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Revision History

This revision history summarizes the changes made in each published version of this document.

Document No.	Publication Date	Description of Revisions
05-2506-002	August 2007	Made global changes to reflect Dialogic brand.
05-2506-001	August 2006	Initial version of document.

About This Publication

The following topics provide more information about this publication:

- Purpose
- Applicability
- Intended Audience
- How to Use This Publication
- Related Information

Purpose

This publication provides a reference to functions, parameters, and data structures in the Dialogic® Conferencing (CNF) API, supported in Dialogic® Host Media Processing Software for Linux and Windows® operating systems. It is a companion document to the *Dialogic® Conferencing API Programming Guide*, which provides guidelines for developing applications using the conferencing API.

Dialgic® Host Media Processing (HMP) Software performs media processing tasks on general-purpose servers based on Dialogic® architecture without the need for specialized hardware. When installed on a system, Dialogic® HMP Software performs like a virtual Dialogic® DM3 board to the customer application, but media processing takes place on the host processor. In this document, the term "board" represents the virtual Dialogic® DM3 board.

Note: The Dialogic® Conferencing (CNF) API is distinct from and incompatible with the Dialogic® Conferencing (CNF) API that was previously released in Dialogic® System Release 6.0 on PCI for Windows.

Applicability

This document version (05-2506-002) is published for Dialogic® Host Media Processing (HMP) Software Release 3.1LIN (also referred to as Dialogic® HMP Software3.1LIN).

This document may also be applicable to other software releases (including service updates) on Linux or Windows® operating systems. Check the Release Guide for your software release to determine whether this document is supported.

Intended Audience

This publication is intended for the following audience:

- Distributors

- System Integrators
- Toolkit Developers
- Independent Software Vendors (ISVs)
- Value Added Resellers (VARs)
- Original Equipment Manufacturers (OEMs)
- End Users

How to Use This Publication

This document assumes that you are familiar with the Linux or Windows® operating systems and the C++ programming language.

The information in this document is organized as follows:

- Chapter 1, "Function Summary by Category" introduces the various categories of conferencing functions and provides a brief description of each function.
- Chapter 2, "Function Information" provides an alphabetical reference to the conferencing functions.
- Chapter 3, "Events" provides an alphabetical reference to events that may be returned by the conferencing software.
- Chapter 4, "Data Structures" provides an alphabetical reference to the conferencing data structures.
- Chapter 5, "Error Codes" presents a list of error codes that may be returned by the conferencing software.
- Chapter 6, "Supplementary Reference Information" provides reference information including example code of all conferencing functions.

Related Information

For related Dialogic publications, see the product documentation (known as the online bookshelf) provided with the software release or at the following web site:
http://www.dialogic.com/manuals/default.htm

Function Summary by Category 1

This chapter describes the categories into which the Dialogic® Conferencing (CNF) API library functions can be logically grouped. The topics in this chapter are:

- Device Management Functions 9
- Conference Management Functions 9
- Configuration Functions 10
- Auxiliary Functions 10
- Error Processing Function 10

1.1 Device Management Functions

Device management functions allow you to open and close devices. There are three types of devices: board device, conference device, and party device. The board device is the parent device for both the conference and party devices. Thus, you must open a board device before you can open a conference device or a party device.

cnf_Close( )
closes a board device

cnf_CloseConference( )
closes a conference device

cnf_CloseParty( )
closes a party device

cnf_Open( )
opens a board device

cnf_OpenConference( )
opens a conference device

cnf_OpenParty( )
opens a party device

1.2 Conference Management Functions

Conference management functions allow you add and remove parties to a conference.

cnf_AddParty( )
adds one or more parties to a conference

cnf_RemoveParty( )
removes one or more parties from a conference

1.3 Configuration Functions

Configuration functions allow you to alter, examine, and control the configuration of an open device.

cnf_DisableEvents( )
disables one or more events

cnf_EnableEvents( )
enables one or more events

cnf_GetAttributes( )
gets one or more device attributes

cnf_GetDTMFControl( )
gets DTMF digits control information

cnf_SetAttributes( )
sets one or more device attributes

cnf_SetDTMFControl( )
sets DTMF digits control information

1.4 Auxiliary Functions

Auxiliary functions provide supplementary functionality to help you manage conferences and resources:

cnf_GetActiveTalkerList( )
gets a list of active talkers on a board or in a conference

cnf_GetDeviceCount( )
gets conference and party count information

cnf_GetPartyList( )
gets a list of added parties in a conference

1.5 Error Processing Function

The error processing function provides error information:

cnf_GetErrorInfo( )
gets error information for a failed function

Function Information 2

This chapter contains a detailed description of each Dialogic® Conferencing (CNF) API function, presented in alphabetical order. A general description of the function syntax is given before the detailed function information.

All function prototypes are in the *cnflib.h* header file.

2.1 Function Syntax Conventions

The conferencing functions typically use the following format:

```
datatype cnf_Function (deviceHandle, parameter1, parameter2, ... parametern)
```

where:

datatype
: refers to the data type; for example, CNF_RETURN and SRL_DEVICE_HANDLE (see *cnflib.h* and *srllib.h* for a definition of data types)

cnf_Function
: represents the name of the function

deviceHandle
: refers to an input field representing the type of device handle (board, conference, or party)

parameter1, parameter2, ... parameter*n*
: represent input or output fields

cnf_AddParty( )

Name: CNF_RETURN cnf_AddParty (a_CnfHandle, a_pPtyInfo, a_pUserInfo)

Inputs:

SRL_DEVICE_HANDLE a_CnfHandle	• conference device handle
CPCNF_PARTY_INFO a_pPtyInfo	• pointer to party information structure
void * a_pUserInfo	• pointer to user-defined data

Returns: CNF_SUCCESS if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Conference Management

Mode: asynchronous

Description

The **cnf_AddParty( )** function adds one or more parties to a conference that has already been created. The CNF_PARTY_INFO structure contains a list of party devices to be added.

Parties must be connected to a voice device (dx_) or other supported device (such as ip_), through the **dev_Connect( )** function, before or after being added to a conference in order to have the party actively participate in the conference. See the *Dialogic® Device Management API Library Reference* for more information on the **dev_Connect( )** function.

Parameter	Description
a_CnfHandle	specifies the conference device handle obtained from a previous open
a_pPtyInfo	points to a party information structure, CNF_PARTY_INFO, which contains a list of party devices to be added.
a_pUserInfo	points to user-defined data. If none, set to NULL.

Termination Events

CNFEV_ADD_PARTY
indicates successful completion of the function; that is, a party was added to a conference
Data Type: CNF_PARTY_INFO

CNFEV_ADD_PARTY_FAIL
indicates that the function failed
Data Type: CNF_PARTY_INFO

Cautions

This function currently supports adding one party at a time to the conference. This function will fail if more than one party is specified.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Alternatively, you can use the Standard Runtime Library (SRL) Standard Attribute functions, **ATDV_LASTERR( )** and **ATDV_ERRMSGP( )**, to obtain the error code and error message. Possible errors for this function include:

ECNF_INVALID_DEVICE
: invalid device handle

ECNF_SUBSYSTEM
: internal subsystem error

Example

See Section 6.1, "Conferencing Example Code and Output", on page 79 for complete example code.

See Also

- **cnf_RemoveParty( )**
- **cnf_OpenParty( )**
- **cnf_CloseParty( )**
- **cnf_CloseConference( )**

cnf_Close( )

Name: CNF_RETURN cnf_Close (a_BrdHandle, a_pCloseInfo)

Inputs: SRL_DEVICE_HANDLE a_BrdHandle — • SRL handle to the virtual board device

CPCNF_CLOSE_INFO a_pCloseInfo — • reserved for future use

Returns: CNF_SUCCESS if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Device Management

Mode: synchronous

Description

The **cnf_Close( )** function closes a virtual board device that was previously opened using **cnf_Open( )**. This function does not affect any subdevices that were opened using this virtual board device. All conference and party devices opened using this virtual board device will still be valid after the virtual board device has been closed.

Parameter	Description
a_BrdHandle	specifies an SRL handle for a virtual board device obtained from a previous open
a_pCloseInfo	reserved for future use. Set to NULL.

Cautions

- Once a device is closed, a process can no longer act on the given device via the device handle.
- The only process affected by **cnf_Close( )** is the process that called the function.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Possible errors for this function include:

ECNF_INVALID_DEVICE
invalid device handle

ECNF_SUBSYSTEM
internal subsystem error

Example

See Section 6.1, “Conferencing Example Code and Output”, on page 79 for complete example code.

See Also

- **cnf_Open( )**

cnf_CloseConference( )

Name: CNF_RETURN cnf_CloseConference (a_CnfHandle, a_pCloseInfo)

Inputs: SRL_DEVICE_HANDLE a_CnfHandle
- conference device handle

CPCNF_CLOSE_CONF_INFO a_pCloseInfo
- reserved for future use

Returns: CNF_SUCCESS if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Device Management

Mode: synchronous

Description

The **cnf_CloseConference( )** function closes a conference device handle that was previously opened using **cnf_OpenConference( )**. When the conference is closed, all added parties in this conference are indirectly removed. It is up to you to decide whether to close the party devices or add them to another conference.

Parameter	Description
a_CnfHandle	specifies a conference device handle obtained from a previous open
a_pCloseInfo	reserved for future use. Set to NULL.

Cautions

- Once a device is closed, a process can no longer act on the given device via the device handle.
- This function closes the conference device on all processes in which it is being used. It is up to you to synchronize the creation and deletion of conference devices between processes.
- The **a_pCloseInfo** parameter is reserved for future use and must be set to NULL.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Possible errors for this function include:

ECNF_INVALID_DEVICE
invalid device handle

ECNF_SUBSYSTEM
internal subsystem error

Example

See Section 6.1, "Conferencing Example Code and Output", on page 79 for complete example code.

See Also

- **cnf_OpenConference( )**
- **cnf_Open( )**

cnf_CloseParty( )

Name: CNF_RETURN cnf_CloseParty (a_PtyHandle, a_pCloseInfo)

Inputs: SRL_DEVICE_HANDLE a_PtyHandle — party device handle

CPCNF_CLOSE_PARTY_INFO a_pCloseInfo — reserved for future use

Returns: CNF_SUCCESS if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Device Management

Mode: synchronous

Description

The **cnf_CloseParty( )** function closes a party device handle that was previously opened using **cnf_OpenParty( )**. If the party device is currently added to a conference, this function removes it from the conference before closing it. .

Parameter	Description
a_PtyHandle	specifies a party device handle obtained from a previous open
a_pCloseInfo	reserved for future use. Set to NULL.

Cautions

- Once a device is closed, a process can no longer act on the given device via the device handle.
- This function closes the party device on all processes in which it is being used. It is up to you to synchronize the creation and deletion of party devices between processes.
- The **a_pCloseInfo** parameter is reserved for future use and must be set to NULL.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Possible errors for this function include:

ECNF_INVALID_DEVICE
invalid device handle

ECNF_SUBSYSTEM
internal subsystem error

Example

See Section 6.1, “Conferencing Example Code and Output”, on page 79 for complete example code.

See Also

- **cnf_OpenParty( )**
- **cnf_CloseConference( )**

cnf_DisableEvents( )

Name: CNF_RETURN cnf_DisableEvents (a_DevHandle, a_pEventInfo, a_pUserInfo)

Inputs:

SRL_DEVICE_HANDLE a_DevHandle	• device handle
CPCNF_EVENT_INFO a_pEventInfo	• pointer to event information structure
void * a_pUserInfo	• pointer to user-defined data

Returns: CNF_SUCCESS if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Configuration

Mode: asynchronous

Description

The **cnf_DisableEvents( )** function disables one or more notification events that were previously enabled using **cnf_EnableEvents( )**. The function only applies to the process in which it was called.

Parameter	Description
a_DevHandle	specifies a device handle on which to disable events
a_pEventInfo	points to the event information structure, CNF_EVENT_INFO, which stores information about events to be enabled or disabled.
a_pUserInfo	points to user-defined data. If none, set to NULL.

Events for a board device are defined in the ECNF_BRD_EVT data type; events for a conference device are defined in the ECNF_CONF_EVT data type. Events are disabled by default.

The ECNF_BRD_EVT data type is an enumeration that defines the following values:

ECNF_BRD_EVT_ACTIVE_TALKER
board level notification event for active talker

ECNF_BRD_EVT_CONF_CLOSED
board level notification event for conference closed

ECNF_BRD_EVT_CONF_OPENED
board level notification event for conference opened

ECNF_BRD_EVT_PARTY_ADDED
board level notification event for party added

ECNF_BRD_EVT_PARTY_REMOVED
board level notification event for party removed

The ECNF_CONF_EVT data type is an enumeration that defines the following values:

ECNF_CONF_EVT_ACTIVE_TALKER
conference level notification event for active talker

ECNF_CONF_EVT_DTMF_DETECTION
conference level notification event for DTMF detected

ECNF_CONF_EVT_PARTY_ADDED
conference level notification event for party added

ECNF_CONF_EVT_PARTY_REMOVED
conference level notification event for party removed

For more information on events, see Chapter 3, "Events".

Termination Events

CNFEV_DISABLE_EVENT
indicates successful completion of this function; that is, one or more events were disabled
Data Type: CNF_EVENT_INFO

CNFEV_DISABLE_EVENT_FAIL
indicates that the function failed
Data Type: CNF_EVENT_INFO

Cautions

None.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Alternatively, you can use the Standard Runtime Library (SRL) Standard Attribute functions, **ATDV_LASTERR( )** and **ATDV_ERRMSGP( )**, to obtain the error code and error message. Possible errors for this function include:

ECNF_INVALID_EVENT
invalid device event

ECNF_SUBSYSTEM
internal subsystem error

Example

See Section 6.1, "Conferencing Example Code and Output", on page 79 for complete example code.

See Also

- **cnf_EnableEvents( )**

cnf_EnableEvents( )

Name: CNF_RETURN cnf_EnableEvents (a_DevHandle, a_pEventInfo, a_pUserInfo)

Inputs:

SRL_DEVICE_HANDLE a_DevHandle	• device handle
CPCNF_EVENT_INFO a_pEventInfo	• pointer to event information structure
void * a_pUserInfo	• pointer to user-defined data

Returns: CNF_SUCCESS if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Configuration

Mode: asynchronous

Description

The **cnf_EnableEvents( )** function enables one or more notification events in the process in which it is called. Notification events can only be enabled on a board or on a conference; they cannot be enabled for a party. Notification events are disabled by default.

Notification events are different from asynchronous function termination events, such as CNFEV_OPEN, which cannot be disabled.

Parameter	Description
a_DevHandle	specifies a device handle on which to enable events
a_pEventInfo	points to the event information structure, CNF_EVENT_INFO, which stores information about events to be enabled or disabled.
a_pUserInfo	points to user-defined data. If none, set to NULL.

Events for a board device are defined in the ECNF_BRD_EVT data type; events for a conference device are defined in the ECNF_CONF_EVT data type. Events are disabled by default.

The ECNF_BRD_EVT data type is an enumeration that defines the following values:

ECNF_BRD_EVT_ACTIVE_TALKER
board level notification event for active talker

ECNF_BRD_EVT_CONF_CLOSED
board level notification event for conference closed

ECNF_BRD_EVT_CONF_OPENED
board level notification event for conference opened

ECNF_BRD_EVT_PARTY_ADDED
board level notification event for party added

ECNF_BRD_EVT_PARTY_REMOVED
board level notification event for party removed

The ECNF_CONF_EVT data type is an enumeration that defines the following values:

ECNF_CONF_EVT_ACTIVE_TALKER
conference level notification event for active talker

ECNF_CONF_EVT_DTMF_DETECTION
conference level notification event for DTMF detected

ECNF_CONF_EVT_PARTY_ADDED
conference level notification event for party added

ECNF_CONF_EVT_PARTY_REMOVED
conference level notification event for party removed

For more information on events, see Chapter 3, "Events".

Termination Events

CNFEV_ENABLE_EVENT
indicates successful completion of this function; that is, one or more events were enabled
Data Type: CNF_EVENT_INFO

CNFEV_ENABLE_EVENT_FAIL
indicates that the function failed
Data Type: CNF_EVENT_INFO

Cautions

None.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Alternatively, you can use the Standard Runtime Library (SRL) Standard Attribute functions, **ATDV_LASTERR( )** and **ATDV_ERRMSGP( )**, to obtain the error code and error message. Possible errors for this function include:

ECNF_INVALID_EVENT
invalid device event

ECNF_SUBSYSTEM
internal subsystem error

Example

See Section 6.1, "Conferencing Example Code and Output", on page 79 for complete example code.

See Also

- **cnf_DisableEvents( )**

cnf_GetActiveTalkerList( )

Name: CNF_RETURN cnf_GetActiveTalkerList (a_DevHandle, a_pUserInfo)

Inputs: SRL_DEVICE_HANDLE a_DevHandle
- device handle

void * a_pUserInfo
- pointer to user-defined data

Returns: CNF_SUCCESS if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Auxiliary

Mode: asynchronous

Description

The **cnf_GetActiveTalker( )** function returns a list of active talkers on the specified device. A device can be a board or a conference. For a board device, all active talkers for that board are returned regardless of the conference to which they belong. For a conference device, only active talkers within that specific conference are returned.

Parameter	Description
a_DevHandle	specifies the device handle obtained from a previous open
a_pUserInfo	points to user-defined data. If none, set to NULL.

Termination Events

CNFEV_GET_ACTIVE_TALKER
indicates successful completion of this function; that is, list of active talkers returned
Data Type: CNF_ACTIVE_TALKER_INFO

CNFEV_GET_ACTIVE_TALKER_FAIL
indicates that the function failed
Data Type: CNF_ACTIVE_TALKER_INFO

Cautions

None.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Alternatively, you can use the Standard Runtime Library (SRL) Standard Attribute functions, **ATDV_LASTERR( )** and **ATDV_ERRMSGP( )**, to obtain the error code and error message. Possible errors for this function include:

ECNF_INVALID_DEVICE
: invalid device handle

ECNF_SUBSYSTEM
: internal subsystem error

Example

See Section 6.1, "Conferencing Example Code and Output", on page 79 for complete example code.

See Also

None.

cnf_GetAttributes( )

Name: CNF_RETURN cnf_GetAttributes (a_DevHandle, a_pAttrInfo, a_pUserInfo)

Inputs: SRL_DEVICE_HANDLE a_DevHandle
- device on which to get attributes

CPCNF_ATTR_INFO a_pAttrInfo
- pointer to attribute information structure

void * a_pUserInfo
- pointer to user-defined data

Returns: CNF_SUCCESS if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Configuration

Mode: asynchronous

Description

The **cnf_GetAttributes( )** function gets the values of one or more device attributes. A device can be a board, a conference, or a party. The values for the attributes are returned in a structure provided in the CNFEV_GET_ATTRIBUTE event.

Parameter	Description
a_DevHandle	specifies the device handle on which to get attributes
a_pAttrInfo	points to the attribute information structure, CNF_ATTR_INFO. This structure in turn points to the CNF_ATTR structure, which specifies an attribute and its value.
a_pUserInfo	points to user-defined data. If none, set to NULL.

Attributes for each type of device are defined in the ECNF_BRD_ATTR, ECNF_CONF_ATTR, and ECNF_PARTY_ATTR enumerations.

The ECNF_BRD_ATTR data type is an enumeration that defines the following values:

ECNF_BRD_ATTR_ACTIVE_TALKER
enables or disables board level active talker.

ECNF_BRD_ATTR_NOTIFY_INTERVAL
changes the default firmware interval for active talker notification events on the board. The value must be passed in 10 msec units. The default setting is 100 (1 second).

ECNF_BRD_ATTR_TONE_CLAMPING
enables or disables board level tone clamping to reduce the level of DTMF tones heard on a per party basis on the board.

The ECNF_CONF_ATTR data type is an enumeration that defines the following values:

ECNF_CONF_ATTR_DTMF_MASK
specifies a mask for the DTMF digits used for volume control. The digits are defined in the ECNF_DTMF_DIGIT enumeration. The ECNF_DTMF_DIGIT values can be ORed to form the mask using the ECNF_DTMF_MASK_OPERATION enumeration. For a list of ECNF_DTMF_DIGIT values, see the description for CNF_DTMF_CONTROL_INFO.

ECNF_CONF_ATTR_TONE_CLAMPING
enables or disables conference level tone clamping. Overrides board level value.

The ECNF_PARTY_ATTR data type is an enumeration that defines the following values:

ECNF_PARTY_ATTR_AGC
enables or disables automatic gain control.

ECNF_PARTY_ATTR_BROADCAST
enables or disables broadcast mode. One party can speak while all other parties are muted.

ECNF_PARTY_ATTR_COACH
sets party to coach. Coach is heard by pupil only.

ECNF_PARTY_ATTR_ECHO_CANCEL
enables or disables echo cancellation. Provides 128 taps (16 msec) of echo cancellation.

ECNF_PARTY_ATTR_PUPIL
sets party to pupil. Pupil hears everyone including the coach.

ECNF_PARTY_ATTR_TARIFF_TONE
enables or disables tariff tone. Party receives periodic tone for duration of the call.

ECNF_PARTY_ATTR_TONE_CLAMPING
enables or disables DTMF tone clamping for the party. Overrides board and conference level values.

Termination Events

CNFEV_GET_ATTRIBUTE
indicates successful completion of this function; that is, attribute values were returned

Data Type: CNF_ATTR_INFO

CNFEV_GET_ATTRIBUTE_FAIL
indicates that the function failed

Data Type: CNF_ATTR_INFO

Cautions

None.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Alternatively, you can use the Standard Runtime Library (SRL) Standard Attribute functions, **ATDV_LASTERR( )** and **ATDV_ERRMSGP( )**, to obtain the error code and error message. Possible errors for this function include:

ECNF_INVALID_ATTR
: invalid attribute

ECNF_INVALID_DEVICE
: invalid device handle

ECNF_SUBSYSTEM
: internal subsystem error

Example

See Section 6.1, "Conferencing Example Code and Output", on page 79 for complete example code.

See Also

- **cnf_SetAttributes( )**

cnf_GetDeviceCount( )

Name: CNF_RETURN cnf_GetDeviceCount (a_BrdHandle, a_pUserInfo)

Inputs: SRL_DEVICE_HANDLE a_BrdHandle
- board device handle

void * a_pUserInfo
- pointer to user-defined data

Returns: CNF_SUCCESS if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Auxiliary

Mode: asynchronous

Description

The **cnf_GetDeviceCount( )** function returns the number of conference and party devices available on the specified virtual board device. See the CNF_DEVICE_COUNT_INFO structure for more on the type of information returned.

Parameter	Description
a_BrdHandle	specifies the virtual board device handle obtained from a previous open
a_pUserInfo	points to user-defined data. If none, set to NULL.

Termination Events

CNFEV_GET_DEVICE_COUNT
indicates successful completion of this function; that is, device count returned
Data Type: CNF_DEVICE_COUNT_INFO

CNFEV_GET_DEVICE_COUNT_FAIL
indicates that the function failed
Data Type: NULL

Cautions

None.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Alternatively, you can use the Standard Runtime Library (SRL) Standard Attribute functions, **ATDV_LASTERR( )** and **ATDV_ERRMSGP( )**, to obtain the error code and error message. Possible errors for this function include:

ECNF_INVALID_DEVICE
: invalid device handle

ECNF_SUBSYSTEM
: internal subsystem error

Example

See Section 6.1, "Conferencing Example Code and Output", on page 79 for complete example code.

See Also

- **cnf_AddParty( )**
- **cnf_RemoveParty( )**

cnf_GetDTMFControl( )

Name: CNF_RETURN cnf_GetDTMFControl (a_BrdHandle, a_pUserInfo)

Inputs: SRL_DEVICE_HANDLE a_BrdHandle
- SRL handle to the virtual board device

void * a_pUserInfo
- pointer to user-defined data

Returns: CNF_SUCCESS if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Configuration

Mode: asynchronous

Description

The **cnf_GetDTMFControl( )** function returns information about the DTMF digits used to control the conference behavior, such as volume level. The DTMF digit information is stored in the CNF_DTMF_CONTROL_INFO structure.

Parameter	Description
a_BrdHandle	specifies the SRL handle to the virtual board device obtained from a previous open
a_pUserInfo	points to user-defined data. If none, set to NULL.

Termination Events

CNFEV_GET_DTMF_CONTROL
indicates successful completion of this function; that is, DTMF digit information was returned
Data Type: CNF_DTMF_CONTROL_INFO

CNFEV_GET_DTMF_CONTROL_FAIL
indicates that the function failed
Data Type: NULL

Cautions

None.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Alternatively, you can use the Standard Runtime Library (SRL) Standard Attribute functions, **ATDV_LASTERR( )** and **ATDV_ERRMSGP( )**, to obtain the error code and error message. Possible errors for this function include:

ECNF_INVALID_DEVICE
: invalid device handle

ECNF_SUBSYSTEM
: internal subsystem error

Example

See Section 6.1, "Conferencing Example Code and Output", on page 79 for complete example code.

See Also

- **cnf_SetDTMFControl( )**

cnf_GetErrorInfo( )

Name: CNF_RETURN cnf_GetErrorInfo (a_pErrorInfo)

Inputs: PCNF_ERROR_INFO * a_pErrorInfo • pointer to error information structure

Returns: CNF_SUCCESS if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Error Processing

Mode: synchronous

Description

The **cnf_GetErrorInfo( )** function obtains error information about a failed function and provides it in the CNF_ERROR_INFO structure. To retrieve the information, this function must be called immediately after the Dialogic® Conferencing (CNF) API function failed.

Parameter	Description
a_pErrorInfo	points to the error information structure, CNF_ERROR_INFO

Cautions

- The **cnf_GetErrorInfo( )** function can only be called in the same thread in which the routine that had the error was called. The **cnf_GetErrorInfo( )** function cannot be called to retrieve error information for a function that returned error information in another thread.
- The Dialogic® Conferencing (CNF) API only keeps the error information for the last Dialogic® Conferencing (CNF) API function call. Therefore, you should check and retrieve the error information immediately after a Dialogic® Conferencing (CNF) API function fails.

Errors

Do not call the **cnf_GetErrorInfo( )** function recursively if it returns CNF_ERROR to indicate failure. A failure return generally indicates that the **a_pErrorInfo** parameter is NULL or invalid.

Example

See Section 6.1, “Conferencing Example Code and Output”, on page 79 for complete example code.

See Also

None.

cnf_GetPartyList( )

Name: CNF_RETURN cnf_GetPartyList (a_CnfHandle, a_pUserInfo)

Inputs: SRL_DEVICE_HANDLE a_CnfHandle
- conference device handle

void * a_pUserInfo
- pointer to user-defined data

Returns: CNF_SUCCESS if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Auxiliary

Mode: asynchronous

Description

The **cnf_GetPartyList( )** function returns a list of party devices currently added to the specified conference.

Parameter	Description
a_CnfHandle	specifies the conference device handle obtained from a previous open
a_pUserInfo	points to user-defined data. If none, set to NULL.

Termination Events

CNFEV_GET_PARTY_LIST
indicates successful completion of this function; that is, list of added parties returned
Data Type: CNF_PARTY_INFO

CNFEV_GET_PARTY_LIST_FAIL
indicates that the function failed
Data Type: NULL

Cautions

None.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Alternatively, you can use the Standard Runtime Library (SRL) Standard Attribute functions, **ATDV_LASTERR( )** and **ATDV_ERRMSGP( )**, to obtain the error code and error message. Possible errors for this function include:

ECNF_INVALID_DEVICE
invalid device handle

ECNF_SUBSYSTEM
internal subsystem error

Example

See Section 6.1, "Conferencing Example Code and Output", on page 79 for complete example code.

See Also

- **cnf_AddParty( )**
- **cnf_RemoveParty( )**

cnf_Open( )

Name: SRL_DEVICE cnf_Open (a_szBrdName, a_pOpenInfo, a_pUserInfo)

Inputs:
- const char * a_szBrdName — pointer to board device name
- CPCNF_OPEN_INFO a_pOpenInfo — reserved for future use
- void * a_pUserInfo — pointer to user-defined data

Returns: board device handle if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Device Management

Mode: asynchronous

Description

The **cnf_Open( )** function opens a virtual board device and returns a unique SRL handle to identify the device. The naming convention for a virtual board device is "cnfB*x*", where *x* is the board number starting at 1. All subsequent references to the opened device must be made using the handle until the device is closed.

Parameter	Description
a_szBrdName	points to a board device name
a_pOpenInfo	reserved for future use. Set to NULL.
a_pUserInfo	points to user-defined data. If none, set to NULL.

Termination Events

CNFEV_OPEN
indicates successful completion of this function; that is, a virtual board device was opened
Data Type: NULL

CNFEV_OPEN_FAIL
indicates that the function failed
Data Type: NULL

Note: If CNFEV_OPEN_FAIL is received, you must call **cnf_Close( )** to clean up the operation.

Cautions

- In applications that spawn child processes from a parent process, the device handle is not inheritable by the child process. Make sure devices are opened in the child process.
- The **a_pOpenInfo** parameter is reserved for future use and must be set to NULL.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Possible errors for this function include:

ECNF_INVALID_NAME
invalid device name

ECNF_SUBSYSTEM
internal subsystem error

Example

See Section 6.1, "Conferencing Example Code and Output", on page 79 for complete example code.

See Also

- **cnf_Close( )**

cnf_OpenConference( )

Name: SRL_DEVICE_HANDLE cnf_OpenConference (a_nBrdHandle, a_szCnfName, a_pOpenInfo, a_pUserInfo)

Inputs:

SRL_DEVICE_HANDLE a_nBrdHandle	• SRL handle to the virtual board device
const char * a_szCnfName	• pointer to conference name
CPCNF_OPEN_CONF_INFO a_pOpenInfo	• reserved for future use
void * a_pUserInfo	• pointer to user-defined data

Returns: conference device handle if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Device Management

Mode: asynchronous

Description

The **cnf_OpenConference( )** function opens a new conference device or an existing conference device.

To open a new conference, set the **a_szCnfName** parameter to NULL and specify the virtual board device handle on which to open the new conference. This function opens a conference device and returns a unique SRL handle to identify the device. All subsequent references to the opened device must be made using the handle until the device is closed.

The number of conference devices that can be opened is fixed per virtual board and you may open all conference devices during initialization or dynamically at runtime. To determine the number of conference devices available, use **cnf_GetDeviceCount( )**.

Parameter	Description
a_nBrdHandle	specifies an SRL handle to the virtual board device
a_szConfName	points to an existing conference device. Set to NULL to open a new conference.
a_pOpenInfo	reserved for future use. Set to NULL.
a_pUserInfo	points to user-defined data. If none, set to NULL.

Termination Events

CNFEV_OPEN_CONF
indicates successful completion of this function; that is, a conference device was opened
Data Type: CNF_OPEN_CONF_RESULT

CNFEV_OPEN_CONF_FAIL
indicates that the function failed

Data Type: CNF_OPEN_CONF_RESULT

Note: If CNFEV_OPEN_CONF_FAIL is received, you must call **cnf_CloseConference( )** to clean up the operation.

Cautions

- In applications that spawn child processes from a parent process, the device handle is not inheritable by the child process. Make sure devices are opened in the child process.
- The **a_pOpenInfo** parameter is reserved for future use and must be set to NULL.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Alternatively, you can use the Standard Runtime Library (SRL) Standard Attribute functions, **ATDV_LASTERR( )** and **ATDV_ERRMSGP( )**, to obtain the error code and error message. Possible errors for this function include:

ECNF_INVALID_DEVICE
invalid device handle

ECNF_INVALID_NAME
invalid device name

ECNF_SUBSYSTEM
internal subsystem error

Example

See Section 6.1, "Conferencing Example Code and Output", on page 79 for complete example code.

See Also

- **cnf_CloseConference( )**

cnf_OpenParty( )

Name: CNF_RETURN cnf_OpenParty (a_nBrdHandle, a_szPtyName, a_pOpenInfo, a_pUserInfo)

Inputs:

SRL_DEVICE_HANDLE a_nBrdHandle	• SRL handle to the virtual board device
const char * a_szPtyName	• pointer to party device name
CPCNF_OPEN_PARTY_INFO a_pOpenInfo	• reserved for future use
void * a_pUserInfo	• pointer to user-defined data

Returns: party device handle if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Device Management

Mode: asynchronous

Description

The **cnf_OpenParty( )** function opens a new party device or an existing party device.

To open a new party, set the **a_szPtyName** parameter to NULL and specify the virtual board device handle on which to open the new party. This function opens a party device and returns a unique SRL handle to identify the device. All subsequent references to the opened device must be made using the handle until the device is closed.

The number of party devices that can be opened is fixed per virtual board and you may open all party devices during initialization or dynamically at runtime. To determine the number of party devices available, use **cnf_GetDeviceCount( )**.

Parameter	Description
a_nBrdHandle	specifies the SRL handle to the virtual board device
a_szPtyName	points to an existing party device. Set to NULL to open a new party.
a_pOpenInfo	reserved for future use. Set to NULL.
a_pUserInfo	points to user-defined data. If none, set to NULL.

Termination Events

CNFEV_OPEN_PARTY
indicates successful completion of this function; that is, a party device was opened
Data Type: CNF_OPEN_PARTY_RESULT

CNFEV_OPEN_PARTY_FAIL
indicates that the function failed

Data Type: CNF_OPEN_PARTY_RESULT

Note: If CNFEV_OPEN_PARTY_FAIL is received, you must call **cnf_CloseParty( )** to clean up the operation.

Cautions

- In applications that spawn child processes from a parent process, the device handle is not inheritable by the child process. Make sure devices are opened in the child process.
- The **a_pOpenInfo** parameter is reserved for future use and must be set to NULL.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Alternatively, you can use the Standard Runtime Library (SRL) Standard Attribute functions, **ATDV_LASTERR( )** and **ATDV_ERRMSGP( )**, to obtain the error code and error message. Possible errors for this function include:

ECNF_INVALID_DEVICE
invalid device handle

ECNF_INVALID_NAME
invalid device name

ECNF_SUBSYSTEM
internal subsystem error

Example

See Section 6.1, "Conferencing Example Code and Output", on page 79 for complete example code.

See Also

- **cnf_CloseParty( )**
- **cnf_CloseConference( )**

cnf_RemoveParty( )

Name: CNF_RETURN cnf_RemoveParty (a_CnfHandle, a_pPtyInfo, a_pUserInfo)

Inputs:
- SRL_DEVICE_HANDLE a_CnfHandle — conference device handle
- CPCNF_PARTY_INFO a_pPtyInfo — pointer to party information structure
- void * a_pUserInfo — pointer to user-defined data

Returns: CNF_SUCCESS if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Conference Management

Mode: asynchronous

Description

The **cnf_RemoveParty( )** function removes one or more parties from a conference. The CNF_PARTY_INFO structure contains a list of party devices to be removed. The removed party or parties can be added to a different conference; or they can be closed.

Parameter	Description
a_CnfHandle	specifies the conference device handle obtained from a previous open
a_pPtyInfo	points to a party information structure, CNF_PARTY_INFO
a_pUserInfo	points to user-defined data. If none, set to NULL.

Termination Events

CNFEV_REMOVE_PARTY
indicates successful completion of this function; that is, a party device was added
Data Type: CNF_PARTY_INFO

CNFEV_REMOVE_PARTY_FAIL
indicates that the function failed
Data Type: CNF_PARTY_INFO

Cautions

This function currently supports removing one party at a time from the conference. This function will fail if more than one party is specified.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Alternatively, you can use the Standard Runtime Library (SRL) Standard Attribute functions, **ATDV_LASTERR( )** and **ATDV_ERRMSGP( )**, to obtain the error code and error message. Possible errors for this function include:

ECNF_INVALID_DEVICE
: invalid device handle

ECNF_SUBSYSTEM
: internal subsystem error

Example

See Section 6.1, "Conferencing Example Code and Output", on page 79 for complete example code.

See Also

- **cnf_AddParty( )**
- **cnf_CloseParty( )**
- **cnf_CloseConference( )**

cnf_SetAttributes( )

Name: CNF_RETURN cnf_SetAttributes (a_DevHandle, a_pAttrInfo, a_pUserInfo)

Inputs:

SRL_DEVICE_HANDLE a_DevHandle	• device on which to get attributes
CPCNF_ATTR_INFO a_pAttrInfo	• pointer to attribute information structure
void * a_pUserInfo	• pointer to user-defined data

Returns: CNF_SUCCESS if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Configuration

Mode: Asynchronous

Description

The **cnf_SetAttributes( )** function sets the values for one or more attributes on a device. A device can be a board, a conference, or a party.

Parameter	Description
a_DevHandle	specifies the device handle on which to set attributes
a_pAttrInfo	points to the attribute information structure, CNF_ATTR_INFO. This structure in turn points to the CNF_ATTR data structure, which specifies an attribute and its value.
a_pUserInfo	points to user-defined data. If none, set to NULL.

Attributes for each type of device are defined in the ECNF_BRD_ATTR, ECNF_CONF_ATTR, and ECNF_PARTY_ATTR enumerations.

The ECNF_BRD_ATTR data type is an enumeration that defines the following values:

ECNF_BRD_ATTR_ACTIVE_TALKER
enables or disables board level active talker.

ECNF_BRD_ATTR_NOTIFY_INTERVAL
changes the default firmware interval for active talker notification events on the board. The value must be passed in 10 msec units. The default setting is 100 (1 second).

ECNF_BRD_ATTR_TONE_CLAMPING
enables or disables board level tone clamping to reduce the level of DTMF tones heard on a per party basis on the board.

The ECNF_CONF_ATTR data type is an enumeration that defines the following values:

ECNF_CONF_ATTR_DTMF_MASK
specifies a mask for the DTMF digits used for volume control. The digits are defined in the ECNF_DTMF_DIGIT enumeration. The ECNF_DTMF_DIGIT values can be ORed to form the mask using the ECNF_DTMF_MASK_OPERATION enumeration. For a list of ECNF_DTMF_DIGIT values, see the description for CNF_DTMF_CONTROL_INFO.

ECNF_CONF_ATTR_TONE_CLAMPING
enables or disables conference level tone clamping. Overrides board level value.

The ECNF_PARTY_ATTR data type is an enumeration that defines the following values:

ECNF_PARTY_ATTR_AGC
enables or disables automatic gain control.

ECNF_PARTY_ATTR_BROADCAST
enables or disables broadcast mode. One party can speak while all other parties are muted.

ECNF_PARTY_ATTR_COACH
sets party to coach. Coach is heard by pupil only.

ECNF_PARTY_ATTR_ECHO_CANCEL
enables or disables echo cancellation. Provides 128 taps (16 msec) of echo cancellation.

ECNF_PARTY_ATTR_PUPIL
sets party to pupil. Pupil hears everyone including the coach.

ECNF_PARTY_ATTR_TARIFF_TONE
enables or disables tariff tone. Party receives periodic tone for duration of the call.

ECNF_PARTY_ATTR_TONE_CLAMPING
enables or disables DTMF tone clamping for the party. Overrides board and conference level values.

Termination Events

CNFEV_SET_ATTRIBUTE
indicates successful completion of this function; that is, attribute values were set

Data Type: CNF_ATTR_INFO

CNFEV_SET_ATTRIBUTE_FAIL
indicates that the function failed

Data Type: CNF_ATTR_INFO

Cautions

None.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Alternatively, you can use the Standard Runtime Library (SRL) Standard Attribute functions, **ATDV_LASTERR( )** and **ATDV_ERRMSGP( )**, to obtain the error code and error message. Possible errors for this function include:

ECNF_INVALID_ATTR
: invalid attribute

ECNF_INVALID_DEVICE
: invalid device handle

ECNF_SUBSYSTEM
: internal subsystem error

Example

See Section 6.1, "Conferencing Example Code and Output", on page 79 for complete example code.

See Also

- **cnf_GetAttributes( )**

cnf_SetDTMFControl( )

Name: CNF_RETURN cnf_SetDTMFControl (a_BrdHandle, a_pDTMFInfo, a_pUserInfo)

Inputs:

SRL_DEVICE_HANDLE a_BrdHandle	• SRL handle to the virtual board device
CPCNF_DTMF_CONTROL_INFO a_pDTMFInfo	• pointer to volume control information structure
void * a_pUserInfo	• pointer to user-defined data

Returns: CNF_SUCCESS if successful
CNF_ERROR if failure

Includes: srllib.h
cnflib.h

Category: Configuration

Mode: asynchronous

Description

The **cnf_SetDTMFControl( )** function returns information about the DTMF digits used to control the conference behavior. The DTMF digit information is stored in the CNF_DTMF_CONTROL_INFO structure.

Parameter	Description
a_BrdHandle	specifies an SRL handle to the virtual board device obtained from a previous open
a_pDTMFInfo	points to the DTMF volume control information structure, CNF_DTMF_CONTROL_INFO
a_pUserInfo	points to user-defined data. If none, set to NULL.

Termination Events

CNFEV_SET_DTMF_CONTROL
indicates successful completion of this function; that is, DTMF digit information was set
Data Type: CNF_DTMF_CONTROL_INFO

CNFEV_SET_DTMF_CONTROL_FAIL
indicates that the function failed
Data Type: CNF_DTMF_CONTROL_INFO

Cautions

None.

Errors

If this function fails with CNF_ERROR, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Alternatively, you can use the Standard Runtime Library (SRL) Standard Attribute functions, **ATDV_LASTERR( )** and **ATDV_ERRMSGP( )**, to obtain the error code and error message. Possible errors for this function include:

ECNF_INVALID_DEVICE
invalid device handle

ECNF_SUBSYSTEM
internal subsystem error

Example

See Section 6.1, "Conferencing Example Code and Output", on page 79 for complete example code.

See Also

- **cnf_GetDTMFControl( )**

Events 3

This chapter provides information about the events that may be returned by the Dialogic® Conferencing (CNF) API software. Topics include:

- Event Types 49
- Termination Events 49
- Notification Events 51

3.1 Event Types

An event indicates that a specific activity has occurred on a channel. The host library reports channel activity to the application program in the form of events, which allows the program to identify and respond to a specific occurrence on a channel. Events provide feedback on the progress and completion of functions and indicate the occurrence of other channel activities. Dialogic® Conferencing (CNF) API library events are defined in the *cnfevts.h* header file.

Events in the Dialogic® Conferencing (CNF) API library can be categorized as follows:

termination events
: These events are returned after the completion of a function call operating in asynchronous mode. The Dialogic® Conferencing (CNF) API library provides a pair of termination events for a function, to indicate successful completion or failure. A termination event is only generated in the process that called the function.

notification events
: These events are requested by the application and provide information about the function call. They are produced in response to a condition specified by the event; for example, the CNFEV_PARTY_ADDED event is generated each time a party is added to a conference. Notification events are enabled or disabled using **cnf_EnableEvents( )** and **cnf_DisableEvents( )**, respectively. Notification events in the conferencing library are disabled by default.

Use **sr_waitevt( )**, **sr_enbhdlr( )** or other SRL functions to collect an event code, depending on the programming model in use. For more information, see the *Dialogic® Standard Runtime Library API Library Reference*.

3.2 Termination Events

The following termination events, listed in alphabetical order, may be returned by the Dialogic® Conferencing (CNF) API software.

CNFEV_ADD_PARTY
: Termination event for **cnf_AddParty( )**. Party added successfully.

CNFEV_ADD_PARTY_FAIL
Termination event for **cnf_AddParty( )**. Add party operation failed.

CNFEV_DISABLE_EVENT
Termination event for **cnf_DisableEvents( )**. Events disabled successfully.

CNFEV_DISABLE_EVENT_FAIL
Termination event for **cnf_DisableEvents( )**. Disable events operation failed.

CNFEV_ENABLE_EVENT
Termination event for **cnf_EnableEvents( )**. Events enabled successfully.

CNFEV_ENABLE_EVENT_FAIL
Termination event for **cnf_EnableEvents( )**. Enable events operation failed.

CNFEV_GET_ACTIVE_TALKER
Termination event for **cnf_GetActiveTalkerList( )**. Active talker list retrieved successfully.

CNFEV_GET_ACTIVE_TALKER_FAIL
Termination event for **cnf_GetActiveTalkerList( )**. Get active talker list operation failed.

CNFEV_GET_ATTRIBUTE
Termination event for **cnf_GetAttributes( )**. Attributes retrieved successfully.

CNFEV_GET_ATTRIBUTE_FAIL
Termination event for **cnf_GetAttributes( )**. Get attributes operation failed.

CNFEV_GET_DEVICE_COUNT
Termination event for **cnf_GetDeviceCount( )**. Device count retrieved successfully.

CNFEV_GET_DEVICE_COUNT_FAIL
Termination event for **cnf_GetDeviceCount( )**. Get device count operation failed.

CNFEV_GET_DTMF_CONTROL
Termination event for **cnf_GetDTMFControl( )**. DTMF digits for volume control retrieved successfully.

CNFEV_GET_DTMF_CONTROL_FAIL
Termination event for **cnf_GetDTMFControl( )**. Get DTMF digits for volume control operation failed.

CNFEV_GET_PARTY_LIST
Termination event for **cnf_GetPartyList( )**. Party list retrieved successfully.

CNFEV_GET_PARTY_LIST_FAIL
Termination event for **cnf_GetPartyList( )**. Get party list operation failed.

CNFEV_OPEN
Termination event for **cnf_Open( )**. Board device handle opened successfully.

CNFEV_OPEN_CONF
Termination event for **cnf_OpenConference( )**. Conference device handle opened successfully.

CNFEV_OPEN_CONF_FAIL
Termination event for **cnf_OpenConference( )**. Open conference operation failed.

CNFEV_OPEN_FAIL
Termination event for **cnf_Open( )**. Open board operation failed.

CNFEV_OPEN_PARTY
Termination event for **cnf_OpenParty( )**. Party device handle opened successfully.

CNFEV_OPEN_PARTY_FAIL
Termination event for **cnf_OpenParty( )**. Open party operation failed.

CNFEV_REMOVE_PARTY
Termination event for **cnf_RemoveParty( )**. Party removed successfully.

CNFEV_REMOVE_PARTY_FAIL
Termination event for **cnf_RemoveParty( )**. Remove party operation failed.

CNFEV_SET_ATTRIBUTE
Termination event for **cnf_SetAttributes( )**. Attribute(s) set successfully.

CNFEV_SET_ATTRIBUTE_FAIL
Termination event for **cnf_SetAttributes( )**. Set attribute(s) operation failed.

CNFEV_SET_DTMF_CONTROL
Termination event for **cnf_SetDTMFControl( )**. DTMF digits for volume control set successfully.

CNFEV_SET_DTMF_CONTROL_FAIL
Termination event for **cnf_SetDTMFControl( )**. Set DTMF digit operation failed.

3.3 Notification Events

The following notification events, listed in alphabetical order, may be returned by the conferencing software:

CNFEV_ACTIVE_TALKER
Notification event for active talker. Active talker feature is set using **cnf_SetAttributes( )**. Notification event is enabled using **cnf_EnableEvents( )**.

Data Type: CNF_ACTIVE_TALKER_INFO

CNFEV_CONF_CLOSED
Notification event for a conference that has been closed. Enabled using **cnf_EnableEvents( )**. Useful in multiprocessing; for example, when process B wants to be notified of activity in process A.

Data Type: CNF_CONF_CLOSED_EVENT_INFO

CNFEV_CONF_OPENED
Notification event for a conference that has been opened. Enabled using **cnf_EnableEvents( )**. Useful in multiprocessing; for example, when process B wants to be notified of activity in process A.

Data Type: CNF_CONF_OPENED_EVENT_INFO

CNFEV_DTMF_DETECTED
Notification event when DTMF digit has been detected in the conference. Enabled using **cnf_EnableEvents( )**.

Data Type: CNF_DTMF_EVENT_INFO

CNFEV_ERROR

General error event. Returned when an unexpected error occurs while processing a notification event.

CNFEV_PARTY_ADDED

Notification event for a party that has been added. Enabled using **cnf_EnableEvents( )**. Useful in multiprocessing; for example, when process B wants to be notified of activity in process A.

Data Type: CNF_PARTY_ADDED_EVENT_INFO

CNFEV_PARTY_REMOVED

Notification event for a party that has been removed, either directly through **cnf_RemoveParty( )** or indirectly through **cnf_CloseConference( )**. Enabled using **cnf_EnableEvents( )**. Useful in multiprocessing; for example, when process B wants to be notified of activity in process A.

Data Type: CNF_PARTY_REMOVED_EVENT_INFO

Data Structures 4

This chapter provides an alphabetical reference to the data structures used by the Dialogic® Conferencing (CNF) API software. The following data structures are described:

- CNF_ACTIVE_TALKER_INFO 54
- CNF_ATTR 55
- CNF_ATTR_INFO 56
- CNF_CLOSE_CONF_INFO 57
- CNF_CLOSE_INFO 58
- CNF_CLOSE_PARTY_INFO 59
- CNF_CONF_CLOSED_EVENT_INFO 60
- CNF_CONF_OPENED_EVENT_INFO 61
- CNF_DEVICE_COUNT_INFO 62
- CNF_DTMF_CONTROL_INFO 63
- CNF_DTMF_EVENT_INFO 65
- CNF_ERROR_INFO 66
- CNF_EVENT_INFO 67
- CNF_OPEN_CONF_INFO 68
- CNF_OPEN_CONF_RESULT 69
- CNF_OPEN_INFO 70
- CNF_OPEN_PARTY_INFO 71
- CNF_OPEN_PARTY_RESULT 72
- CNF_PARTY_ADDED_EVENT_INFO 73
- CNF_PARTY_INFO 74
- CNF_PARTY_REMOVED_EVENT_INFO 75

CNF_ACTIVE_TALKER_INFO

```
typedef struct CNF_ACTIVE_TALKER_INFO
{
      unsigned int unVersion;           /* version of structure */
      unsigned int unPartyCount;        /* number of party handles in list */
      SRL_DEVICE_HANDLE *pPartyList;    /* pointer to list of party handles */
} CNF_ACTIVE_TALKER_INFO, *PCNF_ACTIVE_TALKER_INFO;
typedef const CNF_ACTIVE_TALKER_INFO * CPCNF_ACTIVE_TALKER_INFO;
```

Description

The CNF_ACTIVE_TALKER_INFO data structure provides active talker information after the application receives the CNFEV_ACTIVE_TALKER notification event. Notification events are enabled using the **cnf_EnableEvents( )** function.

Field Descriptions

The fields of the CNF_ACTIVE_TALKER_INFO data structure are described as follows:

unVersion
: specifies the version of the data structure. Used to ensure that an application is binary compatible with future changes to this data structure. The current version of this data structure is CNF_ACTIVE_TALKER_INFO_VERSION_0.

unPartyCount
: specifies the number of party handles in the list.

unPartyList
: points to a list of party handles.

Example

For an example of this data structure, see Section 6.1, “Conferencing Example Code and Output”, on page 79.

CNF_ATTR

```
typedef struct CNF_ATTR
{
      unsigned int unVersion;    /* version of structure */
      unsigned int nAttrType;    /* attribute type */
      unsigned unAttrValue;      /* attribute value */
} CNF_ATTR, *PCNF_ATTR;
```

Description

The CNF_ATTR data structure specifies the attributes of a party, conference, or board. This structure is contained in the CNF_ATTR_INFO structure, and is used by the **cnf_SetAttributes( )** and **cnf_GetAttributes( )** functions.

Field Descriptions

The fields of the CNF_ATTR data structure are described as follows:

unVersion
: specifies the version of the data structure. Used to ensure that an application is binary compatible with future changes to this data structure. The current version of this data structure is CNF_ATTR_VERSION_0.

nAttrType
: specifies the type of attribute: board, conference, or party. The attribute type is defined in the ECNF_BRD_ATTR, ECNF_CONF_ATTR, and ECNF_PARTY_ATTR enumerations. All attributes are disabled by default.

pAttrValue
: specifies the value of the attribute. For attributes that can be enabled or disabled, the attribute value is defined in the ECNF_ATTR_STATE enumeration. Possible values include:
  - ECNF_ATTR_STATE_DISABLED – attribute is disabled
  - ECNF_ATTR_STATE_ENABLED – attribute is enabled

Example

For an example of this data structure, see Section 6.1, “Conferencing Example Code and Output”, on page 79.

CNF_ATTR_INFO

```
typedef struct CNF_ATTR_INFO
{
      unsigned int unVersion;    /* version of structure */
      unsigned int nAttrCount;   /* number of attributes in list */
      PCNF_ATTR pAttrList;       /* pointer to attribute list */
} CNF_ATTR_INFO, *PCNF_ATTR_INFO;
```

Description

The CNF_ATTR_INFO data structure contains information about the attributes of a party, conference, or board. This structure is used by the **cnf_SetAttributes( )** and **cnf_GetAttributes( )** functions.

Field Descriptions

The fields of the CNF_ATTR_INFO data structure are described as follows:

unVersion
: specifies the version of the data structure. Used to ensure that an application is binary compatible with future changes to this data structure. The current version of this data structure is CNF_ATTR_INFO_VERSION_0.

nAttrCount
: specifies the number of attributes in the list.

pAttrList
: points to the attribute list. See the CNF_ATTR data structure for more information.

Example

For an example of this data structure, see Section 6.1, “Conferencing Example Code and Output”, on page 79.

CNF_CLOSE_CONF_INFO

```
typedef struct CNF_CLOSE_CONF_INFO
{
      unsigned int unVersion;            /* version of structure */
      unsigned int unRFU;                /* reserved for future use */
} CNF_CLOSE_CONF_INFO, *PCNF_CLOSE_CONF_INFO;
typedef const CNF_CLOSE_CONF_INFO * CPCNF_CLOSE_CONF_INFO;
```

Description

The CNF_CLOSE_CONF_INFO structure is used by the **cnf_CloseConference( )** function.

Note: This structure is reserved for future use. NULL must be passed.

CNF_CLOSE_INFO

```
typedef struct CNF_CLOSE_INFO
{
      unsigned int unVersion;            /* version of structure */
      unsigned int unRFU;                /* reserved for future use */
} CNF_CLOSE_INFO, *PCNF_CLOSE_INFO;
typedef const CNF_CLOSE_INFO * CPCNF_CLOSE_INFO;
```

Description

The CNF_CLOSE_INFO data structure is used by the **cnf_Close( )** function.

Note: This structure is reserved for future use. NULL must be passed.

CNF_CLOSE_PARTY_INFO

```
typedef struct CNF_CLOSE_PARTY_INFO
{
      unsigned int unVersion;            /* version of structure */
      unsigned int unRFU;                /* reserved for future use */
} CNF_CLOSE_PARTY_INFO, *PCNF_CLOSE_PARTY_INFO;
typedef const CNF_CLOSE_PARTY_INFO * CPCNF_CLOSE_PARTY_INFO;
```

Description

The CNF_CLOSE_PARTY_INFO data structure is used by the **cnf_CloseParty( )** function.

Note: This structure is reserved for future use. NULL must be passed.

CNF_CONF_CLOSED_EVENT_INFO

```
typedef struct CNF_CONF_CLOSED_EVENT_INFO
{
      unsigned int unVersion;            /* version of structure */
      const char *szConfName;            /* conference device name */
} CNF_CONF_CLOSED_EVENT_INFO, *PCNF_CONF_CLOSED_EVENT_INFO;
typedef const CNF_CONF_CLOSED_EVENT_INFO * CPCNF_CONF_CLOSED_EVENT_INFO;
```

Description

The CNF_CONF_CLOSED_EVENT_INFO data structure provides information about the conference after the application receives the CNFEV_CONF_CLOSED notification event. Notification events are enabled using the **cnf_EnableEvents( )** function.

Field Descriptions

The fields of the CNF_CONF_CLOSED_EVENT_INFO data structure are described as follows:

unVersion
: specifies the version of the data structure. Used to ensure that an application is binary compatible with future changes to this data structure. The current version of this data structure is CNF_CONF_CLOSED_EVENT_INFO_VERSION_0.

szConfName
: points to the conference device name

Example

For an example of this data structure, see Section 6.1, “Conferencing Example Code and Output”, on page 79.

CNF_CONF_OPENED_EVENT_INFO

```
typedef struct CNF_CONF_OPENED_EVENT_INFO
{
      unsigned int unVersion;            /* version of structure */
      SRL_DEVICE_HANDLE ConfHandle;      /* conference device handle */
      const char *szConfName;            /* conference device name */
} CNF_CONF_OPENED_EVENT_INFO, *PCNF_CONF_OPENED_EVENT_INFO;
typedef const CNF_CONF_OPENED_EVENT_INFO * CPCNF_CONF_OPENED_EVENT_INFO;
```

Description

The CNF_CONF_OPENED_EVENT_INFO data structure provides information about the conference after the application receives the CNFEV_CONF_OPENED notification event. Notification events are enabled using the **cnf_EnableEvents( )** function.

Field Descriptions

The fields of the CNF_CONF_OPENED_EVENT_INFO data structure are described as follows:

unVersion
: specifies the version of the data structure. Used to ensure that an application is binary compatible with future changes to this data structure. The current version of this data structure is CNF_CONF_OPENED_EVENT_INFO_VERSION_0.

ConfHandle
: specifies the conference device handle

szConfName
: points to the conference device name

Example

For an example of this data structure, see Section 6.1, “Conferencing Example Code and Output”, on page 79.

CNF_DEVICE_COUNT_INFO

```
typedef struct CNF_DEVICE_COUNT_INFO
{
      unsigned int unVersion;            /* version of structure */
      unsigned int unFreePartyCount;     /* number of free parties */
      unsigned int unMaxPartyCount;      /* number of maximum parties */
      unsigned int unFreeConfCount;      /* number of free conferences */
      unsigned int unMaxConfCount;       /* number of maximum conferences */
} CNF_DEVICE_COUNT_INFO, *PCNF_DEVICE_COUNT_INFO;
typedef const CNF_DEVICE_COUNT_INFO * CPCNF_DEVICE_COUNT_INFO;
```

Description

The CNF_DEVICE_COUNT_INFO data structure stores information about the number of devices on a board. This structure is used by the **cnf_GetDeviceCount( )** function.

Field Descriptions

The fields of the CNF_DEVICE_COUNT_INFO data structure are described as follows:

unVersion
: specifies the version of the data structure. Used to ensure that an application is binary compatible with future changes to this data structure. The current version of this data structure is CNF_DEVICE_COUNT_INFO_VERSION_0.

unFreePartyCount
: specifies the number of free parties remaining on the board

unMaxPartyCount
: specifies the maximum number of parties that can be opened on the board

unFreeConfCount
: specifies the number of free conferences remaining on the board

unMaxConfCount
: specifies the maximum number of conferences that can be opened on the board

Example

For an example of this data structure, see Section 6.1, “Conferencing Example Code and Output”, on page 79.

CNF_DTMF_CONTROL_INFO

```
typedef struct CNF_DTMF_CONTROL_INFO
{
      unsigned int unVersion;               /* version of structure */
      ECNF_ATTR_STATE eDTMFControlState;     /* enable/disable DMTF control */
      ECNF_DTMF_DIGIT eVolumeUpDigit;        /* volume up digit */
      ECNF_DTMF_DIGIT eVolumeDownDigit;      /* volume down digit */
      ECNF_DTMF_DIGIT eVolumeResetDigit;        /* volume reset digit */
} CNF_DTMF_CONTROL_INFO, *PCNF_DTMF_CONTROL_INFO;
typedef const CNF_DTMF_CONTROL_INFO * CPCNF_DTMF_CONTROL_INFO;
```

Description

The CNF_DTMF_CONTROL_INFO data structure stores information about DTMF values used to control the volume of a conference. This structure is used by the **cnf_SetDTMFControl( )** and **cnf_GetDTMFControl( )** functions.

Field Descriptions

The fields of the CNF_DTMF_CONTROL_INFO data structure are described as follows:

unVersion
: specifies the version of the data structure. Used to ensure that an application is binary compatible with future changes to this data structure. The current version of this data structure is CNF_DTMF_CONTROL_INFO_VERSION_0.

eDTMFControlState
: enables or disables DTMF digits used to control the volume of a conference. The ECNF_ATTR_STATE data type is an enumeration that defines the following values:
  - ECNF_ATTR_STATE_DISABLED – attribute is disabled
  - ECNF_ATTR_STATE_ENABLED – attribute is enabled

eVolumeUpDigit
: specifies the DTMF digit used to increase the volume. The volume increment is 2 dB. The ECNF_DTMF_DIGIT data type is an enumeration that defines the following values:
  - ECNF_DTMF_DIGIT_1 – specifies DTMF 1
  - ECNF_DTMF_DIGIT_2 – specifies DTMF 2
  - ECNF_DTMF_DIGIT_3 – specifies DTMF 3
  - ECNF_DTMF_DIGIT_4 – specifies DTMF 4
  - ECNF_DTMF_DIGIT_5 – specifies DTMF 5
  - ECNF_DTMF_DIGIT_6 – specifies DTMF 6
  - ECNF_DTMF_DIGIT_7 – specifies DTMF 7
  - ECNF_DTMF_DIGIT_8 – specifies DTMF 8
  - ECNF_DTMF_DIGIT_9 – specifies DTMF 9
  - ECNF_DTMF_DIGIT_0 – specifies DTMF 0
  - ECNF_DTMF_DIGIT_STAR – specifies DTMF *
  - ECNF_DTMF_DIGIT_POUND – specifies DTMF #
  - ECNF_DTMF_DIGIT_A – specifies DTMF A
  - ECNF_DTMF_DIGIT_B – specifies DTMF B
  - ECNF_DTMF_DIGIT_C – specifies DTMF C
  - ECNF_DTMF_DIGIT_D – specifies DTMF D

eVolumeDownDigit
: specifies the DTMF digit used to decrease the volume. The volume decrement is 2 dB. The ECNF_DTMF_DIGIT data type is an enumeration that defines the values for DTMF digits. See eVolumeUpDigit for a list of values.

eVolumeResetDigit
: specifies the DTMF digit used to reset the volume to its default level. The default volume and origin is 0 dB. The ECNF_DTMF_DIGIT data type is an enumeration that defines the values for DTMF digits. See eVolumeUpDigit for a list of values.

Example

For an example of this data structure, see Section 6.1, “Conferencing Example Code and Output”, on page 79.

CNF_DTMF_EVENT_INFO

```
typedef struct CNF_DTMF_EVENT_INFO
{
      unsigned int unVersion;               /* version of structure */
      SRL_DEVICE_HANDLE PartyHandle;        /* party device handle */
      ECNF_DTMF_DIGIT eDigit;               /* detected DTMF digit */
} CNF_DTMF_EVENT_INFO, *PCNF_DTMF_EVENT_INFO;
typedef const CNF_DTMF_EVENT_INFO * CPCNF_DTMF_EVENT_INFO;
```

Description

The CNF_DTMF_EVENT_INFO data structure provides DTMF digit information to the party after the application receives the CNFEV_DTMF_EVENT notification event. Notification events are enabled using the **cnf_EnableEvents( )** function.

Field Descriptions

The fields of the CNF_DTMF_EVENT_INFO data structure are described as follows:

unVersion
: specifies the version of the data structure. Used to ensure that an application is binary compatible with future changes to this data structure. The current version of this data structure is CNF_DTMF_EVENT_INFO_VERSION_0.

PartyHandle
: specifies the party device handle

eDigit
: specifies the DTMF digit that was detected. The ECNF_DTMF_DIGIT data type is an enumeration that defines the following values:
  - ECNF_DTMF_DIGIT_1 – specifies DTMF 1
  - ECNF_DTMF_DIGIT_2 – specifies DTMF 2
  - ECNF_DTMF_DIGIT_3 – specifies DTMF 3
  - ECNF_DTMF_DIGIT_4 – specifies DTMF 4
  - ECNF_DTMF_DIGIT_5 – specifies DTMF 5
  - ECNF_DTMF_DIGIT_6 – specifies DTMF 6
  - ECNF_DTMF_DIGIT_7 – specifies DTMF 7
  - ECNF_DTMF_DIGIT_8 – specifies DTMF 8
  - ECNF_DTMF_DIGIT_9 – specifies DTMF 9
  - ECNF_DTMF_DIGIT_0 – specifies DTMF 0
  - ECNF_DTMF_DIGIT_STAR – specifies DTMF *
  - ECNF_DTMF_DIGIT_POUND – specifies DTMF #
  - ECNF_DTMF_DIGIT_A – specifies DTMF A
  - ECNF_DTMF_DIGIT_B – specifies DTMF B
  - ECNF_DTMF_DIGIT_C – specifies DTMF C
  - ECNF_DTMF_DIGIT_D – specifies DTMF D

Example

For an example of this data structure, see Section 6.1, “Conferencing Example Code and Output”, on page 79.

CNF_ERROR_INFO

```
typedef struct CNF_ERROR_INFO
{
      unsigned int unVersion;           /* version of structure */
      unsigned int unErrorCode;         /* error code */
      const char *szErrorString;        /* error string */
      const char *szAdditionalInfo;     /* additional error information string */
} CNF_ERROR_INFO, *PCNF_ERROR_INFO;
typedef const CNF_ERROR_INFO * CPCNF_ERROR_INFO;
```

Description

The CNF_ERROR_INFO data structure provides error information for the device handle when an API function fails. This structure is used by the **cnf_GetErrorInfo( )** function.

Field Descriptions

The fields of the CNF_ERROR_INFO data structure are described as follows:

unVersion
: specifies the version of the data structure. Used to ensure that an application is binary compatible with future changes to this data structure. The current version of this data structure is CNF_ERROR_INFO_VERSION_0.

unErrorCode
: specifies the error code

szErrorString
: points to the error message

szAdditionalInfo
: points to additional error information

Example

For an example of this data structure, see Section 6.1, “Conferencing Example Code and Output”, on page 79.

CNF_EVENT_INFO

```
typedef struct CNF_EVENT_INFO
{
      unsigned int unVersion;           /* version of structure */
      unsigned int unEventCount;        /* number of events in list */
      unsigned int *punEventList;       /* pointer to event list */
} CNF_EVENT_INFO, *PCNF_EVENT_INFO;
typedef const CNF_EVENT_INFO * CPCNF_EVENT_INFO;
```

Description

The CNF_EVENT_INFO data structure provides event information for the device handle when a notification event is enabled or disabled. This structure is used by the **cnf_EnableEvents( )** function.

Field Descriptions

The fields of the CNF_EVENT_INFO data structure are described as follows:

unVersion
: specifies the version of the data structure. Used to ensure that an application is binary compatible with future changes to this data structure. The current version of this data structure is CNF_EVENT_INFO_VERSION_0.

unEventCount
: specifies the number of events in the list.

punEventList
: points to a list of events.

Example

For an example of this data structure, see Section 6.1, “Conferencing Example Code and Output”, on page 79.

CNF_OPEN_CONF_INFO

```
typedef struct CNF_OPEN_CONF_INFO
{
      unsigned int unVersion;            /* version of structure */
      unsigned int unRFU;                /* reserved for future use */
} CNF_OPEN_CONF_INFO, *PCNF_OPEN_CONF_INFO;
typedef const CNF_OPEN_CONF_INFO * CPCNF_OPEN_CONF_INFO;
```

Description

The CNF_OPEN_CONF_INFO data structure is used by the **cnf_OpenConference( )** function.

Note: This structure is reserved for future use. NULL must be passed.

CNF_OPEN_CONF_RESULT

```
typedef struct CNF_OPEN_CONF_RESULT
{
      unsigned int unVersion;           /* version of structure */
      const char * szConfName;          /* conference device name */
      SRL_DEVICE_HANDLE ConfHandle;     /* conference device handle */
} CNF_OPEN_CONF_RESULT, *PCNF_OPEN_CONF_RESULT;
typedef const CNF_OPEN_CONF_RESULT * CPCNF_OPEN_CONF_RESULT;
```

Description

The CNF_OPEN_CONF_RESULT data structure contains result information returned with the CNFEV_OPEN_CONF event. This termination event is returned by the **cnf_OpenConference( )** function.

Field Descriptions

The fields of the CNF_OPEN_CONF_RESULT data structure are described as follows:

unVersion
: specifies the version of the data structure. Used to ensure that an application is binary compatible with future changes to this data structure. The current version of this data structure is CNF_OPEN_CONF_RESULT_VERSION_0.

szConfName
: specifies the conference device name

ConfHandle
: specifies the conference device handle

Example

For an example of this data structure, see Section 6.1, “Conferencing Example Code and Output”, on page 79.

CNF_OPEN_INFO

```
typedef struct CNF_OPEN_INFO
{
      unsigned int unVersion;            /* version of structure */
      unsigned int unRFU;                /* reserved for future use */
} CNF_OPEN_INFO, *PCNF_OPEN_INFO;
typedef const CNF_OPEN_INFO * CPCNF_OPEN_INFO;
```

Description

The CNF_OPEN_INFO data structure is used by the **cnf_Open( )** function.

Note: This structure is reserved for future use. NULL must be passed.

CNF_OPEN_PARTY_INFO

```
typedef struct CNF_OPEN_PARTY_INFO
{
      unsigned int unVersion;            /* version of structure */
      unsigned int unRFU;                /* reserved for future use */
} CNF_OPEN_PARTY_INFO, *PCNF_OPEN_PARTY_INFO;
typedef const CNF_OPEN_PARTY_INFO * CPCNF_OPEN_PARTY_INFO;
```

Description

The CNF_OPEN_PARTY_INFO data structure is used by the **cnf_OpenParty( )** function.

Note: This structure is reserved for future use. NULL must be passed.

CNF_OPEN_PARTY_RESULT

```
typedef struct CNF_OPEN_PARTY_RESULT
{
      unsigned int unVersion;            /* version of structure */
      const char * szPartyName;           /* party device name */
      SRL_DEVICE_HANDLE PartyHandle;      /* party device handle */
} CNF_OPEN_PARTY_RESULT, *PCNF_OPEN_PARTY_RESULT;
typedef const CNF_OPEN_PARTY_RESULT * CPCNF_OPEN_PARTY_RESULT;
```

Description

The CNF_OPEN_PARTY_RESULT data structure contains result information returned with the CNFEV_OPEN_PARTY event. This termination event is returned by the **cnf_OpenParty( )** function.

Field Descriptions

The fields of the CNF_OPEN_PARTY_RESULT data structure are described as follows:

unVersion
: specifies the version of the data structure. Used to ensure that an application is binary compatible with future changes to this data structure. The current version of this data structure is CNF_OPEN_PARTY_RESULT_VERSION_0.

szPartyName
: specifies the party device name

PartyHandle
: specifies the party device handle

Example

For an example of this data structure, see Section 6.1, “Conferencing Example Code and Output”, on page 79.

CNF_PARTY_ADDED_EVENT_INFO

```
typedef struct CNF_PARTY_ADDED_EVENT_INFO
{
      unsigned int unVersion;            /* version of structure */
      SRL_DEVICE_HANDLE ConfHandle;      /* conference device handle */
      const char *szConfName;            /* conference device name */
      SRL_DEVICE_HANDLE PartyHandle;     /* party device handle */
      const char *szPartyName;           /* party device name */
} CNF_PARTY_ADDED_EVENT_INFO, *PCNF_PARTY_ADDED_EVENT_INFO;
typedef const CNF_PARTY_ADDED_EVENT_INFO * CPCNF_PARTY_ADDED_EVENT_INFO;
```

Description

The CNF_PARTY_ADDED_EVENT_INFO data structure provides information about the party after the application receives the CNFEV_PARTY_ADDED notification event. Notification events are enabled using the **cnf_EnableEvents( )** function.

Field Descriptions

The fields of the CNF_PARTY_ADDED_EVENT_INFO data structure are described as follows:

unVersion
: specifies the version of the data structure. Used to ensure that an application is binary compatible with future changes to this data structure. The current version of this data structure is CNF_PARTY_ADDED_EVENT_INFO_VERSION_0.

ConfHandle
: specifies the conference device handle

szConfName
: points to the conference device name

PartyHandle
: specifies the party device handle

szPartyName
: points to the party device name

Example

For an example of this data structure, see Section 6.1, “Conferencing Example Code and Output”, on page 79.

CNF_PARTY_INFO

```
typedef struct CNF_PARTY_INFO
{
      unsigned int unVersion;           /* version of structure */
      unsigned int unPartyCount;        /* number of party handles in list */
      SRL_DEVICE_HANDLE *pPartyList;    /* pointer to list of party handles */
} CNF_PARTY_INFO, *PCNF_PARTY_INFO;
typedef const CNF_PARTY_INFO * CPCNF_PARTY_INFO;
```

Description

The CNF_PARTY_INFO data structure stores information on a party that is opened, added or removed. This structure is used by the **cnf_OpenParty( )**, **cnf_AddParty( )**, and **cnf_RemoveParty( )** functions. This structure is also returned as the data to several events; for example, the CNF_OPEN_PARTY termination event.

Field Descriptions

The fields of the CNF_PARTY_INFO data structure are described as follows:

unVersion
: specifies the version of the data structure. Used to ensure that an application is binary compatible with future changes to this data structure. The current version of this data structure is CNF_PARTY_INFO_VERSION_0.

unPartyCount
: specifies the number of party handles in the list.

pPartyList
: points to a list of party handles.

Example

For an example of this data structure, see Section 6.1, “Conferencing Example Code and Output”, on page 79.

CNF_PARTY_REMOVED_EVENT_INFO

```
typedef struct CNF_PARTY_REMOVED_EVENT_INFO
{
      unsigned int unVersion;            /* version of structure */
      SRL_DEVICE_HANDLE ConfHandle;      /* conference device handle */
      const char *szConfName;            /* conference device name */
      SRL_DEVICE_HANDLE PartyHandle;     /* party device handle */
      const char *szPartyName;           /* party device name */
} CNF_PARTY_REMOVED_EVENT_INFO, *PCNF_PARTY_REMOVED_EVENT_INFO;
typedef const CNF_PARTY_REMOVED_EVENT_INFO * CPCNF_PARTY_REMOVED_EVENT_INFO;
```

Description

The CNF_PARTY_REMOVED_EVENT_INFO data structure provides information about the party after the application receives the CNFEV_PARTY_REMOVED notification event. Notification events are enabled using the **cnf_EnableEvents( )** function.

Field Descriptions

The fields of the CNF_PARTY_REMOVED_EVENT_INFO data structure are described as follows:

unVersion
: specifies the version of the data structure. Used to ensure that an application is binary compatible with future changes to this data structure. The current version of this data structure is CNF_PARTY_REMOVED_EVENT_INFO_VERSION_0.

ConfHandle
: specifies the conference device handle

szConfName
: points to the conference device name

PartyHandle
: specifies the party device handle

szPartyName
: points to the party device name

Example

For an example of this data structure, see Section 6.1, “Conferencing Example Code and Output”, on page 79.

Error Codes 5

This chapter describes the error codes used by the Dialogic® Conferencing (CNF) API software. Error codes are defined in *cnferrs.h*.

Dialogic® Conferencing (CNF) API library functions return a value that indicates the success or failure of a function call. Success is indicated by CNF_SUCCESS, and failure is indicated by CNF_ERROR. If a library function returns CNF_ERROR to indicate failure, use **cnf_GetErrorInfo( )** to obtain the reason for the error. Alternatively, you can use the standard attribute function **ATDV_LASTERR( )** to return the error code and **ATDV_ERRMSGP( )** to return the error description. These functions are described in the *Dialogic® Standard Runtime Library API Library Reference*.

Note: The following functions cannot use the Dialogic® Standard Runtime Library standard attribute functions to process errors: **cnf_Close( )**, **cnf_CloseConference( )**, and **cnf_CloseParty( )**.

If an error occurs during execution of an asynchronous function, an error event, preceded by "CNFEV_" is sent to the application. No change of state is triggered by this event. Upon receiving the CNFEV_ERROR event, the application can retrieve the reason for the failure using **ATDV_LASTERR( )** and **ATDV_ERRMSGP( )**.

The error codes used by the conferencing software are described as follows:

ECNF_FIRMWARE
: firmware error

ECNF_INVALID_ATTR
: invalid device attribute

ECNF_INVALID_DEVICE
: invalid device

ECNF_INVALID_EVENT
: invalid device event

ECNF_INVALID_HANDLE
: invalid device handle

ECNF_INVALID_NAME
: invalid device name

ECNF_INVALID_PARM
: invalid parameter

ECNF_INVALID_STATE
: invalid device state for requested operation

ECNF_LIBRARY
: library error

ECNF_MEMORY_ALLOC
: memory allocation error

ECNF_NOERROR
no error

ECNF_SUBSYSTEM
internal subsystem error

ECNF_SYSTEM
system error

ECNF_UNSUPPORTED_API
API not currently supported

ECNF_UNSUPPORTED_FUNC
requested functionality not supported

ECNF_UNSUPPORTED_TECH
technology not currently supported

Supplementary Reference Information 6

This chapter provides reference information about the following topic:

- Conferencing Example Code and Output 79

6.1 Conferencing Example Code and Output

Written in the C++ programming language, the example code in Figure 1 exercises Dialogic® Conferencing (CNF) API functions and data structures. It is intended to illustrate how the Dialogic® Conferencing (CNF) API functions and data structures are used in a simple application. It is not intended to be used in a production environment.

The output from the example code is provided in Figure 2, “Conferencing Example Code Output”, on page 102.

Figure 1. Conferencing Example Code

```
#include <cnflib.h>
#include <srllib.h>
#include <iostream>

#ifdef WIN32
#else
#include <unistd.h>
#endif

using namespace std;

#define MAX_CNF_BRD_ATTR   (ECNF_BRD_ATTR_END_OF_LIST - CNF_BRD_ATTR_BASE)
#define MAX_CNF_CONF_ATTR  (ECNF_CONF_ATTR_END_OF_LIST - CNF_CONF_ATTR_BASE)
#define MAX_CNF_PTY_ATTR   (ECNF_PARTY_ATTR_END_OF_LIST - CNF_PARTY_ATTR_BASE)

/**
 * @struct SRL_METAEVENT
 */
struct SRL_METAEVENT
{
   long              EventType;        ///< Event type
   SRL_DEVICE_HANDLE EventDevice;      ///< Event device handle
   void *            pEventData;       ///< Pointer to event data
   long              EventDataLength;  ///< Event data length
   void *            pEventUserInfo;   ///< Pointer to user defined data
};
typedef SRL_METAEVENT * PSRL_METAEVENT;



/**
 * @fn srl_GetMetaEvent
 */
```

```
void srl_GetMetaEvent(PSRL_METAEVENT a_pMetaEvent);

/**
 * @fn ProcessErrorInfo
 */

void ProcessErrorInformation();

/**
 * @fn ProcessMetaEvent
 */

void ProcessMetaEvent(char * a_szString);

/**
 * @fn Process conferencing event(s) functions.
 */

void ProcessGetAttributesEvent();
void ProcessOpenConferenceEvent();
void ProcessOpenPartyEvent();
void ProcessSetAttributesEvent();
void ProcessDisableEventsEvent();
void ProcessEnableEventsEvent();
void ProcessAddPartyEvent();
void ProcessRemovePartyEvent();
void ProcessGetDeviceCountEvent();
void ProcessGetDTMFControlEvent();
void ProcessSetDTMFControlEvent();
void ProcessGetPartyListEvent();
void ProcessGetActiveTalkerListEvent();
void Process_BoardEvent();


/**
 * @fn main
 */
int main(int nArgCount, char *pArgList[])
{
   cout << "Conferencing (CNF) Example Code" << endl;
   cout << "===================================" << endl << endl;

   /*****************************************************************************
    * SETUP SRL MODE OF FUNCTIONALITY.
    *****************************************************************************/
   int nSRLMode = SR_POLLMODE;
   if (sr_setparm(SRL_DEVICE, SR_MODEID, &nSRLMode) == -1)
   {
      cout << "Error setting SRL mode !!" << endl;
      return 0;
   }

   SRL_DEVICE_HANDLE BrdDevice;
   SRL_DEVICE_HANDLE CnfDevice;
   SRL_DEVICE_HANDLE PtyDevice;

   /*****************************************************************************
    * OPEN A BOARD DEVICE
    *
    * NOTE: THIS CALL IS EXPECTED TO FAIL DUE TO BAD PARAMETERS. TEST TO SEE IF
    *       ERROR HANDLING IS WORKING CORRECTLY. PASSING INVALID DEVICE NAME.
   ******************************************************************************/
   if ((BrdDevice = cnf_Open(NULL, NULL, NULL)) == CNF_ERROR)
   {
      ///
      // Good, we were expecting this to happen. Let's get the error information
            cout << "cnf_Open failure!! : Expected failure due to the following" << endl;
```

```
        ProcessErrorInformation();
}

/*****************************************************************************
 * OPEN A BOARD DEVICE.
 *****************************************************************************/
if ((BrdDevice = cnf_Open("cnfB1", NULL, NULL)) == CNF_ERROR)
{
   cout << "cnf_Open failed !!" << endl;
           ProcessErrorInformation();
   return 0;
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(BrdDevice) << endl;
   }
   else
   {
      ProcessMetaEvent("cnf_Open( ) - Successful");
   }
}

/*****************************************************************************
 * GET THE DEVICE COUNTS FOR THE BOARD DEVICE.
 *****************************************************************************/
if ((cnf_GetDeviceCount(BrdDevice, NULL)) == CNF_ERROR)
{
   cout << "cnf_GetDeviceCount failed !!" << endl;
            ProcessErrorInformation();
   return 0;
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(BrdDevice) << endl;
   }
   else
   {
      ProcessGetDeviceCountEvent();
   }
}

/*****************************************************************************
 * SET THE DTMF CONTROL INFORMATION FOR THE BOARD DEVICE.
 *****************************************************************************/
CNF_DTMF_CONTROL_INFO DTMFControlInfo;
DTMFControlInfo.unVersion         = CNF_DTMF_CONTROL_INFO_VERSION_0;
DTMFControlInfo.eDTMFControlState = ECNF_ATTR_STATE_ENABLED;
DTMFControlInfo.eVolumeUpDigit    = ECNF_DTMF_DIGIT_POUND;
DTMFControlInfo.eVolumeDownDigit  = ECNF_DTMF_DIGIT_STAR;
DTMFControlInfo.eVolumeResetDigit = ECNF_DTMF_DIGIT_0;

if ((cnf_SetDTMFControl(BrdDevice, &DTMFControlInfo, NULL)) == CNF_ERROR)
{
   cout << "cnf_SetDTMFControl failed !!" << endl;
           ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(BrdDevice) << endl;
   }
   else
```

```
   {
      ProcessSetDTMFControlEvent();
   }
}

/*****************************************************************************
 * GET THE DTMF CONTROL INFORMATION FOR THE BOARD DEVICE.
 *****************************************************************************/
if ((cnf_GetDTMFControl(BrdDevice, NULL)) == CNF_ERROR)
{
   cout << "cnf_GetDTMFControl failed !!" << endl;
          ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(BrdDevice) << endl;
   }
   else
   {
      ProcessGetDTMFControlEvent();
   }
}

/*****************************************************************************
 * ENABLE EVENTS ON THE BOARD DEVICE.
 *
 * NOTE: THIS CALL IS EXPECTED TO FAIL DUE TO BAD PARAMETERS. TEST TO SEE IF
 *       ERROR HANDLING IS WORKING CORRECTLY. PASSING INVALID EVENT LIST.
 *****************************************************************************/
unsigned int BrdEventList[10];
BrdEventList[0] = ECNF_CONF_EVT_PARTY_ADDED;
BrdEventList[1] = ECNF_CONF_EVT_PARTY_REMOVED;

CNF_EVENT_INFO BrdEventInfo;
BrdEventInfo.unEventCount = 2;
BrdEventInfo.punEventList = BrdEventList;

if (cnf_EnableEvents(BrdDevice, &BrdEventInfo, NULL) == CNF_ERROR)
{
   cout << "cnf_EnableEvents failed !!" << endl;
          ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(BrdDevice) << endl;
   }
   else
   {
      ProcessEnableEventsEvent();
   }
}

/*****************************************************************************
 * ENABLE BOARD DEVICE EVENTS.
 *****************************************************************************/
BrdEventList[0] = ECNF_BRD_EVT_CONF_CLOSED;
BrdEventList[1] = ECNF_BRD_EVT_ACTIVE_TALKER;
BrdEventList[2] = ECNF_BRD_EVT_PARTY_ADDED;
BrdEventList[3] = ECNF_BRD_EVT_PARTY_REMOVED;

BrdEventInfo.unEventCount = 4;
BrdEventInfo.punEventList = BrdEventList;
```

```
if (cnf_EnableEvents(BrdDevice, &BrdEventInfo, (void *)1) == CNF_ERROR)
{
   cout << "cnf_EnableEvents failed !!" << endl;
            ProcessErrorInformation();
   return 0;
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(BrdDevice) << endl;
   }
   else
   {
      ProcessEnableEventsEvent();
   }
}

/*************************************************************************
 * OPEN A CONFERENCE DEVICE.
 *************************************************************************/
if ((CnfDevice = cnf_OpenConference(BrdDevice, NULL, NULL, NULL)) == CNF_ERROR)
{
     cout << "cnf_OpenConference failed !!" << endl;
              ProcessErrorInformation();
}
else
{
   for (int i = 0; i < 1; i++)
   {
      if (sr_waitevt(10000) == -1)
      {
         cout << "sr_waitevt failed - " << ATDV_ERRMSGP(BrdDevice) << endl;
      }
      else
      {
         ProcessOpenConferenceEvent();
      }
   }
}


/*************************************************************************
 * ENABLE CONFERENCE DEVICE EVENTS.
 *************************************************************************/
unsigned int CnfEventList[10];
CnfEventList[0] = ECNF_CONF_EVT_PARTY_ADDED;
CnfEventList[1] = ECNF_CONF_EVT_PARTY_REMOVED;
CnfEventList[2] = ECNF_CONF_EVT_ACTIVE_TALKER;

CNF_EVENT_INFO CnfEventInfo;
CnfEventInfo.unEventCount = 3;
CnfEventInfo.punEventList = CnfEventList;

if (cnf_EnableEvents(CnfDevice, &CnfEventInfo, (void *)1) == CNF_ERROR)
{
   cout << "cnf_EnableEvents failed !!" << endl;
           ProcessErrorInformation();
   return 0;
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(CnfDevice) << endl;
   }
   else
```

```
   {
      ProcessEnableEventsEvent();
   }
}

/*****************************************************************************
 * SET CONFERENCE DEVICE ATTRIBUTES.
 *****************************************************************************/
CNF_ATTR CnfAttrList[MAX_CNF_CONF_ATTR];
CNF_ATTR_INFO CnfAttrInfo;
CnfAttrList[0].unAttribute = ECNF_CONF_ATTR_TONE_CLAMPING;
CnfAttrList[0].unValue = ECNF_ATTR_STATE_ENABLED;
CnfAttrList[1].unAttribute = ECNF_CONF_ATTR_DTMF_MASK;
CnfAttrList[1].unValue = ECNF_DTMF_MASK_OP_SET | ECNF_DTMF_DIGIT_1 | ECNF_DTMF_DIGIT_2 |
  ECNF_DTMF_DIGIT_3 | ECNF_DTMF_DIGIT_4;
CnfAttrInfo.unAttrCount = 2;
CnfAttrInfo.pAttrList = CnfAttrList;

///
// Let's set conference device attributes.
if (cnf_SetAttributes(CnfDevice, &CnfAttrInfo, NULL) == CNF_ERROR)
{
   cout << "cnf_SetAttributes( ) - failed" << endl;
   ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(CnfDevice) << endl;
   }
   else
   {
      ProcessSetAttributesEvent();
   }
}

/*****************************************************************************
 * GET CONFERENCE DEVICE ATTRIBUTES.
 *****************************************************************************/
int nCnfAttr = CNF_CONF_ATTR_BASE;
for (int i = 0; i < MAX_CNF_CONF_ATTR; i++, nCnfAttr++)
{
   CnfAttrList[i].unAttribute = nCnfAttr;
}

CnfAttrInfo.unAttrCount = MAX_CNF_CONF_ATTR;
CnfAttrInfo.pAttrList = CnfAttrList;

if (cnf_GetAttributes(CnfDevice, &CnfAttrInfo, NULL) == CNF_ERROR)
{
   cout << "cnf_GetAttributes( ) - failed" << endl;
   ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(CnfDevice) << endl;
   }
   else
   {
      ProcessGetAttributesEvent();
   }
}
```

```
/*****************************************************************************
 * OPEN A PARTY DEVICE.
 *****************************************************************************/
if ((PtyDevice = cnf_OpenParty(BrdDevice, NULL, NULL, NULL)) == CNF_ERROR)
{
     cout << "cnf_OpenParty( ) - failed" << endl;
              ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(BrdDevice) << endl;
   }
   else
   {
      ProcessOpenPartyEvent();
   }
}

/*****************************************************************************
 * OPEN MULTIPLE PARTY DEVICES.
 *****************************************************************************/
const unsigned int unPtyCount = 5;
SRL_DEVICE_HANDLE * pPtyDeviceList = new SRL_DEVICE_HANDLE[unPtyCount];
{
   for (unsigned int i = 0; i < unPtyCount; i++)
   {
      if ((pPtyDeviceList[i] = cnf_OpenParty(BrdDevice, NULL, NULL, NULL)) == CNF_ERROR)
      {
         cout << "cnf_OpenParty( ) - failed" << endl;
                 ProcessErrorInformation();
   }
      else
      {
         if (sr_waitevt(10000) == -1)
         {
            cout << "sr_waitevt failed - " << ATDV_ERRMSGP(BrdDevice) << endl;
         }
         else
         {
            ProcessOpenPartyEvent();
         }
      }
   }
}

/*****************************************************************************
 * GET PARTY DEVICE ATTRIBUTES.
 *****************************************************************************/
CNF_ATTR PtyAttrList[MAX_CNF_PTY_ATTR];
int nPtyAttr = CNF_PARTY_ATTR_BASE;

{
   for (int i = 0; i < MAX_CNF_PTY_ATTR; i++, nPtyAttr++)
   {
      PtyAttrList[i].unAttribute = nPtyAttr;
   }
}

CNF_ATTR_INFO PtyAttrInfo;
PtyAttrInfo.unAttrCount = MAX_CNF_PTY_ATTR;
PtyAttrInfo.pAttrList = PtyAttrList;

if (cnf_GetAttributes(PtyDevice, &PtyAttrInfo, NULL) == CNF_ERROR)
{
   cout << "cnf_GetAttributes( ) - failed" << endl;
```

```
   ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(PtyDevice) << endl;
   }
   else
   {
      ProcessGetAttributesEvent();
   }
}

/*****************************************************************************
 * SET PARTY DEVICE ATTRIBUTES.
 *****************************************************************************/

PtyAttrList[0].unAttribute = ECNF_PARTY_ATTR_TARIFF_TONE;
PtyAttrList[0].unValue = ECNF_ATTR_STATE_ENABLED;
PtyAttrList[1].unAttribute = ECNF_PARTY_ATTR_COACH;
PtyAttrList[1].unValue = ECNF_ATTR_STATE_ENABLED;

PtyAttrInfo.unAttrCount = 2;
PtyAttrInfo.pAttrList = PtyAttrList;

if (cnf_SetAttributes(PtyDevice, &PtyAttrInfo, NULL) == CNF_ERROR)
{
   cout << "cnf_SetAttributes( ) - failed" << endl;
   ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(PtyDevice) << endl;
   }
   else
   {
      ProcessSetAttributesEvent();
   }
}

/*****************************************************************************
 * GET PARTY DEVICE ATTRIBUTES.
 *****************************************************************************/
nPtyAttr = CNF_PARTY_ATTR_BASE;
{
   for (int i = 0; i < MAX_CNF_PTY_ATTR; i++, nPtyAttr++)
   {
      PtyAttrList[i].unAttribute = nPtyAttr;
   }
}

PtyAttrInfo.unAttrCount = MAX_CNF_PTY_ATTR;
PtyAttrInfo.pAttrList = PtyAttrList;

if (cnf_GetAttributes(PtyDevice, &PtyAttrInfo, NULL) == CNF_ERROR)
{
   cout << "cnf_GetAttributes( ) - failed" << endl;
   ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(PtyDevice) << endl;
```

```
   }
   else
   {
      ProcessGetAttributesEvent();
   }
}

/*****************************************************************************
 * ADD A PARTY TO A CONFERENCE.
*****************************************************************************/
CNF_PARTY_INFO PtyInfo;
PtyInfo.unPartyCount = 1;
PtyInfo.pPartyList = &PtyDevice;

if (cnf_AddParty(CnfDevice, &PtyInfo, NULL) == CNF_ERROR)
{
   cout << "cnf_AddParty( ) - failed" << endl;
   ProcessErrorInformation();
}
else
{
   for (int i = 0; i < 3; i++)
   {
      if (sr_waitevt(10000) == -1)
      {
         cout << "sr_waitevt failed - " << ATDV_ERRMSGP(CnfDevice) << endl;
      }
      else
      {
         ProcessAddPartyEvent();
      }
   }
}

/*****************************************************************************
 * ADD MULTIPLE PARTIES TO A CONFERENCE.
 *****************************************************************************/
{
   for (unsigned int i = 0; i < unPtyCount; i++)
   {
   CNF_PARTY_INFO PtyInfo;
      PtyInfo.unPartyCount = 1;
      PtyInfo.pPartyList = &(pPtyDeviceList[i]);

      if (cnf_AddParty(CnfDevice, &PtyInfo, NULL) == CNF_ERROR)
      {
         cout << "cnf_AddParty( ) - failed" << endl;
         ProcessErrorInformation();
      }
      else
      {
         for (int i = 0; i < 3; i++)
         {
            if (sr_waitevt(10000) == -1)
            {
               cout << "sr_waitevt failed - " << ATDV_ERRMSGP(CnfDevice) << endl;
            }
            else
            {
               ProcessAddPartyEvent();
            }
         }
      }
   }
}
```

```
/*****************************************************************************
 * GET LIST OF PARTIES ADDED TO A CONFERENCE.
 *****************************************************************************/
if (cnf_GetPartyList(CnfDevice, NULL) == CNF_ERROR)
{
   cout << "cnf_GetPartyList( ) - failed" << endl;
   ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(CnfDevice) << endl;
   }
   else
   {
      ProcessGetPartyListEvent();
   }
}

/*****************************************************************************
 * GET LIST OF ACTIVE TALKERS AT THE CONFERENCE LEVEL.
 *****************************************************************************/
if (cnf_GetActiveTalkerList(CnfDevice, NULL) == CNF_ERROR)
{
   cout << "cnf_GetActiveTalkerList( ) - failed" << endl;
   ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(CnfDevice) << endl;
   }
   else
   {
      ProcessGetActiveTalkerListEvent();
   }
}

/*****************************************************************************
 * GET LIST OF ACTIVE TALKERS AT THE BOARD LEVEL.
 *****************************************************************************/
if (cnf_GetActiveTalkerList(BrdDevice, NULL) == CNF_ERROR)
{
   cout << "cnf_GetActiveTalkerList( ) - failed" << endl;
   ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(BrdDevice) << endl;
   }
   else
   {
      ProcessGetActiveTalkerListEvent();
   }
}

/*****************************************************************************
 * GET ATTRIBUTES ON A PARTY DEVICE.
 *****************************************************************************/
if (cnf_GetAttributes(PtyDevice, &PtyAttrInfo, NULL) == CNF_ERROR)
{
   cout << "cnf_GetAttributes( ) - failed" << endl;
   ProcessErrorInformation();
```

```
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(PtyDevice) << endl;
   }
   else
   {
      ProcessGetAttributesEvent();
   }
}

/*****************************************************************************
 * SET ATTRIBUTES ON A PARTY DEVICE.
 *****************************************************************************/
PtyAttrList[0].unAttribute = ECNF_PARTY_ATTR_TARIFF_TONE;
PtyAttrList[0].unValue = ECNF_ATTR_STATE_ENABLED;
PtyAttrList[1].unAttribute = ECNF_PARTY_ATTR_COACH;
PtyAttrList[1].unValue = ECNF_ATTR_STATE_ENABLED;

PtyAttrInfo.unAttrCount = 2;
PtyAttrInfo.pAttrList = PtyAttrList;

if (cnf_SetAttributes(PtyDevice, &PtyAttrInfo, NULL) == CNF_ERROR)
{
   cout << "cnf_SetAttributes( ) - failed" << endl;
   ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(PtyDevice) << endl;
   }
   else
   {
      ProcessSetAttributesEvent();
   }
}

/*****************************************************************************
 * GET ATTRIBUTES ON A BOARD DEVICE.
 *****************************************************************************/
CNF_ATTR BrdAttrList[MAX_CNF_BRD_ATTR];
int nBrdAttr = CNF_BRD_ATTR_BASE;
{
   for (int i = 0; i < MAX_CNF_BRD_ATTR; i++, nBrdAttr++)
   {
      BrdAttrList[i].unAttribute = nBrdAttr;
   }
}

CNF_ATTR_INFO BrdAttrInfo;
BrdAttrInfo.unAttrCount = MAX_CNF_BRD_ATTR;
BrdAttrInfo.pAttrList = BrdAttrList;

if (cnf_GetAttributes(BrdDevice, &BrdAttrInfo, NULL) == CNF_ERROR)
{
   cout << "cnf_GetAttributes( ) - failed" << endl;
   ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(BrdDevice) << endl;
```

```
   }
   else
   {
      ProcessGetAttributesEvent();
   }
}

/*****************************************************************************
 * SET ATTRIBUTES ON A BOARD DEVICE.
 *****************************************************************************/
BrdAttrInfo.unAttrCount = 1;
BrdAttrInfo.pAttrList[0].unAttribute = ECNF_BRD_ATTR_TONE_CLAMPING;
BrdAttrInfo.pAttrList[0].unValue = ECNF_ATTR_STATE_ENABLED;

if (cnf_SetAttributes(BrdDevice, &BrdAttrInfo, NULL) == CNF_ERROR)
{
   cout << "cnf_GetAttributes( ) - failed" << endl;
   ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(BrdDevice) << endl;
   }
   else
   {
      ProcessSetAttributesEvent();
   }
}

/*****************************************************************************
 * REMOVE PARTY FROM A CONFERENCE.
 *
 * NOTE: SINCE WE HAVE ENABLED THE PARTY REMOVED EVENT ON BOTH THE BOARD AND
 *       CONFERENCE DEVICES, WE SHOULD EXPECT TO GET THE CNFEV_PARTY_REMOVED
 *       NOTIFICATION EVENT ON BOTH THE BOARD AND CONFERENCE DEVICE HANDLES,
 *       IN ADDITION TO THE CNFEV_REMOVE_PARTY TERMINATION EVENT.
 *****************************************************************************/
if (cnf_RemoveParty(CnfDevice, &PtyInfo, NULL) == CNF_ERROR)
{
   cout << "cnf_RemoveParty( ) - failed" << endl;
   ProcessErrorInformation();
}
else
{
   for (int i = 0; i < 3; i++)
   {
      if (sr_waitevt(10000) == -1)
      {
         cout << "sr_waitevt failed - " << ATDV_ERRMSGP(CnfDevice) << endl;
      }
      else
      {
         ProcessRemovePartyEvent();
      }
   }
}

/*****************************************************************************
 * CLOSE A PARTY DEVICE.
 *****************************************************************************/
if (cnf_CloseParty(PtyDevice, NULL) == CNF_ERROR)
   {
      cout << "cnf_CloseParty( ) - failed" << endl << endl;
      ProcessErrorInformation();
   }
```

```
else
{
   cout << "cnf_CloseParty( ) - successful" << endl << endl;
}

/*****************************************************************************
 * DISABLE EVENTS ON THE CONFERENCE DEVICE.
 *****************************************************************************/
if (cnf_DisableEvents(CnfDevice, &CnfEventInfo, (void *)1) == CNF_ERROR)
{
   cout << "cnf_DisableEvents failed !!" << endl;
      ProcessErrorInformation();
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(CnfDevice) << endl;
   }
   else
   {
      ProcessDisableEventsEvent();
   }
}

/*****************************************************************************
 * CLOSE A PARTY DEVICE.
 *
 * NOTE: CLOSING A PARTY DEVICE THAT HAS NOT BEEN REMOVED FROM A CONFERENCE
 *       WILL INDIRECTLY REMOVE THE PARTY FROM THE CONFERENCE AND GENERATE
 *       THE CNFEV_PARTY_REMOVED EVENT ON THE BOARD AND/OR CONFERENCE DEVICE
 *       HANDLES IF THIS EVENT WAS ENABLED. IN THIS CASE WE JUST DISABLED
 *       THIS EVENT ON THE CONFERENCE DEVICE THEREFORE WE SHOULD ONLY GET IT
 *       ON THE BOARD DEVICE.
 *****************************************************************************/
if (cnf_CloseParty(pPtyDeviceList[0], NULL) == CNF_ERROR)
   {
      cout << "cnf_CloseParty( ) - failed" << endl;
      ProcessErrorInformation();
   }
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << endl << endl;
   }
   else
   {
      ProcessRemovePartyEvent();
   }

   cout << "cnf_CloseParty( ) - successful" << endl << endl;
}

/*****************************************************************************
 * CLOSE THE CONFERENCE DEVICE.
 *
 * NOTE: THIS CALL IS EXPECTED TO FAIL DUE TO BAD PARAMETERS. TEST TO SEE IF
 *       ERROR HANDLING IS WORKING CORRECTLY. PASSING INVALID DEVICE HANDLE.
 *****************************************************************************/
if (cnf_CloseConference(pPtyDeviceList[0], NULL) == CNF_ERROR)
{
      cout << "cnf_CloseConference failed !!" << endl;
      ProcessErrorInformation();
   }
else
{
```

```
   cout << "cnf_CloseConference successful !!" << endl;
   for (int i = 0; i < 1; i++)
   {
      if (sr_waitevt(10000) == -1)
      {
         cout << "sr_waitevt failed - " << ATDV_ERRMSGP(CnfDevice) << endl;
      }
      else
      {
         Process_BoardEvent();
      }
   }
}

/*****************************************************************************
 * CLOSE A CONFERENCE DEVICE.
 *
 * NOTE: CLOSING A CONFERENCE DEVICE THAT HAS ATTACHED PARTIES WILL
 *       INDIRECTLY REMOVE THE PARTIES FROM THE CONFERENCE. THE
 *       CNFEV_CONF_CLOSED EVENT WILL BE GENERATED ON THE BOARD DEVICE HANDLE
 *       IF THIS EVENT WAS ENABLED. IN THIS CASE WE HAVE ENABLED THIS EVENT,
 *       THEREFORE WE WILL GET CNFEV_CONF_CLOSED EVENT ON THE BOARD DEVICE HANDLE.
 *****************************************************************************/
if (cnf_CloseConference(CnfDevice, NULL) == CNF_ERROR)
   {
      cout << "cnf_CloseConference failed !!" << endl;
      ProcessErrorInformation();
   }
else
{
   for (int i = 0; i < 1; i++)
   {
      if (sr_waitevt(10000) == -1)
      {
         cout << "sr_waitevt failed - " << ATDV_ERRMSGP(CnfDevice) << endl << endl;
      }
      else
      {
         Process_BoardEvent();
      }
   }

   cout << "cnf_CloseConference successful !!" << endl << endl;
}


/*****************************************************************************
 * DISABLE BOARD DEVICE EVENTS.
 *****************************************************************************/
if (cnf_DisableEvents(BrdDevice, &BrdEventInfo, (void *)1) == CNF_ERROR)
{
   cout << "cnf_DisableEvents failed !!" << endl;
      ProcessErrorInformation();
   return 0;
}
else
{
   if (sr_waitevt(10000) == -1)
   {
      cout << "sr_waitevt failed - " << ATDV_ERRMSGP(BrdDevice) << endl;
   }
   else
   {
      ProcessDisableEventsEvent();
   }
}
```

```
   /*****************************************************************************
    * CLOSE THE BOARD DEVICE.
    *****************************************************************************/
   if (cnf_Close(BrdDevice, NULL) == CNF_ERROR)
   {
      cout << "cnf_Close failed !!" << endl << endl;
      ProcessErrorInformation();
   }
   else
   {
      cout << "cnf_Close( ) - Successful" << endl << endl;
   }

   /*****************************************************************************
    * CLOSE MULTIPLE PARTY DEVICES.
    *****************************************************************************/
      {
      for (unsigned int i = 1; i < unPtyCount; i++)
      {
            if (cnf_CloseParty(pPtyDeviceList[i], NULL) == CNF_ERROR)
            {
               cout << "cnf_CloseParty( ) - failed" << endl << endl;
               ProcessErrorInformation();
            }
         else
         {
            cout << "cnf_CloseParty( ) - successful" << endl << endl;
         }
      }
   }

   return 0;
}


/**
 * @fn srl_GetMetaEvent
 */
void srl_GetMetaEvent(PSRL_METAEVENT a_pMetaEvent)
{
   a_pMetaEvent->EventType       = sr_getevttype();
   a_pMetaEvent->EventDevice     = sr_getevtdev();
   a_pMetaEvent->EventDataLength = sr_getevtlen();
   a_pMetaEvent->pEventData      = sr_getevtdatap();
   a_pMetaEvent->pEventUserInfo  = sr_getUserContext();
}


/**
 * @fn ProcessErrorInfo
 */
void ProcessErrorInformation()
{
   PCNF_ERROR_INFO pErrorInfo = new CNF_ERROR_INFO;
   if (cnf_GetErrorInfo(pErrorInfo) == CNF_ERROR)
   {
      cout << "cnf_GetErrorInfo() FAILED!!" << endl;
   }
   else
   {
      cout << "\t      Error Code: " << pErrorInfo->unErrorCode << endl;
      cout << "\t    Error String: " << pErrorInfo->szErrorString << endl;
      cout << "\t Additional Info: " << pErrorInfo->szAdditionalInfo << endl << endl;
   }
}
```

```
/**
 * @fn ProcessGetAttributesEvent
 */
void ProcessGetAttributesEvent()
{
   SRL_METAEVENT Data;
   srl_GetMetaEvent(&Data);
   PCNF_ATTR_INFO pInfo = (PCNF_ATTR_INFO) Data.pEventData;

   if (Data.EventType == CNFEV_GET_ATTRIBUTE)
   {
      cout << "cnf_GetAttributes( ) - Successful" << endl;
      cout << "\t Received following event information:" << endl;
      cout << "\t             Event: " << Data.EventType << endl;
      if (pInfo)
      {
         cout << "\t       Event Data: " << pInfo << endl;
         cout << "\t  Attribute Count: " << pInfo->unAttrCount << endl;
         for (int i = 0; i < pInfo->unAttrCount; i++)
         {
            cout << "\t   Attribute Info: Attribute[" << pInfo->pAttrList[i].unAttribute << "]
Value[" << pInfo->pAttrList[i].unValue << "]" << endl;
         }
      }
      else
      {
         cout << "\t INVALID PINFO POINTER..." << endl;
      }
      cout << "\tEvent Data Length: " << Data.EventDataLength << endl;
      cout << "\t     Event Device: " << Data.EventDevice << endl;
      cout << "\t  Event User Info: " << Data.pEventUserInfo << endl << endl;
   }
   else
   {
      cout << "cnf_GetAttributes( ) - Failed" << endl;
      cout << "\tEvent: " << Data.EventType << endl;
      if (pInfo)
      {
         cout << "\t       Event Data: " << pInfo << endl;
         cout << "\t  Attribute Count: " << pInfo->unAttrCount << endl;
         for (int i = 0; i < pInfo->unAttrCount; i++)
         {
            cout << "\t   Attribute Info: Attribute[" << pInfo->pAttrList[i].unAttribute << "]
Value[" << pInfo->pAttrList[i].unValue << "]" << endl;
         }
      }
      else
      {
         cout << "\t INVALID PINFO POINTER..." << endl;
      }
   }
}


/**
 * @fn ProcessGetPartyListEvent
 */
void ProcessGetPartyListEvent()
{
      SRL_METAEVENT Data;
      srl_GetMetaEvent(&Data);
      PCNF_PARTY_INFO pInfo = (PCNF_PARTY_INFO) Data.pEventData;

   if (Data.EventType == CNFEV_GET_PARTY_LIST)
   {
      cout << "cnf_GetPartyList( ) - Successful" << endl;
      cout << "\tReceived following event information:" << endl;
```

```
      cout << "\t            Event: " << Data.EventType << endl;
      if (pInfo)
      {
         cout << "\t       Event Data: " << pInfo << endl;
         cout << "\t      Party Count: " << pInfo->unPartyCount << endl;
         for (int i = 0; i < pInfo->unPartyCount; i++)
         {
            cout << "\t    Party Info: Party[" << i << "] - Handle[" << pInfo->pPartyList[i] <<
"] - Device Name[" << ATDV_NAMEP(pInfo->pPartyList[i]) << "]" << endl;
         }
      }
      else
      {
         cout << "\t INVALID PINFO POINTER..." << endl;
      }
      cout << "\tEvent Data Length: " << Data.EventDataLength << endl;
      cout << "\t     Event Device: " << Data.EventDevice << endl;
      cout << "\t  Event User Info: " << Data.pEventUserInfo << endl << endl;
   }
   else
   {
      cout << "cnf_GetPartyList( ) - Failed" << endl;
      cout << "\tEvent: " << Data.EventType << endl;
   }
}


/**
 * @fn ProcessSetAttributesEvent
 */
void ProcessSetAttributesEvent()
{
   SRL_METAEVENT Data;
   srl_GetMetaEvent(&Data);

   PCNF_ATTR_INFO pInfo = (PCNF_ATTR_INFO) Data.pEventData;

   if (Data.EventType == CNFEV_SET_ATTRIBUTE)
   {
      cout << "cnf_SetAttributes( ) - Successful" << endl;
      cout << "\tReceived following event information:" << endl;
      cout << "\t            Event: " << Data.EventType << endl;
      if (pInfo)
      {
         cout << "\t       Event Data: " << pInfo << endl;
         cout << "\t  Attribute Count: " << pInfo->unAttrCount << endl;
         for (int i = 0; i < pInfo->unAttrCount; i++)
         {
            cout << "\t   Attribute Info: Attribute[" << pInfo->pAttrList[i].unAttribute << "]
Value[" << pInfo->pAttrList[i].unValue << "]" << endl;
         }
      }
      else
      {
         cout << "\t INVALID PINFO POINTER..." << endl;
      }
      cout << "\tEvent Data Length: " << Data.EventDataLength << endl;
      cout << "\t     Event Device: " << Data.EventDevice << endl;
      cout << "\t  Event User Info: " << Data.pEventUserInfo << endl << endl;
   }
   else
   {
      cout << "cnf_SetAttributes( ) - Failed" << endl;
      cout << "\tEvent: " << Data.EventType << endl;
      if (pInfo)
      {
         cout << "\t       Event Data: " << pInfo << endl;
```

```
         cout << "\t  Attribute Count: " << pInfo->unAttrCount << endl;
         for (int i = 0; i < pInfo->unAttrCount; i++)
         {
            cout << "\t   Attribute Info: Attribute[" << pInfo->pAttrList[i].unAttribute << "]
Value[" << pInfo->pAttrList[i].unValue << "]" << endl;
         }
      }
      else
      {
         cout << "\t INVALID PINFO POINTER..." << endl;
      }
   }
}


/**
 * @fn ProcessAddPartyEvent
 */
void ProcessAddPartyEvent()
{
   SRL_METAEVENT Data;
   srl_GetMetaEvent(&Data);

   switch (Data.EventType)
   {
      case CNFEV_ADD_PARTY:
      {
         PCNF_PARTY_INFO pInfo = (PCNF_PARTY_INFO) Data.pEventData;
         cout << "cnf_AddParty( ) - Successful" << endl;
         cout << "\tReceived following event information:" << endl;
         cout << "\t            Event: " << Data.EventType << endl;
         cout << "\t      Party Count: " << pInfo->unPartyCount << endl;
         for (int i = 0; i < pInfo->unPartyCount; i++)
         {
            cout << "\t     Party Handle: " << pInfo->pPartyList[i] << endl;
         }
         cout << "\t     Event Device: " << Data.EventDevice << endl;
         cout << "\t  Event User Info: " << Data.pEventUserInfo << endl << endl;
      }
      break;

      case CNFEV_PARTY_ADDED:
      {
         PCNF_PARTY_ADDED_EVENT_INFO pInfo = (PCNF_PARTY_ADDED_EVENT_INFO) Data.pEventData;
         cout << "Received PARTY ADDED notification event..." << endl;
         cout << "\tConference Handle: " << pInfo->ConfHandle << endl;
         cout << "\t  Conference Name: " << pInfo->szConfName << endl;
         cout << "\t     Party Handle: " << pInfo->PartyHandle << endl;
         cout << "\t       Party Name: " << pInfo->szPartyName << endl;
         cout << "\t     Event Device: " << Data.EventDevice << endl << endl;
      }
      break;

      default:
      {
         PCNF_PARTY_INFO pInfo = (PCNF_PARTY_INFO) Data.pEventData;
         cout << "cnf_AddParty( ) - Failed" << endl;
         cout << "\tEvent: " << Data.EventType << endl;
         cout << "\t      Party Count: " << pInfo->unPartyCount << endl;
         for (int i = 0; i < pInfo->unPartyCount; i++)
         {
            cout << "\t     Party Handle: " << pInfo->pPartyList[i] << endl;
         }
         cout << endl;
      }
      break;
   }
```

```
}


/**
 * @fn ProcessRemovePartyEvent
 */
void ProcessRemovePartyEvent()
{
   SRL_METAEVENT Data;
   srl_GetMetaEvent(&Data);

   switch (Data.EventType)
   {
      case CNFEV_REMOVE_PARTY:
      {
         PCNF_PARTY_INFO pInfo = (PCNF_PARTY_INFO) Data.pEventData;
         cout << "cnf_RemoveParty( ) - Successful" << endl;
         cout << "\tReceived following event information:" << endl;
         cout << "\t            Event: " << Data.EventType << endl;
         cout << "\t      Party Count: " << pInfo->unPartyCount << endl;
         for (int i = 0; i < pInfo->unPartyCount; i++)
         {
            cout << "\t     Party Handle: " << pInfo->pPartyList[i] << endl;
         }
         cout << "\t     Event Device: " << Data.EventDevice << endl;
         cout << "\t  Event User Info: " << Data.pEventUserInfo << endl << endl;
      }
      break;

      case CNFEV_PARTY_REMOVED:
      {
         PCNF_PARTY_REMOVED_EVENT_INFO pInfo = (PCNF_PARTY_REMOVED_EVENT_INFO) Data.pEventData;
         cout << "Received PARTY REMOVED notification event..." << endl;
         cout << "\tConference Handle: " << pInfo->ConfHandle << endl;
         cout << "\t  Conference Name: " << pInfo->szConfName << endl;
         cout << "\t     Party Handle: " << pInfo->PartyHandle << endl;
         cout << "\t       Party Name: " << pInfo->szPartyName << endl;
         cout << "\t     Event Device: " << Data.EventDevice << endl << endl;
      }
      break;

      default:
      {
         PCNF_PARTY_INFO pInfo = (PCNF_PARTY_INFO) Data.pEventData;
         cout << "cnf_RemoveParty( ) - Failed" << endl;
         cout << "\tEvent: " << Data.EventType << endl;
         cout << "\t      Party Count: " << pInfo->unPartyCount << endl;
         for (int i = 0; i < pInfo->unPartyCount; i++)
         {
            cout << "\t     Party Handle: " << pInfo->pPartyList[i] << endl;
         }
         cout << endl;
      }
      break;
   }
}


/**
 * @fn ProcessDisableEventsEvent
 */
void ProcessDisableEventsEvent()
{
   SRL_METAEVENT Data;
   srl_GetMetaEvent(&Data);

   PCNF_EVENT_INFO pInfo = (PCNF_EVENT_INFO) Data.pEventData;
```

```
   if (Data.EventType == CNFEV_DISABLE_EVENT)
   {
      cout << "cnf_DisableEvents( ) - Successful" << endl;
      cout << "\tReceived following event information:" << endl;
      cout << "\t            Event: " << Data.EventType << endl;
      cout << "\t       Event Data: " << Data.pEventData << endl;
      cout << "\t      Event Count: " << pInfo->unEventCount << endl;
      for (int i = 0; i < pInfo->unEventCount; i++)
      {
         cout << "\t            Event: " << pInfo->punEventList[i] << endl;
      }
      cout << "\tEvent Data Length: " << Data.EventDataLength << endl;
      cout << "\t     Event Device: " << Data.EventDevice << endl;
      cout << "\t  Event User Info: " << Data.pEventUserInfo << endl << endl;
   }
   else
   {
      cout << "cnf_DisableEvents( ) - Failed" << endl;
      cout << "\tEvent: " << Data.EventType << endl;
      cout << "\t      Event Count: " << pInfo->unEventCount << endl;
      for (int i = 0; i < pInfo->unEventCount; i++)
      {
         cout << "\t            Event: " << pInfo->punEventList[i] << endl;
      }
      cout << endl;
   }
}


/**
 * @fn ProcessGetDeviceCountEvent
 */
void ProcessGetDeviceCountEvent()
{
   SRL_METAEVENT Data;
   srl_GetMetaEvent(&Data);

   PCNF_DEVICE_COUNT_INFO pInfo = (PCNF_DEVICE_COUNT_INFO) Data.pEventData;

   if (Data.EventType == CNFEV_GET_DEVICE_COUNT)
   {
      cout << "cnf_GetDeviceCount( ) - Successful" << endl;
      cout << "\tReceived following event information:" << endl;
      cout << "\t                  Event: " << Data.EventType << endl;
      cout << "\t             Event Data: " << Data.pEventData << endl;
      cout << "\t     Free Party Devices: " << pInfo->unFreePartyCount << endl;
      cout << "\tFree Conference Devices: " << pInfo->unFreeConfCount << endl;
      cout << "\t      Max Party Devices: " << pInfo->unMaxPartyCount << endl;
      cout << "\t Max Conference Devices: " << pInfo->unMaxConfCount << endl;
      cout << "\t      Event Data Length: " << Data.EventDataLength << endl;
      cout << "\t           Event Device: " << Data.EventDevice << endl;
      cout << "\t        Event User Info: " << Data.pEventUserInfo << endl << endl;
   }
   else
   {
      cout << "cnf_GetDeviceCount( ) - Failed" << endl;
      cout << "\tEvent: " << Data.EventType << endl << endl;
   }
}


/**
 * @fn ProcessGetDeviceCountEvent
 */
void ProcessGetDTMFControlEvent()
{
```

```
   SRL_METAEVENT Data;
   srl_GetMetaEvent(&Data);

   PCNF_DTMF_CONTROL_INFO pInfo = (PCNF_DTMF_CONTROL_INFO) Data.pEventData;

   if (Data.EventType == CNFEV_GET_DTMF_CONTROL)
   {
      cout << "cnf_GetDTMFControl( ) - Successful" << endl;
      cout << "\tReceived following event information:" << endl;
      cout << "\t                  Event: " << Data.EventType << endl;
      cout << "\t             Event Data: " << Data.pEventData << endl;
      cout << "\t     DTMF Control State: " << pInfo->eDTMFControlState << endl;
      cout << "\t        Volume Up Digit: " << pInfo->eVolumeUpDigit << endl;
      cout << "\t      Volume Down Digit: " << pInfo->eVolumeDownDigit << endl;
      cout << "\t     Volume Reset Digit: " << pInfo->eVolumeResetDigit << endl;
      cout << "\t      Event Data Length: " << Data.EventDataLength << endl;
      cout << "\t           Event Device: " << Data.EventDevice << endl;
      cout << "\t        Event User Info: " << Data.pEventUserInfo << endl << endl;
   }
   else
   {
      cout << "cnf_GetDTMFControl( ) - Failed" << endl;
      cout << "\tEvent: " << Data.EventType << endl << endl;
   }
}


/**
 * @fn ProcessSetDeviceCountEvent
 */
void ProcessSetDTMFControlEvent()
{
   SRL_METAEVENT Data;
   srl_GetMetaEvent(&Data);

   if (Data.EventType == CNFEV_SET_DTMF_CONTROL)
   {
      cout << "cnf_SetDTMFControl( ) - Successful" << endl;
      cout << "\tReceived following event information:" << endl;
      cout << "\t                  Event: " << Data.EventType << endl;
      cout << "\t             Event Data: " << Data.pEventData << endl;
      cout << "\t      Event Data Length: " << Data.EventDataLength << endl;
      cout << "\t           Event Device: " << Data.EventDevice << endl;
      cout << "\t        Event User Info: " << Data.pEventUserInfo << endl << endl;
   }
   else
   {
      cout << "cnf_SetDTMFControl( ) - Failed" << endl;
      cout << "\tEvent: " << Data.EventType << endl << endl;
   }
}


/**
 * @fn ProcessEnableEventsEvent
 */
void ProcessEnableEventsEvent()
{
   SRL_METAEVENT Data;
   srl_GetMetaEvent(&Data);

   PCNF_EVENT_INFO pInfo = (PCNF_EVENT_INFO) Data.pEventData;

   if (Data.EventType == CNFEV_ENABLE_EVENT)
   {
      cout << "cnf_EnableEvents( ) - Successful" << endl;
      cout << "\tReceived following event information:" << endl;
```

```
      cout << "\t            Event: " << Data.EventType << endl;
      cout << "\t       Event Data: " << Data.pEventData << endl;
      if (pInfo)
      {
         cout << "\t      Event Count: " << pInfo->unEventCount << endl;
         for (int i = 0; i < pInfo->unEventCount; i++)
         {
            cout << "\t            Event: " << pInfo->punEventList[i] << endl;
         }
      }
      cout << "\tEvent Data Length: " << Data.EventDataLength << endl;
      cout << "\t     Event Device: " << Data.EventDevice << endl;
      cout << "\t  Event User Info: " << Data.pEventUserInfo << endl << endl;
   }
   else
   {
      cout << "cnf_EnableEvents( ) - Failed" << endl;
      cout << "\tEvent: " << Data.EventType << endl;
      cout << "\t      Event Count: " << pInfo->unEventCount << endl;
      for (int i = 0; i < pInfo->unEventCount; i++)
      {
         cout << "\t            Event: " << pInfo->punEventList[i] << endl;
      }
      cout << endl;
   }
}


void ProcessGetActiveTalkerListEvent()
{
   SRL_METAEVENT Data;
   srl_GetMetaEvent(&Data);

   PCNF_ACTIVE_TALKER_INFO pInfo = (PCNF_ACTIVE_TALKER_INFO) Data.pEventData;

   if (Data.EventType == CNFEV_GET_ACTIVE_TALKER)
   {
      cout << "cnf_GetActiveTalkerList( ) - Successful" << endl;
      cout << "\tReceived following event information:" << endl;
      cout << "\t            Event: " << Data.EventType << endl;
      if (pInfo)
      {
         cout << "\t       Event Data: " << pInfo << endl;
         cout << "\t      Party Count: " << pInfo->unPartyCount << endl;
         for (int i = 0; i < pInfo->unPartyCount; i++)
         {
            cout << "\t    Party Info: Party[" << i << "] - Handle[" << pInfo->pPartyList[i] <<
"] - Device Name[" << ATDV_NAMEP(pInfo->pPartyList[i]) << "]" << endl;
         }
      }
      else
      {
         cout << "\t INVALID PINFO POINTER..." << endl;
      }
      cout << "\tEvent Data Length: " << Data.EventDataLength << endl;
      cout << "\t     Event Device: " << Data.EventDevice << endl;
      cout << "\t  Event User Info: " << Data.pEventUserInfo << endl << endl;
   }
   else
   {
      cout << "cnf_EnableEvents( ) - Failed" << endl;
      cout << "\tEvent: " << Data.EventType << endl << endl;
   }
}


/**
```

```
 * @fn ProcessMetaEvent
 */
void ProcessMetaEvent(char * a_szString)
{
   SRL_METAEVENT MetaData;
   srl_GetMetaEvent(&MetaData);

   cout << a_szString << endl;
   cout << "\tReceived following event information:" << endl;
   cout << "\t            Event: " << MetaData.EventType << endl;
   cout << "\t       Event Data: " << MetaData.pEventData << endl;
   cout << "\tEvent Data Length: " << MetaData.EventDataLength << endl;
   cout << "\t     Event Device: " << MetaData.EventDevice << endl;
   cout << "\t  Event User Info: " << MetaData.pEventUserInfo << endl << endl;
}

void ProcessOpenConferenceEvent()
{
   SRL_METAEVENT MetaData;
   srl_GetMetaEvent(&MetaData);
   PCNF_OPEN_CONF_RESULT pResult = (PCNF_OPEN_CONF_RESULT) MetaData.pEventData;

   switch (MetaData.EventType)
   {
      case CNFEV_OPEN_CONF:
      {
         cout << "cnf_OpenConference( ) - Successful" << endl;
         cout << "\tReceived following event information:" << endl;
         cout << "\t            Event: " << MetaData.EventType << endl;
         cout << "\t       Event Data: " << MetaData.pEventData << endl;
         cout << "\tConference Device: " << pResult->ConfHandle << endl;
         cout << "\t  Conference Name: " << pResult->szConfName << endl;
         cout << "\tEvent Data Length: " << MetaData.EventDataLength << endl;
         cout << "\t     Event Device: " << MetaData.EventDevice << endl;
         cout << "\t  Event User Info: " << MetaData.pEventUserInfo << endl << endl;
      }
      break;

      case CNFEV_CONF_OPENED:
      {
         PCNF_CONF_OPENED_EVENT_INFO pInfo = (PCNF_CONF_OPENED_EVENT_INFO) MetaData.pEventData;
         cout << "Received CONFERENCE OPENED notification event..." << endl;
         cout << "\tConference Handle: " << pInfo->ConfHandle << endl;
         cout << "\t  Conference Name: " << pInfo->szConfName << endl;
         cout << "\t     Event Device: " << MetaData.EventDevice << endl << endl;
      }
      break;

      default:
      {
         cout << "cnf_OpenConference( ) - Failed" << endl;
         cout << "\t            Event: " << MetaData.EventType << endl;
         cnf_CloseConference(pResult->ConfHandle, NULL);
      }
      break;
   }
}

void Process_BoardEvent()
{
   SRL_METAEVENT Data;
   srl_GetMetaEvent(&Data);

   if (Data.EventType == CNFEV_CONF_CLOSED)
   {
      PCNF_CONF_CLOSED_EVENT_INFO pInfo = (PCNF_CONF_CLOSED_EVENT_INFO) Data.pEventData;
      cout << "Received CONFERENCE CLOSED notification event..." << endl;
```

```
      cout << "\t  Conference Name: " << pInfo->szConfName << endl;
      cout << "\t     Event Device: " << Data.EventDevice << endl << endl;
   }
   else
   {
      ProcessRemovePartyEvent();
   }
}

void ProcessOpenPartyEvent()
{
   SRL_METAEVENT Data;
   srl_GetMetaEvent(&Data);
   PCNF_OPEN_PARTY_RESULT pResult = (PCNF_OPEN_PARTY_RESULT) Data.pEventData;

   if (Data.EventType == CNFEV_OPEN_PARTY)
   {
      cout << "cnf_OpenParty( ) - Successful" << endl;
      cout << "\tReceived following event information:" << endl;
      cout << "\t            Event: " << Data.EventType << endl;
      cout << "\t       Event Data: " << Data.pEventData << endl;
      cout << "\t     Party Device: " << pResult->PartyHandle << endl;
      cout << "\t       Party Name: " << pResult->szPartyName << endl;
      cout << "\tEvent Data Length: " << Data.EventDataLength << endl;
      cout << "\t     Event Device: " << Data.EventDevice << endl;
      cout << "\t  Event User Info: " << Data.pEventUserInfo << endl << endl;
   }
   else
   {
      cout << "cnf_OpenParty( ) - Failed" << endl;
      cout << "\tEvent: " << Data.EventType << endl;
   }
}
```

Figure 2. Conferencing Example Code Output

```
Conferencing (CNF) Example Code
===============================

cnf_Open failure!! : Expected failure due to the following
     Error Code: 3
   Error String: Invalid device name provided by user
Additional Info:

cnf_Open( ) - Successful
Received following event information:
            Event: 49153
       Event Data: 0
Event Data Length: 0
     Event Device: 1
  Event User Info: 0

cnf_GetDeviceCount( ) - Successful
Received following event information:
                  Event: 49168
             Event Data: 0x9e11ab8
     Free Party Devices: 120
Free Conference Devices: 60
      Max Party Devices: 120
 Max Conference Devices: 60
      Event Data Length: 20
           Event Device: 1
        Event User Info: 0
```

```
cnf_SetDTMFControl( ) - Successful
Received following event information:
                  Event: 49165
             Event Data: 0
      Event Data Length: 0
           Event Device: 1
        Event User Info: 0

cnf_GetDTMFControl( ) - Successful
Received following event information:
                  Event: 49164
             Event Data: 0x9e11ab8
     DTMF Control State: 1
        Volume Up Digit: 2048
      Volume Down Digit: 1024
     Volume Reset Digit: 512
      Event Data Length: 20
           Event Device: 1
        Event User Info: 0

cnf_EnableEvents failed !!
     Error Code: 6
   Error String: Invalid event provided by user
Additional Info:

cnf_EnableEvents( ) - Successful
Received following event information:
            Event: 49162
       Event Data: 0xb781c6d0
      Event Count: 4
            Event: 302
            Event: 305
            Event: 303
            Event: 304
Event Data Length: 12
     Event Device: 1
  Event User Info: 0x1

cnf_OpenConference( ) - Successful
Received following event information:
            Event: 49154
       Event Data: 0x9e0cb38
Conference Device: 2
  Conference Name: cnfB1C1
Event Data Length: 12
     Event Device: 1
  Event User Info: 0

cnf_EnableEvents( ) - Successful
Received following event information:
            Event: 49162
       Event Data: 0xb781c6d0
      Event Count: 3
            Event: 401
            Event: 402
            Event: 404
Event Data Length: 12
     Event Device: 2
  Event User Info: 0x1

cnf_SetAttributes( ) - Successful
Received following event information:
            Event: 49161
       Event Data: 0xb781e470
  Attribute Count: 2
   Attribute Info: Attribute[101] Value[1]
```

```
   Attribute Info: Attribute[102] Value[4194319]
Event Data Length: 12
     Event Device: 2
  Event User Info: 0

cnf_GetAttributes( ) - Successful
Received following event information:
            Event: 49160
       Event Data: 0x9e0cbd0
  Attribute Count: 2
   Attribute Info: Attribute[101] Value[1]
   Attribute Info: Attribute[102] Value[15]
Event Data Length: 4
     Event Device: 2
  Event User Info: 0

cnf_OpenParty( ) - Successful
Received following event information:
            Event: 49156
       Event Data: 0xb781e648
     Party Device: 3
       Party Name: cnfB1P1
Event Data Length: 12
     Event Device: 1
  Event User Info: 0

cnf_OpenParty( ) - Successful
Received following event information:
            Event: 49156
       Event Data: 0xb781e968
     Party Device: 4
       Party Name: cnfB1P2
Event Data Length: 12
     Event Device: 1
  Event User Info: 0

cnf_OpenParty( ) - Successful
Received following event information:
            Event: 49156
       Event Data: 0xb781e648
     Party Device: 5
       Party Name: cnfB1P3
Event Data Length: 12
     Event Device: 1
  Event User Info: 0

cnf_OpenParty( ) - Successful
Received following event information:
            Event: 49156
       Event Data: 0xb781f070
     Party Device: 6
       Party Name: cnfB1P4
Event Data Length: 12
     Event Device: 1
  Event User Info: 0

cnf_OpenParty( ) - Successful
Received following event information:
            Event: 49156
       Event Data: 0xb781e968
     Party Device: 7
       Party Name: cnfB1P5
Event Data Length: 12
     Event Device: 1
  Event User Info: 0

cnf_OpenParty( ) - Successful
```

```
Received following event information:
            Event: 49156
       Event Data: 0xb781e648
     Party Device: 8
       Party Name: cnfB1P6
Event Data Length: 12
     Event Device: 1
  Event User Info: 0

cnf_GetAttributes( ) - Successful
Received following event information:
            Event: 49160
       Event Data: 0xb781f8e8
  Attribute Count: 7
   Attribute Info: Attribute[201] Value[0]
   Attribute Info: Attribute[202] Value[0]
   Attribute Info: Attribute[203] Value[0]
   Attribute Info: Attribute[204] Value[0]
   Attribute Info: Attribute[205] Value[0]
   Attribute Info: Attribute[206] Value[0]
   Attribute Info: Attribute[207] Value[0]
Event Data Length: 96
     Event Device: 3
  Event User Info: 0

cnf_SetAttributes( ) - Successful
Received following event information:
            Event: 49161
       Event Data: 0xb781f970
  Attribute Count: 2
   Attribute Info: Attribute[201] Value[1]
   Attribute Info: Attribute[202] Value[1]
Event Data Length: 12
     Event Device: 3
  Event User Info: 0

cnf_GetAttributes( ) - Successful
Received following event information:
            Event: 49160
       Event Data: 0xb781f8e8
  Attribute Count: 7
   Attribute Info: Attribute[201] Value[1]
   Attribute Info: Attribute[202] Value[1]
   Attribute Info: Attribute[203] Value[0]
   Attribute Info: Attribute[204] Value[0]
   Attribute Info: Attribute[205] Value[0]
   Attribute Info: Attribute[206] Value[0]
   Attribute Info: Attribute[207] Value[0]
Event Data Length: 96
     Event Device: 3
  Event User Info: 0

Received PARTY ADDED notification event...
Conference Handle: 2
  Conference Name: cnfB1C1
     Party Handle: -1
       Party Name:
     Event Device: 1

Received PARTY ADDED notification event...
Conference Handle: 2
  Conference Name: cnfB1C1
     Party Handle: -1
       Party Name:
     Event Device: 2
```

```
cnf_AddParty( ) - Successful
Received following event information:
            Event: 49158
      Party Count: 1
     Party Handle: 3
     Event Device: 2
  Event User Info: 0

Received PARTY ADDED notification event...
Conference Handle: 2
  Conference Name: cnfB1C1
     Party Handle: -1
       Party Name:
     Event Device: 1

Received PARTY ADDED notification event...
Conference Handle: 2
  Conference Name: cnfB1C1
     Party Handle: -1
       Party Name:
     Event Device: 2

cnf_AddParty( ) - Successful
Received following event information:
            Event: 49158
      Party Count: 1
     Party Handle: 4
     Event Device: 2
  Event User Info: 0

Received PARTY ADDED notification event...
Conference Handle: 2
  Conference Name: cnfB1C1
     Party Handle: -1
       Party Name:
     Event Device: 1

Received PARTY ADDED notification event...
Conference Handle: 2
  Conference Name: cnfB1C1
     Party Handle: -1
       Party Name:
     Event Device: 2

cnf_AddParty( ) - Successful
Received following event information:
            Event: 49158
      Party Count: 1
     Party Handle: 5
     Event Device: 2
  Event User Info: 0

Received PARTY ADDED notification event...
Conference Handle: 2
  Conference Name: cnfB1C1
     Party Handle: -1
       Party Name:
     Event Device: 1

Received PARTY ADDED notification event...
Conference Handle: 2
  Conference Name: cnfB1C1
     Party Handle: -1
       Party Name:
     Event Device: 2
```

```
cnf_AddParty( ) - Successful
Received following event information:
            Event: 49158
      Party Count: 1
     Party Handle: 6
     Event Device: 2
  Event User Info: 0

Received PARTY ADDED notification event...
Conference Handle: 2
  Conference Name: cnfB1C1
     Party Handle: -1
       Party Name:
     Event Device: 1

Received PARTY ADDED notification event...
Conference Handle: 2
  Conference Name: cnfB1C1
     Party Handle: -1
       Party Name:
     Event Device: 2

cnf_AddParty( ) - Successful
Received following event information:
            Event: 49158
      Party Count: 1
     Party Handle: 7
     Event Device: 2
  Event User Info: 0

Received PARTY ADDED notification event...
Conference Handle: 2
  Conference Name: cnfB1C1
     Party Handle: -1
       Party Name:
     Event Device: 1

Received PARTY ADDED notification event...
Conference Handle: 2
  Conference Name: cnfB1C1
     Party Handle: -1
       Party Name:
     Event Device: 2

cnf_AddParty( ) - Successful
Received following event information:
            Event: 49158
      Party Count: 1
     Party Handle: 8
     Event Device: 2
  Event User Info: 0

cnf_GetPartyList( ) - Successful
Received following event information:
            Event: 49167
       Event Data: 0x9e0cc58
      Party Count: 6
    Party Info: Party[0] - Handle[3] - Device Name[cnfB1P1]
    Party Info: Party[1] - Handle[4] - Device Name[cnfB1P2]
    Party Info: Party[2] - Handle[5] - Device Name[cnfB1P3]
    Party Info: Party[3] - Handle[6] - Device Name[cnfB1P4]
    Party Info: Party[4] - Handle[7] - Device Name[cnfB1P5]
    Party Info: Party[5] - Handle[8] - Device Name[cnfB1P6]
Event Data Length: 36
     Event Device: 2
  Event User Info: 0
```

```
cnf_GetActiveTalkerList( ) - Successful
Received following event information:
            Event: 49166
       Event Data: 0x9e11b58
      Party Count: 0
Event Data Length: 12
     Event Device: 2
  Event User Info: 0

cnf_GetActiveTalkerList( ) - Successful
Received following event information:
            Event: 49166
       Event Data: 0x9e50d20
      Party Count: 0
Event Data Length: 12
     Event Device: 1
  Event User Info: 0

cnf_GetAttributes( ) - Successful
Received following event information:
            Event: 49160
       Event Data: 0x9e0cc80
  Attribute Count: 7
   Attribute Info: Attribute[201] Value[1]
   Attribute Info: Attribute[202] Value[1]
   Attribute Info: Attribute[203] Value[0]
   Attribute Info: Attribute[204] Value[0]
   Attribute Info: Attribute[205] Value[0]
   Attribute Info: Attribute[206] Value[0]
   Attribute Info: Attribute[207] Value[1]
Event Data Length: 96
     Event Device: 3
  Event User Info: 0

cnf_SetAttributes( ) - Successful
Received following event information:
            Event: 49161
       Event Data: 0xb781f970
  Attribute Count: 2
   Attribute Info: Attribute[201] Value[1]
   Attribute Info: Attribute[202] Value[1]
Event Data Length: 12
     Event Device: 3
  Event User Info: 0

cnf_GetAttributes( ) - Successful
Received following event information:
            Event: 49160
       Event Data: 0x9e0cd08
  Attribute Count: 3
   Attribute Info: Attribute[1] Value[0]
   Attribute Info: Attribute[2] Value[1]
   Attribute Info: Attribute[3] Value[100]
Event Data Length: 48
     Event Device: 1
  Event User Info: 0

cnf_SetAttributes( ) - Successful
Received following event information:
            Event: 49161
       Event Data: 0xb781f998
  Attribute Count: 1
   Attribute Info: Attribute[2] Value[1]
Event Data Length: 12
     Event Device: 1
  Event User Info: 0
```

```
Received PARTY REMOVED notification event...
Conference Handle: 2
  Conference Name: cnfB1C1
     Party Handle: 3
       Party Name: cnfB1P1
     Event Device: 1

Received PARTY REMOVED notification event...
Conference Handle: 2
  Conference Name: cnfB1C1
     Party Handle: 3
       Party Name: cnfB1P1
     Event Device: 2

cnf_RemoveParty( ) - Successful
Received following event information:
            Event: 49159
      Party Count: 1
     Party Handle: 3
     Event Device: 2
  Event User Info: 0

cnf_CloseParty( ) - successful

cnf_DisableEvents( ) - Successful
Received following event information:
            Event: 49163
       Event Data: 0xb781f9b8
      Event Count: 3
            Event: 401
            Event: 402
            Event: 404
Event Data Length: 12
     Event Device: 2
  Event User Info: 0x1

Received PARTY REMOVED notification event...
Conference Handle: 2
  Conference Name: cnfB1C1
     Party Handle: 4
       Party Name: cnfB1P2
     Event Device: 1

cnf_CloseParty( ) - successful

cnf_CloseConference failed !!
     Error Code: 1
   Error String: Invalid device provided by user
Additional Info:

Received CONFERENCE CLOSED notification event...
  Conference Name: cnfB1C1
     Event Device: 1

cnf_CloseConference successful !!

cnf_DisableEvents( ) - Successful
Received following event information:
            Event: 49163
       Event Data: 0xb781f920
      Event Count: 4
            Event: 302
            Event: 305
            Event: 303
            Event: 304
Event Data Length: 12
     Event Device: 1
```

```
  Event User Info: 0x1

cnf_Close( ) - Successful

cnf_CloseParty( ) - successful

cnf_CloseParty( ) - successful

cnf_CloseParty( ) - successful

cnf_CloseParty( ) - successful
```

Glossary

active talker: A participant in a conference who is providing “non-silence” energy.

automatic gain control (AGC): An electronic circuit used to maintain the audio signal volume at a constant level. AGC maintains nearly constant gain during voice signals, thereby avoiding distortion, and optimizes the perceptual quality of voice signals by using a new method to process silence intervals (background noise).

asynchronous function: A function that allows program execution to continue without waiting for a task to complete. To implement an asynchronous function, an application-defined event handler must be enabled to trap and process the completed event. Contrast with synchronous function.

bit mask: A pattern which selects or ignores specific bits in a bit-mapped control or status field.

bitmap: An entity of data (byte or word) in which individual bits contain independent control or status information.

board device: A board-level object that maps to a virtual board.

buffer: A block of memory or temporary storage device that holds data until it can be processed. It is used to compensate for the difference in the rate of the flow of information (or time occurrence of events) when transmitting data from one device to another.

bus: An electronic path that allows communication between multiple points or devices in a system.

busy device: A device that has one of the following characteristics: is stopped, being configured, has a multitasking or non-multitasking function active on it, or I/O function active on it.

channel device: A channel-level object that can be manipulated by a physical library, such as an individual telephone line connection. A channel is also a subdevice of a board.

CO (Central Office): A local phone network exchange, the telephone company facility where subscriber lines are linked, through switches, to other subscriber lines (including local and long distance lines). The term “Central Office” is used in North America. The rest of the world calls it “PTT”, for Post, Telephone, and Telegraph.

coach: A participant in a conference that can be heard by pupils only. A mentoring relationship exists between a coach and a pupil.

conferee: Participant in a conference call. Synonym of party.

conference: Ability for three or more participants in a call to communicate with one another in the same call.

conferencing: Ability to perform a conference.

conference bridging: Ability for all participants in two or more established conferences to speak to and/or listen to one another.

configuration file: An unformatted ASCII file that stores device initialization information for an application.

configuration manager: A utility with a graphical user interface (GUI) that enables you to add new boards to your system, start and stop system service, and work with board configuration data. Also known as DCM.

CT Bus: Computer Telephony bus. A time division multiplexing communications bus that provides 4096 time slots for transmission of digital information between CT Bus products. See TDM bus.

data structure: Programming term for a data element consisting of fields, where each field may have a different type definition and length. A group of data structure elements usually share a common purpose or functionality.

device: A computer peripheral or component controlled through a software device driver. A Dialog® voice and/or network interface expansion board is considered a physical board containing one or more logical board devices, and each channel or time slot on the board is a device.

device channel: A voice data path that processes one incoming or outgoing call at a time (equivalent to the terminal equipment terminating a phone line).

device driver: Software that acts as an interface between an application and hardware devices.

device handle: Numerical reference to a device, obtained when a device is opened using **xx_open( )**, where *xx* is the prefix defining the device to be opened. The device handle is used for all operations on that device.

device name: Literal reference to a device, used to gain access to the device via an **xx_open( )** function, where *xx* is the prefix defining the device to be opened.

DM3: Refers to Dialogic® mediastream processing architecture, which is open, layered, and flexible, encompassing hardware as well as software components. A whole set of products from Dialogic are built on DM3 architecture.

driver: A software module which provides a defined interface between a program and the firmware interface.

DTMF (Dual-Tone Multifrequency): Push-button or touch-tone dialing based on transmitting a high- and a low-frequency tone to identify each digit on a telephone keypad.

E1: A CEPT digital telephony format devised by the CCITT, used in Europe and other countries around the world. A digital transmission channel that carries data at the rate of 2.048 Mbps (DS-1 level). CEPT stands for the Conference of European Postal and Telecommunication Administrations. Contrast with T1.

extended attribute functions: A class of functions that take one input parameter and return device-specific information. For instance, a voice device's extended attribute function returns information specific to the voice devices. Extended attribute function names are case-sensitive and must be in capital letters. See also standard runtime library (SRL).

firmware: A set of program instructions that reside on an expansion board.

idle device: A device that has no functions active on it.

party: A participant in a conference. Synonym of conferee.

pupil: A participant in a conference that has a mentoring relationship with a coach.

resource: Functionality (for example, conferencing) that can be assigned to a call. Resources are *shared* when functionality is selectively assigned to a call and may be shared among multiple calls. Resources are *dedicated* when functionality is fixed to the one call.

RFU: Reserved for future use.

route: Assign a resource to a time slot.

SRL: See **Standard Runtime Library**.

standard attribute functions: Class of functions that take one input parameter (a valid device handle) and return generic information about the device. For instance, standard attribute functions return IRQ and error information for all device types. Standard attribute function names are case-sensitive and must be in capital letters. Standard attribute functions for all Dialogic® devices are contained in the SRL. See standard runtime library (SRL).

standard runtime library (SRL): A Dialogic® software resource containing event management and standard attribute functions and data structures used by all Dialogic® devices, but which return data unique to the device.

synchronous function: Blocks program execution until a value is returned by the device. Also called a blocking function. Contrast with asynchronous function.

T1: A digital line transmitting at 1.544 Mbps over 2 pairs of twisted wires. Designed to handle a minimum of 24 voice conversations or channels, each conversation digitized at 64 Kbps. T1 is a digital transmission standard in North America. Contrast with E1.

TDM (Time Division Multiplexing): A technique for transmitting multiple voice, data, or video signals simultaneously over the same transmission medium. TDM is a digital technique that interleaves groups of bits from each signal, one after another. Each group is assigned its own "time slot" and can be identified and extracted at the receiving end. See also time slot.

TDM bus: Time division multiplexing bus. A resource sharing bus such as the SCbus or CT Bus that allows information to be transmitted and received among resources over multiple data lines.

termination condition: An event or condition which, when present, causes a process to stop.

termination event: An event that is generated when an asynchronous function terminates. See also asynchronous function.

thread (Windows®): The executable instructions stored in the address space of a process that the operating system actually executes. All processes have at least one thread, but no thread belongs to more than one process. A multithreaded process has more than one thread that are executed seemingly simultaneously. When the last thread finishes its task, then the process terminates. The main thread is also referred to as a primary thread; both main and primary thread refer to the first thread started in a process. A thread of execution is just a synonym for thread.

tone clamping: (DTMF tone clamping) Mutes DTMF tones heard in a conference. If a confereee's phone generates a tone, the DTMF signal will not interfere with the conference. Applies to transmitted audio into the conference and does not affect DTMF function.

time division multiplexing (TDM): See TDM (Time Division Multiplexing).

time slot: The smallest, switchable data unit on a TDM bus. A time slot consists of 8 consecutive bits of data. One time slot is equivalent to a data path with a bandwidth of 64 kbps. In a digital telephony environment, a normally continuous and individual communication (for example, someone speaking on a telephone) is (1) digitized, (2) broken up into pieces consisting of a fixed number of bits, (3) combined with pieces of other individual communications in a regularly repeating, timed sequence (multiplexed), and (4) transmitted serially over a single telephone line. The process happens at such a fast rate that, once the pieces are sorted out and put back together again at the receiving end, the speech is normal and continuous. Each individual, pieced-together communication is called a time slot.

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