MCL TOOL 5.3 - SECTION ONE

SOFTWARE OVERVIEW

Chapters

JOHNSON CONTROLS

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Chapter One

Computer Basics

This chapter contains information on:

- Basic Computer Information
- Basic Window Concepts
- Basic Information on Windows NT

OVERVIEW

Windows NT, the operating system MCL Tool uses, coordinates the functions performed by the microprocessor to allow true multi-tasking. You can be working in a spreadsheet, writing a letter in a word processor, and using MCL Tool to interface with your building all at the same time. This is an overview of computer basics with information on the use of Windows NT. Refer to your Windows NT manuals for more information.

NOTE: If you are unfamiliar with Windows NT operations, please see the Windows NT Help section in this chapter.

The main difference between Windows NT and DOS is *multi-tasking*. Multi-tasking describes an operating system that can perform more than one task at a time. With MCL Tool, multi-tasking is important because it guarantees that alarms and other critical operations are always given proper attention.

THE COMPUTER

KEYBOARD

There are six types of keys on the keyboard:

Standard keys - These are the keys that correspond to typewriter keys (a, b, 1, 2, SHIFT, TAB, RETURN, etc.). Use the standard keys to enter and edit text.

Cursor keys - These are the keys to the right of the standard keys. The four arrow keys (Left, Right, Up, and Down) and the six page keys (Insert, Delete, Home, End, Page Up, and Page Down) are included in this group.

Keypad keys - These are the keys that correspond to the regular calculator functions (1, 2, 3, +, *, ENTER, etc.) and are located on the right side of the keyboard.

Function keys - These are special keys located at the top of your keyboard that can be custom defined by applications. Some applications provide an overlay sheet to remind you of the function key assignments. MCL Tool has several function keys.

Modifier keys - These are special keys that are used to alter the operation of other keys. The most commonly used are the CTRL (Control) and ALT (Alternate) keys. They are usually held down in a combination with another key (see the specific application manual for details). The SHIFT and ESC keys are also frequently used.

Escape key - The ESC (Escape) key is used to abort an application. While in a dialog box, it is the same as choosing Cancel.

MOUSE

The mouse (Figure 1) is a small hand-held device that allows a user to interface with the computer. The mouse lets you move an on-screen cursor over the entire screen. The mouse has two buttons, the left and the right.

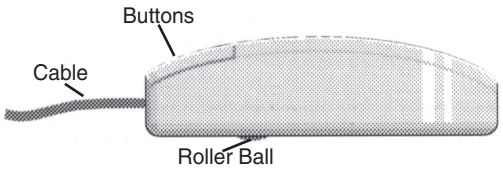

Figure 1. Mouse

NOTE: The mouse operates by measuring the rotation of a small rubber roller ball on its bottom surface. Therefore, the roller ball on the bottom must touching a clean dry surface (the top of a table or desk, a mouse pad, etc.) for the mouse to work (Figure 2).

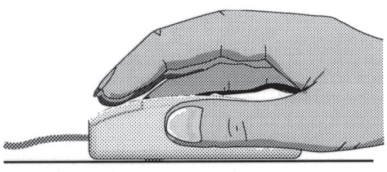

Figure 2. Using the Mouse

BASIC MOUSE ACTIONS

Below is an explanation of the basic mouse actions:

Pointing - Move the mouse until the tip of the cursor rests on a specific item or area. Although the item may appear highlighted, pointing alone does nothing.

Clicking (Selecting) - Point at an item, then press and release the left mouse button. Clicking is used to select an on-screen item.

Double Clicking - Press and release the left mouse button twice in rapid succession. Double clicking is used to select an item from a list.

Dragging - Point at an item to be moved, press and hold down either the left or right mouse button, and then move the mouse (and therefore the cursor-item) to a new location. Release the left or right button only when the cursor-item is in the correct position.

Swiping (Highlighting) - This is basically the same technique used for dragging, but is used for selecting text. Point to the left of the first character to include, press and hold down the left mouse button. Drag the pointer to the right and/or down until the pointer passes the last character to include, then release the button. Text will appear highlighted.

Right Clicking - Click the right mouse button only. This is used to display the shortcut menu of the item (folder, window, or icon) that the cursor is positioned on. If no menu exists for that item, none will be displayed.

CURSOR

The cursor is the on-screen representation of the mouse's position. When the mouse is moved to the left, the cursor will move to the left. When the mouse is moved to the right, the cursor will move to the right, and so on. Typically, the mouse cursor is used to select objects on the screen (pull-down menus, push buttons, etc.) and to select text to be edited. In some situations, the shape of the cursor (normally an arrow) will change to show that the cursor has a different function. Typically, the cursor will be one of the following shapes:

Arrow - Used for pointing and selecting

Hour Glass - Used to indicate that you must wait before proceeding

Double Arrows - Used to change the size of a resizable window (The orientation of the arrows reflects the window dimension being changed.)

Vertical Line - Used to enter text.

Question Mark - Used to access help on a topic. When this cursor is present, click on an item you need information on. See **Getting Help Inside a Dialog Box** for more details.

Cross Hair Pointer - Used when moving an object.

Hour Glass with Arrow - Used to show that the computer is working in the background.

NOTE: The cursor may be customized by clicking Start, selecting Settings, and choosing Control Panel (Start >Settings>Control Panel). Double click on the Mouse icon. Click on the Pointers tab and choose the cursor image you'd like to apply.

SCROLL BARS

When necessary, scroll bars will appear on the bottom and/or left edges of each window, indicating that the screen size is smaller than the complete display. A Scroll Bar (Figure 3) is a window control that allows you to view a document larger than the current window. Scroll bars appear along the bottom and/or right edge of the window. Scroll bars contain three elements:

Scroll Arrows - The rectangular buttons with arrows on them at both ends of a scroll bar

Scroll Box - A solid rectangle between the arrows of the scroll bar. The scroll box indicates how much of the window is visible by its placement within the scroll bar.

Page Areas - The areas of the scroll bar between the scroll box and each of the scroll arrows.

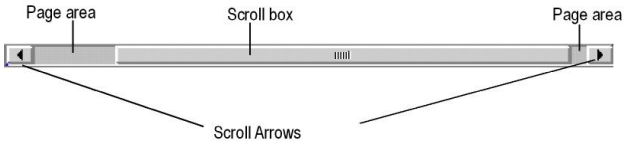

Figure 3. Scroll Bar

To scroll through a screen one line or one item at a time, click on the appropriate scroll arrows. To scroll continuously, hold the arrow down. To scroll through the screen one "page" at a time, click on the page area of the scroll bar. To move more quickly through a window, place the cursor on the scroll box and drag it in the appropriate direction.

BASIC WINDOW CONCEPTS

The window environment is a rectangular area of the computer screen that applications used to display information. Depending on the application, several windows can be displayed at the same time (Figure 4). Windows can be opened and closed, minimized, or re-sized according to User needs.

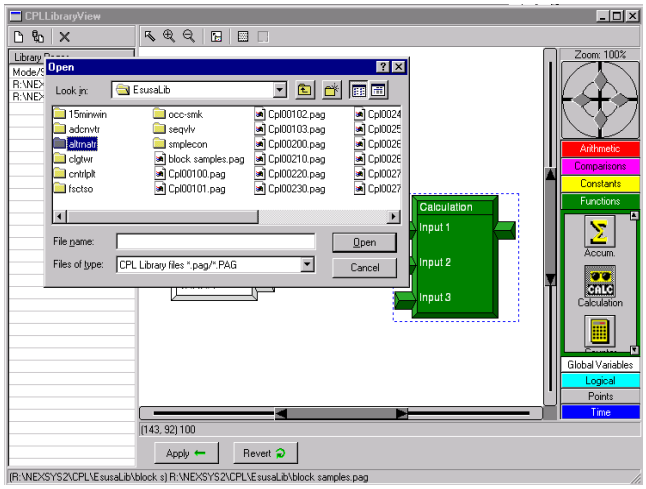

Figure 4. Multiple Windows Displaying

OPENING/CLOSING A WINDOW

A window can be opened in three ways:

- Double click on the window's icon.
- Highlight the icon by clicking once and then press E**nter**.
- Select the item from a pop-up menu.

If the window is already active, you can bring the window to the foreground by clicking on the window's button on the taskbar or anywhere on the window itself, if a portion of it is visible.

A window can be closed in three ways:

- Click on the  on the right side of the title bar.
- Double click on the Windows system menu icon  on the left side of the title bar.
- Click once on the Windows system menu icon  on the left side of the title bar to display the pull down menu and choose **Close**.

RE-SIZING A WINDOW

To make a window smaller or larger, place the cursor on the window's border. When the double-ended arrow appears, drag the edge or corner of the window to re-size appropriately. Dragging the edge of a window will change only one dimension of the window. Dragging the corner of the window will change both the width and the height of the window.

MOVING A WINDOW

You can move any window on the screen by placing the cursor on the title bar and holding down the left mouse button while dragging the window to a new position.

MAXIMIZING A WINDOW

The window can be maximized to take up the entire screen. Click the  located on the right side of the title bar.

RESTORING A WINDOW

To restore a maximized screen to the original size, click the  located on the right side of the title bar.

MINIMIZING A WINDOW

By clicking on the  (minimize button), the current window can be hidden. It will continue running in the background, and can be accessed by clicking its button on the taskbar.

SELECTING AN OPEN WINDOW

Any open window can be brought to the front of the viewing screen by clicking on any visible part of that window. In Windows NT a window may be brought to the front by clicking on its button on the taskbar.

BASIC MENU CONCEPTS

Windows NT uses toolbars, shortcut keys, and toolbar buttons to execute menu commands. It also uses these tools to access information through dialog boxes, and to manipulate the window environment.

A title bar is located at the top of each window. Below the Title Bar appears the Menu Toolbar. Menu commands are listed in logical groups. These groups can be located in the menu bar, and are also accessed from within the application. Both pull-down and pop-up (shortcut) menus are available. A right pointing arrow at the right of a command indicates a submenu. The submenu displays the list of nested commands available for the item you selected.

PULL-DOWN MENUS

One way to access commands is through pull-down menus (Figure 5). Pull-down menus are groups of related commands which are not visible until a menu name is selected. When the User selectsa Menu Name, the pull-down menu of commands is displayed. Click on a command to execute.

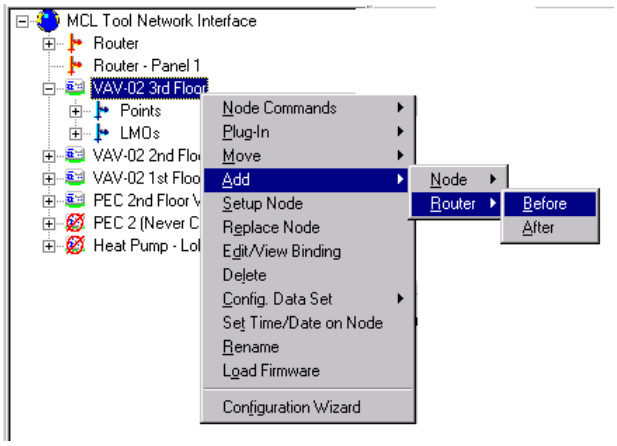

Figure 5. Pulldown Menu

NOTE 1: Unavailable menu items will be displayed in gray (or a light shade of the current menu-text color).

NOTE 2: If other options exist within a menu, selecting a given menu item may lead to a sub-menu. Items with submenus are marked with an arrow.

SELECTING A PULL-DOWN MENU

1. Point to the appropriate menu name.
2. Click on the menu name. The menu is displayed with the menu name highlighted.
3. Point to the appropriate menu item. The item will highlight to indicate selection.
4. Click on the menu item to be selected by pressing once on the left mouse button.
5. If the selected item has a submenu, repeat steps 3 and 4 for the submenu command.

NOTE: Each menu has a default selection that can be chosen by pressing the Return or Enter key on the keyboard. The default selection will be the highlighted command. This is also true for toolbar buttons: the default selection will be the raised button.

EXITING A PULL-DOWN MENU

1. Place the mouse anywhere outside of the menu area and click the left mouse button. The pull-down menu disappears.

SELECTING A PULL-DOWN MENU WITH THE CURSOR (ARROW) KEYS

The pull-down menus can also be accessed through the keyboard in the following manner:

1. Press the ALT and letter keys simultaneously for the appropriate menu name. Each menu name has one letter underlined (the M in MCLT, for example). The underlined letter is the menu's command letter. The pull-down menu displays with the menu name highlighted.
2. Use the arrow keys to highlight the appropriate menu item. Press the up or down arrow keys as necessary until the appropriate menu item is highlighted. If the appropriate menu item is has a submenu, press the right arrow key to open the submenu, and repeat this step.
3. Press the ENTER key to select the menu item.

SELECTING A PULL-DOWN MENU (WITH THE TEXT KEYS)

1. Press and hold the ALT key. Without releasing the ALT key, press the letter key for the appropriate menu name. Each menu name has one letter underlined (the M in MCLT, for example). The underlined letter is the menu's command letter. Do not release the ALT key
2. Press the letter key for the appropriate menu item. Each menu item has one letter underlined (the C in Close, for example, in Figure 4). The underlined letter is the menu item's command letter. If the appropriate menu item leads to a submenu, repeat this step for the submenu.

CANCELING A MENU SELECTION (WITH THE TEXT KEYS)

1. Press the ESC key. The pull-down menu disappears.

POP-UP (SHORTCUT) MENUS

Pop-up menus (also called *shortcut menus*) are another way to access commands. Click the right mouse button on an item to show its pop-up menu (Figure 6). You can also right click an object or window to access the pop-up menu. If no pop-up menu exists, none will be displayed.

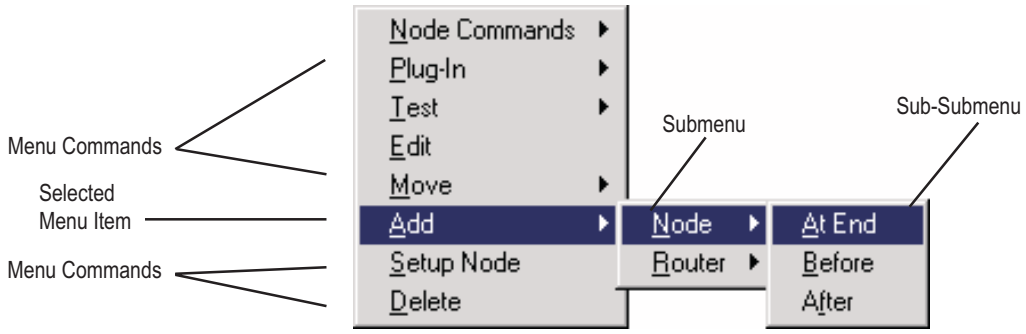

Figure 6. A Pull Down Menu

NOTE 1: Unavailable menu items will be displayed in gray (or a light shade of the current menu-text color).

NOTE 2: If other options exist within a menu, selecting a given menu item may lead to a sub-menu. Items with submenus are marked with an arrow.

SELECTING POP-UP MENUS (WITH TEXT KEYS)

When an item (a folder, icon, etc.) is highlighted, pressing SHIFT-F10 on the keyboard will bring up the pop-up menu**.** For example, if the physical tree is running and a node is highlighted, SHIFT-F10 will bring up the pop-up menu for that node.

NOTE: Press the Escape key to exit the menu.

DIALOG BOXES

Dialog boxes are a common way to view and edit information. A dialog box normally contains text fields and various options particular to its function in which information can be entered or selected (Figure 7).

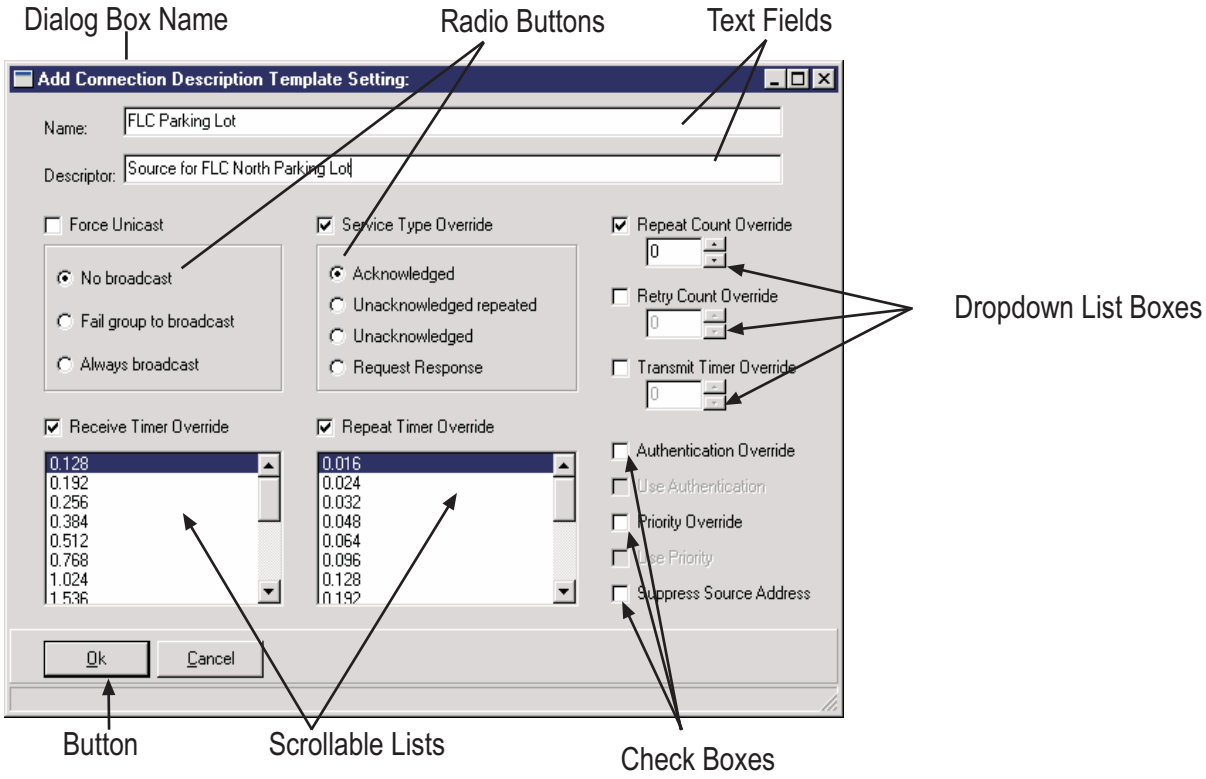

Figure 7. Dialog box

Dialog boxes can contain one or more of the following:

- **Buttons** - Shaded rectangles with a name in the middle.
- **List Boxes** - A rectangular box of text items with a scroll bar along the right side.
- **Dropdown List Boxes** - A small rectangular box with an arrow displayed on the side. Clicking on the arrow causes the box to drop down an item selection list.
- **Radio Buttons** - Small circles with a name to the side.
- **Spin Boxes** - A small rectangular box with a pair of arrows displayed on the side. Clicking on an arrow causes the box to spin through the items contained in the box.
- **Checkboxes** - Small squares with a name to the side.
- **Edit Fields** - Short, wide, rectangular boxes, with a name to the side.

KEYBOARD SHORTCUTS FOR DIALOG BOXES

The following keys perform specific functions in dialog boxes:

- **Return key** - The RETURN (ENTER) key closes the dialog box. The dialog box is returned to its default settings. (A thick border around the text delineates the default button).

- **Escape key** - The ESC or Escape key selects the CANCEL button in any dialog box, and closes the dialog box.

MOUSE OPERATION IN DIALOG BOXES

Dialog box items (buttons, checkboxes, text fields, text, etc.) display differently when they are selected from when they are not selected. Below are descriptions and some examples of the appearance change for each object:

- **Buttons** - Buttons are "spring loaded" (when the mouse is released, they change back to the normal state). When clicked on with the mouse, the button will appear to be slightly recessed, and the text of the button will be outlined with a dashed line:

  Not Selected… Ok or Selected… Ok

NOTE: The default buttons will sometimes also display with the dashed outline, but they will not be recessed.

- **Lists** - Lists show the selected item as a reversed image (white-on-black instead of black-on-white).
- **Menus** - A menu selection appears highlighted. Windows NT highlights in blue.
- **Radio Buttons** - When a radio button is selected a small black dot appears in its center:

  Not Selected… Top or Selected… Top

- **Checkboxes** - When a check box is selected a small check mark appears in its center:

  Not Selected… Use color or Selected… Use color

- **Fields** - A small, vertical flashing bar appears at the left side of a selected empty field:

  Not Selected… or Selected…

- **Page Tabs** - A dialog box will often contain several pages inside a single window. Access each page by clicking on its tab at the top (Figure 8).

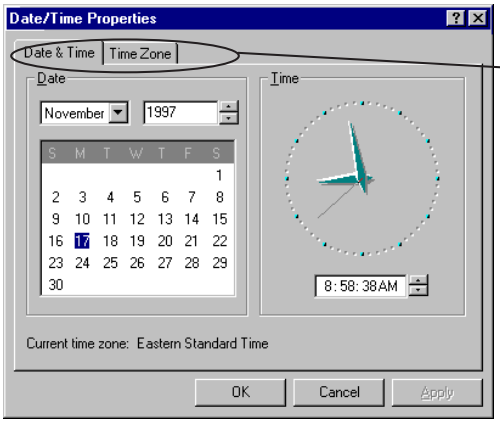

Figure 8. Dialog Box Page Tabs

GETTING HELP INSIDE A DIALOG BOX

Click ? at the top right corner of the dialog box. The **What's This?** question mark will appear next to the mouse pointer. Click on the item you want information about. A pop-up window will appear. If you would like to print or copy the information from the Help pop-up menu, right click inside the pop-up menu box. Select your option from the pull-down menu that appears (Figure 9).

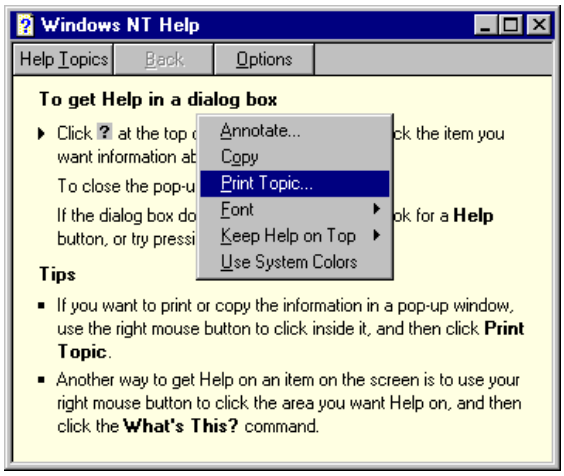

Figure 9. Help Pull-down Menu

WINDOWS NT OVERVIEW

When you boot your computer in Windows NT, your display should be similar to the example in Figure 10. The computer screen has several components, including the desktop, taskbar, and Start Menu.

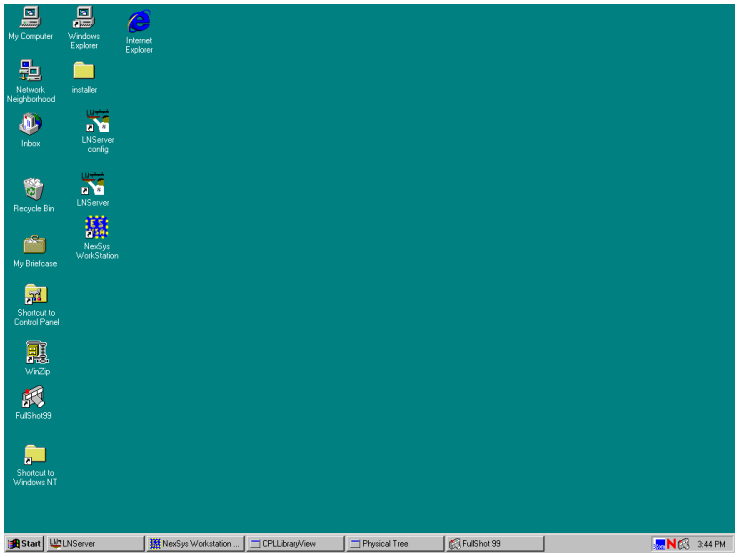

Figure 10. Windows NT Screen

DESKTOP

The solid color background area of the screen is known as the desktop. It appears when Windows NT is running. When other programs are running or windows are open, the desktop can still be found "underneath" the other windows. Just as the top of your desk is where work is done, the Windows NT desktop area is where your computer work is done. On the desktop are icons representing the computer, the network neighborhood, the recycle bin, etc. Icons representing programs, applications, or folders can also be placed on the desktop. A task bar is located at the bottom of the window. Double click on one of the icons to view the contents of the folder or start a program or application. From the Start button, you can run a program, access the system setup control panel, open the NT help file, search for an object, logout, or shutdown the computer.

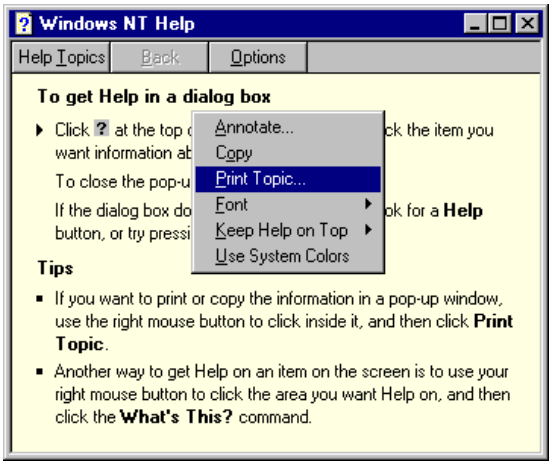

Figure 11. Windows NT Help

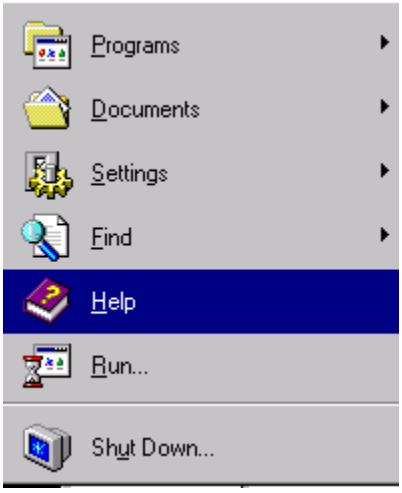

Figure 12. Start >Help Popup Menu

WINDOWS NT HELP

The **Windows NT Help** provides detailed information on using Windows NT (Figure 11). The User can search for Help Topics in three ways:

- **Help Table of Contents**
- **Help Index** (by keyword)
- Search using the **Find Setup Wizard**

To access Help:

1. Select **Start** >**Help** (Figure 12).
2. The **Help Topics: Windows NT Help** Window opens (Figure 13).
3. Select the tab of the method you wish to do your search with (Figure 14).

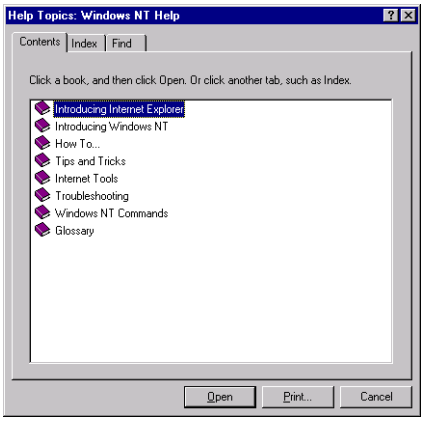

Figure 13. Help Topics: Windows NT Window

Figure 14. Help File Tabs

MY COMPUTER

By double clicking on the **My Computer** icon  , you can display icons representing hard drives, floppy drives, CD-ROMs, printers, network access, and other peripherals. You can also use this function to view and manipulate files in the same manner as done with the *Windows NT Explorer*.

NETWORK NEIGHBORHOOD

If your computer is set up on a network, double-click the Network Neighborhood icon  to view and access the computers and printers on your network. You do not need to connect to a network drive by mapping a drive letter. You can also use Network Neighborhood to browse the drives of computers and servers on the network.

RECYCLE BIN

When an item is deleted, it is sent to the Windows NT Recycle Bin. You can also delete an item by dragging the object to the  . To view the contents of the recycle bin, double click on the icon. To permanently delete the contents of the bin, right click on the **Recycle Bin** icon and select **Empty Recycle Bin** from the pull-down menu.

SHORTCUT MENUS

You can access shortcut/pop-up menus by right clicking. By right clicking on application icons, you may open them, delete them, rename them, create a shortcut, view the properties window, etc. Right click on the desktop or in NT Explorer to display a shortcut menu.

CREATE A FOLDER

To create a folder:

1. Double click on the **My Computer** icon  or open **Windows NT Explorer**.
2. Double click on the drive or folder where the new folder will be located.
3. Pull down the **File** menu located on the Tool Bar, or right click inside the window. Select **New**. Choose **Folder**.
4. A new folder will display in the window. Enter a name for the folder and press return.

NOTE: A filename can have up to 255 characters, including spaces. But, it cannot contain any of the following characters:

|,\,/,:,*,?,",<,>

To delete a folder, icon, object, or program, open the window where it is located. Right click on the object to display its shortcut menu and select **Delete**. Or, place the cursor over the icon, hold down the right mouse button, and drag the icon to the recycle bin. A pop-up menu will display. Choose **Move Here**.

MOVE AN OBJECT

An object can be moved with the drag and drop method. Select the object to be moved. Hold down the right mouse button as you move the icon to its new location. Select **Move Here** from the pop-up menu. You can display the window with the icon to be moved, highlight the icon, and select **Cut** from the **Edit** menu. Display the window of the new location and select **Paste** from the **Edit** menu.

COPY AN OBJECT

Using the drag and drop method, you may click on the icon to be moved, hold down the right mouse button, and drag it to the new location. When the pop-up menu displays, select **Copy Here**. Or, right click on the object, and select **Copy** from the pull-down menu. Open the window where the object is to be copied, right click inside the window, and select **Paste.**

RENAME AN OBJECT

To rename an object, right click on its icon to display the shortcut menu and select **Rename**. Type in the new name and press enter. Or, click once on a highlighted icon, type in the new name and press **Enter**.

NOTE: All of the actions described above can be accomplished in Windows NT Explorer.

TASK BAR

The task bar is located at the bottom of the desktop window (Figure 15). The taskbar displays all programs currently running. The program running in the foreground will appear recessed. To select a different application to run in the foreground, click on the appropriate button on the taskbar.

Figure 15. Windows NT Taskbar with two programs running.

START MENU

From the Start Menu button, you can run a program, access the system setup control panels, open the NT help file, search for an object, logout, or shut down the computer. Shortcut icons can also be added to the Start Menu from the desktop or Windows NT Explorer.

WINDOWS NT EXPLORER

To access Windows NT Explorer, click Start >**Programs**>**Windows NT Explorer**. Or, right click on Start, and select **Explore**. See the sample Window NT Explorer window in Figure 16. Windows NT Explorer replaces the file manager in previous versions of Windows. Through Windows NT Explorer, you can view the contents of all your drives and folders. Documents or programs can be opened from this window by double clicking on them, or by right clicking and selecting **Open** from the pull-down menu. You can also use the drag and drop or the cut and paste methods to move or copy objects in this window.

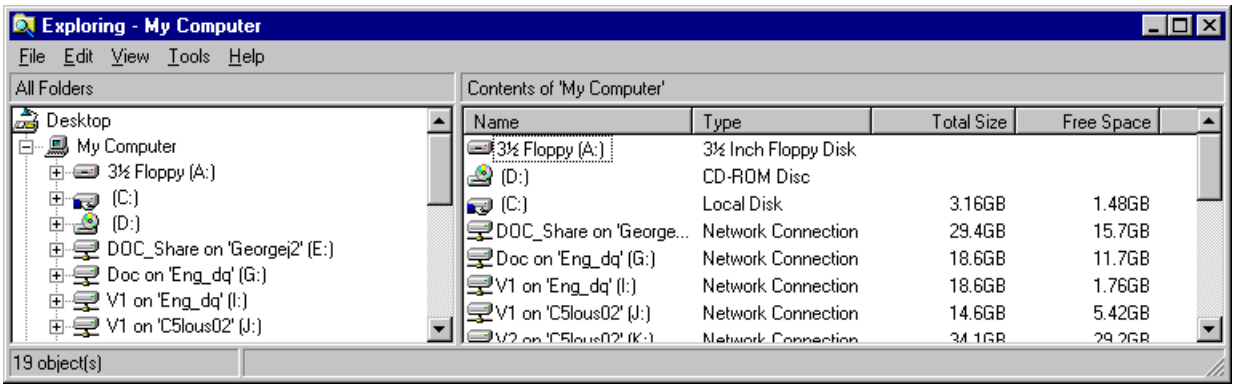

Figure 16. Windows NT Explorer

FIND AN OBJECT

If you would like to search for an object:

1. Click Start and select **Find.** The Find window will appear (See Figure 17).

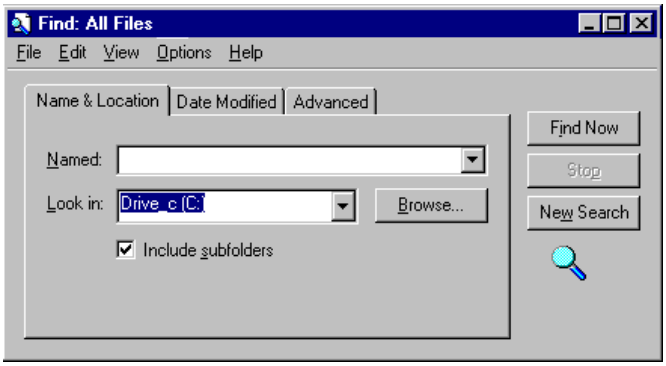

Figure 17. Find File Window

2. The **Find** window offers three different methods to set up the parameters of your search:
   - **Name and Location** - Click on the **Name & Location** tab to search for a file name. Enter the file name and select the appropriate drives.
   - **Date** - Click on the **Date Modified** tab to search using the date a file was last modified, and set up the search parameters as required.
   - **Advanced** - Click on the **Advanced** tab to search for a specific text string, a particular size file, or a specific type of file.
3. When you have set up the search parameters, click Find Now. A report of the files found will be displayed in the bottom portion of the **Find File** window.

PRINTER SETUP

To set up a printer, click Start > **Settings** > **Printers**:

1. To **add** a printer, double click on the **Add Printer** icon (Figure 18). The **Add Printer Wizard** Window (Figure 19) walks you through the setup procedure.
2. To view the **properties** window of a printer previously added, right click on the printer's icon and choose **Properties** (Figure 20). Confirm that the **Auto Form Feed** check box in the standard printer properties window for the history printer is **off**. Otherwise, each alarm will print on a separate sheet of paper. Some printers do not have an **Auto Form Feed** setting.

Figure 18. Add Printer Icon

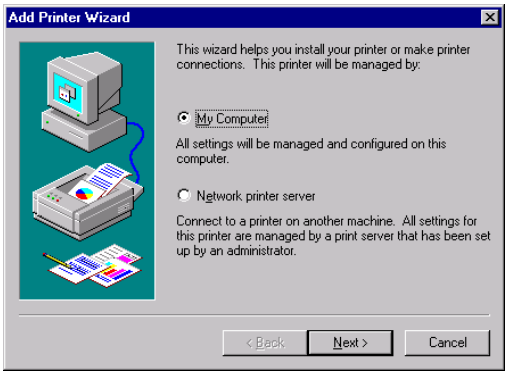

Figure 19. Add Printer Wizard Window

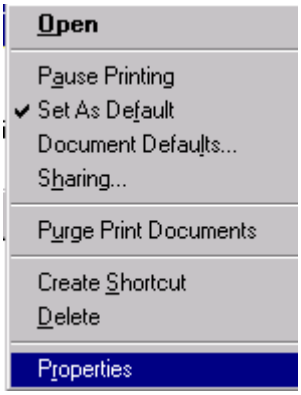

Figure 20. Properties

MS DOS WINDOW

To access an MS-DOS window, click Start > **Programs** > **Command Prompt**. An MS DOS window will display (Figure 21). You can also select the MS-DOS icon on your desktop if available.

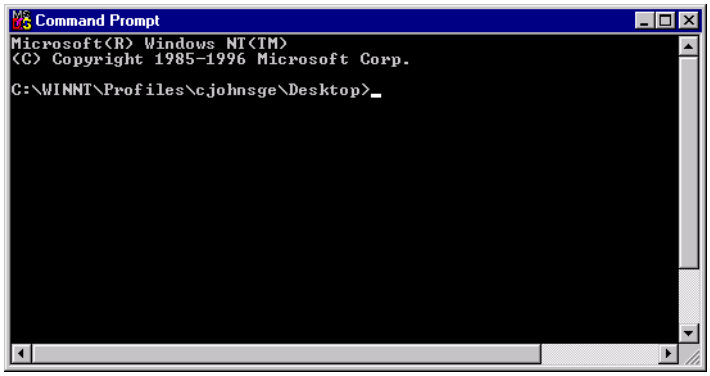

Figure 21. MS DOS Window Accessed From Windows NT

SHUTTING DOWN THE SYSTEM

Windows NT should *always* be shutdown from the Start menu.

1. Click Start >**Shut Down.**
2. The system will ask if you wish to shut down the computer, restart the computer, or close all programs and log on as a new user (Figure 22). Select the appropriate radio button and click Yes.

Figure 22. Shut Down Window

EMERGENCY SHUT DOWN

If your computer completely locks up, press and hold **Ctrl**+**Alt**+**Delete**. Only take this step when you are not able to access your system in any way. All unsaved work will be lost.

Chapter Two

MCL Tool Software Architecture

This chapter contains information on:

- The MCLT
- The LNServer
- LonWorks® Network Services (LNS)
- OPC LonWorks® Server
- The M-Series Workstation

MCL TOOL SOFTWARE ARCHITECTURE

MCL Tool Software architecture is comprised of five main elements:

- The MCLT
- The LNServer
- LonWorks® Network Services Architecture
- The M-Series Workstation
- OPC LonWorks® Server

The combination of MCL Tool, M-Series, and OPC technologies provides a full range of facility management setup, control, and analysis capabilities, all within a LonWorks®–based environment. Figure 1 below illustrates the basic architecture.

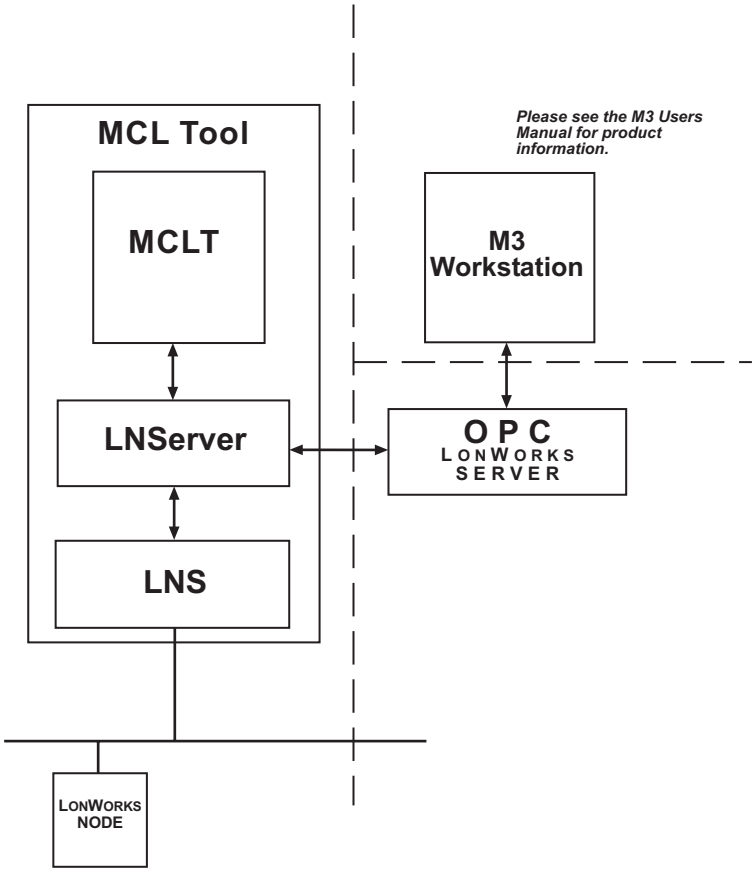

Figure 1. MCL Tool Software Architecture

MCL TOOL

MCL Tool is a LonWorks®-based tool used for the setup and configuration of the building automation system. It is comprised of three components; MCLT, LNServer, and LNS.

MCLT

MCLT is the graphical user interface for MCL Tool. All node configuration, node operations, point binding, and execution of plug-ins is performed using MCLT. MCLT is also used for writing and editing specialty programs for the Flexible System Controller (FSC) using Control Programming Language (CPL), and scheduling of the FSC.

LNSERVER

LNServer allows MCLT to communicate with the LNS architecture. It serves as the interface between MCLT and the LNS Component Object Model (COM) technology. When the user makes a request in MCLT, the data is sent to LNServer using TCP-IP protocol. LNServer then communicates the data to LNS. Information is returned to MCLT and ultimately the user in the same way.

LNS

LonWorks® Network Services (LNS) 3.0 Architecture is a set of network services that provides inter-operability between tools. LNS features an Active X "wrapper" that allows it to interface with a variety of applications. LNS communicates directly with devices on the LonWorks® network using LonTalk® protocol, and then passes this information back to the LNServer.

OPC LonWorks SERVER

The OPC LonWorks® Server is the "plug-and-play" interface between the M-Series Workstation and the LNS Architecture. It utilizes Object Linking and Embedding – for Process Control (OPC) technology for plug-and-play software, providing communications between building control systems. The OPC Server accesses data from the field through LNS, and provides that data to the M-Series Workstation. The multi-tasking OPC LonWorks® Server communicates with all LonTalk® media.

M3 WORKSTATION

The M3 Workstation is the dynamic graphical display for the building control system. The M3 Workstation provides trending, graphics, and alarm features to assist users in analyzing system efficiency and energy consumption. Users can also add navigation links, issue commands, and set up interactive displays of the facility. M3 receives information from the field via the OPC Server.

NAE

The Network Automation Engine (NAE) with a LonWorks® network interface serves as a LonWorks network integrator within the Metasys® System Extended Architecture. As a LonWorks network integrator, the NAE monitors and supervises LonWorks enabled devices on a single network segment. Data is presented on a Web browser that is logged in to the NAE or Application Data Server (ADS) requesting data over the IP network. MCL Tool is used strictly as a configuration tool to add and setup nodes on the LonWorks network. Once these nodes are configured and online, a Web browser, logged in to the NAE is used as the NAE user interface (UI).

An NAE must be commissioned and online on the LonWorks network to assure communication and control from the Metasys extended architecture. Once the NAE and any other LonWorks devices have been added to the physical tree, a database export file for each can be created and then imported into the NAE using a Web browser. See **Generate Metasys III Export File** in the System Setup - Common Node chapter of this document. See the **LonWorks Network Integration With NAE** Technical Bulletin (LIT-1201668) for more information on the NAE and Metasys Extended Architecture.

Software Overview Index