LightLink System Manager
User Guide

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1. Introduction to System Manager

Inova LightLink® System Manager™ is a Supervisor application in the Inova LightLink System. System Manager provides the following general areas of functionality:

- Viewing status of all messages sent to LightLink LED displays, Inova Marquee displays, and other output devices configured in the Inova LightLink System

- Managing virtual displays, which are regions within a configured display to which messages can be sent independently

- Creating and modifying display groups, which are logical groupings of output devices and/or virtual displays, to which messages can be sent as a group

- Managing messages that are currently active or scheduled on output devices

- Viewing message properties and status

- Manually deactivating, returning to schedule, and cancelling messages

- Reviewing and modifying message content, destination, and schedule via Message Editor, and the Fast Text editor

- Sorting and filtering the message display

- Launching the Log Viewer to examine diagnostic output for LightLink programs

LightLink supports English across the entire platform. Support for other character sets is provided in Fast Text messages sent to TaskLink clients and their message titles as shown in System Manager status panes.

1.1. Accessing System Manager

System Manager can be accessed using any of these methods:
- Start > All Programs > Inova Solutions > Supervisor Applications > System Manager
- LightLink Administrator > Tools menu > System Manager
- LightLink Administrator > Toolbar > System Manager icon
- Inova Quick Launch > System Manager

Note: System Manager can be started via LightLink Administrator only when both applications are installed on the same host computer.

When LightLink security is active, the user account launching the System Manager application will be validated against the user list of the LightLink Security Groups. If the user account is not in one of the Inova LightLink Security Groups, or if present but disallowed from running System Manager, the System Manager application will display a message to that effect and will shut down. When LightLink security is dormant, this check will not be made.

1.2. System Manager Panes

Once System Manager is open, you will see the System Manager screen (Figure 1). System Manager consists of four panes. The dividers between these panes may be dragged to adjust the size of each.

- **Output Device Tree** – shows all the displays or groups where your messages are being sent.

- **Overall Status Pane** - displays those messages sent to the destination that is selected in the Output Device Tree.

- **Detailed Status Pane** – displays information about the message selected in the Overall Status Pane.

- **Fast Text Message Editor** – The bottom right pane of the window shows the Fast Text message editor. *Note that you can show or hide the Fast Text pane using the View menu in the toolbar.*

Refer to the following sections for more detailed information about the Output Device Tree, Overall Status, and Detailed Status panes. For more information about Fast Text messaging, refer to the section *Using Fast Text* Messages on page 16.
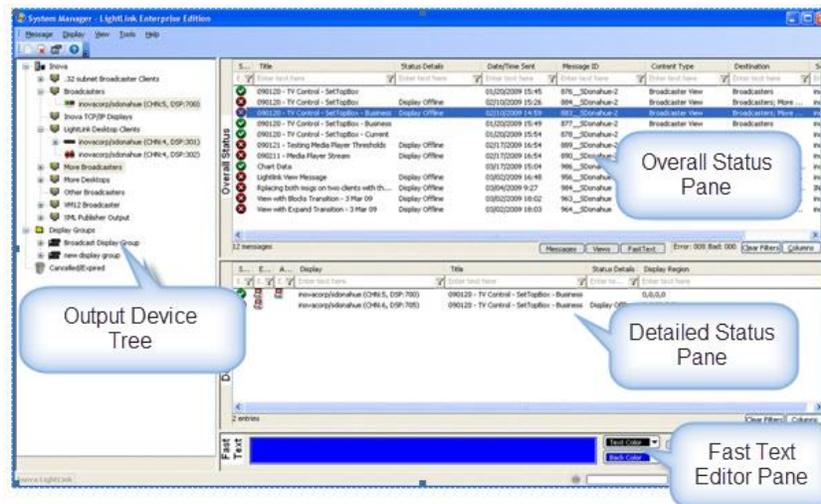
Figure 1

1.3. Output Device Tree Pane

The Output Device Tree allows you to specify the set of displays for which to show messages. These output devices are organized by logical, user-defined output device groups and by physical device connection.

When you select a channel, display, system root node or the display groups node, all visible active messages on those displays appear in the Overall Status pane. An Active message is one which has at least one currently playing message instance on a display. The availability of the message options is according to your access rights.

Once all occurrences of a message are expired or cancelled that message is relegated to the Cancelled/Expired node (trashcan).

The Output Device Tree is a hierarchy organized into three root nodes:

- **System node** - Selecting the System root node causes all visible messages in the system to be displayed in the Overall Status pane.

- **Display groups node -** Selecting the display groups root node causes all visible messages with a display group in its destination to be displayed in the Overall Status pane.

- **Cancelled/Expired node** (trashcan) - Selecting the Cancelled/Expired (trashcan) item will cause messages where all instances are cancelled or expired to appear in the Overall Status pane.

Each item in the tree shows a red 'X' over the icon if there is a connection problem. A channel will display a small red square over its icon if it is disabled.   The

following details what messages you can expect to see in the Overall Status pane when the various tree items are selected:

- Selecting a channel will show all messages sent to the channel, a display on that channel or a virtual display on that channel

- Selecting a display will show messages sent to that display and messages sent to any virtual display defined for it

- Selecting a virtual display will show only messages sent to that virtual display

- Selecting a display group will show messages sent to the display group, any display in that display group, or to any virtual on any display in the display group

- Selecting multiple items in the tree will show all visible messages that meet the criteria you selected

1.3.1. Output Device Tree Icons

Refer to Figure 2 for the icons that may appear in the System Manager device tree.

	Icon	Description
Top Level Nodes		System root node
Output Device Connection Node		Online Output Channel
		Offline Output Channel
		Disabled Output Channel
Output Devices		Online display
		Offline display

Figure 2

1.4. Overall Status Pane

Inova LightLink System Manager provides the Overall Status pane to display overall status for messages playing on destinations selected in the Output Device Tree. Overall Status can be an OK, Error, Disabled, or Unknown status icon for each message.

The Overall Status pane is a list with several columns that can be shown or hidden as needed. These columns can also be dragged around to change their display order. Each column has a filter option in its header that allows the user to show only those items that contain a certain text value; the filter option is a text entry box indicated by the funnel icon. The columns may be sorted in the usual fashion by clicking the column header to toggle in ascending or descending sort order.

The bottom of the Overall Status pane has:

- An informational text field at the left.

- An error status count field.

- A bad status (Disabled) count field.

- Content type filter buttons (Messages, Views, Fast Text).

- A Clear Fields button to clear all filter fields.

- A Columns button to select columns to show in the Overall Status pane.

You can select one or more messages within the display using the conventional Windows select/multi-select methods (shift-click, control-click). When a message is selected, its information appears in the Detailed Status pane below. Multiple messages may be selected and operated on simultaneously.

Figure 3

The Overall Status pane displays the messages playing on the displays represented by the tree selection. When active messages are being shown, each message will have an icon next to it summarizing the status of that message (i.e., *Is this message playing as it should?*).

- If the message is not playing as expected due to a system problem, an error icon appears next to it.

- If the message is playing as expected, then an OK icon appears next to it.

- If the message is not playing as expected but is doing so due to a configuration setting (such as an OCM being disabled) a Disabled icon will appear next to it.

- If a message status has not been reported by an OCM, an **Figure 4**
Unknown icon appears next to it. In the case of Error and
Disabled conditions, a detailed status field contains information pertaining
to the message status.

An error condition may be due to Display Offline, OCM offline, OM not running,
or launcher on hostname not responding. A Disabled condition is only triggered
by a disabled OCM. If the Cancelled/Expired node is selected then only fully
cancelled and expired messages are shown. The icon next to each message in the
Canceled/Expired list will show whether the message was cancelled or if it
expired on its own.

1.4.1. Columns Button for Overall Status Pane

The Columns button is located at the bottom right of the Overall Status pane. The
Columns button allows the selection of which columns to show in the message list.
A check appears next to each column that is currently visible (see Figure 4).

Refer to Figure 5 for descriptions of the Overall Status Columns options:

○	**Status**	Overall status of message
	✓	Message is playing as expected on all displays
	✗	Message is not playing as expected on at least one display
	⚠	Message is not playing due to a disabled OCM
	?	Message status is unknown
	✕	Message is cancelled
	⬛	Message has expired
○	**Title**	Message title
○	**Message ID**	ID assigned to the message by the system when sent
○	**Control Category**	Control category. blank if uncontrolled
○	**Content Type**	Blank if normal
○	**Status Details**	Detailed explanation of status condition
○	**Destination**	Text version of original destination
○	**Schedule**	Text version of schedule
○	**Sender**	name of sender
○	**Message Size**	size in pixels of message if normal content
○	**Date/Time Sent**	time stamp when sent

Figure 5

1.5.   Detailed Status Pane

System Manager uses the Detailed Status pane to display detailed status information for messages selected in the Overall Status pane. The Detailed Status pane consists of a list with several columns that can be shown or hidden as needed.

You may select one or more messages within the pane using the conventional windows select/multi-select methods. When an entry is selected, activation and cancellation operations are available that operate only on the displays associated with the selections. Multiple message instances may be selected and operated on simultaneously.

Figure 6

The Detailed Status pane shows the detailed status of the messages selected in the Overall Status pane for each display to which the message as sent. If the message status mismatches, the status detail column will show *status mismatch*. If an OCM is offline, the details column shows *OCM offline*. If the display is offline is shows *Display Offline*.

When active messages are being displayed the context menu allows messages to be cancelled, deactivated, and returned to schedule on individual or multiple displays. If there are ended messages shown, there will be no context menu for them. Nor will there be a context menu if a multiple selection is made including any ended messages.

Changing the selected messages in the Overall Status pane changes what is shown in the detailed status pane. Operations are allowed from this pane to change the expected status for a message on an individual display.

If a message has a cancelled or expired component in the system, it will appear in the Detailed Status pane when selected in the Overall Status pane. Refer to Figure 7 for descriptions of the icons from the Detailed Status.

Figure 7

1.5.1. Columns Button for Detailed Status Pane

 The Columns button allows the selection of which columns to show in the message list. A check appears next to each column that is currently visible.

The columns for System Manager can also be dragged to change their display order. Each column has a filter field in its header that allows the user to show only those items that contain a certain text value.

The columns may be sorted in the usual fashion by clicking the column header to toggle in ascending or descending sort order. The bottom of the Detailed Status pane has an informational text field, a filter mode field, a button to clear all filter fields and a button to select list columns.

The Status Match column shows *OK* if the expected and actual statuses are compatible states. If the actual and expected statuses are no compatible, then *Error* is shown. If the actual status is unknown and the detailed status is non-empty, an *Error* is shown. If the actual status is unknown and the detailed status is empty, an *Unknown* icon is shown.

The *Columns* button allows the selection of which columns to show in the message list. A check appears next to each column that is currently visible.

Figure 8

Clicking *Clear Filters* will clear any text you entered in the filter boxes in the header above each column in the message list.

In addition to the icons in Figure 7, you will also see the following items:
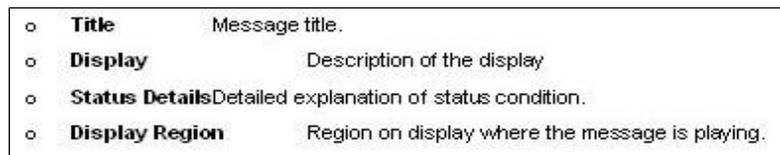
Figure 9

1.6.   Determining the Properties of a Display

To view the properties for an output device, select the device and click on the *Properties* icon in the Toolbar or right-click on the device and select *Properties* from the context menu. The Properties for Display dialog appears. *This is a read-only dialog.* The Properties dialog displays helpful information about your display:

- **ID -** The unique server/connection/display address for this item
- **Serial** - Shows the serial number of a **serial** display, the name of a TCP/IP display, or the device name of a desktop client.
- **Type** - The type of output device
- **Dimensions** - The height and width of the item
- **Color -** Color (red/yellow/green) or Monochrome
- **Version -** The current version of Inova LightLink firmware under which this item is running
- **Status -** The status (CONNECTED, UNKNOWN, or ERROR) of the device
- **Network Address** - Shows the IP address of Marquee clients and TCP/IP displays
- **User Name** – the name of the logged in user for a desktop client

2. Access Rights for System Manager

Access Rights define what channels and display groups each user is permitted to view. Each user's Access Rights also implicitly define what messages that user can view in System Manager. Access Rights are assigned using the Security Manager application.

System Manager will show all messages sent directly to displays that are members of display groups and channels you do have access to, but messages sent to a channel or to a display group you do not have access to will be hidden from view. System Manager filters out messages sent to groups and channels you do not have access to and these will also be hidden from viewing.

Access to messages on a display is implicitly defined by the channels and display groups to which you have access. If you have access to a display group with a display in it, then you will have access to the messages sent to that display via the display group, those sent to that display via a channel to which you have access, and those sent directly to the display.

In cases where messages are sent to multiple groups or channels where you have partial access rights, you will see the messages under the components where you have access rights. If any part of a message destination matches your access rights, the message will be visible.

3. Working with LightLink Messages

System Manager allows you to monitor and modify messages that were created in Message Editor.

3.1. Opening a Message

To open a message, double click on the message or select *Open* from the message context menu in the Overall Status pane.

3.2. Creating a New Message

To open Message Editor to create a new message, select File > New.

System Manager opens the application that corresponds to the type of displays currently selected in the output device side.

3.3. Cancelling a Message

Cancelling the message in System Manager deletes it from the system. *Refer to Section 3.5 for details about deactivating a message, which stops the message from playing but does not remove it from the system.*

To cancel a message, you can use the context menu for that message or the Message menu in System Manager. From the menu, select *Cancel* and then either *on all locations* or *on selected locations* (Figure 10).
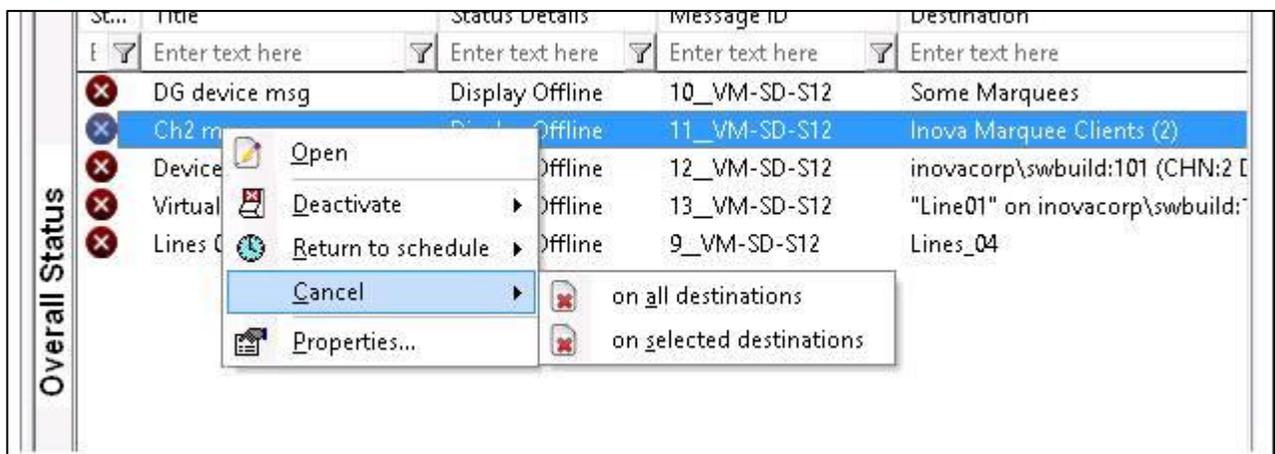
Figure 10

To View the Canceled and Expired messages in your system, select the Cancelled/Expired node.

When ended messages are being displayed the context menu has a different set of operations. This menu allows you to remove ended messages from the Data Directory completely or open them in Message Editor for resending.

- **Open** - Allows you to view the selected expired message.

- **Remove** - Allows you to permanently remove a message from the trashcan. This menu item is enabled when the trashcan is being viewed.

- **Properties** - Allows you to view the properties for the message.

3.4. Returning a Message to its Schedule

You have the option for the selected message to return to its original schedule. To do so:

1. Select *Return to schedule* from the context menu for the desired message(s).

2. Select *on all locations* or *on selected locations*.

Returning to schedule does not apply to canceled or expired messages.

3.5. Deactivating a Scheduled Message

Deactivation does not apply to canceled or expired messages.

To deactivate a message:

1. Select *Deactivate* from the context menu for the desired message(s).

2. Select *on all locations* or *on selected locations*.

3.6. Adding a Message to Selected Devices

Once you have created a new message, you can add that message to other selected devices. To do so:

1. Select *Open* from the context menu for the message.

2. Modify the message as desired.

3. Select the icon to choose the message destination (Figure 11).
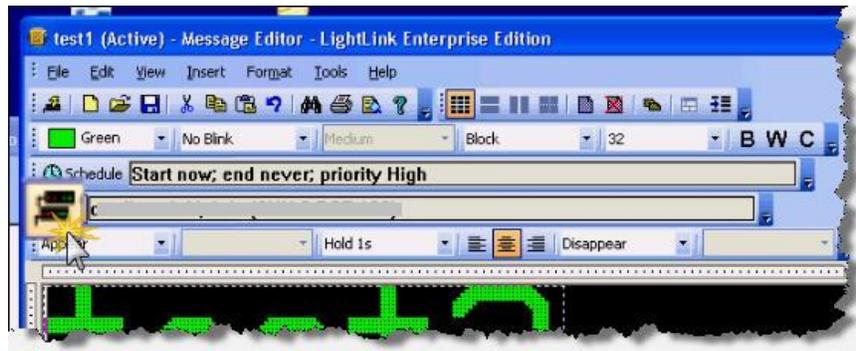
Figure 11

> 4. The Select Destinations dialog opens. Select desired devices on the left and click the Add button.

> 5. Click *OK* to save changes.

Removing devices in the Add/Remove dialog does not remove the original message from the original destination; it only removes that device from future updates to the message. To completely remove the message from the display, you will either need to cancel or deactivate the message for that display. Refer to Section 3.3 (to cancel) or Section 3.5 (to deactivate).

3.7. Message Properties

The Message Properties Dialog is a pop-up dialog that displays the overview for a single message. The Message Properties can be launched from the System Manager main menu or from the Overall Status pane.

1. Open the context menu for the desired message.

2. Select Properties. The *Message Properties* screen appears with the following fields:

- **Title –** The title of the message, identical to the Message column in the main System Manager window

- **ID –** The unique Activity ID of the message

- **Type –** The content type of the message. For 5.7 and beyond the supported content types are LightLink Message and Fast Text Message

- **Destination –** The Destination description for the message, identical to the Destination column in the main System Manager window

- **Schedule –** The Schedule description for the message, identical to the Schedule column in the main System Manager window

- **Sent –** The Date, Time, and user who sent the message

- **Category** – The Categories in effect for the message; this is an optional setting only available for specific installations.

  None of the items on this dialog may be edited.

3. Select *OK* to close this dialog.

3.8. Migrating Messages

Mechanisms for the import and export of messages and views and the migration of DataLink files are provided by System Manager and are accessed via the Tools menu in System Manager. These features are used for moving messages from one LightLink system to another and matching data field names with data field IDs in the LightLink system to which the messages are being moved. *Refer to the* LightLink Migration Tool Solution Guide *for more details on Import, Export, and Migrate LLD.*

There are two settings that must be made for the Message Migration options to show in the Tools menu for any particular user. To allow migration options for a user of System Manager:

1. Ensure that the user is a member of a LightLink Security Group (refer to the *LightLink Security Manager User Guide*).

2. Open Security Manager and select the desired LightLink Security Group in the LightLink Security Accounts pane.

3. Click the *Configure* button.

4. On the Default Profiles tab, select *System Manager* in the application pull-down menu.

5. Set the *Show Migration* property to 1.

6. Enable *Force profile settings on all group members*.

7. On the Privileges tab, open the System Manager node and ensure the *Import and Export messages* privilege is enabled.

4. Using Fast Text Messages

4.1. Fast Text Overview

Fast Text allows users to send spontaneous messages or notifications to LightLink displays. A Fast Text message can be sent to multiple TaskLink clients XML outputs (simple messaging only), or email destinations. Each Fast Text message will play until it is replaced or cancelled. Fast Text messages are composed and sent using the Fast Text editor at the bottom of the System Manager window (see Figure 12). A message composed in the Fast Text editor will be sent to the destinations selected in the LightLink device tree at the left. *Fast Text messages sent to TaskLink clients can include English and other character sets; only English characters are supported at other destinations.*
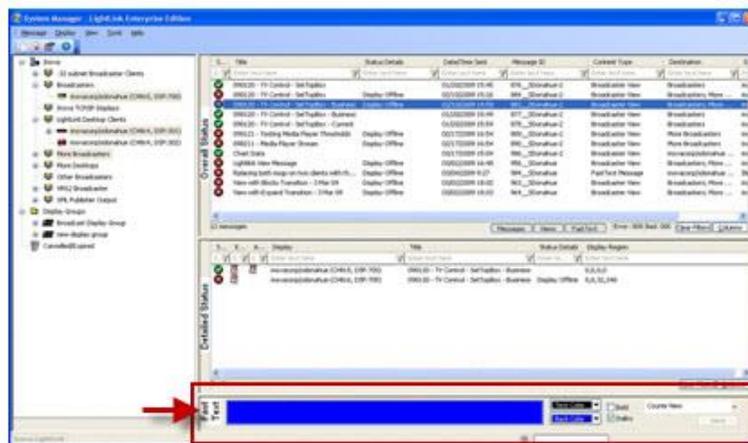
Figure 12

4.2. Required LightLink Components

To use the Fast Text feature, the LightLink system must have these three components installed (see Figure 2).

- **Fast Text capable display client**, including any of the following:
- **Inova Solutions TaskLink** – this application can be of any recent release version from 5.5 or later.
- **Email Address Virtual Display** – requires LightLink Middleware version 5.6 or 5.7 or later.
- **XML output device** – set up for Simple Messaging XML output.
- **Inova Solutions Supervisor Applications** – the System Manager application is required to send and manage Fast Text messages (latest release required).

- **Inova Solutions Middleware** – this is a required component to any LightLink installation (prior 5.6 or 5.7 versions are sufficient).

4.3. Fast Text Behavior

Fast Text messages are minimally-formatted text messages without any schedule. They are created in the System Manager application using the built-in Fast Text message editor. Fast Text messages will play upon their receipt by the destination client and will end only when cancelled or replaced by a new Fast Text message.

Only one Fast Text message can be playing on a device at a time. This means that a Fast Text sent to a device will be replaced if another is sent to that same device. Fast Text messages can be sent to one or more displays directly and can be sent to one or more display groups or output channels. There can be any number of Fast Text messages in the system at a time, but only one will play per display.

Most of the message operations available to other types of LightLink messages (i.e., deactivate, return to schedule) are not applicable to Fast Text messages. The user can only cancel or replace Fast Text messages. When all instances of a given Fast Text are replaced or cancelled, the message will show up in System Manager's Cancelled/Expired bin (Trash Can) like any other deleted or finished message.

4.4. Valid Destinations

The following are valid destinations for Fast Text messages:

- TaskLink devices
- Email devices (must be individually selected) - email address *Virtual displays* can be the destinations of Fast Text messages; the 'Email OCM' and 'To: Address' tree nodes are not supported as destinations.
- XML destinations – set up for Simple Messaging XML output.
- Display groups with at least one device that supports Fast Text. Message resolution does occur for Fast Text messages sent to a display group so a device that is added to the display group after the Fast Text message was sent will receive that Fast Text message.

4.5. Sending a Fast Text Message

To send a Fast Text message:

1. Enter the message text in the editor. (See Figure 13.)

Figure 13

Fast Text messages can include English and other character sets when sent to TaskLink clients; only English characters are supported at other destinations.

2. Set the attributes as desired. Each of the message attributes applies to the entire message. These attributes are:

- font name

- font color

- background color

- font appearance (i.e., bold and italics)

Note that default settings for these attributes can be specified using the Default Profiles setting in Security Manager, and the last used settings will be retained for the next message.

TaskLink devices will only use their own presentation settings when displaying a Fast Text message. When a Fast Text message is sent to an email device, just the text of the message will be sent without any formatting information.

3. In the device tree on the left, select the destinations where the Fast Text message should be displayed. The 'Send' button will be enabled when at least one device in the current destination selection supports Fast Text.

If a Fast Text destination includes a device that doesn't support Fast Text, that device is skipped, no message is sent to that particular device, and no error indicator is generated.

4. Click the Send button to have the message displayed on the selected destinations. The "Send" button will be enabled if at least one device in the current destination selection supports Fast Text. If a Fast Text destination includes a device that doesn't support Fast Text, that device is skipped and that no message is sent to that particular device but also no errors are indicated either.

Fast Text messages are not subject to automatic message resolution if sent to a channel and a device is later added to that channel. A Fast Text message with an output channel as its destination will only be sent to the devices currently present on the channel (but not necessarily currently logged in); new devices added to the

channel will not receive Fast Text messages automatically. To ensure any new additions to the channel display the message, the user will have to select the message in System Manager, select the channel and re-send the message.

For information about how to check on the status of a message, refer to the "Overall Status Pane" section on page 5 of this manual.

4.6. Resending Messages

To resend a message, select an existing Fast Text message in the Overall Status pane of the System Manager window to populate the Fast Text editor with the text and attributes of the message.

This allows you to send the same message content to additional destinations or to modify it and send it to the same or different destinations.

Selecting an existing message does not select the original destinations; the currently selected destinations in System Manager's Device Tree remain selected as the Fast Text destination.

Selecting another destination in the Output Device Tree will not change the attributes or text of the message in the Fast Text editor. Changing the message selection in the 'Overall Status' pane clears the attributes to default settings if no message or a non-Fast Text message is selected. Selecting another Fast Text message will discard any changes made in the Fast Text editor and will replace the text and attributes with those of the newly selected Fast Text message.

4.7. Cancelling Messages

To cancel a Fast Text message:

1. Select it in the Overall Status pane of the System Manager window and right-click to bring up the context menu.

2. Select the Cancel operation and the message will be cancelled on the currently selected destinations.

To cancel a Fast Text message entirely on all destinations to which it was sent:

1. Select all of the message destinations in the LightLink device tree to the left.

- To select all the destinations for a Fast Text message, select all the channels and display groups containing displays to which the message was sent **or** select the top-most node of the Output Device Tree.

2. Cancel the message using the context menu in the Overall Status pane of the System Manager window.

5. Display Groups

Display groups are used to combine separate display devices into a group so one message can be sent to multiple displays.

For example, let's say you want to send the same message to all 10 devices on the first floor. In System Manager you create a display group called First Floor. Then when the message is created in Message Editor or Designer, the user can select the First Floor display group as the destination.

5.1.   Creating a Display Group

The following details how to create a display group.

1.   Select System Manager > Display > Display Group > New.

2.   Select a display or device on the left and click *Add* to add it to the display group.

3.   Continue adding *displays* and *devices* until the desired display group is complete.

4.   Enter a *name* for the new display group.

5.   Select *OK.*

Display groups cannot contain other display groups or Output Channels.

5.2.   Adding or Removing Displays from a Display Group

The following details how to add or remove displays from a display group in System Manager.

- You can use System Manager to exclude displays from your display groups or add existing displays to a newly-created display group.

- You cannot physically remove a display from the Inova Solutions LightLink System using System Manager. You must work through the Inova Solutions LightLink Administrator to remove a display or other types of output devices from the LightLink system.

Below are the steps to adding or removing displays from the display group.

1.   From the Output Device tree on the System Manager main screen, select the display group you want to modify.

2.   Right-click to open the context menu; choose *Display Group > Modify*.

3.   The *Select Display Group Members* dialog appears.

- To add a display, select an item you want to add in the left-hand pane and click the *Add* button. Note that channel items cannot be added to display groups, only their members can be added.

- To remove a display, select an item you want to remove in the right-hand pane and click the *Remove* button.

4. Click the *OK* button to accept the changes you made and close the Display Group Members dialog.

5.3. Deleting a Display Group

The following details how to delete a display group.

1. Select the display group you want to delete.

2. Right-click to open the context menu; choose *Display* > *Display Group* > *Delete*.

3. Select *Yes* to delete the selected display group or select *No* to stop this process and return to the previous screen.

It is not possible to delete an actual display from System Manager. This must be carried out from the Inova LightLink Administrator main screen.

5.4. Renaming a Display Group

To rename a display group:

1. From the Output Device Tree, select the display group you want to rename.
2. Open the context menu; choose Display Group > Rename.
3. Type the new display group name.

When you have entered the new name, hit *Enter* or click somewhere else on the screen.

6. Virtual Display Overview

LightLink **virtual displays** allow you to divide a single display into different grids. In effect, each grid can then be treated as a separate, or virtual, display. For example, using virtual displays, you can:

- Send messages to individual lines or regions of a display

- Send the same information to the top line of one Display and the bottom line of another

- Create a system clock on any Inova display or Marquee

- Display real-time statistics AND an ad-hoc message on the same Inova OnTrack display or Marquee

- Use Security Manager to secure certain regions of displays so that other users cannot make changes

6.1. Dividing a Display

To use virtual displays, you must first understand how the coordinates of the display are mapped. It is helpful to think of the display as a grid. The first coordinate indicates the top-to-bottom location; the second coordinate reflects the left-to-right location. Note the coordinates indicated in Figure 14 for a 48x256 display that is divided into four rows. Note that the height and width coordinates will vary depending on the size of your display.

Figure 14

As an example, Figure 14 has four virtual displays: clock, header row, data lines 1 and 2, and message region.

6.2. Creating a Virtual Display

To create a virtual display in System Manager:

1. From the Output Device Tree, open the context menu for an output device such as an OnTrack display or a Marquee client for the virtual display.

2. Choose *Virtual Displays > Define*. The Edit Virtual Displays dialog opens.

3. Select a type from the Type drop-down. The available options will depend on what types of devices you selected initially.

4. Enter a name for the layout. Once you have created and named a layout, you can reuse that setup for other displays.

5. Select *Add* to add a virtual display to this layout.

6. The New Virtual Display dialog appears. Within this dialog you define the name and dimensions of the virtual display.

    a. Enter the name for the virtual display.

    b. Enter values for the *Left, Top, Width*, and *Height* coordinates. For example, in Figure 14, the values for the virtual displays would be as seen in Table 1.

    c. Select *OK.*

	Left	Top	Width	Height
	Value of left-most point of the virtual display	Value of the top point of the virtual display	Total width of the virtual display	Total height of the virtual display
Clock	0	0	100	12
Header	100	0	156	12
Data Line 1	0	12	256	12
Data Line 2	0	24	256	12
Message Region	0	36	256	12

Table 1

7. Repeat steps 5 and 6 to create additional virtual displays on the selected output device

8. Select *OK* to accept your configuration changes.

6.3.   Modifying a Virtual Display

The following details how to modify a virtual display in System Manager.

1. Select the **virtual display** to be modified.

2. Select Display > Virtual Displays > Define. The Edit Virtual Display dialog appears.

3. If you wish to use a layout you have already created, select the desired layout from the drop-down menu.

4. To modify part of the existing display, select the part you want to modify.

5. Select *Edit* and make desired changes to the name and values. Click *OK*.

6. Click *OK* to accept your configuration changes.

Note that any changes to a layout are not automatically propagated to other displays that use the same layout.

6.4.   Deleting a Virtual Display

The following details how to delete a virtual display in System Manager.

1. Select the *virtual display* to be deleted.

2. Choose Virtual Displays > Delete.

The virtual display is deleted.

7. System Manager Menu Commands

System Manager operations are available via Menus in the menu bar, context menus available by clicking the right button of the mouse, and keyboard shortcuts (shown as underlined letters when menu options are displayed).

7.1. Context Menus

All items in System Manager have context menus; the context menus open when you click the right button of the mouse. The context menu options vary based on what is currently selected when right-clicking. For example, right-clicking over a message brings up the menu options applicable to that message, and when right-clicking on an empty space in the status pane the context menu has only the "New" menu option. If multiple items are selected when right-clicking, the context menu will display the intersection of available menu options applicable to those items.

7.2. Message Commands for System Manager

The following describes the message commands for System Manager. These commands are available through the Message menu in the tool bar and through the context menus in the Overall Status and the Detailed Status panes. If you do not have rights to for the selected messages or devices then these choices will be grayed out.

- **New** - Starts the Message Editor with a blank message to allow the creation of a new message.

- **Open -** Opens Message Editor with the selected message displayed in the Editing Window, ready to edit. In Message Editor, when you send this message, you can either replace the existing message or send it as a new message, which leaves the existing message as it is.

- **Remove –** Removes the message. This option is only available for expired or cancelled messages in the Cancelled/Expired node.

- **Deactivate > on all locations** - Causes the selected message to stop playing on all locations to which it was sent.

- **Deactivate > on selected locations** - Causes the selected message to stop playing as scheduled.

- **Return to Schedule > on all locations** - Causes the selected message to return its schedule at all locations at which it is currently deactivated.

- **Return to Schedule > on selected locations** - Causes the selected message to return its schedule at the selected locations.

- **Cancel on all locations** - Cancels the selected message(s) on all locations to which the message is currently sent.

- **Cancel on selected locations** - Cancels the selected message(s) on the currently selected locations.

- **Properties** - Opens the Properties dialog to determine the status of the message at each display to which it was addressed, the content of the selected message as well as its destination, schedule, date, time, and sender. If no message is selected or more than one message is selected, then this option is disabled.

- **Exit** - Exits System Manager (not available on the context menu).

7.3. Display Commands

These display commands are available through the Display menu and through the context menus in the Output Device Tree. *Only Display Group > New is enabled when the Cancelled/Expired node is selected.*

- **New Message** - Opens Message Editor to create a new message using the selected device as the default destination. *(This menu item is available only through the context menu.)*

- **Copy Virtuals and Groups** – Opens the destination dialog to copy the configuration for one Marquee user to one or more other Marquee users. This operation covers virtual displays, display group membership, and display group messages. Performing this action removes any existing configuration for the target users, replacing it with the configuration for the user initially selected when this option is chosen. *Note that:*

- a message sent to directly to the source user, not via a display group, will not be copied to the destination user(s)

- messages sent to the channel on which the destination user is configured will remain with the destination user(s)

- messages sent directly to the destination user(s) will remain with the destination user(s)

- this feature is intended for use with Marquee users but also will work for TCP/IP Displays (including Encrypted TCP/IP Displays)

- **Display Group** – Provides options to create a new display group, modify an existing display group, rename a display group, or delete a display group.

- **Virtual Display** – Provides options to define or delete a virtual display.

- **Launch Display Monitor -** Launches the Display Monitor which allows you to see, on this pane, what messages are actually running. *Note that if the selected device OCM supports the display monitor application, and if a monitor port is configured, this item will launch the Display Monitor application and attach it to the selected display.*

- **Properties** - The Device ID, Serial Number, Type, Dimensions, Color, Inova LightLink Firmware Version, and Connection Status of the selected display(s) .

Descriptions of the Display > Display Group sub-menu options:

- **New** - Launches the display group Editor dialog for a new display group. You must enter a valid display group name and its contents.

- **Modify** - Only available if a single display group is selected. Launches the display group Editor dialog for the selected display group.

- **Rename** - Only available if a single display group is selected then allows editing of the display group name.

- **Delete** - Only available if a single display group is selected then allows you to delete the selected display group.

Descriptions of the Display > Virtual Display sub-menu options:

- **Define** – Brings up the Define Virtual Display dialog, where one can define sub-regions of the display to which messages can be sent independently. This option is only enabled if one or more end-nodes in the Output Device Tree are selected (not for channels or display groups). The selected devices must all support the same kind of virtual displays for this option to be enabled.

- **Delete** – Deletes a virtual display. This option is only enabled if one or more end-nodes in the Output Device Tree Control are selected (not for channels or display groups or end nodes that are not virtual displays).

7.4. System Manager View Menu

The following describes the System Manager View menu options.

- **Toolbar** - Shows or hides the main window toolbar.

- **Status Bar** - Shows or hides the main window status bar.

- **Show/Hide Fast Text** – This allows you to choose whether to display or hide the Fast Text editor pane.

- **Controlled Message Categories** – [Optional] If any controlled message categories are configured and enable for System Manager's use, each will have a menu item in the View Menu above the Refresh Tree menu item. The menu item will show or hide messages of the named category.

- **Refresh Tree** - This causes the device tree to be reloaded.

7.5. Tools Menu Commands

The following describes the Tools menu options for System Manager.

- **Log Viewer** - This option allows you to launch the Log Viewer to display diagnostic information.

- **Administrator** - This option allows you to launch the Inova LightLink Administrator to make modifications to the system.

- **Import Messages** - Allows you to open a dialog that allows you to load messages from a file and insert them into the LightLink System. This option is available only if the user has the Import messages privilege set in Security Manager. *Refer to the Security Manager User Guide for more details.*

- **Export Messages** - Allows you to open a dialog that allows you to save messages stored in the Data Directory to a file. This option is available only if the user has the Export messages privilege set in Security Manager. *Refer to the Security Manager User Guide for more details.*

- **Migrate LLD –** allows you to move files from one location to another. Refer to the LightLink Migration Process Solution Guide for more details.

7.6. Help Menu

The following describes the Help menu options for System Manager.

- **System Manager Help** - Opens the front page of the help file

- **Contents and Index** - Opens the contents and index dialog for the help file

- **Icon Help** - Opens a special help page which describes all the main window icons

- **Inova on the Web -** Jump to the Inova Solutions web page if you have a web browser registered and internet access available

- **About System Manager** - Opens the About Dialog for System Manager

8. Common Error Messages

The most commonly encountered error messages in System Manager are:

- **Access Denied -** Access is denied when your login ID or password is incorrect. If this occurs, log on again or see your System Administrator for additional assistance.

- **Could Not Send Command -** This occurs when the network access to Inova Solutions LightLink is lost during a session.

- **Database Disconnect -** Database Disconnect occurs if any of the shared database files cannot be found before or during a session.

- **Network Disconnect -** This occurs when the network access to Inova Solutions LightLink is lost during a session.

- **No Connection -** This occurs when you are unable to connect to Inova Solutions LightLink. This usually occurs when there is a configuration or network problem.

- **License Count Exceeded -** The License Count Exceeded appears whenever the number of Supervisor Packs licensed for this system is exceeded.

- **Could Not Modify User -** Occurs when the network access to Inova Solutions LightLink is lost during a System Manager session. This would be encountered when attempting to save window location and size properties for the next user session.

- **No Response from Server -** Occurs when Inova Solutions LightLink does not respond to the request for detailed message properties.

If any of the above problems continue or if any of the above reoccurs, then try again, try logging in again, or see your System Administrator for additional assistance.