Mitel MiContact Center Enterprise

Agent Service Open Interface - Description RELEASE 9.2



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INTRODUCTION

The MiContact Center Agent Service provides an open interface that is implemented in a COM (Component Object Model) object, allowing clients to connect to the Agent Service and receive events about agent activity. The purpose of this interface is to allow integration with MiCC Enterprise on the server side, rather than at each individual desktop client.

COM OBJECT

The COM interface is implemented in a DLL named CCASComClient.dll. The object implements an API (Application Programming Interface) for client applications to connect to the Agent Service and query initial configuration data. It also provides events to inform all connected clients about agent activity.

The COM object is installed, registered, and ready to use on the MiCC Enterprise server. To use the COM object on another machine, do the following:

- 1. Create a new folder on the target machine.
- **2.** Copy the following files from the MiCC Enterprise server to the new folder:
- 3. to the target machine
 - C:\Program Files (x86)\Common Files\EricssonShare\NextCCShare\CCASComClient.dll C:\Program Files (x86)\Common Files\EricssonShare\Socketmanager.dll C:\Program Files (x86)\Common Files\EricssonShare\sectracelog.dll
- **4.** Open a command window on the machine, change to the folder where the files were copied, and enter the following command:
 - regsrv32.exe CCASComClient.dll
- 5. If your application will not be running as a Windows service, please add the following Registry value: HKEY_LOCAL_MACHINE\Software\Ericsson\Nextcc\Common\Parameters\RunningAsService
- 6. Set the value to 0.

INTERFACES

The interfaces are the public COM methods. Applications call the various methods to request an action to be executed. Table 1 provides a detailed description for each interface.

Table 1

INTERFACE	DESCRIPTION
Initialize()	Initializes the connection to the COM object. This is the first method that should be called.
	Return Values: Always returns S_OK
Connect([in] BSTR bstrCCASMac hineName, [in] LONG ICCASPort)	Tells the COM object to attempt to connect to the Agent Service running on the machine name provided, at the port number indicated. The COM object will attempt to make the connection. If no response is received within 30 seconds from the Agent Service, a failure will be returned. Note that this is not supported for tenanted systems
	Return Values:
	S_OK – Indicates connected to the Agent Service
	E_FAIL – Indicates failure to connect to the Agent Service
	Same as Connect, except it allows the client to specify the IP address of the Network Interface Card to be used to connect to the Agent Service. Note that this is not supported for tenanted systems.
LONG ICCASPort, [in] BSTR bstrNICIPAddress)	Return Values:
,	S_OK – Indicates connected to the Agent Service
	E_FAIL – Indicates failure to connect to the Agent Service
in] BSTR	Connects to the Agent Service running on the machine name provided, at the port number indicated. This interface must be used if requests will be sent to the MiContact Center Agent Service using the Open Interface API.
	If a specific IP address is to be used to connect to the Agent Service, it can be provided in the bstrNICIPAddress field; otherwise, an empty string should be provided.
	Using this interface causes a direct TCP/IP connection to be established and maintained with the Agent Service. The multicast address will not be connected to. Note that only a limited number of clients (up to 5) may connect to the Agent Service via this interface.
	Note that this API must be used for tenanted systems.
	Return Values:
	S_OK – Indicates connected to the Agent Service
	E_FAIL – Indicates failure to connect to the Agent Service
Uninitialize()	Tells the COM object to disconnect from the Agent Service. Once uninitialized, no further events will be received. Uninitialize() should always be called when the client is disconnecting.
	Return Values: Always returns S_OK
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INTERFACE	DESCRIPTION				
	Returns the error value and a descriptive string of the last error occurring.				
*IError, [out] BSTR *bstrErrorString)	Return Values: Always returns S_OK				
SetLogonCredentials([in] BSTR bstrUserId, [in] BSTR bstrPassword, [in] LONG ITenantID)	For a tenanted installation, allows the client to specify the user ID, password and tenant identification. This method should be called prior to ConnectWithDirectConnect() for tenanted installations. The user Id and password fields provided can be any of the following:				
This method is only required when tenanting is configured					
for the MiCC Enterprise system.	Tenant Administrator user Id and password, Tenant Id = tenant's assigned Id Events for the specified tenant will be received				
	No other logon credentials other than Host Administrator or Tenant Administrator will be accepted. The ConnectWithDirectConnect option must be specified; events will not be generated on the multicast interface for tenanted systems.				
	Return Values: Always returns S_OK				
D([in] BSTR bstrAgentLogo nID, [out] LONG*	Retrieves the database record ID for the provided agent logon ID. Return Values:				
IAgentRecID)	S_OK – Agent record ID found				
	E_FAIL – Agent unknown or not connected to Agent Service				
MakeCall([in] LONG IAgentRecID, [in] BSTR bstrDialString)	Makes a call from the agent indicated by the provided record ID to the destination entered. The agent must be logged on to MiContact Center Agent to complete this request.				
	Return Values:				
	S_OK – Request sent to agent application				
	E_FAIL – Not connected to Agent Service				
AnswerCall([in] LONG IAgentRecID, [in] LONG ICallID)	Answers the indicated call ringing at the agent indicated by the provided record ID. The agent must be logged on to MiContact Center Agent to complete this request.				
	Return Values:				
	S_OK – Request sent to agent application				
	E_FAIL - Not connected to Agent Service				
HangupCall([in] LONG IAgentRecID, [in] LONG ICallID)	Hangs up the indicated call at the agent indicated by the provided record ID. The agent must be logged on to MiContact Center Agent to complete this request.				
	Return Values:				
	S_OK – Request sent to agent application				
	E FAIL - Not connected to Agent Service				

INTERFACE	DESCRIPTION				
HangupSession([in] LONG IAgentRecID, [in] LONG ISessionID)	Disconnects the indicated session at the agent indicated by the provided record ID. The agent must be logged on to MiContact Center Agent to complete this request. The session disconnected can be an Open Media, Email, or SMS session.				
	Return Values:				
	S_OK – Request sent to agent application				
HoldCall([in] LONG AgentRecID, [in] LONG	E FAIL – Not connected to Agent Service Holds the indicated call at the agent indicated by the provided record ID. The agent must be logged on to MiContact Center Agent to complete this request.				
ICalIID)	Return Values:				
	S_OK – Request sent to agent application				
	E_FAIL – Not connected to Agent Service				
RetrieveCall([i n] LONG IAgentRecID, [in] LONG ICallID)	Retrieves the indicated held call at the agent indicated by the provided record ID. The agent must be logged on to MiContact Center Agent to complete this request.				
	Return Values:				
	S_OK – Request sent to agent application				
	E_FAIL – Not connected to Agent Service				
ConferenceCall([in] LONG IAgentRecID)	Creates a conference with existing calls at the agent indicated by the provided record ID. The agent must be logged on to MiContact Center Agent to complete this request.				
	Return Values:				
	S_OK – Request sent to agent application				
	E_FAIL – Not connected to Agent Service				
TransferCall([in] LONG IAgentRecID, [in] LONG IHeldCallID)	Transfers the indicated held call to the active call at the agent indicated by the provided record ID. The agent must be logged on to MiContact Center Agent to complete this request.				
	Return Values:				
	S_OK – Request sent to agent application				
	E_FAIL – Not connected to Agent Service				
DeflectCall([in] LONG AgentRecID, [in] BSTR bstrDest, [in] LONG CallID)	Deflects the indicated call at the agent indicated by the provided record ID to the destination provided. The agent must be logged on to MiContact Center Agent to complete this request.				
	Return Values:				
	S_OK – Request sent to agent application				
	E_FAIL – Not connected to Agent Service				

INTERFACE	DESCRIPTION
RejectService Call([in] LONG IAgentRecID, [in] LONG ICallID)	Rejects the indicated incoming service group call at the agent indicated by the provided record ID. The agent must be logged on to MiContact Center Agent to complete this request.
	Return Values:
	S_OK – Request sent to agent application
	E_FAIL – Not connected to Agent Service
CancelClerical ([in] LONG IAgentRecID, [in] LONG ICallID)	Cancels clerical state for the indicated call at the agent indicated by the provided record ID. The agent must be logged on to MiContact Center Agent to complete this request.
	Return Values:
	S_OK – Request sent to agent application
	E_FAIL – Not connected to Agent Service
CancelSessionClerical ([in] LONG IAgentRecID, [in] LONG ISessionID)	Cancels clerical state for the indicated session at the agent indicated by the provided record ID. The agent must be logged on to MiContact Center Agent to complete this request. The session can be an Open Media, E-mail, or SMS session.
	Return Values:
	S_OK – Request sent to agent application
	E_FAIL – Not connected to Agent Service
ExtendClerical ([in] LONG IAgentRecID, [in] LONG ICallID, [in] LONG	Extends clerical time on the indicated agent by the number of seconds provided. The agent must be logged on to MiContact Center Agent to complete this request.
INumSeconds)	Return Values:
	S_OK – Request sent to agent application
	E_FAIL – Not connected to Agent Service
SetVoiceRead y([in] LONG IAgentRecID)	Sets the indicated agent to Voice Ready state. The agent must be logged on to MiContact Center Agent to complete this request.
	Return Values:
	S_OK – Request sent to agent application
	E_FAIL – Not connected to Agent Service
SetVoiceNotReady([in] LONG IAgentRecID, [in] LONG IReason)	Sets the indicated agent to Voice Not Ready state. If the record ID of a defined reason is provided, the reason will be recorded with the Not Ready status. The agent must be logged on to MiContact Center Agent to complete this request.
	Return Values:
	S_OK – Request sent to agent application
	E_FAIL – Not connected to Agent Service

INTERFACE	DESCRIPTION					
GetVoiceReadyStatus([in] LONG IAgentRecID, [out] LONG* IStatus)	Retrieves the current Voice Ready state for the indicated agent. The status provided as 0 (Not Ready) or 1 (Ready). The agent must be logged on to MiContact Center Agent to complete this request.					
	Return Values:					
	S_OK – Request sent to agent application					
	E_FAIL – Not connected to Agent Service					
SetEmailRead y([in] LONG IAgentRecID)	Sets the indicated agent to Email Ready state. The agent must be logged on to MiContact Center Agent to complete this request.					
	Return Values:					
	S_OK – Request sent to agent application					
	E_FAIL – Not connected to Agent Service					
SetEmailNotReady([in] LONG IAgentRecID)	Sets the indicated agent to Email Not Ready state. The agent must be logged on to MiContact Center Agent to complete this request.					
	Return Values:					
	S_OK – Request sent to agent application					
	E_FAIL – Not connected to Agent Service					
GetEmailRead yStatus([in] LONG IAgentRecID, [out] LONG* IStatus)	Retrieves the current Email Ready state for the indicated agent. The status is provided as 0 (Not Ready) or 1 (Ready). The agent must be logged on to MiContact Center Agent to complete this request.					
	Return Values:					
	S_OK – Request sent to agent application					
	E_FAIL – Not connected to Agent Service					

INTERFACE	DESCRIPTION				
	Returns the list of defined Not Ready reasons for the tenant provided. Pass				
long ITenantRecID, [out] BSTR* bstrReasons)	-1 if the system is non-tenanted.				
,	Return Values:				
	S_OK - Request succeeded				
	E_FAIL – Not connected to Agent Service				
bstrPIN, [in] BSTR bstrExtension, [in] LONG ITenantID, [in] LONG	Allows the user to logon a Phone Agent with the indicated PIN and extension. Provide the tenant ID of the tenant that the agent is defined on, or -1 for a non-tenanted system, and the OAS ID of the OAS Server that the extension will be monitored on. If the Phone Agent is already logged on to a different extension, no action will be taken.				
	Return Values:				
	S_OK – Request sent to Router Service				
	E_FAIL – Not connected to Agent Service				
bstrPIN, [in] LONG	Allows the user to logoff a Phone Agent with the indicated PIN. Provide the tenant ID of the tenant that the agent is defined on, or -1 for a non-tenanted system.				
	Return Values:				
	S_OK – Request sent to Router Service				
	E FAIL – Not connected to Agent Service				
BSTRbstrPIN, [in] LONG	Allows the user to change the status of the Phone Agent logged on with the indicated PIN to Voice Ready. Provide the tenant ID of the tenant that the agent is defined on, or -1 for a non-tenanted system.				
	Return Values:				
	S_OK – Request sent to Router Service				
	E_FAIL – Not connected to Agent Service				
] BSTR bstrPIN, [in] LONG TenantID, [in] LONG ReasonID)	Allows the user to change the status of the Phone Agent logged on with the indicated PIN to Voice Not Ready. Provide the tenant ID of the tenant that the agent is defined on, or -1 for a non-tenanted system. A Not Ready Reason can also be provided by passing the record ID of the reason in the IReasonID field. Otherwise, pass 0.				
	Return Values:				
	S_OK – Request sent to Router Service				
	E_FAIL – Not connected to Agent Service				
	Returns the voice ready status of a Phone Agent.				
Status([in] LONG AgentRecID, [out] VARIANT* val)	If the request succeeds, the result is returned in the long member (IVal) of the Variant structure.				
1	Return Values:				
	S_OK – Request succeeded				
	E_FAIL – Not connected to Agent Service or agent not logged on				
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xtension([in] BSTR	Returns the record ID of the Phone Agent when provided with the extension that the Phone Agent is currently logged onto.
bstrExtension, [out] VARIANT* val)	If the request succeeds, the result is returned in the long member (IVal) of the Variant structure.
	Return Values:
	S_OK – Request succeeded
	E_FAIL – Not connected to Agent Service or agent not logged on
pID([in] BSTR bstrExtension,	Returns the record ID of the Service Group for the active call of a Phone Agent when provided with the extension that the Phone Agent is currently logged onto.
	If the request succeeds, the result is returned in the long member (IVal) of the Variant structure.
	If the agent is not currently handling a service group call, the value returned is 0.
	Return Values:
	S_OK - Request succeeded
	E_FAIL – Not connected to Agent Service or agent not logged on
	Returns a list of the service groups that the MiContact Center Agent is currently skilled to serve. The groups are returned in the format of Record ID Group Name.
	Return Values:
	S_OK – Request succeeded
	E_FAIL – Not connected to Agent Service or agent not logged on
LONG IAgentRecID, [out] VARIANT BOOL* loggedOn, [out] VARIANT BOOL*	Returns information about the Phone Agent's current status, including logon status, voice ready status, not ready reason, call state, and current service group and call ID if a service group call is in progress. Return Values:
ready, [out] LONG	S_OK – Request succeeded
[out]LONG* callState, [out]	E_FAIL – Not connected to Agent Service or agent not logged on
[5] 200 (dilib)	
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SetAgentCQCodes([in] long AgentRecID, [in] long CallID, [in] long	Sets the call qualification codes for a current agent call. The call must be in progress or in clerical state. Provide the list of call qualification record IDs separated by (i.e. 2 5 21).			
ServiceGroupID, [in] BSTR bstrCQCodes)	Return Values:			
	S_OK – Request succeeded			
	E_FAIL – Not connected to Agent Service or agent not logged on			
SetPrivateData([in] long IAgentRecID, [in] long	Sets private data for a current agent call. The call must be in active state.			
CallID, [in] BSTR	Return Values:			
bstrPrivateData)	S_OK – Request succeeded			
	E_FAIL – Not connected to Agent Service or agent not logged on			

EVENTS

The object communicates with the Agent Service through a COM connection point mechanism. Event handlers in the client application are called in response to events generated by the object.

There are only two types of events provided by the object: OnEvent, and OnDisconnect. OnDisconnect is generated when the connection to the Agent Service is lost. To reconnect, it is necessary to call Connect() on the object.

The OnEvent generates a generic event object that contains different information depending on the type of event that it contains. To retrieve information about the event, the client application can use the interfaces described in Table 2.

Table 2 Events

	Table 2 Liverits
INTERFACE	DESCRIPTION
GetType([out] LONG* IEventType)	Returns the type of event that is provided. For a list of event types, see below.
	Return Values: Always returns S_OK
GetStringValue([in] BSTR bstrName, [out] BSTR bstrValue)	For a particular event type, returns the value of the event parameter passed in bstrName. For example, to retrieve the agent's name from an event of type BROADCAST_LOGON, pass the value "Name" in the bstrName parameter, and bstrValue will return the agent's defined user name.
	Return Values: If the value exists, it is returned in bstrValue and the return value is S_OK. Otherwise, the return value is E_FAIL.
GetLongValue([in] BSTR bstrName, [out] LONG* IValue)	For a particular event type, returns the value of the event parameter passed in bstrName. For example, to retrieve the agent's ID from an event of type BROADCAST_LOGON, pass the value "RecID" in the bstrName parameter, and IValue will return the agent's defined record ID.
	Return Values: If the value exists. it is returned in IValue and the

Immediately after successfully connecting to the Agent Service, initial configuration events will automatically be sent to the application, with information about currently logged on MiContact Center Agents and configured service groups. The event types that will be generated are BROADCAST_LOGON and BROADCAST_SERVICEGROUP_ADDED.

If the MiCC Enterprise system is configured to generate events for Phone Agents, BROADCAST_LOGON events will be generated for all logged on Phone Agents as well.

Once all configuration data has been sent, the event BROADCAST_DATA_COMPLETE will be sent, indicating that all initial data has been provided.

EVENT INTERFACES

Table 3 Event Interfaces provides a detailed description for each event type that can be generated by OnEvent, and the parameters it contains.

Table 3 Event Interfaces

EVENT TYPE	DESCRIPTION	PARAMETERS		
		NAME	TYPE	VALUE
BROADCAST_LO GON (1)	about the MiContact Center Agent logging on. This event type is also sent with the initial	Name	String	Agent's name
		DN	String	Agent's extension
		RecID	Long	Agent's record ID
		LogonID	String	Agent's logon ID
		VoiceReady	Long	Flag indicating whether the agent is ready to receive voice calls.
		EmailReady	Long	Flag indicating whether the agent is ready to receive e- mail sessions
		MediaReady	Long	Flag indicating whether the agent is ready to receive chat sessions
		MachineName	String	Name of the machine the agent is logging onto.
		NumberOfServiceGr oups	Long	The number of service groups this agent is able to serve
		ServiceGroupList	String	List of service group record IDs that this agent is able to serve. Service groups are separated by the character . Ex: 5 4 23
		OASID	Long	The OAS Server ID that this agent is connected to.

EVENT TYPE	DESCRIPTION	PARAMETERS		
		NAME	TYPE	VALUE
	Indicates a MiContact Center Agent has logged off.	RecID	Long	Agent's record ID
BROADCAST_REA DY (3)	Indicates a MiContact Center Agent is Ready to receive voice service group calls.	RecID	Long	Agent's record ID
BROADCAST_NOT READY (4)	Indicates a MiContact Center Agent is Not	RecID	Long	Agent's record ID
NEADT (+)	Ready to receive voice service group calls.	ReasonID	Long	Record ID of the reason for not ready; - 1 if no reason provided
		ReasonString	String	Not Ready reason description; empty if no reason provided
MAILREADY (5)	I Indicates a MiContact Center Agent is Ready to receive e-mail sessions.	RecID	Long	Agent's record ID
_	Indicates a MiContact Center Agent is Not	RecID	Long	Agent's record ID
(6)	Ready to receive e-mail sessions.	ReasonID	Long	Record ID of the reason for not ready; - 1 if no reason provided
		ReasonString	String	Not Ready reason description; empty if no reason provided
	Indicates the agent has initiated a call.	RecID	Long	Agent's record ID
(- /		CallID	Long	Call ID of the call

EVENT TYPE	DESCRIPTION	PARAMETERS			
		NAME	TYPE	VALUE	
		ServiceGroupID	Long	Record ID of the service group, if this call is associated with a service group	
		CallType	Long	Type of the call, defined as: 2 = Web Callback	
				3 = Regular voice call 4 = E-mail	
				5 = Campaign call	

EVENT TYPE	DESCRIPTION	PARAMETERS		
		NAME	TYPE	VALUE
	incoming call has	RecID	Long	Agent's record ID
	arrived at the agent, or an outbound call from the agent is ringing the		Long	Call ID of the call
	opposite party.	OppositeParty Number	String	Identity of the calling/called party
		TrunkID	String	Identifier of the trunk, if provided
		PrivateData	String	Private Data associated with the call, if provided
		Cause	Long	Indicates the cause associated with the call, if any.
BROADCAST_ES TABLISHED (9)	agent is connected to	RecID	Long	Agent's record ID
the opposite par	the opposite party.	CallID	Long	Call ID of the call
		PrivateData	String	Private Data associated with the call, if provided

EVENT TYPE	DESCRIPTION	PARAMETERS		
		NAME	TYPE	VALUE
		TrunkID	String	Identifier of the trunk, if provided
		CallSubstate	Long	Indicates the substate of the call, as follows:
				Talking=0
				Assisting=1 Assisted=2
				Monitoring=3
				Monitored=4
				IVIOTITIOTEU-4
		OppositePartyNumber	String	Identity of the calling/called party
		Cause	Long	Indicates the cause associated with the call, if any.
BROADCAST_HE LD (10)	Indicates that the Indicates that the agent has placed a call on hold, or has been placed on hold.	RecID	<u>l</u> Long	Agent's record ID
		CallID	Long	Call ID of the call
BROADCAST_RE	Indicates that the	RecID	Long	Agent's record ID
TRIEVED (11)	agent has retrieved a			
	previouslyheld call, or has been retrieved.	CallID	Long	Call ID of the call

EVENT TYPE	DESCRIPTION	PARAMETERS			
		NAME	TYPE	VALUE	
	has transferred a held call to an active call,	RecID	Long	Agent's record ID	
	or has been transferred.	HeldCallID	Long	Call ID of the previously held call.	
		ActiveCallID	Long	Call ID of the previously active call.	
		NewCallID	Long	Call ID of the new call, after the transfer.	
		ClericalFlag	Long	Flag indicating whether the agent is now entering clerical state.	
		TransferringAgent	Long	Flag indicating whether this agent performed the transfer.	
		OppositePartyNumber	String	Identity of the opposite party	
		PrivateData	String	Private Data associated with the call, if provided	
BROADCAST_CO NFERENCED (13)	Indicates a conference has been initiated.	RecID	Long	Agent's record ID	
		HeldCallID	Long	Call ID of the previously held call	
		ActiveCallID	Long	Call ID of the previously active call	
		NewCallID	Long	Call ID of the new call, after the conference	
NNECTIONCLEA	Indicates the agent has cleared from a	RecID	Long	Agent's record ID	
RED (14)	call.	CallID	Long	Call ID of the call.	

EVENT TYPE	DESCRIPTION		PARAMETERS	
		NAME	TYPE	VALUE
		ClericalFlag	Long	Flag indicating whether the agent is now entering clerical state.
	Indicates the agent has exited Clerical	RecID	Long	Agent's record ID
(15)	state, and is ready to receive service calls.	CallID	Long	Call ID of the call.
	Indicates the agent has rejected a service	RecID	Long	Agent's record ID
	group or callback call	CallID	Long	Call ID of the call.
		Cause	String	Reason for rejection, defined as follows:
				Ring Timeout= 1
				Rejected By Agent = 2
				Callback Ring Timeout = 3
				Callback Rejected By Agent = 4
				Agent Logged Off = 5
				Callback Error = 6
				Campaign Error = 7
	Indicates the agent has accepted a	RecID	Long	Agent's record ID
(17)	callback call, and will	OrigCallID	Long	Call ID of the original call
		CallID	Long	Call ID of the initiated callback call
		CallType	Long	Type of the callback, defined as:
				2 = Web Callback
				3 = Regular voice call
				4 = E-mail
				5 = Campaign call

EVENT TYPE	DESCRIPTION			
		NAME	TYPE	VALUE
LLBACKREJECT	has rejected a	RecID	Long	Agent's record ID
(18)	callback call, and will not initiate the callback.	CallID	Long	Call ID of the original call
		CallType	Long	Type of the callback, defined as:
				2 = Web Callback
				3 = Regular voice call
				4 = E-mail
				5 = Campaign call
		Cause	String	Reason for rejection, defined as follows:
				Ring Timeout= 1
				Rejected By Agent = 2
				Callback Ring Timeout = 3
				Callback Rejected By Agent = 4
				Agent Logged Off = 5
				Callback Error = 6
				Campaign Error = 7
	Indicates the status of a complete callback	RecID	Long	Agent's record ID
	ooll .	CallID	Long	Call ID of the callback call
		CallType	Long	Type of the callback, defined as:
				2 = Web Callback
				3 = Regular voice call
				4 = E-mail
				5 = Campaign call
		CallbackStatus	Long	Flag indicating whether the callback succeeded (Value = 1) or failed (Value = 0).
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EVENT TYPE	DESCRIPTION	PARAMETERS			
		NAME	TYPE	VALUE	
		Cause	String	Status of the callback, defined as:	
				Succeeded (11062)	
				No Answer (11075)	
				Busy (11076)	
				Not Available (11077)	
				Wrong Number (11078)	
	Indicates the agent has rejected an	RecID	Long	Agent's record ID	
	allocated e-mail.	MessageID	Long	ID of the e-mail message	
		ServiceGroupID	Long	Record ID of the e-mail service group	
		Cause	String	Reason for rejection, defined as follows:	
				Ring Timeout= 1	
				Rejected By Agent = 2	
				Agent Logged Off = 5 Callback Error = 6	
				Campaign Error = 7	
	T_EM Indicates the agent (21) has deleted an	RecID	Long	Agent's record ID	
	allocated e-mail.	MessageID	Long	ID of the e-mail message	
		ServiceGroupID	Long	Record ID of the e-mail service group	
BROADCAST_EM AILREPLY (22)	Indicates the agent has replied to an allocated e-mail.	RecID	Long	Agent's record ID	
		MessageID	Long	ID of the e-mail message	

EVENT TYPE	DESCRIPTION	PARAMETERS			
		NAME	TYPE	VALUE	
		ServiceGroupID	Long	Record ID of the e- mail service group	
		Subject	String	Subject of the e-mail	
		ForwardFlag	Long	Indicates whether the e-mail was forwarded; if so, the value is set to 1, otherwise, it is 0.	
		RecipientList	String	List of recipients for the e-mail	
		EmailText	String	Text of the e-mail sent.	
	Indicates a service group call has been	RecID	Long	Agent's record ID	
(24)	allocated to the agent.	CallID	Long	Call ID of the service group call	
		ServiceGroupID	Long	Record ID of the service group	
		CallingPartyNumber	String	Number of the calling party	
		CalledNumber	String	Originally called number	
		IVRLabel1	String	Label for Data Field 1 from the IVR	
		IVRData1	String	Data for Data Field 1 from the IVR	
		IVRLabel2	String	Label for Data Field 2 from the IVR	
		IVRData2	String	Data for Data Field 2 from the IVR	

DESCRIPTION	PARAMETERS				
	NAME	TYPE	VALUE		
	IVRLabel3	String	Label for Data Field 3 from the IVR		
	IVRData3	String	Data for Data Field 3 from the IVR		
	TimeInQueue	Long	Time (in seconds) this call waited in queue		
	CallType	Long	Type of call: 2 = Web Callback 3 = Regular voice call 4 = E-mail		
			5 = Campaign call		
Indicates a callback	RecID	Long	Agent's record ID		
allocated to this agent.	ServiceGroupID	Long	Record ID of the service group		
	CallingPartyNumber	String	Number of the calling party		
	CalledNumber	String	Originally called number		
	IVRLabel1	String	Label for Data Field 1 from the IVR		
	IVRData1	String	Data for Data Field 1 from the IVR		
	IVRLabel2	String	Label for Data Field 2 from the IVR		
	IVRData2	String	Data for Data Field 2 from the IVR		
	IVRLabel3	String	Label for Data Field 3 from the IVR		
	IVRData3	String	Data for Data Field 3 from the IVR		
	Indicates a callback call has been allocated to this	Indicates a callback call has been allocated to this agent. RecID ServiceGroupID CallingPartyNumber CalledNumber IVRLabel1 IVRData1 IVRData2 IVRLabel3	NAME TYPE IVRLabel3 String IVRData3 String IVRData3 String TimeInQueue Long CallType Long CallType Long ServiceGroupID Long CallingPartyNumber String IVRLabel1 String IVRData1 String IVRLabel2 String IVRData2 String IVRLabel3 String		

EVENT TYPE	DESCRIPTION	RIPTION PARAMETERS			
		NAME	TYPE	VALUE	
		CallType	Long	Type of callback:	
				2 = Web Callback	
				3 = Regular voice call	
				4 = E-mail	
				5 = Campaign call	
		OrigCallID	Long	Original call ID for the callback	
MPAIGNACCEPT	has accepted a	RecID	Long	Agent's record ID	
	campaign call, and will initiate the customer call.	CampaignID	Long	Record ID of the campaign	
		CustomerID	Long	Record ID of the customer to be called	
		CallID	Long	Call ID of the initiated call	
MPAIGNREJECT	has rejected a	RecID	Long	Agent's record ID	
	campaign call, and will not initiate the customer call.	CampaignID	Long	Record ID of the campaign	
		CustomerID	Long	Record ID of the customer	
		Cause	String	Reason for rejection, defined as follows:	
				Ring Timeout= 1	
				Rejected By Agent = 2	
				Callback Ring Timeout = 3	
				Callback Rejected By Agent = 4	
				Agent Logged Off = 5	
	L			Callback Error = 6	
	Indicates the status of a campaign call, after	RecID	Long	Agent's record ID	
	it is completed	CampaignID	Long	Record ID of the campaign	

EVENT TYPE	DESCRIPTION	PARAMETERS			
		NAME	TYPE	VALUE	
		CustomerID	Long	Record ID of the customer	
		Cause	String	Status:	
				Not Yet Called = 1	
				Busy = 2	
				No Answer = 4	
				Callback Later = 8	
				Completed Successfully = 16	
				Wrong Number = 32	
BROADCAST_CA MPAIGNINFO (32)		RecID	Long	Agent's record ID	
	allocated to an agent.	CampaignID	Long	Record ID of the campaign	
		CustomerID	Long	Record ID of the customer	
		CustomerName	String	Name of the customer	
		CustomerNumber	String	Number of the customer to be called	
		Comment	String	Comments added by a prior agent, or empty if none.	
		IVRLabel1	String	Label for first Campaign Customer Data field	
		IVRData1	String	Data for first Campaign Customer Data field	
		IVRLabel2	String	Label for second Campaign Customer Data field	
		IVRData2	String	Data for second Campaign Customer Data field	
		IVRLabel3	String	Label for third Campaign Customer Data field	

EVENT TYPE	DESCRIPTION	PARAMETERS			
		NAME	TYPE	VALUE	
		IVRData3	String	Data for third Campaign Customer Data field	
		IVRLabel4	String	Label for fourth Campaign Customer Data field	
		IVRData4	String	Data for fourth Campaign Customer Data field	
		IVRLabel5	String	Label for fifth Campaign Customer Data field	
		IVRData5	String	Data for fifth Campaign Customer Data field	
		IVRLabel6	String	Label for sixth Campaign Customer Data field	
		IVRData6	String	Data for sixth Campaign Customer Data field	
		IVRLabel7	String	Label for seventh Campaign Customer Data field	
		IVRData7	String	Data for seventh Campaign Customer Data field	
		IVRLabel8	String	Label for eighth Campaign Customer Data field	
		IVRData8	String	Data for eighth Campaign Customer Data field	
		IVRLabel9	String	Label for ninth Campaign Customer Data field	
		IVRData9	String	Data for ninth Campaign Customer Data field	
		IVRLabel10	String	Label for tenth Campaign Customer Data field	

EVENT TYPE	DESCRIPTION	PARAMETERS			
		NAME	TYPE	VALUE	
		IVRData10	String	Data for tenth Campaign Customer Data field	
	Configuration event indicating a service group has been added to the MiCC	RecID	Long	Service Group record ID	
		ServiceGroupPurpose	Long	Defined purpose of the group:	
				0 = Voice	
				1 = Campaign	
				2 = E-mail	
				3 = SMS	
				4 = Chat	
				5 = Voice Dispatch	
				6 = Common Hold	
				7 = E-mail Dispatch	
				8 = SMS Dispatch	
		Name	String	Service Group name	
ENT_SERVICEG	Indicates that the set of service groups this	RecID	Long	Record ID of the agent	
	agent can serve has changed.	ServiceGroupList	String	List of service group record Ids that this agent is able to serve. Service groups are separated by the character . Ex: 5 4 23	
	Indicates the initial configuration data has been sent.	None			
SCONNECT (36)	Indicates the Agent Service has disconnected the client.	None			
BROADCAST_XF ERCALLINFORMA	Information sent when an agent makes a	RecID	Long	Record ID of the agent	
TION (37)	consultation call to	HeldCallID	Long	Call ID of the held customer	

EVENT TYPE	DESCRIPTION	PARAMETERS		
		NAME	TYPE	VALUE
	hold. This information is sent to the consulted agent.	ActiveCallID	Long	Call ID of the consultation call
		ServiceGroupID	Long	Record ID of the service group this customer call is associated with
		CallingPartyNumber	String	Identity of the held customer
		CalledNumber	String	Originally dialed number
		IVRLabel1	String	Label for Data Field 1 from the IVR
		IVRData1	String	Data for Data Field 1 from the IVR
		IVRLabel2	String	Label for Data Field 2 from the IVR
		IVRData2	String	Data for Data Field 2 from the IVR
		IVRLabel3	String	Label for Data Field 3 from the IVR
		IVRData3	String	Data for Data Field 3 from the IVR
AGENTINEO (38)	when a MiContact	RecID	Long	Record ID of the agent
Ce IP t	Center Agent using an IP telephone or SIP softphone registers	IPAddress	String	IP Address of the IP phone or agent machine
		RASPort	Long	Port number used for RAS

EVENT TYPE	DESCRIPTION	PARAMETERS			
		NAME	TYPE	VALUE	
		CSPort	Long	Port number used for call signaling	
BROADCAST_CA LLINFORMATION	Updated call information sent when	RecID	Long	Record ID of the agent	
,	there is a change to the data initiated by the MiContact Center Agent. This can also	CallID	Long	Call ID of the service group call	
	be sent for Campaign Customer Data fields i updated by MiContact Center Agent.	CallType	Long	Type of call: 2 = Web Callback 3 = Regular voice call 4 = E-mail 5 = Campaign call	
		IVRLabel1	String	Updated Label for Data Field	
		IVRData1	String	Updated Data field	
	Updated Associated Data (Private Data)	RecID	Long	Record ID of the agent	
	sent when there is a change to the data initiated by the MiContact Center Agent.	CallID	Long	Call ID of the service group call	
		CallType	Long	Type of call: 2 = Web Callback 3 = Regular voice call 4 = E-mail	
		PrivateData	String	Updated Private Data Field	
BROADCAST_CQ CODES (41)	Sent when call qualification codes	RecID	Long	Record ID of the agent	
	are entered by the	CallID	Long	Call ID of the service group call	

EVENT TYPE	DESCRIPTION		PARAMETER	S
		NAME	TYPE	VALUE
		CallType	Long	Type of call:
				2 = Web Callback
				3 = Regular Voice Call
				4 = E-mail
				5 =Campaign Call
		CQCodeList	String	List of Call Qualification codes entered by the agent, separated by the character.
BROADCAST_F AILED (42)	outgoing call fails to	RecID	Long	Record ID of the agent
	be completed.	CallID	Long	Call ID of the failed call
		Cause	Long	Cause for failure, including the following:
				- Busy = 3
				- Call Cancelled = 5
				- Destination Not
				Obtainable = 13
				Other causes may be sent if received from the switching system.
		CalledNumber	String	Number originally dialed
BROADCAST_R ECORDINGSTA	Sent when recording is initiated by an	RecID	Long	Record ID of the agent
RTED (43)	outside recording system, by a supervisor, or directly by the agent.	DN	String	Extension that is being recorded
		IPAddress	String	IP Address of the agent being recorded, if logged on to an IP extension
		CallID	Long	Call ID of the call being recorded

EVENT TYPE	DESCRIPTION	PARAMETERS			
		NAME	TYPE	VALUE	
		ServiceGroupID	Long	Service Group ID of the group that the call is associated with, if it is a service group call	
		OppositePartyNumber	String	Number of the opposite party on the call	
BROADCAST_R ECORDINGSTO	Sent when recording is stopped.	RecID	Long	Record ID of the agent	
PPED (44)		CallID	Long	Call ID of the call previously being recorded.	
BROADCAST_OP ENMEDIAREJEC T (49)	Sent when an Open Media session is rejected.	RecID	Long	Record ID of the agent	
		SessionID	Long	Session ID of the Open Media session	
		Cause	String	Reason for rejection, defined as follows:	
				Ring Timeout= 1	
				Rejected By Agent = 2	
				Agent Logged Off = 5	
BROADCAST_OP ENMEDIAHANDLI NG (50)	Sent when an Open Media session has been opened by the agent and is being handled.	RecID	Long	Record ID of the agent	
		SessionID	Long	Session ID of the Open Media session	
BROADCAST_OP ENMEDIACOMPL ETE (51)	Sent when an agent has completed handling an Open Media session.	RecID	Long	Record ID of the agent	
		SessionID	Long	Session ID of the Open Media session	
		ClericalFlag	Long	Indicates whether the agent will enter clerical state.	

EVENT TYPE	DESCRIPTION	PARAMETERS		
		NAME	TYPE	VALUE
	Sent when an agent changes Open Media status to Not Ready	RecID	Long	Record ID of the agent
		ReasonID	Long	Record ID of the reason for not ready; -1 if no reason provided
		ReasonString	String	Not Ready reason description; empty if no reason provided
ENMEDIAREADY	Sent when an agent changes Open Media status to Ready	RecID	Long	Record ID of the agent
	Sent when an agent rejects a chat session	RecID	Long	Record ID of the agent
		SessionID	Long	Session ID of the Chat session
		Cause	String	Reason for rejection, defined as follows: Ring Timeout= 1 Rejected By Agent = 2 Agent Logged Off = 5
	Sent when an agent is handling a chat session	RecID	Long	Record ID of the agent

EVENT TYPE	DESCRIPTION	PARAMETERS		
		NAME	TYPE	VALUE
		SessionID	Long	Session ID of the Chat session
BROADCAST_CH ATCOMPLETE (57)	Sent when an agent completes handling a chat session	RecID	Long	Record ID of the agent
		SessionID	Long	Session ID of the Chat session
		ClericalFlag	Long	Indicates whether the agent has entered clerical state for the chat session
BROADCAST_CH ATREADY(58)	Sent when an agent changes Chat status to Ready	RecID	Long	Record ID of the agent
BROADCAST_CH ATNOTREADY (59)	Sent when an agent changes Chat status to Not Ready	RecID	Long	Record ID of the agent

EVENT TYPE	DESCRIPTION	PARAMETERS		
		NAME	TYPE	VALUE
		ReasonID	Long	Record ID of the reason for not ready; -1 if no reason provided
		ReasonString	String	Not Ready reason description; empty if no reason provided
BROADCAST_EM AILREDIRECT (60)	Sent when an agent redirects an e-mail to another agent.	RecID	Long	Record ID of the agent previously handling the e-mail.
		ToRecID	Long	Record ID of the agent receiving the e-mail.
		MessageID	Long	ID of the e-mail session
		ServiceGroupID	Long	Record ID of the service group associated with the email.

EVENT TYPE	DESCRIPTION	PARAMETERS		
		NAME	ТҮРЕ	VALUE
		EmailText	String	Text of the e-mail
BROADCAST_CH ATREDIRECT (61)	Sent when an agent redirects a chat session to another agent.	RecID	Long	Record ID of the agent previously handling the chat.
		ToRecID	Long	Record ID of the agent receiving the chat.
		MessageID	Long	ID of the chat session
		ServiceGroupID	Long	Record ID of the service group associated with the chat session.
BROADCAST_EM AILHANDLING (62)	Sent when an agent begins handling an e- mail.	RecID	Long	Record ID of the agent

EVENT TYPE	DESCRIPTION	PARAMETERS		
		NAME	TYPE	VALUE
		SessionID	Long	ID of the e-mail session
	Sent when an agent begins handling an SMS session	RecID	Long	Record ID of the agent
		SessionID	Long	ID of the SMS session
BROADCAST_OP ENMEDIAREDIRE CT (64)		RecID	Long	Record ID of the agent previously handling the Open Media session
		ToRecID	Long	Record ID of the agent receiving the Open Media session
		SessionID	Long	ID of the Open Media session

EVENT TYPE	DESCRIPTION	PARAMETERS			
		NAME	TYPE	VALUE	
		ServiceGroupID	Long	Record ID of the service group associated with the Open Media session.	

EVENTS FOR PHONE AGENTS

It is possible to provide events via the Agent Service Open Interface for Phone Agents. The option can be configured in Configuration Manager. The following events will be generated for Phone Agents:

Phone Agent Logon/Logoff

Agent Ready/Not Ready for voice

Phone Agent Status - Idle, Busy, Clerical

Call Information for service group call allocated to Phone Agent

In addition, the following events from Table 3 will also be generated for Phone Agents. Note that duplicate events will be generated for Phone Agent logon, logoff, and status change. In the future, the events in Table 4 will be removed and only the events below will be generated for Phone Agents:

BROADCAST_LOGON

BROADCAST_LOGOFF

BROADCAST_READY

BROADCAST_NOTREADY

BROADCAST_IPAGENTINFO

BROADCAST_ORIGINATED

BROADCAST_DELIVERED

BROADCAST_ESTABLISHED

BROADCAST_HELD

BROADCAST_RETRIEVED

BROADCAST_TRANSFERRED

BROADCAST_CONFERENCED

BROADCAST_CONNECTIONCLEARED

BROADCAST_CLERICALENDED

BROADCAST_CALLINFORMATION

BROADCAST_CQCODES

BROADCAST_FAILED

Table 4 Phone Agent events

EVENT TYPE	DESCRIPTION	PARAMETERS			
		NAME	TYPE	VALUE	
	Sent when a phone agent logs on to MiCC Enterprise.	RecID	Long	Record ID of the phone agent logging on.	
		DN	String	Extension used by the phone agent.	
GOFFPHONEAGE	Sent when a phone agent logs out of MiCC Enterprise.	RecID	Long	Record ID of the phone agent logging off.	
BROADCAST_PH ONEAGENTSTATU S (47)		RecID	Long	Record ID of the phone agent.	
		CallSubstate	Long	Indicates the substate of the phone agent as follows:	
				0 = Idle	
				1 = Busy 2 = Clerical	

EVENT TYPE	DESCRIPTION	PARAMETERS		
		NAME	TYPE	VALUE
	group call is allocated to a Phone Agent.	RecID	Long	Agent's record ID
		CallID	Long	Call ID of the service group call
		ServiceGroupID	Long	Record ID of the service group
		CallingPartyNumber	String	Number of the calling party
		CalledNumber	String	Originally called number
		IVRLabel1	String	Label for the first data field of the IVR information
		IVRData1	String	Data for the first data field of the IVR information
		IVRLabel2	String	Label for the second data field of the IVR information
		IVRData2	String	Data for the second data field of the IVR information
		IVRLabel3	String	Label for the third data field of the IVR information
		IVRData3	String	Data for the third data field of the IVR information
		TimeInQueue	Long	Time in seconds that the call waited in queue

SAMPLE SOURCE CODE

The COM API is structured around standard COM technology and is therefore designed to be easy to use, and can be integrated into any programming language supporting COM.

The following sample source code is written using Visual Basic, and illustrates basic handling of the Event interface.

The client is written in Visual Basic 6.0, and it's a Standard EXE project. Once the form has been created, select the References command from the Project menu and check CCASCom 1.0 Type Library. Add controls to the form for the user interface. Double-click on the form to get the code window, and add the following above Form_Load:

Private WithEvents CCASCom As CCASClient

The WithEvents keyword instructs the Visual Basic IDE to read the type library for the outgoing interfaces of the object. This will allow Visual Basic to determine what events the application should handle. Now if you select CCASCom from the (left-hand) Object list, you will find that the events of the object are listed in the (right-hand) Procedure list. Map the click event for all command buttons, and map all events of the object. The form source code is as follows.

```
Private
           WithEvents
                           CCASCom
                                      As
CCASClient
Attribute CCASCom.VB VarHelpID =
-1
Private Sub
  bDisconnect Click()
  CCASCom. Uninitialize
  lstEvents.Clear
  lstEvents.AddItem
  "Disconnected"
  bDisconnect.Enabled =
  False bInitialize. Enabled
  = True
  txtServerName.Enabled =
  True txtServerPort.Enabled
  = True
Ε
n
d
S
```

```
u
Private Sub
   bInitialize_Click()
   Dim szError As
   String
   Dim lError As Long
  CCASCom.Initialize
  If txtServerName =
     "" Then
     txtServerName.Set
     Focus
  ElseIf txtServerPort =
     "" Then
     txtServerPort.SetFo
     cus
  Else
     lstEvent
     s.Clear
     lstEvents.AddItem "Attempting to Connect to " +
txtServerName + " using port " + txtServerPort + "..."
     On Error GoTo Failed
     CCASCom.Connect txtServerName,
     txtServerPort lstEvents.AddItem "Connected
     to Server"
     GoTo FuncEnd
  End If
Failed:
     lstEvents.AddItem "Failed to Connect to
     Server" CCASCom.GetLastErrorInfo lError,
     szError lstEvents.AddItem "Error = " +
     szError
Fu
nc
En
d:
En
```

```
d
Su
b
Private Sub
  CCASCom_OnDisconnect()
  CCASCom. Uninitialize
  lstEvents.Clear
  lstEvents.AddItem
  "Disconnected"
  bDisconnect.Enabled =
  False bInitialize. Enabled
  = True
  txtServerName.Enabled =
  True txtServerPort.Enabled
  = True
End Sub
Private Sub CCASCom OnEvent (ByVal pEvent As CCASCOMCLIEN-
TLib.ICCASEvent)
  Dim n As Long
  Dim nValue As Long
  Dim strData As String
   Dim strText As String
   Dim strType As String
   pEvent.GetType n
   ' Check for data end event
   If n = 35 Then
     bInitialize.Enabled =
     False
     bDisconnect.Enabled =
     True
     bDisconnect.SetFocus
     txtServerName.Enabled =
     False
      txtServerPort.Enabled =
     False
   End If
   lstEvents.AddItem
```

```
"[OnEvent]" If n = 1
Then
   lstEvents.AddItem "Event Type: " + Str(n) + " -
   BroadcastLogon" strText = "RECID"
   pEvent.GetLongValue strText, nValue
   lstEvents.AddItem " RecID = " +
   Str(nValue) strText = "DN"
   pEvent.GetStringValue strText,
   strData lstEvents.AddItem "
                         DN = " +
   strData strText = "NAME"
   pEvent.GetStringValue strText,
   strData
   lstEvents.AddItem " Name = " +
   strData strText = "LogonID"
   pEvent.GetStringValue strText,
   strData
   lstEvents.AddItem " LogonID = " +
   strData strText = "ServiceGroupList"
   pEvent.GetStringValue strText,
   strData lstEvents.AddItem " SGList
   = " + strData strText = "VOICEREADY"
   pEvent.GetLongValue strText, nValue
   lstEvents.AddItem " VoiceReady = " + Str(nValue)
   strText = "MEDIAREADY"
  pEvent.GetLongValue strText, nValue
  lstEvents.AddItem " MediaReady = " +
  Str(nValue) strText = "EMAILREADY"
  pEvent.GetLongValue strText, nValue
  lstEvents.AddItem " EmailReady = " +
  Str(nValue) strText = "MACHINENAME"
  pEvent.GetStringValue strText, strData
  lstEvents.AddItem " MachineName = " +
  strData
ElseIf n = 2 Then
  lstEvents.AddItem "Event Type: " + Str(n) + " -
  BroadcastLogoff" strText = "RECID"
  pEvent.GetLongValue strText, nValue
  lstEvents.AddItem " RecID = " +
  Str(nValue)
```

```
ElseIf n = 3 Then
    lstEvents.AddItem "Event Type: " + Str(n) + " -
    BroadcastReady" strText = "RECID"
    pEvent.GetLongValue strText, nValue
    lstEvents.AddItem " RecID = " +
    Str(nValue)
  ElseIf n = 4 Then
   lstEvents.AddItem "Event Type: " + Str(n) + " -
    BroadcastNotReady" strText = "RECID"
    pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " RecID = " +
    Str(nValue)
  ElseIf n = 5 Then
    lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastEmail- Ready"
     strText = "RECID" pEvent.GetLongValue
    strText, nValue lstEvents.AddItem "
                          RecID = " +
    Str(nValue)
  ElseIf n = 6 Then
    lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastEmail- NotReady"
    strText = "RECID"
     pEvent.GetLongValue strText,
    nValue
     lstEvents.AddItem " RecID = " + Str(nValue)
   ElseIf n = 7 Then
    lstEvents.AddItem "Event Type: " + Str(n) + " -
     BroadcastOriginated" strText = "RECID"
     pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " RecID = " +
     Str(nValue) strText = "CALLID"
     pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " CallID = " +
     Str(nValue) strText =
     "SERVICEGROUPID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                           SG ID = " +
```

```
Str(nValue) strText = "CALLTYPE"
    pEvent.GetLongValue strText, nValue
    GetCallTypeString nValue, strType
    lstEvents.AddItem " CallType = " + Str(nValue) + " - " +
    strType
  ElseIf n = 8 Then
    lstEvents.AddItem "Event Type: " + Str(n) + " -
    BroadcastDelivered" strText = "RECID"
    pEvent.GetLongValue strText, nValue
    lstEvents.AddItem " RecID = " +
    Str(nValue) strText = "CALLID"
    pEvent.GetLongValue strText, nValue
    lstEvents.AddItem " CallID = " +
    Str(nValue) strText =
     "OPPOSITEPARTYNUMBER"
    pEvent.GetStringValue strText, strData
    lstEvents.AddItem " OppositeParty = " +
    strData
  ElseIf n = 9 Then
    lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastEstab- lished"
    strText = "RECID"
    pEvent.GetLongValue strText,
    nValue
    lstEvents.AddItem " RecID = " + Str(nValue)
    strText = "CALLID" pEvent.GetLongValue
    strText, nValue lstEvents.AddItem "
                         CallID = " +
    Str(nValue)
 ElseIf n = 10 Then
    lstEvents.AddItem "Event Type: " + Str(n) + " -
    BroadcastHeld" strText = "RECID"
    pEvent.GetLongValue strText, nValue
    lstEvents.AddItem " RecID = " +
    Str(nValue) strText = "CALLID"
    pEvent.GetLongValue strText, nValue
    lstEvents.AddItem " CallID = " +
```

Str(nValue) ElseIf n = 11 Then lstEvents.AddItem "Event Type: " + Str(n) + " -BroadcastRetrieved" strText = "RECID" pEvent.GetLongValue strText, nValue lstEvents.AddItem " RecID = " + Str(nValue) strText = "CALLID" pEvent.GetLongValue strText, nValue lstEvents.AddItem " CallID = " + Str(nValue) ElseIf n = 12 Then lstEvents.AddItem "Event Type: " + Str(n) + " -BroadcastTrans- ferred" strText = "RECID" pEvent.GetLongValue strText, nValue lstEvents.AddItem " RecID = " + Str(nValue) strText = "HELDCALLID" pEvent.GetLongValue strText, nValue lstEvents.AddItem " HeldCallID = " + Str(nValue) strText = "ACTIVECALLID" pEvent.GetLongValue strText, nValue lstEvents.AddItem " ActiveCallID = " + Str(nValue) strText = "NEWCALLID" pEvent.GetLongValue strText, nValue lstEvents.AddItem " NewCallID = " +Str(nValue) strText = "CLERICALFLAG" pEvent.GetLongValue strText, nValue lstEvents.AddItem " Clerical = " + Str(nValue) strText = "TRANSFERRINGAGENT" pEvent.GetLongValue strText, nValue lstEvents.AddItem " Transferring Agent = " + Str(nValue) strText = "OPPOSITEPARTYNUMBER" pEvent.GetStringValue strText, strData lstEvents.AddItem " OppositeParty = " + strData

```
ElseIf n = 13 Then
     lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastConfer- enced"
     strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                           RecID = " +
     Str(nValue) strText = "HELDCALLID"
     pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " HeldCallID = " + Str(nValue)
     strText = "ACTIVECALLID"
     pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " ActiveCallID = " +
     Str(nValue) strText = "NEWCALLID"
     pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " NewCallID = " +
     Str(nValue)
   ElseIf n = 14 Then
     lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastConnec- tionCleared"
     strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                           RecID = " +
     Str(nValue)
     strText = "CALLID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                          CallID = " +
    Str(nValue) strText = "CLERICALFLAG"
     pEvent.GetLongValue strText, nValue
    lstEvents.AddItem " Clerical = " +
     Str(nValue)
  ElseIf n = 15 Then
    lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastClerical- Ended"
    strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                          RecID = " +
     Str(nValue)
```

```
ElseIf n = 16 Then
     lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastCallRe- jected"
    strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                          RecID = " +
     Str(nValue) strText = "CALLID"
     pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " CallID = " +
    Str(nValue) strText = "CAUSE"
    pEvent.GetStringValue strText,
     strData lstEvents.AddItem "
                          Cause = " +
     strData
  ElseIf n = 17 Then
    lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastCallback- Accept"
     strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                          RecID = " +
    Str(nValue) strText = "ORIGCALLID"
    pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " OrigCallID = " + Str(nValue)
     strText = "CALLID"
     pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " CallID = " +
     Str(nValue) strText = "CALLTYPE"
     pEvent.GetLongValue strText, nValue
     GetCallTypeString nValue, strType
     lstEvents.AddItem " CallType = " + Str(nValue) + " - " +
     strType
   ElseIf n = 18 Then
     lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastCallback- Reject"
     strText = "RECID" pEvent.GetLongValue
```

```
strText, nValue lstEvents.AddItem "
                          RecID = " +
     Str(nValue) strText = "CALLID"
     pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " CallID = " +
     Str(nValue) strText = "CALLTYPE"
    pEvent.GetLongValue strText, nValue
    GetCallTypeString nValue, strType
     lstEvents.AddItem " CallType = " + Str(nValue) + " - "
     + strType strText = "CAUSE"
    pEvent.GetStringValue strText,
     strData lstEvents.AddItem "
                          Cause = " +
     strData
  ElseIf n = 19 Then
    lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastCallback- Status"
     strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                          RecID = " +
    Str(nValue) strText = "CALLID"
    pEvent.GetLongValue strText, nValue
    lstEvents.AddItem " CallID = " +
    Str(nValue)
    strText = "CALLTYPE"
    pEvent.GetLongValue strText,
    nValue GetCallTypeString
    nValue, strType
    lstEvents.AddItem " CallType = " + Str(nValue) + " - "
    + strType strText = "CALLBACKSTATUS"
    pEvent.GetLongValue strText, nValue
    lstEvents.AddItem " Status = " +
    Str(nValue) strText = "CAUSE"
    pEvent.GetStringValue strText,
    strData lstEvents.AddItem "
                          Cause = " +
    strData
 ElseIf n = 20 Then
   lstEvents.AddItem "Event Type: " + Str(n) + " -
   BroadcastEmailReject"
```

```
strText = "RECID"
   pEvent.GetLongValue strText, nValue
   lstEvents.AddItem " RecID = " + Str(nValue)
   strText = "MESSAGEID"
   pEvent.GetLongValue strText, nValue
   lstEvents.AddItem " MsgID = " + Str(nValue)
   strText = "SERVICEGROUPID"
   pEvent.GetLongValue strText, nValue
   lstEvents.AddItem " SG ID = " + Str(nValue)
   strText = "CAUSE"
   pEvent.GetStringValue strText, strData
   lstEvents.AddItem " Cause = " + strData
 ElseIf n = 21 Then
   lstEvents.AddItem "Event Type: " + Str(n) + " -
   BroadcastEmailDelete"
   strText = "RECID"
   pEvent.GetLongValue strText, nValue
   lstEvents.AddItem " RecID = " + Str(nValue)
   strText = "MESSAGEID"
   pEvent.GetLongValue strText, nValue
  ElseIf n = 22 Then
    lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastEmail- Reply"
    strText = "PacketFlag"
    pEvent.GetLongValue strText, nValue
    lstEvents.AddItem " PacketFlag = " +
    Str(nValue)
    strText = "RECID"
    pEvent.GetLongValue strText, nValue
    lstEvents.AddItem " RecID = " +
    Str(nValue)
```

```
strText = "MESSAGEID"
  pEvent.GetLongValue strText, nValue
  lstEvents.AddItem " MsgID = " +
  Str(nValue)
  strText = "SERVICEGROUPID"
  pEvent.GetLongValue strText, nValue
  lstEvents.AddItem " SG ID = " +
  Str(nValue)
  strText = "EmailText"
  pEvent.GetStringValue strText, strData
  lstEvents.AddItem " Reply Text = " +
  strData
ElseIf n = 23 Then
 lstEvents.AddItem "Event Type: " + Str(n) + " -
  BroadcastEmailInfo" strText = "PACKETFLAG"
  pEvent.GetLongValue strText, nValue
  lstEvents.AddItem " Packet# = " +
  Str(nValue) strText = "RECID"
 pEvent.GetLongValue strText, nValue
 lstEvents.AddItem " RecID = " +
 Str(nValue) strText = "MESSAGEID"
 pEvent.GetLongValue strText, nValue
 lstEvents.AddItem " MsgID = " +
 Str(nValue) strText = "SERVICEGROUPID"
 pEvent.GetLongValue strText, nValue
 lstEvents.AddItem " SG ID = " +
 Str(nValue) strText = "TIMERECEIVED"
 pEvent.GetLongValue strText, nValue
 lstEvents.AddItem " Time Received = " + Str(nValue)
 strText = "SUBJECT" pEvent.GetStringValue
 strText, strData lstEvents.AddItem "
                       Subject = " +
 strData strText = "SENDERNAME"
 pEvent.GetStringValue strText, strData
 lstEvents.AddItem " Sender Name = " +
 strData strText = "SENDEREMAILADDRESS"
 pEvent.GetStringValue strText, strData
 lstEvents.AddItem " Sender E-mail Address = " +
```

```
strData strText = "EMAILTEXT"
    pEvent.GetStringValue strText, strData
    lstEvents.AddItem " E-mail Text = " +
    strData
  ElseIf n = 24 Then
    lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastCallInformation"
    strText = "RECID" pEvent.GetLongValue
    strText, nValue lstEvents.AddItem "
                       RecID = " +
    Str(nValue) strText = "CALLID"
    pEvent.GetLongValue strText, nValue
    lstEvents.AddItem " CallID = " +
    Str(nValue) strText = "SERVICEGROUPID"
    pEvent.GetLongValue strText, nValue
    lstEvents.AddItem " SG ID = " +
    Str(nValue) strText = "CALLINGPARTYNUMBER"
    pEvent.GetStringValue strText, strData
    lstEvents.AddItem " CallingParty = " +
     strData strText = "CALLEDNUMBER"
    pEvent.GetStringValue strText, strData
    lstEvents.AddItem " Called Number = " +
     strData strText = "IVRLABEL1"
    pEvent.GetStringValue strText, strData
    strData strText = "IVRDATA1"
    pEvent.GetStringValue strText, strData
     lstEvents.AddItem " IVR Data 1= " +
    strData strText = "IVRLABEL2"
    pEvent.GetStringValue strText, strData
    strData strText = "IVRDATA2"
    pEvent.GetStringValue strText, strData
    strData strText = "IVRLABEL3"
    pEvent.GetStringValue strText, strData
    strData strText = "IVRDATA3"
    pEvent.GetStringValue strText, strData
    strData strText = "TIMEINQUEUE"
```

```
pEvent.GetLongValue strText, nValue
  lstEvents.AddItem " Time in Queue = " + Str(nValue)
  strText = "CALLTYPE"
  pEvent.GetLongValue strText,
  nValue GetCallTypeString
  nValue, strType
  lstEvents.AddItem " CallType = " + Str(nValue) + " - " +
  strType
ElseIf n = 25 Then
 lstEvents.AddItem "Event Type: " + Str(n) + " -
 BroadcastCallback" strText = "RECID"
 pEvent.GetLongValue strText, nValue
 lstEvents.AddItem " RecID = " +
 Str(nValue) strText = "SERVICEGROUPID"
 pEvent.GetLongValue strText, nValue
 lstEvents.AddItem " SG ID = " +
 Str(nValue) strText = "CALLINGPARTYNUMBER"
 pEvent.GetStringValue strText, strData
 lstEvents.AddItem " CallingParty = " +
 strData strText = "CALLEDNUMBER"
 pEvent.GetStringValue strText, strData
 lstEvents.AddItem " Called Number = " +
 strData strText = "IVRLABEL1"
 pEvent.GetStringValue strText, strData
 strData strText = "IVRDATA1"
 pEvent.GetStringValue strText, strData
 strData strText = "IVRLABEL2"
 pEvent.GetStringValue strText, strData
 strData strText = "IVRDATA2"
 pEvent.GetStringValue strText, strData
 lstEvents.AddItem " IVR Data 2= " +
 strData strText = "IVRLABEL3"
 pEvent.GetStringValue strText, strData
 strData strText = "IVRDATA3"
 pEvent.GetStringValue strText, strData
 lstEvents.AddItem " IVR Data 3= " +
 strData strText = "CALLTYPE"
 pEvent.GetLongValue strText, nValue
 GetCallTypeString nValue, strType
```

```
CallType = " + Str(nValue) + " - " +
    lstEvents.AddItem "
     strType
  ElseIf n = 26 Then
    lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastMedia- Started"
     strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                          RecID = " +
     Str(nValue) strText = "SESSIONID"
    pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " SessionID = " +
     Str(nValue) strText = "SERVICEGROUPID"
    pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " SG ID = " +
     Str(nValue)
  ElseIf n = 27 Then
     lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastMedi- aStopped"
     strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                          RecID = " +
    Str(nValue) strText = "SESSIONID"
    pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " SessionID = " +
     Str(nValue)
  ElseIf n = 28 Then
     lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastC- SRStatus"
     strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                          RecID = " +
     Str(nValue) strText = "STATUS"
    pEvent.GetStringValue strText, strData
     lstEvents.AddItem " SessionID = " +
     strData
 ElseIf n = 29 Then
```

```
lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastCampaig- nAccept"
    strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                           RecID = " +
    Str(nValue) strText = "CAMPAIGNID"
     pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " CampaignID = " + Str(nValue)
     strText = "CUSTOMERID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                           CustomerID = " +
     Str(nValue) strText = "CALLID"
    pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " CallID = " +
     Str(nValue)
  ElseIf n = 30 Then
   lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastCampaign- Reject"
     strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                           RecID = " +
     Str(nValue) strText = "CAMPAIGNID"
    pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " CampaignID = " + Str(nValue)
     strText = "CUSTOMERID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                           CustomerID = " +
    Str(nValue) strText = "CAUSE"
    pEvent.GetStringValue strText,
     strData lstEvents.AddItem "
                           Cause = " +
     strData
  ElseIf n = 31 Then
   lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastCampaign- Status"
```

```
strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                           RecID = " +
     Str(nValue) strText = "CAMPAIGNID"
    pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " CampaignID = " + Str(nValue)
     strText = "CUSTOMERID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                           CustomerID = " +
     Str(nValue) strText = "CAUSE"
    pEvent.GetStringValue strText,
     strData lstEvents.AddItem "
                           Cause = " +
     strData
  ElseIf n = 32 Then
   lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastCampaign- Info"
     strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                          RecID = " +
     Str(nValue) strText = "CAMPAIGNID"
     pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " CampaignID = " + Str(nValue)
     strText = "CUSTOMERID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                           CustomerID = " +
     Str(nValue) strText = "CUSTOMERNAME"
     pEvent.GetStringValue strText, strData
     lstEvents.AddItem " Customer Name = " +
     strData strText = "CUSTOMERNUMBER"
    pEvent.GetStringValue strText, strData
     lstEvents.AddItem " Customer Number = " + strData
  ElseIf n = 33 Then
     lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastService- GroupAdded"
```

```
strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                           SG ID = " +
     Str(nValue) strText = "NAME"
     pEvent.GetStringValue strText,
     strData lstEvents.AddItem " SG Name
     = " + strData strText =
     "SERVICEGROUPPURPOSE"
     pEvent.GetLongValue strText, nValue
     If nValue = 0
       Then strData =
       " (General)"
     ElseIf nValue = 1
       Then strData = "
       (Campaign)"
    ElseIf nValue =
       2 Then
       strData = "
       (Email)"
    End If
     lstEvents.AddItem " SG Type = " + Str(nValue) + strData
  ElseIf n = 34 Then
    lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastAgentSer- viceGroupsChanged"
     strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                           RecID = " +
     Str(nValue) strText =
     "SERVICEGROUPLIST"
    pEvent.GetStringValue strText, strData
     lstEvents.AddItem " SG List = " +
     strData
  ElseIf n = 35 Then
    lstEvents.AddItem "Event Type: " + Str(n) + " -
BroadcastDataCom- plete"
  ElseIf n = 36 Then
```

```
lstEvents.AddItem "Event Type: " + Str(n) + " =
BroadcastDiscon- nect"
  ElseIf n = 37 Then
     lstEvents.AddItem "Event Type: " + Str(n) + " =
BroadcastXferCall- Information"
     strText = "RECID" pEvent.GetLongValue
     strText, nValue lstEvents.AddItem "
                         RecID = " +
     Str(nValue) strText = "HELDCALLID"
     pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " HeldCallID = " + Str(nValue)
     strText = "ACTIVECALLID"
     pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " ActiveCallID = " +
     Str(nValue) strText = "SERVICEGROUPID"
     pEvent.GetLongValue strText, nValue
     lstEvents.AddItem " SG ID = " +
     Str(nValue) strText = "CALLINGPARTYNUMBER"
     pEvent.GetStringValue strText, strData
     lstEvents.AddItem " CallingParty = " +
     strData strText = "CALLEDNUMBER"
     pEvent.GetStringValue strText, strData
     lstEvents.AddItem " Called Number = " +
     strData strText = "IVRLABEL1"
     pEvent.GetStringValue strText, strData
     strData strText = "IVRDATA1"
     pEvent.GetStringValue strText,
     strData lstEvents.AddItem " IVR
     Data 1= " + strData strText =
     "IVRLABEL2"
     pEvent.GetStringValue strText, strData
     strData strText = "IVRDATA2"
     pEvent.GetStringValue strText,
     strData lstEvents.AddItem "
                               IVR
     Data 2= " + strData strText =
     "IVRLABEL3"
     pEvent.GetStringValue strText, strData
```

```
strData strText = "IVRDATA3"
    pEvent.GetStringValue strText, strData
     strData
  End If
  If cmdScrollToBottom.Value = 1 Then
    lstEvents.ListIndex =
    lstEvents.ListCount - 1
  End If
End Sub
Private Sub cmdClearEvents_Click()
  lstEvents.Clear
End Sub
Private Sub
  Form Load() On
  Error Resume
  Next
  Set CCASCom = New
  CCASClient
  bDisconnect.Enabled = False
  bInitialize.SetFocus
End Sub
Private Sub GetCallTypeString(ByVal lCallType As Long,
strCallType
As String)
  If lCallType = 0 Then
     strCallType =
     "WebTextChat"
  ElseIf lCallType = 1
    Then strCallType =
     "WebEmail"
  ElseIf lCallType = 2
    Then strCallType
     = "WebVoIP"
  ElseIf lCallType = 3
     Then strCallType =
     "WebCallback"
  ElseIf lCallType = 4
    Then strCallType =
    "Voice Call"
  ElseIf lCallType =
```

```
5 Then strCallType
  = "Email" ElseIf
    lCallType = 6
        Then
    strCallType = "Campaign"
  ElseIf lCallType = 7 Then
    strCallType = "OtherPBX
    Call"
  ElseIf lCallType = 8 Then
     strCallType =
     "NetMeeting Call"
  Ε
  1
  s
     strCallType =
  "Unknown" End If
En
d
Su
b.
```

EXCEPTION HANDLING

Exceptions generated in either the client application or in the COM object itself will be handled within the COM object. If the client application needs to handle exceptions generated in the client code, a Try/Catch block should be added to the OnEvent() and OnDisconnect() event handlers inside the client application.

