR sFileName);
```

C#

```
void StartPlaying(string sFileName);
```

Parameters

Parameters	Description
sFileName	Path to WAV file to be played

Description

Start playing file

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.21 StartPlayingAtLine Method

Start playing file at given line

C++

```
HRESULT StartPlayingAtLine(BSTR sFileName, INT nLineNo);
```

C#

```
void StartPlayingAtLine(string sFileName, int nLineNo);
```

Parameters

Parameters	Description
sFileName	Path to WAV file to be played
nLineNo	Line number

Description

Start playing file at given line

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.22 StopPlaying Method

Stop playing file

C++

```
HRESULT StopPlaying();
```

C#

```
void StopPlaying();
```

Description

Stop playing file

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.23 StopPlayingAtLine Method

Stop playing file at given line

C++

```
HRESULT StopPlayingAtLine(INT nLineNo);
```

C#

```
void StopPlayingAtLine(int nLineNo);
```

Parameters

Parameters	Description
nLineNo	Line number

Description

Stop playing file at given line

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.24 StartRecording Method

Record call to file

C++

```
HRESULT StartRecording(BSTR sFileName);
```

C#

```
void StartRecording(string sFileName);
```

Parameters

Parameters	Description
sFileName	Path to WAV file to be recorded

Description

Record call to file

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.25 StopRecording Method

Stop recording call to file

C++

```
HRESULT StopRecording();
```

C#

```
void StopRecording();
```

Description

Stop recording call to file

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.26 GetOutDevName Method

Get name for output device at position index

C++

```
HRESULT GetOutDevName(INT nIndex, BSTR* psDevName);
```

C#

```
string GetOutDevName(int nIndex);
```

Parameters

Parameters	Description
nIndex	Output device index

Returns

Name for output device at position index

Description

Get name for output device at position index

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.27 GetInDevName Method

Get name for input device at position index

C++

```
HRESULT GetInDevName(INT nIndex, BSTR* psDevName);
```

C#

```
string GetInDevName(int nIndex);
```

Parameters

Parameters	Description
nIndex	Input device index

Returns

Name for input device at position index

Description

Get name for input device at position index

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.28 SetLicenseKey Method

This method is used to set license key (fullversion)

C++

```
HRESULT SetLicenseKey(BSTR sCustomerID, BSTR sLicenseKey);
```

C#

```
void SetLicenseKey(string sCustomerID, string sLicenseKey);
```

Parameters

Parameters	Description
sCustomerID	Customer's ID (provided with fullversion license)
sLicenseKey	Customer's License Key (provided with fullversion license)

Description

It initializes the component with licence key (fullversion)

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.29 SetWebLicense Method

This method is used to set license key (fullversion) for website usage.

C++

```
HRESULT SetWebLicense(BSTR sCustomerId, BSTR sWebKey);
```

C#

```
void SetWebLicense(string sCustomerId, string sWebKey);
```

Parameters

Parameters	Description
sCustomerID	Customer's ID (provided with fullversion license)
sLicenseKey	Customer's Web License Key (provided with fullversion license)

Description

It initializes the component with licence key (fullversion) for website usage. The Web license key is binded on the provided Domain (URL).

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.30 EncryptSipSettings Method

This method is used to encrypt SIP settings for WebInitialize.

C++

```
HRESULT EncryptSipSettings(BSTR sCustomerId, BSTR sWebKey, BSTR sRealm, BSTR sOutboundProxy,
                           BSTR sRegistrationProxy, BSTR sUserId, BSTR sLoginId, BSTR
sPassword, BSTR *psEncryptedSettings);
```

C#

```
string EncryptSipSettings(string sCustomerId, string sWebKey, string sRealm, string
sOutboundProxy,
                          string sRegistrationProxy, string sUserId, string sLoginId,
```

```
string sPassword);
```

Parameters

Parameters	Description
sCustomerId	Customer ID
sWebKey	Web license key
sRealm	Realm
sOutboundProxy	Outbound proxy
sRegistrationProxy	SIP registration proxy
sUserId	User ID
sLoginId	Login ID
sPassword	Password

Returns

Encrypted SIP settings as String for WebInitialize

Description

This method is used to encrypt SIP settings for WebInitialize.

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.31 SendPagerMessage Method

Send pager message to the destination URI

C++

```
HRESULT SendPagerMessage(BSTR sDestinationURI, BSTR sMessageText, BSTR sSubject, BSTR*
psResponseCodeText);
```

C#

```
string SendPagerMessage(string sDestinationURI, string sMessageText, string sSubject);
```

Parameters

Parameters	Description
sDestinationURI	Destination SIP URI
sMessageText	Message body
sSubject	Message subject

Returns

Response SIP code and description as String. Incoming text message return status text, first line is integer status code (e.g "2xx" in case of success) and second is status description (e.g. "OK" in case of success) Sample status text: "408 Request timeout" 408 is integer status code second line "Request timeout" is response description; first line is "code" and next are "error description".

Description

Send pager message to the destination URI

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.32 PostPagerMessage Method

Post pager message to the destination URI asynchronously

C++

```
HRESULT PostPagerMessage(BSTR sDestinationURI, BSTR sMessageText, BSTR sSubject);
```

C#

```
void PostPagerMessage(string sDestinationURI, string sMessageText, string sSubject);
```

Parameters

Parameters	Description
sDestinationURI	Destination SIP URI
sMessageText	Message body
sSubject	Message subject

Description

Post pager message to the destination URI asynchronously

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.33 ConferenceJoin Method

Add call to conference

C++

```
HRESULT ConferenceJoin();
```

C#

```
void ConferenceJoin();
```

Description

Add call to conference

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.34 ConferenceRemove Method

Remove call from conference

C++

```
HRESULT ConferenceRemove();
```

C#

```
void ConferenceRemove();
```

Description

Remove call from conference

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.35 SelectAllVoiceCodecs Method

Select all voice codecs

C++

```
HRESULT SelectAllVoiceCodecs();
```

C#

```
void SelectAllVoiceCodecs();
```

Description

Select all voice codecs

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.36 SelectVoiceCodec Method

Select voice codec

C++

```
HRESULT SelectVoiceCodec(INT nCodecNo);
```

C#

```
void SelectVoiceCodec(INT nCodecNo);
```

Parameters

Parameters	Description
nCodecNo	Codec's index

Description

Select voice codec

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.37 DeselectAllVoiceCodecs Method

De-select all voice codecs

C++

```
HRESULT DeselectAllVoiceCodecs();
```

C#

```
void DeselectAllVoiceCodecs();
```

Description

De-select all voice codecs

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.38 DeselectVoiceCodec Method

De-select voice codec

C++

```
HRESULT DeselectVoiceCodec(INT nCodecNo);
```

C#

```
void DeselectVoiceCodec(int nCodecNo);
```

Parameters

Parameters	Description
nCodecNo	Codec's index

Description

De-select voice codec

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.39 GetVoiceCodecName Method

Get voice codec name

C++

```
HRESULT GetVoiceCodecName(INT nCodecNo, BSTR* psCodecName);
```

C#

```
string GetVoiceCodecName(int nCodecNo);
```

Parameters

Parameters	Description
nCodecNo	Codec's index

Returns

Voice codec name

Description

Get voice codec name

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.40 StoreConfiguration Method

Store SIP SDK configuration

C++

```
HRESULT StoreConfiguration(BSTR sFilePath);
```

C#

```
void StoreConfiguration(string sFilePath);
```

Parameters

Parameters	Description
sFilePath	Path to SIP SDK file

Description

Save SIP SDK configuration file

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.41 LoadConfiguration Method

Load SIP SDK configuration

C++

```
HRESULT LoadConfiguration(BSTR sFilePath);
```

C#

```
void LoadConfiguration(string sFilePath);
```

Parameters

Parameters	Description
sFilePath	Path to SIP SDK file

Description

Load SIP SDK configuration file

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.42 AddAdditionalDNSServer Method

Add additional DNS server that will be attempted to be discovered

C++

```
HRESULT AddAdditionalDNSServer(BSTR sDNSServerIPAddress);
```

C#

```
void AddAdditionalDNSServer(string sDNSServerIPAddress);
```

Parameters

Parameters	Description
sDNSServerIPAddress	Additional DNS server that will be attempted to be discovered

Description

Add additional DNS server that will be attempted to be discovered

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.43 URLGetDisplayName Method

Parse display name from SIP URI

C++

```
HRESULT URLGetDisplayName(BSTR sURI, BSTR* psDisplayName);
```

C#

```
void URLGetDisplayName(string sURI);
```

Parameters

Parameters	Description
sURI	SIP URI

Returns

Display name from SIP URI

Description

Parse display name from SIP URI

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.44 URLGetUserName Method

Parse user name from SIP URI

C++

```
HRESULT URLGetUserName(BSTR sURI, BSTR* psUserName);
```

C#

```
string URLGetUserName(string sURI);
```

Parameters

Parameters	Description
sURI	SIP URI

Returns

User name from SIP URI

Description

Parse user name from SIP URI

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.45 URLGetHost Method

Parse host name from SIP URI

C++

```
HRESULT URLGetHost(BSTR sURI, BSTR* psHost);
```

C#

```
string URLGetHost(string sURI);
```

Parameters

Parameters	Description
sURI	SIP URI

Returns

Host name from SIP URI

Description

Parse host name from SIP URI

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.46 URLGetPort Method

Parse port number from SIP URI

C++

```
HRESULT URLGetPort(BSTR sURI, INT* pnPort);
```

C#

```
int URLGetPort(string sURI);
```

Parameters

Parameters	Description
sURI	SIP URI

Returns

Port number from SIP URI

Description

Parse port number from SIP URI

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.47 URLGetAOR Method

Parse AOR from SIP URI

C++

```
HRESULT URLGetAOR(BSTR sURI, BSTR* psAOR);
```

C#

```
string URLGetAOR(string sURI);
```

Parameters

Parameters	Description
sURI	SIP URI

Returns

AOR from SIP URI

Description

Parse AOR from SIP URI

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.48 GetCaptureDevName Method

Get name for video capture device at position index

C++

```
HRESULT GetCaptureDevName(INT nIndex, BSTR* psDevName);
```

C#

```
string GetCaptureDevName(int nIndex);
```

Parameters

Parameters	Description
nIndex	Video capture device index

Returns

Name for video capture device at position index

Description

Get name for video capture device at position index

Notes

Disabled in audio-only edition

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.49 SelectAllVideoCodecs Method

Select all video codecs

C++

```
HRESULT SelectAllVideoCodecs();
```

C#

```
void SelectAllVideoCodecs();
```

Description

Select all video codecs

Notes

Disabled in audio-only edition

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.50 SelectVideoCodec Method

Select video codec

C++

```
HRESULT SelectVideoCodec(INT nCodecNo);
```

C#

```
void SelectVideoCodec(INT nCodecNo);
```

Parameters

Parameters	Description
nCodecNo	Codec's index

Description

Select video codec

Notes

Disabled in audio-only edition

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.51 DeselectAllVideoCodecs Method

De-select all video codecs

C++

```
HRESULT DeselectAllVideoCodecs();
```

C#

```
void DeselectAllVideoCodecs();
```

Description

De-select all video codecs

Notes

Disabled in audio-only edition

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.52 DeselectVideoCodec Method

De-select video codec

C++

```
HRESULT DeselectVideoCodec(INT nCodecNo);
```

C#

```
void DeselectVideoCodec(int nCodecNo);
```

Parameters

Parameters	Description
nCodecNo	Codec's index

Description

De-select video codec

Notes

Disabled in audio-only edition

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.53 GetVideoCodecName Method

Get video codec name

C++

```
HRESULT GetVideoCodecName(INT nCodecNo, BSTR* psCodecName);
```

C#

```
string GetVideoCodecName(int nCodecNo);
```

Parameters

Parameters	Description
nCodecNo	Codec's index

Returns

Video codec name

Description

Get video codec name

Notes

Disabled in audio-only edition

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.54 AddSipAccount Method

Add new SIP account

C++

```
HRESULT AddSipAccount();
```

C#

```
void AddSipAccount();
```

Description

Add new SIP account

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.55 RemoveSipAccount Method

Remove current SIP account

C++

```
HRESULT RemoveSipAccount();
```

C#

```
void RemoveSipAccount();
```

Description

Remove current SIP account

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.56 GetSipAccountIndex Method

Get index of SIP account

C++

```
HRESULT GetSipAccountIndex(BSTR sLocalURI, INT* pnIndex);
```

C#

```
int GetSipAccountIndex(string sLocalURI);
```

Parameters

Parameters	Description
sLocalURI	local SIP account URI

Returns

Index of SIP account

Description

Get index of SIP account

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.57 SetAudioCodecIndex Method

Set audio codec index

C++

```
HRESULT SetAudioCodecIndex(INT nOldIndex, INT nNewIndex);
```

C#

```
int SetAudioCodecIndex(int nOldIndex, int nNewIndex);
```

Parameters

Parameters	Description
nOldIndex	Old index of the codec
nNewIndex	New index of the codec

Description

Set audio codec index

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.58 SetVideoCodecIndex Method

Set video codec index

C++

```
HRESULT SetVideoCodecIndex(INT nOldIndex, INT nNewIndex);
```

C#

```
int SetVideoCodecIndex(int nOldIndex, int nNewIndex);
```

Parameters

Parameters	Description
nOldIndex	Old index of the codec
nNewIndex	New index of the codec

Description

Set video codec index

Notes

Disabled in audio-only edition

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.59 StartVideo Method

Start sending video

C++

```
HRESULT StartVideo(INT nLine);
```

C#

```
int StartVideo(int nLine);
```

Parameters

Parameters	Description
nLine	Line index

Description

Start sending video

Notes

Disabled in audio-only edition

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.1.60 StopVideo Method

Stop sending video

C++

```
HRESULT StopVideo(INT nLine);
```

C#

```
int StopVideo(int nLine);
```

Parameters

Parameters	Description
nLine	Line index

Description

Stop sending video

Notes

Disabled in audio-only edition

See Also

Methods (see page 33) VoIP SIP Client SDK (see page 33)

3.2 Properties

SIP SDK properties

Description

SIP SDK properties

- LastError (see page 60) - Last error description
- IsPlaying (see page 60) - Indicates whether WAV file is being played on active phone line
- PhoneLine (see page 61) - Active phone line index
- MaxPhoneLines (see page 61) - Total count of phone lines
- RegisterExpiration (see page 61) - Expiration period for registration
- UDPPort (see page 62) - UDP port
- TCPPort (see page 62) - TCP port
- ForwardURI (see page 62) - Forward URI
- NATKeepAlive (see page 63) - Keep-Alive interval for NAT traversal
- RtpPortStart (see page 63) - Starting port for inbound RTP traffic
- OutDevNum (see page 63) - Number of output devices available
- InDevNum (see page 64) - Number of input devices available
- DndEnabled (see page 64) - Enable/Disable DND (Do Not Disturb)
- OutputDeviceName (see page 64) - Name for output device
- InputDeviceName (see page 65) - Name for input device
- IsInitialized (see page 65) - True if SIP SDK was successfully initialized
- PlayRingtone (see page 65) - Enable/Disable playing ring tones
- AGC (see page 66) - Enable/Disable AGC (Automatic Gain Control)
- AEC (see page 66) - Enable/Disable AEC (Acoustic Echo Cancellation)
- NoiseReduction (see page 66) - Enable/Disable Noise Reduction
- EchoTail (see page 67) - Length (in ms) of the echo canceling filter (also known as tail length)
- SpeakerVolume (see page 67) - Speaker volume (0..100)
- MicrophoneVolume (see page 67) - Microphone volume (0..100)
- SpeakerMuted (see page 68) - Speaker mute state
- MicrophoneMuted (see page 68) - Microphone mute state
- SpeakerEnergy (see page 68) - Volume from speaker volume meter (0-100)
- MicrophoneEnergy (see page 69) - Volume from microphone volume meter (0-100)
- VoiceCodecCount (see page 69) - Count of voice codecs
- VideoCodecCount (see page 77) - Count of video codecs
- CallState (see page 69) - Call state at given line
- RemoteURI (see page 70) - Remote URI at given line
- LineResponseCode (see page 70) - SIP response code (if available)
- LineResponseText (see page 70) - SIP response text (if available)
- RegistrationResponseCode (see page 71) - SIP response code (if available)
- RegistrationResponseText (see page 71) - SIP response text (if available)
- LogEnabled (see page 71) - Enable/Disable logging
- DisplayName (see page 72) - Display name
- UserID (see page 72) - User ID
- LoginID (see page 72) - Authentication ID

- Password (see page 73) - Password
- Realm (see page 73) - Realm for which the login ID and password are valid. Empty for automatic realm
- RegistrationProxy (see page 73) - SIP registration proxy
- OutboundProxy (see page 74) - Outbound-Proxy
- SipAccountCount (see page 79) - Count of SIP accounts
- ActiveSipAccount (see page 79) - Active SIP account
- AcceptLanguage (see page 74) - Accept Language used in SIP messages
- NegotiatedCodecName (see page 74) - Negotiated codec name
- LocalIPsCount (see page 75) - Number of local IPs found by the system
- LocalIP (see page 75) - Local IP address
- NetworkAdapter (see page 76) - Network adapter name
- Identity (see page 76) - Information about the UAC originating the request
- RingtoneFile (see page 76) - Default ring/alert tone audio file
- CameraInUse (see page 77) - Indicates whether camera is used by other application
- PreviewWindow (see page 77) - Video preview window
- OutputWindow (see page 78) - Video output window
- VideoMaxBitrate (see page 80) - Max video bitrate
- VideoFrameSize (see page 79) - Video frame size
- AutoStartSendingVideo (see page 80) - Automatically start sending video
- CaptureDevNum (see page 78) - Number of video capture devices
- CaptureDeviceName (see page 78) - Selected video capture device

See Also

VoIP SIP Client SDK (see page 33)

3.2.1 LastError Property

Last error description

C++

```
HRESULT get_LastError(BSTR* psLastError);
```

C#

```
readonly string LastError;
```

Description

Last error description

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.2 IsPlaying Property

Indicates whether WAV file is being played on active phone line

C++

```
HRESULT get_IsPlaying(VARIANT_BOOL* pbIsPlaying);
```

C#

```
readonly bool IsPlaying;
```

Description

Indicates whether WAV file is being played on active phone line

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.3 PhoneLine Property

Active phone line index

C++

```
HRESULT get_PhoneLine(INT* pnPhoneLine);
HRESULT put_PhoneLine(INT nPhoneLine);
```

C#

```
int PhoneLine;
```

Description

Active phone line index

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.4 MaxPhoneLines Property

Total count of phone lines

C++

```
HRESULT get_MaxPhoneLines(INT* pnMaxPhoneLines);
HRESULT put_MaxPhoneLines(INT nMaxPhoneLines);
```

C#

```
int MaxPhoneLines;
```

Description

Total count of phone lines

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.5 RegisterExpiration Property

Expiration period for registration in seconds

C++

```
HRESULT get_RegisterExpiration(INT* pnRegisterExpiration);
HRESULT put_RegisterExpiration(INT nRegisterExpiration);
```

C#

```
int RegisterExpiration;
```

Description

Expiration period for registration in seconds

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.6 UDPPort Property

UDP port

C++

```
HRESULT get_UDPPort(INT* pnUDPPort);
HRESULT put_UDPPort(INT nUDPPort);
```

C#

```
int UDPPort;
```

Description

UDP port

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.7 TCPPort Property

TCP port

C++

```
HRESULT get_TCPPort(INT* pnTCPPort);
HRESULT put_TCPPort(INT nTCPPort);
```

C#

```
int TCPPort;
```

Description

TCP port

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.8 ForwardURI Property

Forward URI

C++

```
HRESULT get_ForwardURI(BSTR* psForwardURI);
HRESULT put_ForwardURI(BSTR sForwardURI);
```

C#

```
string ForwardURI;
```

Description

Forward URI

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.9 NATKeepAlive Property

Keep-Alive interval for NAT traversal, in seconds

C++

```
HRESULT get_NATKeepAlive(INT* pnNATKeepAlive);
HRESULT put_NATKeepAlive(INT nNATKeepAlive);
```

C#

```
int NATKeepAlive;
```

Description

Keep-Alive interval for NAT traversal, in seconds

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.10 RtpPortStart Property

Starting port for inbound RTP traffic

C++

```
HRESULT get_RtpPortStart(INT* pnRtpPortStart);
HRESULT put_RtpPortStart(INT nRtpPortStart);
```

C#

```
int RtpPortStart;
```

Description

SIP SDK uses ports starting at RtpPortStart and ending at (RtpPortStart + 2 * MaxConnections) - 1

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.11 OutDevNum Property

Number of output devices available

C++

```
HRESULT get_OutDevNum(INT* pnOutDevNum);
```

C#

```
readonly int OutDevNum;
```

Description

Number of output devices available

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.12 InDevNum Property

Number of input devices available

C++

```
HRESULT get_InDevNum(INT* pnInDevNum);
```

C#

```
readonly int InDevNum;
```

Description

Number of input devices available

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.13 DndEnabled Property

Enable/Disable DND (Do Not Disturb)

C++

```
HRESULT get_DndEnabled(VARIANT_BOOL* pbEnabled);
HRESULT put_DndEnabled(VARIANT_BOOL bEnabled);
```

C#

```
bool DndEnabled;
```

Description

Enable/Disable DND (Do Not Disturb)

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.14 OutputDeviceName Property

Name for output device

C++

```
HRESULT get_OutputDeviceName();
```

```
HRESULT put_OutputDeviceName();
```

C#

```
string OutputDeviceName;
```

Description

Name for output device

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.15 InputDeviceName Property

Name for input device

C++

```
HRESULT get_InputDeviceName(BSTR* psInputDeviceName);
HRESULT put_InputDeviceName(BSTR sInputDeviceName);
```

C#

```
string InputDeviceName;
```

Description

Name for input device

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.16 IsInitialized Property

True if SIP SDK was successfully initialized

C++

```
HRESULT get_IsInitialized(VARIANT_BOOL* pbIsInitialized);
HRESULT put_IsInitialized(VARIANT_BOOL bIsInitialized);
```

C#

```
readonly bool IsInitialized;
```

Description

True if SIP SDK was successfully initialized

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.17 PlayRingtone Property

Enable/Disable playing ring tones

C++

```
HRESULT get_PlayRingtone(VARIANT_BOOL* pbPlayRingtone);
HRESULT put_PlayRingtone(VARIANT_BOOL bPlayRingtone);
```

C#

```
bool PlayRingtone;
```

Description

Enable/Disable playing ring tones

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.18 AGC Property

Enable/Disable AGC (Automatic Gain Control)

C++

```
HRESULT get_AGC(VARIANT_BOOL* pbEnabled);
HRESULT put_AGC(VARIANT_BOOL bEnabled);
```

C#

```
bool AGC;
```

Description

Enable/Disable AGC (Automatic Gain Control)

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.19 AEC Property

Enable/Disable AEC (Acoustic Echo Cancellation)

C++

```
HRESULT get_AEC(VARIANT_BOOL* pbEnabled);
HRESULT put_AEC(VARIANT_BOOL bEnabled);
```

C#

```
bool AEC;
```

Description

Enable/Disable AEC (Acoustic Echo Cancellation)

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.20 NoiseReduction Property

Enable/Disable Noise Reduction

C++

```
HRESULT get_NoiseReduction(VARIANT_BOOL* pbEnabled);
HRESULT put_NoiseReduction(VARIANT_BOOL bEnabled);
```

C#

```
bool NoiseReduction;
```

Description

Enable/Disable Noise Reduction

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.21 EchoTail Property

Length (in ms) of the echo canceling filter (also known as tail length)

C++

```
HRESULT get_EchoTail();
HRESULT put_EchoTail();
```

C#

```
int EchoTail;
```

Description

Length (in ms) of the echo canceling filter (also known as tail length)

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.22 SpeakerVolume Property

Speaker volume (0..100)

C++

```
HRESULT get_SpeakerVolume(INT* pnVolume);
HRESULT put_SpeakerVolume(INT nVolume);
```

C#

```
int SpeakerVolume;
```

Description

Speaker volume (0..100)

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.23 MicrophoneVolume Property

Microphone volume (0..100)

C++

```
HRESULT get_MicrophoneVolume(INT* pnVolume);
HRESULT put_MicrophoneVolume(INT nVolume);
```

C#

```
int MicrophoneVolume;
```

Description

Microphone volume (0..100)

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.24 SpeakerMuted Property

Speaker mute state

C++

```
HRESULT get_SpeakerMuted(VARIANT_BOOL* pbMuted);
HRESULT put_SpeakerMuted(VARIANT_BOOL bMuted);
```

C#

```
bool SpeakerMuted;
```

Description

Speaker mute state

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.25 MicrophoneMuted Property

Microphone mute state

C++

```
HRESULT get_MicrophoneMuted(VARIANT_BOOL* pbMuted);
HRESULT put_MicrophoneMuted(VARIANT_BOOL bMuted);
```

C#

```
bool MicrophoneMuted;
```

Description

Microphone mute state

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.26 SpeakerEnergy Property

Volume from speaker volume meter (0-100)

C++

```
HRESULT get_SpeakerEnergy(DOUBLE* pbLevel);
```

C#

```
readonly double SpeakerEnergy;
```

Description

Volume from speaker volume meter (0-100)

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.27 MicrophoneEnergy Property

Volume from microphone volume meter (0-100)

C++

```
HRESULT get_MicrophoneEnergy(DOUBLE* pbLevel);
```

C#

```
readonly double MicrophoneEnergy;
```

Description

Volume from microphone volume meter (0-100)

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.28 VoiceCodecCount Property

Count of voice codecs

C++

```
HRESULT get_VoiceCodecCount();
```

C#

```
readonly int VoiceCodecCount;
```

Description

Count of voice codecs

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.29 CallState Property

Call state at given line

C++

```
HRESULT get_CallState(INT nLine, CallState* pcsCallState);
```

C#

```
CallState get_CallState(int nLine);
```

Description

Call state at given line

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.30 RemoteURI Property

Remote URI at given line

C++

```
HRESULT get_RemoteURI(INT nLine, BSTR* psRemoteURI);
```

C#

```
string get_RemoteURI(int nLine);
```

Description

Remote URI at given line

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33) CallState (see page 93)

3.2.31 LineResponseCode Property

SIP response code (if available)

C++

```
HRESULT get_LineResponseCode(INT nLine, INT* pnResponseCode);
```

C#

```
readonly int get_LineResponseCode(int nLine);
```

Description

SIP response code (if available)

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.32 LineResponseText Property

SIP response text (if available)

C++

```
HRESULT get_LineResponseText(nLine, BSTR* psResponseText);
```

C#

```
readonly string get_LineResponseText(int nLine);
```

Description

SIP response text (if available)

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.33 RegistrationResponseCode Property

SIP response code (if available)

C++

```
HRESULT get_RegistrationResponseCode(INT* pnResponseCode);
```

C#

```
readonly int RegistrationResponseCode;
```

Description

SIP response code (if available)

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.34 RegistrationResponseText Property

SIP response text (if available)

C++

```
HRESULT get_RegistrationResponseText(BSTR* psResponseText);
```

C#

```
readonly string RegistrationResponseText;
```

Description

SIP response text (if available)

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.35 LogEnabled Property

Enable/Disable logging

C++

```
HRESULT get_LogEnabled(VARIANT_BOOL* pbLogEnabled);
HRESULT put_LogEnabled(VARIANT_BOOL bLogEnabled);
```

C#

```
bool LogEnabled;
```

Description

Enable/Disable logging

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.36 DisplayName Property

Display name

C++

```
HRESULT get_DisplayName(BSTR* psDisplayName);
HRESULT put_DisplayName(BSTR sDisplayName);
```

C#

```
string DisplayName;
```

Description

Display name

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.37 UserID Property

User ID

C++

```
HRESULT get_UserID(BSTR* psUserID);
HRESULT put_UserID(BSTR sUserID);
```

C#

```
string UserID;
```

Description

User ID

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.38 LoginID Property

Authentication ID

C++

```
HRESULT get_LoginID(BSTR* psLoginID);
HRESULT put_LoginID(BSTR sLoginID);
```

C#

```
string LoginID;
```

Description

Authentication ID

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.39 Password Property

Password

C++

```
HRESULT get_Password(BSTR* psPassword);
HRESULT put_Password(BSTR sPassword);
```

C#

```
string Password;
```

Description

Password

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.40 Realm Property

Realm for which the login ID and password are valid. Empty for automatic realm

C++

```
HRESULT get_Realm(BSTR* psRealm);
HRESULT put_Realm(BSTR sRealm);
```

C#

```
string Realm;
```

Description

Realm for which the login ID and password are valid. Empty for automatic realm

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.41 RegistrationProxy Property

SIP registration proxy

C++

```
HRESULT get_RegistrationProxy(BSTR* psRegistrationProxy);
HRESULT put_RegistrationProxy(BSTR sRegistrationProxy);
```

C#

```
string RegistrationProxy;
```

Description

SIP registration proxy

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.42 OutboundProxy Property

Outbound proxy

C++

```
HRESULT get_OutboundProxy(BSTR* psOutboundProxy);
HRESULT put_OutboundProxy(BSTR sOutboundProxy);
```

C#

```
string OutboundProxy;
```

Description

Outbound proxy

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.43 AcceptLanguage Property

Accept Language used in SIP messages

C++

```
HRESULT get_AcceptLanguage(BSTR* psAcceptLanguage);
HRESULT put_AcceptLanguage(BSTR sAcceptLanguage);
```

C#

```
string AcceptLanguage;
```

Description

Accept Language used in SIP messages

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.44 NegotiatedCodecName Property

Negotiated codec name

C++

```
HRESULT get_NegotiatedCodecName(INT nLine, BSTR* psCodecName);
```

C#

```
string get_NegotiatedCodecName(int nLine);
```

Description

Negotiated codec name

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.45 NegotiatedPayloadType Property

Negotiated payload type

C++

```
HRESULT get_NegotiatedPayloadType(INT nLine, INT* pnPayloadType);
```

C#

```
get_NegotiatedPayloadType(int nLine);
```

Description

Negotiated payload type

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.46 LocalIPsCount Property

Number of local IPs found by the system

C++

```
HRESULT get_LocalIPsCount(INT* pnLocalIPsCount);
```

C#

```
readonly int LocalIPsCount;
```

Description

Number of local IPs found by the system

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.47 LocalIP Property

Local IP address

C++

```
HRESULT get_LocalIP(INT nIndex, BSTR* psLocalIP);
```

C#

```
string get_LocalIP(int nIndex);
```

Description

Local IP address

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.48 NetworkAdapter Property

Network adapter name

C++

```
HRESULT get_NetworkAdapter(INT nIndex, BSTR* psNetworkAdapter);
```

C#

```
string get_NetworkAdapter(int nIndex);
```

Description

Network adapter name

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.49 Identity Property

Information about the UAC originating the request

C++

```
HRESULT get_Identity(BSTR* psIdentity);
HRESULT put_Identity(BSTR sIdentity);
```

C#

```
string Identity;
```

Description

Information about the UAC originating the request

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.50 RingtoneFile Property

Default ring/alert tone audio file

C++

```
HRESULT get_RingtoneFile(BSTR* psRingtoneFile);
HRESULT put_RingtoneFile(BSTR sRingtoneFile);
```

C#

```
string RingtoneFile;
```

Description

Default ring/alert tone audio file

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.51 VideoCodecCount Property

Count of video codecs

C++

```
HRESULT get_VideoCodecCount();
```

C#

```
readonly int VideoCodecCount;
```

Description

Count of video codecs

Notes

Disabled in audio-only edition

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.52 CameraInUse Property

Indicates whether camera is used by other application

C++

```
HRESULT get_CameraInUse(VARIANTBOOL* pbCameraInUse);
```

C#

```
bool get_CameraInUse(int nLine);
```

Description

Indicates whether camera is used by other application

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.53 PreviewWindow Property

Video preview window

C++

```
HRESULT get_PreviewWindow(BSTR* psPreviewWindow);
HRESULT put_PreviewWindow(BSTR sPreviewWindow);
```

C#

```
string PreviewWindow;
```

Description

Video preview window

Notes

Disabled in audio-only edition

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.54 OutputWindow Property

Video output window

C++

```
HRESULT get_OutputWindow(BSTR* psOutputWindow);
HRESULT put_OutputWindow(BSTR sOutputWindow);
```

C#

```
string OutputWindow;
```

Description

Video output window

Notes

Disabled in audio-only edition

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.55 CaptureDevNum Property

Number of video capture devices

C++

```
HRESULT get_CaptureDevNum(INT* psCaptureDevNum);
```

C#

```
readonly int CaptureDevNum;
```

Description

Number of video capture devices

Notes

Disabled in audio-only edition

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.56 CaptureDeviceName Property

Selected video capture device

C++

```
HRESULT get_CaptureDeviceName(BSTR* psCaptureDeviceName);
HRESULT put_CaptureDeviceName(BSTR sCaptureDeviceName);
```

C#

```
string CaptureDeviceName;
```

Description

Selected video capture device

Notes

Disabled in audio-only edition

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.57 SipAccountCount Property

SIP account count

C++

```
HRESULT get_SipAccountCount(INT* pnCount);
```

C#

```
readonly int SipAccountCount;
```

Description

SIP account count

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.58 ActiveSipAccount Property

Active SIP account

C++

```
HRESULT get_ActiveSipAccount(INT* pnActiveSipAccount);
HRESULT put_ActiveSipAccount(INT nActiveSipAccount);
```

C#

```
int ActiveSipAccount;
```

Description

Active SIP account

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.59 VideoFrameSize Property

Video frame size

C++

```
HRESULT get_VideoFrameSize(VideoFrameFormat* pvffVideoFrameSize);
```

```
HRESULT put_VideoFrameSize(VideoFrameFormat vffVideoFrameSize);
```

C#

```
VideoFrameFormat VideoFrameSize;
```

Description

Video frame size

Notes

Disabled in audio-only edition

See Also

Video frame format (see page 93) Max video bitrate (see page 80) Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.60 VideoMaxBitrate Property

Max video bitrate

C++

```
HRESULT get_VideoMaxBitrate(INT* pnVideoMaxBitrate);
HRESULT put_VideoMaxBitrate(INT nVideoMaxBitrate);
```

C#

```
int VideoMaxBitrate;
```

Description

Max video bitrate

Notes

Disabled in audio-only edition

See Also

Video frame format (see page 93) Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.2.61 AutoStartSendingVideo Property

Automatically start sending video

C++

```
HRESULT get_AutoStartSendingVideo(VARIANT_BOOL* pbAutoStartSendingVideo);
HRESULT put_AutoStartSendingVideo(VARIANT_BOOL bAutoStartSendingVideo);
```

C#

```
bool AutoStartSendingVideo;
```

Description

Automatically start sending video

Notes

Disabled in audio-only edition

See Also

Properties (see page 58) VoIP SIP Client SDK (see page 33)

3.3 Events

SIP SDK events

Description

SIP SDK events

- OnStunSuccess (see page 82) - STUN binding has been obtained successfully
- OnStunFailure (see page 82) - Unable to obtain STUN binding
- OnRegistrationSuccess (see page 82) - Successfully registered
- OnRegistrationFailure (see page 83) - Failed to register
- OnUnregistration (see page 83) - Successfully un-registered
- OnReregistration (see page 83) - Successfully re-registered
- OnAlerting (see page 84) - Call has been accepted and the application should alert the end user
- OnConnected (see page 84) - Call has been setup between the local and remote party
- OnRedirectSuccess (see page 85) - The transfer was completed successfully
- OnRedirectFailure (see page 85) - Failed to transfer call
- OnDTMF (see page 85) - DTMF detected
- OnTerminatedLine (see page 86) - Call was disconnected or failed to connect
- OnConnectingLine (see page 86) - Connecting to remote participant
- OnPlayfileStop (see page 87) - File has completed playing or was aborted
- OnHold (see page 87) - Call is locally held
- OnRemoteHold (see page 88) - The remote party is on hold
- OnPIMIncomingMessage (see page 88) - Incoming text message
- OnLocalMediaStarted (see page 89) - Local media is being sent to the remote party
- OnLocalMediaStoped (see page 89) - Local media is no longer being sent to the remote party
- OnRemoteMediaStarted (see page 89) - Remote media is ready to be received
- OnRemoteMediaStoped (see page 90) - Remote media has been stopped due to a hold or call tear down
- OnPostPagerMessageResult (see page 90) - Result of asynchronous message post
- OnOutgoingSipRequest (see page 91) - Outgoing SIP request message. You must handle this event as soon as possible
- OnOutgoingSipResponse (see page 91) - Outgoing SIP response message. You must handle this event as soon as possible
- OnIncomingSipRequest (see page 92) - Incoming SIP request message. You must handle this event as soon as possible
- OnIncomingSipResponse (see page 92) - Incoming SIP response message. You must handle this event as soon as possible

See Also

VoIP SIP Client SDK (see page 33)

3.3.1 OnStunSuccess Event

STUN binding has been obtained successfully

C++

```
__event void OnStunSuccess();
```

C#

```
event void OnStunSuccess();
```

Description

STUN binding has been obtained successfully

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.2 OnStunFailure Event

Unable to obtain STUN binding

C++

```
__event void OnStunFailure();
```

C#

```
event void OnStunFailure();
```

Description

Unable to obtain STUN binding

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.3 OnRegistrationSuccess Event

Successfully registered

C++

```
__event void OnRegistrationSuccess(BSTR sLocalURI);
```

C#

```
event void OnRegistrationSuccess(string sLocalURI);
```

Parameters

Parameters	Description
sLocalURI	Local participant SIP URI

Description

Successfully registered

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.4 OnRegistrationFailure Event

Failed to register

C++

```
__event void OnRegistrationFailure(BSTR sLocalURI, INT nCause);
```

C#

```
event void OnRegistrationFailure(string sLocalURI, int nCause);
```

Parameters

Parameters	Description
sLocalURI	Local participant SIP URI
nCause	Failure code

Description

Failed to register

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.5 OnUnregistration Event

Successfully un-registered

C++

```
__event void OnUnregistration(BSTR sLocalURI);
```

C#

```
event void OnUnregistration(string sLocalURI);
```

Parameters

Parameters	Description
sLocalURI	Local participant SIP URI

Description

Successfully un-registered

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.6 OnReregistration Event

Successfully re-registered

C++

```
__event void OnReregistration(BSTR sLocalURI, INT nRetries);
```

C#

```
event void OnReregistration(string sLocalURI, int nRetries);
```

Parameters

Parameters	Description
nRetries	Number of retries
sLocalURI	Local participant SIP URI

Description

Successfully re-registered

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.7 OnAlerting Event

Call has been accepted and the application should alert the end user

C++

```
__event void OnAlerting(BSTR sFromURI, BSTR sLocalURI, INT nLine);
```

C#

```
event void OnAlerting(string sFromURI, string sLocalURI, int nLine);
```

Parameters

Parameters	Description
sFromURI	Remote participant SIP URI
sLocalURI	Local participant SIP URI
nLine	Phone line number

Description

Call has been accepted and the application should alert the end user

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.8 OnConnected Event

Call has been setup between the local and remote party

C++

```
__event void OnConnected(BSTR sFromURI, BSTR sLocalURI, INT nLine);
```

C#

```
event void OnConnected(string sFromURI, string sLocalURI, int nLine);
```

Parameters

Parameters	Description
sFromURI	Remote participant SIP URI
sLocalURI	Local participant SIP URI
nLine	Phone line number

Description

Call has been setup between the local and remote party

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.9 OnRedirectSuccess Event

The transfer was completed successfully

C++

```
__event void OnRedirectSuccess(BSTR sLocalURI, INT nLine);
```

C#

```
event void OnRedirectSuccess(string sLocalURI, int nLine);
```

Parameters

Parameters	Description
sLocalURI	Local participant SIP URI
nLine	Phone line number

Description

The transfer was completed successfully

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.10 OnRedirectFailure Event

Failed to transfer call

C++

```
__event void OnRedirectFailure(BSTR sLocalURI, INT nLine);
```

C#

```
event void OnRedirectFailure(string sLocalURI, int nLine);
```

Parameters

Parameters	Description
sLocalURI	Local participant SIP URI
nLine	Phone line number

Description

Failed to transfer call

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.11 OnDTMF Event

DTMF detected

C++

```
__event void OnDTMF(BSTR sFromURI, BSTR sLocalURI, INT nLine, INT nSignal);
```

C#

```
event void OnDTMF(string sFromURI, string sLocalURI, int nLine, int nSignal);
```

Parameters

Parameters	Description
sFromURI	Remote participant SIP URI
sLocalURI	Local participant SIP URI
nLine	Phone line number
nSignal	DTMF signal

Description

DTMF detected

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.12 OnTerminatedLine Event

Call was disconnected or failed to connect

C++

```
__event void OnTerminatedLine(BSTR sFromURI, BSTR sLocalURI, INT nStatusCode, BSTR
sStatusText, INT nLine);
```

C#

```
event void OnTerminatedLine(string sFromURI, string sLocalURI, int nStatusCode, string
sStatusText, int nLine);
```

Parameters

Parameters	Description
sFromURI	Remote participant SIP URI
sLocalURI	Local participant SIP URI
sStatusText	Call end description
nStatusCode	Call end code
nLine	Phone line number

Description

Call was disconnected or failed to connect

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.13 OnConnectingLine Event

Connecting to remote participant

C++

```
__event void OnConnectingLine(BSTR sFromURI, BSTR sLocalURI, INT nLine);
```

C#

```
event void OnConnectingLine(string sFromURI, string sLocalURI, int nLine);
```

Parameters

Parameters	Description
sFromURI	Remote participant SIP URI
sLocalURI	Local participant SIP URI
nLine	Phone line number

Description

Connecting to remote participant

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.14 OnPlayfileStop Event

File has completed playing or was aborted

C++

```
__event void OnPlayfileStop(BSTR sFromURI, BSTR sLocalURI, int nLine);
```

C#

```
event void OnPlayfileStop(string sFromURI, string sLocalURI, int nLine);
```

Parameters

Parameters	Description
sFromURI	Remote participant SIP URI
sLocalURI	Local participant SIP URI
nLine	Phone line number

Description

File has completed playing or was aborted

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.15 OnHold Event

Call is locally held

C++

```
__event void OnHold(BSTR sFromURI, BSTR sLocalURI, int nLine);
```

C#

```
event void OnHold(string sFromURI, string sLocalURI, int nLine);
```

Parameters

Parameters	Description
sFromURI	Remote participant SIP URI
sLocalURI	Local participant SIP URI

nLine	Phone line number

Description

Call is locally held

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.16 OnRemoteHold Event

The remote party is on hold

C++

```
__event void OnRemoteHold(BSTR sFromURI, BSTR sLocalURI, int nLine);
```

C#

```
event void OnRemoteHold(string sFromURI, string sLocalURI, int nLine);
```

Parameters

Parameters	Description
sFromURI	Remote participant SIP URI
sLocalURI	Local participant SIP URI
nLine	Phone line number

Description

The remote party is on hold

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.17 OnPIMIncomingMessage Event

Incoming text message

C++

```
__event void OnPIMIncomingMessage(BSTR sFromURI, BSTR sSubject, BSTR sMessage);
```

C#

```
event void OnPIMIncomingMessage(string sFromURI, string sSubject, string sMessage);
```

Parameters

Parameters	Description
sFromURI	Remote participant SIP URI
sSubject	Message subject
sMessage	Message body

Description

Incoming text message

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.18 OnLocalMediaStarted Event

Local media is being sent to the remote party

C++

```
__event void OnLocalMediaStarted(BSTR sFromURI, BSTR sLocalURI, int nLine);
```

C#

```
event void OnLocalMediaStarted(string sFromURI, string sLocalURI, int nLine);
```

Parameters

Parameters	Description
sFromURI	Remote participant SIP URI
sLocalURI	Local participant SIP URI
nLine	Phone line number

Description

Local media is being sent to the remote party

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.19 OnLocalMediaStoped Event

Local media is no longer being sent to the remote party

C++

```
__event void OnLocalMediaStoped(BSTR sFromURI, BSTR sLocalURI, int nLine);
```

C#

```
event void OnLocalMediaStoped(string sFromURI, string sLocalURI, int nLine);
```

Parameters

Parameters	Description
sFromURI	Remote participant SIP URI
sLocalURI	Local participant SIP URI
nLine	Phone line number

Description

Local media is no longer being sent to the remote party

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.20 OnRemoteMediaStarted Event

Remote media is ready to be received

C++

```
__event void OnRemoteMediaStarted(BSTR sFromURI, BSTR sLocalURI, int nLine);
```

C#

```
event void OnRemoteMediaStarted(string sFromURI, string sLocalURI, int nLine);
```

Parameters

Parameters	Description
sFromURI	Remote participant SIP URI
sLocalURI	Local participant SIP URI
nLine	Phone line number

Description

Remote media is ready to be received

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.21 OnRemoteMediaStoped Event

Remote media has been stopped due to a hold or call tear down

C++

```
__event void OnRemoteMediaStoped(BSTR sFromURI, BSTR sLocalURI, int nLine);
```

C#

```
event void OnRemoteMediaStoped(string sFromURI, string sLocalURI, int nLine);
```

Parameters

Parameters	Description
sFromURI	Remote participant SIP URI
sLocalURI	Local participant SIP URI
nLine	Phone line number

Description

Remote media has been stopped due to a hold or call tear down

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.22 OnPostPagerMessageResult Event

Result of asynchronous message post

C++

```
__event void OnPostPagerMessageResult(BSTR sRemoteURI, BSTR sMessageText, INT nStatusCode,
BSTR sStatusText);
```

C#

```
event void OnPostPagerMessageResult(sRemoteURI, BSTR sMessageText, INT nStatusCode, BSTR
sStatusText);
```

Parameters

Parameters	Description
sRemoteURI	Remote participant SIP URI

sMessageText	Message body
nStatusCode	SIP status code
sStatusText	SIP status description

Description

Result of asynchronous message post

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.23 OnOutgoingSipRequest Event

Outgoing SIP request message. You must handle this event as soon as possible

C++

```
__event void OnOutgoingSipRequest(BSTR sRemoteAddress, INT nRemotePort, BSTR* psSIPMessage);
```

C#

```
event void OnOutgoingSipRequest(string sRemoteAddress, int nRemotePort, ref string
psSIPMessage);
```

Parameters

Parameters	Description
sRemoteAddress	Remote address
nRemotePort	Remote port
psSIPMessage	SIP request message

Description

Outgoing SIP request message. You must handle this event as soon as possible

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.24 OnOutgoingSipResponse Event

Outgoing SIP response message. You must handle this event as soon as possible

C++

```
__event void OnOutgoingSipResponse(BSTR sRemoteAddress, INT nRemotePort, BSTR*
psSIPMessage);
```

C#

```
event void OnOutgoingSipResponse(string sRemoteAddress, int nRemotePort, ref string
psSIPMessage);
```

Parameters

Parameters	Description
sRemoteAddress	Remote address
nRemotePort	Remote port
psSIPMessage	SIP request message

Description

Outgoing SIP response message. You must handle this event as soon as possible

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.25 OnIncomingSipRequest Event

Incoming SIP request message. You must handle this event as soon as possible

C++

```
__event void OnIncomingSipRequest(BSTR sRemoteAddress, INT nRemotePort, BSTR* psSIPMessage);
```

C#

```
event void OnIncomingSipRequest(string sRemoteAddress, int nRemotePort, ref string
psSIPMessage);
```

Parameters

Parameters	Description
sRemoteAddress	Remote address
nRemotePort	Remote port
psSIPMessage	SIP request message

Description

Incoming SIP request message. You must handle this event as soon as possible

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.3.26 OnIncomingSipResponse Event

Incoming SIP response message. You must handle this event as soon as possible

C++

```
__event void OnIncomingSipResponse(BSTR sRemoteAddress, INT nRemotePort, BSTR*
psSIPMessage);
```

C#

```
event void OnIncomingSipResponse(string sRemoteAddress, int nRemotePort, ref string
psSIPMessage);
```

Parameters

Parameters	Description
sRemoteAddress	Remote address
nRemotePort	Remote port
psSIPMessage	SIP request message

Description

Incoming SIP response message. You must handle this event as soon as possible

See Also

Events (see page 81) VoIP SIP Client SDK (see page 33)

3.4 CallState

Call state

C++

```
enum CallState {
   CallState_Inbound,
   CallState_Outbound,
   CallState_Connected,
   CallState_Conferenced,
   CallState_LocalHeld,
   CallState_RemoteHeld,
   CallState_Transferring,
   CallState_Free,
};
```

C#

```
enum CallState {
   CallState_Inbound,
   CallState_Outbound,
   CallState_Connected,
   CallState_Conferenced,
   CallState_LocalHeld,
   CallState_RemoteHeld,
   CallState_Transferring,
   CallState_Free,
};
```

Description

Enum Items:

- CallState_Inbound - Incoming call
- CallState_Outbound - Outgoing call
- CallState_Connected - Connected
- CallState_Conferenced - Conferenced
- CallState_LocalHeld - Call is put on local hold
- CallState_RemoteHeld - Call is put on remote hold
- CallState_Transfering - Call is being transfered
- CallState_Free - Free

3.5 VideoFrameFormat

Video frame format.

C++

```
enum VideoFrameFormat {
   VideoFrameFormat_SQCIF,
   VideoFrameFormat_QCIF,
   VideoFrameFormat_QVGA,
   VideoFrameFormat_CIF,
   VideoFrameFormat_VGA,
   VideoFrameFormat_4CIF,
   VideoFrameFormat_16CIF,
};
```

C#

```
enum VideoFrameFormat {
   VideoFrameFormat_SQCIF,
   VideoFrameFormat_QCIF,
   VideoFrameFormat_QVGA,
   VideoFrameFormat_CIF,
   VideoFrameFormat_VGA,
   VideoFrameFormat_4CIF,
   VideoFrameFormat_16CIF,
};
```

Description

Enum Items:

- VideoFrameFormat_SQCIF - 128 X 96
- VideoFrameFormat_QCIF - 176 X 144
- VideoFrameFormat_QVGA - 320 X 240
- VideoFrameFormat_CIF - 352 X 288
- VideoFrameFormat_VGA - 640 X 480
- VideoFrameFormat_4CIF - 704 X 576
- VideoFrameFormat_16CIF - 1408 X 1152

4 Support and service

4.1 Technical support

In case you would like to download latest version of Conaito VoIP SIP Client SDK , find out relative information, or license this SDK, please visit our website

Our technical support staff will provide timely service on your problems encountered during using our product.

Please provide the following information when you submit your questions:

- The installed version of Conaito VoIP SIP Client SDK
- The installed type and version of your operation system
- The details of the problem you encounter. And if it is possible, please inform us how to reproduce this problem
- Please provide your license informations in case you have a licensed SDK

and our technical support staff will deal with your problem with priority.

At the meanwhile, it's our pleasure and honor to receive any comments and suggestions from you.

4.2 Our Service for your Solutions

There is no doubt that "Voice over IP" telephony applications are increasing in importance. The strong demand is reflected in the steep upward trends in take-up. Significant costs can be saved and profits increased through VoIP. We offer a professional support for your projects and solutions to help you realize these benefits. Our experienced development team can assist you modify one of our SDKs or help with advice on how to design your own solutions within other applications.

There are many advantages to be gained for your business, or your own customers, through a range of possible solutions including:

- Direct voice access

The convenience of free and instantaneous direct voice contact with individuals

- Voice messaging

Leaving messages to be listened to at the receiver’s convenience.

- Virtual workgroups

Creating focused group work involving individuals who are in different locations. This is the best way to keep everyone up to date on developments and involving substantial cost savings in travel.

- Virtual workplaces

Virtual workgroups operate in virtual workplaces and this results in significant savings in real estate rental or upkeep.

- Meeting & conferences

Convenient group reviews and discussions, rapid resolution of group issues, can involve corporate or mixed customer-company groups, significant levels of saving of costs such as travel and accommodation.

- Education, schools and eLearning

Particularly useful in supporting home-based learning and economising on student travel and accommodation costs and even books! This can help increase the numbers wishing to use such a basis for education. Teachers can serve a larger number of students without involving buildings, classrooms and associated maintenance and can themselves save costs of travel.

- eCommuting

Major savings can be gained with staff working from home but using “free” data and voice communications. Such eCommuting reduces the real estate burden on companies; particularly important in service industries.

- Online support

Particularly useful in supporting home-based learning and economising on student travel and accommodation costs and even books! This can help increase the numbers wishing to use such a basis for education. Teachers can serve a larger number of students without involving buildings, classrooms and associated maintenance and can themselves save costs of travel.

A large range of online support issues are better resolved using voice communications. In many conventional arrangements customers have to pay for line time when using telephonic support and VoIP eliminates this cost. There are many other potential applications and benefits. Try imaging how VoIP might improve some aspect of your business operations or competitive position as well as help your customers. Let this potential for innovation inspire you to create better ideas! Why not contact us to review your requirements or explore possibilities by benefiting from our extended experience.

The Conaito Team

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