



LightLink Training Workbook

for Administrators and

Supervisors

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April 2, 2020

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Course Outlines

This Training Workbook covers all content that may be necessary for both LightLink administrators and system managers. Some of the content included in the workbook may not apply to your job or to your site.

Inova Solutions customizes training sessions based on the needs of each customer. As such, the outlines below include the specific content that will be covered during training at your site for LightLink administrators and LightLink system managers.

Prerequisites

Prior to the training session, trainees should review the content in Section 15. These key terms will be helpful to know prior to the training.

Course Outline for LightLink Administrators

During the course for LightLink administrators, we will first cover an overview of the Inova signage system and the system components before diving deeper into LightLink Administrator, which is the application you are most likely to use. We will also go into further detail about other applications and tasks you are likely to need to complete in each. We will wrap up with some troubleshooting ideas and some sandbox time for you to practice what you've learned.

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Course Outline for LightLink Supervisors

During the course for LightLink supervisors, we will first cover an overview of the Inova signage system and the system components before diving deeper into LightLink Administrator, which is the application you are most likely to use. We will also go into further detail about other applications and tasks you are likely to need to complete in each. We will wrap up with some troubleshooting ideas and some sandbox time for you to practice what you've learned.

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1. Course Introduction

1.1. Preface

Welcome to the Inova LightLink training for administrators and supervisors. We will be taking a detailed look at the Inova digital signage system and how you, as a site administrator or supervisor, can manage it. This training will allow you to explore the possibilities of your system so that you may utilize it and all that it offers.

During this course, you will become familiar with your Inova LightLink system. You will learn about the individual components of the system and acquire a general understanding of how these work together. Most importantly, you will learn how to complete common administrative or supervisor tasks.

This training workbook is yours to keep at the end of the training session and should serve as a helpful user guide. Feel free to take notes.

1.2. Document Overview

This document provides supplemental training material to accompany your training. The document assumes that all users are familiar with using a Web browser and Microsoft® Office products.

The following document principles are used throughout this document for easy identification by the user:

- Screen elements (e.g., the names of buttons, fields, menus, menu options) will be Capitalized.
- The Courier New font is used to delineate system displayed messages.
- The keyboard keys are surrounded by <Angle Brackets>.
- The phrase “click(ing) on” implies clicking on the item with the left mouse button. If a different mouse button is required to perform an operation, it is so indicated (e.g., “right-click on”).
- A right angle bracket indicates a consecutive click on a different item (e.g., Site Actions > Edit Page).

1.3. Course Objectives

1.3.1. Goals for LightLink Administrators

If you are taking this course as a LightLink administrator, we will cover the skills and knowledge that you will need to be a successful digital signage administrator. By the conclusion of this training you will be able to:

- Navigate within LightLink Administrator
- Use a View Window
- View Output Channels and data sources
- Add and remove displays and users
- Start or stop LightLink components

1.3.2. Goals for LightLink Supervisors

If you are taking this course as a LightLink supervisor, we will cover the skills and knowledge required to effectively manage your LightLink system. By the conclusion of the training, you will be able to:

- Navigate within LightLink Administrator
- Identify main areas of the System Manager home screen and complete tasks within System Manager
- Identify the main areas of the Message Editor home screen and complete tasks using Message Editor
- Create and manage LightLink messages
- Create and use Display Groups

2. Overview of the Inova Digital Signage System

2.1. Learning Objectives

By the completion of this module, you will be able to:

- Identify the major LightLink applications and their basic functions.
- Explain the role of the LightLink server.
- Identify your LightLink server and hostname.

2.2. System Overview

Effectively distributing information within today's fast-paced environment requires efficient and effective means of communication. The challenge is that information is often fragmented across multiple systems and sites making it almost impossible to quickly view performance metrics and send messages.

Inova LightLink™ is powerful middleware that provides a real-time infrastructure for capturing and communicating information. LightLink connects the unfiltered data sources already running in your facilities (e.g., your fire panel, primary mass notification system, RSS feeds and databases), captures and extracts just the data required, and feeds that information to your output displays. These outputs can be simple messages or reminders, emergency notifications and instructions, or basic information such as the time and date that are easily generated within Inova's user interface. Either way, Inova LightLink funnels the sea of information generated by your various business components into one system that is focused, relevant and actionable.

2.3. LightLink Applications

The LightLink suite is made up of several different applications (Figure 1). These applications collect data from various sources at your company, perform complex calculations with that data to provide valuable key performance indicators (KPI), and then display that data on a variety of end points such as desktop presenter clients, mobile dashboards, and LED displays.

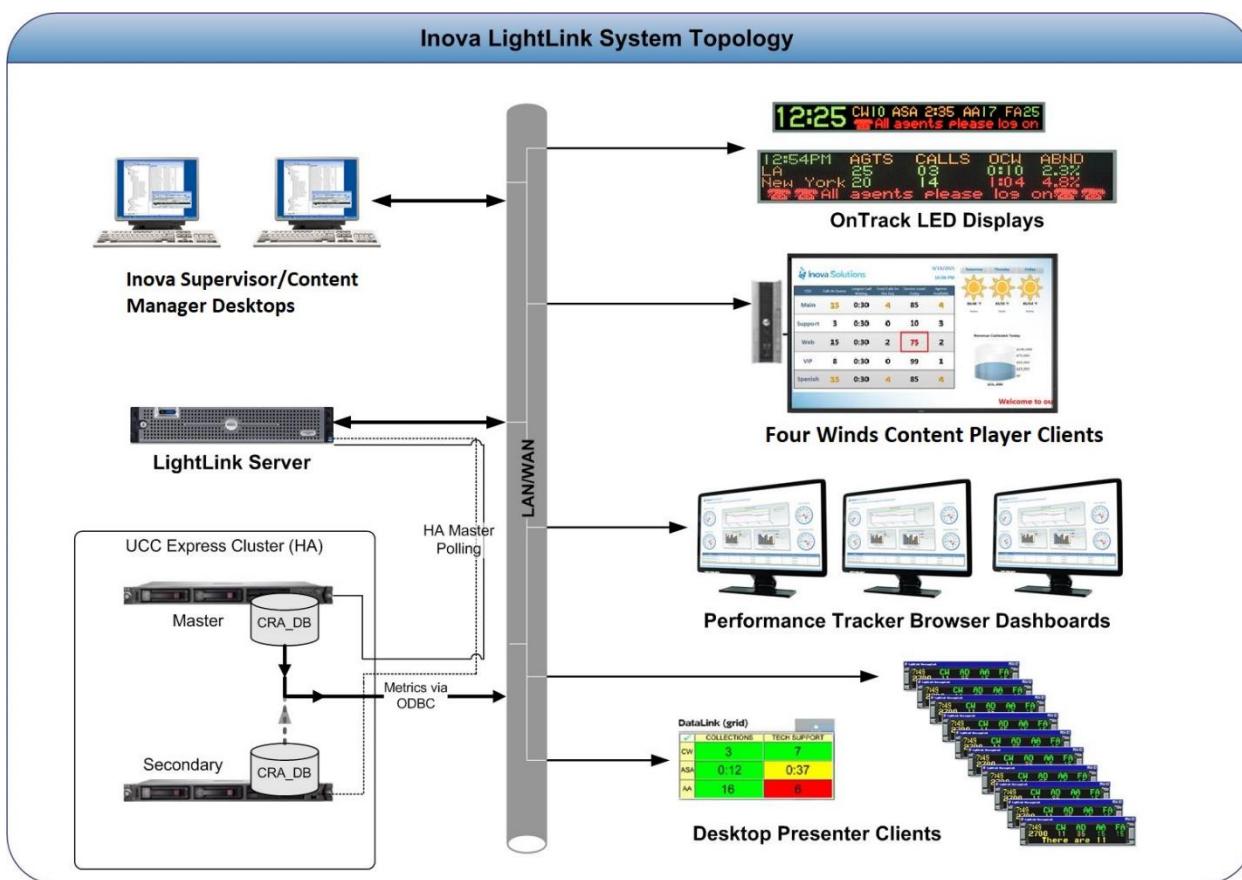


Figure 1

Administrator is the main configuration management tool of LightLink. It allows configuration of various LightLink components, as well as monitoring and management of connections and interactions of various components, such as data sources and output devices within the LightLink system.

When Administrator is opened, the screen entitled Administrator - LightLink will appear. This screen will be divided into three parts, as seen in Figure 2.

The Main Menu and Toolbar are at the top of the screen and include your text menu items and icons for commonly used items.

The View Window allows for a detailed view of items. Views of this information can be broken down by tabs or “View Windows,” allowing you to customize the groups of items that fit your specific needs.

One of three Views is available by selection at the bottom:

- The “Startup View” is the default View when Administrator is launched.
- The “Host View” shows the server structure of your LightLink system. This is where you will perform all tasks.
- The “Global View” shows the simplified view of the LightLink system.

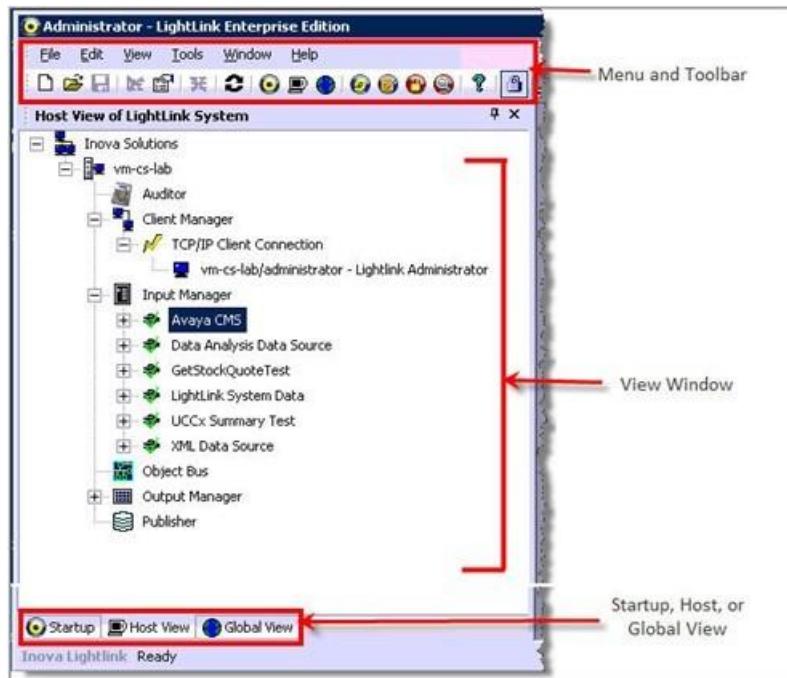


Figure 2

2.4. Administrator Device Tree

In Host View, the LightLink Administrator device tree appears on the left side of the screen and contains an expandable list of the connections in your LightLink system. Refer to Table 1 for a description of each node in the device tree.



Reminder! Use the + and - on the device tree to expand and collapse each node.

Application	Description
Administrator	Main configuration management tool of LightLink.
System Manager	Control center of your LightLink system; it organizes all of the messages and displays prior to and during when they are scheduled to be displayed on the appropriate destinations.
LightLink Auditor	Event monitoring component that logs events related to Inova LightLink system performance. It can provide up-to-date information for immediate use and log events for historical reports.
Client Manager	Handles all of the client connections for a LightLink host. Connections are made to the Client Manager over the TCP/IP protocol. Client Manager provides services to LightLink client programs. These services include security checking via client login, user profile management, service location in the distributed Inova LightLink system, and command routing between LightLink components.
Security Manager	Controls access to the LightLink system.
Input Manager*	Establishes and monitors the connection between your data and LightLink, thereby providing a real-time flow of raw data into the LightLink system. Multiple data sources can be configured via an Input Manager; each one is known as a Data Source Manager (DSM). Multiple Input Manager components can be configured in the LightLink system to distribute the input data processing load among multiple servers.
Output Manager*	Responsible for starting and stopping output channels and for sending device connection requests and messages to active output channels.
Message Editor	Enables users to create and edit messages for displays and desktops.
Site Monitor	Allows Inova Solutions customers who have purchased our cloud solutions to activate an uplink that will send real-time contact center data to the Inova Solutions cloud site.
Marquee	Displays messages sent from Message Editor on multiple PC desktops.
DataLink	Allows users to create grids and charts for your display.

Table 1: LightLink Applications

*We will cover Input Manager and Output Manager in more detail later in the training, since those are the components system administrators use frequently.

2.5. LightLink Server

The LightLink Server is the host machine which connects to and captures data from your data sources, houses the math engine that calculates metrics, and sends your data back out to various endpoints. In most installations, this server also hosts a SQL database containing the Inova LightLink configuration information. It is also possible for Inova LightLink to utilize a remote SQL database provided by the customer to store its configuration data.

2.6. License Properties and License Key

The Administrator Properties dialog shows the Server ID and license key assigned by Inova to your installation and included with your Inova LightLink license agreement.

The license key includes information that enables certain license-restricted features based on the options you have purchased with your Inova LightLink system. The Details button will activate a dialog that displays these options.

If you purchase additional options for your Inova LightLink system, a new license key will be generated and applied to your Inova LightLink system.

3. Navigating System Components

3.1. Learning Objectives

By the completion of this module, you will be able to:

- Open the LightLink applications.
- Navigate within LightLink using common computer functions such as context menus, device trees, and keyboard shortcuts.
- Recognize device status icons and what they mean.

3.2. Opening and Navigating within LightLink Applications

The LightLink applications can be accessed through the following paths:



Note that you can also access applications from the Tools menu in Administrator, Message Editor, and System Manager. In Administrator, you can also use the shortcut icons in the Toolbar.

3.3. Using Context Menus

Context menus can be accessed by right clicking on a screen element. Many of the context menu items are self-explanatory, but further details are provided in the workbook when needed.

Some of the most common context menu items are:

- **New / Add** – Allows you add a new element (e.g., device, message).
- **Rename** – Allows you to change the name for the selected element.
- **Delete** – Allows you to delete the selected element. You will always be asked to confirm this action.
- **Properties** – Opens a Properties dialog for the selected element. From this dialog, you will usually be able to use the tabs to modify properties.

3.4. Using the Device Tree

Many of the LightLink applications will allow navigation through a device tree, or list of components. The tree is a type of data structure that shows the hierarchical structure for the Inova LightLink system and for each node. Each node can have one or more sub nodes directly beneath it. The connections between the nodes and sub nodes are called branches. The sub nodes with nothing beneath are called leaves.

There are plus signs and minus signs at each branch. Clicking on the plus sign "opens" a branch to show more detail; clicking on the minus sign "closes" the branch to show less detail.

3.5. Using Common Keyboard Functions

Similar to many other applications you likely use, there are a few common keyboard functions that you can use in LightLink:

- Cut, copy, or paste can be helpful when editing messages.
 - Use *Ctrl+X* to cut selected area. The information you cut is stored in the clipboard and can be pasted into another location.
 - Use *Ctrl+C* to copy the selected area.
 - Use *Ctrl+P* to paste the selected area.
- Multiple selections – You can use the *Control* or *Shift* keys to select multiple items on a screen. *Control* allows you to select all items in a range while *Shift* allows you to select only the items that you specifically click. You can use this method to modify multiple elements at once.

4. LightLink Administrator

4.1. Learning Objectives

You are unlikely to need to use many of the Administrator functions for most of your LightLink tasks, since much of the system configuration is already completed for you or is available through the Inova Help Desk. However, there are components in Administrator that are helpful for you to understand. By the end of this module, you will able to:

- Use Input Manager to expand and view data sources in the tree hierarchy.
- Use the View Window for troubleshooting and data source validation.
- Identify the purpose of the data analysis tool.
- Identify the purpose of LightLink system data.
- Use Output Manager to expand and view the tree hierarchy.

4.2. Administrator Status Icons

LightLink Administrator includes icons to indicate status for devices. This can be beneficial when verifying that connections are working properly or when troubleshooting connection problems. Refer to Table 2 for the icons and statuses.

	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

Table 2

4.3. Input Manager

LightLink data source connections provide the LightLink interface to *your* real-time data. A data source connection is the communications link between a real-time data source and the LightLink system. You make these connections via the Input Manager component.

The Input Manager establishes and monitors the connection between your data and LightLink, thereby providing a real-time flow of raw data into the LightLink system. Multiple data sources can be configured via an Input Manager; each one is known as a Data Source Manager (DSM). Multiple Input Manager components can be configured in the LightLink system to distribute the input data processing load among multiple servers.

You can use the tree hierarchy in Input Manager to expand and view the data sources configured in your system.

4.4. View Window

You can use the Administrator View Window for troubleshooting and data source validation. To do so, you need to create a new View Window from the Administrator context menu.

Once you have created a View Window, you can add to that window. Expand the Input Manager node to show your configured items. Right click on the desired data source and select *Add to View Window* from the context menu.

To use your View Window for troubleshooting and data source validation, compare the values in the LightLink Administrator test window with those provided by the data source proprietary software.

4.5. Data Analyzer

The data analysis tool allows you to manipulate LightLink data values from your data sources. If it's an option you have purchased, Inova can create a custom data value for you.

For example, if you want to see cumulative values for total calls waiting across multiple groups of agents, we could create that single value with Data Analyzer by adding up calls waiting across groups. Another example would be to create a data value that your data source does not already provide; if you wanted to know your abandonment rate, Inova can create a custom calculation to issue that data.

4.6. LightLink System Data

LightLink System Data provides a data field with the server date and time. By utilizing this information as a data field, we can use it in calculations and messages like any other data field in Administrator.

4.7. Output Manager

LightLink Output Channels send real-time data and messages to any type of output device that the LightLink system supports (e.g., LED Displays, Inova Desktop Presenter Clients, email output, and Database Publisher output). The Output Manager is used to create and modify those connections.

Output Manager interfaces with the LightLink Object Bus, the Data Directory, and other LightLink system components to manage the channels and messages, and to publish channel status.

As with Input Manager, you can use the tree hierarchy in Output Manager to expand and view output channels.

5. Managing TCP/IP Displays

5.1. Learning Objective

By the end of this module, you will be able to:

- Add and remove TCP/IP displays.

5.2. Introduction to TCP/IP Displays

The Inova TCP/IP Displays output channel type allows LightLink to connect to Inova OnTrack® LED displays manufactured by Inova Solutions®, and thereby to display real-time data and messages on those displays. The Inova TCP/IP Displays support multi-region, multi-page messages that can contain data fields that are updated with new values in real-time. *The Inova TCP/IP Displays OCM is not compatible with OnAlert display firmware; it is only compatible with OnTrack display firmware 1.1.11 with update 1.2.39 applied.*

5.3. Adding Devices

Once you have created a new output device for Inova TCP/IP Displays Output, the Add Devices option becomes available from the General dialog.

1. Once you have the configuration lock, right click the *Output Manager* node in Administrator.
2. Select *Add New Device* from the context menu. A dialog box will open, with the options available for your system visible in black font. Select *TCP/IP Displays* to create your new display output channel.
3. Select the *General* tab from the Inova TCP/IP Displays Properties dialog.
4. Select Add Devices.
5. The Inova TCP/IP Display Properties dialog appears. Select the Address tab. Enter the display ID Address, discovery port, and preferred ID in the Inova TCP/IP Display Properties Address tab. You can also select Use Default Discovery Port to use the default settings. If un-checked, then you must enter the port number.
6. Select the Settings tab and complete the Inova TCP/IP Display Properties *Settings* tab options:
 - **Time Between Commands (ms)** - the minimum amount of time in milliseconds that Inova LightLink will wait after sending a command before it sends another command.

- **Data Field Update Interval (ms)** - rate in milliseconds at which Inova LightLink sends data field updates. The range is 500 to 60,000.
 - **Response Timeout (ms)** - time in milliseconds that Inova LightLink will wait for a response from a Display before timing out and reporting an error.
 - **Automatic Query Interval (ms)** - time in milliseconds that Inova LightLink will wait between sending queries to output devices to verify proper operation of the devices. The range is 60 to 3,600.
7. Select *OK* to accept the configuration changes.

6. Using Marquee and DataLink

6.1. Learning Objective

By the end of this module, you will be able to:

- Add and remove DataLink and Marquee users

6.2. Introduction to Marquee and DataLink

Inova Marquee is a great way to share information to those who may not be able to clearly see LED displays in the area because Marquee places your message directly on the users' desktops. A Marquee display is a portion of the desktop, and is generally created to match the dimensions of the LEDs in a LightLink system. A Marquee display is treated by the LightLink Server as a standard output device, and acts just like the LED display. You will use System Manager to initiate and manage messages to your Marquee displays.

DataLink allows you to display real-time data values in a customized grid, which can broadcast to multiple PC desktops using the DataLink Client. The DataLink software is comprised of two separate pieces, the client on the PC desktop and the DataLink editor for managing information.

Refer to the *System Manager User Guide* for more information about customizing and using your Marquee displays and DataLink.

6.3. Adding and Removing Users

To enter allowed client names for Marquee or DataLink:

1. Obtain configuration permissions in Administrator by clicking the padlock in the icon menu.
2. Open the context menu for the output device (e.g., Inova DataLink) and click *New Device* (Figure 3).

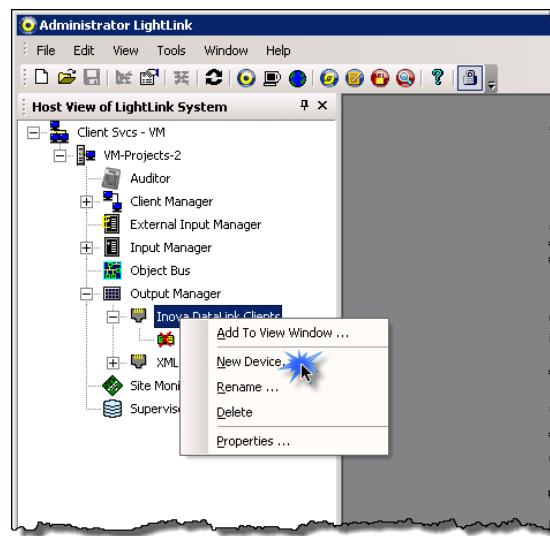


Figure 3

3. The Add Desktop Devices dialog opens. Enter a single allowed client name or multiple allowed client names at the same time.
4. Each name is of the form `MyDomain\MyUserAccount`. Separate each allowed client name with commas or enter them on separate lines; if a name is to include a space character, enclose it in double-quotes.

7. Troubleshooting for Administrators

7.1. Learning Objective

By the end of this module, you will be able to:

- Use Administrator to restart your LightLink components.

7.2. Starting and Stopping LightLink Components

When in the Host View tab, right-click on the components such as the Input and Output Managers to stop and start them. This is generally done to troubleshoot system problems (e.g., if Data Fields appear to be disconnected by showing an error message or by having the data represented as asterisks).

Be aware that if you stop the Input Manager component, it will disrupt all data source connections. If you stop Output Manager, it will disrupt all output connections. Assuming there is no external issue, both will resume when the components are restarted.

Inova Customer Support is very helpful in assisting with troubleshooting. Please contact them if you believe that you have a larger issue.

8. Conclusion for LightLink Administrators

8.1. Q&A

Do you have any questions for the instructor?

8.2. Sandbox

You will now have some time to try to apply some of the information we have covered in this course. Take advantage of this sandbox opportunity to try some of the following tasks and to ask any follow-up questions:

- Open LightLink Administrator.
- Expand and view a data source.
- Open the context menu for a data source.
- Use a View Window to view and validate data values provided by your data source.
- Expand and view an Output Channel.
- Add and then remove a TCP/IP display.
- Add and then remove a DataLink or Marquee user.
- Start and stop LightLink components.

8.3. Additional Resources

If you have any follow up questions after this training, remember that our Inova Help Desk is available for further assistance. You can contact the Help Desk at (800) 637-1077.

These additional documents, available on the Inova Solutions Support Site, may also be useful to you:

- The other sections of this *Training Workbook*
- *Inova Administrator User Guide*
- *Inova Log Viewer Solution Guide*
- *Inova Supervisor Installation Guide*

These documents, as well as other helpful content, can be found on the Inova Solutions Support Site.

9. System Manager

9.1. Learning Objectives

By the end of this module, you will be able to:

- Explain the role of System Manager and the tasks that can be completed from the application
- Identify the four main areas of the System Manager home screen

9.2. Introduction to System Manager

System Manager is the control center of the LightLink system. This software organizes all the messages and displays prior to and during their scheduled display on the appropriate destinations.

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

Note that while you control the messages within System Manager, to create new messages or open and modify existing messages, System Manager will open Message Editor. Section 11 will cover the details for creating and modifying messages. Refer to the appendices for additional information about virtual displays and Display Groups.

9.3. Navigating System Manager

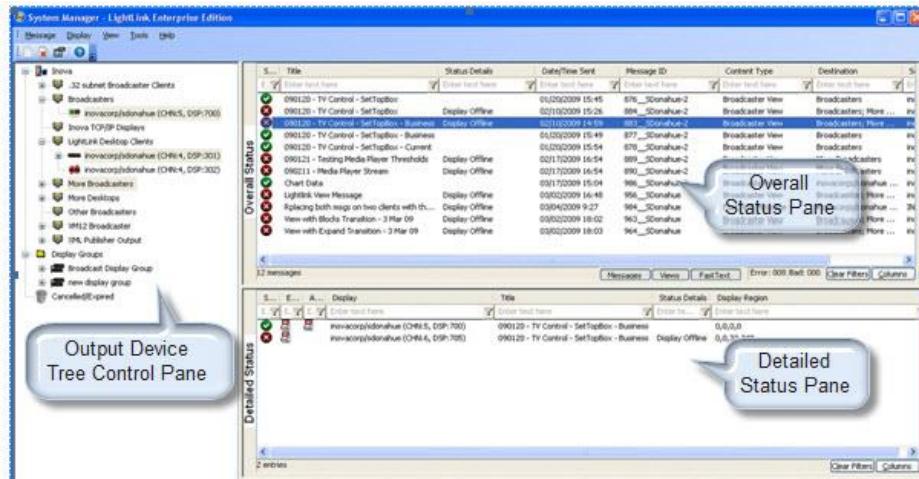


Figure 4

Once System Manager is open, you will see the System Manager screen (Figure 4). 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.

When you click a display or node in the Output Device Tree, its messages will populate into the Overall Status Pane. Clicking a message in the Overall Status Pane will populate the devices that have the message (and their status) into the Detailed Status Pane. Once all occurrences of a message are expired or cancelled that message is relegated to the Cancelled/Expired node (trashcan).

The Columns button is located at the bottom right of the Overall Status and Detailed Status panes. 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. You can check and uncheck each item to modify the information you see in each pane.

9.3.1. System Manager Status Icons

For each component in the device tree, you will see an icon indicating the status of that device. This can be beneficial when verifying that your entire LightLink system is working properly or when troubleshooting connection problems.

You will see status icons in each pane of System Manager. Icons in the Output Device Tree indicate the status of the device (Figure 5).

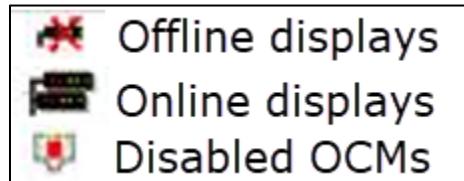


Figure 5: Output Device Tree Icons

System Manager identifies both *expected status* and an *actual status* for content. The expected status is based on the conditions of the content and shows what the content *should* be doing at any given time (Figure 6). The server is also querying the displays for message status, which is reported through the actual status icon (Figure 7). Both the expected and actual status are identified in columns in the Detailed Status Pane.

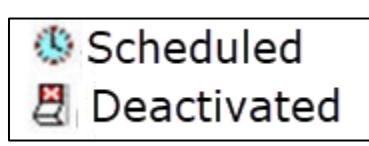


Figure 6: Expected Status Column Icons



Figure 7: Actual Status Column Icons

The Overall Status Pane and the Detailed Status Pane include a status match column, which will indicate whether the content is actually playing as expected (Figure 8).

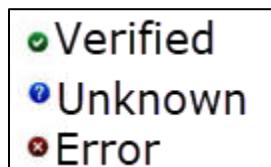


Figure 8: Status Match Icons

10. Message Editor

10.1. Learning Objectives

By the end of this module, you will be able to:

- Explain the role of Message Editor and the tasks that can be completed from the application
- Identify the main areas of the Message Editor home screen

10.2. Introduction to Message Editor

Message Editor enables you to create and edit messages for your displays and desktops. Message Editor allows you to customize the format of your message and to select the message destination and schedule. The completed message will be sent from Message Editor to System Manager to be displayed.

10.3. Navigating Message Editor

Message Editor is utilized similar to a word processor; it features many of the same tools that are available in Microsoft® Word, including the ability to cut, copy, and paste the text, and to modify the text style and size.

Message Editor is comprised of several toolbars as well as the message editing window and the preview buttons (Figure 9).

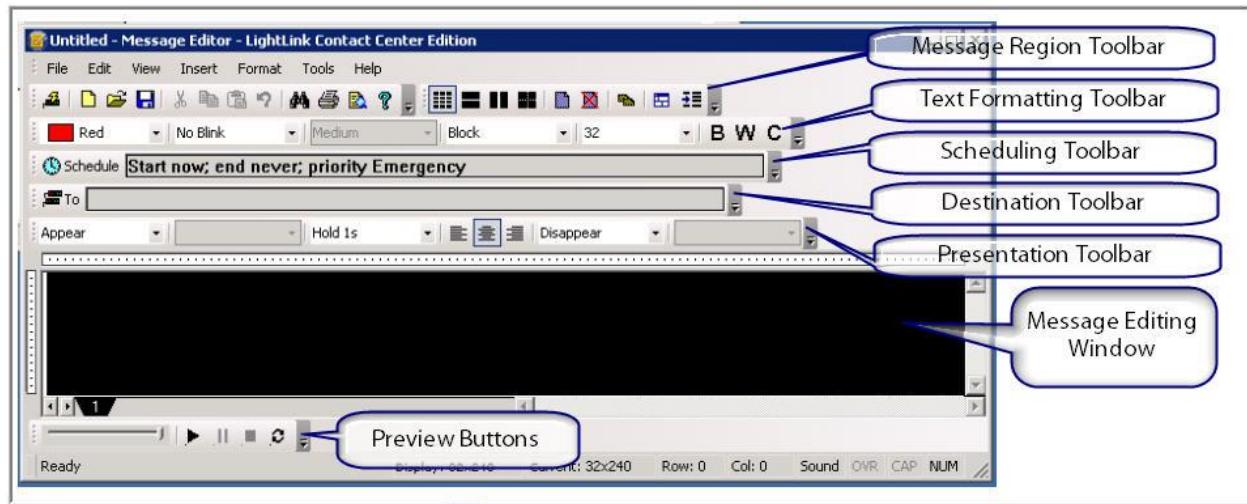


Figure 9

The Message Region, Text Formatting, and Presentation Toolbars allow you to customize the appearance of your display message.

- **Message Region Toolbar** - Allows you to determine and modify message regions, add pages, and set tab stop positions.
- **Text Formatting Toolbar** - Allows you to set the font, font color, font attributes, action, and size.
- **Presentation Toolbar** - Presents options for how the message enters and exits the display.

You will use the Destination and Scheduling Toolbars to specify the timeframe for your message as well as on which displays it will be shown.

- **Scheduling Toolbar** - Allows you to set the day, time, duration, conditions, priority, and intervals for your message.
- **Destination Toolbar** - Allows you to use destination button  To to select the appropriate destinations for your message.

The bottom of the screen contains the Editing Window, where you will enter the content of your message, and the message preview buttons. There is also a Status Bar that presents the display size, the current message region size, as well as row and column indicators.

11. Creating and Managing LightLink Messages

11.1. Learning Objectives

By the end of this unit, you will be able to complete basic functions for individual and multiple messages:

- Create new
- Open
- Deactivate
- Cancel Schedule
- Return to schedule
- Add to selected device(s)
- Add threshold

11.2. Creating and Sending a LightLink Message

The best practice to create a new message is to start from System Manager. Doing so will allow you to select the destination(s) for your message first, ensuring that the message region is sized appropriately. *Note that you can create a new message directly from Message Editor, but the size message region is not accurate until you have selected a destination.*

To create a new message:

1. Right click on the destination display or Display Group in System Manager. *You can also select multiple destinations by holding the Ctrl button.*
2. Select New Message from the context menu. Message Editor will open with the Message Editing Window set to the appropriate size for your selected destination.
3. Enter your message in the Message Editing Window. (Refer to the following sections for more details about formatting and scheduling the message, or for setting thresholds for your message.)
4. If desired, use the Play button  to preview your message.
5. When you are ready, use the Send button  at the left of the main toolbar to deploy your message.

11.3. Opening Saved Messages

Use the context menu to open an existing message in System Manager. You have two choices to open a message:

- **Open with original location** opens the message in the original location where it was saved.
- **Open with selected location** opens the message in all the locations that you selected in the Output Device tree.

Either choice will use the original application to open and display the message.

11.4. Formatting a Message

Message Editor offers you many options to customize your message through the various toolbars on the main screen.

11.4.1. Message Region

In the Message Region Toolbar, the most commonly used options are:

- Split horizontal  - Allows you to split the display into multiple rows.
- Split vertical  - Allows you to split the display into columns.
- Add tabs  - Allows you to set tab stops.

11.4.2. Text Format



Figure 10

Starting at the left of the Text Formatting Toolbar (Figure 10), you can adjust the following parameters for your text:

- Color: red, green, yellow, or rainbow
- Blink appearance: no blink, blink on/off, blink inverse, or blink rainbow
- Speed of blink: slow, medium, or fast
- Text width: block or profile
- Font size: 7 to 16 pixels
- Text appearance: bold, wide, and/or condensed

You can apply text formatting to the entire message, or you can highlight certain text to apply it only to the selected area.

11.4.3. Message Presentation



Figure 11

You can choose the way the message appears and disappears from the display in the Presentation Toolbar (Figure 11). Starting from the left of the toolbar, you can use the drop down menus to select the way the message appears, the speed with which it appears, the hold time, the justification, and the way and speed with which it disappears.

11.5. Scheduling the Message

You can create message schedules so that messages play at particular times. You can specify the time, day of the week, date, and duration for your message. To schedule a message:

1. Click the Schedule button in Message Editor. The Schedule dialog will open.
2. To schedule the message to start and stop playing at a particular date and time, click the *At* button on the Duration tab and select the desired information.
3. To schedule the message for particular days of the week and times of day, select the Intervals tab and make the desired selections.
4. Click OK to save your changes.

11.6. Adding Thresholds to a Message

While you preset the time for scheduled messages, threshold messages are triggered by a predetermined data point. Creating thresholds as part of your LightLink displays allows you to set a trigger that will initiate a new message or change on your display. Threshold messages are especially beneficial because, once created, they essentially run themselves and there is no need for you to continually manage the messages. Consider some of the following common examples of thresholds:

- A new, full screen message that asks agents to apologize for exceptionally long delays when the average speed of answer is unusually high.
- A new message that covers the whole screen congratulating employees for achieving a milestone goal.

To create a threshold message:

1. Click the Schedule button in Message Editor. The Schedule dialog will open.
2. Click the *If* button to open the Data Field Expression dialog.
3. Select the desired data source at the top of the Data Field expression dialog.
4. At the bottom of the dialog, enter your threshold expression. *Click the More button at the bottom of the dialog is not open.*
5. Click *Check* to verify the validity of your data field expression.
6. Save the expression and click OK to exit the Data Field Expression dialog.
7. If desired, select the *If* button to set the parameters to end the threshold message. The default is for the message to stop when the threshold is no longer met.
8. Click OK on the Schedule dialog to save your changes.

11.7. Canceling, Deactivating, or Returning to Schedule

Cancelling the message in System Manager deletes it from the system.

Deactivating a message stops the message from playing but does not remove it from the system.

Returning a message to schedule will restart the message according to the schedule that was first created. *Returning to schedule does not apply to canceled or expired messages.*

Choose one of the following methods to cancel, deactivate, or return to schedule in System Manager:

- Use the context menu for a message in the Overall Status pane.
- Use the Ctrl button to select multiple displays and then use the context menu for the message in the Overall Status pane to make the modifications to the message on the selected locations.
- Select a message or several messages in the Overall Status pane. In the Detailed Status pane, select one or more displays in to cancel, deactivate, or return to schedule on only these displays.

To View the Canceled and Expired messages in your system, select the Cancelled/Expired node. From here, you can use the context menu to open and view expired messages or permanently remove expired messages.

11.8. 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. Right click on the message in the Overall Status pane.
2. Select *Open with original destination* to modify the message in all original locations. Select *Open with selected destination* to modify the message only in the devices selected in the tree.
3. Modify the message as desired.
4. Select the message destination icon.
5. The Select Destinations dialog opens. Select desired devices on the left and click the Add button.
6. 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 11.7.

12. Display Groups

12.1. Learning Objective

By the end of this module you will be able to create, manage, and use Display Groups.

12.2. Introduction to Display Groups

Through the functionality of Display Groups, you can more effectively communicate vital information to contact center personnel.

LightLink **Display Groups** are used to combine separate display devices into a group so one message can be sent to multiple displays. This is especially useful if you have many displays and often wish to send messages to select groups of those displays such as specific agent groups, physical locations within your building, or even certain geographic locations. Once you have created a Display Group, you can then select that group as a destination for relevant messages.

12.3. Creating a 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.

To create a Display Group for System Manager:

1. From the menu, select Display > Display Group > New.
2. When the Select Destination dialog appears, select a display or virtual display on the left. Select *Add* to add it on the right.
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*.



Reminder! Use the context menu for each display group to modify or delete that group.

Display Groups cannot contain other Display Groups or Output Channels.

Once you have created a Display Group, you can select that group as a destination for messages.

12.4. Managing a Display Group

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.

12.4.1. Adding or Removing Displays from a Display Group

To add or remove displays from a Display Group in System Manager:

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.

12.4.2. 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.

12.4.3. 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.

13. DataLink

13.1. Learning Objectives

By the end of this section, you will be able to:

- Open DataLink.
- Build new DataLink grids and charts.

13.2. Overview

DataLink is an application which displays data grids with thresholding on an agent's desktop. It can also be used to create and modify the data grids displayed in Four Winds and IPT views. DataLink allows you to display real-time data values in a customized grid, which can broadcast to multiple PC desktops using the DataLink Client. The DataLink software is comprised of two separate pieces, the client on the PC desktop and the DataLink editor for managing information.

13.3. Navigating DataLink

To start the DataLink Editor as a Supervisor user:

- From the Start menu, select All Programs > Inova Solutions > Supervisor Applications > DataLink Editor.

To start the DataLink Client as a general user:

- From the Start menu, select All Programs > Inova Solutions > Desktop Presenter > DataLink.

Once the connection is established, the "Data Properties" dialog appears. When you start DataLink for the first time, the Properties dialog appears to allow you to enter the number of rows and columns you want in the grid.

Once the grid has been customized with cell and header information, it becomes a DataLink View that displays with the main screen each time DataLink is activated (Figure 12).

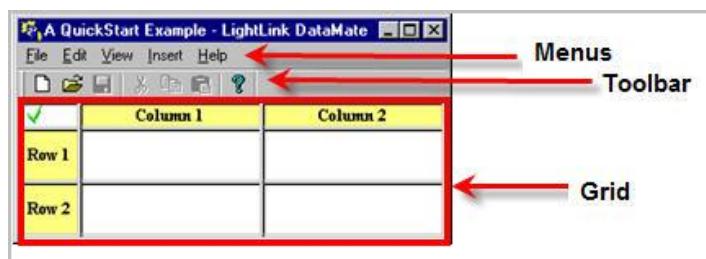


Figure 12

13.4. Editing Grids

When the program is launched and you are creating a new grid, the DataLink Properties dialog will appear requiring you to format the size of the chart that you would like to work with, and whether or not you would like to show row and column headers. You may make changes to this later if you are unhappy with your selection.

The blank grid can be populated with relative ease. To populate a field with data, right click on the cell and select *Insert data field*.... Highlight the desired data field and select *Apply*. To create expressions utilizing multiple data fields, click *More* in the Data Field Expression dialog. This will reveal an area where custom expressions can be created using the data fields listed. (Figure 13).

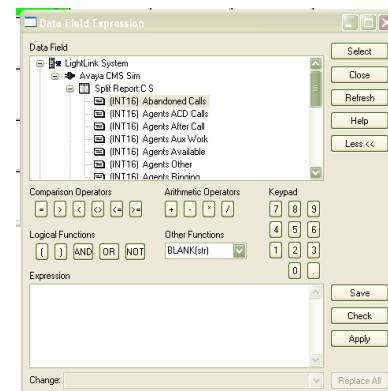


Figure 13

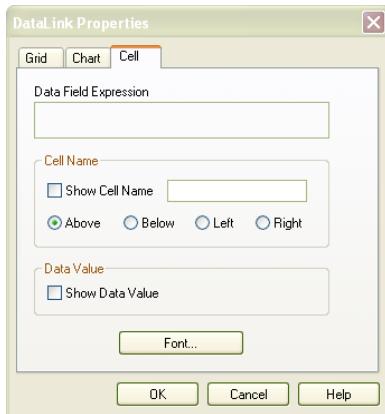


Figure 14

The formatting and properties of the grid and individual cells can be modified at any point. Click File > Properties to bring up the DataLink Properties window. If a cell is selected when this is done, a third Cell tab will be available, allowing you to format that particular cell (Figure 14). This includes the ability to modify the fonts of both the grid and individual cells, as well as the background, rows, and columns of the grid and the cells' title, text position, and ability to show the data value.

Once you have assigned

Data Fields to the corresponding cells, you can also assign thresholds to the values in the cells. This is a great way to easily identify conditions for viewers. To assign thresholds for a specific cell, right-click on the cell and select Properties, then Thresholds. In the Thresholds tab (Figure 15), use the less than (<) symbols to create a statement for each threshold. You will determine the value at which the color of the text will change, and whether or not that text will blink. You must save your final DataLink grid when you are finished editing.

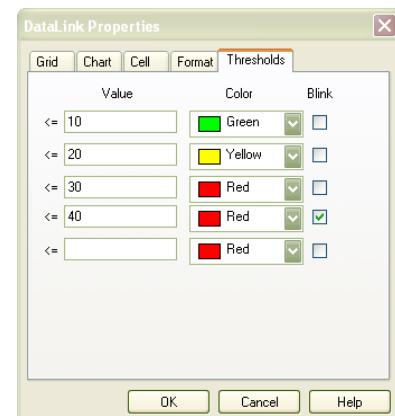


Figure 15

14. Conclusion for LightLink Supervisors

14.1. Q&A

Do you have any questions for the instructor?

14.2. Sandbox

You will now have time to try to apply some of the information we have covered in this course. Take advantage of this sandbox opportunity to try some of the following tasks and to ask any follow-up questions:

Task	Additional details
Open LightLink Administrator.	
Expand and view a data source.	
Open the context menu for a data source.	
Create the following text message for one of your displays: <i>Free Pizza! Conference Room A, 11:30 am – 1:30 pm</i>	The message should have the following parameters: <ul style="list-style-type: none"> • Line 1 should be wide red text with inverse slow blink. The text should appear and hold for 15 seconds. • Line 2 should be green and in a smaller font than line 1. The text should continuously ribbon left to appear and disappear.
Create the following scheduled message for one of your displays: <i>Sign up for the FREE lunch drawing!!</i>	The message should have the following parameters: <ul style="list-style-type: none"> • FREE should be in rainbow blinking text. • Scroll down as it enters and ribbon left as it exits • Start at 11:00 am and stop at 1:00 pm on Mondays, Wednesdays, and Fridays • Normal priority
Create the following threshold message: <i>High number of calls waiting!</i>	Include the following parameters in your message: <ul style="list-style-type: none"> • The Calls Waiting data field should turn yellow at one call waiting and red at two waiting. When there are no calls waiting, the field should be green. • The Display should beep twice when there are two calls waiting. • The threshold message should simply appear and hold.
Create a sample Display Group.	Use a fictitious geographic location within your company. Add at least three users to your group.

14.3. Additional Resources

If you have any follow up questions after this training, remember that our Inova Help Desk is available for further assistance. You can contact the Help Desk at (800) 637-1077.

These additional documents, available on the Inova Solutions Support Site, may also be useful to you:

- The other sections of this *Training Workbook*
- *Inova System Manager User Guide*
- *Inova Administrator User Guide*
- *Inova Log Viewer Solution Guide*
- *Inova Supervisor Installation Guide*

These documents, as well as other helpful content, can be found on the [Inova Solutions Support Site](#).

15. Prerequisites

15.1. Prerequisite Terminology

By now, you should already be working with Inova Solutions to configure your signage system. To increase the effectiveness of your Inova training sessions, please set aside some time to review the terminology below and to be sure you understand your organization's goals for your digital signage system.

During this training, you will acquire some new terminology that is specific to the Inova digital signage system. However, there are also some industry terms with which you should be familiar prior to the training session. You are likely already familiar with most of these terms, but take a moment to review the following terms:

- ACD – Automated Call Distributor; takes all phone calls into a contact center and directs them to the proper location for resolution.
- Call metrics – the data used to provide performance in a contact center. Common metrics include:
 - Calls Waiting (CW) – the number of calls on hold at one point in time.
 - Available Agents (AA) – the number of contact center agents who are available to take calls.
 - Longest (or Oldest) Call Waiting (LCW or OCW) – the amount of time the oldest call has been waiting for service.
- Configuration lock (Figure 16) – provides permissions to make the changes in LightLink Administrator.



Figure 16

- Displays – a general term for all the outputs in your LightLink system. LightLink displays refers to the Marquee display on desktops or mounted LED signs in your workplace.
- Data source – the source from which data is acquired.
- Data field expression – the “sentence” that identifies key information in data, usually to trigger a threshold.
- IVR – Interactive Voice Response; an automated system used at many contact centers to route calls and to address common customer queries.
- Message – any information that is sent to be shown on the digital displays.
- Queue – group of calls being held that are awaiting answer.
- Threshold – a data point that triggers an action on a display, such as a color change or new message.

15.2. Goals for your LightLink System

Your Inova digital signs are incredibly diverse in the functionality they can offer your organization. Prior to your training, it is critical that you work with the key stakeholders in your organization to identify goals for your Inova system. Doing so will allow your trainer to focus the training specifically on the applications and uses most relevant to your LightLink users.

Some questions to consider:

- Where will our LightLink messages be displayed?
- Would it be useful for us to group our displays (i.e., by skillset, geographic or physical location, etc.)? If so, what are the most effective groups?
- What levels of security and user access should we have for our system?
- What, if any, data is reported on our displays?
- What data, if any, do we want to tie to threshold messages? What are the exact threshold levels and related messages?
- Do we want to establish any standard or recurring messages (holidays, birthdays, emergency notifications, etc.)?