eLumen™ Software

SUITE VERSION 2.2
Software User Guide

DesignIT™
SecureIT™
ControlIT™
ConfigureIT™

LUTRON

Lutron controls your light.™

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Chapter 1

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eLumen™

Introduction

Welcome to eLumen™ software and to the worldwide Lutron customer family! Your new Lutron lighting control system will enhance the ambiance and elegance of your building, while providing you with an extraordinary suite of tools to design, monitor, and control your project.
Lighting design is an important part of a building project and a key element in managing the building for its users. Your new Lutron system enhances your building when you first open your doors, and your Lutron system can grow and change to provide you and your building users with the utmost in flexibility, convenience, and system management.

Overview

Lutron's GRAFIK™ 5000, 6000, and 7000 systems control a wide range of projects from residences and restaurants to hotels, convention centers, theme parks, and office buildings. Some projects have modest design requirements - other projects require constant management and monitoring by a staff of dedicated building professionals. Whether the simplest system or the most sophisticated, your Lutron lighting control system is managed by a suite of applications named eLumen. eLumen software was developed with sophisticated technology to:

- Design your system–identifying spaces and zones, specifying scenes, creating schedules, programming events, and much more.
- Monitor your system–reporting zone intensities, current scene selection, system status information, and much more.
- Control your system–selecting scenes, changing light levels, enabling or disabling controls, and much more.

eLumen™ Applications

The eLumen suite includes four standard applications: DesignIT™, ControlIT™, ConfigureIT™, and SecureIT™. You will use these tools to manage your Lutron lighting control system.

DesignIT™
Use the DesignIT application to add, change, or remove different parts of your project. You will use the DesignIT application to add additional spaces or zones, to change intensities in scenes, to program buttons, to schedule events, and much more. As a general rule, if you are changing data in your project, you will use the DesignIT application.

ControlIT™
Use the ControlIT application to monitor and control your lighting system. You can view (or change) current zone intensities, specify the scene to show in a space, and otherwise manage your system. You will also use the ControlIT application to compile and transfer any project changes you make with DesignIT to the *GRAFIK* 5000, 6000, or 7000 processor(s) in your system.

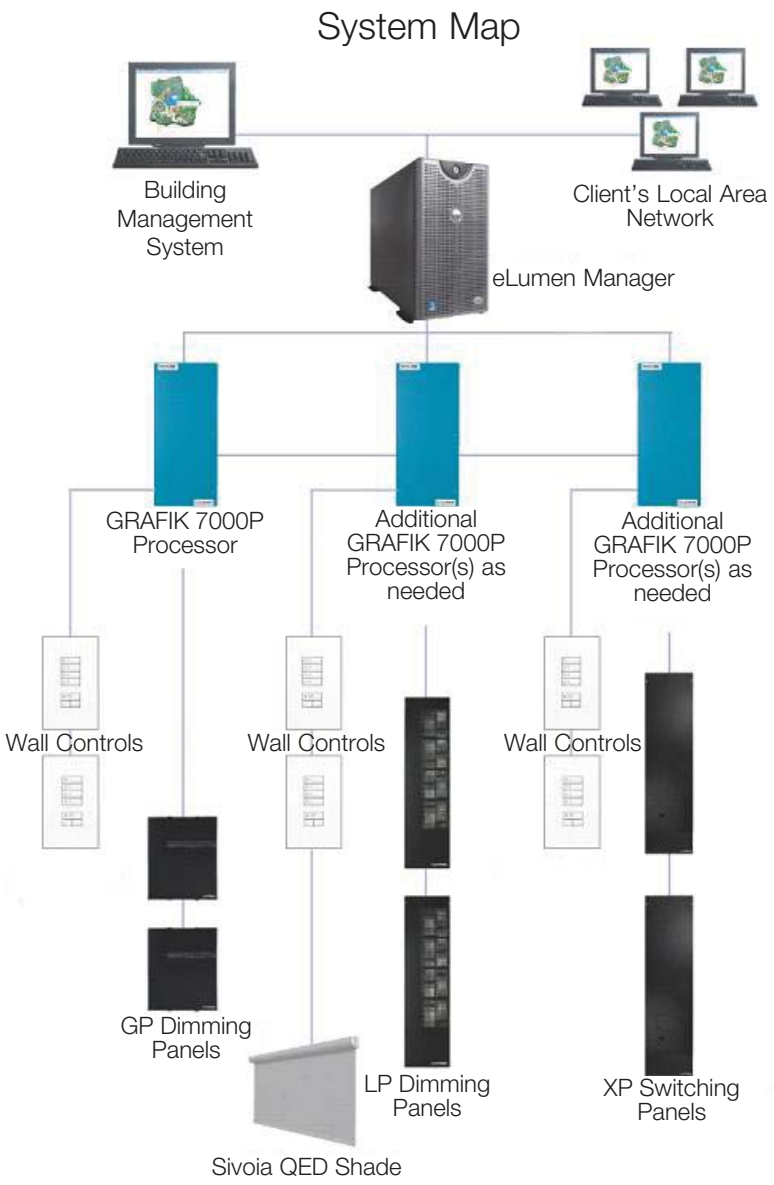
SecureIT™
Use the SecureIT application to add users to your system, assign passwords for those users, and assign access rights and privileges to users. If your system is divided into multiple projects you can associate a user with some of those projects, but not necessarily all of them.

ConfigureIT™
Use the ConfigureIT application to make real-time configuration changes to your scenes. You can modify zone intensity, fade time, and delay time. The ConfigureIT application also allows you to flash individual zones if you have trouble locating them in the space.

The *eLumen* suite offers additional software tools that are sold as system options to provide graphical floorplan control, to permit ad hoc scheduling of events, and other features. If you would like to explore adding options to your system, contact your Lutron sales representative for assistance, or call Lutron customer service at one of the phone numbers listed on page 5.

Sample System

The following illustration shows a sample configuration for a GRAFIK™ 7000 lighting control system.



System Maximums

GRAFIK™ 5000

- 1 *GRAFIK* 5000P processor
- 128 zones
- 2,048 circuits
- 64 dimming and/or switching panels
- 32 wallstations and/or interfaces

GRAFIK 6000®

- 1 *GRAFIK* 6000P processor
- 512 zones
- 4,000 circuits
- 125 dimming and/or switching panels
- 96 wallstations and/or interfaces

GRAFIK™ 7000

- 32 *GRAFIK* 7000 processors
- 16,384 zones
- 128,000 circuits
- 4,000 Lutron dimming and/or switching panels
- 6,144 wallstations and/or interfaces
- 1 eLumen™ Manager with RAID (Redundant Array Independent Disks)

Using Your Manual

This manual was designed to help you use eLumen$_{TM}$ to manage your Lutron lighting control system. The manual is divided into chapters. Each chapter contains several major topics and each major topic may have one or more specific tasks. Screen shots and pictures of icons are frequently used to show you how each task can be performed.

Please take note of the following special features:

Major Topic

Words defined in the Lexicon are italicized

Specific Task

Procedures include screen shots parallel to the corresponding text showing the current task with helpful arrows guiding the way

Creating a New Zone

A *zone* is a collection of switch legs controlled simultaneously as one unit (also called a channel by some lighting designers).

To create a new zone:

1. From the Navigator in the Logical Definition screen, select the space to which the zone is to be added.

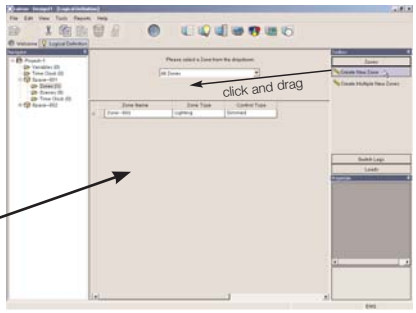
   The Zones dropdown list in the top portion of the main pane displays existing zones for that space. The table in the lower portion of the main pane displays settings for the currently selected zone.

2. Select the Zones panel in the Toolbox. Then click and drag the Create New Zone option into the top portion of the main pane.

   The zone is added to the space. You can now associate switch legs with the zone. You can also add zones to scenes.

NOTES:

- To rename the zone, refer to "Viewing and Editing Object Properties" on page 11.
- To create more than one zone, click and drag the Create Multiple New Zones option into the main pane. Type the number you wish to add and click the OK button.



Creating Switch Leg to Zone Associations

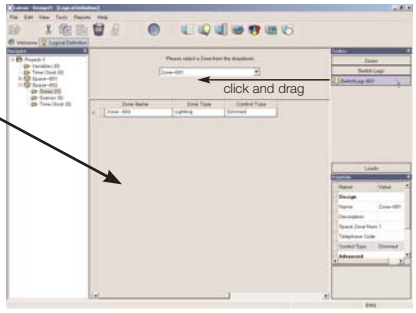
Switch legs are associated with zones so that they (and the loads they connect to) can be controlled simultaneously through the zone.

To create a switch leg to zone association:

1. From the Navigator in the Logical Definition screen, select the Zones folder below the space that is to have the switch leg to zone association.

   The Zones dropdown list in the top portion of the main pane displays existing zones for that space. The table in the lower portion of the main pane displays settings for the currently selected zone.

2. From the Zone dropdown list, select the zone.
3. Select the Switch Legs panel in the Toolbox. Then click and drag the appropriate switch leg into the top portion of the main pane or directly onto the zone row in the table (the row will highlight when the cursor is over it).



Additional Help

This manual includes several additional features to help you get the most advantage from your Lutron lighting control system.

- Lexicon: defines many of the terms used throughout the manual. See page 80
- Frequently Asked Questions (FAQ): lists questions that the user community has asked, with references to appropriate tasks in this manual. *See page 6*
- Index: used to find specific information on a wide range of topics. See page 84
- Online help: Each application provides useful, practical information at your fingertips as you work with the software.

Lutron Technical Support

Every Lutron lighting control system shipped includes an invaluable feature: the men and women of Lutron Technical Support, who are available 24 hours per day, 7 days per week, to help you with any issue. Our Technical Support staff can help you with any problem you might encounter - and they can provide helpful suggestions about how to best take advantage of your system.

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Frequently Asked Questions

New to the current version of eLumen$_{TM}$ software is a Welcome Screen that addresses some of the most commonly performed tasks and a quick guide to performing each task.

The documentation uses a word or phrase I have never seen before.
See “Lexicon” on page 80.

How do I change my preset lighting scenes?
See “Changing a Preset Lighting Scene” on page 23.

How do I change when my time clock event happens?
See “Changing When a Time Clock Event Happens” on page 46.

How do I change what my time clock does?
See “Changing What the Time Clock Event Does” on page 46.

How do I create a new time clock?
See “Creating a New Time Clock” on page 25.

How do I change the function of my wall controls?
See “Programming a Button for a Single Action” on page 35.
See “Programming a Button for a Dual Action” on page 37.
See “Programming a Button for a Conditional Action” on page 38.

How do I add a new circuit or switch leg?
See “Adding a Switch Leg” on page 19.

How do I transfer settings to the system (processor)?
See Chapter 7 “Compile and Transfer” on page 71.

How do I change my username and password?
See “Resetting a User’s Password” on page 51.

How do I control my lighting zones?
See “Viewing and Setting Zone Intensities” on page 57.

How do I disable a control station device?
See “Viewing and Setting the State of Programmable Devices” on page 59.

How do I save scene changes?
See “To Run the Scene Capture Macro” on page 62.

How do I rename my zones/scenes/spaces?
See “Viewing and Editing Object Properties” on page 10.

How do I backup my database?
See Chapter 6 “Backup, Restore, and Update Tool” on page 69.

Why can’t I see my project in any of my applications?
See “Associating Users with Projects” on page 50.

Chapter 2

DesignIT™

Overview

The DesignIT application enables you to create and maintain a database that models the lighting control system in a facility. To set up the database, you:

- Create a model of the facility, including defining *spaces* and *partitionable spaces*
- Create *zones* and associate *switch legs*
- Add hardware, including *control station devices,* lighting *panels,* and *sensors*
- Program control functions, including assigning *scenes* and defining button functionality
- Create schedules
- Create flexible *programming* strategies with controls, *groups, modes,* partitions, *time clock* scheduling (*astronomic* and *real-time*), and reference scheduling

  The database you create within the DesignIT application is used to automate the facility's lighting control *system.*

NOTE: The DesignIT application is not intended for real-time control. For real-time control, refer to Chapter 4: ControlIT™.

Performing Basic DesignIT™ Operations

The following topics contain procedures used to perform basic DesignIT application operations.

Starting and Exiting DesignIT™

To start DesignIT™:

1. Double-click the DesignIT icon 

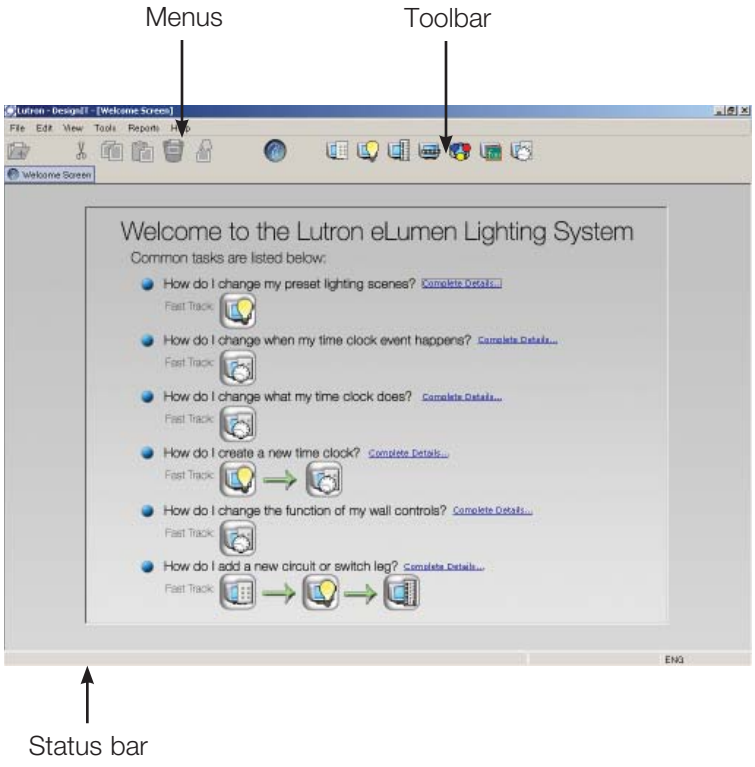
on the desktop. Or from the Start menu, choose Lutron Electronics>DesignIT.

   You are prompted to login.

2. Enter your user name and password. Then click OK.

   The DesignIT application framework is displayed. It contains menus, a toolbar, and a status bar. When a DesignIT application screen is open, additional components are added to the framework.

To exit DesignIT™: Choose Exit from the File menu.



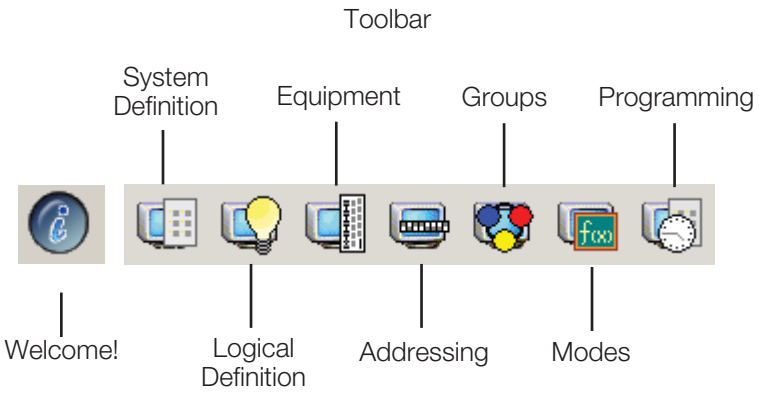
The Design IT Framework

Opening DesignIT™ Screens

Eight main screens are available from the DesignIT application framework.

- **To open a DesignIT screen:** Click its icon in the toolbar.

Optionally, choose a screen from the View menu.



DesignIT™ Screen Components

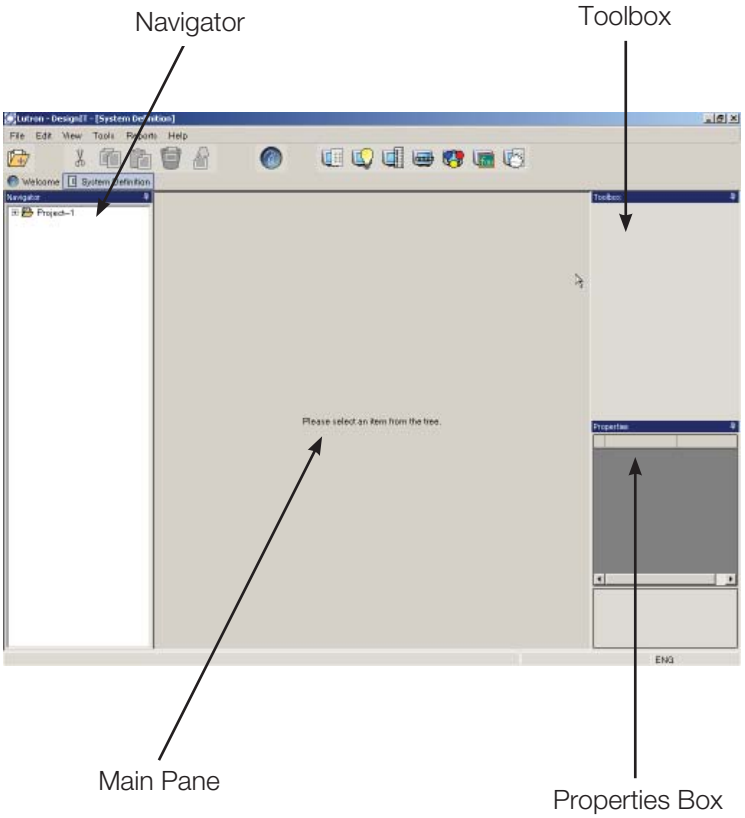
Each DesignIT application screen has the following common components.

NAVIGATOR
Shows existing *projects* you can access and enables you to navigate to *spaces* and other folders within a project.

TOOLBOX
Used to add objects to the project.

MAIN PANE
Used to add *objects* by dragging them here from the Toolbox. Can show lists of objects and interactive images of Lutron hardware.

PROPERTIES BOX
Used to view and modify properties of the currently selected item.



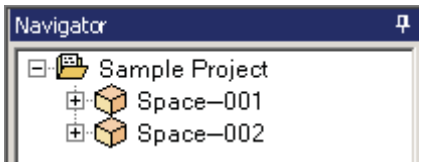
Using the Navigator

The Navigator component in the DesignIT™ application framework displays levels of database information through which you can navigate. The project folder is positioned on top, with object folders arranged hierarchically below it.

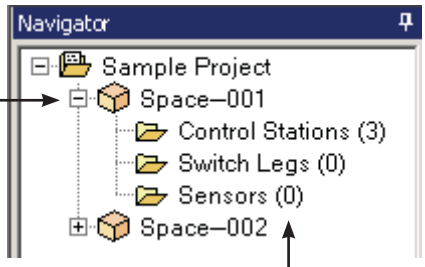
NOTE: The projects available to you in the Navigator depend on the system privileges associated with your user name. For details about user names, refer to Chapter 3: SecureIT™.

- **To open a folder and display its contents:** Click the folder's + sign or simply double-click the folder.

The folder opens and displays the first sublevel within the navigational tree.
Continue to open folders until you reach the desired level of the selected project.
The number in parentheses following the folder name indicates the number of objects contained in the folder.



- **To close a folder and hide its contents:** Click the folder's - sign or double-click the folder.



Number in parentheses shows the total number of objects contained in the folder

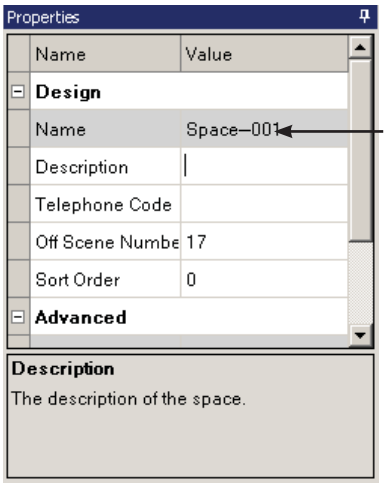
Viewing and Editing Object Properties

The Properties box in the DesignIT application framework shows property values for the *object* that is currently selected (for example, the object's name).

Editable property fields are white; non-editable fields are gray and their values cannot be modified from this screen.

To edit a property value for a selected object:

Click in the property field and then enter the new value.



Click in an editable field and then enter a new property value

Deleting Objects

You can delete an *object* if it is no longer needed.

To delete an object:

1. Select the object.

   Some objects are selected in the navigator (for example, *projects* or *spaces*). Others are selected from dropdown lists displayed in the top portion of the main pane (for example, *control stations* or *groups*).

2. Click  in the toolbar, or choose Delete from the Edit menu.

3. Click OK to confirm the deletion. (Or click Cancel to cancel the deletion.)

Removing Objects

You can remove an *object* that is associated with another object (for example, a *switch leg* associated with a *panel*).

To remove an object:

1. Select the object.

   Associated objects are typically selected by clicking on the *object* when displayed in the lower portion of the main pane.

2. Click  in the toolbar, or choose Remove from the Edit menu.

3. Click OK to confirm the removal. (Or click Cancel to cancel the removal.)

   NOTE: Removing an object only removes the association to another object. It does not delete the object.

Using the System Definition Screen

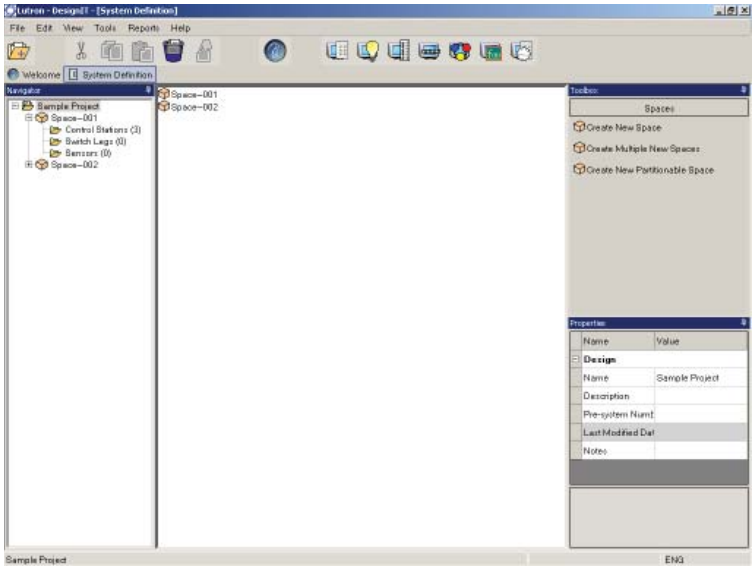
The *System Definition screen* is used to create a *project* and add *spaces* that represent the physical characteristics of a facility or building. This screen is also used to add *control stations, control station devices, switch legs,* and *sensors.*

Opening the System Definition Screen

- **To open the System Definition screen:** Click  in the toolbar or choose System Definition from the View menu.

From the *System Definition screen,* you can:

- Create *projects*
- Create *spaces* and *partitionable spaces*
- Add *control stations* and *control station devices*
- Add *switch legs*
- Add *sensors*



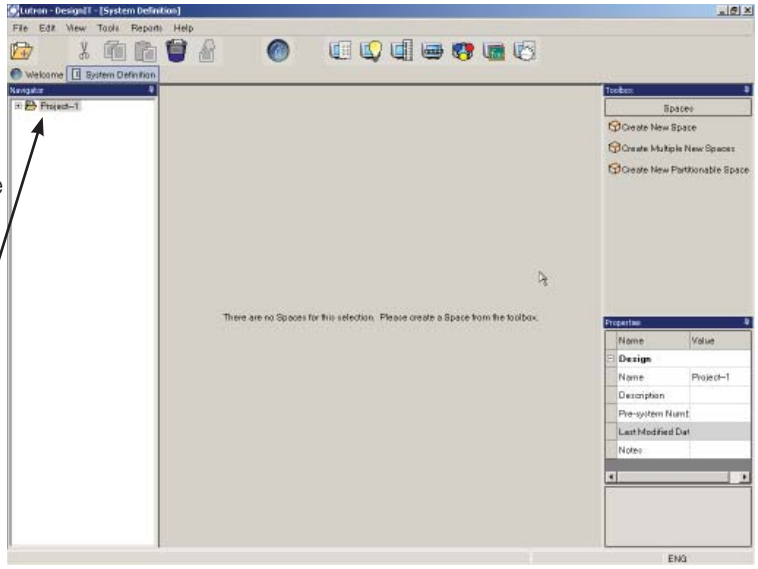
The System Definition Screen

Creating a New Project

A *project* is a container that includes all the database modeling information for a lighting control *system.*

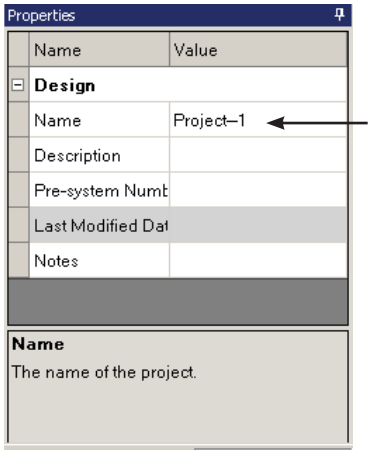
- **To create a new project:** From the *System Definition screen,* click  in the toolbar, or choose New from the File menu.

A folder for the new project is displayed in the Navigator and assigned a default project name.



- **To rename the project:** Select the project folder in the Navigator. In the Properties box, click in the Name value field and then enter the name you would like to use.

Once a project is created, you can add *spaces* and other *objects* to it.



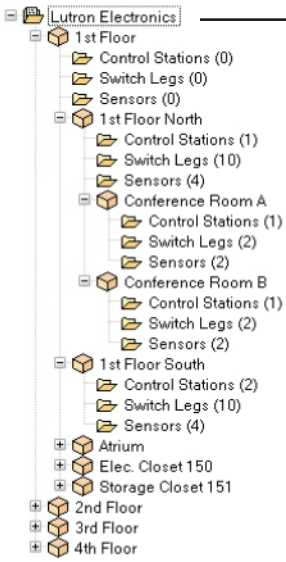
Click here and then enter a new project name

Creating Spaces

A *space* refers to the physical representation of a building or any of its parts. Spaces can contain other spaces (subspaces). Spaces can also contain other *objects* (for example, *control stations, sensors,* and so on).

Adding spaces to a *project* or other spaces enables you to create an accurate representation of the building or facility to be modeled. For example, a typical office building could be modeled as shown on the right.

Spaces can be *fixed* (their walls do not move) or *partitioned* (have one or more movable walls that can be positioned to divide the space into subspaces). Once spaces are created in the database, you can add objects to them.



Sample office building space hierarchy

Creating a New Fixed Space

Fixed *spaces* have fixed walls and cannot be partitioned.

To create a new fixed space:

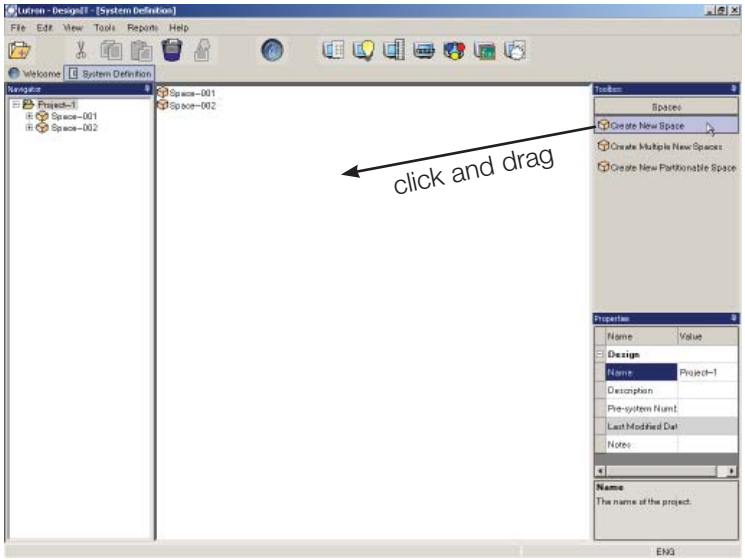
1. From the *System Definition screen,* select the *project* in the Navigator. Or, to create a space within a space, select an existing space within the project.

   Existing spaces, if any, for the selected project or space are listed in the main pane.

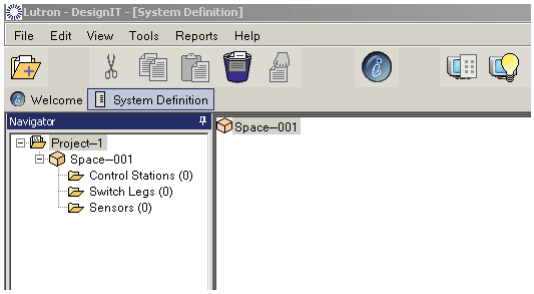
2. Select the Spaces panel in the Toolbox. Then click and drag the Create New Space option into the main pane.

   NOTE: To create more than one space, click and drag the Create Multiple New Spaces option into the main pane. Type the number you wish to add and click the OK button.

   The new space is displayed in the Navigator and assigned a default name. Folders for *control stations, switch legs,* and *sensors* are also automatically displayed for the space.

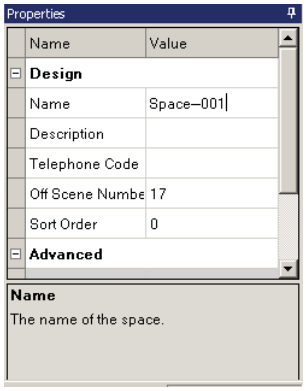


NOTE: Other folders exist within the project and space. These folders for other *object* types are visible only on the screens in which they can be modified.

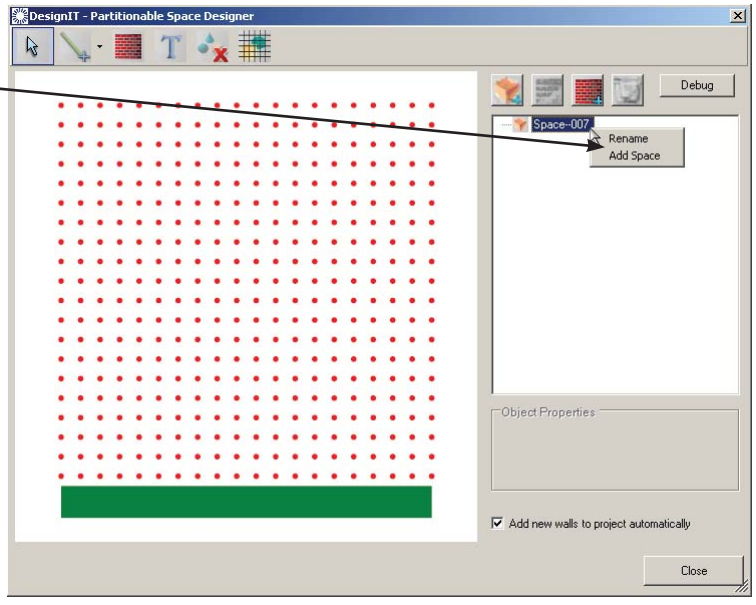


To rename the space:

1. Select the space in the Navigator.
2. In the Properties box, click the Name value field and then enter the name you would like to use.



NOTE: For *partitionable spaces* you must open the Partitionable Space Edit field to rename spaces. Right-click on the name of the space.



Creating a New Partitionable Space

Partitionable spaces can have movable *walls* used to partition the *space* (create subspaces). Lights in partitionable spaces can be controlled differently depending on the state of the movable walls.

To create a new partitionable space:

1. From the *System Definition screen,* select the *project* in the Navigator. Or, to create a space within a space, select an existing space within the project.

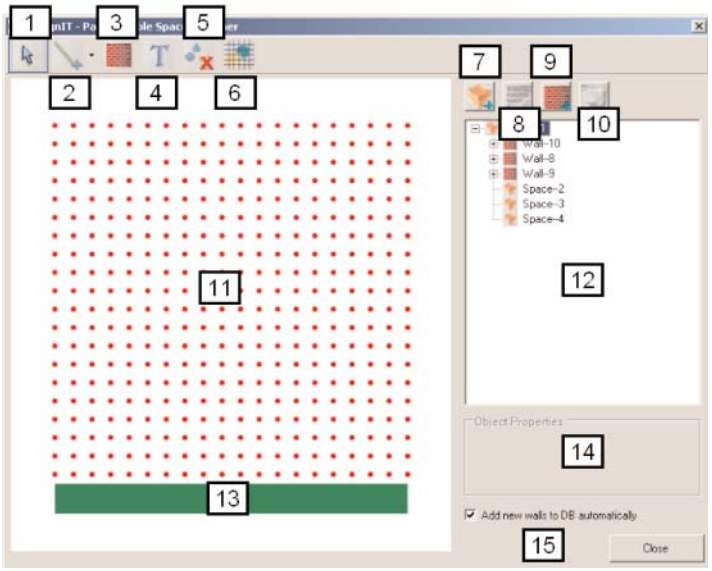
   Existing spaces, if any, for the selected project or space are listed in the main pane.

2. Select the Spaces panel in the Toolbox. Then click and drag the Create New Partitionable Space option into the main pane.

   The *Partitionable Space Designer* opens and enables you to model the space, including fixed and movable walls.

   NOTES:

   - To create more than one partitionable space, click and drag the Create Multiple New Partitionable Spaces option into the main pane. Type the number you wish to add and click the OK button.
   - The Partitionable Space Designer can also be used later to modify the space as needed.



Legend

1. **Normal Tool.** Used to select, move, and highlight objects.
2. **Fixed Wall Tool.** Used to draw fixed walls in the partitionable space; this can be used to draw straight lines or rectangles.
3. **Moveable Wall Tool**. Used to draw moveable walls in the space.
4. **Text Tool.** Used to add descriptive text to the diagram.
5. **Delete Symbol Tool.** Used to delete objects in the graphic.
6. **Show / Hide Grid**. Shows or hides the grid (the red dots); the grid is visible only in the DesignIT editor.
7. **Add Space**. Adds a new subspace to the partitionable space.
8. **Add Wall State.** Adds a new wall state to an existing wall.
9. **Add Wall.** Adds a new wall to the partitionable space
10. **Delete.** Deletes objects from the project (walls, spaces, wall states).
11. **Draw Region.** The area in which the user draws the partitionable space layout.
12. **Explorer Tree.** Used to show the spaces and walls in the partitionable space. Right-click on any object and rename it from the tree.
13. **Feedback Bar.** Displays the properties of an object when you place the cursor over the object in the graphic.
14. **Template Object Properties.** Used to change properties related to wall templates.
15. **Add Wall to DB.** Inserts a movable wall in the graphic into the database. There may be cases when you do not want to do this (associating a wall with an existing wall). By un-checking this option, you can draw a wall in the graphic without having to add it to the database.

To use the Partitionable Space Designer:

1. To create a fixed *wall,* select the Fixed Wall tool. Then click the grid points to draw the shape of the *space.*

   Click the start and end points to create a line. Double-click the final point to complete the shape.

2. To create a partition, select the Moveable Wall tool. Then click the grid points to draw the shape of the space.

   Click the start and end points to create a line. Double-click the final point to complete the shape.

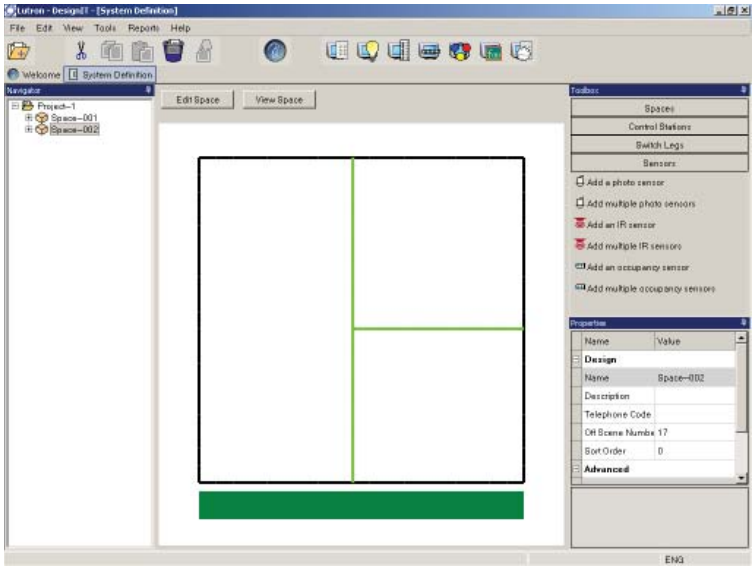
3. When you are finished modeling the space, click the Close button.

   The new partitioned space is displayed in the Navigator and an image of the space is shown in the main pane. Edit Space and View Space buttons are also added to the main pane.

   Folders for *control stations, switch legs,* and *sensors* are also automatically created for the space.

- To continue modeling the space, click the Edit Space button.
- To view the space in a separate window and view more details, click the View Space button.
- To rename the space, click the Edit Space button. From the navigation tree in the *Partitionable Space Designer,* right-click on the space name. Select Rename from the popup menu and then enter a new name.

  NOTE: Partitioned spaces cannot be renamed using the Properties box.

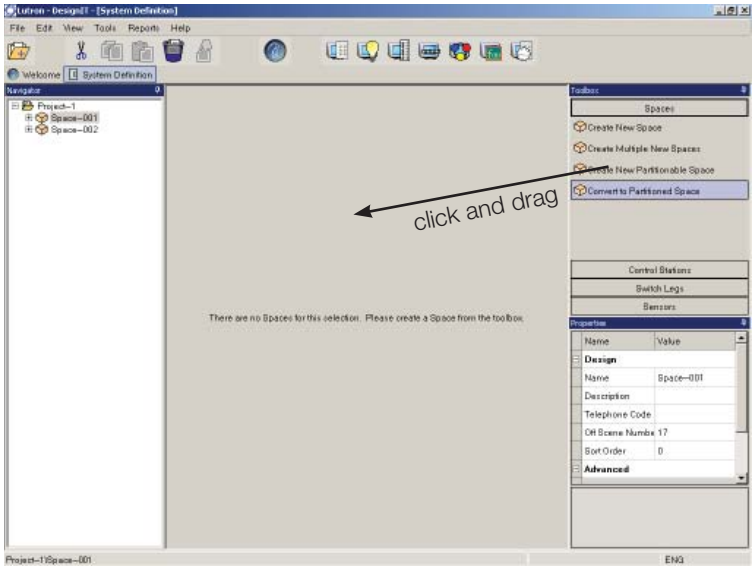


Converting a Fixed Space to a Partitionable Space

An existing fixed *space* can be converted automatically to a *partitionable space.*

To convert a fixed space to a partitionable space:

1. From the *System Definition screen,* select the fixed space in the Navigator.
2. Select the Spaces panel in the Toolbox. Then click and drag the Convert to Partitioned Space option into the main pane.

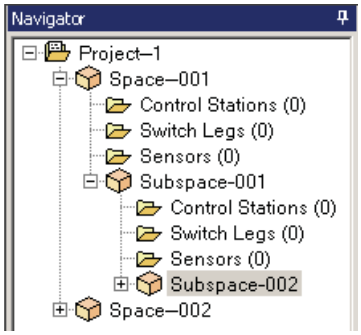


The space is converted and Edit Space and View Space buttons are displayed at the top of the main pane.

- To model the partitionable space, click the Edit Space button. Then use the *Partitionable Space Designer* to draw the model.
- To view the partitionable space in a separate window showing additional details, click the View Space button.

Note that there are two instances in which you cannot convert a fixed space to a partitionable space:

- The space to be converted cannot have more than one level of subspaces. For example, in the sample project shown below, Space A cannot be converted because it has a subspace called Space B, which in turn has a subspace called Space C. You could convert either Space B or Space C because they do not have more than 1 level of subspaces.
- A fixed space cannot be converted to a partitionable space if one of its subspaces is already partitioned. For example, in the sample project, if Space C was partitioned you could not convert Space B to a partitionable space.



Converting a Partitioned Space to a Fixed Space

An existing *partitioned space* can be converted automatically to a fixed *space.* Movable *walls* are automatically deleted.

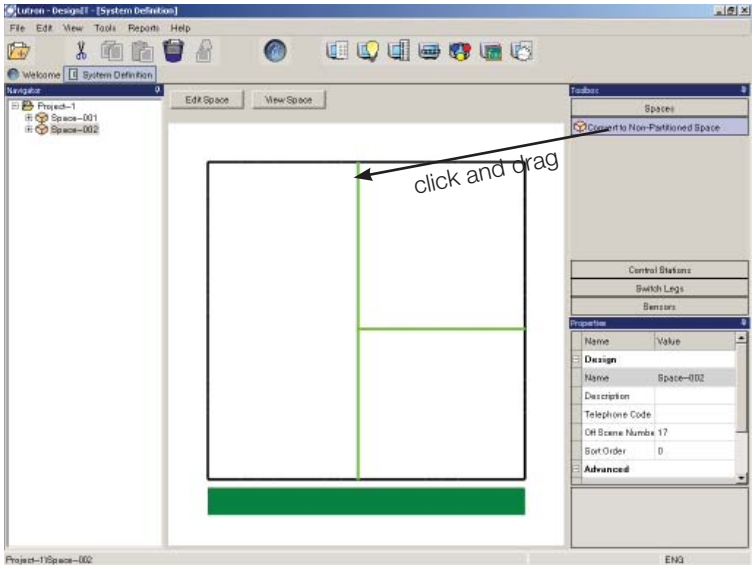
▸ To convert a partitioned space to a fixed space:

1. From the *System Definition screen,* select the partitioned *space* in the Navigator.

   The image of the partitioned space is displayed in the main pane.

2. Select the Spaces panel in the Toolbox. Then click and drag the Convert to Non-Partitioned Space option into the main pane.

   The space is converted and the space image is removed from the screen. Since the space is no longer partitionable, the Edit Space and View Space buttons are also removed.



Adding a New Control Station

A *control station* refers to the wallbox used to house the *control station device.* Control stations are added to *spaces* as needed to model the lighting *system.*

▸ To add a control station to a space:

1. From the *System Definition screen,* select the space in the Navigator.

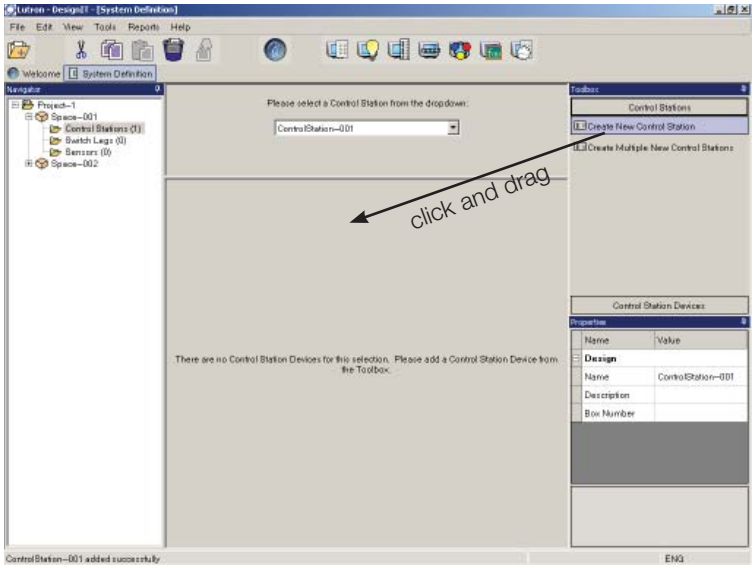
   The Control Stations dropdown list in the top portion of the main pane displays the existing control stations for that space.

2. Select the Control Stations panel in the Toolbox. Then click and drag the Create New Control Stations option into the main pane.

   A control station is added to the space. Devices can now be added to the control station.

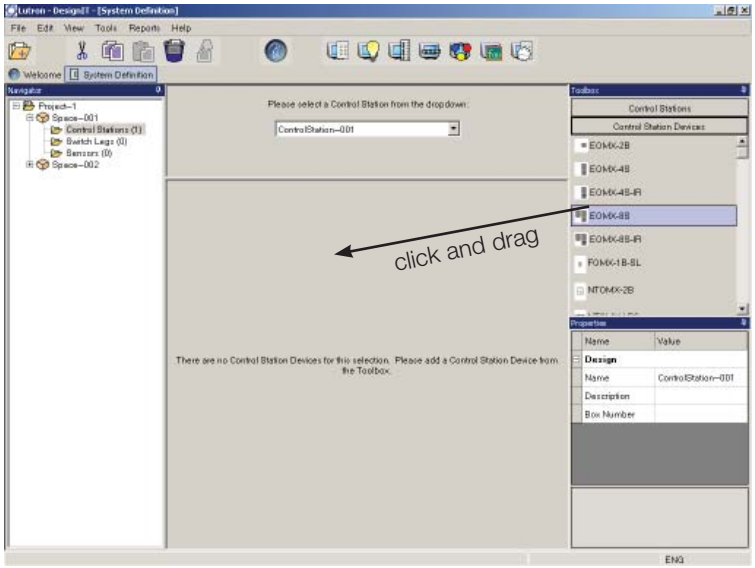
   NOTES:

   - To rename the control station, refer to “Viewing and Editing Object Properties” on page 10.
   - To create more than one control station, click and drag the Create Multiple New Control Stations option into the main pane. Type the number you wish to add and click the OK button.



Adding a Control Station Device

A *control station device* is housed in a *control station* and provides a point of input or output (for example, the buttons in a wall-mounted control). Devices are added to control stations as needed to model the lighting *system.*



To add a device to a control station:

1. From the Navigator in the *System Definition screen,* select the Control Stations folder for the *space* in which the control station is located.

   The Control Stations dropdown list in the top portion of the main pane displays the existing control stations for that space.

2. Select the control station from the dropdown list.

3. Select the Control Station Devices panel in the Toolbox. Then click and drag the *base model number* of the device to be added into the main pane.

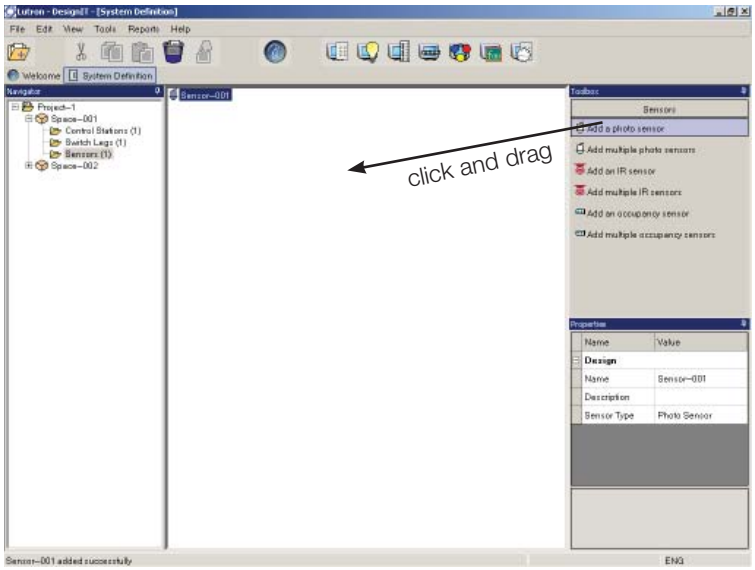
   The device will be added to the control station and an interactive image of the hardware will be displayed.

   NOTES:

   - To remove a control station device from the control station, select the device image in the main pane. Then select Remove from the Edit menu.
   - Control station devices are programmed using the *Programming screen.*

Adding a Sensor

Sensors are devices that control lighting by detecting *infrared (IR)* signals, the current light level in the *space,* or whether the space is occupied. Sensors are added to spaces as needed to model the lighting system.



To add a sensor:

1. From the Navigator in the *System Definition screen,* select the space to which the sensor is to be added.

2. Select the Sensors panel in the Toolbox. Then click and drag an *infrared (IR), photo,* or *occupancy sensor* into the main pane.

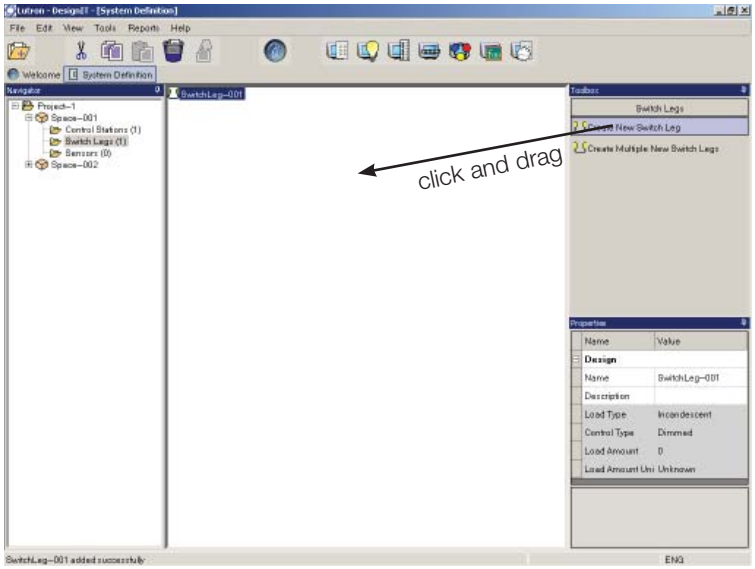
   The sensor is added to the space.

   NOTES:

   - To rename the sensor, refer to “Viewing and Editing Object Properties” on page 10.
   - To create more than one sensor, click and drag the Add Multiple Sensors option into the main pane. Type the number you wish to add and click the OK button.
   - Sensors are associated with Lighting Zone Controller units using the *addressing screen.*

Adding a Switch Leg

A *switch leg* is the connection between a *group* of *loads* and a *switch leg control.* Switch legs are added to *spaces* as needed to model the lighting *system.*



To add a switch leg to a space:

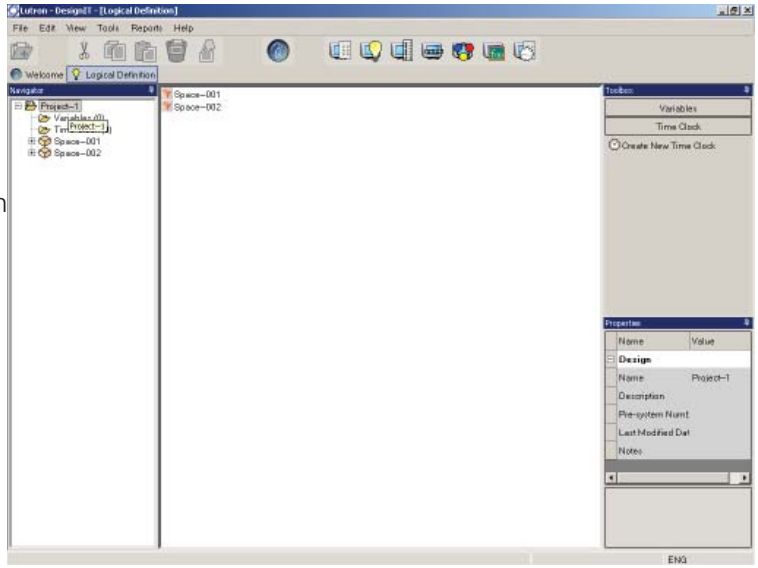
1. From the Navigator in the *System Definition screen,* select the space to which the switch leg is to be added.
2. Select the Switch Legs panel in the Toolbox. Then click and drag the Create New Switch Leg option into the main pane.

   The switch leg is added to the space.

   NOTES:
   - To rename the switch leg, refer to "Viewing and Editing Object Properties" on page 10.
   - To create more than one switch leg, click and drag the Create Multiple New Switch Legs option into the main pane. Type the number you wish to add and click the OK button.
   - Switch legs are associated with zones using the Logical Definition screen. If this switch leg is to be controlled individually, create a new zone and associate this switch leg to it. If the switch leg is to be controlled with others, associate the switch legs together on one zone.
   - Switch legs are associated with lighting panels and high voltage control units, known as switch leg controls, using the Equipment screen. Each switch leg will be associated with the output number of one of the switch leg controls.

Using the Logical Definition Screen

The *Logical Definition screen* is used to add *zones, scenes, time clocks,* and *variables* to a *space* or *project.*



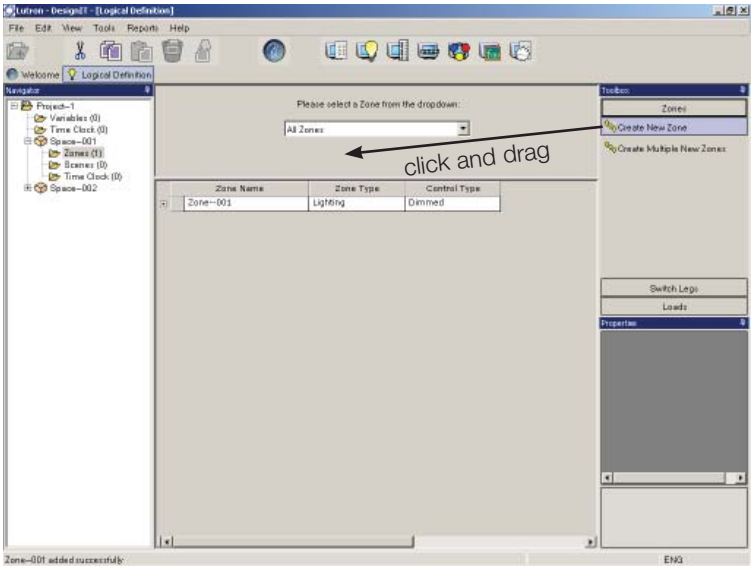
Opening the Logical Definition Screen

To open the Logical Definition screen: Click  in the toolbar or choose Logical Definition from the View Menu.

From the *Logical Definition screen,* you can:
- Create *zones*
- Create *switch leg* to *zone* associations
- Create *scenes*
- Create *variables*
- Create *time clocks*

Creating a New Zone

A *zone* is a collection of *switch legs* controlled simultaneously as one unit (also called a channel by some lighting designers).



To create a new zone:

1. From the Navigator in the *Logical Definition screen,* select the *space* to which the zone is to be added.

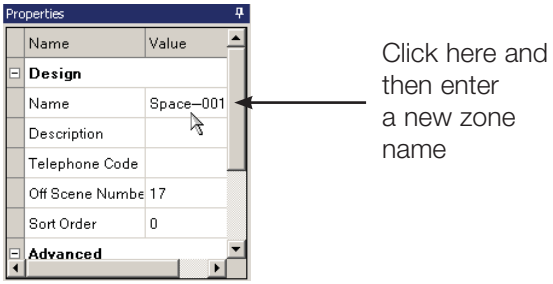
   The Zones dropdown list in the top portion of the main pane displays existing zones for that space. The table in the lower portion of the main pane displays settings for the currently selected zone.

2. Select the Zones panel in the Toolbox. Then click and drag the Create New Zone option into the top portion of the main pane.

   The zone is added to the space. You can now associate switch legs with the zone. You can also add zones to *scenes.*

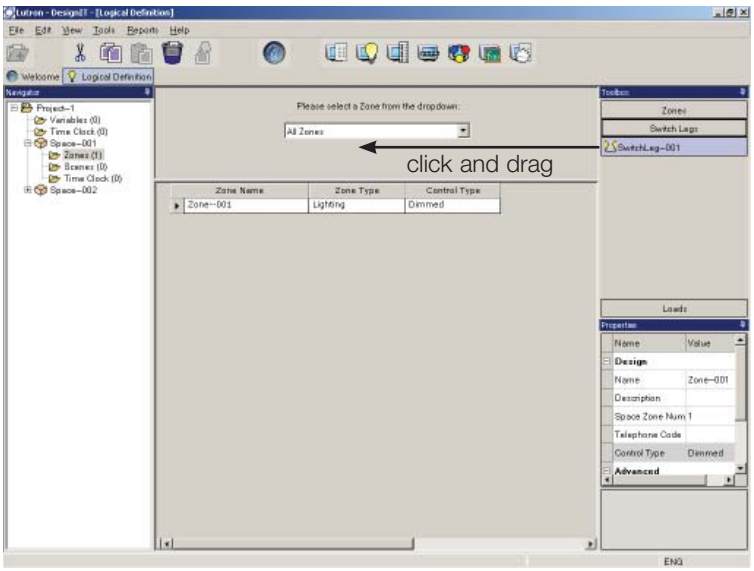
To rename the zone: Select the *zone* in the Navigator. In the Properties box, click in the Name value field and then enter the name you would like to use.

NOTE: To create more than one zone, click and drag the Create Multiple New Zones option into the main pane. Type the number you wish to add and click the OK button.



Creating Switch Leg to Zone Associations

Switch legs are associated with *zones* so that they (and the *loads* they connect to) can be controlled simultaneously through the zone.



To create a switch leg to zone association:

1. From the Navigator in the *Logical Definition screen,* select the Zones folder below the *space* that is to have the switch leg to zone association.

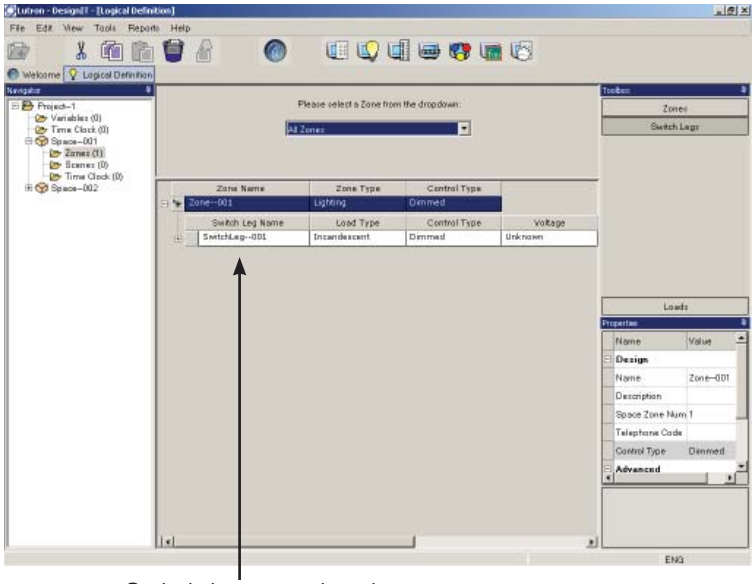
   The Zones dropdown list in the top portion of the main pane displays existing zones for that space. The table in the lower portion of the main pane displays settings for the currently selected zone.

2. From the Zone dropdown list, select the zone.

3. Select the Switch Legs panel in the Toolbox. Then click and drag the appropriate switch leg into the top portion of the main pane or directly onto the zone row in the table (the row will highlight when the cursor is over it).

NOTE: If All Zones is selected in the Zones dropdown list, the switch leg is associated with the *zone* that is currently selected in the table. To make the association with a different zone, click and drag the switch leg directly onto the row for the desired zone in the table.

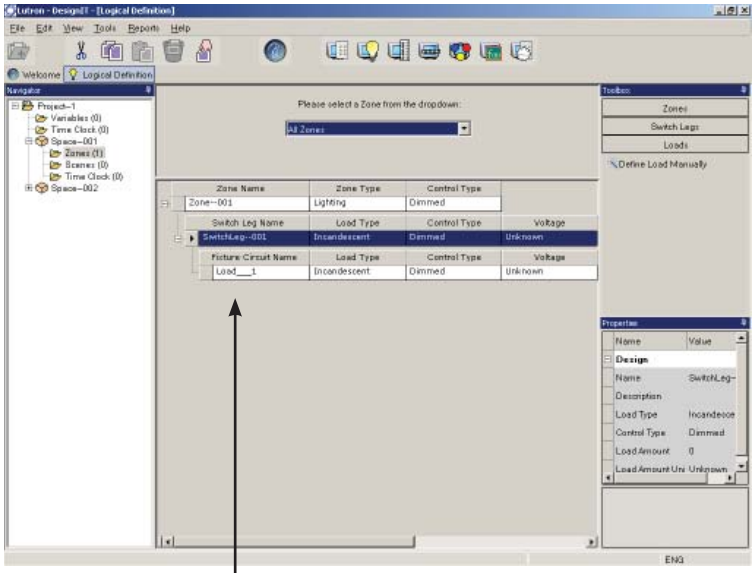
The switch leg to zone association is created and default switch leg settings are displayed. You can now manually define the load for the switch legs in the zone.

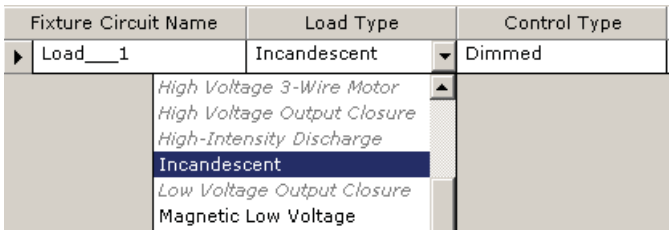


To manually define the load for a switch leg:

1. From the table in the main pane, select the *switch leg* whose *load* you want to define.
2. Select the Loads panel in the Toolbox. Then click and drag the Define Load Manually option into the main pane and directly onto the row for the switch leg in the table. (The row will highlight when the cursor is positioned over it.)

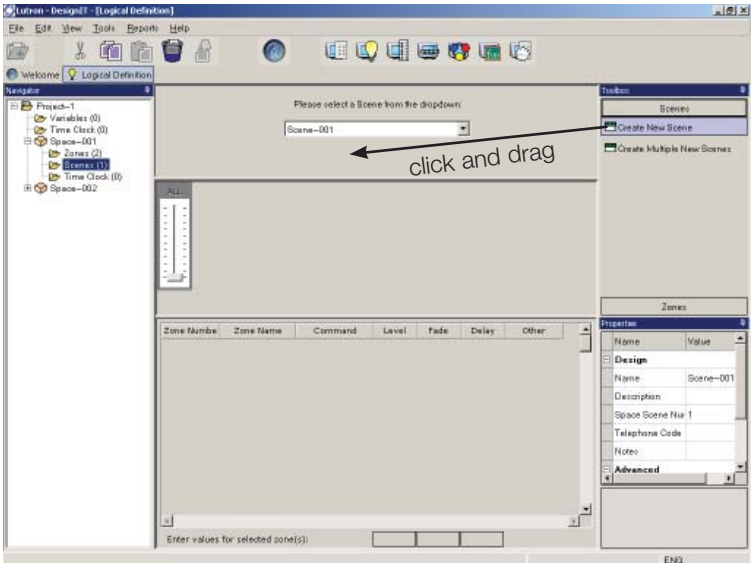
   An editable row showing default *load* settings is added beneath the switch leg in the table. You can modify the settings, as needed.
3. To rename the load, click in the Fixture Circuit Name field and enter a new name.
4. To change the load type, click in the Load Type field and then select the option you want from the dropdown list.
5. To modify the other load settings, click in each of the fields and enter a new value. Move from left to right across the fields in the table row.





Creating a New Scene

A *scene* is a lighting effect achieved by adjusting one or more *zones* to *preset* levels.



To create a new scene:

1. From the Navigator in the *Logical Definition screen,* select the Scenes folder below the *space* that is to have the scene.

   The Scene dropdown list in the top portion of the main pane displays existing scenes for that space. The table in the lower portion of the main pane displays settings for the currently selected scene.

2. Select the Scenes panel in the Toolbox. Then click and drag the Create New Scene option into the top portion of the main pane.

   The scene is added and displayed in the Scenes dropdown list in the top portion of the main pane. Empty fields for scene values are also displayed.

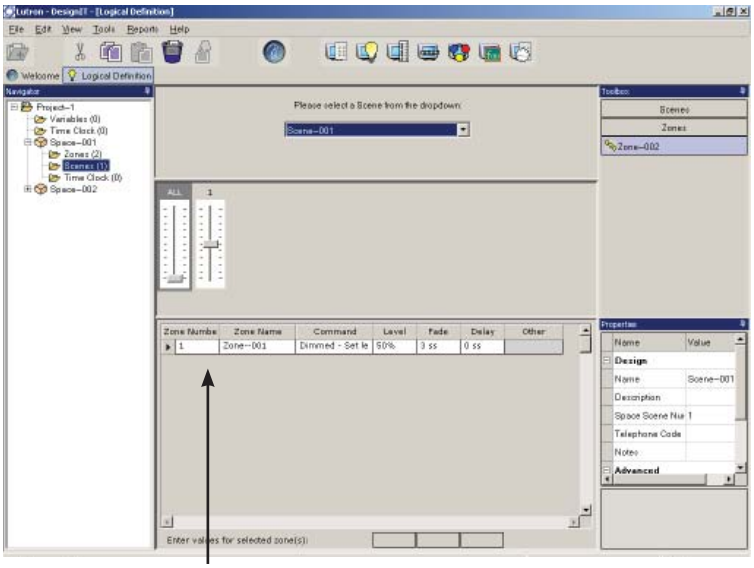
   NOTES:

   - To rename the scene, refer to "Viewing and Editing Object Properties" on page 10.
   - To create more than one scene, click and drag the Create Multiple New Scenes option into the main pane. Type the number you wish to add and click the OK button.

To add a zone to the scene:

1. From the Scene dropdown list in the main pane, select the *scene* to which you want to add a *zone.*
2. Select the Zones panel in the Toolbox. Then click and drag the zone to be added into the top portion of the main pane.

   The zone is associated with the scene and default settings for the zone are displayed in the table in the main pane.



Zone added to scene

To remove a zone from the scene:

1. From the Scene dropdown list in the main pane, select the scene from which you want to remove a zone.
2. Select the zone that you would like to remove from the table in the lower center of the main pane.
3. Click on the remove icon  in the menu bar to remove the zone from the scene.

Changing a Preset Lighting Scene

A *scene* is a lighting effect achieved by adjusting one or more *zones* to *preset* levels.

To select a scene to edit:

From the Navigator in the Logical Definition screen, select the Scenes folder below the appropriate *space.*

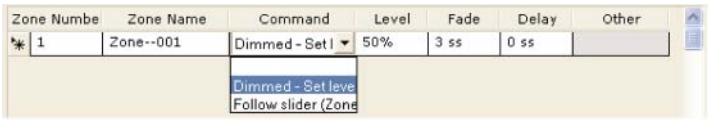
The Scene dropdown list in the top portion of the main pane displays existing scenes for that space. The table in the lower portion of the main pane displays zone settings for the currently selected scene.

NOTE: To rename the scene, refer to "Viewing and Editing Object Properties" on page 10.

To change scene settings for an individual zone:

To modify the scene settings, enter the Level, Fade and/or Delay moving from left to right, in the appropriate field for each zone.

NOTE: Alternatively, to set the level, use the slider to set the value in the Level field.



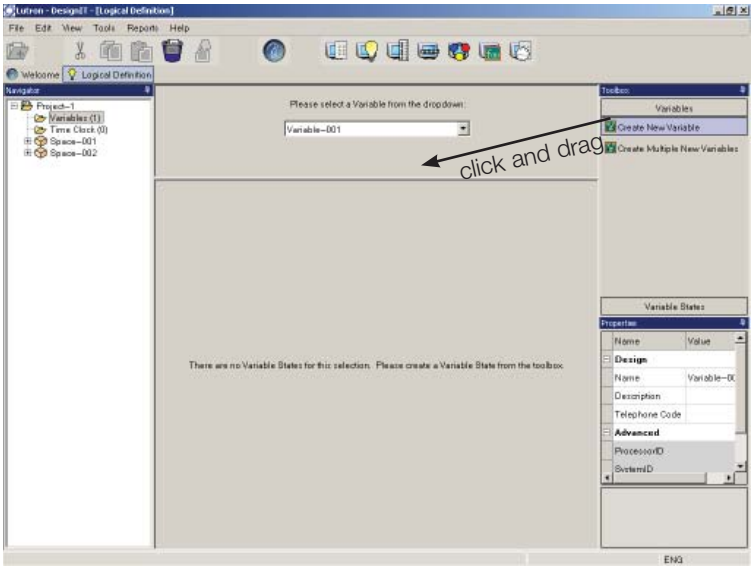
To change scene settings for multiple zones:

1. Select multiple zones by holding the CTRL key and clicking on each zone or by clicking on the first zone and then hold the Shift key while clicking on the last zone.
2. To modify the scene settings for the selected zones, enter the Level, Fade and/or Delay in the fields at the bottom of the table.

   NOTE: Alternatively, to set the level for all zones, use the ALL slider to set the value in the Level fields.

Creating New Variables

A *variable* is a user-created *object* used for *programming* purposes. A variable can be one of three types: True/False, Multi-state, or Integer. Variables are added at the *project* level.
Example: A variable named "[spacename] occupied" could be created and the *variable states* could be True and False. This variable could then be used to program a button to either turn the lights OFF or dim them to a very low level.



To create a new variable:

1. From the Navigator in the *Logical Definition screen,* select the Variables folder below the *project* folder.

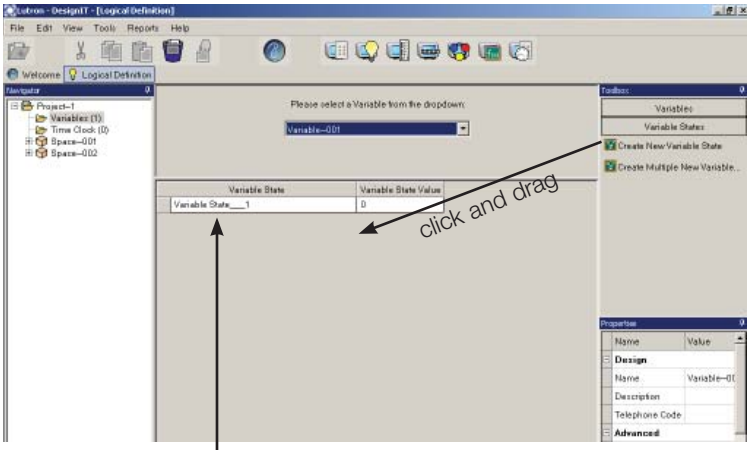
   The Variables dropdown list in the top portion of the main pane displays existing *variables* for that *space.* The table in the lower portion of the main pane displays settings for the currently selected variable.

2. Select the Variables panel in the Toolbox. Then click and drag the Create New Variable option into the main pane.

   The variable is added to the project and displayed in the dropdown list in the main pane.

   NOTES:

   - To create more than one variable, click and drag the Create Multiple New Variables option into the main pane. Type the number you wish to add and click the OK button.
   - To rename the variable, refer to "Viewing and Editing Object Properties" on page 10.



To create a state for the variable:

1. Select the *variable* from the Variable dropdown list.
2. Select the *Variable States* panel in the Toolbox. Then click and drag the Create New Variable State option into the main pane.

   The variable state is created and its default settings are displayed in the table.

3. To modify the variable state settings, enter the name and value in the fields provided.

   NOTES:

   - To create more than one variable state, click and drag the Create Multiple New Variables States option into the main pane. Type the number you wish to add and click the OK button.
   - Variables are used later in the *Programming screen.*

Variable state added

Creating a New Time Clock

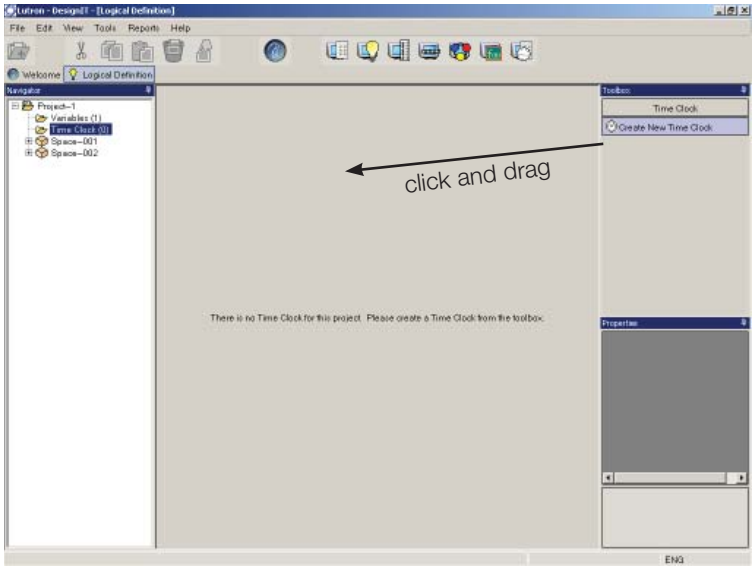
A *time clock* is a collection of *schedules.* Time clocks can be added to the *project* or a *space.*

To create a new time clock:

1. From the Navigator in the *Logical Definition screen,* select the Time Clock folder for the project or space.
2. Select the Time Clock panel in the Toolbox. Then click and drag the Create New Time Clock option into the main pane.

   The time clock is added to the project or space.
3. Events can now be created for your time clock. These programming functions can be accomplished on the Programming Screen. Please see “Working with Schedules and Time Clocks” on page 40 for more information.

   NOTES:
   - To rename the time clock, refer to “Viewing and Editing Object Properties” on page 10.
   - Time clocks are programmed from the *Programming screen.*



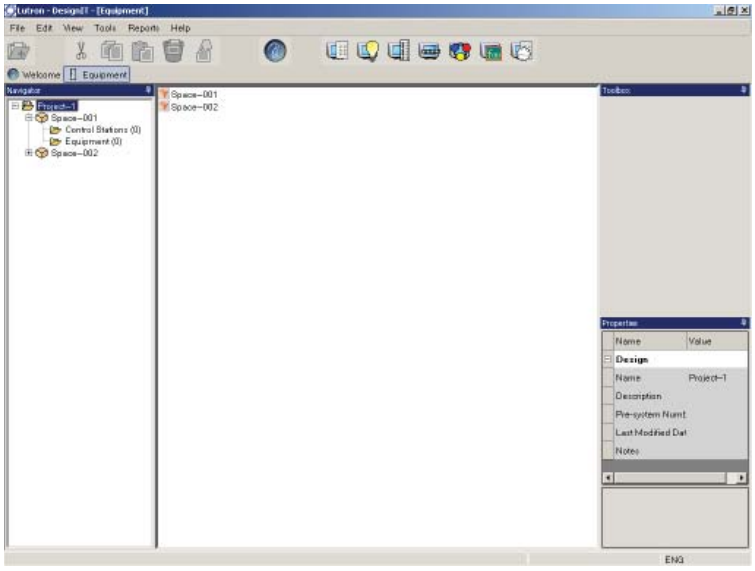
Using the Equipment Screen

The Equipment screen is used to add *processors* and *panels* to *spaces* in a *project.* This screen is also used to associate all the *switch legs* in the lighting *system* with the *switch leg controls* in panels and high voltage *control station devices* (such as a *GRAFIK Eye* 3602).

Opening the Equipment Screen

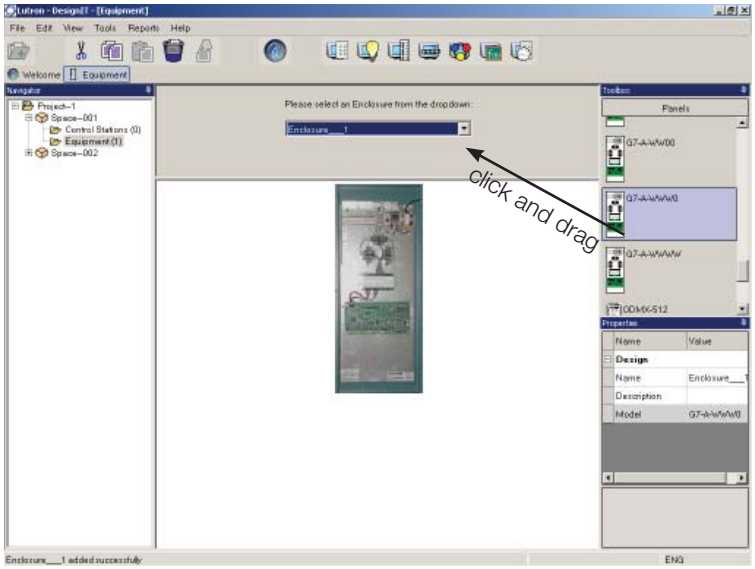
To open the Equipment screen: Click  in the toolbar or choose Equipment from the View Menu.

From the Equipment screen, you can:
- Add processors
- Add panels
- Create switch leg to switch leg control associations



Adding a Processor

A *processor* is a Lutron hardware device that communicates with other hardware via a series of *links.* A processor runs programs and maintains the state of all *objects* in the lighting *system.* Processors are housed in *enclosures.*



To add a processor:

1. From the Navigator in the Equipment screen, select the Equipment folder for the *space* in which the processor is located.

   The *Enclosure* dropdown list in the main pane displays the existing enclosures, if any, for the space.

2. Select the *Panels* panel in the Toolbox. Then click and drag the *base model number* of the processor to be added into the main pane.

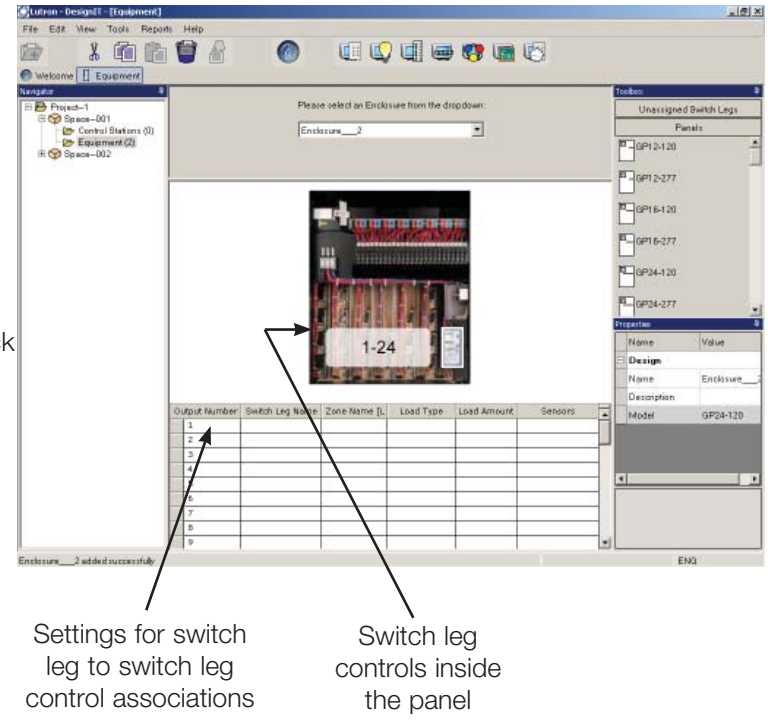
   The processor is added to the space. The default name for the enclosure that houses the processor is displayed in the Enclosure dropdown list in the main pane. An image of the processor is also shown.

   NOTES:

   - To rename the enclosure, select the enclosure from the dropdown list and then enter a new name in the Properties box. You can rename the processor on the *Addressing screen.*
   - *Objects* are added to *links* on the processor using the *Addressing screen.*

Adding a Panel

A *panel* is a factory built pre-wired assembly of hardware. Panels are housed in *enclosures.*



To add a panel:

1. From the Navigator in the Equipment screen, select the Equipment folder for the *space* in which the panel is located.

   The Enclosure dropdown list in the main pane displays the existing enclosures, if any, for the *space.*

2. Select the Panels panel in the Toolbox and then click and drag the *base model number* of the panel into the main pane.

   The panel is added to the space. The default name for the enclosure that houses the panel is displayed in the Enclosure dropdown list in the main pane. An image of the panel and a table for creating *switch leg control* associations is also displayed.

   NOTE: To rename the enclosure, select the enclosure from the dropdown list and then enter a new name in the Properties box. To rename the panel, select the image and then enter a new name in the Properties box.

   You can now associate a *switch leg* with each switch leg control on the panel.

Creating a Switch Leg to Switch Leg Control Association

A *switch leg control* is any electronic device that controls a *switch leg* by varying the signal delivered to the *load(s),* including wallbox and *panel*-based switch leg controls. In most cases, a switch leg is located between the circuit breaker and the load(s) being controlled.

To associate a switch leg with a switch leg control:

1. From the Navigator in the Equipment screen, select the Equipment folder for the *space* in which the panel/switch leg control is located.

   The *Enclosure* dropdown list in the main pane displays the existing enclosures for the *space.*

2. From the Enclosures dropdown list, select the panel that contains the switch leg control(s) to be associated.

   A table showing the panel's switch leg control associations is displayed in the main pane. If there are no existing associations, the table is empty.

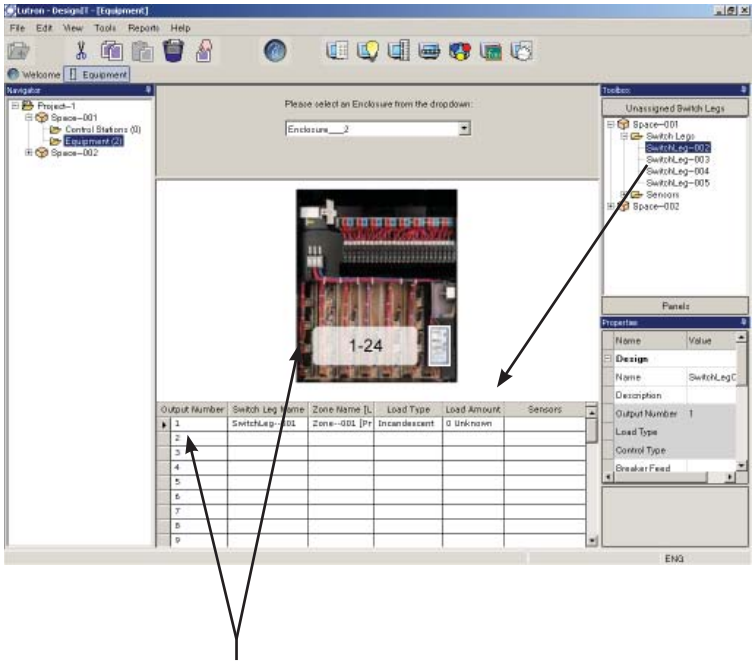
3. Select the Unassigned Switch Legs panel in the Toolbox and then select the Switch Legs folder that contains the switch leg to be assigned. Click and drag a switch leg directly onto the correct row in the table.

   The association is made and switch leg settings are displayed in the table row.

To remove a switch leg association:

1. Select the switch leg in the table.
2. Click in the toolbar, or choose Remove from the Edit menu.

   NOTE: Clicking in the toolbar or choosing Delete from the Edit menu will delete the entire panel.



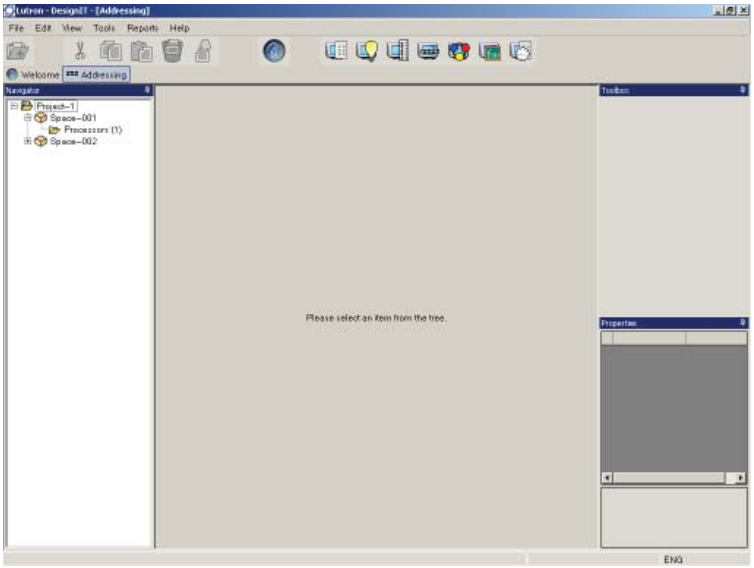
Rows in table correspond to switch leg controls in the panel

Using the Addressing Screen

The *Addressing screen* is used to inform the *system* of the location of all addressable hardware in the lighting system. Addresses enable a *processor* to communicate with the hardware connected to it.

Opening the Addressing Screen

▸ **To open the Addressing screen:** Click  in the toolbar or choose Addressing from the View Menu.



From the *Addressing screen,* you can:

- Add an *object* to a *link* on a processor
- Configure the network settings of the processor
- Create a *sensor* to Lighting Zone Controller association

NOTE: Lighting Zone Controller units are only available for North and South America.

Adding an Object to a Link on a Processor

A *link* refers to a low-voltage wire that connects to the *processor* and enables it to communicate with other hardware in the lighting *system.*

▸ **To add an object to a link on a processor:**

1. From the Navigator in the *Addressing screen,* select the Processor folder for the *space* in which the processor is located.

   The Processor dropdown list in the main pane displays the existing processors for the *space.* The Link dropdown list displays available links.

2. From the Processor dropdown list, select the processor. From the Links dropdown list, select the link on the processor to which the *object* is to be assigned.

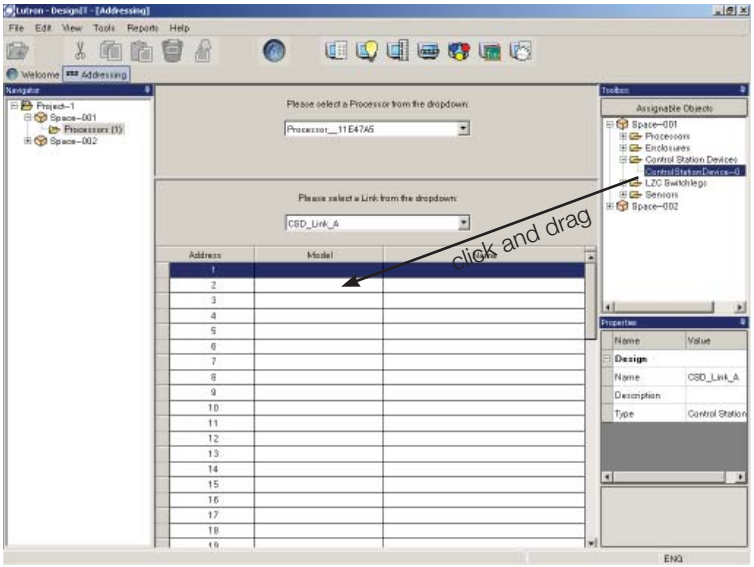
   Depending on the selected processor and link, the appropriate number of *address* rows are listed in the table.

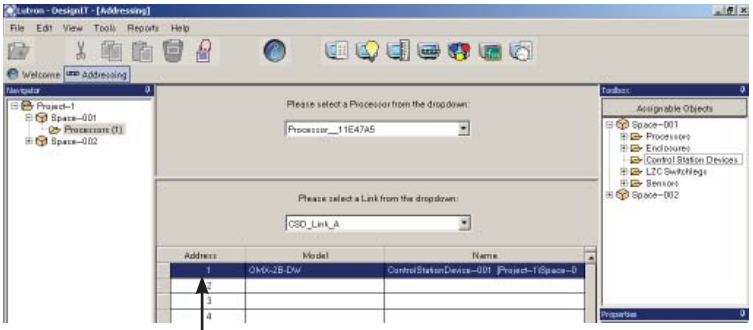
   NOTES:

   - AUX and UI links are not addressable from the *Addressing screen.*
   - To rename the processor, select the processor from the dropdown list and then enter a new name in the Properties box.

3. Select the *assignable objects* panel in the Toolbox and then navigate to the space that contains the object to be assigned. Open the appropriate object folder and then click and drag the object directly onto the correct address row in the table.

   The association is made and the properties of the object are displayed in the table row.





Object added to address on link

To remove an addressed object from the processor:

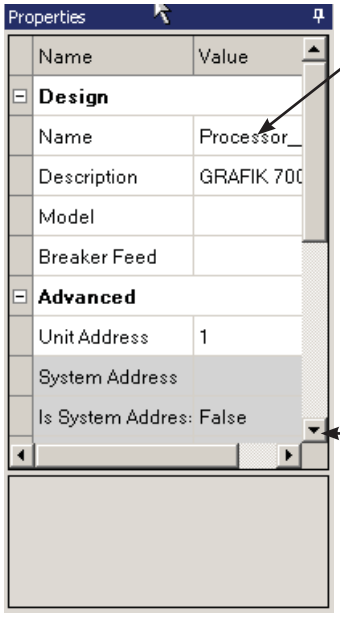
1. Select the object in the table.
2. Click  in the toolbar, or choose Remove from the Edit menu.

Configuring the Network Settings of the Processor

The eLumen™ software communicates to the *processor(s)* across a TCP/IP network. The network settings for each processor are configured using the properties window on the *Addressing screen.*

To configure the network settings of the processor:

1. From the Navigator in the *Addressing screen,* select the Processor folder for the *space* in which the *object* is to be assigned.
2. Select the processor from the Processor dropdown list in the main pane.
3. In the Properties box, click each property field to be configured and then enter the appropriate network setting.



The following table describes the network settings.

Setting	Description
Unit Address	DIP switch address of the processor.
IP Address	Net work address of the processor (factory default is 192.168.250.1).
Subnet Mask	Subnetwork mask (factory default is 255.255.255.0).
UI Port	User interface port used to communicate from the software to the processor (factory default is 8000).

NOTE: You cannot change the current address fields. Instead, change the future *address* fields. The fields will be updated during the next data *transfer* from the ControlIT application. (For procedures on how to transfer data, refer to Chapter 4.)

Creating a Sensor to Lighting Zone Controller (LZC) Association

Occupancy sensors and *photo sensors* can be wired to Lighting Zone Controller (LZC) units to enhance their functionality in the *space.* These sensors are associated with the unit from the *Addressing screen.*

To associate a sensor with a Lighting Zone Controller unit:

1. From the Navigator in the Addressing screen, select the Processor folder for the space in which the processor is located.

   The Processor dropdown list in the main pane displays the existing processors for the space. The Link dropdown list displays available *links.*

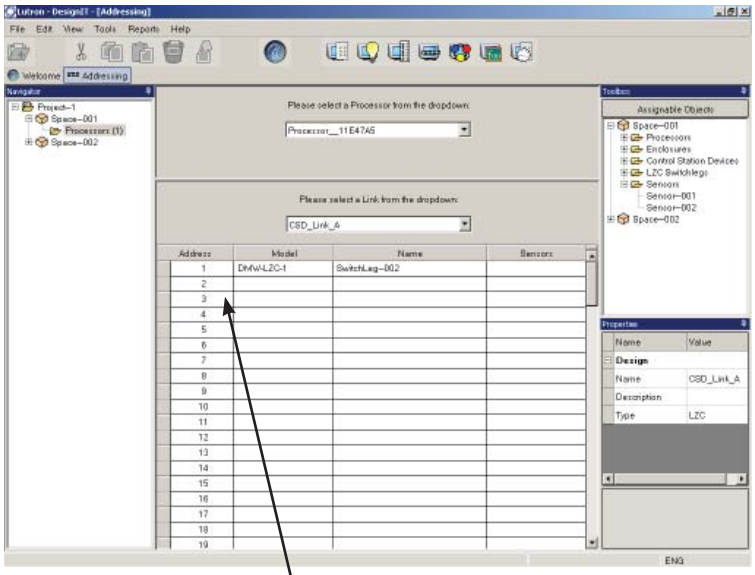
2. From the Processor dropdown list, select the processor. From the Links dropdown list, select the LZC link on the processor to which the *object* is to be assigned.

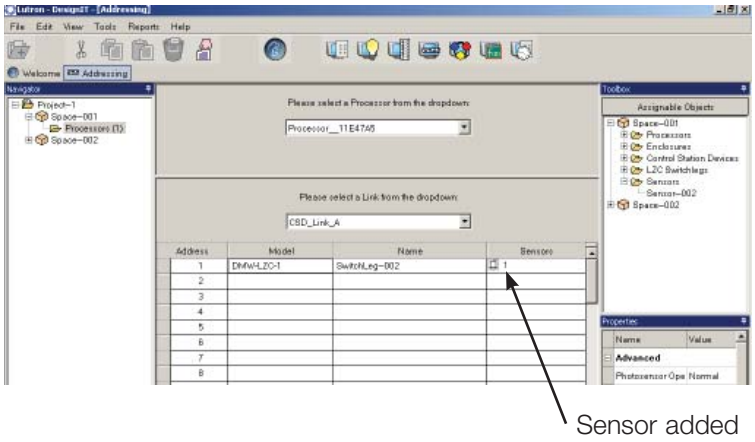
   Depending on the selected processor and link, the appropriate number of *address* rows are listed in the table.

   NOTE: The Sensors field will display only for Lighting Zone Controller links. The link type can be changed from the link Properties box.

3. Select the *assignable objects* panel in the Toolbox and then navigate to the space that contains the sensor to be assigned. Open the sensor folder and then click and drag the object directly onto the correct address row in the table.

   The association is made and the number of sensors associated with the LZC unit is displayed in the Sensors field.





To remove a sensor association:

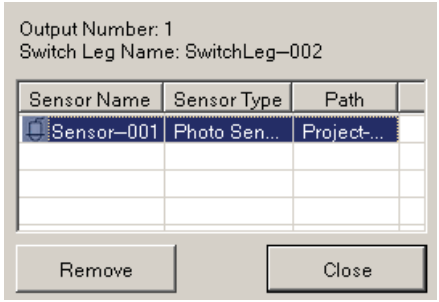
1. From the table in the main pane, click in the Sensors field that contains the *sensor* whose association is to be removed.

   A browse button is displayed.

2. Click ... .

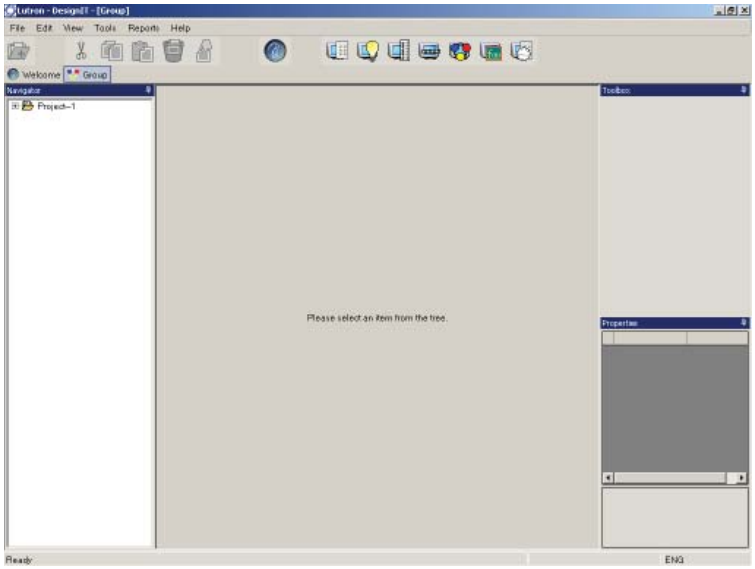
   A popup window lists the sensors currently associated with that *switch leg.*

3. Select the sensor to be removed and then click the Remove button.



Using the Group Definition Screen

The *Group Definition screen* is used to create *groups* and add *objects* to them. Groups can be used to quickly affect a large number of lighting system objects *simultaneously.*
Groups are a *programming* convenience and are not required for a lighting *system* to operate.



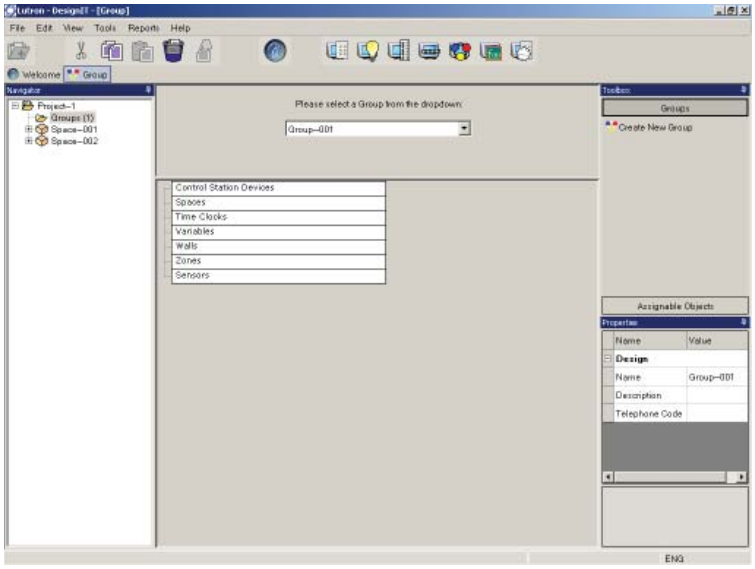
Opening the Group Definition Screen

▸ **To open the Group Definition screen:** Click  in the toolbar or choose Group Definition from the View Menu.

From the *Group Definition screen,* you can:
- Create new groups
- Add objects to groups

Creating a Group

A *group* is a named collection of one or more *objects* (or one or more groups) that share a common functional purpose. Groups can be added to a *space* or to the *project.*
Example: A group called “public spaces” could be created that contains all public places and their *control station devices.*



▸ **To create a new group:**

1. From the Navigator in the *Group Definition screen,* select the Groups folder for the space in which the processor is located.

   The Group dropdown list in the main pane displays the existing groups, if any, for the space.

2. Select the Groups panel in the Toolbox. Then click and drag the Create New Group option into the main pane.

   The group is added and you can now assign objects to it.

   NOTES:
   - To rename the group, refer to “Viewing and Editing Object Properties” on page 10.
   - Groups are controlled by applying a *mode* to them from the *Mode Definition screen.*

Assigning Objects to a Group

After a *group* is added to a *project* or *space,* you assign the *objects* to be included in it.

To assign objects to a group:

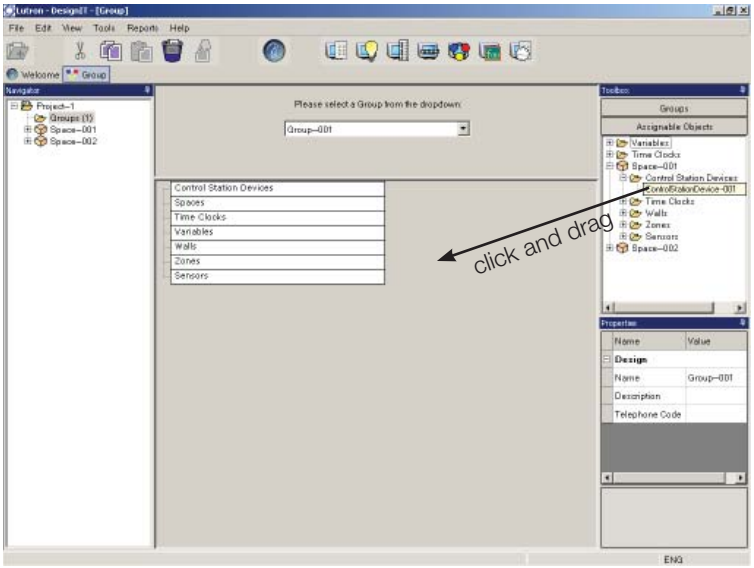
1. From the Navigator in the *Group Definition screen,* select the Groups folder for the project or space.

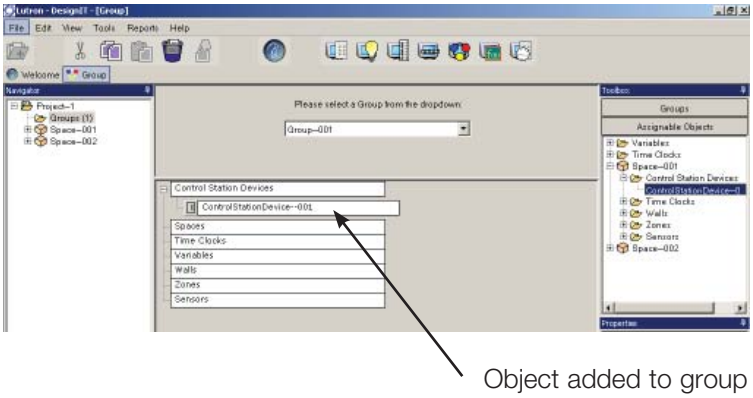
   The Group dropdown list in the main pane displays the existing groups for the space.

2. From the Group dropdown list, select the group to which you want to assign objects.

3. Select the *Assignable Objects* panel in the Toolbox and then select the folder that contains the object to be assigned. Click and drag the object into the lower portion of the main pane.

   The object is added under the corresponding row type in the table.

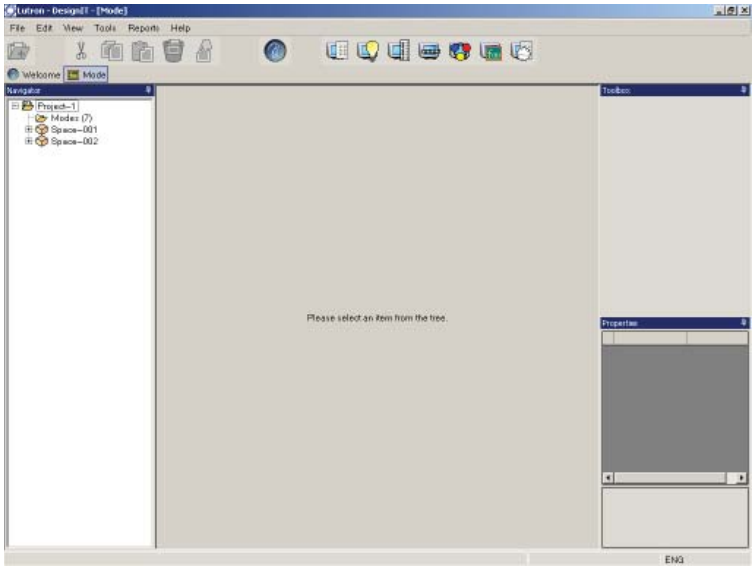




Using the Mode Definition Screen

The *Mode Definition screen* is used to create *modes* (*programming* functions and values) that can be applied to *groups* and other *objects* during *programming.*

Modes are a programming convenience and are not required for the operation of the lighting system.



Opening the Mode Definition Screen

▸ **To open the Mode Definition screen:** Click in the toolbar or choose Mode Definition from the View Menu.

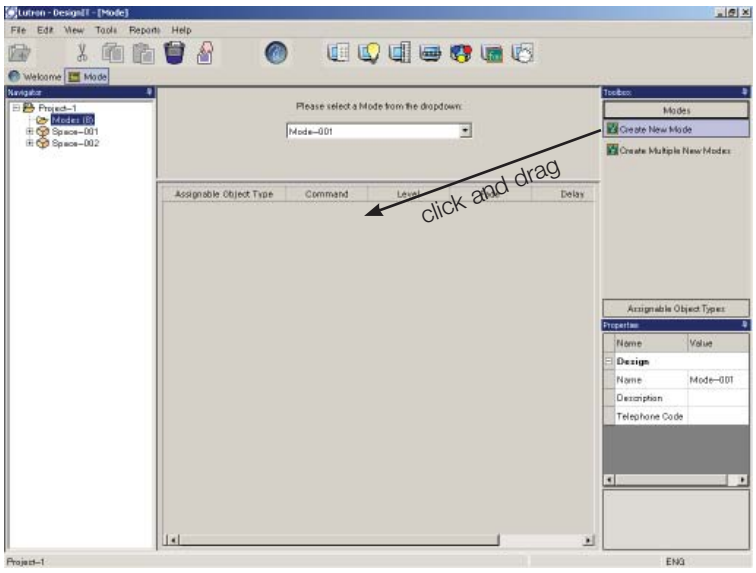
From the Mode Definition screen, you can:

- Create new modes
- Add object types to modes

Creating a Mode

A *mode* is a function and set of associated values that determine the behavior of a *group* or other *object* to which it is applied. Modes are added at the *project* level.

Example: A mode called “Daytime” could be created to turn on all lights and disable the *control station devices* in a group that contains *spaces* and *control station devices.*



▸ **To create a new mode:**

1. From the Navigator in the *Mode Definition screen,* select the Mode folder for the *project.*

   Existing modes, if any, are displayed in the Mode dropdown list in the main pane.

2. Select the Modes panel in the Toolbox. Then click and drag the Create New Mode option into the main pane.

   The mode is added to the project and displayed in the Mode dropdown list in the main pane. You can now assign objects to the mode.

   NOTES:

   - To rename the mode, refer to “Viewing and Editing Object Properties” on page 10.
   - To create more than one mode, click and drag the Create Multiple New Modes option into the main pane. Type the number you wish to add and click the OK button.

Assigning Objects to a Mode

After a *mode* is added to a *project,* you assign the *objects* you want it to control.

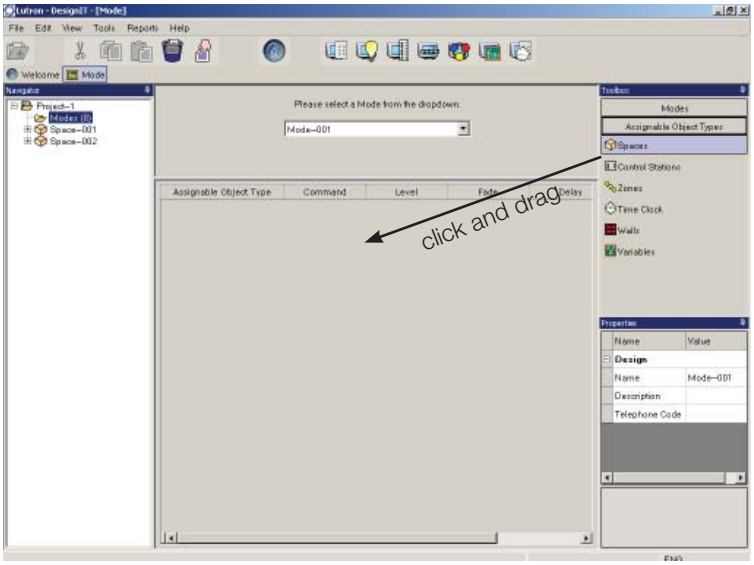
To assign objects to a mode:

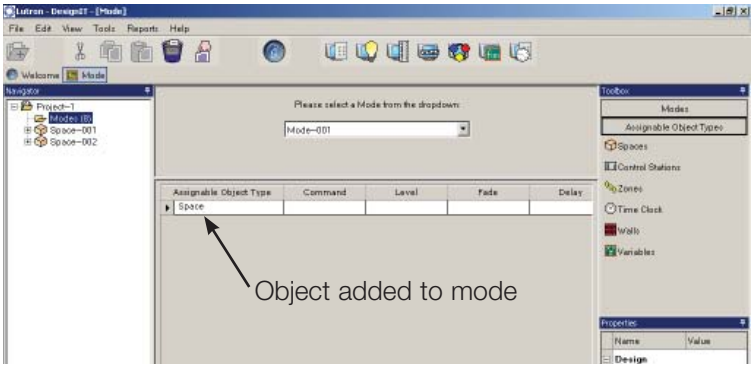
1. From the Navigator in the *Mode Definition screen,* select the Mode folder for the project.

   The Modes dropdown list in the main pane displays the existing modes for the *space.*

2. Select the mode from the dropdown list. Select the *Assignable Object Types* panel from the Toolbox and then click and drag the type of object to be assigned into the main pane.

   The *object* type is assigned to the *mode* and fields for entering object setting values are displayed in the table.





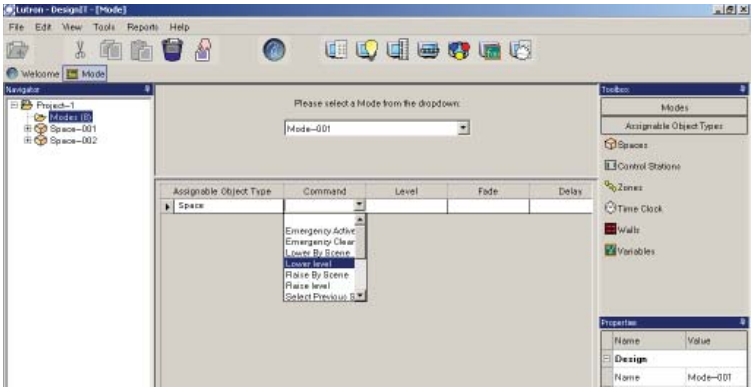
To enter setting values for the object assigned to the mode:

1. Double-click in the Command field in the row for the assigned object.

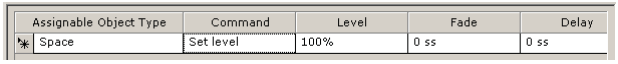
   A dropdown list is displayed.

2. Select the Command value from the dropdown list.

   Depending on the value you select, default values are displayed in the other fields in the table row.



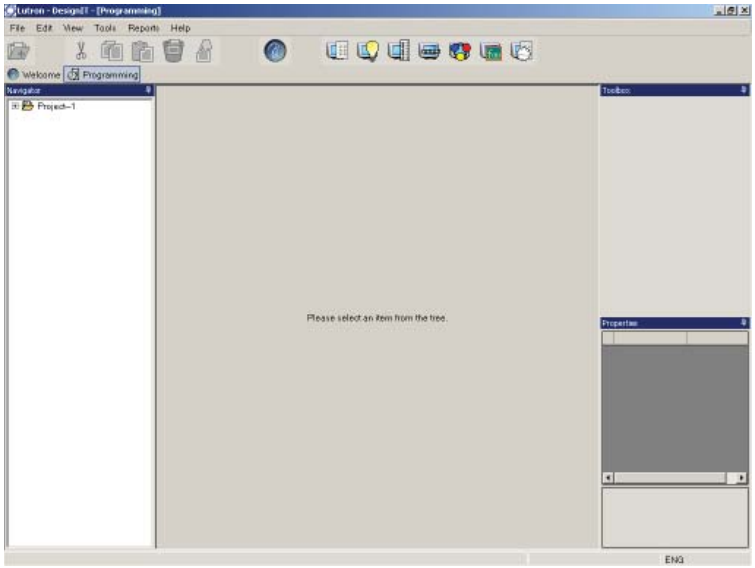
3. To modify the other settings for the object, click in each of the fields and enter a new value. Move from left to right across the table row.



Assignable Object Type	Command	Level	Fade	Delay
Space	Set level	100%	0 ss	0 ss

Using the Programming Screen

The *Programming screen* is used to program *control station* buttons, create *programming* and *schedules,* and apply schedules to *time clocks.*



Opening the Programming Screen

▸ **To open the Programming screen:** Click  in the toolbar or choose Programming from the View Menu.

From the Programming screen, you can:

- Program the buttons for control station devices.
- Program schedules for time clocks.

Working with Control Station Devices

A *control station device* is housed in a control station and provides a point of input or output. In most cases, control stations devices are wall-mounted controls with buttons.

Control station devices can be programmed to react to a button press (Single Action), a button press and release (Dual Action), a different action based on the status of a part of the building (Conditional), or to run a sequence of events (Auto Sequence).

NOTE: For information on *programming* an *autosequence,* refer to the Online Help in the DesignIT application.

Programming a Button for a Single Action

Control station buttons can be programmed to execute a *single action* when pressed (for example, pressing the button selects a *scene*).

▸ **To program a button for a single action:**

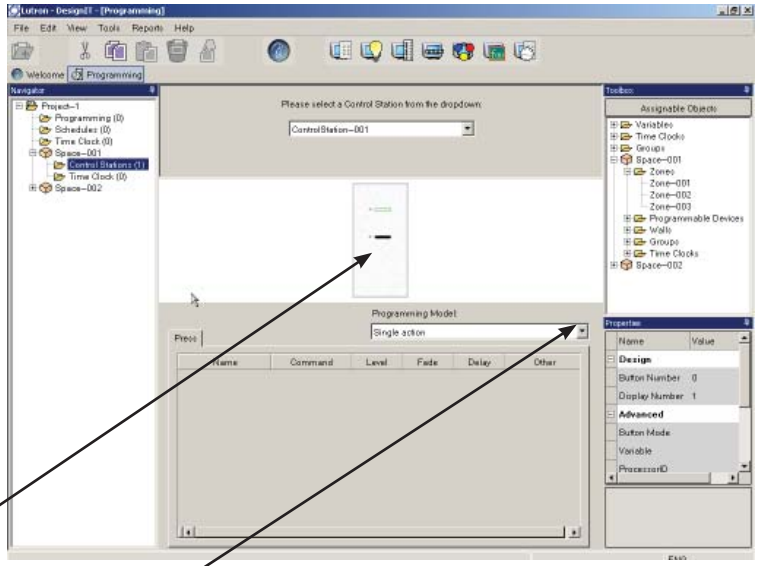
1. From the Navigator in the *Programming screen,* select the *space* and then the Control Stations folder that contains the control station to be programmed.

   The Control station dropdown list in the main pane displays the existing control stations for the space. An image of the currently selected control station is also displayed.

2. From the dropdown list, select the control station to be programmed.
3. From the image of the control station device, click the button to be programmed.

   The Programming Model dropdown list displays available models for the selected button. A model specifies how the *system* responds to user interaction.

4. From the Programming Model dropdown list, select Single action.



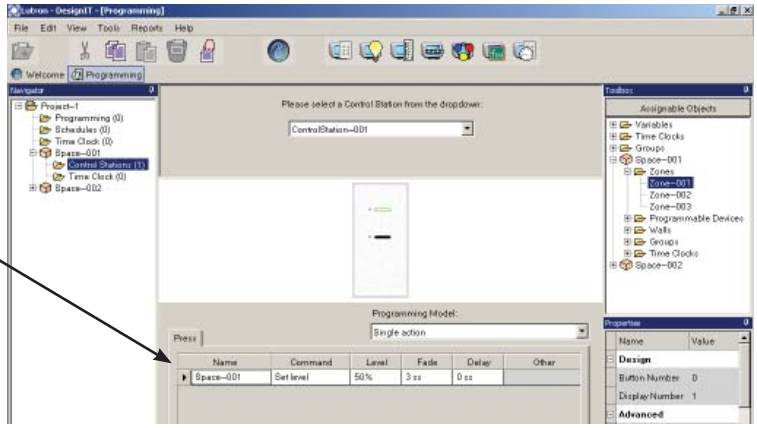
5. Select the *Assignable Objects* panel in the Toolbox. Navigate to the space that contains the object to be controlled by the selected button. Select that object folder and then click and drag the object into the lower portion of the main pane.

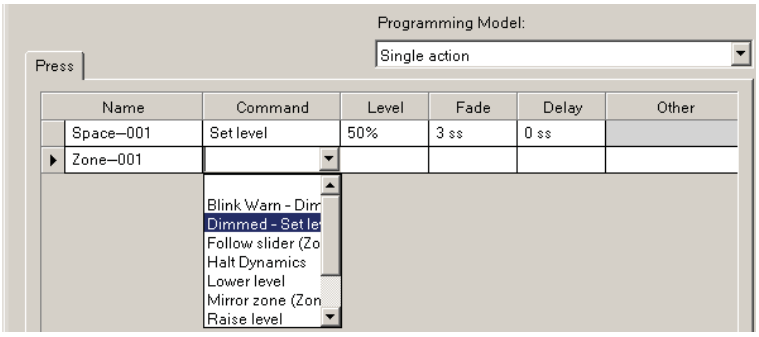
   The object is assigned to the button and default program settings are displayed in the table.

6. To modify the default settings, double-click the Command field. Then select the value you want from the dropdown list.

7. To modify other program settings for the object, click in each field and enter the new value. Move from left to right across the table row.

   NOTE: Use the scroll bars to view table fields that are hidden from view.





Programming a Button for a Dual Action

Control station buttons can be programmed to execute a *single action* when pressed (for example, pressing the button starts raising the *zone* intensity) and then execute another action when released (for example, releasing the button stops raising the zone intensity).

To program a button for a dual action:

1. From the Navigator in the *Programming screen,* select the *space* and then the Control Stations folder that contains the control station to be programmed.

   The Control Station dropdown list in the main pane displays the existing control stations for the space. An image of the currently selected control station is also displayed.

2. From the dropdown list, select the control station to be programmed.

3. From the image of the *control station device,* click the button to be programmed.

   The Programming Model dropdown list displays available models for the selected button. A model specifies how the *system* responds to user interaction.

4. From the Programming Model dropdown list, select *Dual action.*

   The Press tab in the main pane is automatically selected.

5. Select the *Assignable Objects* panel in the Toolbox. Navigate to the space that contains the object to be controlled by the selected button. Select that object folder and then click and drag the object into the lower portion of the main pane.

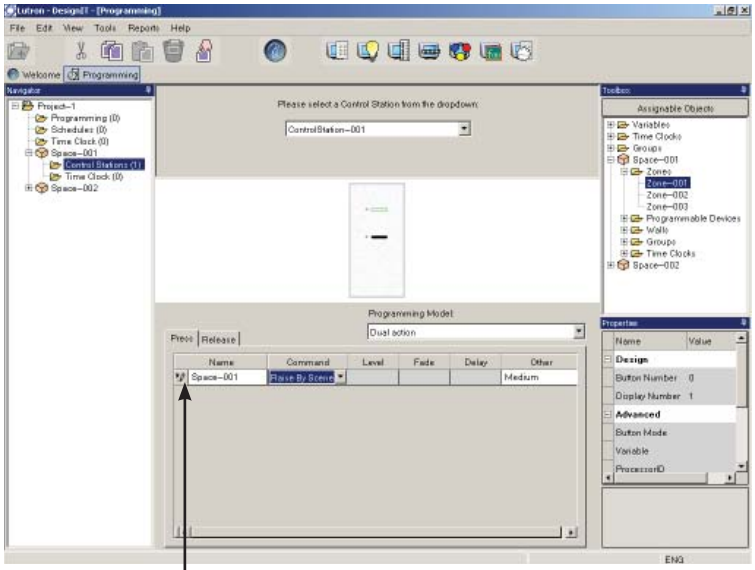
   The object is assigned to the button and default program settings are displayed in the table.

6. To modify the default settings, double-click the Command field. Then select the value you want from the dropdown list.

7. To modify other program settings for the object, click in each field and enter the new value. Move from left to right across the table row.

   NOTE: Use the scroll bars to view table fields that are hidden from view.

8. Select the Release tab in the main pane. Then repeat steps 5 through 7 to specify the button *release* action.

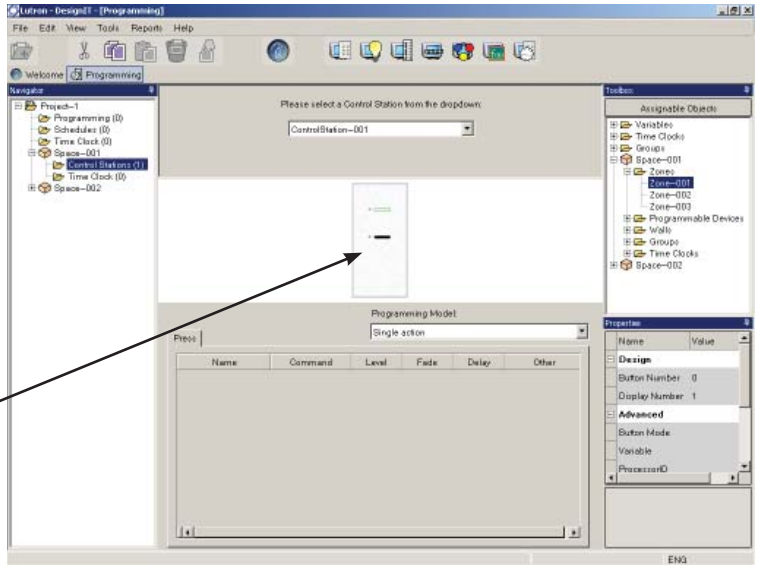


Object is assigned to the button

Programming a Button for a Conditional Action

Control station buttons can be programmed to execute an action based on one or more conditions. For example, when a button is pressed, you may want to select Scene 2 if Scene 1 was previously selected. Otherwise, you would like to have the Off Scene selected. In this example, you would need to create the following program settings:

If
  The Scene in Space A = Scene 1
Then
  Select Scene 2
Else
  Select Scene Off
End If



To program a button for a conditional action:

1. From the Navigator in the *Programming screen,* select the *space* and then the Control Stations folder that contains the control station to be programmed.

   The Control Station dropdown list in the main pane displays the control stations for the space. An image of the currently selected control station is also displayed.

2. From the dropdown list, select the control station to be programmed.

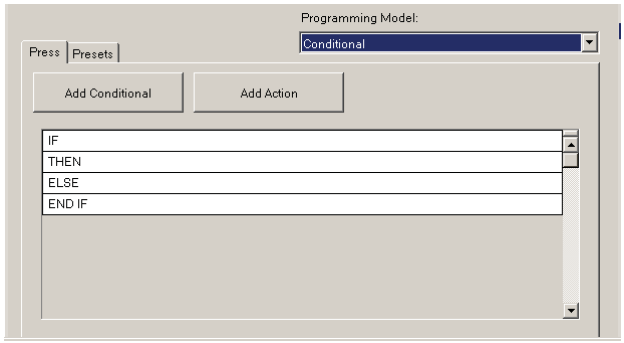
3. From the image of the control station, click the button to be programmed.

   The Programming Model dropdown list displays available models for the selected button. A model specifies how the *system* responds to user interaction.

4. From the Programming Model dropdown list, select *Conditional.*

   A table used to create the *conditional programming* is displayed in the main pane.

   At this point, you can create a *preset* to be used in the conditional programming. A preset specifies the object(s) that are controlled by the button and the action to be performed.



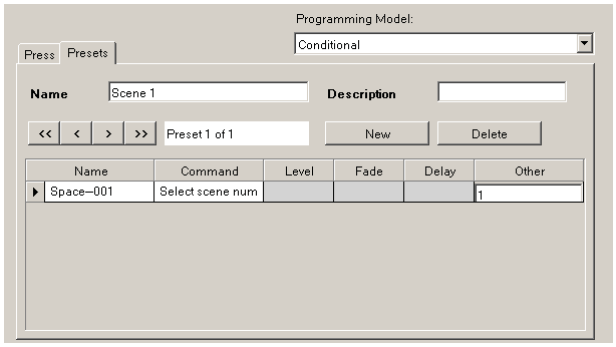
To create a preset to use for conditional programming:

1. Select the Presets tab in the main pane.
2. Click the New button.
3. Select the *Assignable Objects* panel in the Toolbox. Navigate to the *space* that contains the *object* to be controlled by the *conditional* button. Select the object folder and then click and drag the object into the lower portion of the main pane.

   The object is assigned to the *preset* and default program settings are displayed in the table.
4. To rename the preset, click in the Name field and enter a new name.

   If needed, enter a text description of the preset in the Description field.
5. To modify the program settings, double-click the Command field. Then select the value you want from the dropdown list.
6. To modify other program settings for the object, click in each field and enter the new value. Move from left to right across the table row.

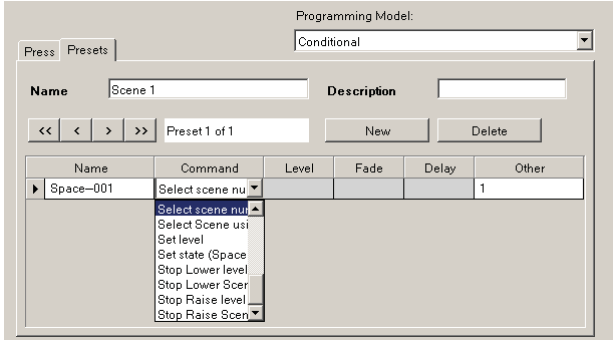
   NOTE: Use the scroll bars to view table fields that are hidden from view.
7. Repeat the procedure to create all presets needed to create the *conditional* programming.

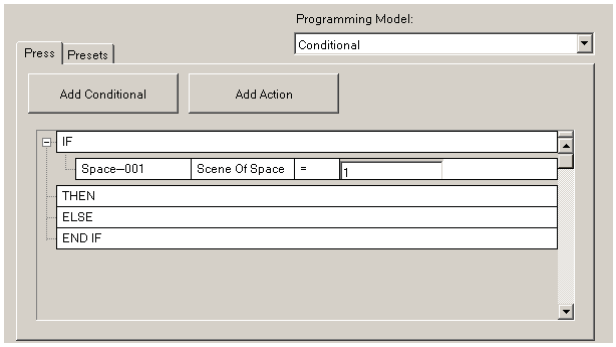


To apply a preset to the conditional programming:

1. Select the Press tab in the main pane.
2. Click the IF cell in the table. From the Toolbox, drag the *object* that the condition is evaluating into the IF cell.

   A row for the object is added in the table.
3. Click in the row for the object and specify the settings and values to be used.
4. Click in the THEN cell on the grid. Click the Add Action button in the main pane.
5. Double-click the cell created below the THEN cell. Select the *preset* you created from the dropdown list.
6. If needed, click in the ELSE and/or END IF cells. Click the Add Action button and then select the appropriate preset for those actions.



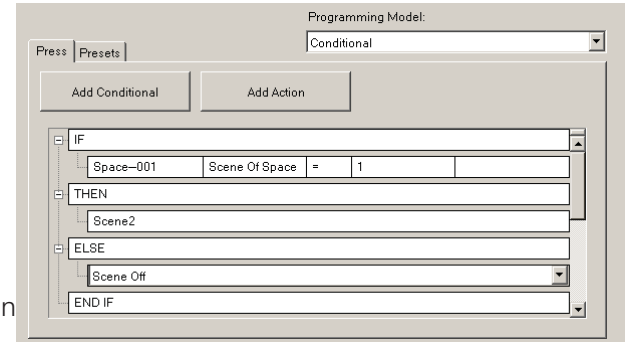


To remove existing programming:

1. Navigate to the button.
2. Click on the row you wish to remove.
3. Click the remove button  .

   NOTES:

   - Be sure to choose an LED preset for your button in the Properties Box.



Working with Schedules and Time Clocks

A *schedule* is a collection of *event/programming* pairs. A schedule identifies the programmed commands to be executed within the lighting *system* at a certain time. You can create weekly schedules (for ongoing *events* that occur weekly) or date-specific schedules (for holidays or other special events).

Schedules are applied to *time clocks,* which are *calendars* that identify when scheduled events are to occur.

It is important to understand the workflow needed to set up the schedules and time clocks for a system:

1. Identify the purpose of the schedule (events to be included, *objects* to be affected, and commands to be executed).
2. Create the programming to be used in a time clock.
3. Create the schedule and apply a time to the programming.
4. Apply the schedule to a time clock within the system.

Planning Schedules and Time Clock Configurations

Before you create the *programming* for a *schedule,* it is helpful to map out the schedule on paper. This will make it easier to understand how a program, schedule, and *time clock* work together to control the lighting *system.*

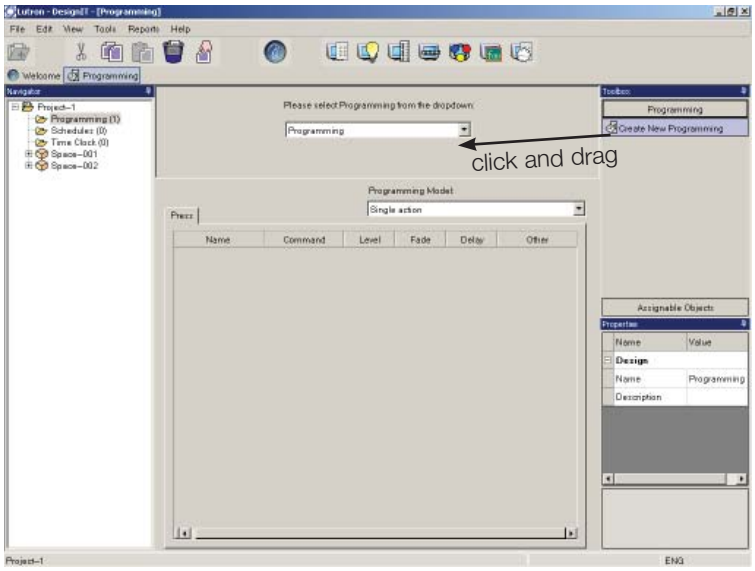
For example, suppose you want to turn off Zone 1 and Zone 2 at 2PM on August 6:

- The programming portion is zone 1 = 0% and zone 2 = 0%.
- The schedule portion is the real-time event of 2PM.
- The time clock portion is August 6.

Programming and schedules are created at the project level. Time clocks can be configured at both the project and space level.

Creating New Programming for a Schedule

Programming is predetermined behavior that is defined to occur as the result of an *event* (*astronomic or real-time*).



To create new programming for a schedule:

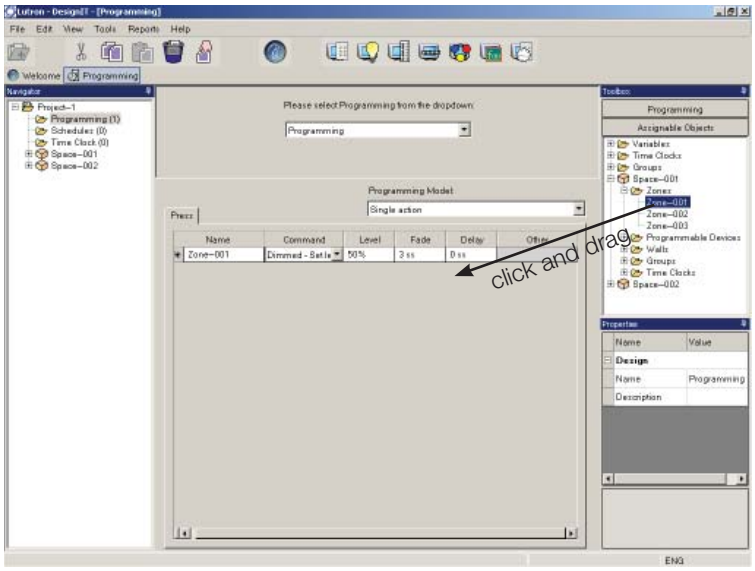
1. From the Navigator in the *Programming screen,* select the Programming folder for the *project.*

   The Programming dropdown list in the main pane displays existing programming, if any, for the project.

2. Select the Programming panel in the Toolbox. Then click and drag the Create New Programming option into the top portion of the main pane.

   The programming is added. You can now assign *objects* and programming actions to it.

   NOTE: To rename the programming, refer to "Viewing and Editing Object Properties" on page 10.



To assign objects and actions to the programming:

1. If it is not already selected, select the *programming* from the Programming dropdown list.
2. From the Programming Model dropdown list, select *Single action* or *Conditional.*
3. Select the *Assignable Objects* panel in the Toolbox. Navigate to the *space* that contains the *object* to be controlled by the programming. Select that object folder and then click and drag the object into the lower portion of the main pane.

   The object is added to the program and default program settings are displayed in the table.

4. Modify the program settings, as needed.

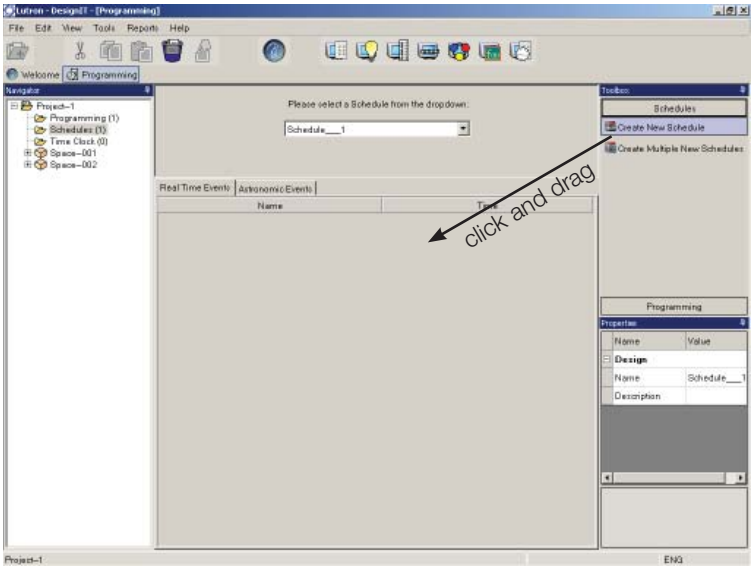
   For procedures on how to modify *single action* settings, refer to "Programming a Button for a Single Action" on page 35.

   For procedures on how to modify conditional action settings, refer to "Programming a Button for a Conditional Action" on page 38.

   After the schedule programming is created, you can create the schedule.

Creating a New Schedule

A *schedule* is a collection of *event/programming* pairs. A schedule identifies the programmed commands to be executed within the lighting *system* at a certain time. Schedules are created at the *project* level.



To create a new schedule:

1. From the Navigator in the *Programming screen,* select the Schedules folder for the project.

   The Schedule dropdown list in the main pane displays the existing schedules, if any, for the project.

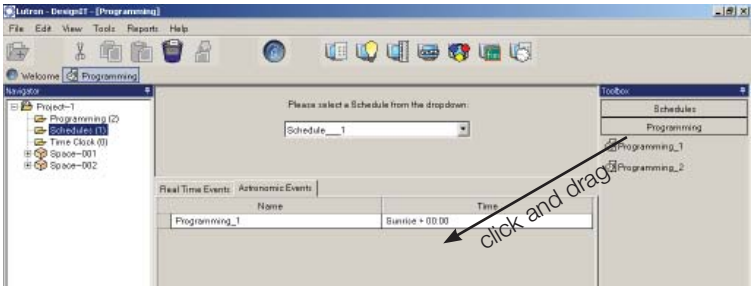
2. Select the Schedules panel in the Toolbox. Click and drag the Create New Schedule option into the main pane.

   The schedule is added and displayed in the Schedule dropdown list. You can now add *astronomic* and/or *real-time events* to it.

   NOTE: To rename the schedule, refer to "Viewing and Editing Object Properties" on page 10.

Adding an Astronomic Event to a Schedule

An *astronomic event* is an *event* defined to occur at a certain time period before or after sunrise or sunset.



To add an astronomic event to a schedule:

1. From the Navigator in the Programming screen, select the Schedules folder for the *project.*

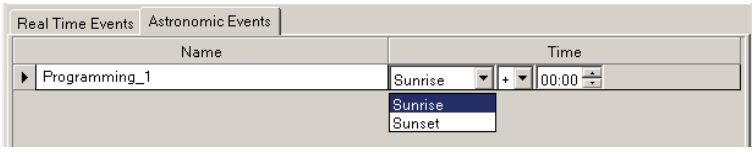
   The Schedule dropdown list in the main pane displays the existing *schedules* for the project.

2. From the dropdown list, select the schedule to which the astronomic event is to be added. Then select the Astronomic Events tab in the main pane.

3. Select the Programming panel in the Toolbox. Click and drag the predefined *programming* for the schedule into the lower portion of the main pane.

   This should be programming you created specifically for this schedule. (For procedures, refer to "Creating New Programming for a Schedule" on page 41.)

   The programming is added to the schedule and default event settings are displayed in the table.



4. To modify the setting values, double-click the Sunrise/Sunset field. Then select the value you want from the dropdown list.

5. Click in the +/- field. Select + to start the event after sunrise or sunset. Select - to start the event before sunrise or sunset.

6. Click the Time field. Enter the number of hours and minutes to wait before starting the event.

Adding a Real-Time Event to a Schedule

A *real-time event* is an *event* defined to occur at a specific time of day.

To add a real-time event a schedule:

1. From the Navigator in the *Programming screen,* select the Schedules folder for the *project.*

   The Schedule dropdown list in the main pane displays the existing *schedules* for the project.

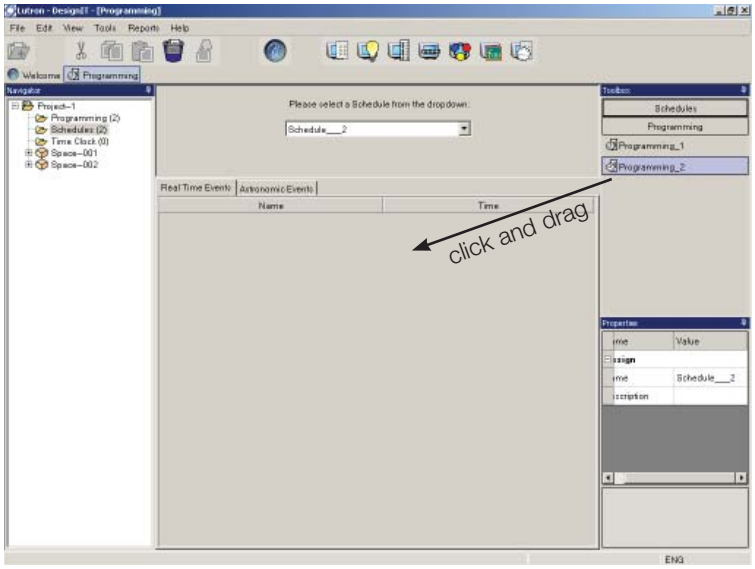
2. From the dropdown list, select the schedule to which the real-time event is to be added. Select the Real-Time Events tab in the main pane.

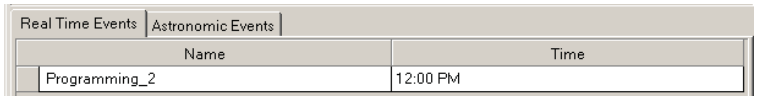
3. Select the Programming panel in the Toolbox. Click and drag the predefined *programming* for the schedule into the lower portion of the main pane.

   This should be programming you created specifically for this schedule. (For procedures, refer to “Creating New Programming for a Schedule” on page 41.)

   The programming is added to the schedule and a default event time is displayed in the table.

   NOTE: To change the event time, double-click in the Time field and enter a different time.





Adding a Date-Specific Schedule to a Time Clock

If a *schedule* is designed for *events* that occur on one or more specific dates (for example, a holiday or special time period), it is added to the *time clock* for those dates only.

NOTE: Default weekly schedules can also be added to a *time clock.* Refer to “Adding a Default Weekly Schedule to a Time Clock” on page 44.

To add a date-specific schedule to a time clock:

1. From the Navigator in the *Programming screen,* select the Time Clock folder for the project. Or to add a *schedule* to a *space,* select the Time Clock folder for the space.

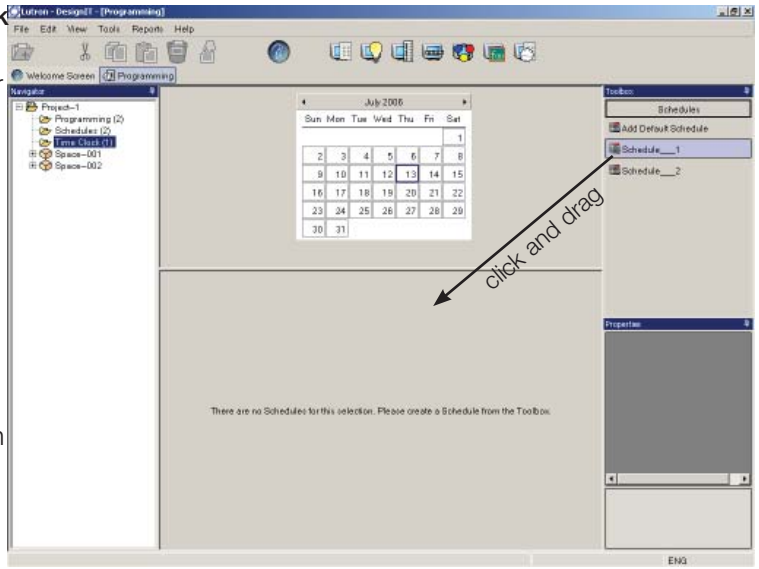
   A *calendar* for the *time clock* is displayed in the main pane. Today’s date is automatically selected.

2. Select the date to which you want to add the schedule.

   NOTE: Use the scroll arrows to scroll through the calendar months.

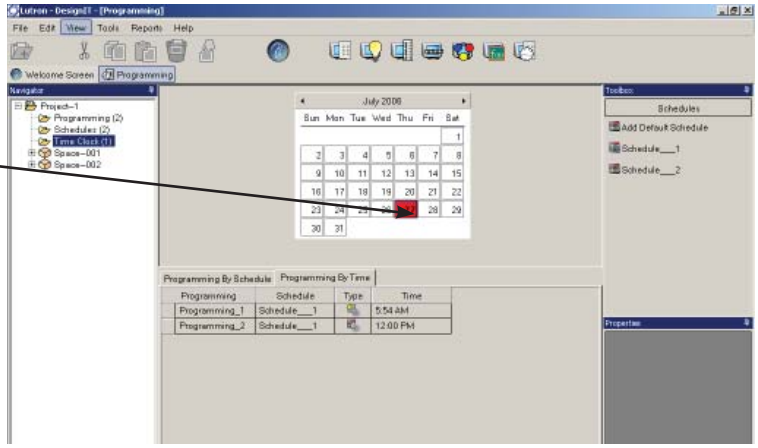
3. Select the Schedules panel in the Toolbox. Click and drag the schedule to be assigned into the main pane.

   The schedule is assigned and the calendar date is highlighted in red.



4. If the schedule applies to more than one date, select the next date and repeat the procedure.

‣ **To view the schedule for a date:** Click the date in the calendar.



Adding a Default Weekly Schedule to a Time Clock

If a *schedule* is designed for *events* that occur weekly, it is added to the *system* as a *default schedule.*

NOTE: Default schedules will occur on the same day every week. To add a date-specific schedule to a *time clock,* refer to page 43.

‣ **To add a default weekly schedule to a time clock:**

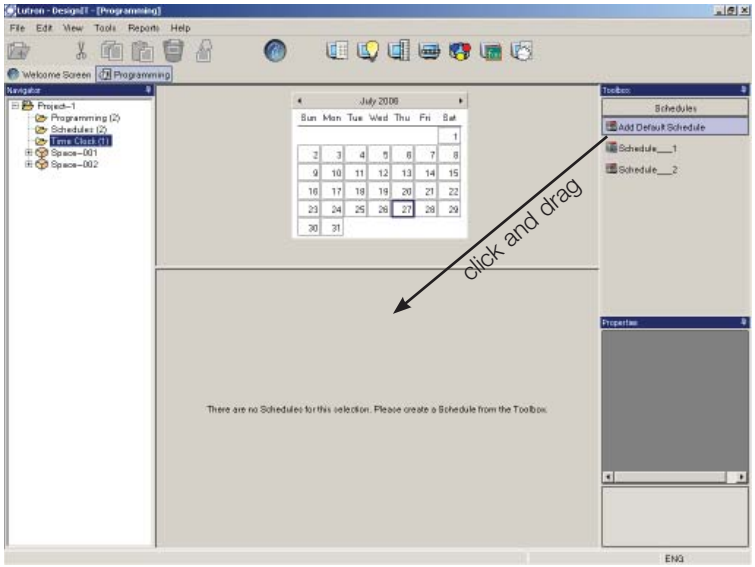
1. From the Navigator in the *Programming screen,* select the Time Clock folder for the *project.* Or to add a default schedule to a *space,* select the Time Clock folder for the space.

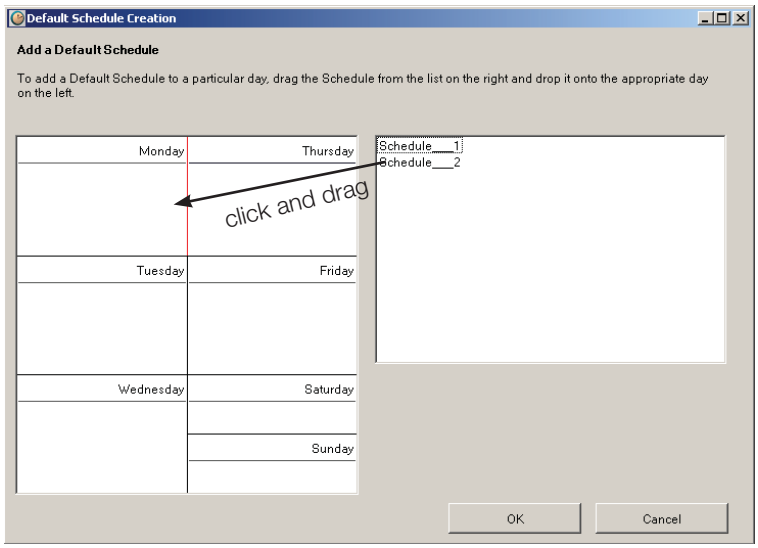
   The time clock *calendar* is displayed in the main pane. Today's date is automatically selected.

2. Select the Schedules panel in the Toolbox. Click and drag the Add Default Schedule option into the main pane.

   The Default Schedule Creation window displays. It contains a placeholder for each day in the week. It also lists the existing schedules for the project or space.

3. From the Default Schedule Creation window, click and drag a *schedule* onto each day that it should occur.

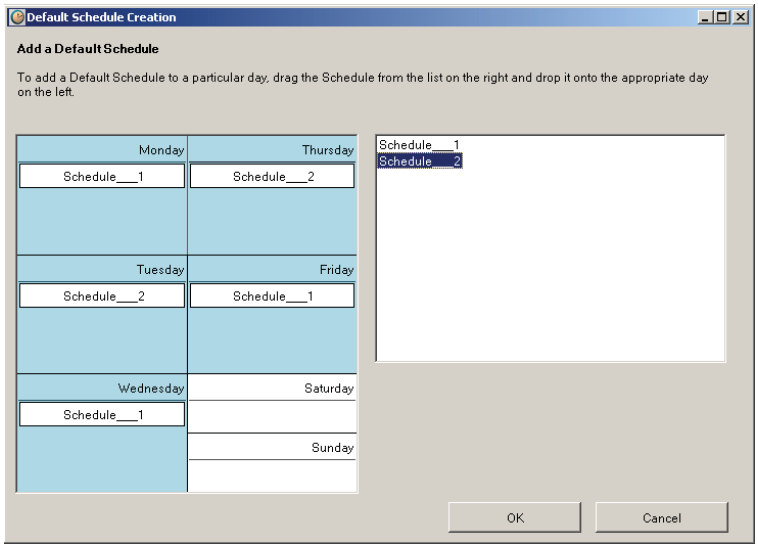




4. When you are finished setting default schedules, click the OK button.

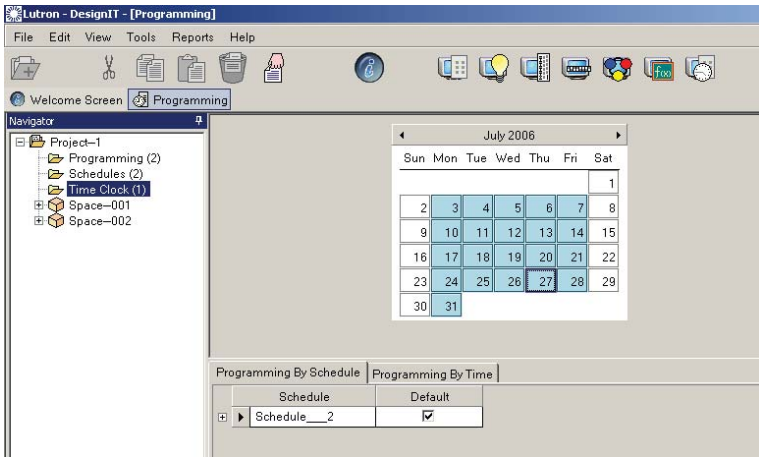
   Days in the calendar that have been assigned a default schedule are highlighted in blue in the main pane.

   NOTE: To remove a default schedule, please refer to the Online Help.



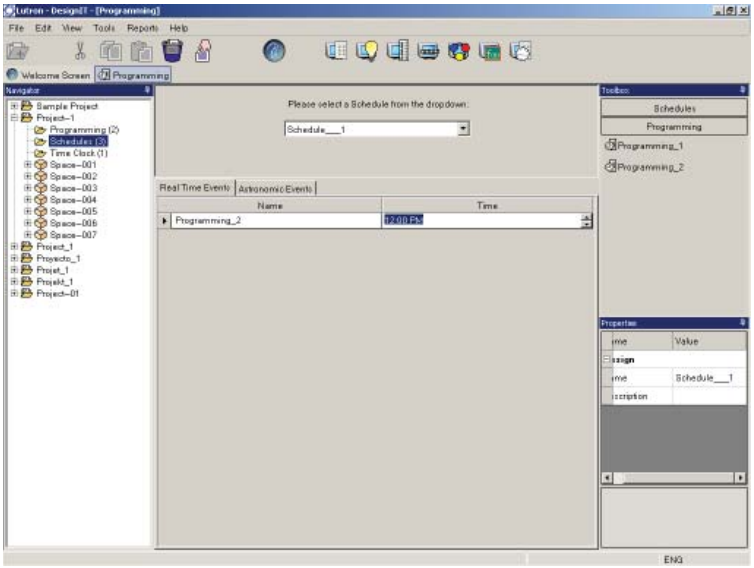
- **To view the schedule for a date:** Click the day in the calendar.

  NOTE: Only one *schedule* can run on each *time clock* for a given day.



Changing When a Time Clock Event Happens

A *schedule* is a collection of *event/programming* pairs. A schedule identifies the programmed commands to be executed within the lighting system at a certain time. Schedules are created at the *project* level.



To change the time an event occurs:

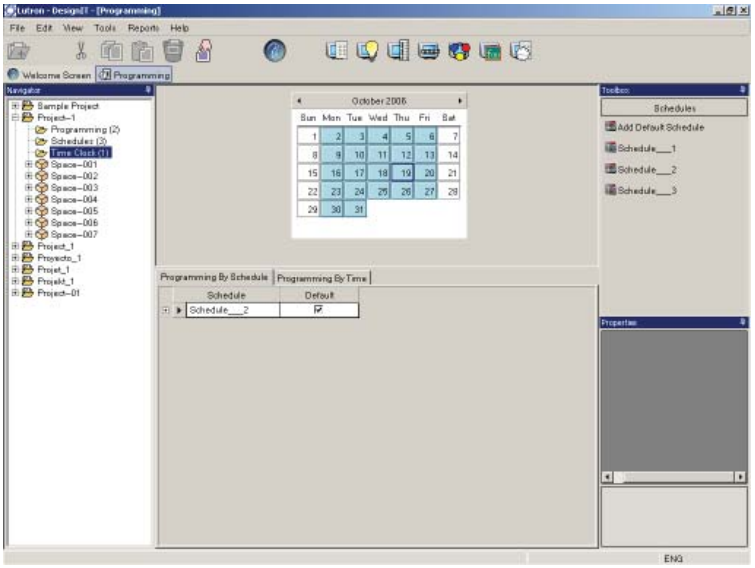
1. From the Navigator in the Programming screen, select the Schedules folder for the project.

   The Schedule dropdown list in the main pane displays the existing schedules for the project.

2. Select the tab for Real-Time or Astronomic events.

   Real-Time events occur at a specific time, while Astronomic events occur relative to sunrise or sunset.

3. Using the table in the center of the main pane, enter a new time for the event.



To change the day an event occurs:

1. Select the day that the event occurs from the calendar at the top of the main pane.
2. Click on the remove icon from the menu bar.
3. You can now add a date-specific schedule (see page 43) or add a default weekly schedule (see page 44).

Viewing and Changing What the Time Clock Event Does

Programming is predetermined behavior that is defined to occur as the result of an *event (astronomic* or *real-time).*

To locate programming on a specific time clock:

1. From the Report menu, select Time Clock Programming.
2. Next, select a date or date range for the report.
3. The report will display the *time clock,* event name, event time, programming name, and *schedule* name.

   NOTE: For more information on running reports in the DesignIT or ControlIT applications, refer to Generating Reports on page 64.

To change existing time clock programming:

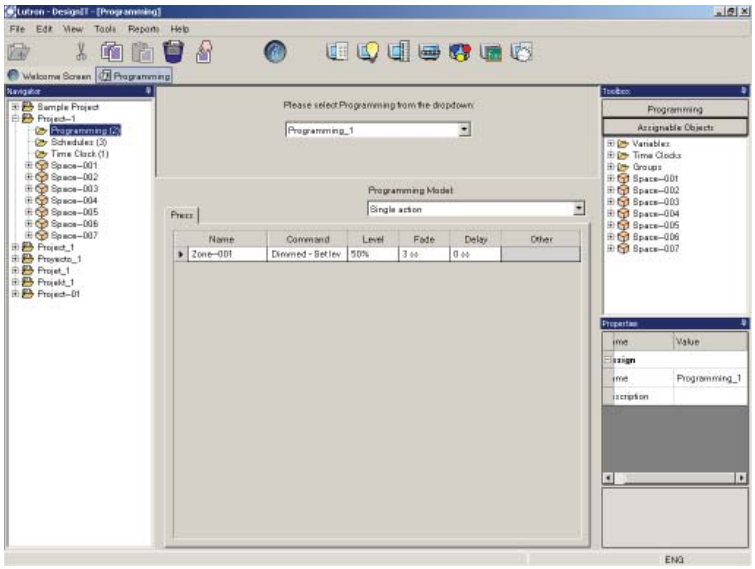
From the Navigator in the Programming screen, select the Programming folder for the project.

The Programming dropdown list in the main pane displays existing programming for the project.

NOTE: To rename the programming, refer to "Viewing and Editing Object Properties" on page 10.

Add commands to the programming:

1. Select the Assignable Objects panel in the Toolbox.
2. Navigate to the space that contains the object to be controlled by the programming.
3. Select that object folder and then click and drag the object into the lower portion of the main pane.



Edit commands to the programming:

1. From the table in the main pane, select the command, level, fade time, or delay time.
2. Add or remove commands as necessary.

Remove commands from the programming:

1. Select the command within the table on the main pane.
2. Click on the Remove icon from the menu bar.

Change the programming model from Single Action to Conditional:

1. Using the Programming Model dropdown list select Conditional.
2. A dialog box will appear asking you to choose to modify the existing programming or to create new programming. If you choose to edit the existing program, any scheduled events will be affected.

Chapter 3

SecureIT™

Overview

The SecureIT™ appliaction enables an eLumen™ administrator to manage eLumen™ Lighting Control user accounts.

From the SecureIT™ application, an administrator can:

- Add and delete users
- Enable and disable users
- Associate users with *projects*
- Change a user's password
- Change a user's basic information
- Set application level access
- Set application feature privileges
- Set *space* level access

Starting and Exiting SecureIT™

To start SecureIT™:

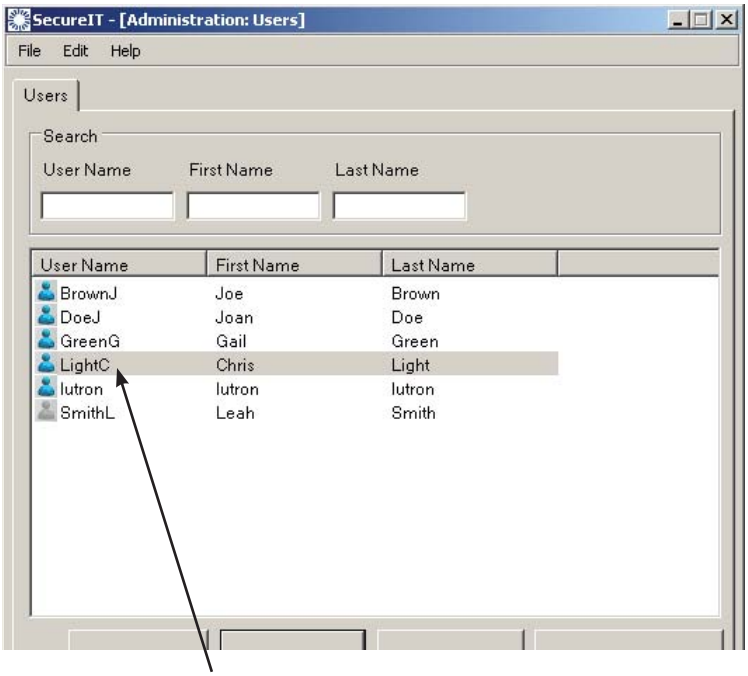
1. Double-click the SecureIT™ icon  on the desktop. Or from the Start menu, choose Lutron Electronics>SecureIT.

   You are prompted to login.

2. Enter your user name and password. Then click OK.

   The SecureIT™ window displays all eLumen™ users.

To exit SecureIT™: Open the File menu and choose Exit.



eLumen™ users
(disabled users are dimmed)

Adding Users

NOTE: Only available to eLumen™ administrators.

Users must be added to SecureIT™ to use the eLumen™ software tools.

To add a user:

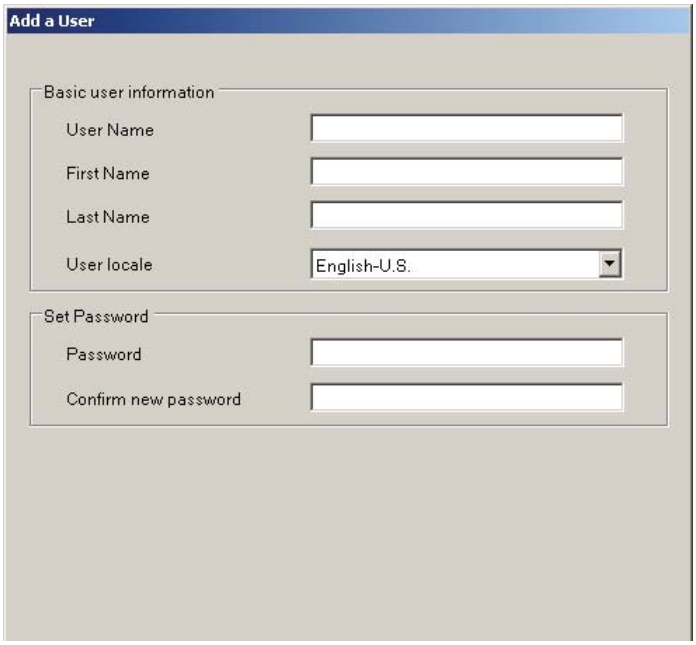
1. From the SecureIT™ application window, open the File menu and choose Add>User. Alternatively, you can click on the Add button at the bottom of the screen.

   The Add a User window displays.

2. Enter the user settings.
3. Click the OK button.

   The user is added to the list in the SecureIT™ window.

   NOTE: The new user that was created must be enabled and associated with a *project* before the user will be active (see page 50).



The following table describes the user settings.

Setting	Description
User Name	1-30 character user name used to login to eLumen software tools.
First Name	The user's first name.
Last Name	The user's last name.
User Locale	Language to be displayed within eLumen software suite for the user.
Password	0-30 character password used to login to eLumen software tools
Confirm Password	Re-type the password in this field to confirm that it is entered correctly.

Deleting Users

NOTE: Only available to eLumen™ administrators

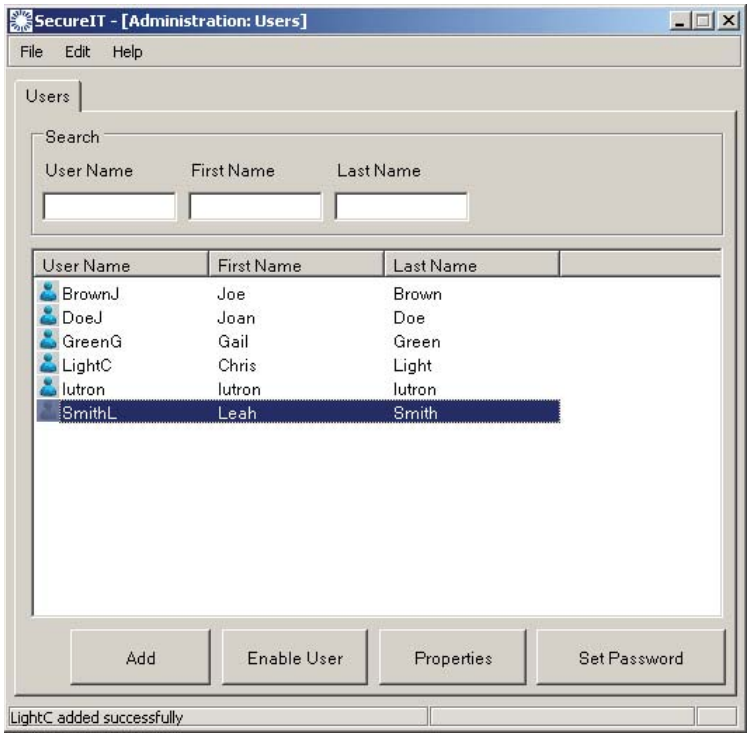
To delete a user:

1. From the SecureIT™ application window, select the user.
2. Open the File menu and choose Delete>User.
3. Click the OK button to confirm the deletion, or click the Cancel button to cancel the deletion.

Enabling and Disabling Users

An administrator must enable users in order for them to login to the eLumen™ software tools.

- **To enable a user:** Select the user name. Then, open the File menu and choose Enable>User. Alternatively, you can click on the Enable User button at the bottom of the screen.
- **To disable a user**: Select the user name. Then, open the File menu and choose Disable>User. Alternatively, you can click on the Disable User button at the bottom of the screen.



Associating Users with Projects

An eLumen™ administrator must associate users with the *projects* they can access within the eLumen™ software tools.

- **To associate a project with a user:**

1. From the SecureIT™ window, open the File menu and choose Add>User Project.

   The Associate Users with Projects window is displayed.

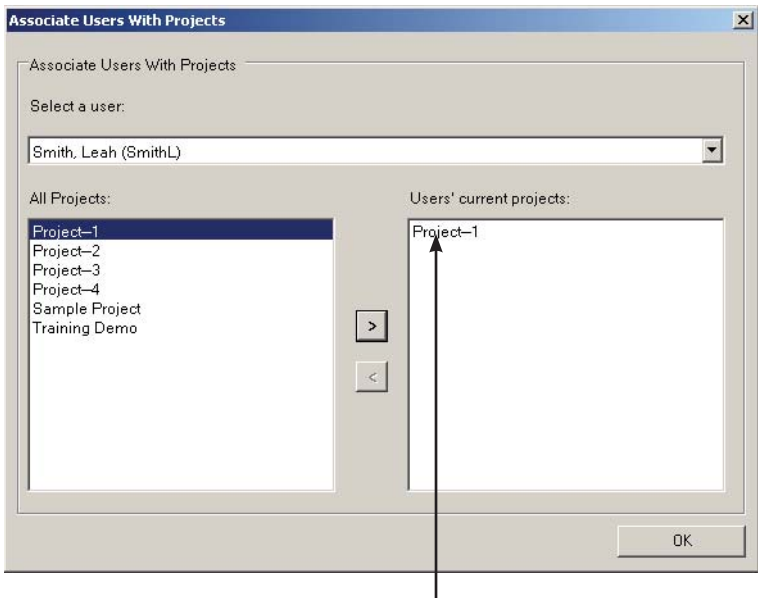
2. From the dropdown list, select the user.
3. From the All Projects box, select the project to be associated with this user.
4. Click the > button.

   The association is made and the project name is displayed in the User's current projects box.

   The next time the user logs in to an eLumen™ software tool, the associated project(s) will be displayed in the navigation tree.

- **To remove a project association:**

1. From the Associate Users with Projects window, select the user from the dropdown list.
2. From the User's current projects box, select the project to be removed from the user.
3. Click the < button.



Projects associated with this user

Resetting a User's Password

To reset a user's password:

1. From the SecureIT™ application window, select the user. Then click the Set Password button.

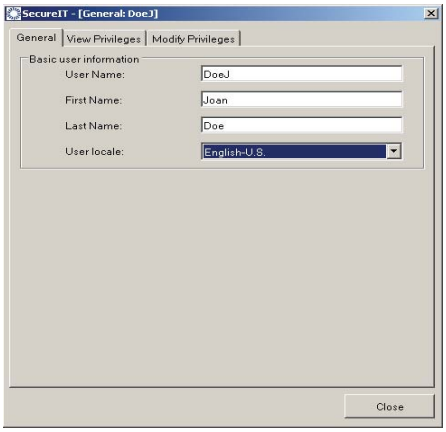
   The Set Password dialog box displays.

2. Enter the new password in each field. Then click the OK button.

Changing a User's Basic Information

To change a user's basic information:

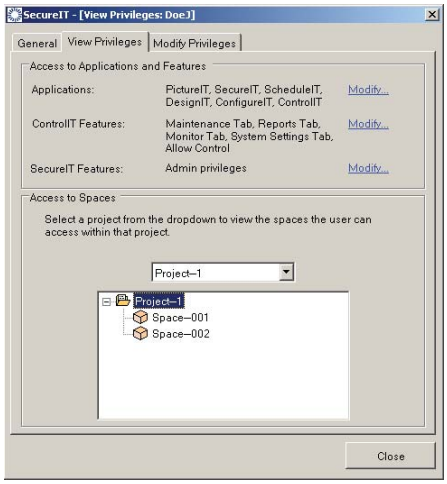
1. From the SecureIT™ application window, select the user. Then click the Properties button.
2. Change the properties for the user, as needed. Then click the Close button.



Viewing User Privileges

To view a user's privileges:

1. From the SecureIT™ application window, select the user.
2. Open the Edit menu and choose Properties.
3. You can now view the applications, features, and *spaces* that the selected user has access to use.
4. Click on the Close button to return to the SecureIT™ application window.



Modifying User Privileges

Setting Space Level Access

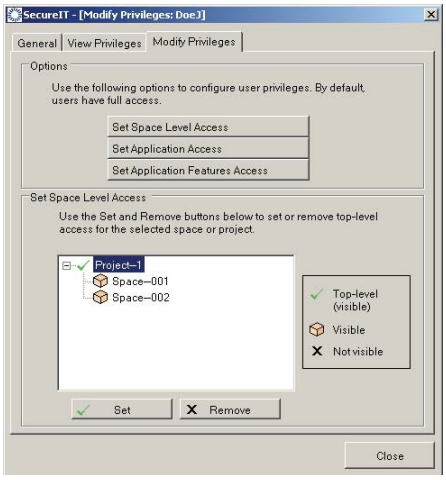
NOTE: Only available to eLumen™ administrators

To set application access for a user:

1. From the SecureIT™ application window, select the user.
2. Open the Edit menu and choose Properties.
3. Click on the Modify Privileges tab.

   Top-level *spaces* appear at the top of the software tree list within the eLumen™ Suite of tools. A user has access to all spaces underneath a top-level space.

   A top-level space that can be accessed will be marked with a check ✓. A top-level space that cannot be accessed will be marked with an ✘.



To set access to spaces:

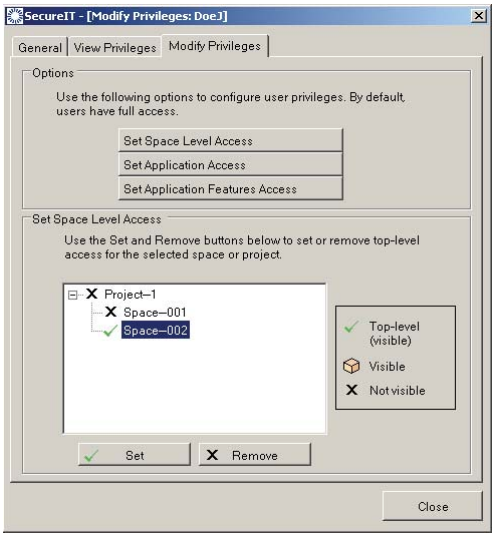
1. Select the top-level *space* for a particular *project* and click on the Set button.
2. Repeat this process for all spaces that should be visible at the top-level.

   NOTES:
   - Access will be granted to all spaces and subspaces that are marked as top-level.
   - It is possible to have more than one top-level space. A space can only be a top-level space if none of the spaces above it within the same branch are also top-level spaces.

To remove access to spaces:

1. Select a top-level *space* for a particular *project* and click on the Remove button.
2. Repeat this process for all spaces that should not be visible to the user.

   NOTE: To restore a space to the list of visible spaces, select the space and click on the Set button.



Setting Application Level Access

NOTE: Only available to eLumen^{TM} administrators.

To set application access for a user:

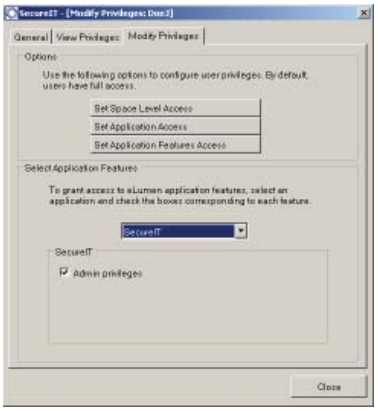
1. From the SecureIT^{TM} application window, select the user.
2. Open the Edit menu and choose Properties.
3. Click on the Modify Privileges tab.
4. Deselect check boxes to remove access to those programs.

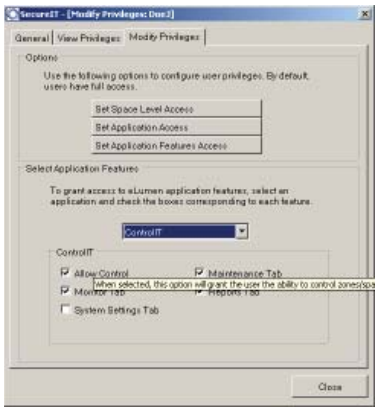
Setting Application Features Access

NOTE: Only available to eLumen^{TM} administrators.

To set application features access for a user:

1. From the SecureIT^{TM} application window, select the user.
2. Open the Edit menu and choose Properties.
3. Click on the Modify Privileges tab.
4. Click on the Set Application Features Access button.
5. Use the dropdown box and select an application.
6. Remove the check boxes from the features that you wish to have removed from the user's access rights.





Chapter 4

ControlIT™

Overview

ControlIT™ is a web-based interface used to monitor and control a facility's lighting *system* in *real-time.* The ControlIT™ application enables you to view the status of the lighting system at any time and temporarily change the settings specified in DesignIT™.

From the ControlIT™ application, you can:

- View current status and details on *spaces* (including subspaces), *zones, control station devices, calendar events,* and *variables*
- Select *scenes* and modes in any space
- Set zone intensities, including raise/lower, on/off, and full on/off
- Enable/disable control station devices
- Enable/disable *time clocks*
- Set *variable states*
- Set the state of movable *walls*
- Apply *modes* to *groups*
- Run reports, including time clock and event log
- Perform maintenance or troubleshooting by checking communication channels and software error logs
- Process system settings, including compiling a *project* and transferring it to the processor(s)

When you change *real-time* settings using the ControlIT™ application, the system stays in that temporary state until a time clock event, button *press,* or other user interaction occurs. Real-time changes made in the ControlIT™ application do not modify the system settings specified in DesignIT™.

NOTES:

- The ControlIT™ application is not intended for system modeling or programming. For modeling and programming procedures, refer to Chapter 2: DesignIT™.
- Actions initated from the ControlIT™ application will be sent to the system immediately, but the status may not be displayed for up to one minute.

Performing Basic ControlIT™ Operations

The following topics contain procedures used to perform basic ControlIT™ operations.

Starting and Exiting ControlIT™

To start ControlIT™:

1. Double-click the ControlIT™ application icon  on the desktop.

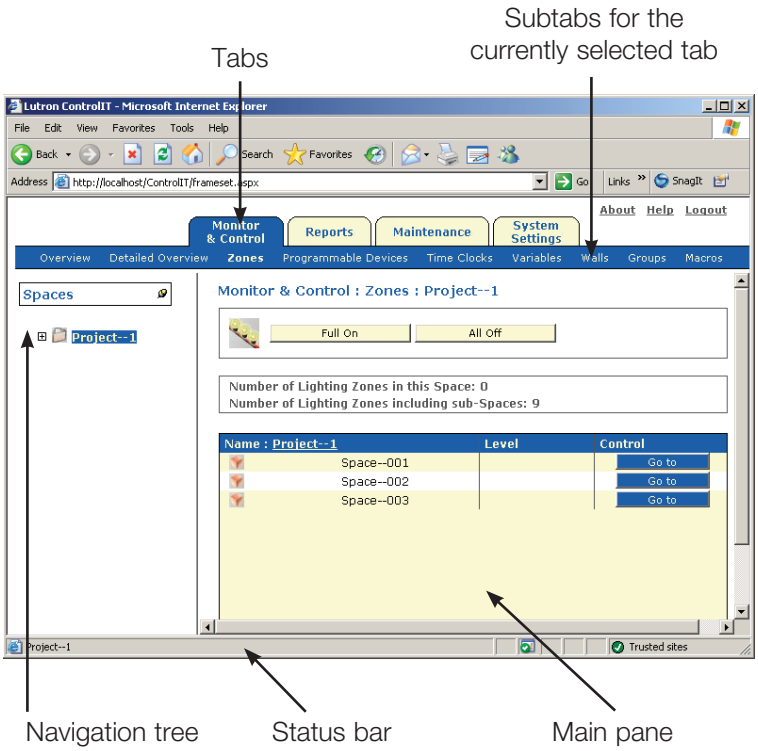
   You are prompted to login.

2. Enter your user name and password. Then click OK.

   The ControlIT™ Zones page is displayed. The page contains tabs and related subtabs, a navigation tree, a main pane, and a status bar.

To logout of ControlIT™: Click Logout.

To exit ControlIT™: Choose Close from the File menu or click the ✘ in the upper right-hand corner of the screen.



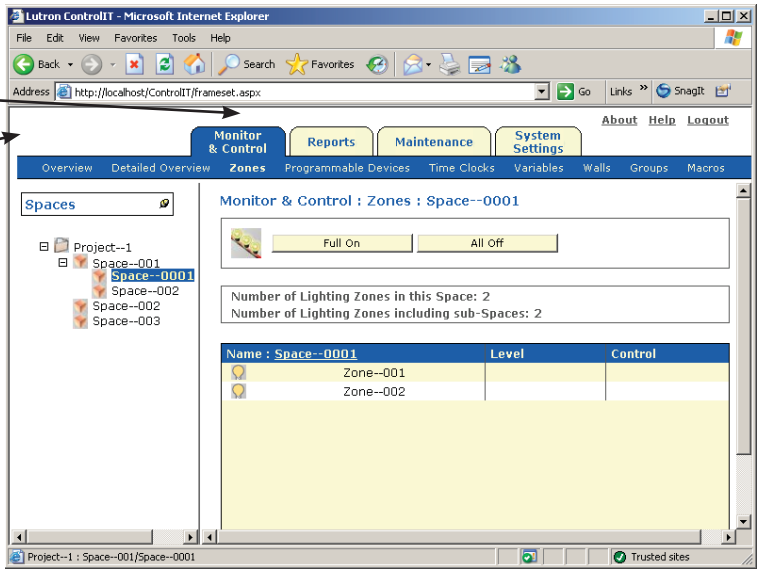
Selecting ControlIT™ Tabs and Subtabs

To work within the ControlIT™ application, select a function tab.

Related subtabs for that function are displayed.

Click a subtab to select a specific operation.

NOTE: Function tabs can be visable or hidden depending on the level of access that has been granted to that user by the eLumen™ administrator.



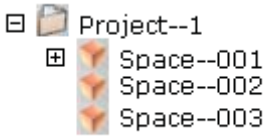
Using the Navigation Tree

The navigation tree on ControlIT™ pages displays levels of *system* information through which you can navigate. The *project* folder is positioned on top, with system spaces arranged hierarchically below it.

NOTE: The projects available to you in the navigation tree depend on the system privileges associated with your user name. For details about user names, refer to Chapter 3: SecureIT™.

- **To open the project folder and display its contents:** Click the folder's + sign or simply double-click the folder.

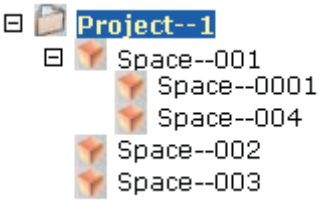
The project folder opens and displays the first level of *spaces* in the project.



Click a space's + sign to display the next level of spaces (subspaces). Continue to open folders until you reach the desired level of the selected project.

If a space does not have a + sign, it does not have subspaces.

- **To close a project or space and hide its contents:** Click its - sign or double-click its name.

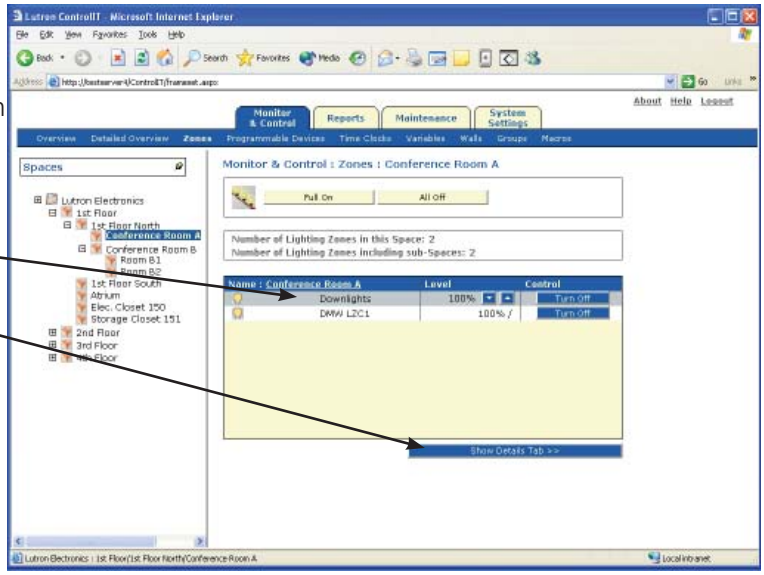


Showing and Hiding the Details Tab

If the ControlIT™ page you are viewing has a Show Details Tab button, you can view details about a *space* or other *object* shown in the table on the main pane.

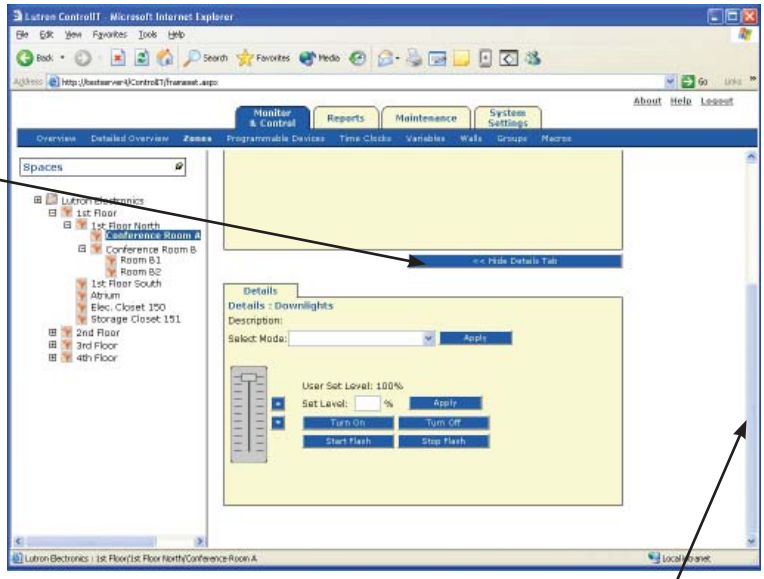
- **To show the details tab for an object:** Select the object in the table.

Then click the Show Details tab button.



The Details tab is shown at the bottom of the page.

- **To hide the Details tab:** Click the Hide Details Tab button.



Use the scroll bar to move up and down on the page

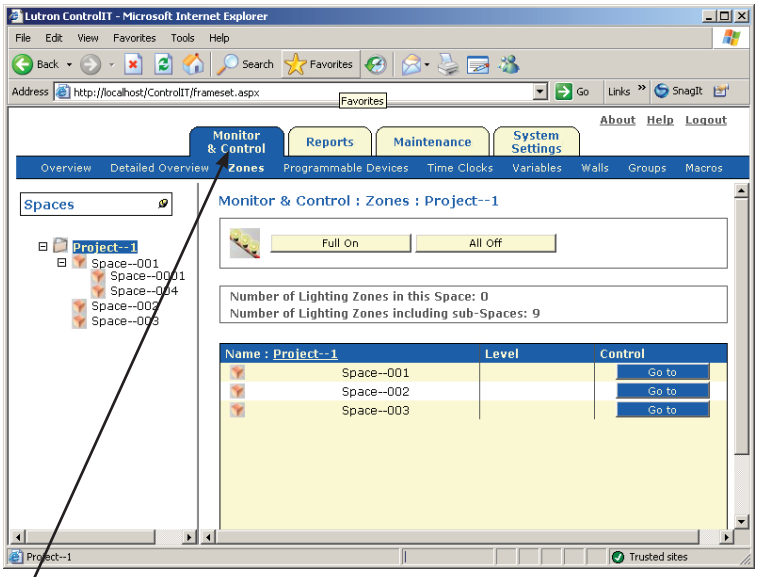
Monitoring and Controlling the System

From the Monitor and Control page in the ControlIT™ application, you can view a list of all the *spaces* in the *system* and select a *scene* and/or *mode* for any space.

You can also view and set the state of:

- *Zone* intensities
- Programmable devices
- *Time clocks*
- *Variables*
- Movable *walls*
- *Groups*

NOTE: When you change the *real-time* state of an object using the ControlIT™ application, the system stays in that temporary state until a time clock event, button *press,* or other user interaction occurs. Real-time changes made in the ControlIT™ application do not modify the system settings specified in DesignIT™.



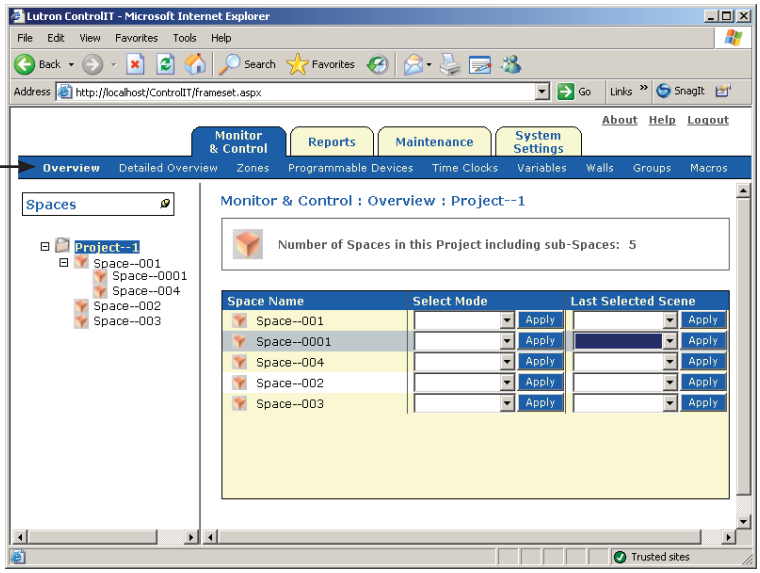
- **To display the Monitor and Control page:** Select the Monitor & Control tab.

Viewing System Spaces and Selecting Scenes and Modes

The Overview and Detailed Overview pages are used to view system *spaces* and select *scenes* and *modes.*

Viewing and Selecting Space Scenes and Modes Using the Overview Page

The Overview page lists all the spaces in the *system* and enables you to apply a different scene or mode to any space.



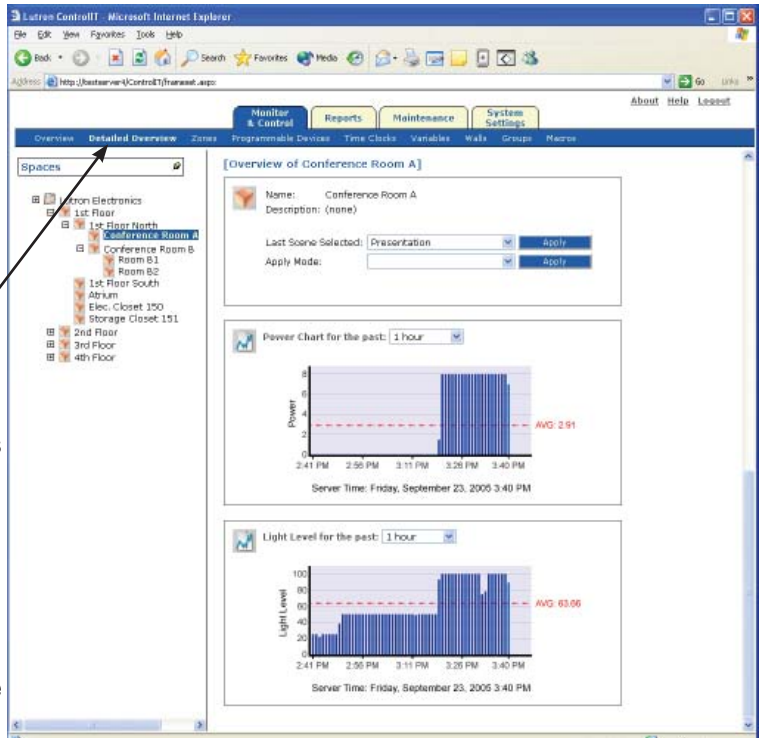
- **To view all system spaces using the Overview page:** From the Monitor & Control page, click the Overview subtab.

Once the Overview page is displayed, the table in the main pane lists all the spaces in the *project* and the last selected scene for each space.

- **To select a scene for a space**: Click in the Last Selected Scene field for the space. From the dropdown list, select the scene to be applied. Then click the Apply button.
- **To apply a mode to a space:** Click in the Select Mode field for the space. From the dropdown list, select the mode to be applied. Then click the Apply button.

Viewing and Selecting Space Scenes and Modes using the Detailed Overview Page

The Detailed Overview page displays the *scene* and *mode* for a specific *space* and enables you to apply a different scene or mode. Light level and power graphs are also displayed.



▸ **To view a specific space using the Detailed Overview page:**

1. From the navigation tree in the Monitor & Control page, select the space you want to monitor.
2. Click the Detailed Overview subtab.

   The Detailed Overview page displays detailed information about the space.

   NOTE: The power graph is displayed only for spaces that contain Lighting Zone Controller (LZC) units. LZC units are only available for North and South America.

▸ **To select a scene for the space**: From the Last Scene Selected dropdown list, select the scene to be applied. Then click the Apply button.

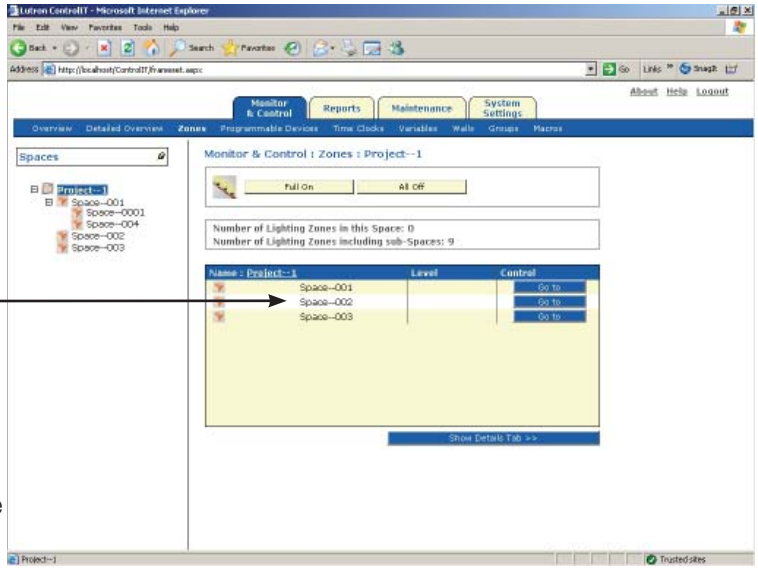
▸ **To apply a mode to the space**: From the Apply Mode dropdown list, select the mode. Then click the Apply button.

If the selected space contains LZC units, the Detailed Overview page contains additional information.

▸ **To change the timeframe of the data displayed in the power and light level graphs**: Select a time interval from the dropdown list.

Viewing and Setting Zone Intensities

A *zone* is a collection of *switch legs* controlled simultaneously as one unit (also called a channel by some lighting designers).



▸ **To view the intensity setting for a zone:**

1. From the navigation tree on the Monitor and Control page, select the space that contains the zone whose intensity you want to view.
2. Click the Zones subtab.

   The zones for that space and their current intensities (lighting levels) are displayed in the table.

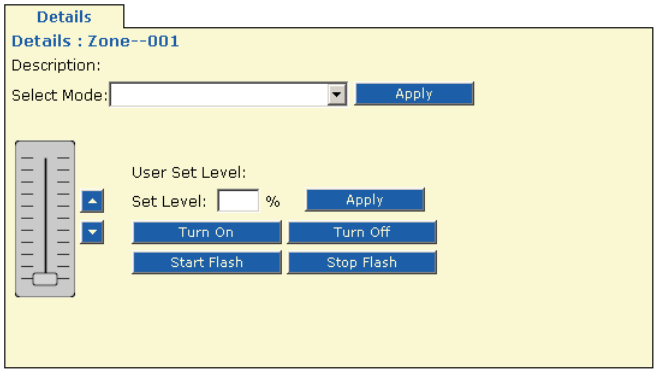
▸ **To set the intensity of a zone:**

1. Select the *zone* in the table.
2. Click  to lower or raise the intensity.

   - To turn the zone ON or OFF, click the Turn On or Turn Off button.
   - To turn all zones for the space ON or OFF, click the Full On or All Off button. This turns ON or OFF all zones in that space and any subspaces.

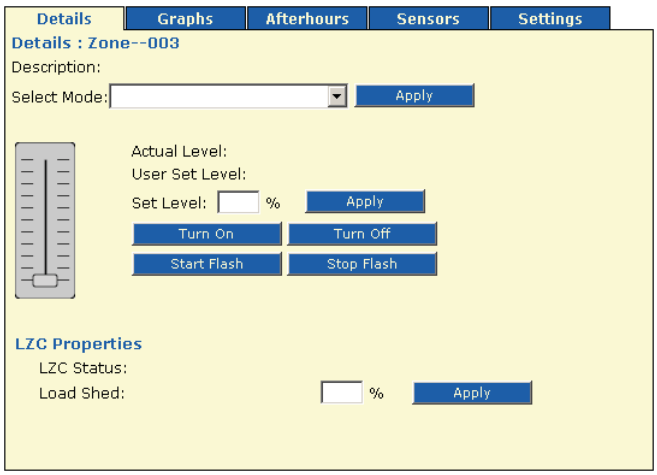
To modify settings of a zone:

- To view details about a zone, select the zone in the table. Then click the Show Details Tab button. The zone Details tab is displayed and you can view or apply additional zone settings.
- To apply a mode to the zone, select the mode from the Select Mode dropdown list. Then click the Apply button.
- To lower or raise the zone intensity, use the slider or click  or enter a value in the Set Level field and then click the Apply button.
- To start or stop zone flashing, click the Start Flash or Stop Flash button.



To modify additonal settings of a Lighting Zone Controller (LZC) Unit:

- To set the *load shed,* enter a value in the Load Shed % field and then click the Apply button.
- To view the power and light levels for the zone, select the Graphs subtab. Use the dropdown list to select the time interval to be displayed.
- To view and adjust the settings for when a LZC unit goes into *Afterhours* mode, select the Afterhours subtab. This mode is used to turn the lights OFF after a set time in which the space is unoccupied.
- To view and adjust the settings for *sensors* attached to a LZC unit, select the Sensors subtab.
- To view and adjust the LZC unit settings, select the Settings subtab.



The following table describes the LZC unit settings.

Setting	Description
High-end Trim	Maximum actual light level that is allowed to be set (for example, Actual=90 when user sets it to 100)
Low-end Trim	Lowest the light level can go before the OFF command is sent.
Emergency Level	Light level the unit will go to during Emergency mode.
Status	Indicates if a wall control is connected.
Wall Control State	Indicates if the wall control is enabled or disabled.

Viewing and Setting the State of Programmable Devices

Programmable devices include *wall* controls, AV equipment, and RS232 equipment.

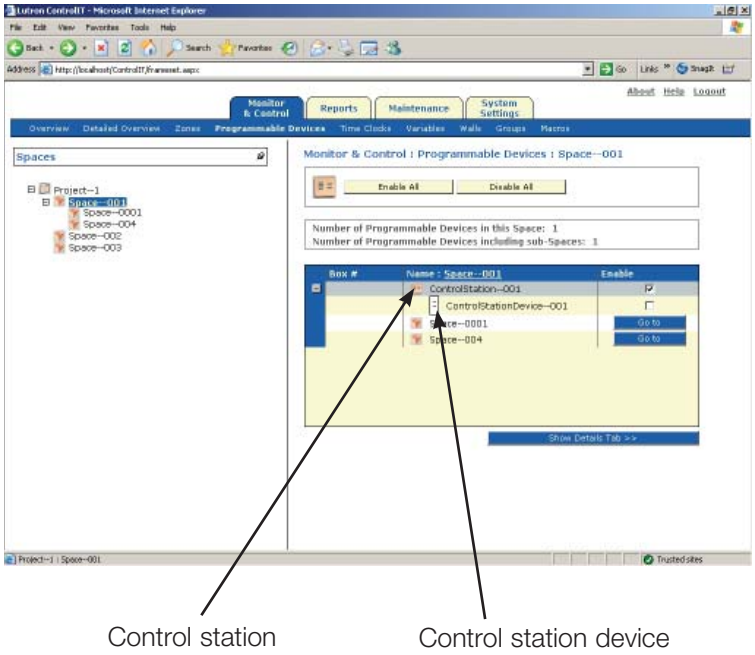
- **To view the state of a programmable device:**

1. From the navigation tree on the Monitor and Control page, select the *space* that contains the programmable device.
2. Select the Programmable Devices subtab.

   The programmable devices for the space are listed in the table.

   NOTE: If there are subspaces below the selected space, the subspaces are also listed in the table. Click the Go to button for a subspace to view its programmable devices.

- **To enable or disable a programmable device**: Check or uncheck its Enable checkbox.



Control station

Control station device

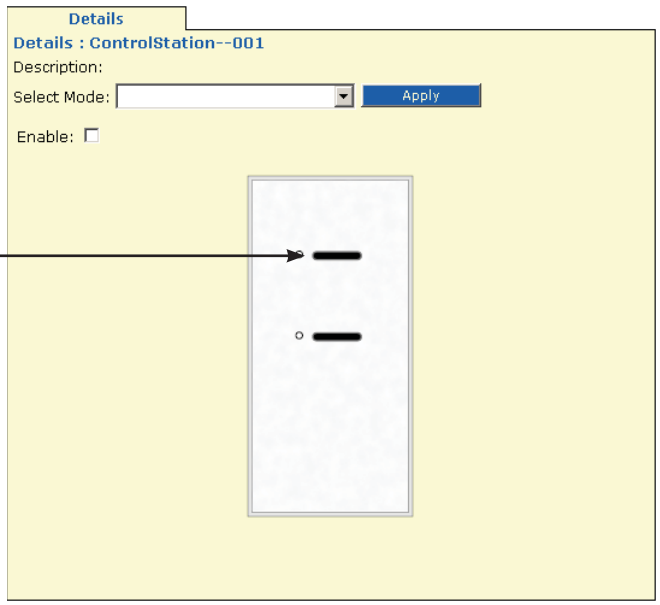
- **To enable or disable all programmable devices in the space and its subspaces**: Click the Enable All or Disable All button.
- **To view more details about a programmable device**: Select the device in the table. Then click the Show Details Tab button.

  The Details tab is displayed and you can view or apply additional device settings.

- **To virtually "press" a button on the device**: Click the button in the image.

  NOTE: Since a *release* event cannot be simulated in the ControlIT™ application, pressing the button may not have the same effect as a real button *press* on the actual device.

- **To apply a mode to the device**: Select the *mode* from the Select Mode dropdown list. Then click the Apply button.



Viewing and Setting the State of Time Clocks

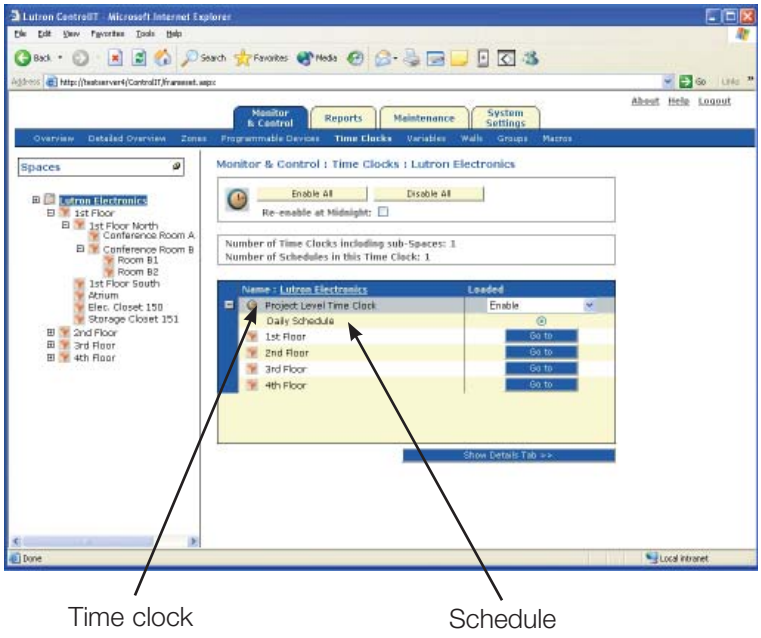
A *time clock* is a collection of *schedules.* Time clocks are used to trigger lighting *system* events.

To view the state of a time clock:

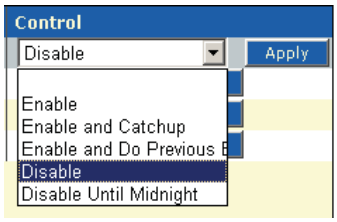
1. From the navigation tree on the Monitor and Control page, select the *space* that contains the time clock. Or to view the time clock for the *project,* select the project.
2. Select the Time Clocks subtab.

   The time clock is listed in the table in the main pane.

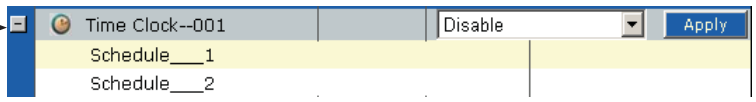
   NOTE: If there are subspaces below the selected space, the subspaces are also listed in the table. Click the Go to button for a subspace to view its time clock.



To enable or disable the time clock: Select the state from the dropdown list.



To view the time clock schedules: Select the time clock's + sign.



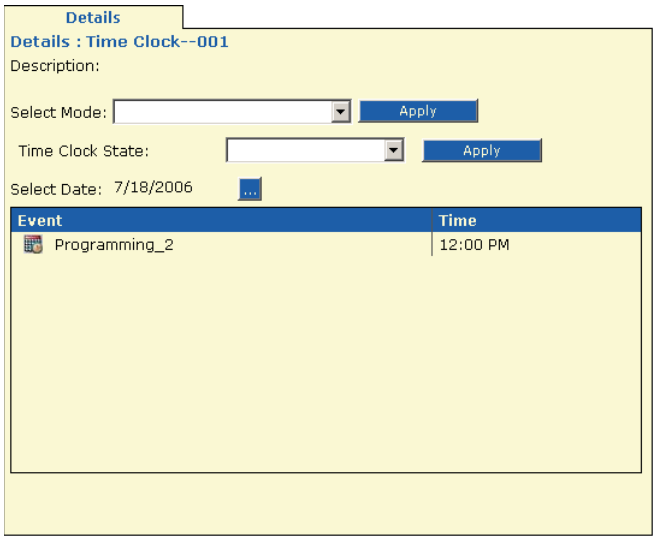
To enable or disable all time clocks in the selected space and its subspaces: Click the Enable All or Disable All button.

To re-enable all time clocks at midnight, check the Re-enable at Midnight checkbox.

To view details about a time clock schedule: Select the *schedule* in the table. Then click the Show Details Tab button.

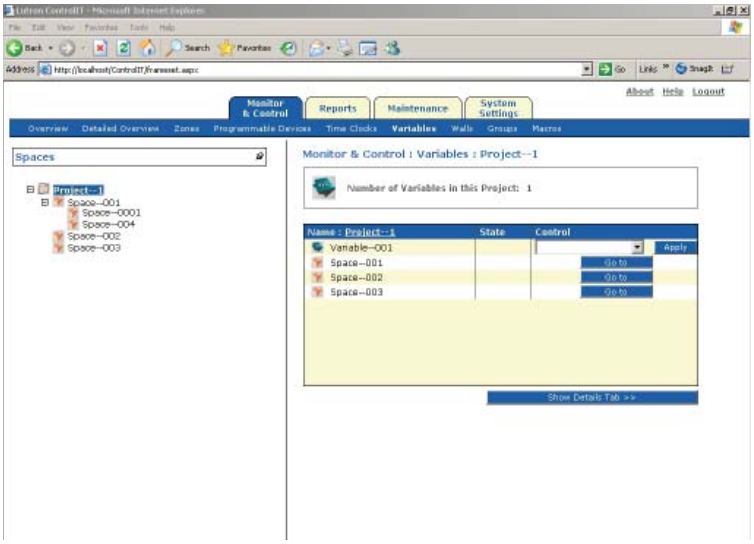
The Details tab is displayed and you can view *schedule* events.

To apply a mode to the schedule: Select the *mode* from the Select Mode dropdown list. Then click the Apply button.



Viewing and Setting the State of Variables

A *variable* is a programming *object* that is referenced by other objects for programming purposes. A variable can be one of three types: True/False, Multi-state, or Integer.



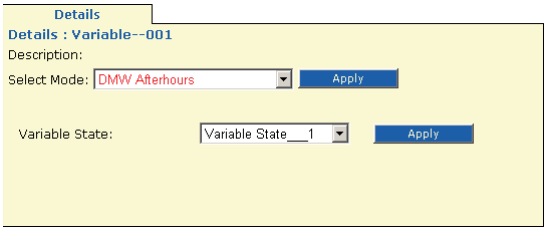
- **To view the state of a variable:**

1. From the navigation tree on the Monitor and Control page, select the *project.*
2. Select the Variables subtab.

   The variables for the project are listed in the table.

- **To set the variable state**: Select the state from the dropdown list.
- **To view details about a variable**: Select the variable in the table, and then click the Show Details Tab button.

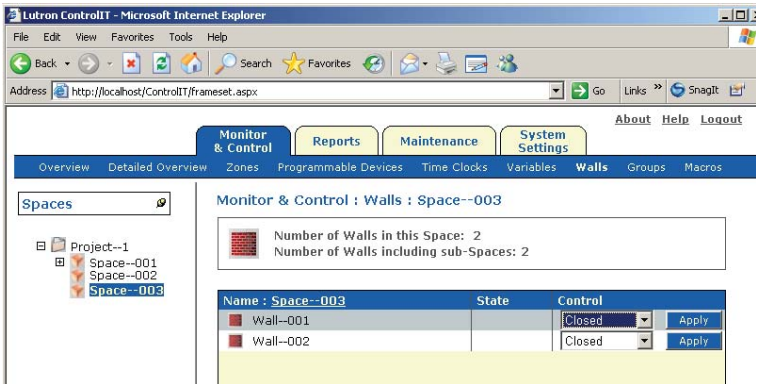
  The variable Details tab is displayed.



- **To apply a mode to the variable**: Select the *mode* from the Select Mode dropdown list. Then click the Apply button.

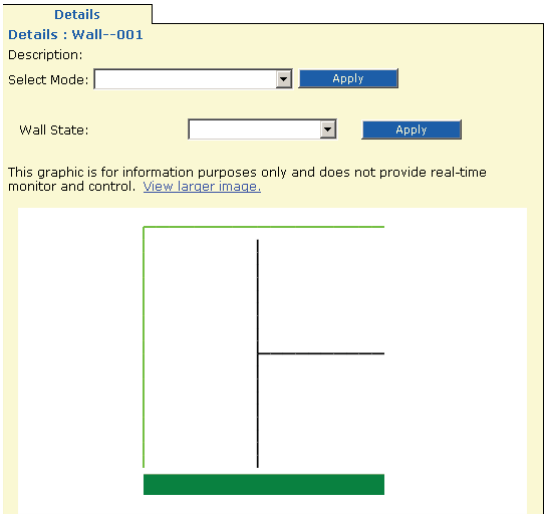
Viewing and Setting the State of Movable Walls

Movable walls can be opened or closed to create partitions (subspaces) within a *space.*



- **To open or close the wall:** Select that option from the Wall State dropdown list.
- **To view details about a wall**: Select the wall in the table, and then click the Show Details Tab button.

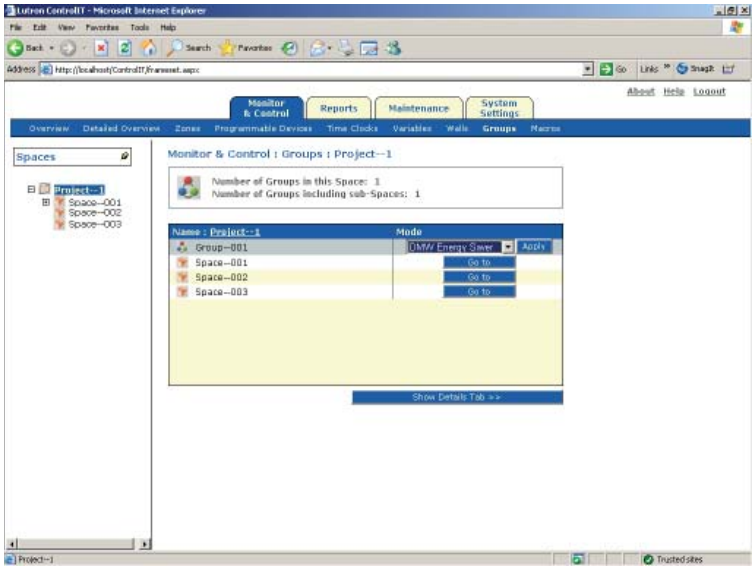
  The wall Details tab is displayed.



- **To apply a mode to the wall:** Select the *mode* from the Select Mode dropdown list. Then click the Apply button.

Viewing and Setting the State of Groups

A *group* is a named collection of one or more *objects* (or one or more groups) that share a common functional purpose.



To view the state of a group:

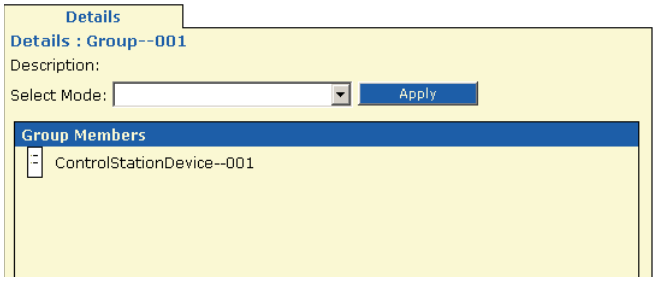
1. From the navigation tree on the Monitor and Control page, select the *project* or *space* that contains the group.
2. Click the Groups subtab.

   The groups in the space are listed in the table.

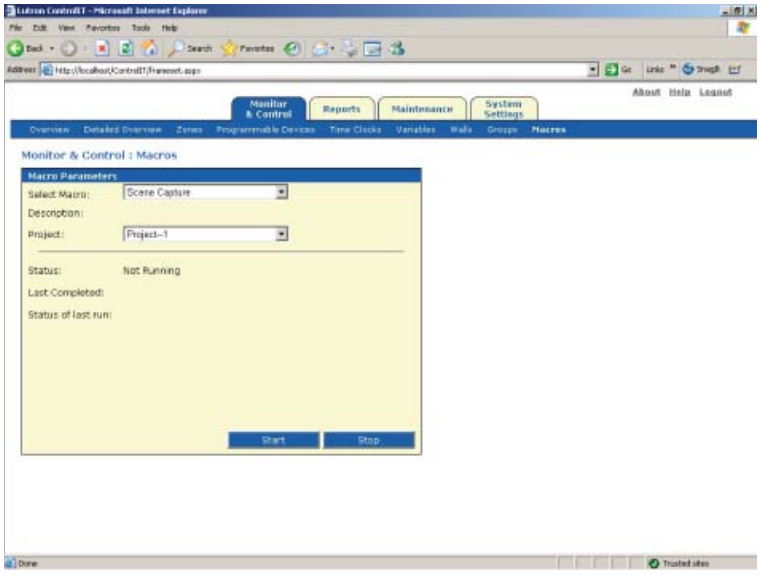
   NOTE: If there are subspaces below the selected space, the subspaces are also listed in the table. Click the Go to button for a subspace to view its groups.

- **To apply a mode to a group**: Select the *mode* from the Select Mode dropdown list. Then click the Apply button.
- **To view details about a group**: Select the group in the table, and then click the Show Details Tab button.

  The group Details tab is displayed. Members of the group are listed in the table.



- **To run the scene capture macro:**
  Your *system* may be equipped with certain hardware devices that can modify the values of *scenes.* These devices are called hand-held programmers and Viseo™ *control station devices.* When scene changes are made from the devices, the changes are stored in the processors only. If you *transfer* to your system without saving these changes to the database, the changes will be lost. If you choose to save the changes, you will do so by clicking on the *macro* option under Monitor & Control. Choose the scene capture macro and press the run button. The macro may take several minutes to execute. The screen will update to inform you that the operation was completed successfully.



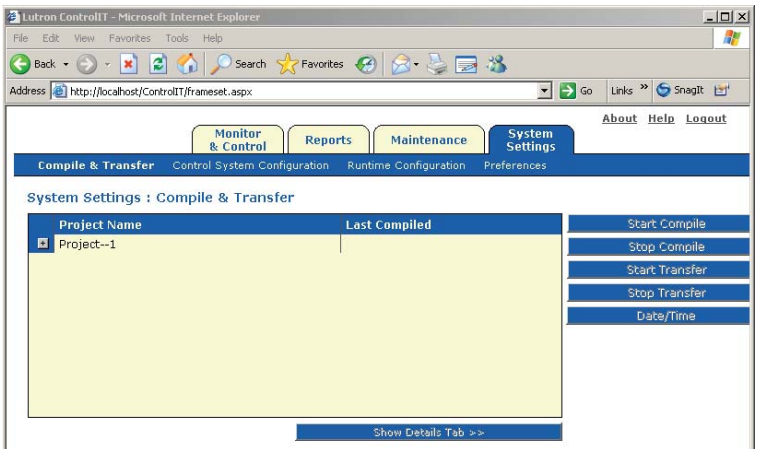
System Settings

From the System Settings page, you can:

- *Compile* the *project* database and then *transfer* it to the lighting *system* hardware
- View and set preferences

▸ **To display the System Settings page:** Select the Systems Settings tab.

NOTE: Function tabs can be visable or hidden depending on the level of access that has been granted to that user by the eLumen™ administrator.



Compiling and Transferring Project Data

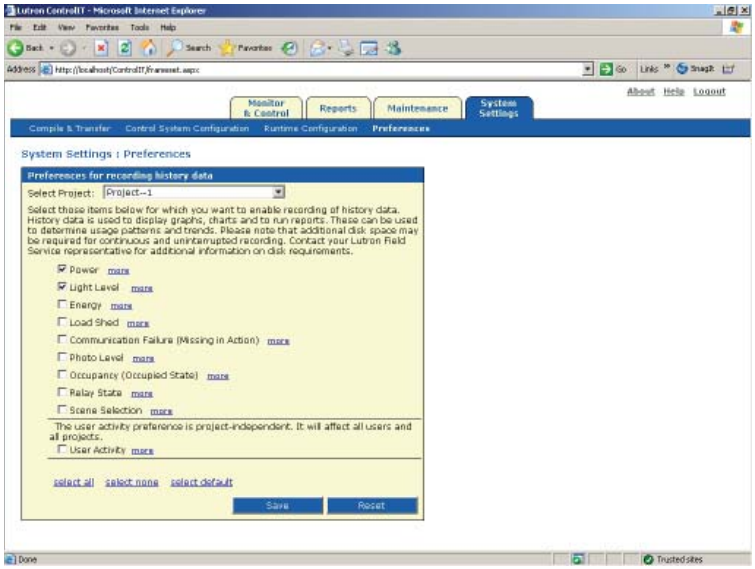
Please refer to Chapter 7: Compile and Transfer.

Viewing and Setting Preferences

Preference settings specify the items to be recorded about the *system* (for example, when graphs are displayed and reports are generated.)

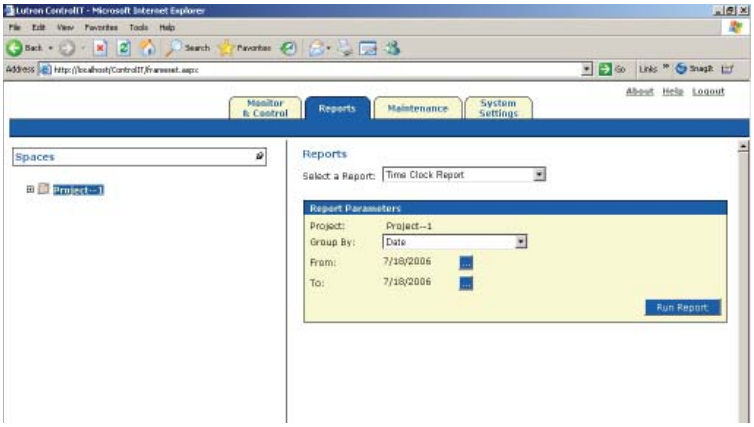
▸ **To enable/disable DataLogging:**

1. From the System Settings page, select the Preferences subtab.
2. Check or uncheck the setting checkboxes. Then click the Save button.



Generating Reports

The ControlIT™ application enables you to generate a variety of reports. Reports are helpful for monitoring *system* usage and performance.



To generate a report:

1. Select the Reports tab.

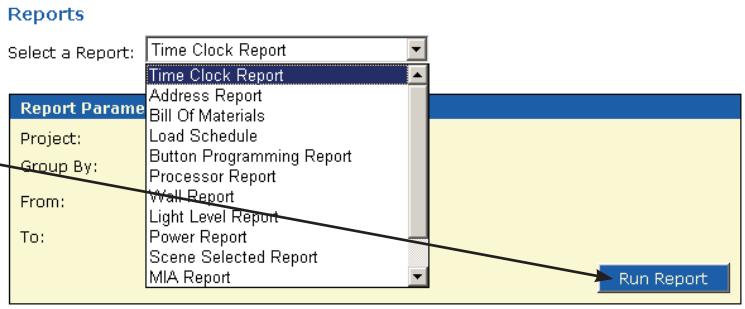
   The Reports page is displayed.

2. From the Select a Report dropdown list, select the type of report to be generated.

   Depending on the report type you select, related report *parameters* are displayed in the Report Parameters box.

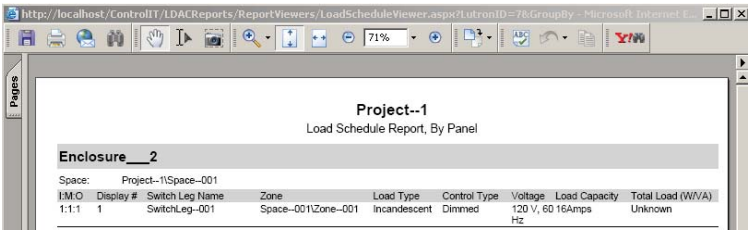
3. Select the parameters to be included in the report.

4. Click the Run Report button.



The report is generated and displayed in PDF format. Use the Adobe window controls to save or print the report.

NOTE: Some reports will not contain data until relevant preferences are set. See "Viewing and Setting Preferences" on page 63.



Performing Maintenance

From time to time, you may need to perform *system* maintenance or troubleshoot problems by checking communication channels, *switch legs,* and software error logs. You can also display lamp information for Lighting Zone Controller units.

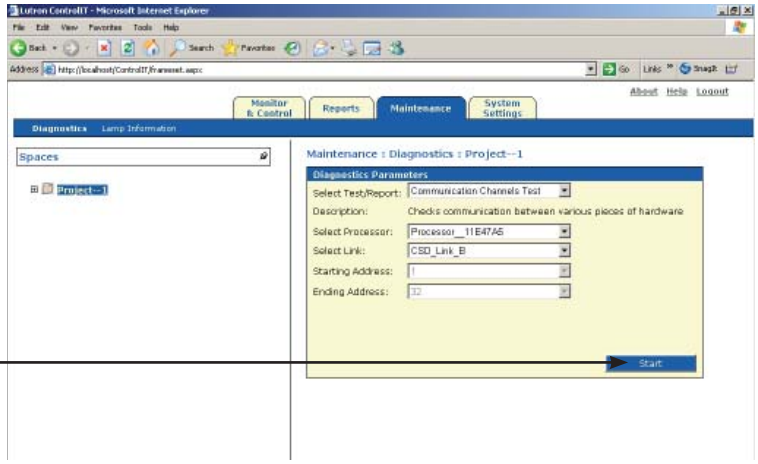
System maintenance is performed from the Maintenance page.

- **To display the Maintenance page:** Select the Maintenance tab.

Running Diagnostic Tests

- **To run a diagnostic test:**

1. From the Maintenance page, select the Diagnostics subtab.
2. From the Select Test/Report dropdown list, select the test to be run.
3. Select the *parameters* to be included in the test.
4. Click the Start button.



Displaying Lamp Information for Lighting Zone Controller Units

- **To display lamp information for Lighting Zone Controller units:** From the Maintenance page, select the Lamp Information subtab.

Chapter 5

ConfigureIT™

Overview

The ConfigureIT™ application enables you to make *real-time* configuration changes to your *scenes.* From Configure IT™, you can:

- Modify scene values and save changes to the hardware and/or the database
- Modify *zone* intensity
- Modify zone *fade time*
- Modify zone *delay* time
- View scene values from the *processor* or the database

NOTE: The ConfigureIT™ application is designed to only work with panel-based zones or LZC units.

Starting and Exiting ConfigureIT™

To start ConfigureIT™:

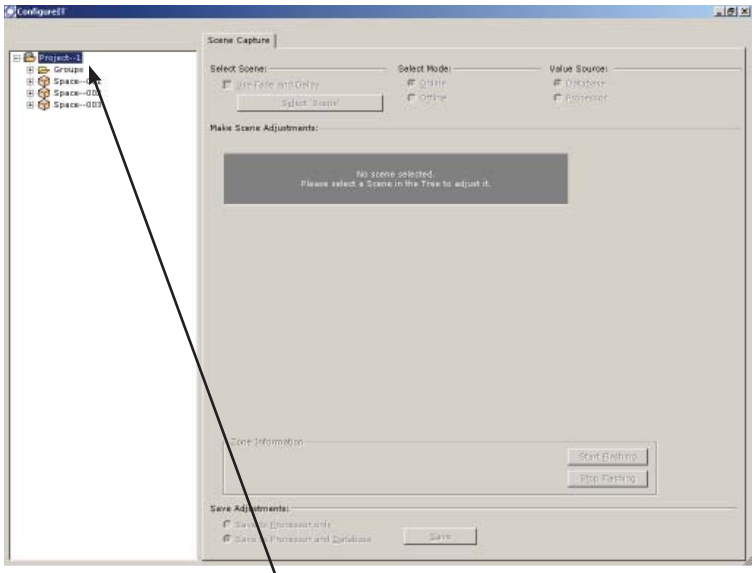
1. Double-click the ConfigureIT™ application icon on the desktop. Or from the Start menu, choose Lutron Electronics>ConfigureIT™.

   You are prompted to login.

2. Enter your user name and password. Then click OK.

   The ConfigureIT™ application window displays the list of *spaces* and *scenes* in the navigator.

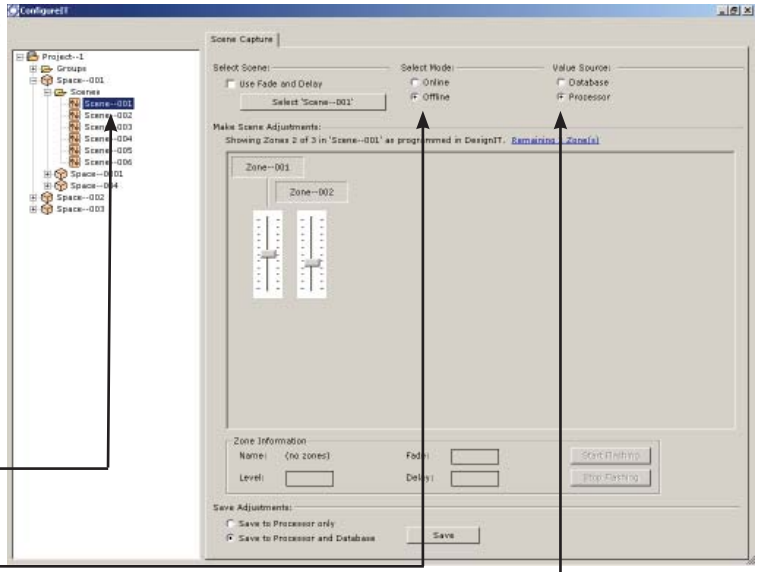
To exit ConfigureIT™: Choose Exit from the File menu.



Viewing or Modifying Scene Values in a Space

A *scene* is a lighting effect achieved by adjusting one or more *zones* to *preset* levels. While scenes are programmed in DesignIT™, from the ConfigureIT™ window, you can:

- View scene lighting levels for each zone in a *space*
- Make a scene active in a space
- Adjust the scene values for one or more zones



To select a scene and view its values:

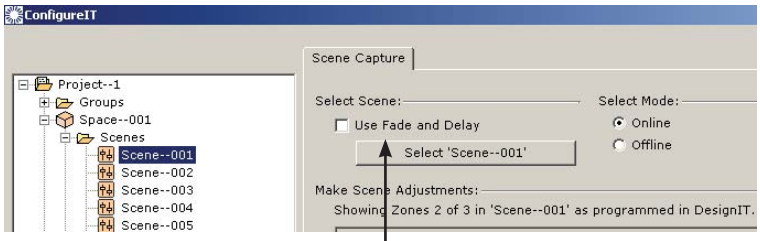
1. From the navigation tree in the ConfigureIT™ window, select the *space* that contains the scene you want to view or modify.
2. Within that space, select the Scenes folder and then a specific scene.
3. Select Mode "Online" to modify scene values and lighting levels in real-time or select "Offline" to only change the scene values.
4. Select Value Source from where you would like to read the scene values. You can view values that were stored in the "Processor" or were saved in the "Database".

   The Scene Capture tab displays the programmed scene lighting levels for each zone in the space.

To make the selected scene active in the space:
Click the Select '[scene name]' button.

NOTES:

- This function is not available in offline mode.
- If the Use Fade and Delay checkbox is checked, selecting the scene will apply it to the zones using the programmed fade and delay values. Otherwise, the scene will be applied instantly in the space.



Click here to make the selected scene active in the space

Chapter 5

▸ To adjust the zone values in a scene:

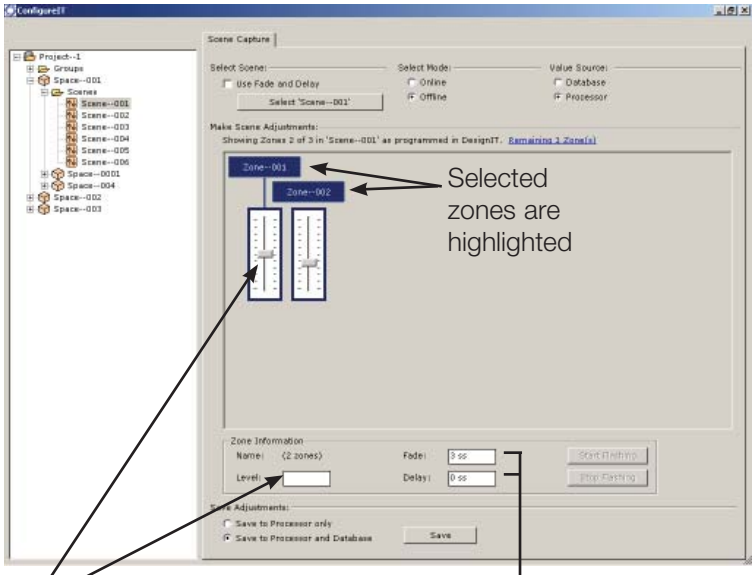
1. In the Make Scene Adjustments portion of the window, select the *zone* to be modified.

   The zone is highlighted to show that it is selected.

   NOTE: SHIFT-click and/or CTRL-click to select multiple zones. Press CTRL-A to select all zones in the *space.*

2. To adjust the programmed lighting level for the zone, use the slider control or enter the intensity value in the Level field.

3. If needed, enter the number of seconds in the Fade and Delay fields.



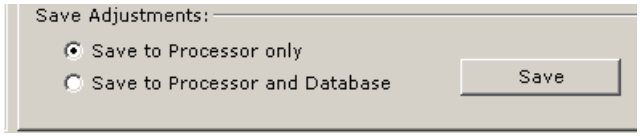
▸ To save the modified scene values:

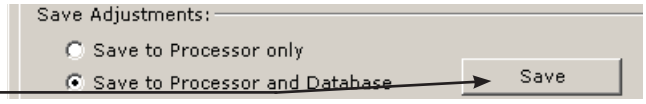
1. Select the Save to Processor only option. *The adjustments will be saved to the processor, but not permanently saved in the database.*

   or

   Select the Save to Processor and Database option. *The adjustments will be saved to the processor and also permanently saved in the database.*

2. Click the Save button.





NOTES:

- Scene changes saved only to the processor will be overwritten the next time a database transfer is done.
- For more information on transferring data to the processor, refer to Chapter 4: ControlIT™.

Chapter 6

Backup, Restore, and Update Tool

Overview

The Backup, Restore, and Update tool (BRU tool) is a utility that enables you to manage the MS SQL database. With the BRU tool you can:

- Backup an existing database
- Restore a database from an external file
- Update a database to the latest software version

NOTE: The BRU tool is not intended to create a database. For information on creating a database, refer to Chapter 2: DesignIT™.

Performing Basic BRU Operations

The following topics contain procedures used to perform basic BRU operations.

Starting and Exiting the BRU Tool

To start the BRU tool:

1. The default location of the BRU tool application in the file system is "\Lutron\DB Backup Restore\Lutron_Monitor_DBBackupRestore.exe".

   You are prompted to login.

2. Once the application is started, you will need to login with the username database and the password restore. Then click OK.

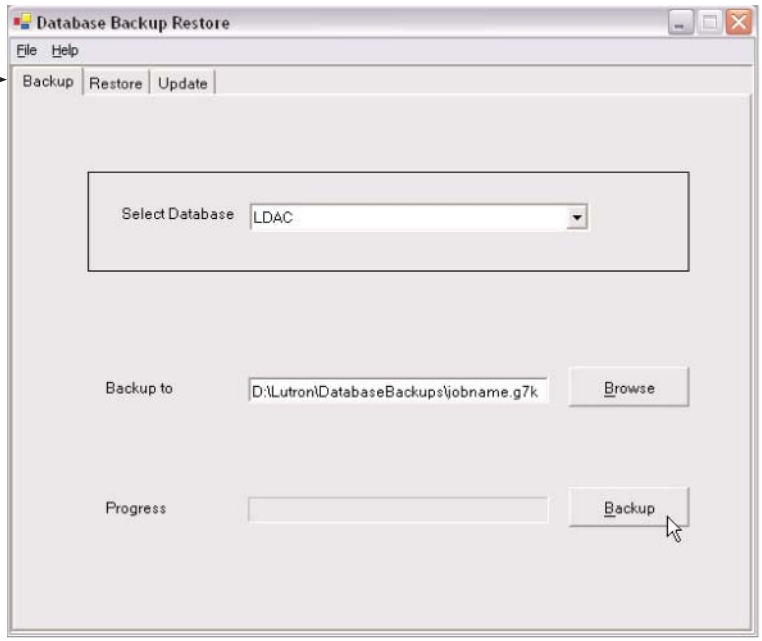
Database Backup

To backup the database to an external file:

1. Select the Backup tab on the form.

   The "LDAC" database is already selected for you on the "Select Database" drop down list.

2. Click the Browse button to specify a backup file, or, type backup file name and path in the "Backup" to text box.
3. Click the Backup button to backup the database.
4. When the "Database Backup Completed" message box pops up, the database has been successfully backed up to the file you specified.



Database Restore

To restore the database from an external file:

1. Select the Restore tab on the form.

   The "LDAC" Database is already selected for you on the "Select Database" drop down list.

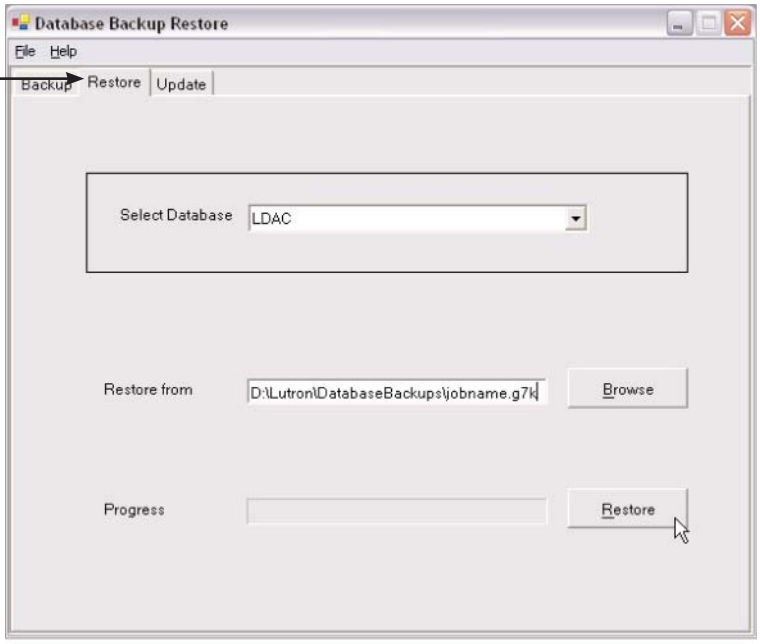
2. Click the Browse button to select a backup file or type the full path and name of a backup file in the Restore from text box.

3. Click the Restore button to restore the database.

4. When the "Database Restore Completed" message box pops up, the database has been successfully restored.

   NOTE: You cannot restore a database if there are active connections to the database. To close these connections, you will need to stop the "Lutron_LDAC_ControlSystem" and "Lutron_LDAC_RuntimeLogic" services.

   For more information, please see Chapter 8: System Services.



Database Update

To update the database to the current version:

1. Select the Update tab on the form.

   The server name, database name, and database version will be displayed on the form.

2. If at least one database version is older than the tool version and no database version is newer than the tool version, the Update button will be enabled and you can use the tool to update your databases.

3. Click the Update button to update the databases. (The target database version number will be displayed on the button.)

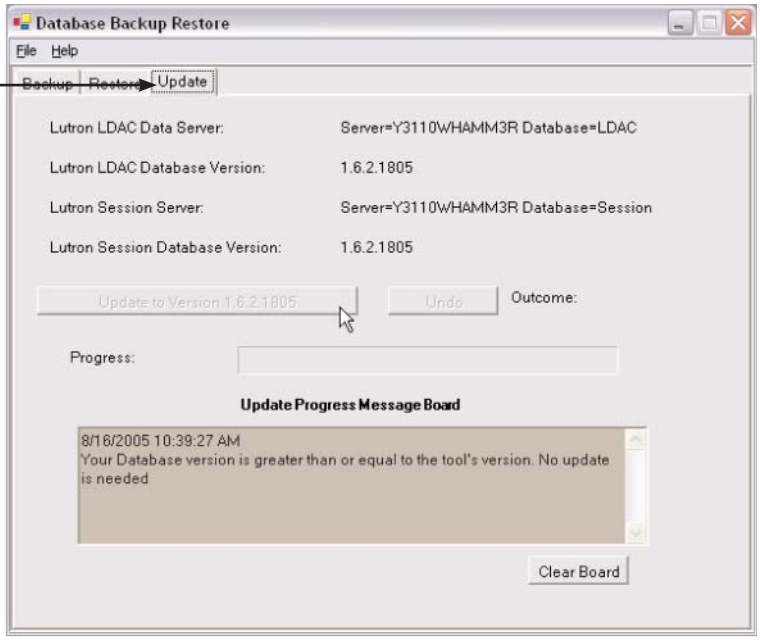
   The tool will automatically back up the databases before updating them.

   If there is any error during the updating, the tool will stop the update process and restore the databases to their original state prior to continuing.

4. When the "Outcome:" field shows "Success", the databases have been successfully updated.

5. After a successful update, you can click on the Undo button to undo the upgrade and revert the databases to their previous state.

   NOTE: This function can only be used to update the Session and LDAC databases after a software update has been performed. This process can take several minutes to an hour, depending upon the size of the database.



Chapter 7

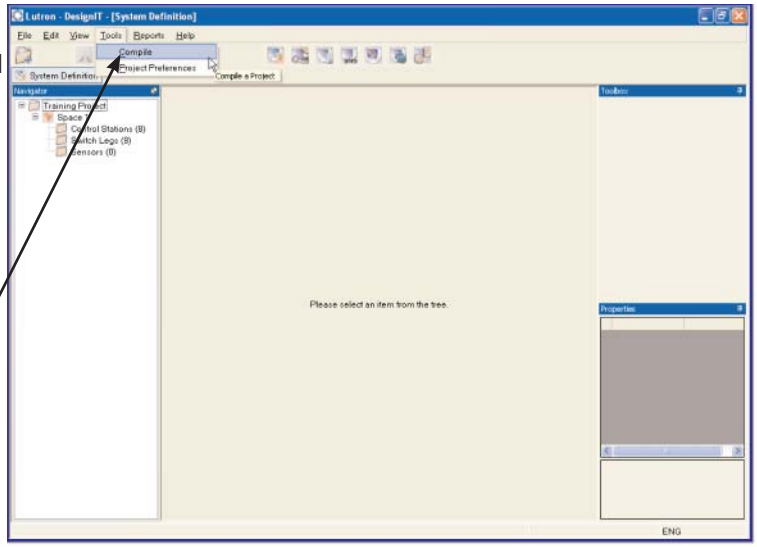
Compile and Transfer

Overview

The Compiler is a subsystem of the eLumen™ Suite that converts the database into the individual files that will be transferred into the G7000 processor. When you are finished creating or modifying a *project,* you must *compile* the project before *transferring* the database to the lighting system hardware.The output files of each compile are stored locally on the database host computer.

NOTES:

- The system can be compiled from either the DesignIT™ or ControlIT™ application, but the system can only be transferred from ControlIT™.
- Scene changes will be lost if not saved to the database (refer to "Run the Scene Capture Macro" on page 62).

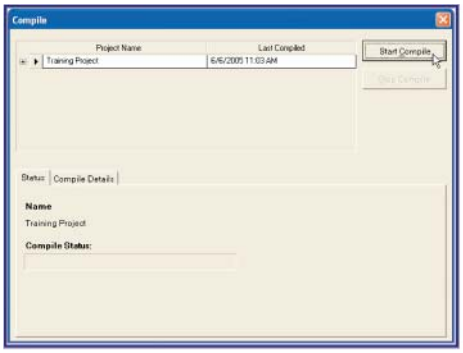


Compiling a Project

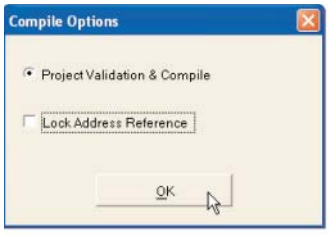
To compile from DesignIT™:

1. Click on "Tools" and then click on "Compile."

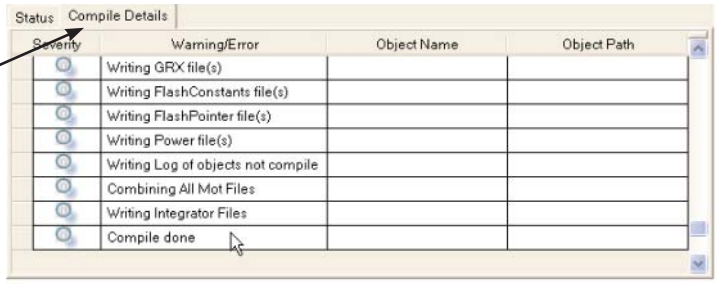
2. Next, click on the name of the Project that you wish to compile and click the Start Compile button.



3. A popup window will appear asking if you wish to lock the database. Locking the database will lock the location of objects (spaces, zones, etc.) in the database. Make your selection and then click on "OK."



4. Finally, click on the Compile Details tab to see if the compile has completed and if there are any warnings or errors.



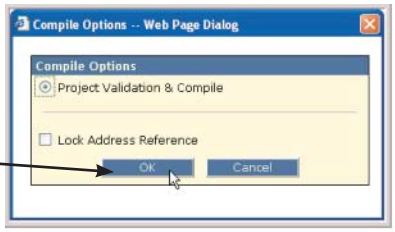
▸ To compile from ControlIT™:

1.Click on the System Settings Tab.

2.Click on the Project Name and then click on "Start Compile."

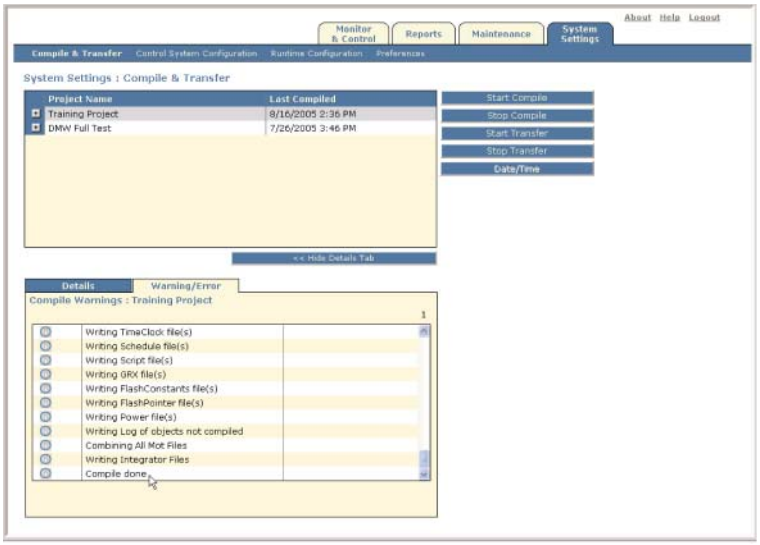
3.A popup window will appear asking if you wish to lock the database. Locking the database will lock the location of objects (spaces, zones, etc.) in the database. Make your selection and then click on "OK."

NOTE: Selecting the Lock the Address Reference option will lock all *space* and zone identifiers. This is needed only for BMS, RS232, and DMX integration jobs.



4.Click on the Show Details tab to see if the compile has completed and if there are any warnings or errors. When compiling is complete, you can *transfer* the data to the *system* hardware.

NOTE: Resolve all compile warnings and errors before transferring. Click on the Warning/Error tab to view this information.



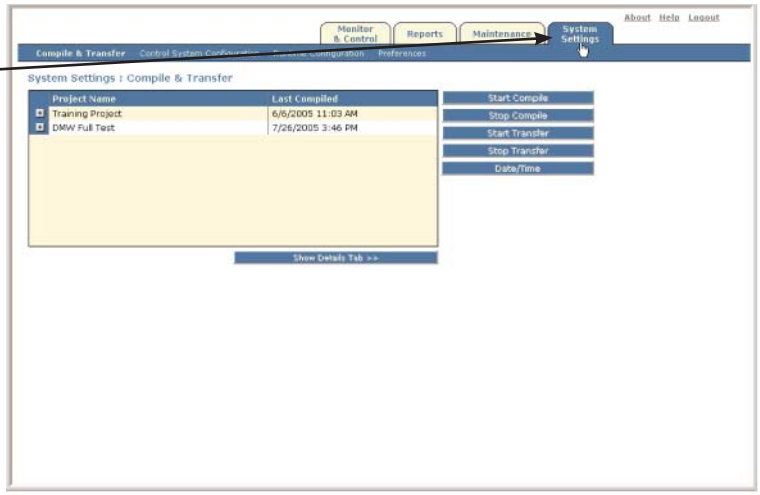
System Transfer

The system transfer function of ControlIT™ allows the user to transfer the compiled database files to the processor.

Transferring from ControlIT™

To transfer the database from ControlIT™:

1. Click on the System Settings Tab.

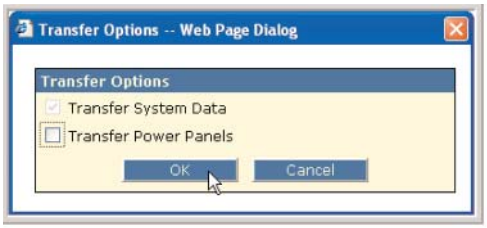


2. Select the Project name that you would like to access. If you would like to transfer to a specific processor to group of processors, you would need to click on the + sign next to the Project name. If you would like to transfer to all processors in the project, you would simply keep the Project name selected.

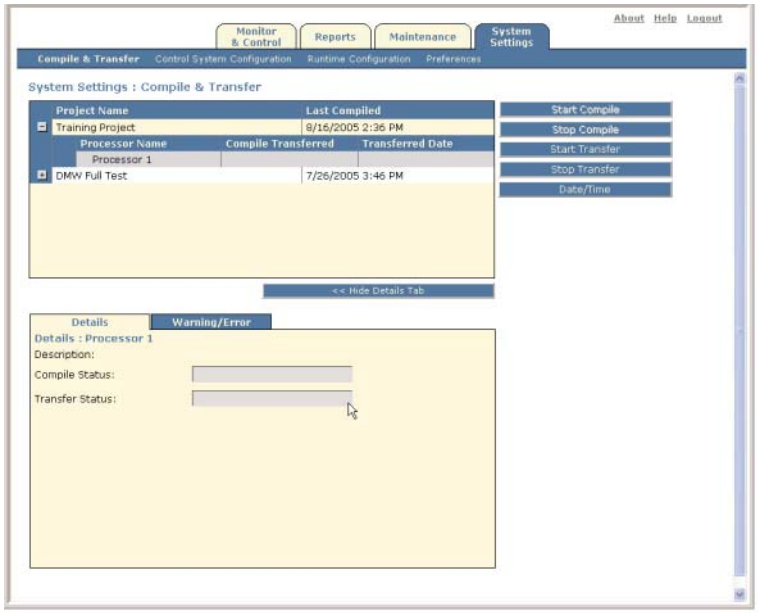
   NOTE: Transferring to individual processors after you have made significant changes may cause Timeclocks and other Inter-Processor functionality to behave incorrectly. Improper scripts or events could be run and as such individual processor transfers should only be conducted if you are aware of the system configuration.

3. Click on the "Start Transfer" button to begin transferring to the project or processor(s) that you have selected.

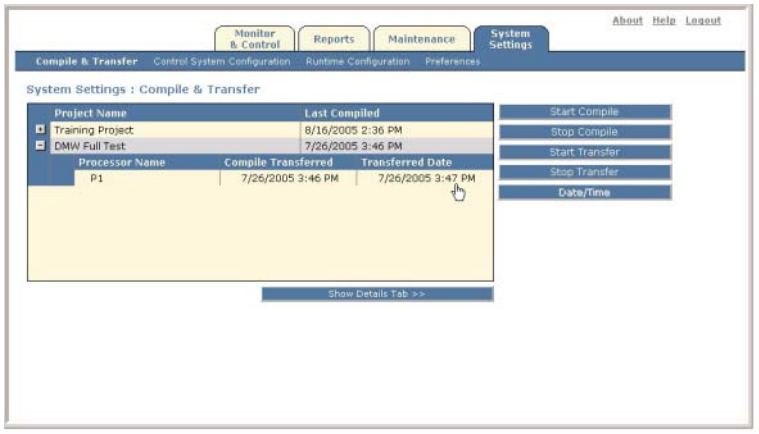
4. Choose to transfer the System Data, or System Data and Power Panel Data. You only need to transfer Power Panel Data if you need to transfer information to the Circuit Selectors in the field.



5. Click on the "Show Details Tab" button to see the progress of the transfer.

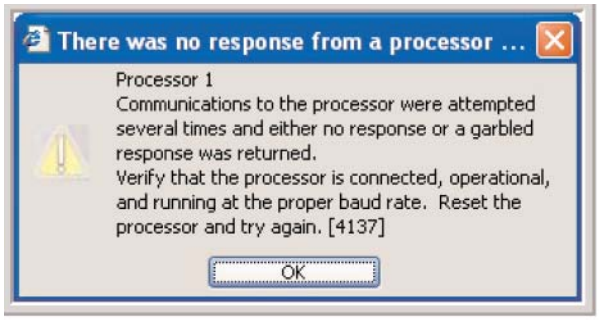


6. When the transfer has completed, the transferred date field will be populated.



Transfer Troubleshooting

If you have an error transferring, the following error will appear. Please note that this error will also appear the first time that you try to transfer after you have changed any of the network settings within the DesignIT™ application.



To fix this error, complete the following steps:

1. Ensure that the UI Link is connected properly.
2. Ensure that the Ethernet cable is connected from the computer to the Comtrol Box or to the Processor's Ethernet port.
3. Verify the proper network configuration settings are in DesignIT™ under the Address Screen. The IP Address, Subnet Mask, and UI Port must all be set. The default settings are 192.168.250.1, 255.255.255.0, and 8000, respectively.
4. Verify communication with the processor by pinging the processor's IP address.

   To ping a processor:
   - Open Start menu in Windows toolbar.
   - Select Run.
   - Type in CMD and press return/enter button.
   - In the command window, enter the ping command. For example, "ping 192.168.250.1".

   If there is an error communicating with the processor, please contact Lutron Technical Support.
5. Ensure that all IP Addresses are unique on the network.
6. Ensure that the Runtime and Control services are started.

Chapter 8

System Services

Overview

The eLumen™ Software Suite utilizes services that run at the system level. This means that these services are running in the background while the client tools are being used at the user level. The real benefit to service-level applications is that a user does not need to be logged in for the application to be active. The eLumen™ System Services contains four components. They consist of the following:

- Environment – Provides the configuration settings for the eLumen™ software.
- Control System – Responsible for all communication and message parsing between the hardware and the software.
- RunTime Logic – Translates low-level commands to plain text.
- DataLogging – Records user commands and historical system settings.

NOTE: DataLogging is initially disabled. To enable datalogging, refer to "Viewing and Setting Preferences" on page 63.

Control System

The Control System is a Windows service and is responsible for taking messages from the Runtime Logic System, creating hardware commands, and sending the commands to the appropriate piece of hardware.

The Control System is responsible for the following features:

- Building messages that hardware can understand from a common low-level language. This allows the GRAFIK 7000 to easily interface with many different types of hardware using various protocols.
- Scheduling and Dispatching of commands based on priority and scheduling class.
- Maintaining simultaneous communication with all processors.
- Polling the processors for information to fill monitors with data.
- Ethernet communications.

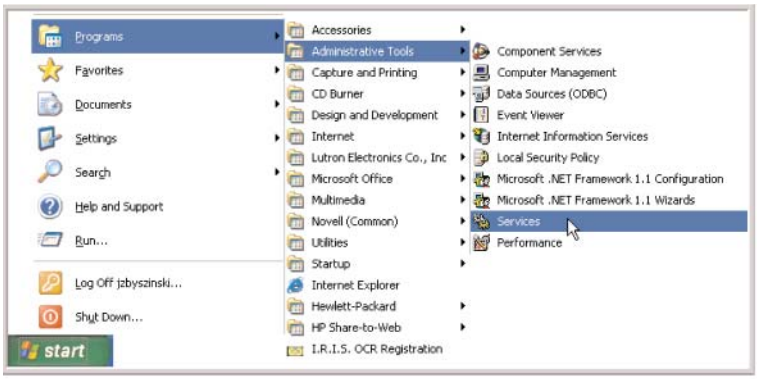
Starting the Control System

The Control System is a Windows Service. This means that it starts when the Operating System is loaded. A user does not need to log into Windows for it to start. To view the status of the Control System, you will need to look at the Services Console.

▸ To view the status of the Control System services:

1. Click on Start > Program Files > Administrative Tools, and then click on Services.

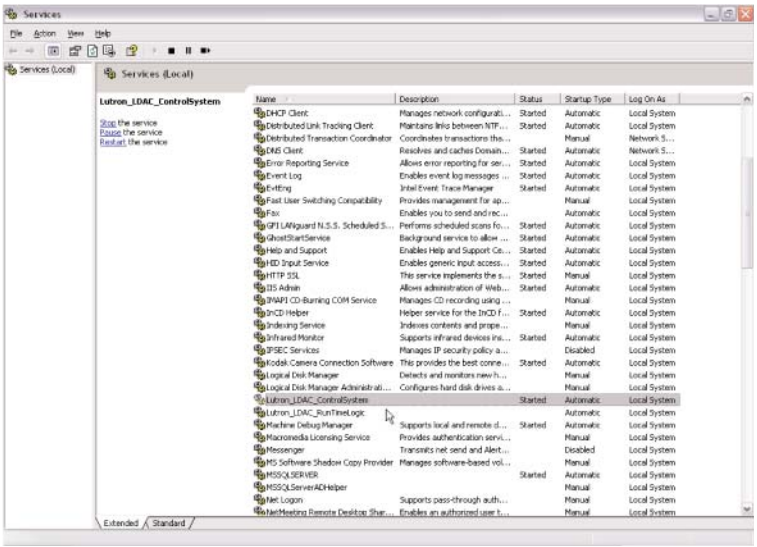
   This will bring up the Services Console. You will need to scroll down until you see "Lutron_LDAC_ControlSystem." When a service is running it will show as "Started" within the status column.



▸ To start or stop a service:

1. If it has not been started, simply click on the name of the service and then click on start button ▸ .
2. To stop a service, simply click on the stop button ■

   NOTE: The only time a service should be stopped is if you are restoring a database. The ControlSystem and RuntimeLogic services must be running to communicate with the hardware.



Runtime Logic System

The Runtime Logic System is a Windows service that is responsible for translating low-level commands to something that the user can understand. This interface primarily holds data values and interprets user requests into a messaging scheme that lower-level components can understand.

Runtime Logic is responsible for the following features:

- Database connectivity for ControlIT™.
- Exposing a web service to allow ControlIT™ clients to connect through HTML pages.
- Accepting messages from the messaging server for processing.
- Providing data to the compiler in formatting low-level hardware commands.
- Storing data that has been collected from hardware.
- Broadcasting changes in requested data to clients
- Creation of controls for quick access.
- Decoding and Encoding of messages from the hardware.
- Normalizing values from hardware to something that the user can understand.
- Transferring databases to GRAFIK 7000 processors.

Starting the Runtime Logic System

The Runtime Logic System is a Windows Service. This means that it starts when the Operating System is loaded. A user does not need to log into Windows for it to start. To view the status of the Control System, you will need to look at the Services Console.

NOTE: For more information on viewing the status of a service, refer to page 77.

For more information on starting or stopping a service, refer to page 77.

Troubleshooting the Control and Runtime System

When using the Runtime and Control Systems, the following is important to keep in mind:

The Control System service must start before the Runtime Logic System. Since the Control System is not dependent on any other components and has a short startup sequence, this is always the case when the system starts automatically. If you restart the Control System, you will also need to restart Runtime Logic afterwards.

The Control System uses an addressing scheme to communicate with each piece of hardware. If you have not properly set up the addressing and connectivity using DesignIT™, you will not be able to communicate with hardware.

Runtime and Control System are configured using the Environment Utility. Changing the environment settings will allow you to customize how the systems operate without the need to change software code. If you make an environment change, you will need to restart each of the services.

If the services fail to start, it is usually attributed to settings in the Environment.

The Runtime Logic System is also dependent on the Data Server to start. The Data Server is a combination of MS SQL (the database) and Internet Information Services (IIS web server).

Notes

Lexicon

Address: A unique alphanumeric identifier that is applied to each component in a system communication link.

Addressing Screen: A screen in DesignIT™ that allows the user to assign control station devices to processors and assign addresses to all equipment and control station devices.

Assignable Object: An object whose value can be modified via an event. Examples would include a particular zone or a particular control station device.

Assignable Object Type: A classification of an assignable object. Examples of Assignable Objects Types include, but are not limited to: zones, walls, variables, time clocks, and control station devices.

Astronomic Event: An event defined as a number of hours and minutes before or after sunrise or sunset time.

Autosequence: A programming model that will automatically loop though a series of presets, with a user defined dwell time between presets, until it is terminated.

Base Model Number: The portion of the model number that is required to identify the functionality of the device.

Button-by-button programming: A programming technique where each button on a control station device is programmed individually. This programming technique does not limit the user to those objects contained by the same space in which the control station device is located.

Button Mode: A means by which the programming to be executed changes based on the value of a variable or moveable wall.

Calendar: Identifies the dates to which a particular schedule refers.

Circuit: A connection between the circuit breaker and one or more switch leg controls. (This is not a connection between a group of loads and a switch leg control. In the 7000 Lexicon, this is referred to as a switch leg.)

Client: A software application that provides an interface to server-based components.

Client-Server: A network system that utilizes one or more servers and one or more clients.

Compile: The act of translating user-defined project data into the machine level language that Lutron hardware understands.

Conditional: A programming model that may execute different presets based on logical statements that utilize the values of variables or moveable walls.

Control: An object that allows the user of ControlIT™ to change the present value of a parameter for an object or collection of objects. This will generate an event in the system.

Control Station: One or more ganged control station devices under a common faceplate.

Control Station Device: A device that provides a point of input or output. In most cases, these are wall-mounted controls with buttons.

Control Type: The manner in which a given load type can be controlled. Not all control types are valid for all load types. Examples of control types include, but are not limited to: dimmed and switched.

ControlIT™: A user-interface that allows the user to monitor and control the system via a standard, non-graphical, Web-based control.

Default Schedule: A collection of event/programming pairs that has been added to a Time Clock on a particular day of the week. Once added, it will always run on that day of the week.

Delay: A user defined time interval between an event and a response (for example, the time between the button press and the light turning on).

DesignIT™: A user-interface used to create a database model of a lighting system and implement the desired control strategies.

Dual Action: A programming model that will execute a preset while the control is pressed and held and then execute a second preset once released.

Dwell Time: A user-defined period of time between successive presets in an automatic sequence.

Enclosure: The housing in which the equipment is installed.

Engraving: User-defined numbers or letters that are inscribed on control stations, control station devices, or control station device buttons.

Equipment: The hardware of the system that is installed in an enclosure or is found in a panel. Examples include processors, interfaces, and switch leg controls.

Equipment Definition Screen: A screen in DesignIT™ that allows the user to define the equipment for a project. Additionally, switch legs are assigned to switch leg controls on this screen.

Event: An occurrence that can trigger programming to be executed.

Exception Schedule: A collection of event/programming pairs that has been added to a Time Clock on a particular date or dates.

Faceplate: A separate, decorative component that covers a control station. Also referred to as a wallplate or frontplate.

Fade: A change in intensity (bright to dim) of a light or lighting environment.

Fade Rate: The rate at which a particular zone changes intensity.

Fade Time: The total time it takes a dimmable zone to change intensity from one level to another.

Fixture: A complete electrical device that may consist of lamps, relays, motors, ballasts, or receptacles.

Fixture Power Feeds: Refers to one or more electrical connections as required by a fixture. Multiple fixture power feeds are required for those fixtures that have a total current draw that is larger than the capacity of one switch leg control and those fixtures that have differing load types.

Fixture Type: A reusable template that defines or specifies the characteristics of one or more loads that are contained within the same housing or apparatus.

Group: A named collection of one or more objects or other groups that share a common functional purpose. This is consistent with the building automation industry standard term.

Group Definition Screen: A screen in DesignIT™ that allows the user to create new groups or to modify existing groups.

Hold: The period of time between a press and release.

Infared (IR) Sensor: A device that controls the lighting system by detecting infrared (IR) signals from a handheld remote.

LED Logic: Defines the condition for which an LED will light.

Link: The means by which the individual parts of a lighting control system communicate with each other.

Load: A device to which power is delivered via a switch leg.

Load Schedule: A list of switch leg to switch leg control assignments and the switch leg properties, including load type, voltage, etc. Typically, this list is delivered on a panel-by-panel basis.

Load Shed: The term load shed, in the broadest sense, means reducing power consumption by "shedding" or reducing some of the load. In a modern building this load is primarily electrical, and is due to the many computers, lights, HVAC components, coffee machines, microwave ovens, etc., operating in the building at any given time.

Load Type: A classification of a load determined by the load's electrical characteristics. The load type determines the manner in which the load can be controlled based on the switch leg control's capability.

Logical Definition Screen: A screen in DesignIT™ that allows the user to create scenes, time clocks, variables, and zones.

Macro: Programming that executes on the server.

Mode: A function and a set of associated values that determine the behavior of a group or other object to which it is applied. This is consistent with the building automation industry standard term.

Mode Definition Screen: A screen in DesignIT™ that allows the user to create new modes or modify existing modes.

Model Number: A unique alphanumeric string assigned to a Lutron component.

Object: A generic term that refers to any Lutron product or abstract entity that is added to the project (for example, Lutron product–GP48; abstract entity–scene).

Occupancy Sensor: A device that controls the lighting system by detecting whether the space is occupied or unoccupied.

Panel: A factory built pre-wired assembly of hardware.

Parameter: A property whose value determines the characteristics or behavior of an object.

Partitioned/Partitionable Space: A term that refers to a specific type of space. A partitionable space allows the user to include fixed and moveable walls. These walls can be used later in the Programming Screen to achieve various lighting effects. A partitionable space contains child spaces as defined by the Partitionable Space Designer.

Partitionable Space Designer: A feature that leads the user through all the steps required to define a partitionable space.

Photo Sensor: A device that controls the lighting system by the current light level in the space.

Preset: A user-defined set of one or more objects and their associated commands/levels.

Press: A type of button event. In the case of a mechanical button, this occurs when the button is depressed.

Processor: A factory-built assembly that contains the system information and executes time clock events. Each processor contains a unique address and all equipment is wired to and communicates with a processor.

Programming: Predetermined behavior that is defined to occur as the result of an event. Programming does not include the event itself.

Programming Model: Specifies how the system responds to user interaction (for example, single action, automatic sequence).

Programming Screen: A screen in DesignIT™ used to program control station buttons, create programming and schedules, and apply schedules to time clocks.

Project: A named container that includes all information about the system.

Project Hardware Type: The lighting control product family or families that the user is planning to use in a project (for example, HWI, G6000, LZC, etc).

Real-Time Event: An event defined in terms of the time of day.

Release: A type of button event. In the case of a mechanical button, this occurs when the button is no longer depressed.

Scene: A lighting effect achieved by adjusting one or more zones to various levels.

Schedule: A collection of event/programming pairs.

Script: A reusable set of one or more commands that resides and is executed in the processor.

SecureIT™: A user-interface that allows an administrator to define user accessibility to various aspects of the system.

Sensor: A device that controls the lighting system by detecting infrared (IR) signals, the current light level in the space, or whether the space is occupied.

Sequence: A series of presets that occur successively to achieve a desired lighting effect.

Server: A computer in a network that is used to provide services to clients in the network.

Single Action: A programming model that executes the same preset for each event.

Space: A generic term that refers to a physical representation of a building, or any of its parts. Spaces can contain other spaces. Additionally, each space can contain other objects. Each object in a space can only be assigned to one space.

Switch Leg: A connection between a group of loads and a switch leg control.

Switch Leg Control: Any electronic device that controls a switch leg by varying the signal delivered to the load(s). In most cases, it is situated between the circuit breaker and the load(s) being controlled. This includes wall box and panel-based switch leg controls.

System: The interconnected components that are referenced in an eLumen™ project.

System Definition Screen: A screen in DesignIT™ that allows the user to create spaces, add control stations, add control station devices, and add switch legs.

Time Clock: A collection of schedules.

Transfer: The act of transmitting the compiled data from the user-interface to Lutron Hardware or vice-versa. This cannot be done in the absence of hardware.

Variable: A user created object that can be of three types: True/False, Multi-state, or Integer. Variables can be used in the Programming Screen.

Variable State: One of the 255 available values of a variable, which is used for conditional logic programming.

Wall: A structure that is used to define a partitionable space.

Wall State: A state of a moveable wall (for example, fully open, fully closed, half open).

Zone: A group of switch legs controlled simultaneously as one unit (also called a channel by some lighting designers).

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