# PictureTel® LiveLAN™ Version 3.1 Helper Application and Dynamic Data Exchange (DDE) Interface

---

This guide describes the LiveLAN 3.1 helper application (helper app) and the LiveLAN DDE (Dynamic Data Exchange) interface. The first section of this guide identifies the files associated with the helper app and provides instructions for configuring it with web browsers and other applications. The second section details the command line switches and parameters that can be used with the helper app. The last section discusses the DDE interface. An appendix includes the registry settings used in configuring the helper app.

**Note**: You should be familiar with the LiveLAN 3.1 product to use this guide.

For support or service, please contact your PictureTel service provider or call PictureTel Technical Support at 978-292-5999. If you are located in the United States, you may call 800-874-2835 during your local business hours.



PictureTel provides a LiveLAN 3.1 helper application (helper app) which accesses LiveLAN's DDE interface to place videoconferencing calls. You can configure third-party applications, such as web browsers, databases, and contact managers, to place LiveLAN videoconferencing calls directly from within these applications.

---

## Using the Helper App

One way you can use the helper app to initiate a videoconferencing call is by viewing an ILS directory via a web browser. Once in the browser, you click on a listing which passes address information to initiate a LiveLAN call. Another way you can use the helper app is to browse through a corporate address book and press a customized toolbar button to initiate a videoconferencing call.

For more advanced or specialized implementations, you can access the DDE interface directly to create custom helper apps or embed DDE calls within existing applications.

The LiveLAN helper app must be installed on a system on which LiveLAN 3.1 has already been installed.

---

## About the Helper App Files

The helper app consists of two files:

- LLDDECmd.exe (Helper app program)
- LLDDEIns.exe (Installation/configuration)

You must copy both files to your LiveLAN directory. Typically, this directory is:

C:\Program Files\PictureTel\LiveLAN

You can also optionally create shortcuts to these files which can be placed in more convenient locations.

No further installation is required to begin using the helper app. The LLDDEIns program is provided primarily to assist with configuring web browsers to use LiveLAN for placing videoconferencing calls. Most web browsers provide a method for configuring helper apps. Using the LLDDEIns program will perform this configuration for you and will save any current settings for potential future use.

To use the configuration program, double click the LLDDEIns.exe file name. The program will display a single dialog window from which you specify the helper app you want to use.

The first time you run the program select the option, PictureTel LiveLAN. The program then updates the Windows Registry appropriately for the LiveLAN helper app. If another videoconferencing application is already configured, the program will save its settings for future reference.

If at any time in the future you want to revert back to the previous helper app, run the LLDDEIns program again and select the second option, Previously installed application. Using this configuration program you can easily toggle between applications.

For reference, LLDDEIns creates two additional files in your LiveLAN directory. For configuring the LiveLAN registry settings, it creates a file named HelperLL.reg. For any previously installed application, it creates a file named HelperX.reg. These files are for internal use only, though you can examine them if you wish to review the specific registry keys being configured. Refer to Appendix A for a complete listing of the LiveLAN helper app registry settings.

---

# Using the Helper App Command Line Options

This section describes the command line options available for the helper app. The LiveLAN helper app accesses LiveLAN's DDE interface to place videoconferencing calls.

## About the Helper App Interface

The helper app, LLDDECmd , supports several command line switches and parameters to place calls using a variety of addressing formats. With LLDDECmd you can place a call by initiating the helper app with the appropriate command line switch and caller address information. You can also configure your web browser to initiate the helper app when accessing a web page containing videoconferencing addresses, such as an ILS server.

## General Use Command Line Switches

The command line switches listed in the following table are provided for general use.

| Switch | Use For |
|---|---|
| -CALL | Short address format. |
| -LONG | Long address format. |
| -IP | IP address embedded in file. |
| -UID | User ID embedded in file. |
| -IPORUID | IP address embedded in file. If IP address is not specified then use UID. |
| -UIDORIP | User address embedded in file. If UID is not specifed then use IP. |
| -CALLTO | CallTo protocol with user ID. |
| -CMDIP | IP address on command line. |
| -CMDUID | User ID on command line. |

For more information on these switches, see the following.

### -CALL <short address>

Places a call using the short address format. In general, the short address format follows this structure:

**ConnectionType Address ISDN#1 ISDN#2 ChannelRate**

The valid ConnectionType values are:

0 = LAN (H.323)

1 = ISDN (H.320)

2 = LAN via Gateway

3 = Data Only (T.120)

The valid ChannelRate values are:

2x64K

1x64K

2x56K

1x56K

The helper app accepts addresses with missing information and makes the best determination of connection type and address based on the information provided. The acceptable short address formats for each connection type are listed below.

**LAN (H.323)**

- CALL 0 address

-CALL address

where address is a LiveLAN ID, Alias, or IP Address.

**ISDN (H.320)**

**-CALL 1 ISDN1 (assumes 1x64K)**

-CALL 1 ISDN1 ChannelRate

**-CALL 1 ISDN1 ISDN2 (assumes 2x64K)**

-CALL 1 ISDN1 ISDN2 ChannelRate

**LAN via Gateway**

**-CALL 2 ID ISDN1 (assumes 1x64K)**

-CALL 2 ID ISDN1 ChannelRate

**-CALL 2 ID ISDN1 ISDN2 (assumes 2x64K)**

-CALL 2 ID ISDN1 ISDN2 ChannelRate

**Data Only (T.120)-CALL 3 IPAddress**

-CALL 3 IPAddress

**Examples:**

LLDDECmd -CALL sjones

LLDDECmd -CALL 0 5598

LLDDECmd -CALL 1 915082923322 915082923322

LLDDECmd -CALL 1 915082923322 915082923322 2x56K

LLDDECmd -CALL 2 5598 915082923322 915082923322

LLDDECmd -CALL 3 140.242.112.113

## -LONG <long address>

Places a call using the long address format. The long address must be specified in the following format (without the line break):

LastName FirstName Company LiveLANID Alias IPAddress ISDN1 ISDN2 ChannelRate ConnectionType

Use double quotes around strings containing spaces and empty strings as place holders for missing information.

**Examples (do not include line breaks):**

LLDDECmd -LONG Wilson Scott PictureTel 5598 swilson 140.242.114.35 "" "" "" 0

LLDDECmd -LONG Wilson Scott "PictureTel Corp." 5598

swilson 140.242.114.35 "" "" "" 0

LLDDECmd -LONG "" "" "" 5598 "" "" "" "" "" 0

LLDDECmd -LONG "" "" "" 5598 "" "" 15082923344

15082923344 2x64K 2

## -IP <file containing IP address>

Places a call using an IP address which is embedded in a file. The string containing the IP address must be in the format IP=xxx.xxx.xxx.xxx, for example IP=140.240.111.112. Use this switch with ILS server web browsers that use the ULS file type for specifying the videoconferencing address. See the Web Browser Configuration section for more information.

**Example:**

LLDDECmd -IP test.uls

where the test.uls file could be as follows:

<IULS><

[res]

hr=0

ip=140.240.111.112

port=1720

mt=text/iuls

uid=sjones@pictel.com

url=action=resolve;uid=sjones@pictel.com;appid=ms- netmeeting;protid=h323

></IULS>

## -UID <file containing user ID>

Places a call using a user ID which is embedded in a file. The string containing the user ID must be in the format UID=aaaa, for example, UID=sjones@pictel.com.

**Example: LLDDECmd -UID test.uls**

where the *test.uls* file could be the same as the example above.

## -IPORUID <file containing IP address or user ID>

Places a call using an IP address which is embedded in a file. If no IP address is found in the file, place the call using a UID if it exists in the file. Reference -IP and -UID options described above.

**Example: *LLDDECmd -IPORUID test.uls***

where the test.uls file could be the same as the example above.

## -UIDORIP <file containing user ID or IP address>

Places a call using a user ID which is embedded in a file. If no UID is found in the file, places the call using an IP address if it exists in the file. Reference -IP and -UID options described above.

**Example: LLDDECmd -UIDORIP test.uls**

where the test.uls file could be the same as the example above.

## -CALLTO <CallTo: address>

Places a LAN H.323 call using the address following CallTo: label. Use this switch with ILS server web browsers which use the
URL: CallTo Protocol for specifying the videoconferencing address. See the Web Browser Configuration section more information.

**Example: LLDDECmd -CALLTO CallTo:sjones@pictel.com**

## -CMDIP <IP address>

Places a call using an IP address on the command line in the format ip=xxx.xxx.xxx.xxx.

**Example: LLDDECmd -CMDIP ip=140.240.111.145**

### -CMDUID <user ID>

Places a call using a user ID on the command line in the format uid=aaaa.

**Example: LLDDECmd -CMDUID uid=sjones@pictel.com**

# Command Line Switches for Administrators

These command line switches are used by system administrators and PictureTel technical support. They are not intended for general use.

### -SQA

Displays the user interface for the LiveLAN DDE tool. Allows an administrator to place LiveLAN calls via the DDE interface using both the short and long address formats. Also enables the administrator to issue any MCI command or error message via DDE to LiveLAN, simulating all incoming messages.

**Example: LLDDECmd -SQA**

### -MSG <mci message number in hex>

Sends an MCI command message to LiveLAN via the DDE interface.

**Example: LLDDECmd -MSG 45**

### -ERR <mci error number in hex>

Sends an MCI error message to LiveLAN via the DDE interface.

**Example: LLDDECmd -ERR FA2**

---

# Using the LiveLAN DDE Interface

This section describes the LiveLAN DDE interface and explains how this interface enables third-party applications to initiate LiveLAN videoconferencing calls. A brief summary of DDE concepts and a high-level description of a DDE-initiated LiveLAN call are given, followed by a detailed explanation of each DDE statement and the specifications for using LiveLAN's DDE interface. Throughout, examples are provided using Lotus Notes ® . The information presented in this section assumes you are familiar with LiveLAN operations.

## About the LiveLAN DDE Interface

Many Windows applications support DDE commands, such as Lotus Notes, Microsoft's Excel *TM* , Word *TM* , and Access *TM* . These applications provide tools that allow you to easily construct DDE commands using macros or formulas which can be linked to toolbar buttons or menus. For example, if you have a Lotus Notes employee directory, you can create a toolbar button that will initiate a DDE connection with LiveLAN to place a call to a selected person. Users can quickly make LiveLAN calls from the applications in which they are already working; there is no need to open another phone book or retype address information.

For a LiveLAN call to work, two DDE-compliant applications exchange information via a DDE conversation. One application initiates the conversation and defines a topic, then both can exchange information within the context of that conversation topic until the conversation is ended.

To initiate a videoconferencing call there are four steps:

1. Start a new conversation with LiveLAN.

2. Give LiveLAN the address information for the person being called.

3. Tell LiveLAN to start the call.

4. End the conversation.

In all implementations of DDE, this sequence would translate into four common DDE statements:

- *Initiate* --starts a new conversation and topic
- *Poke* --transmits data into a specific location in the other application
- *Execute* --tells the other application to initiate a defined command
- *Terminate* --ends the conversation
- You will not need to use the remaining DDE command, *Peek* (or *Request)* .

### Placing LiveLAN Calls

Below is a typical sequence of Lotus Notes statements you can use to place a H.323 LiveLAN call. A Lotus Notes end user can insert these statements into the formula of a macro button (SmartIcon) on their toolbar, and place LiveLAN calls from their corporate Notes phone book with one button click.

```
ConvID := @DDEInitiate ("LiveLAN3"; "LLDDE" );

ResultVal := @DDEPoke ( ConvID; "txtDataString"; "0" + @Char(9) + OfficePhoneNumber );

ResultVal := @DDEExecute ( ConvID; "CALL" );
```

ResultVal := @DDETerminate ( ConvID );

@All

## Understanding the Example

The following example explains how a LiveLAN call is made.

**1. Start a conversation with LiveLAN.**

To start a DDE conversation you must specify an application and a topic. For LiveLAN, the application is LiveLAN3 and the topic is LLDDE. Lotus Notes uses the DDEInitiate function to initiate a new conversation, using the following syntax:

@DDEInitiate( application ; topic )

If the initiation is successful, the function returns a unique conversation ID, otherwise it will return an error. In this example the statement looks like this:

ConvID := @DDEInitiate ( "LiveLAN3" , " LLDDE");

The result is saved as ConvID. This unique conversation identifier will be used for all subsequent communications in this short conversation.

**2. Give LiveLAN the address information for the person being called.**

After the conversation is initiated, you can pass information and commands to LiveLAN. To place a call you must first supply LiveLAN with the call type and address for the person you wish to call. In DDE terms, when you want to send information you Poke it to the other side. To do this, you need to specify:

- a conversation ID
- the location to which you are poking
- the data itself

Lotus Notes uses the *DDEPoke* function as follows:

@DDEPoke( conversationID ; location ; data )

For LiveLAN, you always poke data to a location named *txtDataString* . All the address information is poked in one statement, separating each piece of data by a tab. In Lotus Notes the example looks like this:

ResultVal := @DDEPoke ( ConvID; "txtDataString"; "0" + @Char(9) + OfficePhoneNumber );

LiveLAN accepts address information in either a short address format or long address format. The short address format (used in the example above) includes these tab-separated fields:

ConnectionType Address ISDN#1 ISDN#2 ChannelRate

Only the fields needed to place the call are necessary. However, if any of the fields are left out you must include a tab separator.

There are four connection types:

- 0 - LAN (H.323)
- 1 - ISDN (H.320)
- 2 - LAN via Gateway
- 3 - Data Only (T.120)

The four valid channel rates are:

- 2x64K
- 2x56K
- 1x64K
- 1x56K

In this example, a LAN (H.323) call is being made to a person designated by his office phone number. To show this in the current Notes View, the data string is:

"0" + @Char(9) + OfficePhoneNumber

In Lotus Notes, the plus sign ( + ) is used to concatenate strings together. The *@Char(9)* function is used to insert a tab character. The OfficePhoneNumber field will retrieve the office phone number from the currently selected record in the Lotus Notes view.

**Using trailing tabs is not necessary.**

For an H.323 call no other information is necessary. LiveLAN will automatically interpret the address as either a Terminal ID, Alias, or IP address.

For an ISDN (H.320) call the data string might look as follows:

"1" + @Char(9) + @Char(9) + ISDN_1 + @Char(9) + ISDN_2 + @Char(9) + "2x64K"

Notice that there is no address field for the ISDN call, though you must leave an empty place holder for the address field so that LiveLAN will correctly interpret the remaining fields.

LiveLAN also supports a long address format, which includes these fields separated by tabs (with no line break):

**LastName FirstName CompanyName TerminalID Alias IPAddress**

ISDN#1 ISDN#2 ChannelRate ConnectionType

Use the long address format to avoid confusion between your Terminal ID, Alias, and IP Address. PictureTel recommends that Aliases contain at least one letter to distinguish them from Terminal IDs. If your standards or practices do not allow this, then use the long address format to specifically identify the address type.

### 3. Tell LiveLAN to start the call.

After the address information is poked to LiveLAN, LiveLAN places the call using the DDE Execute statement. The Lotus Notes syntax for *Execute* is:

@DDEExecute( conversationID ; command )

The example using Lotus Notes is:

ResultVal := @DDEExecute ( ConvID; "CALL");

LiveLAN uses only two commands which correspond to the two address formats:

- CALL
- CALL_LONG_ADDR

Use *CALL* for the short address format and *CALL_LONG_ADDR* for the long address format.

**4. End the conversation.**

Once LiveLAN has been told to place the call, you can end the DDE conversation. The Notes function is DDETerminate having this syntax:

@DDETerminate( conversationID )

Using Lotus Notes the example appears as:

ResultVal := @DDETerminate ( ConvID );

When LiveLAN receives the *Execute* command it processes the call just as if the information was entered in the LiveLAN dial pad or as if the person was selected from the LiveLAN phone book. This information assumes LiveLAN is already running on a user's machine. If not, a slightly more complicated sequence could start LiveLAN if necessary.

---

# Registry Settings for Helper App

This section shows the registry file that is used to configure the Windows Registry for the LiveLAN helper app. There are three major sections:

- CallTo Protocol
- ULS Files
- Netscape Helper App

The Netscape section is used only if the user has installed Netscape
and it is configured for videoconferencing calls.

**REGEDIT4**

[HKEY_CLASSES_ROOT\callto]

@="URL:CallTo Protocol"

"EditFlags"=hex:02,00,00,00

"URL Protocol"=""

[HKEY_CLASSES_ROOT\callto\DefaultIcon]

@="C:\\Program Files\\PictureTel\\LiveLAN\\LLDDECmd.exe,0"

[HKEY_CLASSES_ROOT\callto\shell]

@=""

[HKEY_CLASSES_ROOT\callto\shell\open]

"EditFlags"=hex:01,00,00,00

[HKEY_CLASSES_ROOT\callto\shell\open\command]

@" \ " C:\\Program Files\\PictureTel\\LiveLAN\\LLDDECmd.exe\" -CALLTO %l"

[HKEY_CLASSES_ROOT\callto\QuickView]

@="*"

[HKEY_CLASSES_ROOT\.uls]

@="ulsfile"

"Content Type"="text/iuls"

[HKEY_CLASSES_ROOT\ulsfile]

@="Internet Location Service"

"EditFlags"=hex:00,00,01,00

"testbin"=hex:

[HKEY_CLASSES_ROOT\ulsfile\DefaultIcon]

@="C:\\Program Files\\PictureTel\\LiveLAN\\LLDDECmd.exe,0"

[HKEY_CLASSES_ROOT\ulsfile\shell]

@=""

[HKEY_CLASSES_ROOT\ulsfile\shell\open]

"EditFlags"=hex:01,00,00,00

[HKEY_CLASSES_ROOT\ulsfile\shell\open\command]

@="\"C:\\Program Files\\PictureTel\\LiveLAN\\LLDDECmd.exe\" -IP %l"

[HKEY_USERS\.Default\Software\Netscape\Netscape Navigator]

[HKEY_USERS\.Default\Software\Netscape\Netscape Navigator\Viewers]

"text/h323"="\"C:\\Program Files\\PictureTel\\LiveLAN\\LLDDECmd.exe\" -IP %l"

"application/x-iphone"="\"C:\\Program Files\\PictureTel\\LiveLAN\\LLDDECmd.exe\" -IP %l"

"text/iuls"="\"C:\\Program Files\\PictureTel\\LiveLAN\\LLDDECmd.exe\" -IP %l"

[HKEY_USERS\.Default\Software\Netscape\Netscape Navigator\Suffixes]

"text/iuls"="uls"

[HKEY_CURRENT_USER\Software\Netscape\Netscape Navigator]

[HKEY_CURRENT_USER\Software\Netscape\Netscape Navigator\Viewers]

"text/h323"="\"C:\\Program Files\\PictureTel\\LiveLAN\\LLDDECmd.exe\" -IP %l"

"application/x-iphone"="\"C:\\Program Files\\PictureTel\\LiveLAN\\LLDDECmd.exe\" -IP %l"

"text/iuls"="\"C:\\Program Files\\PictureTel\\LiveLAN\\LLDDECmd.exe\" -IP %l"

[HKEY_CURRENT_USER\Software\Netscape\Netscape Navigator\Suffixes]

"text/iuls"="uls"

---


feedback@pictel.com