



PictureTel

Manager.dll Reference Guide

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Introduction

This control is used to facilitate the usage of NetMeeting Data conferencing capabilities with same ease as using the LiveShare Plus© controls. Specifically, this control provides methods to use NetMeeting capabilities:

- Connect call
- Make call
- Share applications
- Launch chat and whiteboard
- Send files

This control maintains a list of current conferences, current calls, and the above mentioned abilities without the user's knowledge of NetMeeting APIs or Interfaces. The following list is a typical scenario of usage:

1. A call is made using CallInterfaceCtrl's Connect method. This can be via DTK call or using the dial pad.
 2. Once the call is connected, a call is made to Manage control's Connect method that tries to connect to the other end via INmManager using the CreateCall() method.
 3. A series of manager's events about the call progress are reported, the NetMeeting call is connected.
 4. Calls are made to any/ all of the methods in Manager, i.e. LaunchMessage(), LaunchWhiteBoard(), ShareApp(), SendFile() etc.
 5. The call is disconnected using CallInterfaceCtrl's Disconnect () method. This closes down the current NetMeeting call and closes the NetMeeting session.
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Design of the Control

This control was designed based on the NMUI sample extensively. This control has 18 methods and 22 events. The relevant parts of the design are listed out as each method is described.

Properties

AutoShowChat Property

Description	This property is a boolean value that indicates whether to show/not show an internal chat dialog box when LaunchMessage is called. This is valid in run-time only.
Returns	<i>True</i> : Show Internal dialog box for chat. <i>False</i> : Do not show dialog box for chat.

SharableApps Property

Description	This property is a long value that is called to enumerate all the window handles that can be shared. Call this method until the return value is 0. This is valid in run-time only.
Returns	Can be any long value. You need to use as a hWnd. In C++ , you need to typecast the return to (HWND) to use it.
NetMeeting Interfaces Used	INmEnumSharableApps, INmSharableApp, INmChannelAppShare

Methods

Connect Method

Description	This method can be used to connect to the data conferencing part of a Live200 call. This method is to be called on or after the CallConnected() event of the CallInterface control is received. Init() method has to be called before calling this method.
Example	CALLSTATE bState = Connect ()
Returns	CALL_NOT_STARTED: Call is not started due to general failure MANAGER_NO_INIT_CALL_NOT_STARTED : Init () method is not called before calling this method CREATECALL_FAILED_CALL_NOT_STARTED: CreateCall() method failed. CALL_STARTED: Call has successfully started.
NetMeeting Interface Used	INmManager

Init Method

Description	This method is the startup point for the manager. This has to be called before calling any other methods.
Example	<code>short bSuccess = Init()</code>
Returns	TRUE if successfully initialized, FALSE if not.
NetMeeting Interface Used	INmManager

LaunchMessage Method

Description	This method launches the chat dialog if AutoShowChat is true and launches the remote chat application if in a call.
Example	<code>Short bSuccess = LaunchMessage ()</code>
Returns	N/A
NetMeeting Interfaces Used	INmConference

LaunchWhiteBoard Method

Description	This method launches the Whiteboard application on the local machine.
Example	<code>short bSuccess =LaunchWhiteBoard ()</code>
Returns	TRUE if successful, FALSE if not.
NetMeeting Interfaces Used	INmManager, INmSysInfo

NMAccept Method

Description	This methods purpose is to accept a NetMeeting call. This method has to be called when CallRinging Event() of manager occurs, if the call needs to be accepted.
Example	<code>VARIANT_BOOL bSuccess =NMAccept ()</code>
Returns	TRUE if successful, FALSE if not.
NetMeeting Interface Used	INmCall

NMCancel Methods

Description	This method is to cancel a previously placed call via NMConnect() or Connect() methods. If its an incoming call, this method does not do anything.
Example	VARIANT_BOOL bSuccess =NMCancel ()
Returns	TRUE if successful, FALSE if not.
NetMeeting Interface Used	INmCall

NMConnect Method

Description	This method is used to place a netmeeting call.
Example	CALLSTATE bState = NMConnect (CALL_TYPE callType,ADDR_TYPE addrType,BSTR strAddr)
Returns	callType can take these values: CALL_DEFAULT : Default Call CALL_T120 : T120 compliant call, data conference CALL_H323 : H323 compliant call, audio and video conference AddrType can take these values: ADDR_UNKNOWN : Unknown address type, Netmeeting will try to determine the address and try to place a call in that type. ADDR_IP : IP as the address name (111.222.333.444) ADDR_MACHINENAME : Machine Name ADDR_PSTN : ADDR_ULS : ULS address , Universal Location Server address ADDR_H323_GATEWAY : H323 gateway address name StrAddr can take any address as specified in the address type: CALL_NOT_STARTED: Call is not started due to general failure MANAGER_NO_INIT_CALL_NOT_STARTED : Init () method is not called before calling this method CREATECALL_FAILED_CALL_NOT_STARTED: CreateCall() method failed CALL_STARTED: Call has successfully started
NetMeeting Interface Used	INmManager

NMDisconnect Method

Description	This method is called to disconnect from the current conference.
Example	VARIANT_BOOL bSuccess =NMDisconnect ()
Returns	TRUE if successful, FALSE if not.
NetMeeting Interface Used	INmConference

NMReject Method

Description	This method is to accept a NetMeeting call. This method has to be called when CallRinging Event() of manager occurs, if the call needs to be accepted.
Example	VARIANT_BOOL bSuccess = NMReject ()
Returns	TRUE if successful, FALSE if not.
NetMeeting Interface Used	INmCall

SendChat Method

Description	This method sends chat message to the other end programmatically.
Example	VARIANT_BOOL bSuccess =SendChat (BSTR bstr)
Argument Types	BSTR bstr: Fill this with the string to be sent to the remote end.
Returns	TRUE if successful, FALSE if not.
NetMeeting Interfaces Used	INmConference, INmChannelData

SendFile Method

Description	This method sends files to the other end programmatically.
Example	short bSuccess = SendFile (BSTR fileName)
Argument Types	BSTR bstr: Fill this with the file name to be sent to the remote end.
Returns	TRUE if successful, FALSE if not.
NetMeeting Interfaces Used	INmChannelFt, INmMember

ShareApp Method

Description	This method shares the specified application to the other end.
Example	short bSuccess =ShareApp (long hWnd)
Argument Types	Long hWnd : fill this with the hWnd of the application to be shared
Returns	TRUE if successful ,FALSE if not.
NetMeeting Interface Used	INmSharableApp

TerminateMessage Method

Description	This method terminates the internal chat dialog if one is created.
Example	<code>void TerminateMessage ()</code>
Returns	N/A
NetMeeting Interface Used	N/A

TerminateWhiteBoard Method

Description	This method terminates the whiteboard, if one is created.
Example	<code>void TerminateWhiteBoard ()</code>
Returns	N/A
NetMeeting Interface Used	N/A

UnshareApp Method

Description	This method unshares the specified application to the other end.
Example	<code>short bSuccess =UnShareApp (long hWnd)</code>
Argument Types	Long hWnd: fill this with the hWnd of the application to be unshared
Returns	TRUE if successful, FALSE if not.
NetMeeting Interface Used	INmSharableApp

SetShareState Method

Description	This method sets the shared application state to either collaborating or working alone.
Example	<code>short bSuccess =SetShareState (SHARE_STATE uState)</code>
Argument Types	SHARE_STATE uState: This can take SHARE_IN_CONTROL = 0, or SHARE_WORK_ALONE= 1.
Returns	TRUE if successful, FALSE if not.
NetMeeting Interface Used	INmSharableApp

Events

AppshareStateChanged Event

Description	This event is fired whenever an applications share state has changed.
Example	<code>void AppShareStateChanged ([in] APPSHARESTATE uState,[in] long hWnd)</code>
Argument Types	uState can have one of these values: APP_NOT_SHARED APP_SHARED hWnd is the handle of the application's window handle.
Returns	N/A
NetMeeting Interface Used	INmSharableAppNotify

CallAccepted Event

Description	This event is fired whenever a NetMeeting call is accepted.
Example	<code>void CallAccepted(BSTR bAddress)</code>
Argument Types	BAddress is the address of the user.
NetMeeting Interface Used	INmCallNotify

CallCanceled Event

Description	This event is fired whenever a NetMeeting call is canceled (via NMCcancel method).
Example	<code>void CallCanceled(BSTR bAddress)</code>
Argument Types	BAddress is the address of the user.
NetMeeting Interface Used	INmCallNotify

CallInit Event

Description	This event is fired whenever a NetMeeting call is initializing.
Example	<code>void CallInit (BSTR bAddress)</code>
Argument Types	BAddress is the address of the user.
NetMeeting Interfaces Used	INmCallNotify

CallInvalid Event

Description	This event is fired whenever a NetMeeting call is invalid. This can occur if a bad address is provided in NMConnect method.
Example	<code>void CallInvalid (BSTR bAddress)</code>
Argument Types	BAddress is the address of the user.
NetMeeting Interfaces Used	INmCallNotify

CallRejected Event

Description	This event is fired whenever a NetMeeting call is rejected.
Example	<code>void CallRejected(BSTR bAddress)</code>
Argument Types	BAddress is the address of the user.
NetMeeting Interface Used	INmCallNotify

CallRinging Event

Description	This event is fired whenever a NetMeeting call is ringing.
Example	<code>void CallRinging (BSTR bAddress)</code>
Argument Types	BAddress is the address of the user. Note: This is the place where user has to either Accept() or Reject () the call.
NetMeeting Interface Used	INmCallNotify

CallSearching Event

Description	This event is fired whenever a NetMeeting is searching for the given address.
Example	<code>void CallSearching(BSTR bAddress)</code>
Argument Types	BAddress is the address of the user.
NetMeeting Interface Used	INmCallNotify

CallWaiting Event

Description	This event is fired whenever a NetMeeting call is waiting for getting accepted/rejected from the remote end.
Example	<code>void CallWaiting (BSTR bAddress)</code>
Argument Types	BAddress is the address of the user.
NetMeeting Interface Used	INmCallNotify

ChatReceived Event

Description	This event is fired whenever a NetMeeting data channel has received some data from the other end.
Example	<code>void ChatReceived (BSTR memberName,BSTR message)</code>
Argument Types	memberName is the name of the conference member who has sent this message. Message is the string received from the remote end.
NetMeeting Interface Used	INmDataNotify

ChatSent Event

Description	This event is fired whenever a NetMeeting data channel has sent data to the other end.
Example	<code>void ChatSent (BSTR memberName, BSTR message)</code>
Argument Types	memberName is the name of the conference member who has sent this message. Message is the string received from the remote end.
NetMeeting Interface Used	INmDataNotify

ConferenceCreated Event

Description	This event is fired whenever a NetMeeting conference has become active.
Example	<code>void ConferenceCreated ()</code>
Argument Types	N/A
NetMeeting Interface Used	INmConferenceNotify

ConferenceIdle Event

Description	This event is fired whenever a NetMeeting conference has becomes idle.
Example	<code>void ConferenceIdle ()</code>
Argument Types	N/A
NetMeeting Interface Used	INmConferenceNotify

FileTransferCanceled Event

Description	This event is fired whenever a NetMeeting FileTransfer previously started has been canceled.
Example	<code>void FileTransferCanceled ([in] BSTR FileName)</code>
Argument Types	FileName is the name of the file whose transfer has been canceled.
NetMeeting Interface Used	INmFtNotify

FileTransferComplete Event

Description	This event is fired whenever a NetMeeting FileTransfer previously started has been completed.
Example	<code>void FileTransferComplete ([in] BSTR FileName)</code>
Argument Types	FileName is the name of the file whose transfer has been completed. Note: This event can occur either because the file has been succesfully transferred or due to canceling of the the transfer.
NetMeeting Interface Used	INmFtNotify

FileTransferProgress Event

Description	This event is fired whenever a NetMeeting FileTransfer is progressing.
Example	<code>void FileTransferProgress ([in] BSTR FileName)</code>
Argument Types	FileName is the name of the file whose transfer is currently in progress.
NetMeeting Interface Used	INmFtNotify

FileTransferReceiving Event

Description	This event is fired whenever remote end is sending the file to the local end.
Example	<code>void FileTransferReceiving ([in] BSTR FileName)</code>
Argument Types	FileName is the name of the file which is being received.
NetMeeting Interface Used	INmFtNotify

FileTransferSending Event

Description	This event is fired whenever local end is sending the file to the remote end.
Example	<code>void FileTransferSending ([in] BSTR FileName)</code>
Argument Types	FileName is the name of the file which is being sent.
NetMeeting Interface Used	INmFtNotify

FileTransferStarted Event

Description	This event is fired whenever a NetMeeting FileTransfer is started.
Example	<code>void FileTransferStarted([in] BSTR FileName)</code>
Argument Types	FileName is the name of the file whose transfer has started.
NetMeeting Interface Used	INmFtNotify

MemberAdded Event

Description	This event is fired whenever a new member is added to the conference.
Example	<code>void MemberAdded ([in] BSTR MemberName)</code>
Argument Types	MemberName is the name of the member added.
NetMeeting Interface Used	INmConferenceNotify

MemberRemoved Event

DescriptionExample	<code>void MemberRemoved ([in] BSTR MemberName)</code>
Argument Types	MemberName is the name of the member removed.
NetMeeting Interface Used	INmConferenceNotify

MemberUpdated Event

Description	This event is fired whenever a new member channel is updated.
Example	<code>void MemberUpdated ([in] BSTR MemberName)</code>
Argument Types	MemberName is the name of the member updated.
NetMeeting Interface Used	INmChannelNotify

How to use this Control

The following steps detail the use of this control in Visual Basic:

1. Insert this control to your form. This has a window and it does not actually appeal to the eye. So, Move it off the screen. Give it a meaningful name, say Manage1.
2. Call `Manage1.Error! Bookmark not defined. ()` in `Form.Load` or `Form.Activate`. If it fails, You will not be able to use any methods from the control. So, handle that eventuality.
3. On the `CallConnected()` of the `CallInterface Control` which I assume is there on your form, Call `Manage1.Error! Bookmark not defined.()`. Check the result to be `CALL_STARTED`.
4. You will be receiving several of `CallXXXXX` events from `Manage1` control. When you receive `Error! Bookmark not defined. ()` event, you can start using the methods.

Typical Scenario:

