

Chapter 1

What is the Home Control Assistant?

In today's complex world, busy people can benefit from a home environment that anticipates their needs and helps take care of itself. For instance, suppose your house could:

- Turn on outside and entryway lights at dusk every day, or before you get home from work on weekdays?
- Automatically run the hot tub filter during the day, or start the heater, filter, and turn on the lights all at the flick of one switch?
- Dim hall lights, turn off a ceiling light, and turn on the children's night light at a preset time every evening?
- Turn on kitchen lights, and start the coffee pot at the same time every weekday morning?
- Turn all the lights in the house on or off when you press one switch at your bedside?

The Home Control Assistant can help you program your house to automatically respond to your typical schedule on weekdays, or a weekend or vacation schedule. You can set up schedules to make your home look lived in when you are away, and save energy by automatically turning lights off after you're in bed.

This chapter introduces the Home Control Assistant, and discusses the conventions of the guide and common procedures of HCA. This chapter includes sections on:

- About this guide
- Quick tour of HCA
- Using the menus
- Using the status bar
- Using the properties dialog boxes
 - Home Properties dialog box
 - HCA Options dialog box
- The conventions used in this guide
 - Procedures and operations common to HCA
 - Common Windows procedures used in HCA

About this guide

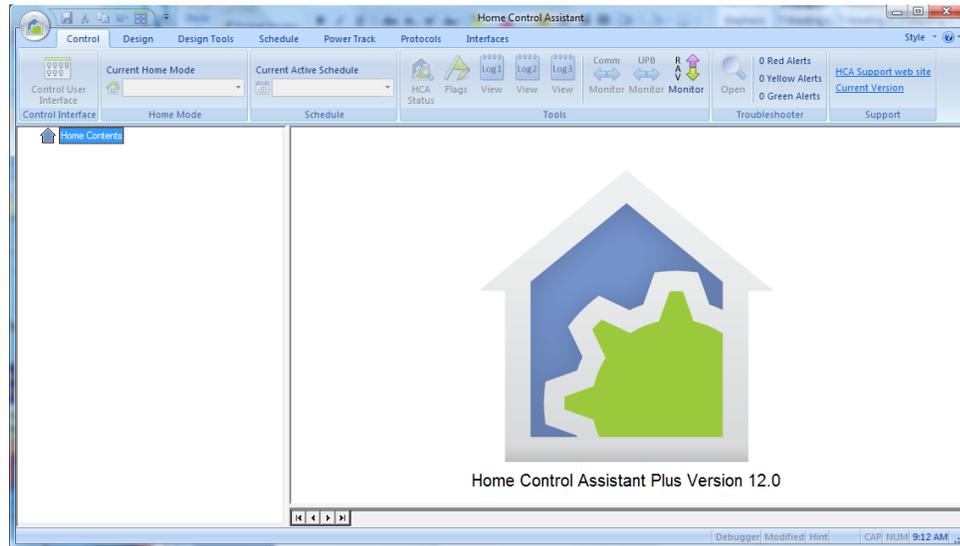
This user guide walks you through the process for setting up a typical device, and shows you how to set up more complex schedules and programs to help automate your home. This first chapter includes an introduction to and quick tour of the Home Control Assistant (HCA), showing what HCA looks like and discussing the use of ribbon, status bar, and the Properties dialog boxes. This is followed by a section on the conventions and typical Windows procedures used in this guide.

This guide is set up in chapters that discuss the major procedures that you can use in working with HCA. In addition to the main chapters, there are appendixes that describe specific features of HCA or the automation hardware supported.

Quick tour of HCA

To start the Home Control Assistant once you have installed it:

1. From the Windows task bar, click the Start button.
2. Choose Programs.
3. Then click Home Control Assistant.



The Home Control Assistant window is split into two panes.

- The left pane, the design pane, shows the HCA design outline with items in the design organized into folders. Everything in the left pane has properties: simply right-click the element you want to access and choose Properties from the popup menu.
- The right pane, the display pane, is reserved for the displays in your design, and at different times also shows the Visual Scheduler, Visual Link Editor, and messages.

As with a typical Windows environment, you can re-size the panes by clicking the divider between the two panes, and moving it either left or right to achieve the relative sizes that you want. You can even close one side entirely to show just the other side.

Across the top of the Home Control Assistant you see the Ribbon which contains a number of categories – tabs – that control buttons to activate various features of HCA. Across the bottom of the display pane is a tab bar that shows a tab for displays in your design. Across the bottom of the whole window is a status bar.

Opening and Closing HCA

When you first start HCA, its main window appears on the screen. Also in the system tray on the system task bar, a small HCA icon appears:



Unlike other Windows programs you may be familiar with (word processors, spreadsheets, email programs), HCA must be running 24/7 on your computer in order to control your home. To make it easier to keep HCA running all the time, and to help prevent you from inadvertently terminating HCA, HCA works a bit differently than these other programs.

There are five operations that are important to understand:

Maximize the HCA Window

The HCA Window is maximized in the same manner as most Windows programs. Using the left mouse button, click on the maximize button on the upper right hand corner of the HCA window. The HCA window expands to fill the whole display.

Minimize the HCA Window

The HCA Window is minimized in the same manner as most Windows programs. Using the left mouse button, click on the minimize button on the upper right hand corner of the HCA window. HCA is removed from the display and appears in the Windows Task Bar as a button labeled with your home design name.

Hide the HCA Window

To hide HCA and have only the small icon in the system notification area, select *Exit* from the *File* menu. Unlike other programs this **does not** terminate HCA. This operation can also be done by clicking with the left mouse button on the close icon on the upper right hand corner of the HCA window.

Open the HCA Window

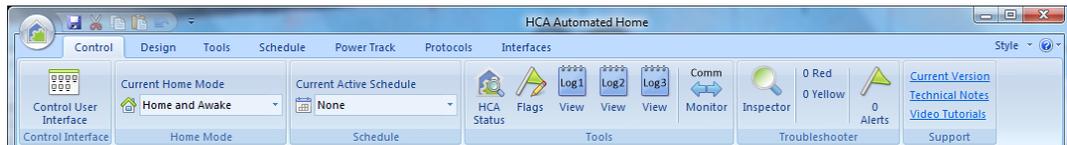
To open the HCA window when HCA only appears as an icon in the system notification area, move the mouse over the icon and click the right mouse button. Select *Open* from the popup menu.

Terminate HCA

Open the application menu by clicking on the application “Bubble” and then select *Shutdown* from menu

Using the ribbon

Across the top of the Home Control Assistant window is a ribbon menu. There are seven categories – tabs - with various controls in each.



The **Control** category contains controls that show the current state of your design. For example, the current schedule and home mode and shown in dropdown controls. To change the mode of schedule all you need do is to change the selection in those dropdowns.

Also shown is the current inspector and alert report given in shorthand. The number of red and yellow problems identified and the count of alerts reported by the alert manager.

The buttons in the Tools panel open viewers for the Logs, flag inventory, and the communications monitor.

- **HCA Status.** Opens a dialog box that gives the current design path and name, current schedule, next scheduled event; a list of the programs running, and sunrise and sunset times.
- **Flags.** The Flag Inventory dialog box shows all the flags and their current values in your design. A Program Flag is used to represent various types of information including status, values, times, etc. which are used in HCA programs
- **Log1m, Log2, Log3.** Show a viewer for the each configured log. If the log is not configured the button is disabled.

- **Comm Monitor.** A window that shows the lowest level communication between HCA and the attached automation interfaces

The **Design** category contains controls for modifying your design. For example, adding new programs, devices, groups, and schedules. Also tools for accessing the properties of your design.

The **Tools** category contains tools for configuring the Control UI, Status export, etc. Also in this category are the tools for configuring various aspects of HCA like the Visual Programmer and debugger.

The **Schedule** category contains the controls necessary to work with the Visual Scheduler. This is described in the Visual Schedule chapter.

The **Power Track** category is to view both current power uses and to view historical power graphs that show power usage in your home over time.

The **Protocols** category contains tools customized for specific attributes of the various automation protocols supported by HCA. For example, special facilities for working with Insteon and UPB.

The **Interfaces** category contains tools for working with all supported automation interfaces and for weather providers.



One nice feature of the Interfaces category is that the icons show you which interfaces have been configured, which are connected and working, and which are not.

In the above picture the Insteon PowerLine and the UPB interface has been configured and are working – green check. If they were not working the green check would have been replaced by a exclamation point. The IR interfaces have not been configured - red bars.

The HINT System

HCA contains a system that may make learning all the features of HCA a bit simpler. When you are working with the HCA User Interface if your actions could be done in a better way, or there is a feature you may not be aware of, HCA displays a hint. This can be done in one of two ways.

First, the hint can just appear on the screen in a popup window. Or, the Hint Indicator in the status bar can change to show that HCA has a hint. In this case you must wither click on it or press the F1 key to show the hint.

You can resize and move the hint window out of the way and leave it on the screen as you work. HCA updates it with whatever hint it has about what you are doing.

In the Help menu is an option to select your preference. If Auto Hint Display has a checkmark next to it, hints automatically appear. Without the checkbox the start bar method is used.

On each hint popup dialog is a checkbox that you can use to have HCA no longer show that hint. As you get more sophisticated you will have no need of some of the hints.

If you find yourself wanting to get the hints back that you turned off, select Enable All Hints from the Help menu.

Using the properties dialog boxes

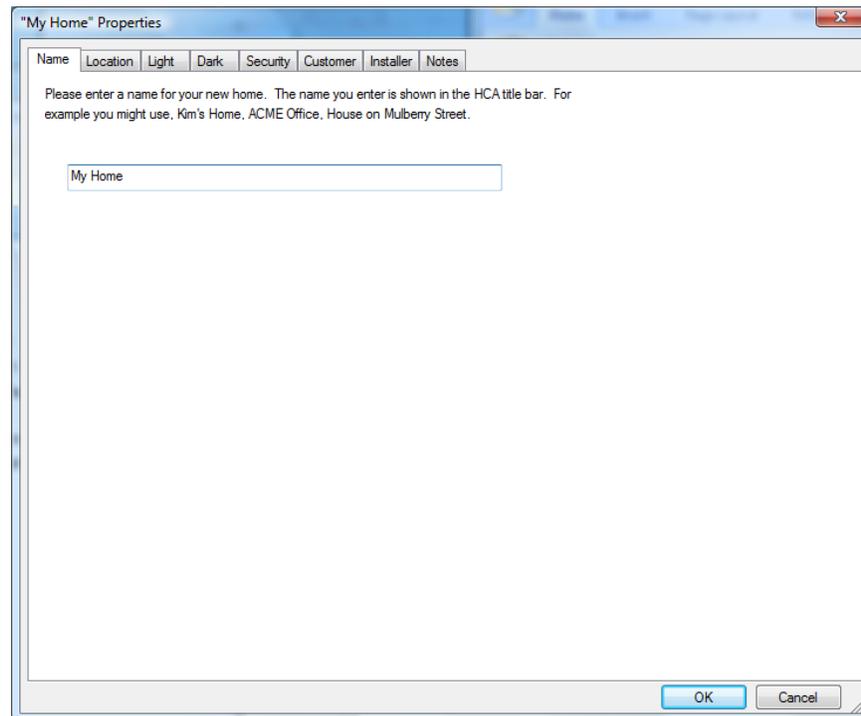
In HCA, nearly everything has properties. Most properties dialog boxes are available from a popup menu that you see when you right click an item in either pane of HCA.

- In the design pane of the HCA, right click an element word, and choose Properties from the popup menu. The properties dialog box for the item appears.
- In the display pane, right-click on the display background, or on an icon, or the visual scheduler background to display the popup menu with a properties dialog box for that item.

These properties dialog boxes generally have multiple tabs, and include items like the name, icon, restart choices, green settings, etc. There are usually other tabs with options specific to the object or the type of object.

Home Properties dialog box

You can access your Home Properties dialog box by either right clicking Home Contents in the design pane, or by clicking the *Properties* button in the *Design* category.



The home Properties dialog box shows the information specific to your home design that you entered when you first set up your HCA design. It provides tabs where you can modify or add settings later for these properties, including:

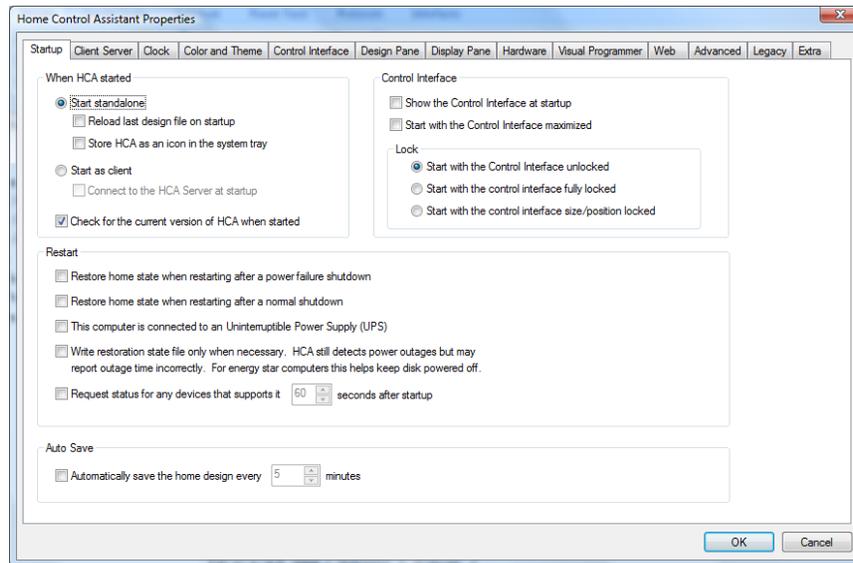
- Name of the design
- Location—city, state, longitude and latitude
- Light and Dark settings. How HCA determines if it is light or dark. There are many ways to do this.

- Security settings—passwords to modify the design, control programs and devices, and activate or deactivate HCA
- Identification info – name, address, email, etc – for both the home owner and installer
- Any notes about the design.

See the chapter on Home Properties for more information.

HCA Options dialog box

You can access the Home Control Assistant Options dialog box by using the HCA Options button from the application menu.



The Home Control Assistant Properties dialog box is a very powerful tool where you can modify or add settings for the general properties for the HCA program. This is information about how to run HCA, including:

- Startup—design, size, power failure information, and auto save options
- Client Server – Opens for the HCA Server
- Clock—PC clock correction information, modem info if used, and Time Service options
- Color and Theme—select the default color and theme used for display background in the development and control interface.
- Control Interface – Options for the Control Interface
- Design Pane – design pane and time format options.
- Display Pane —what you'll see in the display pane of HCA
- Hardware—Automation interfaces and how they are attached to your computer.
- Visual Programmer – configure Visual Programmer options
- Web – Configuration for the HCA Web Server
- Advanced – other options
- Legacy – Selection for older legacy hardware and features.

- Extra – Extra feature codes that enable/ disable some special HCA features

Refer to the HCA Options chapter for more detailed information.

The Design Pane and the Display Pane

As described above, the HCA main window is split into two parts. The display pane is described in the chapter on displays. The design pane is described here in the next section.

The Design Pane

The left pane of the HCA Window, called the Design Pane contains a list of the elements of your design. There are a few items not shown and these will be described later.

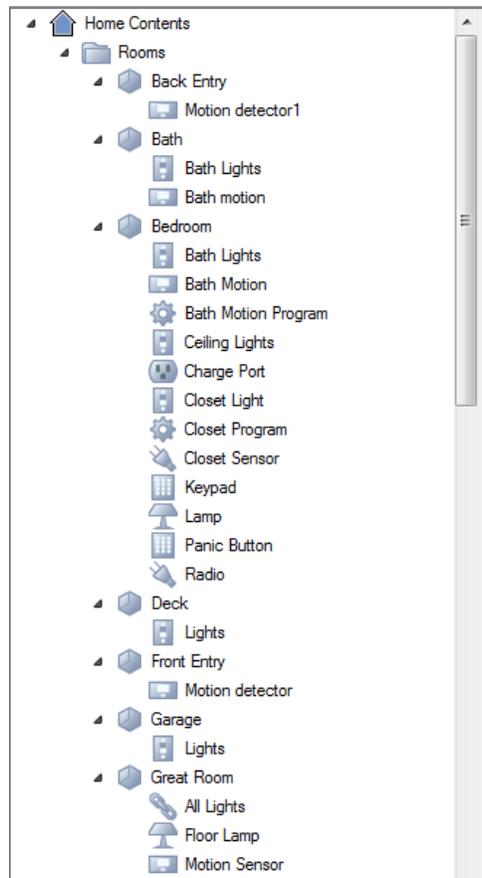
Every object in your design can have a name and most objects require a name. These names appear in the design pane. Each object is also contained within a room or folder. You can have as many objects as you need and place them in as many rooms or folders as you need. The only limitation is that each item within the room or folder must have a unique name, and no room or folder can contain another room or folder.

What's the difference between a room and a folder? While rooms are a good way to organize your device, programs, and groups, there are special operations that allow you to treat all the devices in a "room" as a single set of devices. This is all explained in the chapter on rooms. Folders are much simpler and are just an organizational method.

Hint: Rather than say "folder or room" everywhere, the term *folder* is used and means either folder or room unless otherwise stated.

Why would you want to organize your design into folders? One reason may be to help group those things together that work in unison. For example one room may have three devices, a group, and 6 programs. All of these work together as part of your automation solution so it makes sense to have them in one folder. And perhaps the folder name is the name of the room.

How do you organize things that don't fit into a simple room-by-room organization? That's up to you! One way would be to have a folder called Home that contains all those items that work with the house as a whole. Or have a folder for each floor that, in a similar way, contains things that handle that floor.



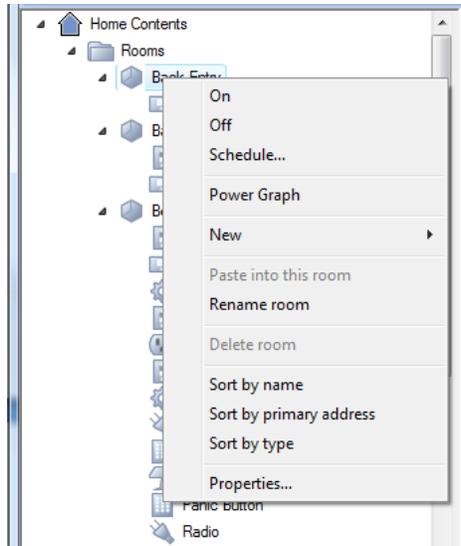
In this example, the design contains a number of Rooms. One room is for the Back Entry, another for the Bath, and so on.

When you open the properties for each object type, on the first tab is the place where you can select which folder or room the object is placed in.

Design Pane

There are a number of options for sorting the individual folder/room contents and the sorting for the order of the folders displayed.

Right click on the folder/room name and the sort options are in the popup menu.



Two part names

In HCA everything has a name. It's always hard to come up with names for things in your design. It may seem that each room of your home has computer controllable lamps and ceiling lights. You could call them "Den Lamp" "Den Ceiling Lights", "Bedroom lamp", or come up with some other naming convention. But with the ability to assign objects to folders, HCA lets you call them the same name, as long as they are in different folders.

For example, assume you have two lamps. If you create two folders: one called *Den* and the other *Bedroom*, then you can create two devices and call each *Lamp*.

This can get confusing: which "lamp" is which? HCA always shows them as "Den – Lamp" and "Bedroom – lamp" whenever you have to choose a device.

When names are managed in this way, HCA calls them *Two Part Names*.

With two part names, where does the first part of the name come from? It comes from the name of the folder the object is stored in. Where does the second part of the name come from? It is the name you entered when you created the object. For example, when you used the "new device" wizard to add the device to your design you gave the new device a name.

Two parts names are enabled or disabled by selecting HCA – Properties from the menu and choosing the Design tab:

Keep these points in mind as you work with the design pane:

- Each object always is stored in a folder.
- The design pane can be organized to show objects within their folders or within their type.
- Names in HCA are *two part* where the name is the folder name and the object name taken together.

Working within the design pane

There are a number of things you can do in the design pane to help create an organization that is best for your use.

1. You can rename a device, program, group, or schedule. Right click on the name and select Rename from the popup menu. You can then enter the new name.

2. You can rename a folder. This is done in the same way as described above.
3. You can reorder the folders, by grabbing the folder, dragging it and dropping it on the folder you want it to appear *after*.
4. You can drag an object from one folder to another. This changes which folder it is stored in. Each object must be stored in some folder, and can only be stored in a single folder. That is, one object can't appear in two different folders.
5. You can close or open a folder. To close the folder click on the small icon next to it. All the objects in the folder disappear. To have them reappear just click on the small icon next to it. HCA will remember which folders are open and closed when you close and reopen your file.
6. You can select more than one device, program, or group and operate upon them all at once. Not all operations are possible if you have more than one item selected. In general you can control them all on, all off, suspend, resume, delete or open their properties. You can also drag more than one object from one folder to another to change their location.

You can also control the order of the objects within a folder. To do this, right click on the folder name in the design pane and select one of the ordering options.

The small icon next to the name in the design pane can be changed in only one way. You must open the properties for the object and if there are any choices, select an icon from the choices displayed. There are a limited set of choices, if any, and you can't add your own icons to the design pane like you can for the display pane.

Design pane information

In addition to a simple listing of your design elements by name and in folders, the design pane also shows the state of the object in two ways.

1. If the device, group, or controller is ON or if a program is running, the background of the icon in the design pane is colored yellow.
2. If the device, program, or group is suspended a red slash is drawn across it.
3. If the device, program, or group is disabled a black slash is drawn across it.

Working with the design and display panes together

HCA supports drag and drop between the design pane and the display pane. To add an icon to a display (one that supports icons – see the Displays chapter for more information), just grab the device, program, or group name and drag it onto the display pane and drop it. You can select more than one object and drag them as a group onto a display.

In addition to this drag and drop method, you can also choose which displays an icon for an object appears by opening its properties dialog and making changes on the Display tab.

What doesn't appear in design pane

The main elements of your design - devices, programs, groups, schedules, and schedule entries - are listed in the design pane.

Other elements of your design like the calendar, keypads, log filters to name just some are not listed in the design pane.

The conventions used in this guide

The following are the common protocols used in this Guide.

Convention	Definition
Arial font	Text in this font indicates either entries that you type into HCA, or responses or messages from the HCA system for you to read.
HCA	An abbreviation for the Home Control Assistant.
Hint	A hint is a special trick, a neat way of doing something, or a reminder of other HCA operations.
web tip	A web tip points you to the Home Control Assistant web location for more information on a particular subject.

In this guide, we assume that you are familiar with the use of Windows, and the most common Windows conventions, such as click, drag and drop, double-click, right mouse click, use of the browse function, directories, and files. However, some of these common Windows conventions most often used in HCA are documented in the section following.

For instance, if a procedure says click, we mean to use the mouse button you most often use, generally the left. If you need to right-click an item, we'll specify that.

Procedures and operations common to HCA

There are several common tasks that occur in multiple places in HCA, and that you may find yourself completing in different wizards, or for the various properties dialog boxes. Rather than repeating them or explaining them each time they are used, we have placed them here to be less repetitive.

Selecting items for use in a particular area

This may be used to place icons for a device, group, or program on a display, to place members in a group, and in several other wizards. Regardless of the specific wizard or dialog box, there will be two boxes, separated by two arrow buttons.

You click a listed item in the left box, and then click the right arrow → pointing to the right box, and the item moves into that box. In some cases you can move one, some, or all of the items to the right column. If you find that you have mistakenly moved something to the right box, you can move it back. Select the item from the right box, and click the left arrow ← to return it to the left column.

Object names

As described above, most HCA objects have names. You may use as many characters as you like to name your objects except for dash, left square bracket or right square bracket. There is no practical limit to the length of any name.

Printing

HCA provides printing support for details on several elements of your design, using a typical Windows format. You can select any of the four print commands available from the Application menu:

- **Print**—provides the typical Windows print dialog box, allowing you to determine your print range, number of copies, and so on.

- **Pint Preview**—shows you a reduced, full page layout of what you are printing.
- **Page Setup**—opens a dialog box where you can set the elements you want to print: home information, rooms, folders, displays, schedules, device address info, Insteon network description, protocol bridges, flags, and references.
- **Print Setup**—opens a dialog box where you can view and set the name and location of your printer, paper size and orientation.

The HCA printouts contain information about the elements in your design that you have selected using the Page Setup command. HCA formats and prints the information you chose in a vertical list, with headings for the different sections. The path for your design is included at the top of each page, along with the printout page number. Because the printouts can get long, you may want to specify only those elements that you are interested in seeing each time you print.

Common Windows procedures used in HCA

There are also typical Windows procedures that are frequently referenced in HCA procedures. We have gathered a few of them here, for your reference in case you are not familiar with them.

Right click for popup menu

Most objects in HCA have properties attached to them. You can generally get to the properties for the object by using the mouse, and right clicking on the object. To do this:

1. Move the mouse pointer to or over the object in question.
2. Click the **right** mouse button. (Unless you're using a mouse device set up for a left-hander, in which case, you would click the left mouse button.) This is the button that you don't normally use.

A popup menu appears.

3. With the mouse, move the pointer down the popup menu until you get to the menu command you want, and click the **left** (normal) mouse button.

In the case of properties, the properties dialog box opens.

Drag and place

In HCA there are several things—icons on a display, entries on the visual scheduler—that you may want to move from one place to another. This is very easy to do with the typical Windows drag method.

To drag an icon to another location:

Move the mouse pointer to or over the object in question.

1. Click the **left** mouse button. (Unless you're using a mouse device set up for a left-hander, in which case, you would click the right mouse button.) This is the button that you use most of the time.
2. While you continue to hold the mouse button down, move the mouse pointer to the new location for this object. You will see the object moving with your pointer.
3. When you reach the correct location, release the mouse button.

The object “drops” into its new place.

Viewing the hierarchy of your design

Several areas in HCA are organized in hierarchies like the design pane. These hierarchies use the Windows convention of small icons on the left margin to indicate the status of the hierarchy. One icon shows that the contents of the folder is hidden and another when it is seen.

This system is the same as used by the Windows File Explorer so you probably already know how to work it.

