Meta5

Getting Started with the Meta5 Developer's Desktop

Version 4.3

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About This Book

This book introduces the Meta5 system and the Meta5 developer's desktop. It explains how Meta5 fits into your business environment and provides an overview on how to interact with and customize the capsule development environment, get online help, and use the following tools:

Folder	Discard
E-Mail	Screen Capture
Format	PC Directory
File Drawer	Envelope
Printer	SendMsg
Clipboard	PC Application

This book also introduces the other tools used to create capsule applications, Administer databases, and perform system administration tasks, and it tells you where to look for additional information.

Who Should Read This Book

All Meta5 users should read this book, including application developers, system administrators, and database administrators. If you have no previous experience with Meta5 you should read this book sequentially because the later chapters build on the techniques explained in earlier ones.

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Chapter 1.   Introducing Meta5

The Meta5 system is a powerful data access, analysis and reporting system. It provides a flexible suite of software tools for creating your own Meta5 applications. Meta5 "smart applications" push your business intelligence data to the end users with a minimum expenditure of time and resources thanks to Capsule technology. Meta5 can create and distribute an unlimited number of customized reports which can be delivered in minutes rather than weeks.

Meta5 provides a rapid application development environment on the Meta5 developer's desktop that helps your organization respond quickly to changing business environments. Capsule developers can build, deploy, and update capsule applications that automate data query functions and reporting functions for your end users. Figure 1 shows the relationship between the Meta5 developer's desktop, the Meta5 server, databases, and the open clients.
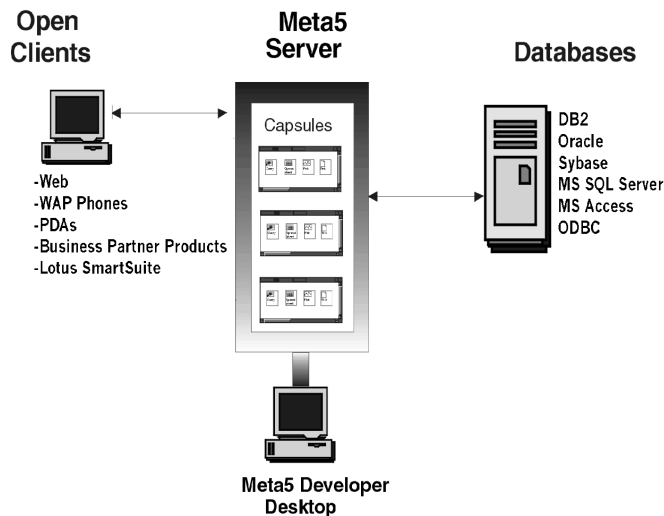
Figure 1. Meta5 in a three-tiered architecture

Meta5 Capsules

You can create capsule applications in a graphical environment by using icons for functions such as joining data sources, performing queries, creating spreadsheets, and even creating Microsoft Word and Excel reports. You do not need to know any commands or macros. By simply connecting objects with arrows, you can automate the creation and running of queries, calculations, plots,

and reports. A comprehensive set of transformer tools help you transform data into useful information.

The tools you use to build capsules also let you create multidimensional views and reports of relational data. Multidimensional views help you quickly find the complex and otherwise hidden trends in your business data.

Figure 2 shows a typical capsule application. In this example, a user runs a query against a database and sends the results to a Meta5 spreadsheet. Using XLaunch, that data is exported into a pre-formatted MS Excel spreadsheet. For the final step, the data is automatically e-mailed using the user's default PC e-mail tool.
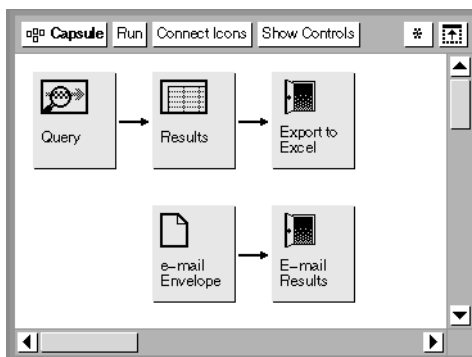
Figure 2. A sample capsule application

What Meta5 Can Do For Your Business

With Meta5, you can develop and deploy the analytical function of reusable capsule applications throughout your business. End users in your organization can receive results and analyze them further with common applications they are already skilled at using. Here are some of the analytical systems that your business can build using Meta5:

- *Marketing information systems* that combine syndicated product-movement data with internal distribution, pricing, advertising, and promotional data. These systems help you understand how well your products are doing against the competition on a global or regional level. Meta5 lets you conduct quick, ad-hoc explorations of potential problem areas or opportunity areas.

- *Sales information systems* that combine customer information, branch data, and demographics. Your retail marketing group can use this information to define targeted direct-marketing programs, identify new product opportunities, produce ad-hoc and customer-specific analyses, and set product and branch performance goals.

- *Financial analysis systems* that present profit-and-loss data so a finance department can thoroughly investigate and explain trends and variances in performance.

- *Credit exposure management systems* that combine data from numerous internal systems with purchased databases. Your credit analysts can use this information to evaluate loan exposure and commitment levels, identify areas of risk, and minimize undesirable exposure in the loan portfolio.

The Meta5 Components

The primary components of Meta5 are the Meta5 developer's desktop and the Meta5 server. Figure 3 shows the typical components in a Meta5 environment. Your environment can contain databases on different platforms and open clients that provide end users with access to the capsule applications that you develop and administer. All communication between Meta5 components, databases, and Meta5 open clients takes place through a local area network (LAN). You can use token-ring or Ethernet communication protocols or a combination of both for your Meta5 LAN.
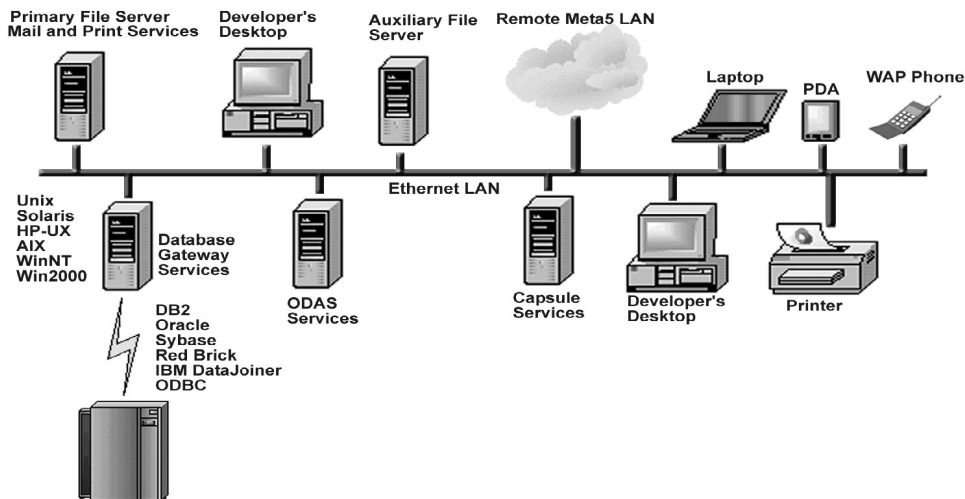
Figure 3. Typical Meta5 environment

From the developer's desktop, you can access the Meta5 tools. You can use these tools to develop capsule applications; perform system administration tasks, such as adding and deleting users; and perform database administration tasks, such as granting authorities. Your environment can have as many developer's desktops as needed to support your development and administration requirements.

The Meta5 server is configured to run a variety of services including:

- File services
- Capsule execution services
- Mail services
- Database gateway services
- Communications services
- Printing services
- Conversion services
- Cooperative Application Services (CAS)
- Open Data Access Services (ODAS)

Depending on your organizational requirements and workload, you can spread these services across several Meta5 servers in your environment.

Chapter 2.   Getting Started

This chapter provides the basic information you need to start working with Meta5. It is organized into the following sections:

- Starting Meta5
- Meta5 StartCenter
- Using the Meta5 Workstation Configuration Tool
- The Developer's Desktop
- The Meta5 Environment
- Using the Mouse and Pointer
- Selecting and Deselecting Icons
- Selecting and Deselecting Text
- Manipulating Objects
- Working with Status and Error Messages
- Using the `Special` menu
- Interacting with Your Operating System
- Logging Off
- Exiting Meta5

Some of the information in this chapter is explained more fully in "Chapter 3. Working with Icons," on page 23 and "Chapter 4. Working with Windows," on page 35.

Starting Meta5

Before you begin, ask your supervisor or system administrator for the following information:

- Your Meta5 user ID. This is the name you use to log on to Meta5 and that your colleagues use to send you mail
- Your Meta5 password

To start Meta5:

1. Double-click the Start Meta5 Desktop icon. After a few moments, a copyright message is displayed, and then the Meta5 logon window opens.

   If the characters in the logon window are garbled or you are working in a mixed language environment, you might need to set the language and font environment variables at your desktop to produce a readable display. Contact

your system administrator for more information or see *Installing Meta5 LAN Components*. Meta5 can also be started as described in "Meta5 StartCenter" on page 7.

2. Type your Meta5 user ID as assigned by your system administrator. The characters you type are displayed at the bottom of the screen, next to the words `Please enter your user ID`. Note the following items as your make your entries:

    • Use the `Backspace` key to delete characters.

    • Your user ID is not case sensitive. You can use any combination of uppercase and lowercase letters when you type your user ID. The capitalization you use when you log on is used by Meta5 when you send mail during your work session. For example, if your user ID is your last name, you might want to begin it with a capital letter.

    • If the characters that are displayed on the screen as you type are not the characters you thought you were typing, your keyboard might have been set to another language. To find out how to change the language setting that Meta5 uses to interpret your keystrokes, see "Resetting Your Keyboard Language" on page 64.

3. Press the Enter key. The word `Password`: is displayed.

4. Type your Meta5 password. Your password will be masked by asterisks. Note the following items as you make your entries:

    • Use the Backspace key to delete incorrect characters.

    • Your password is case sensitive.

    • If your enter the wrong password, Meta5 will again prompt for your user ID.

5. Press the Enter key. In a few moments, your developer's desktop is displayed.

When you start Meta5, it takes up your entire screen. However, you can switch to other open applications as described in "Interacting with Your Operating System" on page 22.

When using the Windows** 95, Windows98, Windows2000 or Windows NT** operating systems, your operating system's task bar may cover the Meta5 menu bar at the bottom of the window, preventing you from using the Meta5 menus. In this case, click and drag the Meta5 window bar upward to reveal the entire developer's desktop window.

When you start Meta5 for the first time, you use a password that has been assigned by your system administrator. For security purposes, you should change this password to one of your own choosing. For instructions on changing your password, see "Changing Your Password" on page 67. However, before you change your password, you should read the rest of this chapter to become familiar with fundamental techniques for interacting with Meta5.

Meta5 StartCenter

The Meta5 StartCenter allows you to start a Meta5 Workstation, select the size of your Meta5 Workstation desktop and close the StartCenter. If your Meta5 StartCenter does not start automatically, navigate to the Meta5 folder of the Windows start menu and click on Meta5 Workstation.

Figure 4. System Tray with Meta5 StartCenter Icon

Once started you will see a Meta5 icon in your system tray similar to Figure 4. You open the Meta5 Workstation by double clicking on the icon. If you right click the StartCenter icon you will see a menu that allows you to stop the Meta5 StartCenter, start a Meta5 Workstation, change the size of the Meta5 desktop and get information about the StartCenter. In order to specify a custom size for your Meta5 Desktop you must use the Meta5 Workstation Configuration Tool.
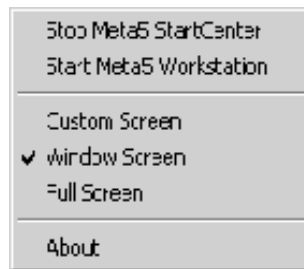
Figure 5. The right click menu of the Meta5 StartCenter

Using the Meta5 Workstation Configuration Tool

The Workstation Configuration Tool allows you to change many of your Meta5 settings.

On the main tab you can change:

- **Broadcast Address** - This specifies where your Meta5 workstation looks to find the Primary File Server
- **Server Address** - This is used when you know the name or IP of your Meta5 Primary File Server
- **Default Language** - Selects your language.
- **Directory** - Specifies your Meta5 directory.
- **IP Address** - Specifies your IP address or 0.0.0.0 if you are on DHCP

- **Realm** - The realm number for your Meta5 Primary Files Server
- **Subnet Mask** - Used to allow communication with the Meta5 Primary File Server.
- **Time Zone** - Sets the time zone that your are in.
- **Screen Rows** - Sets the width of the Meta5 workstation by the number of icons it can display on one row. The default is 9
- **Screen Columns** - Sets the height of the Meta5 workstation by the number of icons it can display on one column. The default is 14.
- **Advanced** - Allows you to change the LMM cache size. This is the memory that your system allots for holding your Meta5 Desktop Information.

On the top menu of the Workstation Configuration Tool there are four headings, E-mail, Bootstart, Autostart and Help.

- **E-mail** - Allows you to select the e-mail client you will use with Meta5. You can select from Lotus Notes(5.0 and higher), Outlook or the Meta5 default mail.
- **Faststart** - Enables the Meta5 StartCenter to start on boot up.
- **Autostart** - Starts a Meta5 Workstation as soon as StartCenter connects to the Meta5 PFS. This will also close the StartCenter when you close the Meta5 Workstation.
- **Help** - Displays the Version information.

Note: If you are using a Windows95/98/Me system, shutting down the StartCenter will cause an error. To correct this go to your system folder of your windows directory (C:\Windows\System by default) and right click on conagent.exe and select properties. Under the Misc tab uncheck the **Warn if still active** option and click OK.
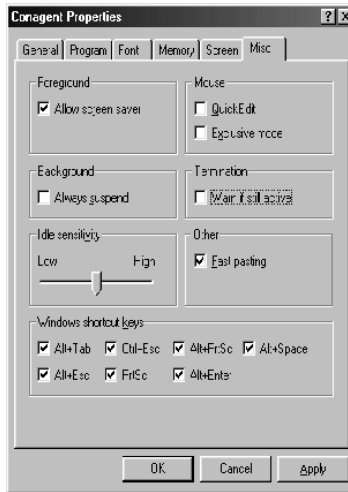
Figure 6. Conagent.exe Properties

The Developer's Desktop

The environment you use when you work with Meta5 is known as developer's desktop. You can use the developer's desktop to build and test capsule applications, perform database administration tasks, and perform system administration tasks.

When you first start Meta5, it takes up your entire screen. You can use the Workstation Configuration tool and StartCenter to change the size of your Meta5 Developer's Desktop window.

The developer's desktop contains icons that represents both business tasks and tools in the Windows environment. For example, you can use the Meta5 File drawer to share documents and applications with others on your network. You can also open Windows Explorer from your Meta5 desktop to copy a PC file from your local hard drive. You can access Microsoft Outlook from your desktop to send everything from memos to entire capsule applications to your colleagues or use the Meta5 Envelope and Mail Tray to send reports and capsules to other Meta5 developers.

You interact with Meta5 tools through point-and-click operations. Use the mouse to select an icon and begin using a tool. Using the Capsule tool, you can automate entire sequences of operations by drawing arrows between individual icons, including icons that represent popular desktop applications. These applications can be accessed by end users from the Internet

When you use Meta5, much of the work you perform takes place in rectangular workspaces called *windows*, many of which can be open simultaneously. You can easily rearrange windows and change their sizes to suit your needs. For example,

you might want to compare the information in two different windows, or copy information from one window to another.

The Meta5 Environment

The screen space occupied by Meta5 developer's desktop environment is where you will work to create capsule applications. This section describes the parts of your developer's desktop, which includes: icons, pointer, message bar, `Message Log` button, `Help` button, and `Special` button.
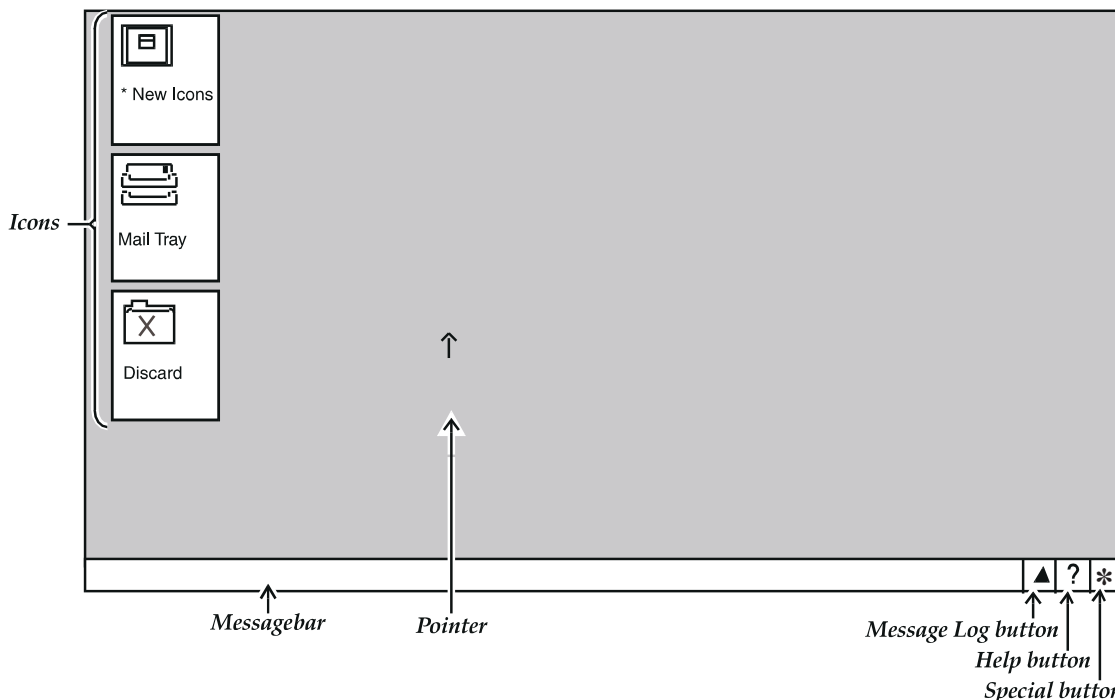
Figure 7. Typical developer's desktop

Icons

When you start the Meta5 developer's desktop, you see a suite of icons, or rectangles of graphics and labels, on the screen. These icons represent Meta5 tools and services. You use icons to retrieve, analyze, store, present, and distribute information. For example, some icons represent tools for creating

documents (such as the Text icon) and other icons represent tools for retrieving data (such as the Query and Reporter icons).

Icon graphic → Mail Tray
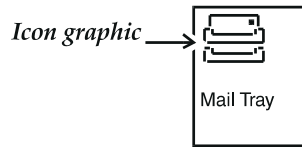
Some icons, called *containers*, can be used to hold other icons. Folder and File Drawer icons are containers that hold other icons. File Drawers also allow icons to be shared among users. Other tools, such as Mail Tray, Envelope, Printer, and Discard, are also containers, but they provide other functions as well.

Much of the work you perform with Meta5 is accomplished by manipulating icons with the mouse and the keyboard. You should always have a copy of the Mail Tray, Discard folder, and New Icons file drawer on your developer's desktop.

- Use the Mail Tray to send and receive mail (see "Chapter 7. Using Mail for Application Development and Data Reporting," on page 79).

- Use the Discard folder to retrieve an icon that you delete by mistake (see "Discarding Icons" on page 30).

- Use the New Icons file drawer to get copies of any other icons you need (see "Copying Icons" on page 24 and "Finding Icons in the New Icons File Drawer" on page 27).

If you inadvertently delete the Mail Tray or Discard icons, you can get copies of them from the New Icons file drawer. If you inadvertently delete the New Icons file drawer and you have a Mail Tray icon, you can ask another user to mail you a copy. However, if you delete all your icons, you cannot use Meta5. Your system administrator will have to create a new developer's desktop for you.

Pointer

The *pointer* is a symbol, usually an arrow, that you move with the mouse. The pointer indicates where the next action occurs. You will learn more about using the pointer and mouse later in this chapter.

Message Bar

The message bar is the narrow, rectangular area along the bottom of your developer's desktop where status and error messages are displayed. For information about messages, see "Working with Status and Error Messages" on page 17.

Message Log Button

The `Message Log` button is the square enclosing a triangle to the right of the message bar. This button opens the Message Log window, which displays current and previous messages and messages that are too long to be displayed entirely in the message bar. For more information, see "Working with the Message Log Window" on page 18.

Help Button

The `Help` button is the square enclosing a question mark to the right of the `Message Log` button. This button directs you to the online documentation for Meta5.

Special Button

The `Special` button is the square enclosing an asterisk to the right of the `Help` button. This button opens a menu of choices for performing various tasks, such as changing your password or logging off Meta5. For more information, see "Using the Special Menu" on page 20.

Using the Mouse and Pointer

The mouse is your primary means for positioning the pointer. Use the pointer to select an icon, menu item, section of text, or other object that you want to use.

The pointer often looks like an arrow but assumes other shapes depending on the procedure in progress. For example, the pointer becomes a stopwatch to indicate that a lengthy procedure is taking place. When you attempt an action that is not valid, the pointer changes to a "do not" symbol.

↑	☉	⊖
Arrow pointer	*Stopwatch pointer*	*Do-not pointer*

The two mouse buttons have different uses.

- Mouse button 1 is used to select or deselect icons; to select buttons, menu choices, and text; and for other purposes described later in this manual.
- Mouse button 2 is used to extend your selection, to expand an icon when the icon's name is too long to read otherwise, and for other purposes that are described later in this book.
- Both mouse buttons are used together to display the function pad.

Throughout this and other Meta5 books, the following terms are used to describe actions you perform with a mouse.

Term	Meaning
Point to	Slide the mouse to move the pointer onto the specified object.
Click, as in "Click on the `Reply` button."	Press and release mouse button 1 while the pointer is on the specified object.
Double-click, as in "Double-click on the Text icon."	Press and release mouse button 1 two times while the pointer is on the specified object.
Drag an object	Point to the object, then hold down mouse button 1 and slide the mouse.

Selecting and Deselecting Icons

To use an icon, you must first select it. This informs the system that you want your next action to apply to that icon.

To select an icon, click on the icon that you want to select. The icon changes to a different color (a change that is referred to as *highlighting*).

To perform the same operation on several icons, for example to move a group of icons to one side of the desktop, you can select more than one icon.

To select more than one icon:

1. Click on the first icon. The color of the icon changes.
2. Point to the second icon and click mouse button 2. The color of the second icon changes.
3. Repeat step 2 until you have selected all the icons you want.

If you select one or more icons and then change your mind, you can deselect all of them by clicking on a different icon or by clicking on an empty spot on your developer's desktop.

If you select more than one icon and want to deselect just one of them, point to the icon you want to deselect and click mouse button 2.

To keep one icon selected and deselect all other icons, point to the icon that you want to keep selected and click mouse button 1.

Selecting and Deselecting Text

When you select text, you inform the system that you want your next action to apply to that text; for example, you can move or copy the selected text or italicize it. Note that if your next action is to type one or more characters, the selected text is replaced by whatever text you type. For example, if a word is selected and you press the space bar, the selected word is replaced by a space.

To select text by dragging:

1. Point to where you want to begin the selection.
2. Press and hold down mouse button 1, and drag the pointer through the text that you want to select. The selected text is highlighted.
3. Release the mouse button.

To select text by pointing and clicking:

1. Click in front of the first character you want to select. An insertion point (a blinking vertical bar) is displayed there.
2. Point to the end of the text you want to select and click mouse button 2. The selected text is highlighted.

To deselect text, click on an empty spot on the developer's desktop, or select something else.

Table 1 provides alternative methods for selecting a specific word, sentence, and paragraph.

Table 1. Text selection methods

To select	Do this
A word	Double-click on any character in the word.
A sentence	Click three times on any character in the sentence.
A paragraph	Click four times on any character in the paragraph.

Manipulating Objects

This section describes two methods for manipulating objects (such as icons and text) and performing other developer's desktop functions:

- Using the pop-up function pad
- Using the function keys

Methods for manipulating icons are explained in more detail in "Chapter 3. Working with Icons," on page 23.

Using the Pop-Up Function Pad

The pop-up function pad provides a convenient way for you to manipulate objects such as icons and text. You activate the pad by pressing both mouse buttons while the pointer is anywhere on your developer's desktop. You can use the pad to move, copy, and delete icons or text, and to open an options window.

An options window provides a way for you to view and modify the properties of a selected object. You will learn how to use options windows to perform specific tasks as you work through this book.

There are four symbols on the pop-up function pad that represent functions you can activate:

- Copy

- Delete

- Move

- Options

The next procedure explains how to use the pop-up function pad. This procedure might seem complicated at first, but with a few minutes of practice, you will find the actions comfortable and automatic. Take the time to experiment.

"Chapter 3. Working with Icons," on page 23 provides detailed instructions for moving, copying, and deleting icons using the pop-up function pad and other methods.

To manipulate icons or text using the pop-up function pad:

1. Select the icons or text that you want to work with.

2. While pointing anywhere on your developer's desktop, press and hold down both mouse buttons at the same time. The function pad is displayed for as long as you continue to press both mouse buttons.

3. Drag the pointer to the symbol on the pad that represents the function that you want to activate. The color of the symbol changes to show that it is selected.

4. Release the mouse buttons to activate your selected function.

   - If you dragged the pointer to highlight the delete symbol (at the top of the pad), the selected text or icons are deleted.

   - If you dragged the pointer to highlight the move symbol (on the left side of the pad), the pointer changes to show that the icon or text is ready to be moved. Click on the spot where you want to move the selection.

   - If you dragged the pointer to highlight the copy symbol (on the right side of the pad), the pointer changes to show that the icon or text has been copied. Click on the spot where you want a copy of your selection to be displayed.

   - If you dragged the pointer to highlight the options function (at the bottom of the pad), an options window opens or, if one is already open, it

closes. (For more information about options windows, see "Working with an Icon Options Window" on page 31.)

To delete a selection, drag the pointer up

To move a selection, drag the pointer to the left

To copy a selection, drag the pointer to the right

To open or close an options window, drag the pointer down
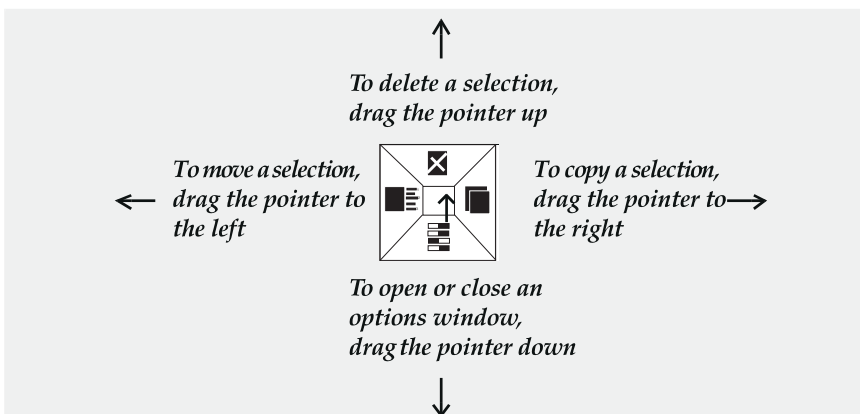
To open an Icon Options window, make sure that only one icon is selected. You can open only one options window at a time.

You can change your mind at any time while holding down the mouse buttons. If you want to select a different function, drag the pointer to a different symbol on the pad. If you do not want to take any action, drag the pointer out of the pop-up function pad (so that no symbol is highlighted) or into the box in the center of the pad, and then release the mouse buttons.

If the pointer is here, no action is taken
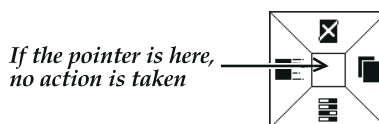
You can change the colors of the pop-up function pad (see "Changing Your Desktop Colors" on page 59) and you can make the background of the pad clear, tinted, or opaque (see "Changing the Transparency of the Pop-Up Function Pad" on page 63).

Using the Function Keys

You can use seven of the *function keys* on your keyboard to manipulate selected icons and perform other actions. The function keys are usually located at the top of the keyboard.

Table 2 describes the default function assigned to each of these keys. Notice that four of the function keys are assigned to the four functions that you can activate with the pop-up function pad (copy, delete, move, and options). Pressing one of these keys is functionally identical to selecting the same function on the pop-up function pad.

Table 2. Function key descriptions

Key	Function	Description
F1	Help	Displays information about the online documentation for Meta5.
F2	Move	Moves a selection to a new location selected with the mouse
F3	Copy	Copies a selection to a new location selected with the mouse
F4	Options	Displays a window that allows you to change some of the attributes of a selection
F5	Delete	Removes a selection
F8	Size	Opens an icon or changes the size of a window
F9	Stop	Stops an operation in progress, such as querying a database

You can change your function key assignments. For example, you can make F12 the Delete key instead of F5, or you can switch the functions of F3 and F4 so that they are Options and Copy, respectively. (For instructions, see "Redefining Function Keys" on page 65.) For this reason, the instructions in this manual provide the function name, not the key name. For example, an instruction will read "Press the Copy function key" rather than "Press F3."

Instructions for using the function keys to move, copy, and delete icons and to open an options window are provided in "Chapter 3. Working with Icons," on page 23.

Working with Status and Error Messages

You can receive status and error messages in your developer's desktop message bar or in an Important Message window. You can read current or previous messages in the Message Log window.

Receiving Important Messages

When your Meta5 system administrator has information that everyone needs to read, or when Meta5 sends an error or status message that requires your acknowledgment, the message is displayed in the Important Message window. The Important Message window will open when a new message is sent. You must close this window before you can continue your work.

To close the Important Message window, click the OK button.

If more than one message has been sent to the Important Message window, the next message is displayed in the window. Read the message and click OK again. When you reach the last message, clicking OK removes the window from the screen, but you can still read the messages by opening the Message Log window (see "Working with the Message Log Window").

Receiving Messages in the Message Bar

To use Meta5 efficiently, you should look at the message bar often because it displays status and error messages (which sometimes tell you what to do next). For example, if you press the Delete function key when nothing is selected, the following message is displayed in the message bar:

```
Need object on which to work.--Select something before doing that.
```

As soon as you perform your next action on the developer's desktop, the current message is cleared from the message bar. However, you can still see the message by opening the Message Log window (see "Working with the Message Log Window"). You can also use the Message Log window to read messages that is too long to be entirely displayed in the message bar.

Sometimes the message bar changes to another color to call your attention to a potential problem or error condition.

Working with the Message Log Window

When a message is long or when you are using a large screen font, there might not be enough room in the message bar for the entire message. When this happens, you can open the Message Log window to see the entire message.

You might also want to open the Message Log window to read messages that you received previously. The number of previous messages that can be stored in the window varies depending on their length and how your system is set up.

To open the Message Log window, click on the `Message Log` button (the triangle to the right of your message bar).

Click here to open the
Message Log window

The message log window opens, as shown in Figure 8.
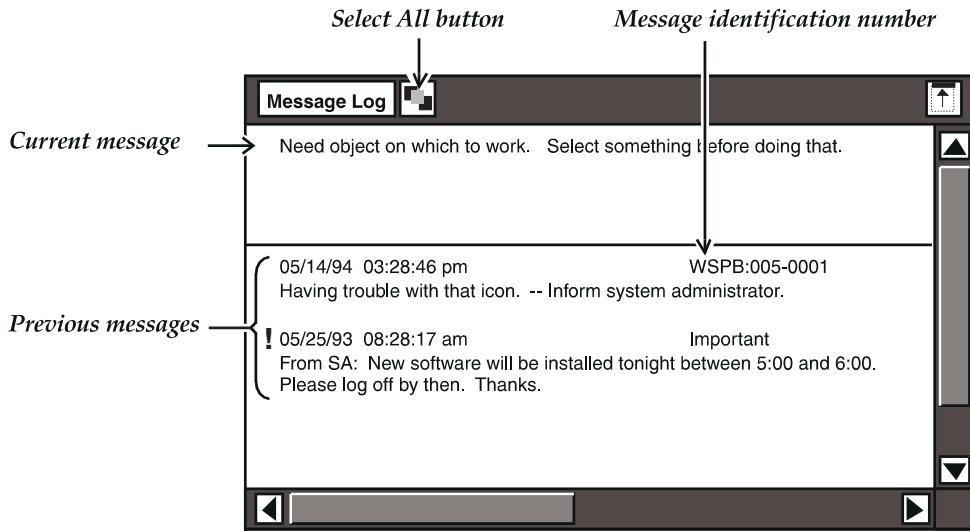
Figure 8. The Message Log window

The top part of the Message Log window displays the current message, and the lower part displays previous messages in reverse chronological order. Notice the following characteristics:

- An identification number is shown for each message that is generated by Meta5 (as opposed to messages that are sent by your system administrator). Use this number if you need to report the message to your system administrator. For more information, see *Messages and Codes*.

- An exclamation point (!) identifies messages that were originally received in an Important Message window.

If the window is not large enough to display all the messages, you can enlarge it or use the window's scroll bars to bring different information into view. For more information, see "Scrolling a Window" on page 41 and "Changing a Window's Size" on page 42.

If you want to save a message permanently, you can copy it to any tool window that accepts text, such as a Envelope window. The Message Log window has a `Select All` button if you want to copy all the messages in the window. For information about copying text, see the *Text User's Guide*.

Because the Message Log window is not a Text window, you cannot delete anything in it. If you attempt to do so, your workstation will beep.

To close the Message Log window, click on the `Message Log` button again, or click on the window's title block (the rectangle at the top that contains the window name).

Using the Special Menu

The `Special` menu provides access to useful choices for controlling the appearance and other features of your Meta5 environment. Each choice is described in the table in Table 3 on page 21.

To select a choice from the `Special` menu:

1. Point to the `Special` button, then press and hold down mouse button 1. A menu opens and remains open for as long as you continue to hold down the mouse button.
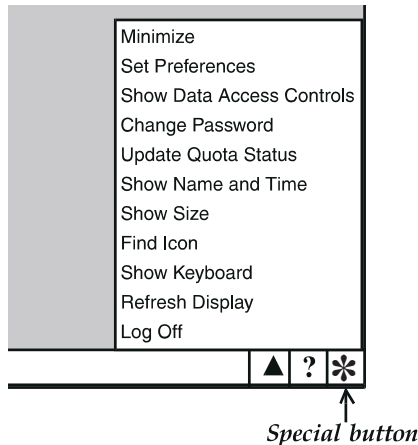
```
Minimize
Set Preferences
Show Data Access Controls
Change Password
Update Quota Status
Show Name and Time
Show Size
Find Icon
Show Keyboard
Refresh Display
Log Off
                              ▲  ?  ✳
```

Special button

2. Drag the pointer to the choice you want. Each choice is highlighted while the pointer is dragged across it.

   • For details about each choice, see Table 3 on page 21.

   • If you are using a large screen font, you can scroll the menu to see all the choices.

3. Release the mouse button to activate your choice or, if you change your mind, move the pointer away from the menu and then release the mouse button.

   • Some choices result in a completed action. For example, if you select `Show Name and Time`, the user ID and current time (as well as the date and realm name) are displayed in your message bar.

   • Some choices (such as `Change Password` or `Set Preferences`) open a window where you can provide the information needed to complete the action.

When you are using a large screen font, scroll bars are displayed at the top and bottom of the menu and you must scroll the `Special` menu to see all the choices. An arrowhead indicates that there are more choices in the direction of the arrowhead.

To scroll the menu:

1. Open the menu by pointing to the `Special` button and then pressing and holding down mouse button 1.

2. Drag the pointer up into the menu. A solid arrowhead is displayed on the bottom scroll bar, indicating that there are more choices in that direction.

3. Drag the pointer into the bottom scroll bar. The menu scrolls to display more choices. When you start scrolling down, a solid arrowhead is displayed in the top scroll bar, indicating that there are now more choices in that direction. When you reach the top or bottom of the menu, the scrolling stops and the arrowhead is no longer shown in the relevant scroll bar.

The Meta5 logon screen also has a `Special` menu.

Figure 9. Choices in the logon screen's Special menu

Table 3 describes each choice in the `Special` menu.

Table 3. Special menu choices

Menu choice	Use
Minimize	Reduces your developer's desktop to an icon so that you can see your operating system's desktop without exiting Meta5. For more information, see "Interacting with Your Operating System" on page 22.
Set Preferences	Opens a window that allows you to customize various characteristics of your Meta5 environment, such as the colors and fonts used on the developer's desktop; the formats for time, date, measurement units, and numbers; the transparency of the pop-up function pad; and the width of window borders. For more information, see "Chapter 5. Customizing Your Meta5 Environment," on page 53.
Show Data Access Controls	Opens a window displaying a list of databases to which you have access. This window enables authorized users to add or modify an entry and change the mainframe password. For more information, see "Gaining Access to Databases" on page 70.
Change Password	Opens a window in which you can change your Meta5 password. For more information, see "Changing Your Password" on page 67.

Table 3. Special menu choices

Menu choice	Use
Update Quota Status	Updates the record of how much storage space you are currently using on the Meta5 file server. This information, along with your storage quota, is then communicated to you in the Important Message window. For more information, see "Managing Your Disk Space" on page 74.
Show Name and Time	Displays the Meta5 user ID, the current time, the date, your realm name and version level. Note: If a you have the /s turned on, or any files in the nodeovly directory, you will see the following statement instead of the version level, "Unknown software version - check /s and nodeovly." This informs you to please check the meta5.bat file to see if the /s is turned on, or check the nodeovly directory for any files that may be present.
Show Size	Displays the size of one or more selected icons. For more information, see "Displaying the Size of One or More Icons" on page 74 and "Displaying the Size of Your Meta5 User Data" on page 75.
Find Icon	Locates an icon by name. For more information, see "Searching for an Icon" on page 33.
Show Keyboard	Opens the Keyboard window in which you can change your keyboard language setting (which Meta5 uses to interpret the keys you type), redefine your function keys, view the layout of the currently selected keyboard language, and click on keys depicted in the window instead of typing the keys on the physical keyboard attached to your developer's desktop. For more information, see "Resetting Your Keyboard Language" on page 64 and "Redefining Function Keys" on page 65.
Refresh Display	Repaints your Meta5 screen. Select this choice when the images on your screen are not completely or correctly displayed.
Log Off	Closes any open icons, saves your work, and closes Meta5. For more information, see "Logging Off".
Exit	Returns you to the operating system.

Interacting with Your Operating System

When you open Meta5, it fills your entire screen if you are running standard VGA resolution. However, you can use any key sequences available in your operating system to bring other open application windows to the foreground.

To switch to another open application in your operating system desktop, minimize the Meta5 developer's desktop.

When you are ready to resume working with Meta5, click on the Meta5 object on your operating system desktop to bring it to the foreground, or select the Meta5 choice from the open windows function for your operating system.

For information about using Meta5 with your desktop applications, including how to transfer clipboard information and desktop files between Meta5 and other applications, see "Chapter 10. Using PC Interaction Tools," on page 109.

Logging Off

When you finish working with Meta5 developer's desktop, be sure to log off. Logging off:

- Closes all open Meta5 windows and saves your work
- Prevents unauthorized use of your developer's desktop and icons

If you want to change your password before you log off, see "Changing Your Password" on page 67.

To log off developer's desktop, select Log Off from the Special menu.

Your developer's desktop closes and the system saves all open Meta5 windows, informs the network that you are no longer using Meta5, and displays the logon screen.

Exiting Meta5

Exiting Meta5 frees up resources (such as memory) for use by your other applications.

To exit Meta5:

1. Log off Meta5, as described in "Logging Off" on page 23.
2. From the logon screen's Special menu, select Exit.

Chapter 3.   Working with Icons

This chapter describes various ways to manipulate icons and explains how to find the icons you need and organize them in folders and file drawers. It also explains how to open and use an Icon Options window (in which you can rename the icon and protect it from unauthorized use), and provides information about the Discard icon.

The chapter contains the following sections:

- Moving icons
- Copying icons
- Deleting icons
- Expanding an icon to see its entire name
- Opening and closing icons
- Finding icons in the New Icons file drawer
- Organizing your icons in containers
- Discarding icons
- Working with an Icon Options window
- Changing an icon name
- Searching for an icon

Moving Icons

You can move icons to any empty spot on your Meta5 desktop or into an unprotected container, such as a Folder or File Drawer icon. When you log off Meta5, the locations of your icons are preserved. The next time you log on, your icons will be wherever you last put them.

When you move icons out of shared containers, such as file drawers, other users will no longer have access to these icons. If you move an addressed Envelope icon to the Mail Tray, it is immediately mailed and cannot be retrieved. When you want to retain the icons in the original location, use Copy on the pop-up function pad.

Icons inside containers are arranged automatically. You cannot rearrange icons inside containers. Attempting to rearrange envelope icons in a mail tray resends the mail.

You can move an icon by:

- Dragging

- Using the move function

The easiest way to move an icon is to drag it:

1. Point to the icon you want to move, then press and hold down mouse button 1. Do not release the mouse button.

2. Drag the icon to its new location.

   While you drag the icon, the pointer looks like a miniature version of the icon graphic, and an outline of the icon follows the pointer as it moves. The icon is not displayed on the screen during the drag operation.

3. Release the mouse button. The icon is moved to the new location:

   - If the new location is a container icon that can accept icons in a move operation, the icon outline is not displayed and the container is highlighted. To see the icon, you must open the container (see "Opening and Closing Icons" on page 27).

   - If the new location is an open container, the icon outline is not displayed. You must release the mouse button when the pointer is above the first item or below the last item in the container. For detailed information about working with containers, see "Manipulating Icons in a Container Window" on page 49.

   - If the new location is an object that cannot accept icons, the pointer shape changes to the "do-not" pointer, the icon outline is not shown, and the icon is displayed in its original spot on the screen.

If you select more than one icon, you can move them as a group by dragging any one of them. Outlines are displayed for all the icons in the group, and the pointer assumes the shape of the icon that you clicked on to begin dragging.

When you move a group of icons, Meta5 attempts to maintain their relative positions at the destination. If this is not possible (because other icons are in the way), each icon is placed as near as possible to where its outline showed it would go.

To move an icon using the move function:

1. Select one or more icons that you want to move.

2. Press the Move function key or activate the move function on the pop-up function pad.

   The pointer changes to a miniature version of the icon graphic. (If you are moving a group of icons, the pointer assumes the shape of the first icon you selected.)

3. Click on an empty spot on your Meta5 desktop or on the container into which you want to move the icons. The icons are moved to the new location.

Copying Icons

You can make a copy of any icon that is on your Meta5 desktop or in a container. The copied icon is identical to the original icon.

Because the copied icon has the same name as the original, you should change its name to avoid confusion (see "Changing an Icon Name" on page 34).

You can copy an icon by:

- Using the copy function
- Dragging

To copy an icon using the copy function:

1. Select one or more icons that you want to copy.

2. Press the Copy function key or activate the copy function on the pop-up function pad.
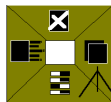
The pointer looks like a miniature version of the icon graphic. (If you are copying a group of icons, the pointer assumes the shape of the first icon you selected.)

3. Click on an empty spot on your desktop or on the container into which you want to copy the icons. A copy of each icon is displayed there.

To copy an icon by dragging:

1. Hold down the Ctrl key on your keyboard.

2. Point to the icon that you want to copy and press mouse button 1. The pointer changes to a miniature version of the icon graphic.

3. Drag the pointer to where you want to copy the icon.

4. Release the mouse button and then the Ctrl key. A copy of the icon is displayed in the location you selected.

   - If the new location is a container icon that can accept icons in a copy operation, the icon outline is not displayed and the container is highlighted. To see the icon, you must open the container (see "Opening and Closing Icons" on page 27).

   - If the new location is an open container window, the icon outline is not displayed. You must release the mouse button when the pointer is above the first item or below the last item in the container. For detailed information about working with containers, see "Manipulating Icons in a Container Window" on page 49.

- If the new location is an object that cannot accept icons, the pointer shape changes to the "do-not" pointer, the icon outline is not displayed, and the icon is displayed in its original spot on the screen.

If you select more than one icon, you can copy them as a group by dragging any one of them. Outlines are displayed for all the icons in the group, and the pointer assumes the shape of the icon that you clicked on to begin dragging.

Deleting Icons

The delete function enables you to remove icons you no longer need. Because you share system resources with other users, it is a good practice to keep your desktop clear of unneeded icons.

Use the delete function with caution. Deleted icons are sent to the Discard icon, which normally retains the last four icons that you deleted or changed. If the Discard icon is not on your desktop, the deleted icons are immediately erased and cannot be recovered. For more information, see "Discarding Icons" on page 31.

To delete an icon:

1. Select one or more icons that you want to delete.

2. Press the Delete function key or activate the delete function on the pop-up function pad.
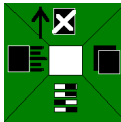
The selected icons are deleted.

If you use the pop-up function pad and then change your mind before you release the mouse buttons, move the pointer out of the pop-up function pad or into the box in the center of the pad, and then release the mouse buttons.

Expanding an Icon to See Its Entire Name

When the name of an icon is long or when you are using a large screen font, you might not be able to read the name of an icon unless you expand the icon.

To expand an icon:

1. Make sure no icons are selected.

2. Point to the icon you want to expand, then hold down mouse button 2. The icon expands to show the entire name.
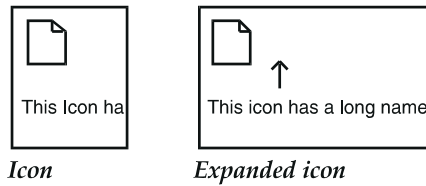
Icon   *Expanded icon*

An icon expands to the right if there is enough room. If there is not enough room, the icon expands as far as possible to the right and then expands to the left as far as necessary to show the entire icon name.

To see the entire names of other icons, continue holding down mouse button 2 and drag the pointer over the icons you want to expand. Each icon with a name that is not completely visible expands while you drag the pointer over it.

Opening and Closing Icons

To see what is in a file drawer or to read the message in an envelope, you must open the icon for that file drawer or envelope. You must also open an icon to work with the tool that the icon represents, for example, to add new columns to a spreadsheet. Opening an icon causes a window to open on your desktop.

To open an icon, double-click on the icon. A window opens. The icon's shape remains on the screen as a position holder to preserve the icon's original location.

To close an icon, click on the icon's Title Block.

For information about working with windows, see "Chapter 4. Working with Windows," on page 35.

Finding Icons in the New Icons File Drawer

The New Icons file drawer contains other file drawers from which to copy any icon you need.

The New Icons file drawer usually contains several standard file drawers, listed in Table 4, plus other file drawers that your system administrator might have added.

An asterisk before an icon name causes it to be sorted ahead of other icons in a container.

Table 4. The New Icons file drawer

File drawer	Contents
*Blank Icons	Most of the icons you need are in this file drawer, like the Text, Plot, and Reporter icons.
*Capsule Service Icons	Contains capsule service icons used for monitoring and controlling capsule execution services.
*Data Access Icons	Contains any Query and Reporter icons that have been configured by your system administrator.
*Printer Icons	Contains printer icons configured by your system administrator for your use with Meta5.
*Public File Drawers	Usually contains all the file drawers that you are likely to need, such as Distribution Lists for mail. It can also contain icons that your system administrator uses to configure Meta5.
*Transformer Icons	Contains the transformer icons used for analyzing and converting data.

Most of the icons you need to are in the *Blank Icons file drawer, shown in Figure 10. Notice that icons look different in containers than they do on the desktop or in Capsule windows. You can open, close, and copy icons in the *Blank Icons file drawer, but you cannot move icons within or delete icons from this file drawer.
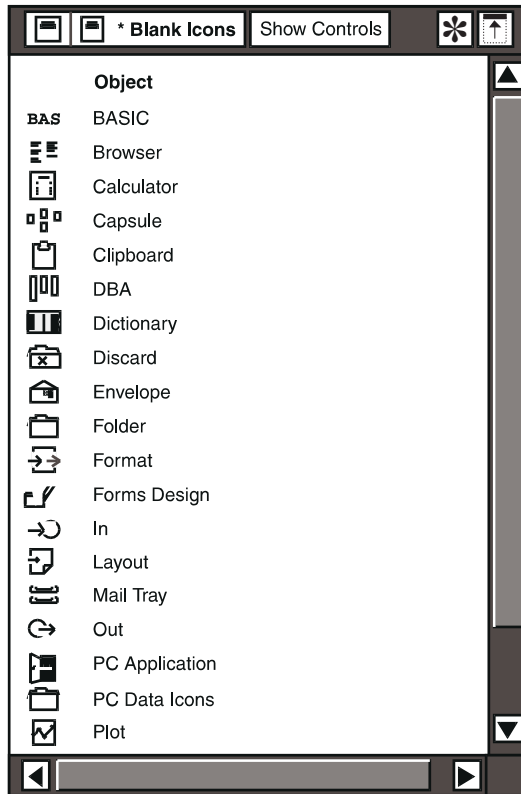
*Figure 10. *Blank Icons file drawer*

To get a copy of a blank icon:

1. Open the New Icons file drawer.

2. Open the *Blank Icons file drawer.

3. To find the icon you need, you can scroll the window (see "Scrolling a Window" on page 41).

4. Copy the icon you want out of the file drawer (see "Copying Icons" on page 25).

   Icons cannot be moved from the *Blank Icons file drawer; they can only be copied.

5. Rename the icon as appropriate (see "Changing an Icon Name" on page 34).

6. Close the New Icons file drawer.

   You can close both file drawers at the same time by clicking on the icon graphic for the outer file drawer, as shown in Figure 11.

Figure 11. Closing outer file drawers

Organizing Your Icons in Containers

A container is a special type of icon that can hold other icons. Folder and File Drawer icons are containers that have no other function except to hold other icons. Some tools, such as the Mail Tray, Envelope, Printer, Capsule, and Discard tools, are also containers, but they have other functions as well.

You can nest containers (that is, place one inside another) to a level of more than 20, depending on the size of the enclosed icons.

The following sections describe the Folder and File Drawer containers. For information about working in container windows, see "Sorting and Displaying Information in Container Windows" on page 46 and "Manipulating Icons in a Container Window" on page 49.

Using Folders

The Folder container functions like a file folder, letting you collect related desktop objects into manageable units. You can store folders inside other folders or in file drawers. You can sort the icons in a folder alphabetically or by the date each was last changed. (For instructions, see "Sorting and Displaying Information in Container Windows" on page 46.)

You can place a Folder icon on your desktop by copying the Folder icon from the *Blank Icons file drawer, which is contained in the New Icons files drawer. You should rename the new icon to reflect how you are going to use it. For information on renaming icons, see "Changing an Icon Name" on page 34.

If you are not sure which folder contains a particular icon, you can use the `Find Icon` choice in the `Special` menu. For more information, see "Searching for an Icon" on page 34.

Using File Drawers

The File Drawer container provides an easy way to share files among work groups. File drawers are managed by your system administrator and provide a common resource for all authorized users, much like a bulletin board. In fact, a common practice is to have a file drawer named Bulletin Board in which users can store telephone lists, personnel notices, and other files of popular interest or

company-wide importance. Your system administrator can limit the degree of access to a file drawer for any set of users.

For quick access to file drawers you use often, you can keep copies directly on your desktop. Most file drawers that you will need are found in *Public File Drawers within the New Icons file drawer. If you cannot find a file drawer that you need, ask your system administrator.

Here are some things to keep in mind when working with file drawers:

- Unlike other objects on your desktop (such as Folder, Envelope, and Spreadsheet icons), file drawers do not occupy disk space assigned to your desktop. When you delete a file drawer, it still exists, although it is no longer represented by an icon on your desktop.

- If you delete an icon that is stored in a file drawer, that icon is permanently removed. Icons deleted from a file drawer are not placed in the Discard folder.

- Only one user can change an icon in a file drawer at any given time. If you and another user are working concurrently on the same open icon in a file drawer and the other user changes the icon and then closes it, you will not be able to close the icon if you have made changes in it. When you attempt to close the icon, you will receive an `unable to write file` message in an Important Message window. If this happens, select `Cancel Changes` from the icon window's `Special` menu. Otherwise, you cannot close the icon or perform any other work in Meta5.

  You also cannot reopen the icon without first closing the file drawer. Attempts to do so will result in an `unable to read file` message.

- The desktop location or contents of a window in a file drawer can change between the times that you open it because other users might have opened the icons and used them in the interim.

Discarding Icons

The Discard folder is a special type of container that temporarily holds any icon that you delete or revise. It is represented on your desktop by an icon that looks like a folder with an X across it. Make sure that you always have one, and only one, Discard icon on your desktop.

If the Discard icon is not on your desktop, any icons you delete cannot be recovered.

The Discard folder normally stores up to four icons, which are displayed in alphabetical order when you open the Discard window (unless you have changed the sorting order, as described in "Sorting and Displaying Information in Container Windows" on page 46).

What Gets Sent to the Discard Folder?

The Discard folder receives the following objects:

- Any icon that you delete from your desktop.

  Icons deleted from a file drawer are not placed in the Discard folder.

- The original version of any icon except a container or a capsule that you revise.

  Every time you open an icon that is not in a container, edit its contents, and close it, a copy of the original icon is placed in the Discard folder.

- The edited version of an icon that you close by selecting `Cancel Changes` from the `Special` menu.

  If you close an Envelope, Text, or Spreadsheet window by selecting `Cancel Changes`, a copy of the edited version of the information is placed in the Discard folder as a precaution, in case you selected `Cancel Changes` by mistake. Note that this is not true for Plot or Screen Capture icons or for icons in a file drawer.

  When your desktop is reset (for example, if you shut down your operating system without first logging off Meta5, or if a software problem causes the desktop to reset), the contents of the Discard folder are preserved.

  The contents of the Discard folder are deleted when you properly log off.

When Are Icons Permanently Deleted?

The Discard folder normally stores up to four icons. When a fifth icon is placed in it, the icon that has been there the longest is removed.

All icons in the Discard folder are removed permanently when you log off Meta5, when you select `Update Quota Status` from the `Special` menu, or when you delete them from the Discard folder.

Working with an Icon Options Window

Each Meta5 icon has an Icon Options window. This window displays basic information about the icon, such as its size in bytes and the date it was created. The Icon Options window also contains information you can change, such as the icon name. If you are the icon's owner, you can specify in the Icon Options window whether other users can view and change the icon. An Icon Options window can also contain other information specific to that type of icon.

To open an icon's Icon Options window:

1. Click on the icon to select it.

2. Press the Options function key or activate the options function on the pop-up function pad.

An options window opens, similar to the one shown in Figure 12.

| | Icon Options | Apply | Cancel | Reset | ⬆ |

Display field →

Display   [Name and Size]   [Printing]

Name field →

Name   [Plot]

Read-only fields
- Last Changed   03/14/94 15:49:10 pm
- First Created   03/14/94 15:49:10 pm
- Size   3099   **bytes**
- Icon's Owner Is   You

Access privileges
- Icon's Access Is   [Same As the Container or Home]   [As Set In This Options Window]
- Other Than the Owner, This Icon May Be   Viewed By Anyone Changed By Anyone

Figure 12. The Icon Options window

All Icon Options windows look similar, but each is customized for the particular icon. Common elements are listed here.

- The `Display` field allows you to specify the kind of information you want displayed in the window. The highlighted choice identifies the kind of information that is currently displayed. (In Figure 12, the name and size information is displayed.)

- The `Name` field displays a text box in which you can change the icon name.

- Read-only fields display information about the icon, such as the date it was last changed and its size.

- The access privileges of an icon can be changed if you are the owner of the icon. For instructions, see "Controlling Access to Your Icons" on page 68.

You can move from one settable field to another by pressing the Enter or Tab key.

The Icon Options window can have more than one *page*. A page is an alternate window view that provides a different set of options.

- The first page always contains the icon name and size information.

- Other pages, if present, provide other options for setting controls and defining behavior of the icon. For example, some Icon Options windows have a `Printing` page. For information about the `Printing` page, see "Preparing Your Print Job" on page 94.

The window header of an options window usually has three standard window header buttons: `Apply`, `Cancel`, and `Reset`. These buttons are discussed on "The Apply, Cancel, and Reset Buttons" on page 40.

Changing an Icon Name

When you copy an icon from the *Blank Icons file drawer, it retains the generic icon name (for example, Text). You should change the name to reflect the icon's contents (for example, you could change Text to June Progress Report).

Although you can use up to 80 characters for a name, icon names consisting of short words are usually the most useful because they are easier to see on the icon and in window headers.

To rename an icon:

1. Click on the icon and open its options window by pressing the Options function key or activating the options function on the pop-up function pad.

2. In the Icon Options window, make sure that `Name and Size` is the `Display` choice. Notice that the icon name is selected in the window.

3. Type the new name for the icon. The text you type replaces the selected text.

   • After you start typing, you can use the `Backspace` key to make corrections, if necessary.

   • If the text you want to change is not selected, you can select it by pointing to it and clicking two times to select one word, or three times to select a multi-word entry. For more information about selecting text, see "Selecting and Deselecting Text" on page 13.

   • To type a two-line name, type the first part of the name, then press Shift+Enter to move the insertion point to the second line, and type the second part of the name.

4. When the name is the way you want it, click on the `Apply` button in the window header, or close the window to save your changes.

If you change your mind and you have not clicked on the `Apply` button, you can:

   • Click on the `Cancel` button to close the window without saving your changes.

   • Click on the `Reset` button to restore the previous settings without closing the window.

Searching for an Icon

If you are having trouble locating an icon that is nested in multiple containers, use the `Find Icon` choice in the `Special` menu. You can use the `Find Icon` choice to search one or more selected containers or your entire Meta5 desktop.

The `Find Icon` choice searches all levels of containers except nested file drawers such as those in the New Icons file drawer. For example, you can search folders, Capsule icons, your Mail Tray, the Discard folder, and envelopes on your Meta5 desktop. The Find Icon window displays the names of all icons that match the name you specify, and shows the names of the containers in which they are located. For example, if you specify `January Analysis` and this icon is in a

folder called Marketing, the Find Icon window displays the name as Marketing->January Analysis.

The `Find Icon` choice is particularly useful if you cannot remember the complete name of the icon you want. You can enter part of an icon name, or any string of characters. The `Find Icon` choice displays the names of all icons containing those characters. The `Find Icon` choice ignores the case of the characters you enter. For example, you could locate January Analysis by specifying `January An` or `january an`.

Additional guidelines for using the `Find Icon` choice:

- If you are searching your entire desktop or a set of containers that hold many files, the search can take a long time.

- The icon name might be too long to be displayed, particularly if it is in a container that also has a long name. In this case, a message is sent to your message bar.

- You cannot use wildcard characters, such as the asterisk (*) and question mark (?), with the `Find Icon` choice.

More information for using the `Find Icon` choice is provided in "Searching the Desktop" and "Searching Containers".

Searching the Desktop

To search your Meta5 desktop for an icon:

1. From the `Special` menu, select `Find Icon`. The Find Icon window opens.

2. In the `Icon Name` field, type the name of the icon you want to locate.

3. Click on the `Search` button. The names of all icons containing the characters you type in the Find Icon window. For example, if you type `new` in the `Icon Name` field, the following names might be displayed:

```
New Icons
Mail Tray->Newton:HQ / Reminder
specs->1994->new spec
Discard->gomez:HQ / Newsletter items needed
```

Searching Containers

If you do not want to search the entire desktop, you can narrow the search to one or more specific containers by selecting those containers before you click on the Find Icon window.

To narrow the search to one or more specific containers:

1. From the `Special` menu, select `Find Icon`. The Find Icon window opens.

2. In the `Icon Name` field, type the name of the icon you want to find.

3. Select the container or containers you want searched. Remember, you cannot search a file drawer that is within another file drawer.

4. Click on the `Search` button.

Chapter 4. Working with Windows

Much of the work you perform with Meta5 takes place in windows, many of which can be open at the same time. The number of windows that you can have open depends on the amount of memory available on your desktop.A message is displayed in the message bar when no more windows can be opened or when an operation cannot be performed unless you close one or more windows.
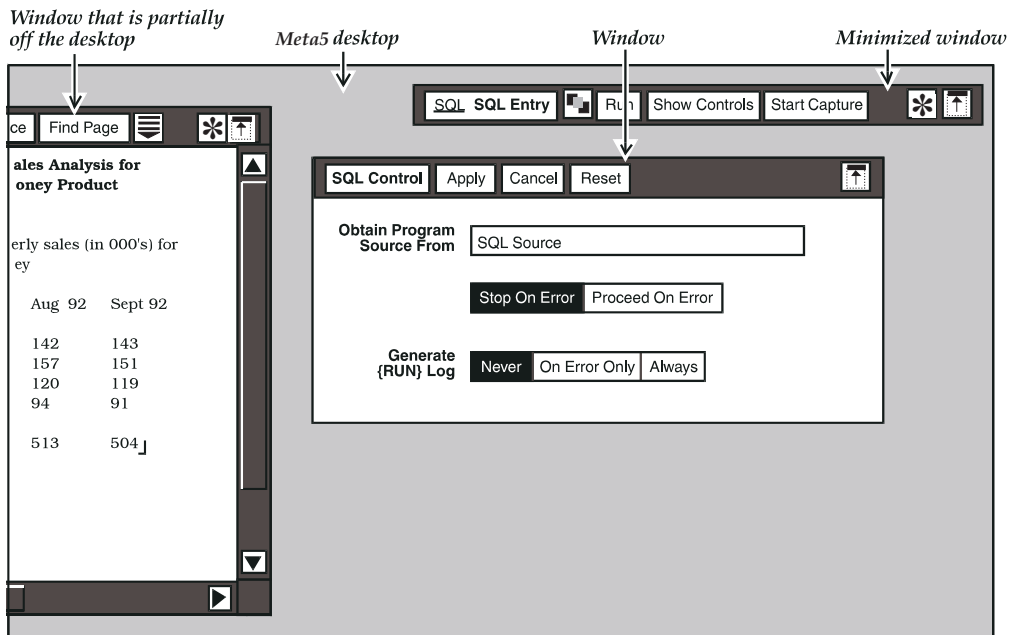
Figure 13. Typical windows found on the Meta5 desktop

As shown in Figure 13, you can rearrange windows and change their sizes to suit your needs. This chapter describes how to manipulate windows in various ways, use the buttons in the window header, use menus, and work with container windows.

Windows Types

The window that opens when you double-click on an icon is usually referred to as a tool window or main tool window. The tool window is your primary means for interacting with the tool.
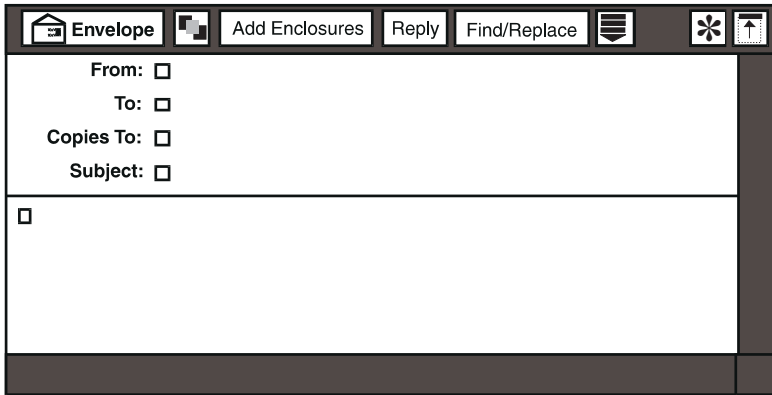
Figure 14. Example of a tool window

The tool window for a container icon is also known as a *container window*. It shows you the icon's contents.
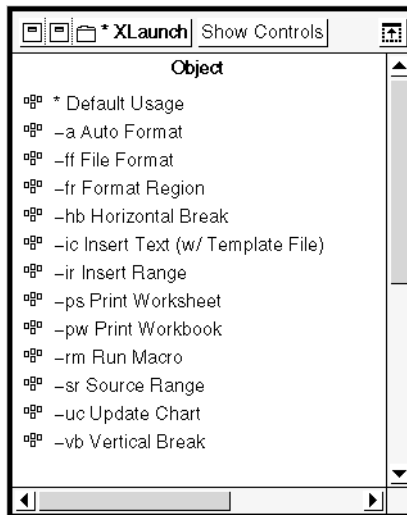
Figure 15. Example of a container window

Tool windows can have one or more subordinate windows. When you close a tool window, all of its subordinate windows also close.

Two standard subordinate windows are controls windows and options windows.

A controls window displays settings that you can view or modify. You open a controls window by clicking on a button (usually named `Show Controls`) or selecting a choice from a menu in a tool window.
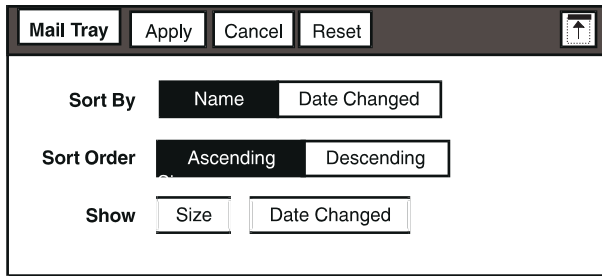
Figure 16. Example of a controls window

An options window is any window that you can open by selecting something and then pressing the Options function key or activating the options function on the pop-up function pad. Like controls windows, options windows display settings that you can view or modify.

As you learned in "Chapter 3. Working with Icons," on page 23, each icon has an options window named Icon Options.
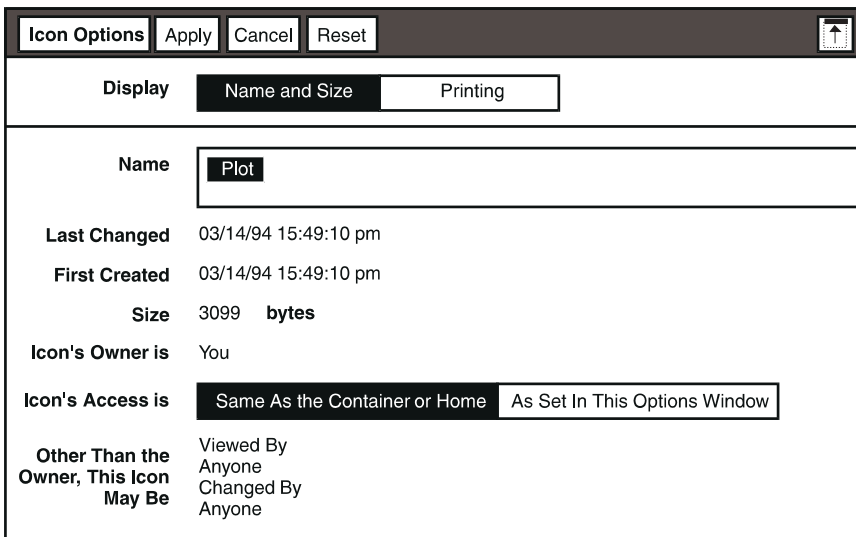
Figure 17. Example of an Icon Options window

In addition to the Icon Options window, many Meta5 tools have other options windows that you can open from within tool windows. For example, you can open a Text Options window by selecting the text you want to format in a Text or Envelope window, then pressing the Options function key or activating the options function on the pop-up function pad. Text Options windows are described in the *Text User's Guide*.

Window Parts

A window is surrounded by a border and includes mechanisms that you can use to manipulate the window and its contents. The parts of a typical tool window are shown in Figure 18.

Minimize button

Title block *Window header buttons* *Special button*

Window header →

□□□ **Capsule** | Run | | Connect Icons | | Show Controls | ✳ ↑

Display area →

scroll bar

Border →

◄ | | ►

↑ *Scroll button* ↑ *Scroll box* ↑ *Scroll button*
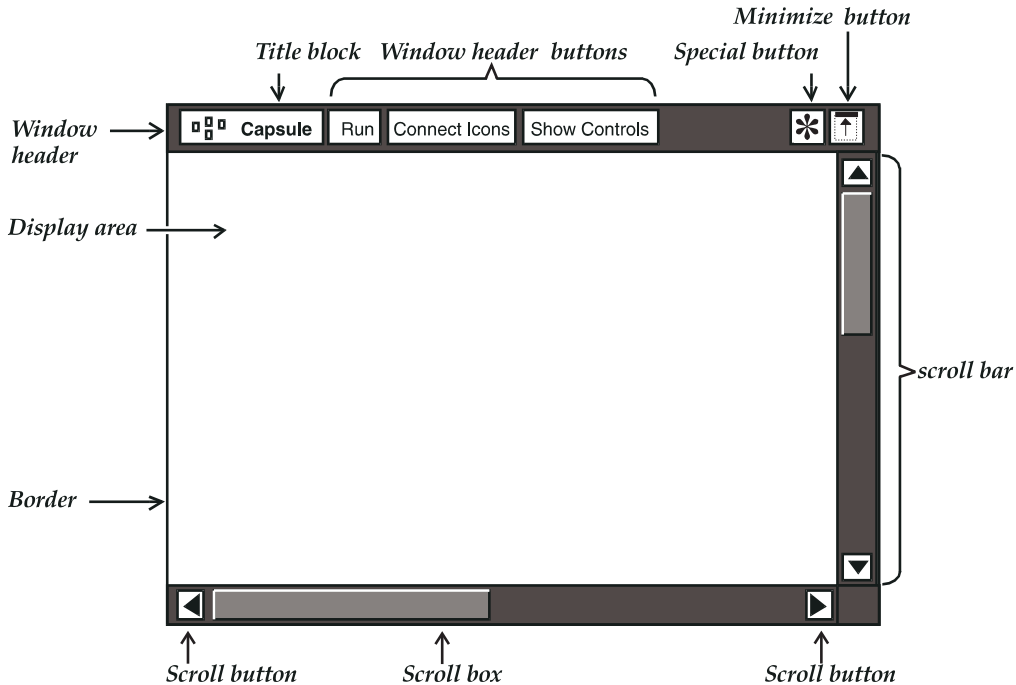
Figure 18. Parts of a typical tool window

The window parts shown in Figure 18 are described next. You will learn more about using these parts later in this chapter.

Window part	Use
Border	This window part defines the boundaries of the window. You can change a window's size by dragging its border to a new position (as described in "Changing a Window's Size" on page 42). You can also change the width of a border (as described in "Changing the Width of Window Borders" on page 63).
Window header	This is the bar at the top of the window that you use to move a window (as described in "Changing a Window's Location" on page 43). Every window header contains a title block, one or more window header buttons, and a Minimize/Restore button. Many window headers also contain a `Special` button.
Display area	This is the work area of the tool window.

Window part	Use
Title block	This button displays the name of the window and the icon graphic to close the window and save the changes that you made in the window. Clicking on the leftmost icon in the window header closes the icon and all its parent windows and any subordinate windows.
Window header buttons	These buttons enable you to perform tool functions. The window header buttons for each tool are described in the individual tool user's guides. (See the list of publications in "Meta5 Publications" on page 155.) When you make a window too narrow to display all the window header buttons, some of them are placed on a menu and the `More` button is displayed in their place. (For more information, see "The More Button" on page 40.)
Special button	This button is displayed in some window headers. Use it to open a menu of tool-specific choices (as described in "Using Menus" on page 44). For information about the choices in a tool's `Special` menu, see the user's guide for that tool. (See the list of publications in "Meta5 Publications" on page 155).
Minimize button	Use this button to reduce the size of a window so that only its window header block is displayed on your desktop. (For more information, see "Minimizing a Window" on page 42.)
Scroll bar	This window part, at the bottom and right edge of the window, shows that the window, at its current size, is not displaying all available information. This is often the case because many tools and containers hold more information than can be displayed in a window of any size. You can use the parts of a scroll bar to bring different information into view. (See "Scrolling a Window" on page 41.)
Scroll box	This part of the scroll bar indicates the position and proportion of information currently visible in a window relative to the total amount of information available. You can drag the scroll box to a different location in the scroll bar to bring different information into view.
Scroll buttons	Click on these buttons to scroll up, down, left, or right by small increments. To cause the image in the window to scroll continuously, point to a scroll button, then press and hold down mouse button 1.

Two buttons that are often displayed in window headers are the `Select All` button and the `More` button, shown in Figure 19.

More button
Select All button
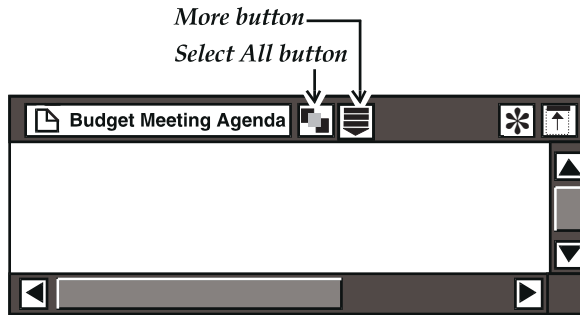
Figure 19. The Select All and More buttons

The Select All Button

Click on the `Select All` button to select everything in the window's display area. In some windows, the `Select All` button is located in the display area instead of in the window header. Use the `Select All` button when you want to copy, move, delete, or change the options of all of the information in a window.

The More Button

When a window is too narrow to display all the window header buttons, some of the buttons are placed in a menu that you can open by using the `More` button (as described in "Using Menus" on page 44).

The Apply, Cancel, and Reset Buttons

Options and controls windows have three standard window header buttons: `Apply`, `Cancel`, and `Reset`. These buttons are also available in other windows (such as the Set Preferences window discussed in "Chapter 5. Customizing Your Meta5 Environment," on page 53).

Button	Purpose
Apply	Puts into effect any changes that you have specified in the window. You cannot undo this operation. The window remains open. If a window contains an `Apply` button, closing the window will automatically apply any changes. If you do not want to apply changes you have made, click on the `Cancel` button or select `Cancel Changes` from the `Special` menu.
Cancel	Closes the window without saving any changes except those that were saved the last time you clicked on `Apply`.
Reset	Restores the settings that were in effect when the window was first opened, or those that were saved the last time you clicked on `Apply`. The window remains open.

Scrolling a Window

When a window is not large enough to display all the available information, you can use keyboard keys or the scroll mechanisms on the window's scroll bars to bring different portions of the information into view.

Using Keyboard Keys to Scroll

You can use the Page Up, Page Down, Home, and End keys to scroll a window or, in a Text window, to move the insertion point to a different position. If there is more than one window open, these keys act on the most recently opened window or the window containing the current selection.

Press this key	To do this in a non-Text window	Or to do this in a Text window
Page Down or Page Up	Shift the image in the window by the amount of information that can be displayed in the available window space	Move the insertion point to the beginning of the next or previous page
Home	Scroll directly to the beginning	Move the insertion point to the beginning of the line
End	Scroll directly to the end	Move the insertion point to the end of the line

Using Scroll Bars

Scroll bars are displayed in windows only when you need them, either along the right side or bottom of the window, or both. In some windows (such as Spreadsheet), the scroll bars are always present but the scroll boxes are displayed only when you need them.

You can use the parts of the scroll bar to move the image in the window by small or large increments. The size of the scroll box indicates the position and proportion of information currently visible in the window relative to the total amount of information available.

The following table explains how to scroll the information in a window.

To do this	Perform this action
Shift the image in the window up, down, left, or right by a small increment	Click one time on the up, down, left, or right scroll button.
Shift the image in the window continually by small increments	Point to one of the scroll buttons, then press and hold down mouse button 1 until the desired position is reached.

To do this	Perform this action
Shift the image in the window by the amount of information that can be displayed in the available window space	Click on the part of the scroll bar that is above, below, to the right, or to the left of the scroll box.
Shift the image in the window continually by large increments	Point to the part of the scroll bar that is above, below, to the right, or to the left of the scroll box, then press and hold down mouse button 1 until the desired position is reached.
Scroll directly to a different location	Drag the scroll box to the desired position in the scroll bar, then release the mouse button.

If the images in the window scroll too fast or too slow when you use the scroll buttons, you can change the scroll speed by setting the scroll period environment variable at your desktop. Contact your system administrator for more information or see *Installing Meta5 LAN Components*.

Changing a Window's Size

You can change a window's size to make it narrower, wider, taller, or shorter. For example, you can make a Spreadsheet window wider or an Envelope window narrower. Thewindow retains its new size, even after you close and reopen it.

To change a window's size:

1. Point to a border or corner of the window. The pointer becomes a two-headed arrow.

2. Press and hold down mouse button 1, and drag the border or corner until the window is the size you want. An outline of the window follows the pointer to show the new size.

   Dragging a border changes the window's size in only one direction, either vertically or horizontally.

   Dragging a corner changes the window's width and height simultaneously.

3. Release the mouse button. The window is redrawn to the size you specified.

Minimizing a Window

To save space without closing a window, you can minimize it to the size of its window header. (However, a minimized window still counts as an open window in terms of memory used.)

Minimizing a window has no effect on its function. For example, minimizing, unlike closing, does not end a data access session that was started when you opened the data access tool's window.

To minimize a window, click on the window's `Minimize` button.

```
┌──────────────────────────────────────────────────┐
│ ┌──────────────┐                                  │
│ │ ▣ New Icons  │  Show Controls            [ ⬆ ]  │
│ └──────────────┘                                  │
│     Object                                         │
│  ▣   * Blank Icons                                 │
│  ▣   * Data Entry Icons                            │
│  ▣   * Printer Icons                               │
│  ▣   * Public File Drawers                         │
│  ▣   * Query Icons                                 │
└──────────────────────────────────────────────────┘
```
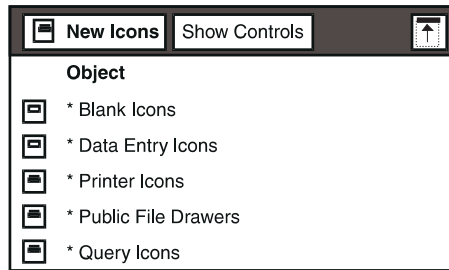
You can move a minimized window around on your desktop the same way you move a window that has not been minimized. For example, you can move a minimized window partially off your Meta5 desktop or send it to the bottom or top of a stack of windows (see "Changing a Window's Location").

Restoring a Minimized Window

To restore a minimized window to its full size, click on the window's `Restore` button.

Click here to restore a
minimized window

```
┌──────────────┐                              ┌───┐
│ ▣ New Icons  │  Show Controls               │ ⬆ │
└──────────────┘                              └───┘
```
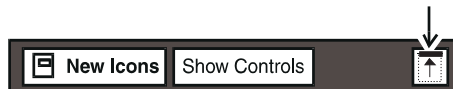
Changing a Window's Location

After you open a window, you can move it so that it does not cover other windows. Windows open where you last moved them, even after you log off Meta5 and then log on again. Moving a window does not affect the location of its icon.

The desktop location or contents of a window in a file drawer can change between the times that you open it because other users might have opened the icons and used them in the interim.

Dragging a Window to a New Location

The easiest way to move a window is to drag it:

1. Point to a part of the window header that is not a button.

2. Press and hold down mouse button 1. Do not release the mouse button.

3. Drag the window to its new location. An outline of the window moves along with the pointer so you can see the new location.

4. When the window outline is where you want it, release the mouse button.

Windows open at the same position and size as when last closed. Icon Option windows and most blank icons open on the left side of the desktop.

You can drag a window partially off your Meta5 desktop (even if the window has been minimized to the size of its window header). Do not worry about dragging too far off the desktop. Meta5 will not let you drag a window so far that you cannot drag it back.

Windows that are partially off the Meta5 desktop take longer to scroll.

Using the Move Function to Move a Window

Instead of dragging a window, you can use the move function on the pop-up function pad or the Move function key to move a window.

To move a window using the move function:

1. Click on a part of the window header that is not a button. The window header changes color to show that it is selected.
2. Press, then release the Move function key or activate the move function on the pop-up function pad.
3. Click anywhere on your desktop. The window moves to the new location.

Reordering Windows that Overlap

When two or more windows are open on your desktop, the most recently opened window can partially or completely conceal previously opened windows, like pieces of paper on your desk. You can easily change the order of overlapping windows.

To move a window to a different position in a stack of windows, point to the window header of the window you want to move and click mouse button 2, or point to the window border and, when the pointer changes to a double-headed arrow, click mouse button 2.

If the window is on the top, it moves to the bottom of the stack. If the window is not on the top, it moves to the top of the stack.

To see a window that is completely covered by another window, point to the window header of the window on top of the stack and click mouse button 2. The window moves to the bottom of the stack. Repeat this action until you can see the window you want.
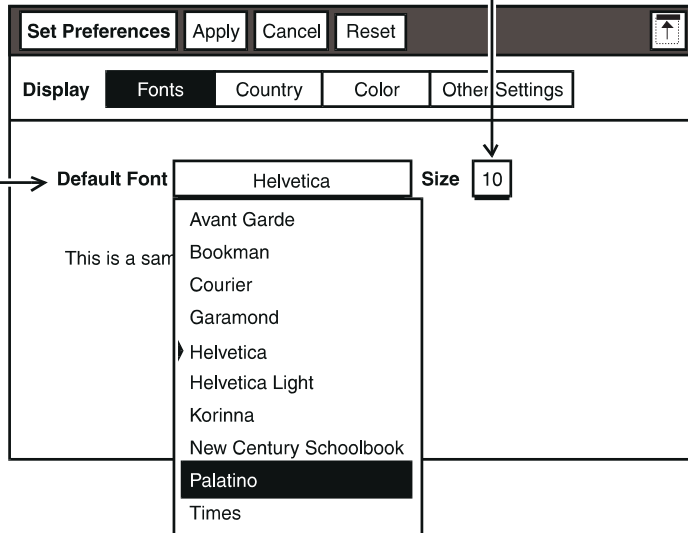
Using Menus

A menu is a list of choices that you can open from a button, such as the `Special` button or `More` button.

You open some menus from choice buttons in fields. You can recognize that a choice in a field is actually a choice button because it is enclosed in a rectangle and has a shadow on the bottom.

This field choice has a shadow on the bottom, indicating that it is a choice button that opens a menu

Because the Default Font and Size fields have many choices, the choices are placed in menus

Set Preferences	Apply	Cancel	Reset		⬆

Display	Fonts	Country	Color	Other Settings

Default Font   Helvetica   **Size** 10

This is a sam ▸

- Avant Garde
- Bookman
- Courier
- Garamond
- ▸ Helvetica
- Helvetica Light
- Korinna
- New Century Schoolbook
- **Palatino**
- Times

To select a menu choice:

1. Point to the choice button or menu button (for example, the `Special` button), then press and hold down mouse button 1. A menu opens and stays open for as long as you continue to hold down the mouse button.

2. Drag the pointer to the choice you want. Each choice is highlighted while the pointer is dragged across it.

3. Release the mouse button. Your choice is activated.

To close the menu without making a choice, move the pointer away from the menu, then release the mouse button.

Sometimes you must scroll a menu to see all the choices. This happens when you are using a large screen font or when the window is so close to the bottom of the screen that only some of the choices can be displayed.

To scroll a menu:

1. Open the menu by pointing to the menu button and then pressing and holding down mouse button 1.

2. Drag the pointer down into the menu. A solid arrowhead is displayed on one or both of the scroll bars, indicating that there are more choices in the direction of the arrowhead.

3. Drag the pointer to the scroll bar that displays a solid arrowhead. The menu scrolls up or down, depending on the direction of the arrowhead. When you reach the top or bottom of the menu, the scrolling stops and the arrowhead is no longer shown in the scroll bar.

If there is only enough room to display one or two choices, the menu opens up instead of down.

```
                                          Cancel Changes
                                          Show Printing Controls
                                          Show Format Characters
                                          Hide Region Markers
                                          Format to Page
                                          Show Conversion Controls
                                          Get @-Values

  [Envelope]  [Add Enclosures]  [Reply] [ ]  [Find/Replace] [ ] [*] [↑]
    From: □                                                      ▲
      To: □
Copies To: □
  Subject: □
```
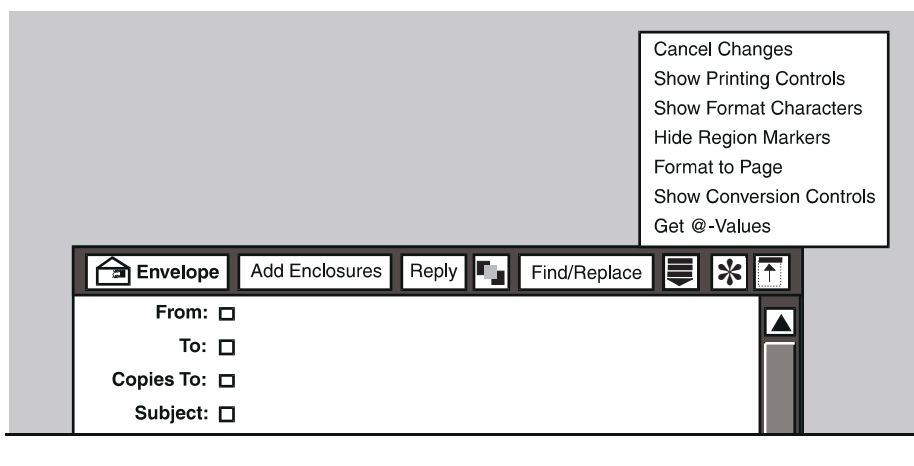
Sorting and Displaying Information in Container Windows

The first time you open a container (such as a folder or your File Drawer), it is set to list its contents in ascending alphanumeric order, that is, from 0 to 9, A to Z. English is the default language used for sorting icons and lists. If you are working in a language other than English, you can set the desktop settings to sort according to the accepted rules of other languages. For more information, see "Setting the Language Used for Sorting Icons and Lists" on page 56.

You can set controls for the container to change the sort order and to display size and date information for each icon. Because the sort order is controlled by the settings you choose, you cannot manually rearrange the icons in a container. These controls are in the container's controls window. Figure 20 on page 47 shows the controls window for a folder.
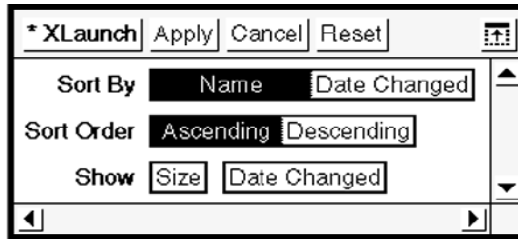
Figure 20. Container Control window

You can set the container controls to:

- Sort icons by name or by the date they were last changed in either ascending or descending order

- Display the size of each icon or the date each icon was last changed, or both

To set the controls for a container:

1. Open the container icon by double-clicking on it.

2. In the container window header, click on `Show Controls`. A controls window opens.

3. Select the choices that you want to use for the container. For more information about the settings, see "Sorting Icons in Container Windows" and "Displaying Size and Date Information".

4. Select `Apply` or close the controls window. The controls you selected take effect.

The new settings remain in effect until you change them again. For example, if you set the controls to show icon sizes and to sort by date instead of by name, the next time you open the container, the sizes of the icons are displayed and the contents are sorted by date. The settings remain the same after you log off and then log on again.

Sorting Icons in Container Windows

A container's controls window usually provides two fields for specifying how you want the icons to be sorted:

- The `Sort By` field specifies whether the icons in the container are to be sorted alphanumerically (by the icon name) or chronologically (by the date and time that each icon was last changed).

- The `Sort Order` field specifies whether icons are to be sorted in ascending order (from 0 to 9, A to Z) or descending order (from Z to A, 9 to 0).

To sort the container contents in alphanumeric order:

1. In the `Sort By` field, click on `Name`.

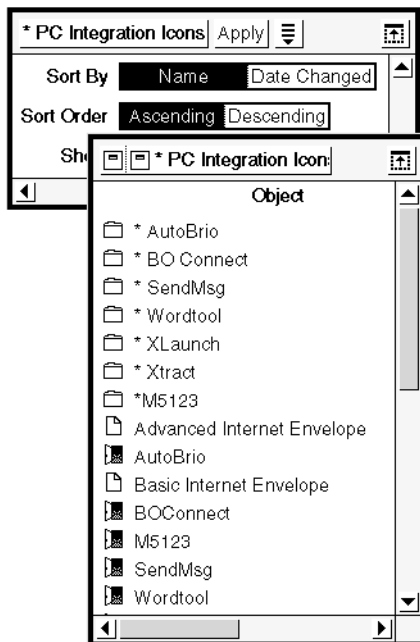2. In the `Sort Order` field, click on either `Ascending` or `Descending`.

Figure 21. Icons sorted in ascending alphanumeric order by icon name

To sort the container contents in chronological order:

1. In the `Sort By` field, click on `Date`.

2. In the `Sort Order` field, click on either `Ascending` or `Descending`.

Displaying Size and Date Information

The `Show` field specifies whether or not the window should display the size of each icon, the date and time that each icon was last changed, or both.

To display the size of each icon, in the `Show` field, click on `Size`.

To display the date and time that each icon was last changed, in the `Show` field, click on `Date`.
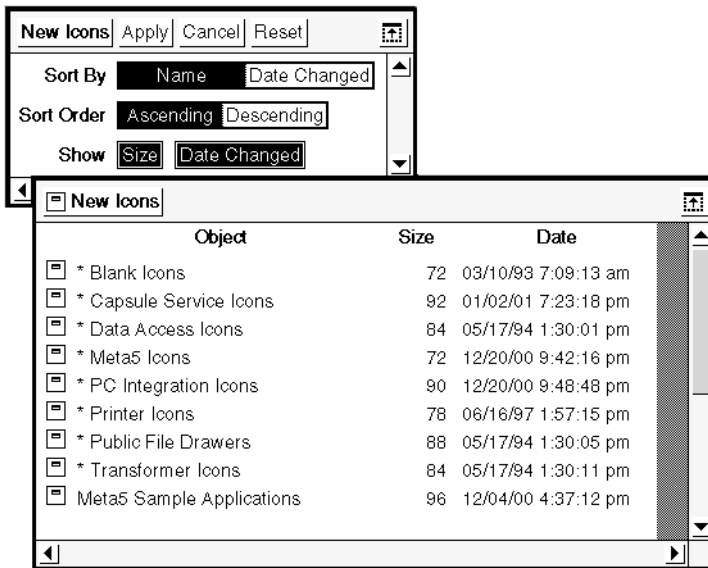
Manipulating Icons in a Container Window

When you open a container icon, you see the icons it contains. You can manipulate the icons in various ways. The following sections describe how to:

- Open icons in a container
- Remove an icon from a container window
- Put an icon into an open container window

Opening Icons in a Container

You open an icon that is visible inside a container by double-clicking on it.

When you open an icon inside a container, the title block includes the icon graphic for the container and for the opened icon.

An icon that is inside a container is the same as other icons. The pop-up function pad, function keys, window headers, and window header buttons work the same as for icons that are directly on the desktop.

Remember that file drawers are shared with other users. Do not make changes to icons while they are inside file drawers. Always make a copy of the icon you want to work with and use the copy on your desktop.

When you open an icon in a container, its window often partially overlaps the window of the container. When you open successive windows, those underneath

can be covered up. To find out how to change the order of the windows, see "Reordering Windows that Overlap" on page 44.
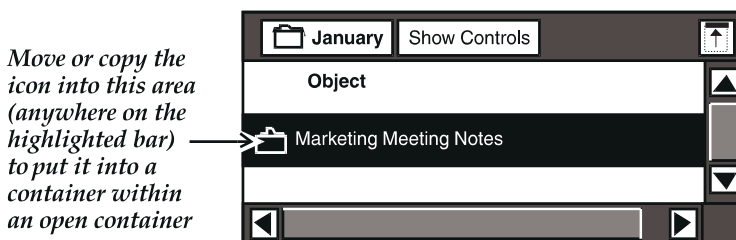
Removing an Icon from a Container Window

You can remove one or more icons from a container the same way you move icons on your Meta5 desktop: by dragging them out, by using the move function on the pop-up function pad, or by using the Move function key. You can also copy and delete icons from containers.

Putting an Icon into an Open Container

In "Chapter 3. Working with Icons," on page 23, you learned that you can move or copy icons into a closed container icon. You can also move or copy an icon into an open container window. When you do this, you must place the icon either above or below the list of contents (even though the actual destination will be determined by the sort order specified in the controls window). The best area is the space near the word `Object`.

Move or copy the icon into this area to put it into a container window
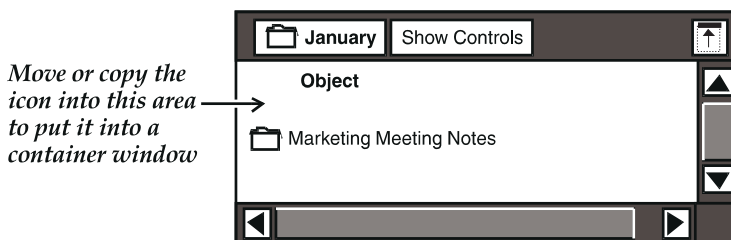
Alternatively, you can move or copy an icon into a folder, envelope, or other container within the open container.

Move or copy the icon into this area (anywhere on the highlighted bar) to put it into a container within an open container

When you attempt a move or copy action that is not valid, the pointer becomes a do-not symbol ⊖.

Closing Windows

Always close any windows you are not currently using. Closing a window removes it from the screen and automatically saves your work. When you close a window, its open subordinate windows are also closed.

To close a window, click on the window's title block. The window closes and its icon is displayed in its former place on your desktop. The icon remains highlighted until you click somewhere else.

You can close a window in a container by clicking on its title block, or you can close the window and its container at the same time by clicking on the container's icon graphic.

To close an icon window and leave the container window open, click on the part of the title block that represents only the icon (the right part of the title block):

Clickhere

To close an icon and its container at the same time, click on the part of the title block that represents the container:

Clickhere
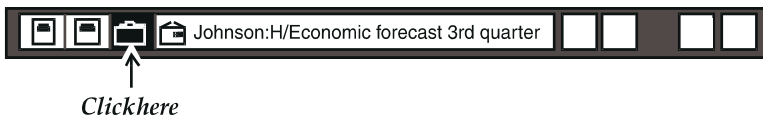
To close the outermost container and all its containers and icons at the same time, click on the leftmost part of the title block, which represents the outermost container:

Clickhere
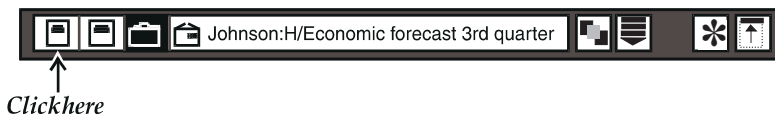
Chapter 5.   Customizing Your Meta5 Environment

This chapter describes how to customize your Meta5 environment to suit your needs and preferences. You can change the following characteristics of your desktop by changing the settings available in the Set Preferences window:

- System default font
- Country settings (including measurement units, number format, and date and time format)
- Colors
- Transparency of the pop-up function pad
- Width of window borders

You can change the following desktop characteristics from the Keyboard window:

- Keyboard language
- Function key assignments

You open the windows that enable you to customize your Meta5 environment by selecting the appropriate choice from the `Special` menu.

Changing the System Default Font

The system default font is used initially for the text you see on your Meta5 desktop in such things as icon and button names, menu choices, and messages. This font is also used in the address area of all envelopes on your desktop and is the default font for text you enter in an unformatted Text window or in the message area of an Envelope window.

You can change the style and size of your desktop's default font in the Set Preferences window, but before you do, note the following behaviors and restrictions:

- Before your changes can take effect, all other open windows must be closed.
- The Set Preferences window has the `Apply`, `Cancel`, and `Reset` buttons (described on "The Apply, Cancel, and Reset Buttons" on page 40).

To change the default font:

1. Close all open windows.
2. From the `Special` menu, select `Set Preferences`. The Set Preferences window opens, showing the font settings.

3. From the choice menu in the `Default Font` field, select the font style you want to use. An example of your font choice is displayed in the window.
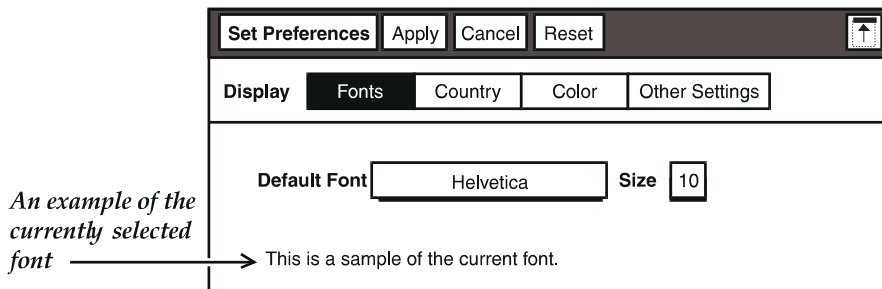

An example of the currently selected font

Figure 22. An example of the currently selected font

4. From the choice menu in the `Size` field, select the font size you want to use. The example in the window changes to reflect your size choice.

5. Close the window to put your changes into effect.

To use a choice button, point to the button, press and hold down mouse button 1, drag the pointer to the choice you want, and then release the mouse button.

If you change a font setting while other windows are open, you cannot close the Set Preferences window until you close the other windows. If you do not want to close all open windows, click on the `Cancel` button in the window header to cancel your changes and close the Set Preferences window.

If you are using an international version of Meta5, you must choose a font that supports the character set used for your language. Double-byte character set (DBCS) fonts are used for languages such as Japanese, Chinese, and Korean. Other languages requiring special character sets include Arabic and Russian. Some font selections are provided with Meta5 depending upon the language selected at the time Meta5 is installed. Other fonts can be supplied with your operating system. For more information on the languages that Meta5 supports, see *Installing Meta5 LAN Components*.

You must set the default font for your language before you change the Language setting as described in "Changing Country Settings". If you change the developer's desktop language setting before you set the default font, you might not be able to read the controls, windows, and icon names on the developer's desktop.

Changing Country Settings

The Set Preferences window is used by Meta5 to determine what measurement, number, date, and time formats to use on your desktop. When you change the `Country` choice, Meta5 sets the measurement system and the number, date, and time formats to match those that are standard in that country. You can also change these settings individually to suit your needs. Any changes you make to

these settings affect all icons on your desktop, unless the icon itself overrides the desktop settings, as is possible with the Spreadsheet, Reporter, and Layout tools.

You can select `System Default` for each group of settings in the window to restore the default settings for the selected country.

The settings you specify for an individual icon (such as a Spreadsheet or Reporter icon) override the default settings specified in the Set Preferences window. For example, you can specify a different number format for a spreadsheet or a different date format for a report.

To specify country settings:

1. From the `Special` menu, select `Set Preferences`. The Set Preferences window opens.
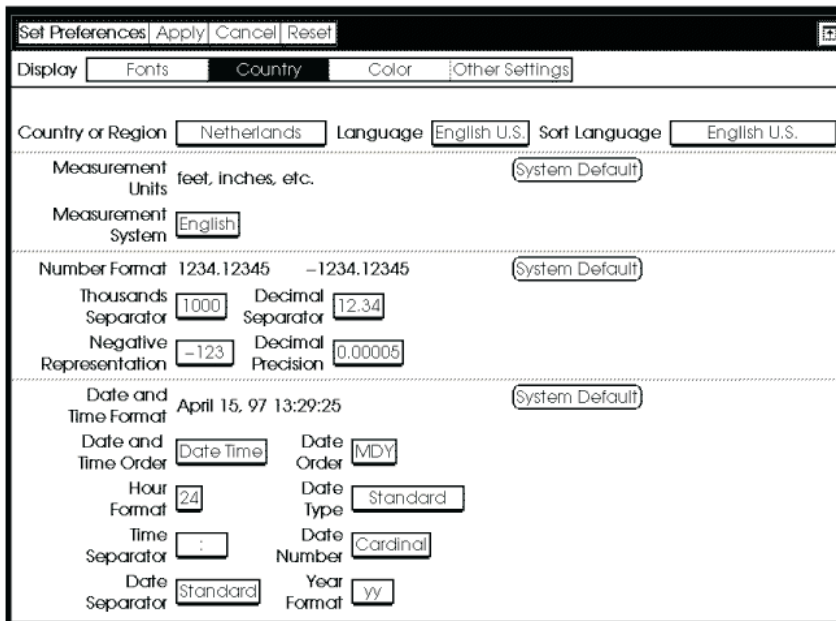

Figure 23. The Set Preferences window

2. In the `Display` field, click on `Country`.

3. From the choice menu in the `Country` field, select the country whose standard settings you want to use.

   Meta5 adjusts the settings for measurement units and number, date, and time formats to match those used in the specified country. You can then change these defaults by selecting different choices in the appropriate fields. If you change your mind, you can select `System Default` for each group of settings in the window to restore the default settings for the selected country.

4. From the choice menu in the `Language` field, select the language used for messages, windows, controls, and object names.

If you have not set a default font appropriate for your language, you must do so now. Select a font as described in "Changing the System Default Font" on page 53 and return to this procedure to complete the country preference settings.

5. From the choice menu in the `Measurement System` field, select one of two measurement systems:

   - `English` causes measurements to be shown in feet and inches.
   - `Metric` causes measurements to be shown in meters and centimeters.

   The `Measurement Units` field displays an example of the measurement system that is currently selected.

6. Select the choices you want to use for number format and for date and time format. For more information about these settings, see "Number Format" on page 56 and "Date and Time Format" on page 57.

7. To put your changes into effect, close the window or click on `Apply` in the window header.

Setting the Language Used for Sorting Icons and Lists

You can select the language used for sorting icons in containers and items in lists. The language you select determines the sort table or order used when sorting. For example, in English the Latin 1 table is used. The icons or items are sorted alphanumerically from 0 to 9 and A to Z. In Chinese and other languages that use a double-byte character set, icons and items are sorted according to the Unicode** order. For a listing of supported languages and sort tables, see "Appendix D. Language and Sort Tables," on page 145.

To select the language to used when sorting:

1. From the `Special` menu, select `Set Preferences`. The Set Preferences window opens.

2. Click on `Country`.

3. Select a language in the `Sort Language` list.

4. Click on `Apply`.

5. Close the Set Preferences window.

Number Format

You can control the way numbers are displayed on your desktop by specifying settings for such things as the character used as a decimal separator or the way negative values are indicated.

To change the number format:

1. From the `Special` menu, select `Set Preferences`. The Set Preferences window opens.

2. In the `Display` field, click on `Country`. The `Country` settings are displayed.

   The `Number Format` field shows an example of the number format that is currently selected for positive and negative numbers.

3. Select the settings you want from the choice menus.

   The example in the `Number Format` field changes each time you change a setting so you can try different settings and see the consequences immediately. For a description of each setting, see Table 5.

   You cannot use the same separator for both decimals and thousands. For example, if you select a period as the thousands separator, you cannot use a period as the decimal separator.

4. To put your changes into effect, close the window or click on `Apply` in the window header.

Table 5. Number formats

Use this field	To do this
Thousands Separator	Specify the format you want to use for a number in the thousands. The choices are no separator (1000), space (1 000), comma (1,000), period (1.000), or apostrophe (1'000).
Decimal Separator	Specify either a period or a comma as the decimal separator.
Negative Representation	Specify the symbol for indicating a negative value. The choices are a negative sign before or after a number (-123 or 123-), parentheses, square brackets, or angled brackets.
Decimal Precision	Specify how many digits are displayed to the right of a decimal separator.

Date and Time Format

You can change the way dates are displayed on your desktop by specifying settings for such things as the order of the month, day, and year, or the character used to separate the parts of a date.

To change the date and time format:

1. From the `Special` menu, select `Set Preferences`. The Set Preferences window opens.

2. In the `Display` field, click on `Country`. The `Country` settings are displayed.

   Notice that the `Date and Time Format` field shows an example of the date and time formats that are currently selected.

3. Select the settings you want from the choice menus.

The example in the `Date and Time Format` field changes each time you change a setting so you can try different settings and see the consequences immediately. For a description of each setting, see Table 6 on page 58.

The displayed format for date and time fields reflects all of your choices. For example, if you specify a `Date Type` of `Numeric`, the date can be expressed in a variety of ways (such as 02/18/00, 02-18-2000, 18.02.00), depending on the settings in other fields (such as `Year Format`, `Date Separator`, and `Date Order`).

4. To put your changes into effect, close the window or click on `Apply` in the window header.

Table 6. Date and Time Formats

Use this field	To do this
Date and Time Order	Specify the arrangement of the date and time, and whether both the date and time are shown. The choices are `Date Time`, `Time Date`, `Date Only`, and `Time Only`.
Hour Format	Specify whether a 12-hour or 24-hour clock is to be used for time entries. If you specify the 12-hour clock, time entries are followed by `am` or `pm`.
Time Separator	Specify the character to separate the hours, minutes and seconds in time entries. The choices are colon (:), period (.), comma (,), `hms` (h for hours, m for minutes, and s for seconds), and `None`.
Date Separator	Specify the character to separate the month, day, and year. The choices are `Standard`, slash (/), hyphen (-), period (.), or `None`. `Standard` means that if your `Date Order` is `MDY`, the month and day are separated by a space, and the day and year are separated by a comma and space (as in `October 19, 1999` or `10 19, 99`); if your `Date Order` is `DMY` or `YMD`, spaces are used to separate the month, day, and year (as in `19 October 1999`).
Date Order	Specify the arrangement of the month (M), day (D), and year (Y). The choices are `MDY`, `DMY`, and `YMD`.
Date Type	Specify how the date is displayed:
	`Abbreviated` displays the month as an abbreviated word and the year as two or four digits (depending on the choice in the `Year Format` field), as in `Feb. 18, 2000`.
	`Long` displays the day of the week and month fully spelled out and the year as two or four digits (depending on the choice in the `Year Format` field), as in `Friday, February 18, 2000`.
	`Numeric` displays dates as numbers, as in `02/18/00`.
	`Standard` displays dates with the month fully spelled out and the year represented by two or four digits (depending on the choice in the `Year Format` field), as in `February 18, 2000`.

Table 6. Date and Time Formats

Use this field	To do this
`Date Number`	Specify whether the day is to be expressed as a cardinal or ordinal number (for example, `Feb 18` or `Feb 18th`).
Year Format	Specify the format of a year in a date entry. The choices are `yy` (two digits, as in `00`) or `yyyy` (four digits, as in `2000`).

Changing Your Desktop Colors

The first time you use Meta5, your desktop is displayed in default colors that you can change in the Set Preferences window. You can assign new colors to each class of objects on your desktop by selecting from a palette of colors that have been provided by Meta5 or that you have created yourself in the Define New Colors window.

The colors you assign to a desktop object apply to all instances of that object. For example, if you select blue as the color for an icon, all icons on your desktop will be blue. You cannot set colors for individual objects, such as blue for Text icons and red for Plot icons.

When you create a color scheme that you like, you can save it in an icon for use later. Thus, you can experiment freely with different color schemes without having to settle on just one. You can even send a favorite color scheme to another user by mailing it as an enclosure in an Envelope icon.

Assigning Colors to Desktop Objects

To assign different colors to desktop objects:

1. From the `Special` menu, select `Set Preferences`. The Set Preferences window opens.

2. In the `Display` field, click on `Color`.

   The window displays color boxes showing the current color settings for desktop objects. These boxes provide access to the color palette, explained in the next step.

3. Point inside the color box that represents an object to which you want to assign a new color. For example, to change the color of menu borders, point inside the color box labeled `Menu Borders`.

   See Table 7 on page 60 for an explanation of what each color box represents.

4. Press and hold down mouse button 1. Do not release the mouse button. The color palette opens and remains open for as long as you continue to hold down the mouse button.

   Notice the following parts of the color palette:

   • The color spectrum displays 125 colors.

- To the right of the color spectrum is the color-choice area. The top half of this area displays the current color of the selected object. The bottom half displays the color that is currently selected on the color palette.
- The gray scale displays 64 shades of gray, ranging from black to white.
- The color bar at the bottom of the palette displays eight user-definable colors that you can change (as described in "Creating Your Own Colors" on page 62).

5. Drag the pointer to the color of your choice. Notice the following behaviors:
   - The pointer becomes a small square that frames the color currently selected in the color palette.
   - As you drag the pointer around the palette, the bottom half of the color-choice area changes to show the currently selected color.

As long as you continue holding down the mouse button, you can move the pointer around the palette to test different colors. You can pick a color from the color spectrum, gray scale, or bar of user-definable colors.

6. When you have selected the color you want, release the mouse button. The new color is displayed in the color box you were pointing to when you opened the palette.

To close the color palette without selecting a color, move the pointer out of the color palette and then release the mouse button.

7. To apply the new colors to your desktop, click on Apply in the window header or close the window.

Each time you log off Meta5, the color settings currently in effect are saved. The next time you log on, you will see the same colors. You can also save color settings in an icon, as described in "Saving Your Color Settings for Later Use" on page 63.

Table 7 describes what each color box in the Set Preferences window represents.

Table 7. Set Preferences window color boxes

Category	Color box	What it represents
Windows	Foreground	The color of text in windows
	Background	The background color of windows
	Header	The color of window headers
	Border	The color of window borders
	Selection	The color of the window header when it is selected
Icons	Foreground	The color of icon graphics in icons (the color of text labels on icons cannot be changed)
	Background	The background color of icons

Table 7. Set Preferences window color boxes

Category	Color box	What it represents
	Selected Foreground	The color of the icon graphic in a selected icon
	Selected Background	The background color of selected icons
	Secondary Selection	The background color of an icon for which an options window is open
Message Bar	Foreground	The color of text in the message bar
	Background	The background color of the message bar
	Error Messages Foreground	The color of text in the message bar when certain error messages are received
	Error Messages Background	The background color of the message bar when certain error messages are received
Pop-Up Function Pad	Foreground	The color of the images on the pop-up function pad
	Background	The background color of the pop-up function pad
	Selection	The color of a selected symbol in the pop-up function pad
Other	Background	The background color of the desktop
	Menu Borders	The color of menu borders

You can not change the color of the pointer on the desktop.

Restoring the Previous Color Settings

To cancel your changes and leave the color settings as they were when you opened the window:

1. Click on the `Restore Previous Colors` button in the Set Preferences window. The previous colors are displayed in the color boxes.

2. Click on the Set Preferences window. The colors that were in effect when you opened the window are restored.

Restoring the Meta5 Default Color Settings

To restore the Meta5 default color settings (the ones that were in effect the first time you used your desktop):

1. Click on the `Restore Default Colors` button. The default colors are displayed in the color boxes.

2. Click on `Apply` or close the window. The default colors are restored to your desktop.

Creating Your Own Colors

You can change the eight user-definable colors in the color palette by creating your own colors in the Define New Colors window.

To open the window:

1. In the Set Preferences window, select `Color` as the `Display` option.
2. Click on the `Define New Colors` button. The Define New Colors window opens.

The window displays six color-property fields with slider controls (short, black, vertical bars) that you can move to change the degree of red, green, blue, hue, lightness, and saturation for the current color. Notice that a numerical value is shown on the right side of each color-property field.

- `Hue` refers to the position of the color in the color spectrum. The numerical value for the `Hue` field can range from 0 to 359 to represent mixtures of red, green, and blue.

- `Lightness` is the brightness of the color, determined by how much light is filtered into the color, on a scale from 0 to 100.

- `Saturation` is the vividness of a hue, determined by the amounts of color and grayness it has, on a scale from 0 to 100. A hue with high saturation contains more color and less gray than a hue with low saturation.

If you adjust the settings for `Red`, `Green`, and `Blue`, Meta5 automatically adjusts the settings for `Hue`, `Lightness`, and `Saturation`. Similarly, if you adjust the settings for `Hue`, `Lightness`, and `Saturation`, Meta5 adjusts the settings for `Red`, `Green`, and `Blue`.

To create a new color:

1. In the color bar at the bottom of the window, click on the color you want to change. The large square on the right side of the window shows the current color.

2. Move the slider controls for `Red`, `Green`, `Blue`, `Hue`, `Lightness`, and `Saturation` by using one of the following three techniques (the slider-control settings are interrelated, so changing one might affect one or more of the others):

   - Drag the appropriate slider control to a different position.

   - Click on the arrow buttons at the end of a field. This technique is useful when you want to make adjustments in small increments.

   - Type a new value into the box at the end of each field that you want to change.

   As you change the color, the new color is shown in the square on the right side of the window.

3. When the color is the way you want it, repeat steps 1 and 2 to create another color if you want.

4. When you are satisfied with the colors, close the Define New Colors window. All desktop objects whose colors were set using the user-definable colors are changed to the new color.

The next time you open the color palette, your new colors are on the user-definable color bar for you to select.

Saving Your Color Settings for Later Use

Each time you log off Meta5, the colors currently on your desktop are saved. However, you might want to change your current color settings and then later restore them. You can do so by saving them in a Saved Color Settings icon. This is convenient if you like to work with more than one color scheme.

To save color settings for later use:

1. Copy a Saved Color Settings icon from the *Blank Icons file drawer in the New Icons file drawer.

2. Open the icon. The window displays a miniature replica of the Meta5 desktop in the default colors.

3. Click on the `Capture Colors` button. The colors in the window change to those currently being used on your Meta5 desktop.

4. To save your colors, close the window.

   If you change your mind, click on the `Cancel Changes` button (you might have to open the `More` menu to find this button).

If you save more than one color scheme, be sure to rename each Saved Color Settings icon so that you can distinguish between them.

Restoring Saved Color Settings

To restore the color settings that you have saved in a Saved Color Settings icon:

1. Open the appropriate Saved Color Settings icon.

2. In the window that opens, click on `Apply Colors`.

Your saved color settings are restored to the desktop. If you change your mind, click on `Cancel Changes`.

Changing the Transparency of the Pop-Up Function Pad

To change the transparency of the pop-up function pad:

1. From the `Special` menu, select `Set Preferences`. The Set Preferences window opens.

2. In the `Display` field, click on `Other Settings`.

3. Select the setting you want:

- Clear makes the background of the pad completely transparent.
- Tinted makes the background a color that you can see through.
- Opaque makes the background a color that you cannot see through.

4. Click on the Apply button or close the window to put your change into effect.

Changing the Width of Window Borders

You can set the width of window borders to a thickness of from 1 to 10 pixels. Thicker borders can be easier for you to select when you want to resize a window.

To change the width of window borders:

1. From the Special menu, select Set Preferences. The Set Preferences window opens.

2. In the Display field, click on Other Settings.

3. Select the setting you want. Choose a number between 1 and 10, with 10 being the thickest.

4. Click on the Apply button or close the window to put your change into effect.

Resetting Your Keyboard Language

You can reset your desktop keyboard to act like one of 18 international and symbol keyboards when you use Meta5. By resetting your keyboard, you can produce characters that might not be available on your desktop keyboard, such as ã or Ñ.

Before resetting your keyboard, be aware the following characteristics:

- Meta5 uses the settings in the Keyboard window to interpret the keys you type on your desktop keyboard. For example, if you change your keyboard language from U.S. English to Danish, your desktop keyboard will behave like a Danish keyboard.

- When you log off Meta5, your keyboard remains set to the language you selected. The next time you log on, your keyboard is still set to this language.

- Resetting your keyboard has no effect on how the keys you type are interpreted when you are not using Meta5.

You can use Meta5 with keyboard Input Method Editors (IME) to produce characters supported by DBCS langauges. See *Installing Meta5 LAN Components* for a list of supported languages. When you use an IME, you must select a default font that correctly displays the character set for your language. See "Changing the System Default Font" on page 53 for more information.

Resetting Your Keyboard

To set your keyboard to a different language:

1. From the `Special` menu, select `Show Keyboard`. The Keyboard window opens.

2. From the choice menu in the `Change Keyboard` field, select the keyboard you want. You can scroll the menu to display the appropriate keyboard choice.

To return to the keyboard language that your system administrator set as the system default, click on the Default button on the Keyboard window header.

Using Your Reset Keyboard

Resetting your keyboard might change the location of some characters. For example, on a German keyboard the positions of Z and Y are the reverse of their positions on the U.S. English keyboard.

The keys available on the U.S. English keyboard differ slightly from the keys available on non-U.S. keyboards. Notice that the non-U.S. keyboard has one more key than the U.S. keyboard. If the actual keyboard attached to your desktop is U.S. English, you can type the characters on this extra key only by using the mouse to click on the keys depicted in the Keyboard window.

All keyboards other than U.S. English have several keys with three characters. To type the third character (lower right on the key), hold down the Alt key and press the key you want. For example, to type a right bracket on the Spanish keyboard, hold down the Alt key and press the key that has the right bracket, asterisk, and plus sign.

On most of the non-U.S. keyboards, you can press special key combinations to type characters with accents and other special marks. For more information, see the *Text User's Guide*.

Redefining Function Keys

Meta5 allows you to change function-key assignments. For example, you can set F12 to be the Delete function key instead of F5, or you can switch the functions of F3 and F4 so that they are Options and Copy, respectively.

To redefine function keys:

1. From the `Special` menu, select `Keyboard`. The Keyboard window opens.

2. In the Keyboard window header, click on `Redefine Function Keys`. The Redefine Function Keys window opens. The functions are listed down the left side. The function keys are listed across the window.

3. Click on a function key for each function you want to want to reassign.

4. Change as many function-key assignments as you want. When you are finished, click on the title block to close the window and apply the changes.

   If two functions are assigned to the same key, you cannot close the window or use the `Apply` button, and an error message is displayed. After you have changed function key settings so that each function is assigned to a separate key, you can close the window.

To restore the function key assignments to the default settings, click on the `Default` button.

To reset the function key assignments to the settings that were last saved on your desktop, click on the `Reset` button.

Chapter 6. Managing Your Desktop Security and Disk Space

This chapter explains how to work with various security features to protect your Meta5 desktop and icons from unauthorized use, and to gain access to your company's databases. It also explains how to manage the disk space allotted to your desktop.

Working with Meta5 Security Features

Meta5 provides several security features that prevent unauthorized access to your user data and to your company's databases.

- The system administrator creates each user's desktop with a password to control access to the desktop.
- You can protect your icons by setting view and change privileges for them.
- To gain access to your company's databases, each user must have the appropriate authorization from your system or database administrator.

Changing Your Password

When you start Meta5 for the first time, you use the password assigned by your system administrator. For security purposes, you should immediately change this password to one of your own choosing.

Your system administrator can set a limit on how long you can use a password, such as 60 days. If you fail to change your password before it expires, you will receive an important message in the logon screen informing you that you can log on one more time and that, if you do not change your password during that session, you will not be able to use Meta5 again without the intervention of your system administrator.

To change your password:

1. From the `Special` menu, select `Change Password`. The Change Password window opens with the insertion point (a blinking vertical bar) in the `Old Password` field.

2. Type your current password. For security purposes, the characters you type are not shown in the `Old Password` field, or in any other field in this window. Instead, an asterisk is displayed for each character you type. If you make a mistake, you can use the Backspace key to back up and retype the characters you want to replace.

3. Press the Enter or Tab key to move the insertion point to the `New Password` field.

4. Type the new password you want to use, following these guidelines:

    •   Use between 1 and 8 characters. Your system administrator might have changed the minimum to a higher number (for example, between 2 and 8 characters).

    •   Use any letters, numbers, or symbols.

    •   Passwords are case sensitive; that is, uppercase and lowercase letters are interpreted as different characters.

    •   Do not use a space at the beginning or end of the password.

5. Press Enter or Tab to move the insertion point to the `Confirm New Password` field, and type your new password again, to verify that the characters you typed the first time are the ones you intended to type.

6. If you change your mind about changing your password, close the window at this point. Otherwise, proceed to step 7.

7. Click on the `Change Password` button at the bottom of the Change Password window.

8. Close the window by clicking on its title block.

If you forget your password, ask your system administrator for assistance.

Controlling Access to Your Icons

You own all icons on your desktop except file drawers and printer icons. When you want to allow other users to view or change an icon that you own, you can mail it to them or store it in a file drawer to which you and they have access. You

can also specify which users can view or change an icon you own by setting access privileges for that icon in its Icon Options window.

Icon Options	Apply	Cancel	Reset	✳ ⬆

Display Name and Size   Printing

Name Plot

Last Changed 03/14/94 15:49:10 pm

First Created 03/14/94 15:49:10 pm

Size 3099 **bytes**

Icon's Owner Is You

Icon's Access Is Same As Its Container or Home   As Set In This Options Window

Other Than the Owner, This Icon May Be Viewed By
Anyone
Changed By
Anyone

Every Icon Options window has an `Icon's Access Is` field, which provides two choices:

- `Same As the Container or Home` gives the icon the same view and change privileges as the container in which it is placed.

- `As Set in This Options Window` allows you to set the view and change privileges for the icon independent of the controls set for its container. These privileges can be granted to:

  — Anyone (any user on the system)

  — *key holders* (users who are assigned special access numbers by the system administrator)

To set view and change privileges:

1. Click on the icon and open its options window.

2. In the `Icon's Access Is` field, select `As Set in This Option Window`. Another field opens, providing the six choices shown in Figure 24 on page 70.

Icon's Owner Is	You					
Icon's Access Is	Same As the Container or Home		As Set in This Options Window			
Other Than Owner, This Icon May Be	Viewed By No One Changed By No One	Viewed By Anyone Changed By Anyone	Viewed By Anyone Changed By No One	Viewed By Anyone Changed By Key Holders	Viewed By Key Holders Changed By No One	Viewed By Key Holders Changed By Key Holders

Figure 24. Icon Access Options

3. Click on the appropriate view and change choice. See Table 8 for an explanation of each choice.

    To restrict access to a group of users, select one of the last three choices. This opens two additional fields where you can enter one or more *access keys*. An access key is a number that your system administrator assigns to a user or group of users.

    To enter two or more access keys, separate them with either a space or comma.

    To save your settings, click on the `Apply` button or close the window. If you change your mind before clicking the `Apply` button:

    -   Click on the `Cancel` button to close the window without saving your changes.
    -   Click on the `Reset` button to restore the previous settings without closing the window.

    Table 8 describes each view and change choice.

Table 8. Icon access privileges

Choice	Meaning
Viewed By No One Changed By No One	Only the owner and system administrator can use the icon.
Viewed By Anyone Changed By Anyone	Anyone can open, edit, move, copy, or delete the icon, or change its options.
Viewed By Anyone Changed By No One	Anyone can copy and open the icon. Only the owner and system administrator can move or delete it, change its options, or edit its contents. If the icon is a container, no other users can move icons to or from it. If a user copies an icon onto their desktop, he or she becomes the owner of that copy.
Viewed By Anyone Changed By Key Holders	Anyone can copy and open the icon. Only the owner and users with matching keys can move it, delete it, or change its options. When this choice is selected, the `Keys For Viewing and Changing` field is displayed so that you can enter the appropriate key numbers.

Table 8. Icon access privileges

Choice	Meaning
Viewed By Key Holders Changed By No One	Only the owner and users with matching keys can copy and open the icon. Only the owner and system administrator can move it, delete it, or change its options. When this choice is selected, the `Keys For Viewing` field is displayed so that you can enter the appropriate key numbers.
Viewed By Key Holders Changed By Key Holders	Only the owner and users with matching keys can move, copy, delete, or open the icon, or change its options. When this choice is selected, the `Keys For Viewing` and `Keys For Viewing and Changing` fields are displayed so that you can enter the appropriate key numbers.

Gaining Access to Databases

The Meta5 data access tools (Query, Reporter, SQL, and Browser) enable you to retrieve information from your company's databases. Before you can use a data access tool, its icon must be appropriately configured; that is, the Icon Options window for that icon must include the information needed to gain access to a database. This information includes:

- The name of the appropriate database service or database gateway service, and the physical name of the database
- Database logon information in the form of a valid user name and password

Data access icons can be configured to read the database user name and password from one of the following sources:

- The settings in the Data Access Controls window of the desktop where the icon resides.

  This configuration prevents unauthorized use of the icon and its data. Instructions for adding to and modifying the entries in the Data Access Controls window are provided on the pages that follow.

- The `Password` field in the Icon Options window for the icon.

  When an icon is configured in this way, it can also be secured so that the user ID changes to the user ID of the desktop where the icon resides. This is an alternate way to prevent unauthorized use of the icon. If another user sends you an icon that has been secured and the database does not recognize your user ID, you will not be able to open the icon.

Usually, the database administrator configures the icons you need and places them in a file drawer in the New Icons file drawer. If you have the appropriate authorization from your database administrator, you can also configure icons yourself. Instructions for doing so are included in the user's manual for each data access tool.

To see the database access permissions specified in your desktop's Data Access Controls window, select `Show Data Access Controls` from the `Special` menu.

The first time you open the window, it might already list the databases to which you have access, or it might be empty, depending on how your system is set up.

You can add or modify entries, using information provided by your system administrator. The window also enables the authorized users to change their mainframe passwords.

Adding an Entry to the Data Access Controls Window

Before you can add an entry to the Data Access Controls window, your system administrator must assign you the appropriate database user name and password.

To add an entry to the data access controls window:

1. From the `Special` menu, select `Show Data Access Controls`. The Data Access Controls window opens.

2. In the window header, click on `Add Entry`.

3. Type the appropriate information into each text field, according to the guidelines provided in Table 9. You can ask your system administrator what information to type into each field.

   Enter the information correctly because Meta5 does not confirm the accuracy of the entry until you attempt to use a data access tool. For this reason, you must enter your password twice, to ensure that you have typed it correctly.
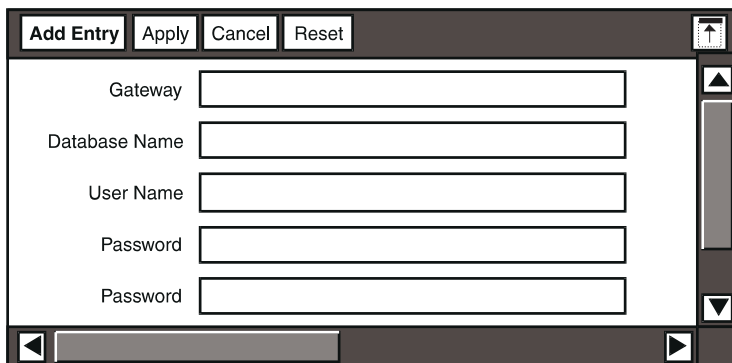
Figure 25. The Add Entry window

4. Close the Add Entry window. The entry is displayed in the Data Access Controls window. The password is not displayed in the window.

Table 9. explains what to enter in each field.

Table 9. Data Access Controls

Field	Information to supply
Gateway	Type the name of the database gateway to which you want access. If the gateway service is on a different realm from the one you are on, immediately follow the gateway name with a colon and then the realm name. For example: `mydbs:HQ`

Database Name	Type the name of the physical database to which you want access. For DB2 databases, type the name of the DB2 subsystem you want to access. For DB2 for VM databases, type the name of the virtual machine running DB2 for VM. For AS/400 databases, it is not necessary to specify anything in this field, because the AS/400 is a single-database system.
	
	If you want to connect to a supported remote database using Distributed Relational Database Architecture (DRDA), immediately follow the local database name with a period and then the name of the DRDA server through which the connection is being made. For example:
	
	`DSN.TD1`
	
	If you want to connect to a remote SYBASE or Red Brick database, immediately follow the SQL Server name with a vertical bar and then the name of the database you want to access. For example:
	
	`SYBSERVER2│SYBPROD`
	
	If you want to connect to a remote ORACLE database, specify the full database name or its alias. For the full database name, specify the standard single-character prefix used for the remote connection (such as `T` for TCP/IP), followed by a colon, the name of the target host followed by another colon, and finally the system ID (SID) of the target ORACLE database. For example:
	
	`T:host1:DBS`

User Name	Type a user ID the database can identify as valid. This might or might not be the same as your desktop user ID depending on how your database security is set up. When you connect to the RDBMS, this is the user ID sent to the RDBMS.
Password	Type the database user's password into each of the `Password` fields. This password might or might not be the same as your desktop password depending on how your database security is set up. For security, the password is never displayed.

Modifying an Entry

If you are authorized to do so, you can modify an entry in the Data Access Controls window:

1. In the Data Access Controls window, click on the entry you want to change and open its options window.

2. Modify the information entered in each field, as appropriate, following the guidelines provided in Table 9 on page 73 .

3. Type the appropriate password in each `Password` field. For security, asterisks are displayed for each character you type.

Changing the Mainframe Password

If you are authorized to do so, you can use the Data Access Controls window to change the password you use to gain access to a specified database on a mainframe.

To change the mainframe password:

1. From the `Special` menu, select `Show Data Access Controls`. The Data Access Controls window opens.

2. From the `Special` menu in the Data Access Controls window, select `Change Mainframe Password`.

3. In the Change Mainframe Password window, enter the appropriate information into each field.

4. Click on the `Change Password` button at the bottom of the window, and close the window.

Managing Your Disk Space

When Meta5 is initially configured, the Meta5 system administrator allocates a specific number of icons and a specific amount of system disk space to each desktop on the system. To enforce these allocations, the system administrator can also set a warning threshold, a limit threshold, or both.

Because you share system resources with other users, you should keep your desktop clear of unnecessary icons at all times. For example, delete messages you do not need from your Mail Tray, especially if they contain file folders or screen captures, which can use a lot of disk space.

This section explains how to find out the size of an icon and of all your user data. It also explains what can happen when your desktop exceeds the limit threshold or warning threshold assigned to it and what you can do to remedy the situation.

Displaying the Size of One or More Icons

To display the size of one or more icons:

1. Select the icon or icons whose size you want to display.

2. From the `Special` menu, select `Show Size`.

The size information is displayed in your message bar:

- The size of an icon that is not a container is shown as the number of blocks (or kilobytes). For example:

  ```
  Size in blocks (kilobytes): 14.
  ```

- The size of an icon that is a container is shown as the number of icons in the container and the combined size of the container and its icons. For example:

  ```
  One container. Items counted in container: 12. Total size
  in blocks (kilobytes): 15.
  ```

Some objects which might not be displayed to be containers are, however, stored as such by the File Service, and include:

- Envelopes with cover notes (counts as two objects; enclosures are in addition to this number)
- Data Entry icons
- Transformer icons (each region is stored as a separate file)

You can also find out the size of an icon by looking at the `Size` information in the Icon Options window (as shown in "Working with an Icon Options Window" on page 32). However, for container icons, the Icon Options window shows only the size of the container itself and does not tell you the sizes of the icons in the container.

Displaying the Size of Your Meta5 User Data

To display the size of your user data:

1. Click on an icon.
2. Use mouse button 2 to add all the other icons on your desktop to the selection.
3. From the `Special` menu, select `Show Size`.

   A message is displayed in your message bar stating the total number of containers and icons as well as the number of kilobytes your user data is consuming on the disk. For example:

   ```
   Containers counted: 18. Items counted (including items in
   containers):
   215. Total size in blocks (kilobytes): 1,180.
   ```

See the *System Administration Guide and Reference* for more information about icon and desktop sizes.

Exceeding the Warning Threshold

If your system administrator has assigned a warning threshold to your desktop and you exceed it, the system warns you by sending a message to your message bar.

If the message says you are over your file quota limit, this means that you have exceeded the number of icons (files) assigned to your desktop. The best remedy

is to delete as many small icons as possible, for example, Envelope icons you no longer need.

If the message says that you are over your disk quota limit, this means that you have exceeded the amount of storage space assigned to your desktop. The remedy is to delete one or more large icons. (Remember that file drawers are not actually on your desktop. Deleting them does not give you more space on your desktop.)

The warning messages are displayed until you solve your disk-quota problem, as described in "Solving Your Disk-Quota Problem" on page 76.

Do not ignore these warnings. Your disk-quota limit could be enforced with important consequences, as described in "Exceeding the Limit Threshold".

Exceeding the Limit Threshold

If your system administrator has assigned a limit threshold to your desktop and you exceed it, an error message is displayed in the Important Message window every time you try to perform an action that requires more disk resources (for example, when you try to copy an icon or save changes in it).

The system notes that this message has been issued. During system status update, the system checks to see if your desktop is still over its threshold after this message was issued. System status update is performed automatically at night. It can also occur whenever the system administrator finds it necessary.

After deleting icons, you can perform your own quota status update by selecting `Update Quota Status` from the `Special` menu, as described in "Solving Your Disk-Quota Problem".

If you have not deleted icons and are still over the limit threshold set for your desktop when you begin work again, you cannot copy an icon, save changes in it, or, in the case of a Text, Spreadsheet, or Envelope icon, cancel changes. An error message is displayed in the Important Message window every time you attempt these actions.

If you do not resolve your limit threshold problem, you might be unable to log off Meta5 because the open icon cannot be closed. Resolving this problem requires not only deleting icons to bring your desktop under quota, but also updating your disk quota, as described in "Solving Your Disk-Quota Problem".

Solving Your Disk-Quota Problem

There are two ways to solve the problem of exceeding your desktop limits:

- Ask your system administrator to raise your quota thresholds and update your quota status.
- Delete icons and update your quota status using the `Update Quota Status` choice in the `Special` menu.

You must use the `Update Quota Status` choice to inform the system that your quota status has changed. Otherwise, the system does not take your changes into account until system status update, which might not be performed until the automatic update at night.

To solve your disk quota problem:

1. Delete icons.

   If an open window fills the entire display area, you can resize or minimize it to select and delete icons.

2. From the `Special` menu, select `Update Quota Status`.

   If you have many icons on your desktop, this can take a long time, perhaps as long as five minutes or more.

The Discard icon is emptied whenever `Update Quota Status` is selected.

After the system updates your quota status, it displays a message to inform you of your warning and limit thresholds and your current usage.

Chapter 7.   Using Mail for Application Development and Data Reporting

Meta5 supports two methods for e-mail: Sendmsg and the Meta5 proprietary mail service. Sendmsg will send e-mail through Microsoft Outlook, LotusNotes, or any SMTP server to users outside the Meta5 environment. You can use the Meta5 mail service to exchange capsule applications and icons between Meta5 desktops within the Meta5 environment.

SendMsg

Sendmsg is a powerful tool that allows you to attach the results of Meta5 capsule applications to e-mails and e-mail actual Meta5 capsules.

Your company's powerful database information is not locked up within the Meta5 world. Users can attach Word or Excel documents generated by Meta5 using Xlaunch or Wordtool, and e-mail them to any standard e-mail account.

Sendmsg is a one-way tool. It does not allow you to receive e-mail in Meta5. It passes information to your mail client. If someone responds to your message, it will appear in your mail client.

Sendmsg requires an installed and properly configured copy of your selected mail client on the same workstation as the Meta5 desktop. Outlook clients have access to more features than Lotus Notes and the default Meta5 client.

Sending an E-mail

Sendmsg will send mail from the e-mail client that is defined to the workstation that is running your capsule. If you log into your Meta5 desktop on another workstation or submit your capsule to a capsule server, Sendmsg may send e-mail from a different e-mail client. Be sure to take this into consideration when sending mail with Sendmsg.

Also, if you are using Lotus Notes as your e-mail client, be sure to take careful precautions to ensure that the command line parameter -p <password> has the appropriate password or your e-mail will not be sent due to password restrictions in the Lotus security model.

1. Place a Sendmsg envelope and the Sendmsg Application icon into a capsule.

2. Connect the envelope to the Sendmsg icon.
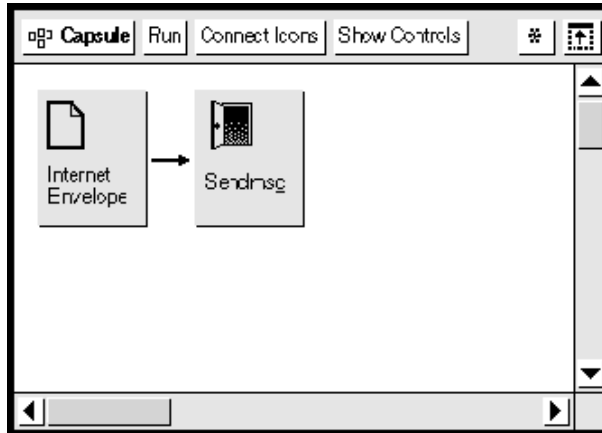
3. Open the Sendmsg envelope.
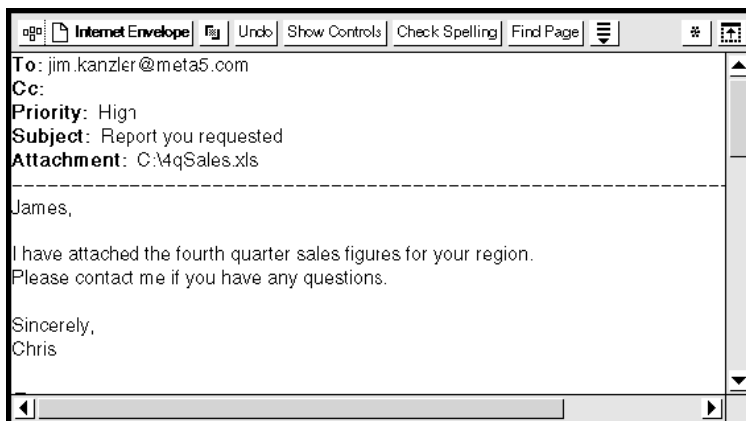
4. Enter at least one e-mail address in the To field (required field). Multiple addresses can be separated by commas. Additional addresses can also be entered in the Cc field (optional).

```
Important: Make sure all of the parameters are spelled
correctly. An error will occur if there are any spelling or
capitalization errors.
```

5. Enter a subject for your message in the Subject field (optional).

6. Click in the body area below the line and type your message (optional). Close and save your Sendmsg envelope.

7. Run your capsule. Note: Sendmsg only works in a capsule.

```
An alternate method of specifying multiple recipients is to have
multiple To or Cc fields. For example:
```

```
To: tammy@meta5.com

To: lisa@meta5.com

To: kim@meta5.com

To: michael@meta5.com

To: chris@meta5.com

The same method can be used with the Cc field.
```
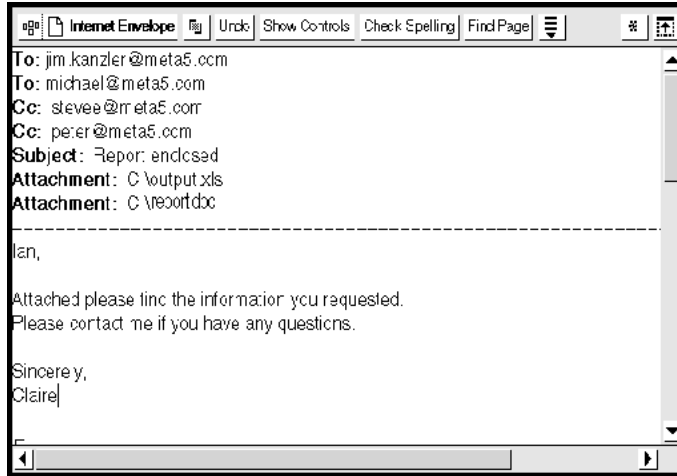

Attach a File to an E-mail

To attach a file, type a valid path and file name in the Attachment area.

Multiple files can be separated by commas. For example:

```
Attachment: c:\output.txt, c:\report.xls
```

An alternate method for specifying multiple attachments is to have multiple Attachment fields. For example:

```
Attachment: c:\output.txt

Attachment: c:\report.xls
```

Note: File names may not contain commas as they are the delimiter that separates multiple attachments. Sendmsg can handle long Windows file names containing any characters valid in the Windows file system.

It is possible to e-mail Meta5 Capsule applications using SendMsg. To do so, you must first export a capsule into the PC Directory on the computer sending the e-mail. You can then indicate the attachment as you would any other file.

Meta5 Capsules have the extension ".m5" in Windows. These files are generally uncompressed data and can become fairly large. The Meta5 Proprietary mail

system is specifically designed to move capsules between Meta5 users. Using this system is recommended for sharing your capsule applications.

Specify Message Priority

You can set the priority level of your e-mail to High, Normal, or Low. Enter High, Normal, or Low (these can be abbreviated to H, N, or L) in the Priority area. For example, to set high priority:

```
Priority: High
```

Or

```
Priority: H
```

Note: If you do not specify a priority, Normal will be used as the default. This feature only works with Outlook mail clients.

Request a Return Receipt

When you send a message, you can request that a return receipt be sent back to the account that your system is configured to access. (Note: the e-mail system of the recipient(s) must support return receipts in order for this feature to function. Remember that the return recipient will be the account that sent the e-mail. You must then check that e-mail client for the return receipt.

To request a return receipt, enter Yes or No (these can be abbreviated to Y or N) in the Return Receipt area. For example:

```
Return Receipt: Yes
```

Or

```
Return Receipt: Y
```

Note: This feature only works with Outlook mail clients.

Delete Attachment Files After Sending Them

With Sendmsg, you can build a capsule that automatically generates a file and e-mails it as an attachment. By default, these files are left wherever you saved them. If you do not wish these files to accumulate over time, Sendmsg can delete them for you after it has e-mailed them.

To delete a file after sending an e-mail, enter the path and file name of the file in the Delete File area.

Multiple files can be separated by commas. For example:

```
Delete File: c:\output.txt, c:\report.xls
```

An alternate method for specifying multiple files to be deleted is to have multiple Delete File fields. For example:

```
Delete File: c:\output.txt

Delete File: c:\report.xls
```

Note: File names may not contain commas as they are the delimiter that separates multiple entries.

Warning: Sendmsg will delete any file(s) you specify in this field without warning, regardless of whether they were generated by Meta5 or not. Be sure that you wish to delete the file(s) listed before running Sendmsg.

Notes:

- You must have a working version of your defined e-mail client on your computer.
- Sendmsg e-mail does not function like your Meta5 mail tray, and must be launched from within a capsule.
- You must separate multiple recipients and attachments with commas.
- For attachments, the full path and file name must be specified, i.e. c:\temp\example.xls
- You can connect the Sendmsg Mail Tray to a text icon to see execution messages or error messages
- The delete file feature only works with Outlook mail clients.

Create a Run Log

With Sendmsg, you can build a capsule that automatically generates a run log after each request to your e-mail client.

To create a Sendmsg run log simply connect any Meta5 text document after the Sendmsg Mail Tray. To view the run log just double click it just like any Meta5

icon. There are no special arrows to option. This is necessary because Sendmsg is NOT incorporated into the normal capsule run log.
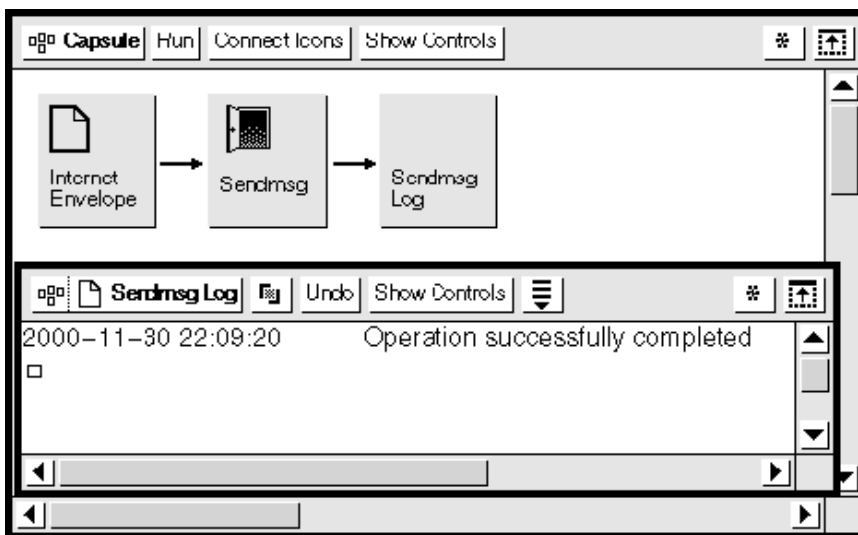
Important Things to Remember

- If you leave Return Receipt blank, Sendmsg will assume that you do not want a return receipt.
- The source path and file names refer to your local Windows95/98/NT/2000 file system.
- Several features are only supported if Meta5 is using the Outlook client. You can specify the client you have in the Meta5 Workstation Configuration Tool. Details about this tool are included in the "Getting Started with the Meta5 Developer's Desktop" manual.

Meta5 Proprietary Mail

To receive mail, you must have a Mail Tray icon directly on your desktop, not in a container. The mail service delivers to just one Mail Tray, so ensure that you have only one mail tray icon on your desktop.

You create mail by opening an Envelope icon, typing the appropriate address information and message, and perhaps enclosing one or more icons. To mail the Envelope, copy or move it to your Mail Tray icon, which automatically sends it to the mail service.

After you address the Envelope icon, create your message, and enclose any icons you want to include, you are ready to mail it.

After you move an Envelope icon to the Mail Tray, you cannot retrieve it. If you want to keep a copy, either include your user ID in the `Copies To` line or, when you are ready to mail the Envelope, copy it to the Mail Tray instead of moving it.

To mail an Envelope icon, copy or move the Envelope icon to your closed Mail Tray icon or into an open Mail Tray window.

As described in "Putting an Icon into an Open Container" on page 50, you must place the icon either above or below the list of contents in the open window.

The following message is displayed in your message bar:

`Envelope has been delivered to Post Office.`

The mail service is now processing your mail.

Receiving Mail

To receive mail, you must have an Mail Tray icon directly on your desktop, not in a container. Your desktop receives mail whether or not you are logged on to Meta5. When mail arrives while you are logged on, the following three things occur:

- The desktop beeps.

- An envelope is displayed in the Mail Tray's icon graphic.

- This message is displayed in your message bar:

    `You have mail. -- Check your Mail Tray.`

If mail arrives when you are not logged on, an envelope is displayed in the Mail Tray icon when you log on to Meta5.

If you leave mail in your Mail Tray, be sure to check your Mail Tray every time you log on because an envelope is displayed in the Mail Tray icon whenever there is mail in your Mail Tray.

Opening and Reading Mail

Like other containers, your Mail Tray shows you a list of its contents when you open it.
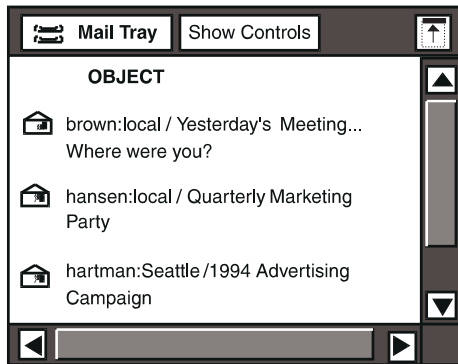
The name of an Envelope in the Mail Tray window is a combination of the sender's user ID and realm name, and as much of the text on the `Subject` line as can fit within the 80-character limitation. (If there is no text in the `Subject` line, the icon's name is the sender's user ID and realm name.)

You can open and read a message while it is in the Mail Tray window or move it to your desktop and then open it.

Do not move or copy an Envelope icon back into the Mail Tray for storage. If you do so, the Envelope is again mailed to all those listed in the address area, but with your name inserted as the sender.

An example of a received message is shown in Figure 26.
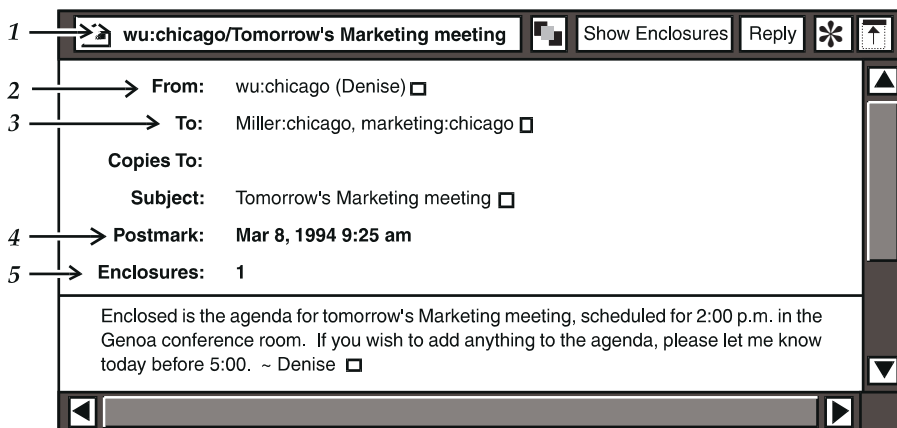
Figure 26. Received message example

Notice the following characteristics of the example message in Figure 26:

1. When the sender mails the Envelope, the mail service changes the icon name to the sender's user ID and realm name, plus the text from the `Subject` line.

2. The `From` line contains the sender's user ID and realm name (inserted by the mail service), followed in parentheses by the text that the sender typed on the line `Denise` in the example message.

3. The `To` line contains the user IDs and realm names of the recipients. (In the example message, `Marketing` is the name of a distribution list.)

4. The `Postmark` line, inserted by the mail service, indicates when the message was received for processing.

5. The `Enclosures` line indicates how many enclosures are contained in the Envelope icon.

To gain access to the enclosures in the Envelope icon, click on `Show Enclosures` in the Envelope's window header. The Enclosures window opens.

You open an icon in an enclosures window the same way you open an icon in any other container window

Enclosures En velope			⬆
Object		**Size**	**Date**
🗋 Marketing Meeting agenda		1024	Mar 8, 1994 09:02:57 am

You open an icon in an enclosures window the same way you open an icon in any other container window.

If you close an Envelope window while its enclosures window is open, the enclosures window also closes, and the next time you open the Envelope, its Enclosures window opens in the same position and has the same dimensions as it had the last time it was open.

Sorting Mail

By default, Envelopes are listed chronologically in your Mail Tray according to when they were delivered. The most recent message is displayed last.

You can, however, sort the mail in your Mail Tray alphabetically or chronologically, in ascending or descending order. You can also show the date and time that the message was delivered. Instructions for setting these controls are provided in "Sorting and Displaying Information in Container Windows" on page 46.

If you try to manually sort your Mail Tray window by moving or copying the icons to a different place in the window, you will resend the Envelopes.

Printing Mail

You can print an Envelope simply by copying it to a Printer icon. Here are a few things to be aware of:

- When you copy an Envelope to a Printer icon, the message and all printable enclosures are printed. If you do not want to print the enclosures, move them out of the Envelope before copying it to the Printer icon.

- If you want to print only the enclosures and not the message, copy them from the enclosures window to the Printer icon (or move them to your desktop and then copy them to the Printer icon).

- If the Envelope or enclosures use a font not available on your printer, the printing service substitutes Courier. This can cause the lines of text to be formatted incorrectly. If this happens, reformat the document with a font that is available on your printer and resubmit the print job.

Note: Ensure that the enclosures in the Envelope are printable icons or you will receive an error message on print out.

Remember that you share printers with other users. Avoid copying your Mail Tray or an Envelope with many enclosures to a Printer icon. This action could unnecessarily delay the printing process.

If you want to change the margins or direction of printing on the page, or if you want to add headers, footers, or page numbers, you can do so by using the settings in the Printing Options window, accessed by selecting `Show Printing Controls` from the Envelope's `Special` menu. For detailed information about preparing and submitting print jobs, see "Chapter 8. Printing".

Creating a Reply

After you read a message, you can mail a response to the sender or forward the message to another user. You can create a Reply envelope to add a message to the top of the received message.

To create a reply:

1. Click on the `Reply` button in the Envelope's window header. A controls window opens.
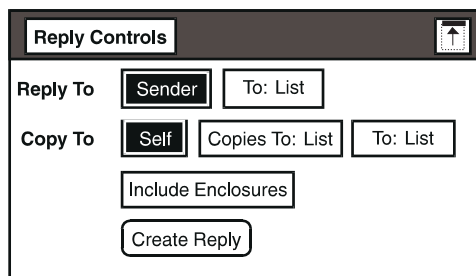
The controls window displays toggle buttons that you can turn on or off. You can select all, some, or none of these buttons. Clicking on a button that is not selected turns it on. Clicking on a selected button turns it off.

2. In the `Reply To` field, specify how you want the `Reply` envelope to be addressed:

   • Leave `Sender` selected if you want the reply to be automatically addressed to the sender. Otherwise, click on this button to turn it off.

   • Select `To List` if you want the reply to be automatically addressed to all user IDs listed in the original Envelope's `To` line. If your user ID is in the message's `To` line, you will receive a copy also.

   • Turn off both buttons if you want to manually address the `Reply` envelope.

3. In the `Copy To` field, specify how you want the Reply envelope's `Copies To` line to be addressed:

   • Leave `Self` selected if you want to receive a copy. Otherwise, click on this button to turn it off.

   • Select `Copies To List` if you want to send copies to all user IDs listed in the original Envelope's `Copies To` line. If your name is in the `Copies To` line of the original Envelope, you will receive a copy, even if you have not selected `Self`.

   • Select `To List` if you want to send copies to all the user IDs listed in the original Envelope's `To` line. If your name is in the `To` line of the original Envelope, you will receive a copy, even if you have not selected `Self`.

   • Turn off all three buttons if you want to leave the `Copies To` line blank (you can manually complete the blank line after the `Reply` envelope is created).

   The mail service will send you one copy of a message, not multiple copies. For example, if your user ID is in the `To` line of the original message and you select `Self` and `To: List`, although you should logically receive two copies, you will only receive one.

4. If you want the `Reply` envelope to include all the enclosures in the original Envelope, click on `Include Enclosures`.

5. To create the `Reply` envelope, click on the `Create Reply` button at the bottom of the controls window.

   If you change your mind and want to close the controls window without creating a Reply envelope, click on the window's title block.

When you click on `Create Reply`, the controls window closes, and a Reply window opens. The lines in the address area are filled out as you specified in the controls window. However, you can change the text in any line.

RE: indicate that this is a reply

| 📨 **Reply** | ⬛ | Add Enclosures | Reply | Find/Replace | Check Spelling | | ✳ | 🔝 |

From: [▯|
To: Marketing ▢
Copies To: ↓ayley ▢
Subject: RE: Tomorrow's Marketing meeting ▢
Enclosures: 1

An insertion point ➝ |

****

From: miller:chicago (Denise) ▢
To: Marketing ▢
Copies To: Dayley ▢
Subject: Tomorrow's Marketing meeting ▢
Enclosures: 1
Postmark: March 14, 2000 09:02:57

Enclosed is the agenda for tomorrow's Marketing 2:00pm meeting in the Genoa conference room. If you wish to add anything to the agenda, please let me know today before 5:00. ~ Denise ▢

6. Type your reply. An insertion point (a blinking vertical bar) in the message window shows where your typing will start.

7. Close the Reply window.

    An Envelope icon named `Reply` is displayed on the lower-right side of your desktop.

8. Copy or move the icon to your Mail Tray to mail it.

Working with Distribution Lists

A distribution list is a Text document that is stored in the Distribution List file drawer and that contains a list of user IDs or the names of other distribution lists. You can use the name of a distribution list in place of individual user IDs to address an Envelope. For example, if your system administrator creates a distribution list called Developers that includes 10 user IDs, you can address an Envelope to all 10 employees by typing `Developers` on the `To` line.

You can also create distribution list for users working outside of Meta5. This is useful when developing capsule applications in which the results are sent to a group of users through an e-mail system.

Finding Distribution Lists

The Distribution Lists file drawer is usually stored in *Public File Drawers (which is in the New Icons file drawer), but your system administrator might have stored it elsewhere. If you cannot find it, consult your system administrator.

Creating and Modifying Distribution Lists

Distribution lists can be created and modified only by the system administrator and those users who have access privileges to change the contents of the Distribution List file drawer. Further, individual distribution lists can be assigned separate access privileges. For example, the administrative assistant in your Marketing department might have access privileges to change the Marketing list, and that list only. (For more information about access privileges, see "Controlling Access to Your Icons" on page 68.)

If you need to create or modify a distribution list and do not have the necessary access privileges, consult your system administrator. Instructions for creating a distribution list are provided in the *System Administration Guide and Reference*.

Sending Mail to Distribution Lists

To send mail to a distribution list, type the name of the list on the `To` or `Copies To` line of the Envelope. You can do this to mail the results of a capsule application to a group of users.

If a user ID is included on two different distribution lists and an Envelope is addressed to both distribution lists, the mail service sends only one message to that user ID, rather than multiple copies.

Distribution lists can include other distribution lists.

Handling Undeliverable Mail

When you mail an Envelope with incorrect or unidentifiable address information, the mail service returns it to you with an explanation of the problem added to the original message. When you receive returned mail, your Mail Tray window displays an `Unable to Deliver` message.
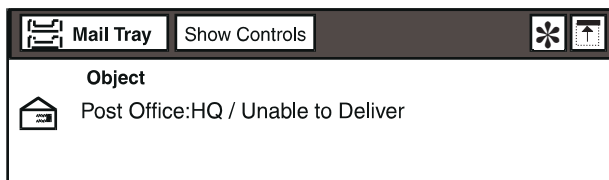
A message added by the mail service identifies the problem that prevented delivery. For example, the next illustration shows an `Unable to Deliver`

message that resulted when the sender (Schultz) misspelled the recipient's name (Cohn should be Cohen).

```
┌──────────────────────────────────────────────────────────────────────┐
│ [📬] Post Of ce:HQ / Unab le to Deliver │ Add Enclosures │ Reply  ▤  ✳ ⬆ │
├──────────────────────────────────────────────────────────────────────┤
│       From:  Post Office:HQ ☐                                      ▲   │
│         To:  Schultz:HQ ☐                                          ▓   │
│   Copies To:  ☐                                                    ▓   │
│     Subject:  Unable to Deliver ☐                                  ▓   │
│    Postmark:  Feb 22, 1994 2:50:09 pm                              ▓   │
│                                                                    ▓   │
├────────────────────────────────────────────────────────────────── ▓ ─┤
│ *******************Problems********************                    ▓   │
│                                                                    ▓   │
│  Desktop Cohn does not exist                                       ▓   │
│                                                                    ▓   │
│ *******************Original Addressing Form*******************     ▓   │
│                                                                    ▓   │
│                                                                    ▓   │
│       From:  Schultz:HQ ☐                                          ▓   │
│         To:  Cohn:HQ, McClendon:HQ ☐                               ▓   │
│   Copies To:                                                       ▓   │
│     Subject:  3rd Quarter Financial ☐                              ▓   │
│    Postmark:  Feb 22,2000 2:49:37 pm                               ▼   │
│                                                                        │
├────────────────────────────────────────────────────────────────────┤ │
│ ◀ │███████████████████████████████████████████████████████ │      ▶   │
└──────────────────────────────────────────────────────────────────────┘
```
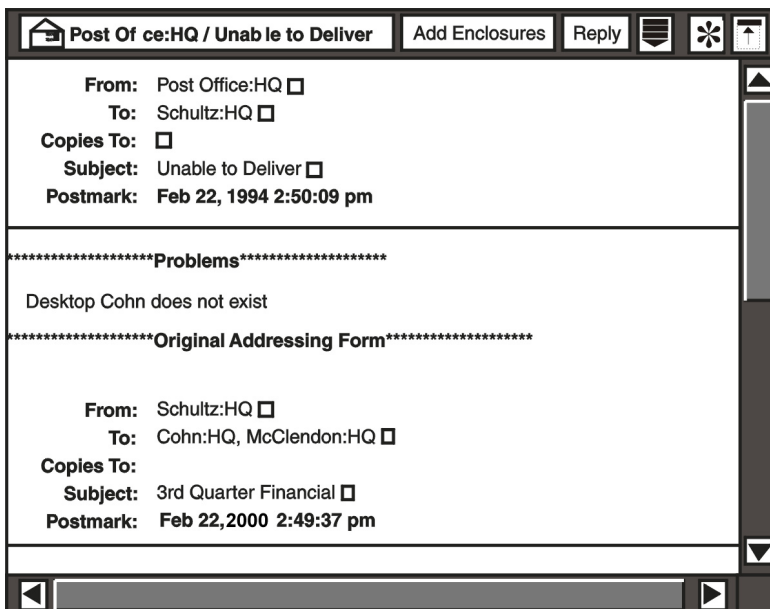
The mail service delivers messages to all recipients it can find and returns only undeliverable messages. In the previous example, the message that should have gone to Cohen was returned, but the other recipient (McClendon) received the original message.

If a temporary problem prevents delivery (for example, a remote realm is temporarily inaccessible), the mail service continues to try delivering your message for three days (or however long your system administrator has specified) before returning the message to you.

You can resend an undelivered message one of the following ways:

- Enclose the returned Envelope in a new Envelope that you have correctly addressed, and write an explanation in the message area of the new Envelope.

- Delete the information in the `From` line of the returned Envelope, change the information in the `To` line from your name to the recipient's corrected address, and enter the text from the original `Subject` line in the `Subject` line, followed by a brief explanation (such as `Corrected Delivery`).

- Address a new Envelope to the correct user ID, and copy the `Subject` line and message from the returned Envelope to the new Envelope.

Chapter 8.   Printing

Your system administrator assigns a Printer icon to each printer available for your use with Meta5. You can use the icon to print objects and to view and manage your print jobs. To print an object, you copy the object's icon to a Printer icon. `Your system administrator can provide printer icons for network printers on a LAN and for local printers connected to your workstation.`

Tools that generate printable output include the Envelope, Layout, Plot, Reporter, Screen Capture, Spreadsheet, and Text tools. You can copy a container icon (such as a folder or your Mail Tray) to a Printer icon if you want to print everything in it.

This chapter explains how to do the following tasks:

- Prepare a print job
- Submit a print job
- Check the status of the printer and of a print job in the print queue
- Cancel a print job that you have submitted
- Specify the number of copies and pages to print, and whether to include a banner page with the print job

To use the printing service, you need to have a Printer icon on your Meta5 desktop. Your system administrator names and configures Printer icons and stores them in the *Printer Icons file drawer, within the New Icons file drawer. If you do not have a Printer icon on your desktop or you want to use a different one, you can copy one out of this file drawer. If you cannot find the Printer icon you need, ask your system administrator for assistance.

You can change the name of a Printer icon that you have copied to your desktop. (For instructions, see "Changing an Icon Name" on page 34.) When you do so, the original name (assigned by the system administrator) is retained in the Icon Options window.

Avoiding Font Problems

Some fonts provided in Meta5 (for example, Helvetica Light, Korinna, and Garamond) might not be available on your printer. When you submit a print job that includes a font your printer does not have, the printing service substitutes Courier font. This can cause the lines of text to be formatted incorrectly. If this happens, reformat the document with a font that is available on your printer and resubmit the print job.

Preparing Your Print Job

When you copy an icon to a Printer icon, the Meta5 printing service uses the default settings for printing and layout unless you have specified different settings for the icon. For example, you can:

- Specify the page size
- Change the print orientation—that is, the direction (horizontal or vertical) in which printed information is placed on the page
- Change the margin width
- Add headers and footers
- Add page numbers

The location of print settings varies depending on the icon type:

- For Envelope and Layout icons, the settings are in the Printing Controls window, accessible from the tool window's `Special` menu.
- For Text icons, the settings are in the Text window header.
- For all other icons that generate printable output, the settings are in the Icon Options window.

Specifying Settings for Icons Other than Envelope, Layout, and Text

The print settings for most tools are in the Icon Options window.

To specify print settings for any icon that generates printable output except Envelope, Layout, and Text icons:

1. Select the closed icon you want to print and open its options window by pressing the Options function key or activating the options function on the pop-up function pad.

2. In the Icon Options window, select `Printing` as the display choice. The window displays the printing options.
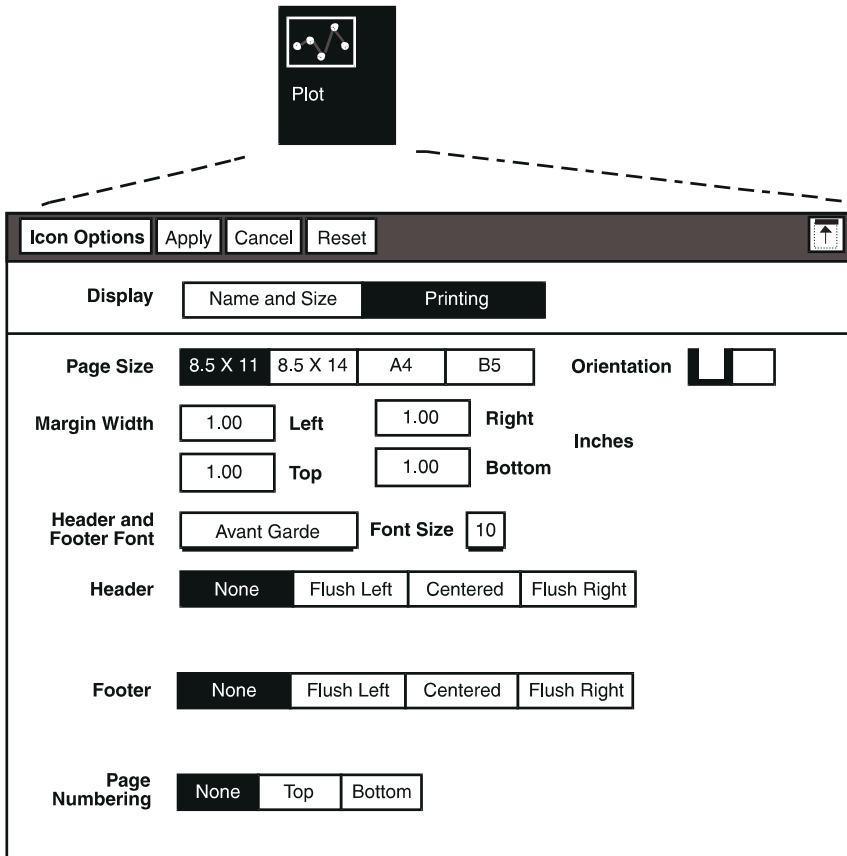
Plot

| Icon Options | Apply | Cancel | Reset |

Display	Name and Size	Printing

Page Size	8.5 X 11	8.5 X 14	A4	B5	**Orientation**

Margin Width	1.00	**Left**	1.00 **Right**
	1.00	**Top**	1.00 **Bottom**

Inches

Header and Footer Font	Avant Garde	**Font Size**	10

Header	None	Flush Left	Centered	Flush Right

Footer	None	Flush Left	Centered	Flush Right

Page Numbering	None	Top	Bottom

3. Specify the appropriate settings for page size, orientation, margin width, headers, footers, and page numbering. Each option is discussed later in this chapter.

Spreadsheets have other options that you set in the Spreadsheet Options window. These include the option to print only a selected portion of the spreadsheet, print the grid, and specify rows and columns as titles on every page. For instructions, see the *Spreadsheet User's Guide*.

Specifying Settings for Envelope Icons

To specify print settings for an Envelope icon:

1. Open the Envelope icon.

2. From the Envelope window's `Special` menu, select `Show Printing Controls`. The Printing Controls window open.

3. Specify the appropriate settings for page size, orientation, margin width, headers, footers, and page numbering. Each option is discussed later in this chapter.

The Envelope's Printing Controls window looks the same as the Icon Options window except that it has an additional field for specifying measurement units to use for margin width.

Printing Controls	Apply	Cancel	Reset		↑

Page Size	8.5 X 11	8.5 X 14	A4	B5	**Page Orientation**	
Measurement Units	Inches	Centimeters	Picas	Half Picas		
Margin Width	1.00 **Left**		1.00 **Right**			
	1.00 **Top**		1.00 **Bottom**			
Header and Footer Font	Avant Garde	**Font Size** 10				
Header	None	Flush Left	Centered	Flush Right		
Footer	None	Flush Left	Centered	Flush Right		
Page Numbering	None	Top	Bottom			

Specifying Settings for Layout Icons

To specify print settings for a Layout icon:

1. Open the Layout icon.

2. From the Layout window's `Special` menu, select `Printing Controls.` The Printing Controls window opens.

3. Specify the appropriate settings for page size, orientation, and margin width. Each option is discussed later in this chapter.

To add headers and footers to a Layout report, see the *Layout User's Guide*.

Specifying Settings for Text Icons

To specify print settings for a Text icon:

1. Open the Text icon.

2. In the Text window header, click on the `Show Document Controls` button. The Document Controls window opens.

3. Specify the appropriate settings for page size, orientation, margin width, headers, footers, and page numbering. Each option is discussed later in this chapter.

Document Controls	Apply	Cancel	Reset					⬆

Page Size	8.5 x 11	8.5 x 14	A4	B5	Page Orientation	☐☐

Measurement Units	Inches	Centimeters	Picas	Half Picas

Margin Width | 1.00 | Left | 1.00 | Right

 | 1.00 | Top | 1.00 | Bottom

Header | Hide | Show

Footer | Hide | Show

Page Numbering | None | Top | Bottom

Specifying Page Size

Use the `Page Size` field to specify the paper size used by the printer to which you plan to submit the print job.

The `Page Size` setting controls only how a document is formatted for printing, not the paper that is actually loaded in the printer.

If your printer uses more than one paper bin, your system administrator can configure an appropriately named Printer icon for each bin (for example, `Printer Legal` and `Printer Letter`).

Changing the Orientation

You can print information on the page by selecting the appropriate symbol in the `Orientation` field:

*   Vertically ▯
*   Horizontally ▭

Vertical orientation (sometimes referred to as *portrait orientation*) is usually used for letters, and horizontal (or *landscape*) orientation is appropriate for wide spreadsheets and reports.

Changing Margin Width

Use the text boxes in the `Margin Width` field to specify how much you want the printer to indent each edge of your printed document. The default width is one inch (2.54 centimeters) on each side of the printed page.

- For most tools, the measurement units are inches or centimeters, depending on what settings are selected in the desktop Set Preferences window. (See "Changing Country Settings" on page 54.)

- For Envelope and Layout icons, you specify the measurement units in the Printing Controls window, and for Text icons, in the Document Controls window.

In deciding what margin width to use, be aware that headers, footers and page numbers are centered vertically in the margins, so you must allow enough room for them. See "Adding Headers and Footers" for more information.

To change the width of a margin, in the `Margin Width` field, replace the values in the text boxes as appropriate.

For Layout icons, when you change the margins of your report, the values in the `Required Display Width` and `Available Display Width` fields automatically change to reflect the new margin settings. If the value in the `Required Display Width` field is larger than the value in the `Available Display Width` field, some of the information in the report might not be printed. For more information, see the *Layout User's Guide*.

Adding Headers and Footers

You can include headers and footers on each page of your printed document. A header is text that is printed at the top of every page, and a footer is text that is printed at the bottom.

Headers, footers, and page numbers are centered vertically in the margin (that is, they are placed halfway between the edge of the page and the body of the text). Therefore, if you plan to use these elements in your document, make sure to specify a font size that can be accommodated by the margin widths you plan to use. Specifying a large font size and narrow margins could result in headers, footers, and page numbers in which the characters are cut off and unreadable.

To add headers and footers to a Layout report, see the *Layout User's Guide*.

To add headers and footers to a Text document, see the *Text User's Guide*.

To add a headers or footers to the output from icons other than Text and Layout:

1. In the `Header` or `Footer` field, select the horizontal alignment you want to use.

    - `Flush Left` aligns the text with the left margin.
    - `Flush Right` aligns it with the right margin.
    - `Centered` places it halfway between the left and right margin.

2. In the `Header` or `Footer Text` field that is displayed, type or copy in the text you want to use.

3. From the choice menus in the `Header and Footer Font` field and the `Font Size` field, select the font style and size you want to use.

Be sure the font you select is available on your printer. For more information, see "Avoiding Font Problems" on page 93.

If you use the icon in a capsule application, you can use @-keywords, such as @Date, @Time, or @User, in the `Header` or `Footer Text` field if you want the value of the @-keyword to be displayed on each page. For example, typing `@date` in the Footer Text field creates a footer similar to this on the printed page:

```
September 19, 2001
```

The @-keywords are not case sensitive. For example, you can type `@date`, `@Date`, or `@DATE`. Do not include a space after the @ symbol.

Adding Page Numbering

To add page numbering to a Layout report, see the *Layout User's Guide*.

To add page numbering to a Text document, see the *Text User's Guide*.

To add page numbers to your output from other icons:

1. In the `Page Numbering` field, select the location for the number: `Top` or `Bottom`. After you select the location, three alignment choices and the `Starting Page` field are displayed.

2. Select an alignment position: `Flush Left`, `Centered`, or `Flush Right`.

3. If you want the numbering to begin with a number other than 1, enter the appropriate number in the `Starting Page` field.

If you specify the same location for a page number and a header or footer, both will be printed in the same place on the page. For example, if you select `Bottom` and `Flush Left` for the page number's position, and select `Flush Left` for the footer's position, the footer will be printed over the page number. Overlapping can also occur even when you specify different locations if your header or footer text is lengthy.

Setting Up Your Printer Icon

Unless you set up the Printer icon to prompt you for options, the printing service uses the settings specified in the Printer's Icon Options window to determine how many pages and which pages to print.

Depending on how your system administrator configured the Printer icon, you might be able to specify whether you want your print job to include a banner page, as shown in Figure 27 on page 100, which records the name of the icon, the time it was submitted to the printer, the time it was printed, and your user ID.

Icon Name: Marketing Meeting Agenda
Queued: Thu Oct 13 14:35:09 **2000**
Printed: Thu Oct 13 14:35:19 **2000**
Printed By: heintz
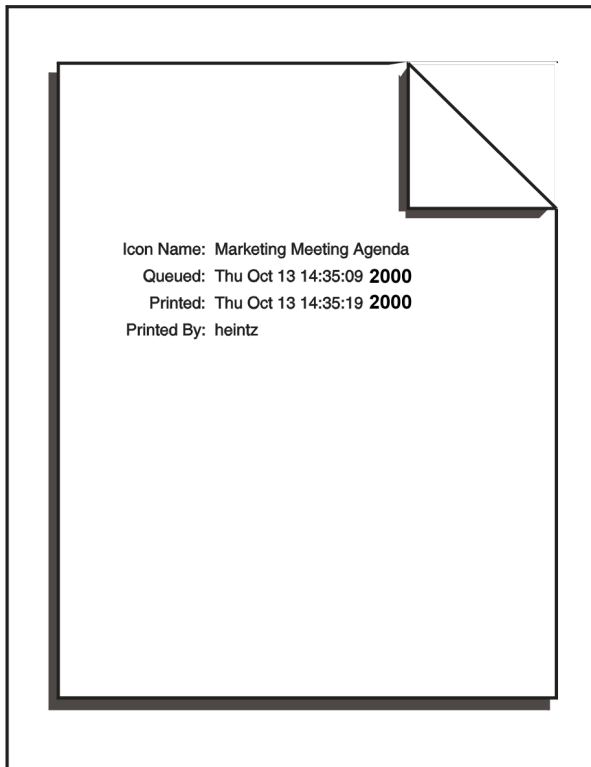
Figure 27. Banner page

To set printer options:

1. Select the Printer icon and open its options window.
2. Select `Other Data` as the `Display` choice.
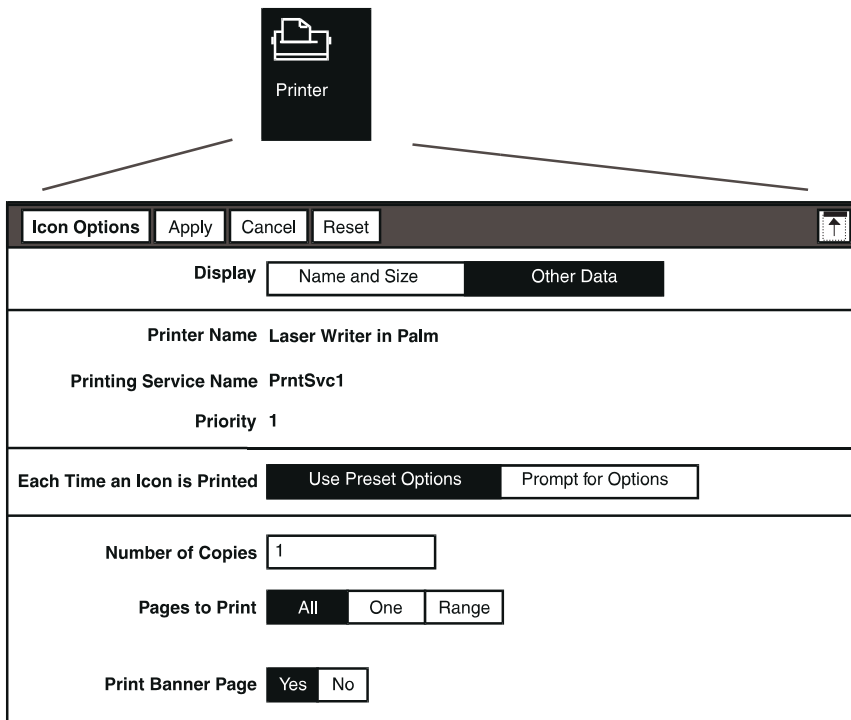
Figure 28. Other Data page

In addition to providing changeable settings, the `Other Data` page displays the following status information:

- The printer name assigned by the system administrator (which will be different from the icon name if you changed the icon's name)

- The printing service name provided by the system administrator

- The print-queue priority established by the system administrator

3. Modify the default settings as appropriate.

- If you want to be able to specify the number of copies and pages to print each time you submit a print job, select `Prompt for Options`.

- If you prefer to use preset options, be sure `Use Preset Options` is selected and specify the options you want to use in the appropriate fields.

You might not be able to specify whether or not you want a banner page, depending on how your system administrator configured the Printer icon.

Submitting a Print Job

You can submit a print job by copying the appropriate icon to a closed Printer icon or to an open Printer window. If you submit a container icon or an Envelope icon

that includes enclosures, all of the objects in the Envelope or container are printed. A print job can take a long time if it is a screen capture or a container icon. Consider submitting such jobs when the printer is not being used by others.

To submit a print job:

1. Copy the appropriate icons to a Printer icon or into an open Printer window.

   When you copy two or more icons to the printer simultaneously, they are treated as one job and identified on the banner page and in the print queue as `Multiple icons`, followed by the names of the icons you copied to the Printer icon.

   Because of the way in which multiple icons are processed, including the icons within a container that you submit, it is possible that other people's print jobs might be printed in between some of yours. Each of the icons in a multiple job, however, is printed with its own copy of the job banner page, allowing you to identify your printout easily.

2. If your Printer icon is set up to use preset options, the printer uses the options specified in the Printer's Icon Options window and your job is submitted to the print queue. You can skip the rest of the steps in this procedure.

   If your Printer icon is set up to prompt you for options, the Printing Options window opens.

3. If you want, replace the number of copies to print with a different number.

4. Specify which pages you want to print:

   - Select `All` to print every page of the document

   - Select `One` to print a single page. Selecting `One` opens a field where you can specify which page you want to print.

   - Select `Range` to print two or more consecutive pages. Selecting `Range` opens fields where you can specify the beginning and ending page.

     The printing service counts the first page of the document as page 1, regardless of how the pages are numbered. For example, if you want to print page 23 of a document and the page number of the first page is 21, type `3` in the `Page` field.

5. Specify whether you want a banner page (if your system administrator has made this an optional choice for you).

6. Close the Icon Options window to send the icon to the print queue.

To cancel the print job and close the window, click on `Cancel` in the window header.

To leave the window open and restore the settings that were in effect when you opened the window, select `Reset` in the window header.

Checking the Status of Print Jobs

You can check the status of print jobs in the printer window. Be aware, however, that when your print job leaves Meta5, it is no longer displayed in the Printer window. This might mean either that your output has already been printed or that it is in your operating system's print queue waiting to be printed.

To open the Printer window, double-click on the Printer icon.

The Printer window opens, displaying the printer status and the print queue, which lists the jobs that have been sent to the printer.
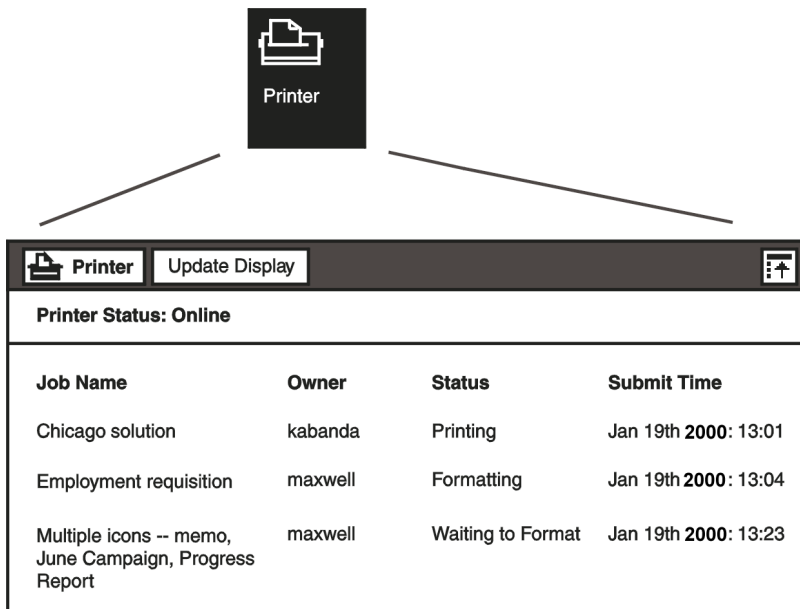
The Printer Status line at the top of the Printer window tells you the status of the printer. There are four possible Printer Status messages:

- `Online` means the printer is ready to print.

- `Offline` means the Printer tool cannot open a connection with the Printer Host to query the state of the printer. This could mean that the printer is not ready to print because of an error condition; for example, the power might have been switched off or a cable might have been disconnected.

- Paused means someone has paused the printer at the print interface.
- No Paper means the printer is out of paper.

The print queue displays the following information:

- Job Name: the name of the icon that was copied to the printer (if two or more icons are copied simultaneously to the printer, the job name is Multiple icons)
- Owner: the user ID of the desktop that submitted the job
- Status: where each print job is in the printing process (such as Formatting, Printing, or Waiting to Print)
- Submit Time: the time and date that the job was sent to the printer

The queue does not show those jobs that have left the Meta5 environment but are still waiting in your operating system's print queue. Similarly, the queue does not show jobs that were submitted by applications other than Meta5.

You can track the progress of the print jobs by periodically clicking on the Update Display button in the Printer window header.

The Printer window is also updated whenever you copy an icon into it.

Canceling a Print Job

You must be the owner of the icon or the system administrator to cancel a print job. Here are some things to keep in mind when you cancel a print job:

- Because icons copied to a printer are usually processed very quickly, you have a limited amount of time to cancel a print job.
- Print jobs deleted from the print queue are not placed in the Discard folder.
- If the printing service cannot delete a job, this information is communicated to you in the Important Message window.

To cancel a print job:

1. Open the Printer icon.
2. Select one or more print jobs that you want to cancel and delete them by pressing the Delete function key or by activating the delete function on the pop-up function pad.

Printing a Wide Spreadsheet or Report

When the output from a Spreadsheet or Reporter tool has more columns or data items than can fit on the width of the paper in your printer, the information that flows over the right edge of the paper is continued on a new page. When this happens, the output is said to be printed in panel form.

To aid in assembling the printed output, a panel page is printed with the spreadsheet or report. The panel page shows how the individual pages fit together to make a complete document, as shown in Figure 29 on page 105.

page 1	page 2
page 3	page 4

Figure 29. A panel page

When you print individual pages of a Spreadsheet or a Reporter document, be sure to specify an extra page to allow for the panel page.

If you specify only page 1, only the panel page will be printed.

Panel pages do not cause your page numbering to be incorrect.

Chapter 9.   Using the Format Tool

The Format tool is provided in the *Blank Icons file drawer as a convenience when developing applications and administering the Meta5 environment.

The Format tool enables you to make spreadsheet-to-text and text-to-spreadsheet conversions between Meta5 Text and Spreadsheet icons, and to transpose rows and columns in a spreadsheet.

Using the Format Tool

These restrictions apply to using the Format tool:

- You cannot open the Format tool until you copy data to it.
- You cannot use the Format tool in a capsule application.
- You cannot use the Format tool to convert desktop icons.
- You cannot use the Format tool with graphics.
- You cannot use the Format tool with log icons, such as the Capsule Run Log.

To use the Format tool:

1. If you do not already have a Format icon on your developer's desktop, copy one from the *Blank Icons file drawer in the New Icons file drawer.

2. Open the source Text or Spreadsheet icon and click on the `Select All` button or select the information in the window that you want to reformat.

3. Copy the selected information to the closed Format icon. The Format window opens. Different options are displayed in the window depending on whether the source information is from a text document or a spreadsheet.
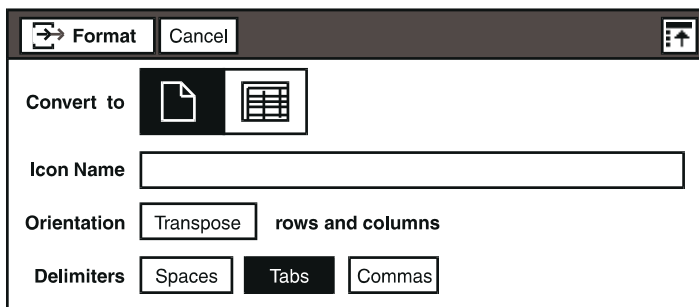
4. In the `Convert to` field, click on the icon type that you want to create.

5. In the `Icon Name` field, enter a name for the new, reformatted icon.

6. If you want to convert rows to columns and columns to rows, click on the `Transpose` button in the `Orientation` field.

7. For spreadsheet-to-text or text-to-spreadsheet conversions, select the appropriate delimiters. You can select one, two, or all three of the choices: `Spaces`, `Tabs`, and `Commas`.

    •   For spreadsheet-to-text conversions, select the character or characters you want to use to separate the columns. For example, if you select `Spaces`, two spaces are used to separate columns.

    •   For text-to-spreadsheet conversions, select the character or characters that you want the Format tool to interpret as separators between columns. At least two spaces are required between columns in the source text to create columns in the destination spreadsheet. One space or more than two consecutive spaces have no effect.

8. Click on the title block in the Format window header. This starts the conversion process. When the process is finished, the Format window closes, and the pointer takes the shape of the new icon.

9. Click on an empty spot on your desktop to place the new icon.

    If you decide not to create the new icon, click on `Cancel` in the window header.

Chapter 10. Using PC Interaction Tools

Meta5 provides three tools for interacting with workstation files and applications from your developer's desktop:

- Clipboard

  Use the Clipboard tool to copy or cut data from a workstation application and paste it into an Meta5 tool or to copy data from an Meta5 tool and paste it into a workstation application.

- PC Directory

  Use the PC Directory tool to view the contents of a directory on your workstation file system and to copy files between your workstation file system and your developer's desktop. You can also use the PC Directory tool to change the format of your data. For example, you can use the PC Directory tool to import data as a DIF file and export the data as a WK1 file.

- PC Application

  Use the PC Application tool to automatically start an application on your workstation from within Meta5 and to use data from Meta5 in that application. This tool can be especially useful in capsule applications.

The information presented in this guide assumes that you have a basic understanding of your workstation applications and of the directories and files associated with those applications.

Using the Clipboard Tool

The Clipboard tool gives you access to the data on the clipboard used by your workstation applications, providing you with an easy way to exchange data between your developer's desktop and your workstation applications (Windows 95, 98, NT or Windows 2000).

The clipboard is a temporary storage location used by your workstation applications to share information. When you use the cut or copy functions in your workstation application, the data is placed on the clipboard, replacing whatever data was previously stored there. When you use the paste function, the contents of the clipboard are copied to the location you select.

Data that you cut or copy to the clipboard stays there until you cut or copy different data, or until you shut down your operating system. Because the clipboard retains its contents until you change them, you can paste the same data over and over again.

On your developer's desktop, you can use the Clipboard tool to exchange data with your operating system clipboard. The Meta5 Clipboard tool supports the following data formats: TXT, DIF, RTF, BMP, and WK1.

In many ways, the Clipboard icon is like any other icon on your developer's desktop. For example:

- You can move it around on your developer's desktop, into a folder, or into a capsule window.
- You can delete it. Deleting the icon does not affect the contents of the clipboard.

In other ways, the Meta5 Clipboard tool is not typical. For example:

- The Clipboard tool occupies no storage space on your developer's desktop. It points to a storage location used by your workstation applications. Therefore, deleting a Clipboard icon does not give you more space on your developer's desktop.
- You can copy a Clipboard tool, but having more than one Clipboard icon on your developer's desktop is not useful. The Clipboard tool references only one storage location, so multiple copies all refer to the same storage location.
- The Clipboard icon always remains closed. If you attempt to open it, you will receive error messages.

Copying Data from the Clipboard

Table 10 shows the different data formats that can be transferred from the clipboard to various Meta5 tools.

Table 10. Data transfer formats from the clipboard

You can copy this type of clipboard data	To this Meta5 tool
TXT	Envelope, Spreadsheet, Text, PC.TXT
	In capsule applications, the Spreadsheet tool cannot receive TXT data.
WK1	Spreadsheet, PC.WK1
RTF	Layout, Plot, Query, Spreadsheet, PC.DIF, Envelope, Text, PC.RTF
BMP	Text (if destination is a graphic region)

In capsule applications, data transferred to an Envelope become enclosures. Clipboard transfers to Envelopes are not supported within capsule applications.

To copy data from the clipboard to a Meta5 tool:

1. If you do not already have a Clipboard icon on your developer's desktop, copy one from the *Blank Icons file drawer in the New Icons file drawer.

2. Switch to your workstation application and cut or copy the desired data to place the data on the clipboard.

3. Switch back to your developer's desktop and open the icon into which you want to copy the data.

4. Copy the closed Clipboard icon to the location in the open tool window where you want to place the data.

   The data is copied to the location you selected.

Copying and Moving Data to the Clipboard

Copying or moving data from a Meta5 tool to the clipboard replaces the clipboard contents with new data in one of the supported data formats. In capsule applications, the Envelope tool cannot supply data to the clipboard.

Table 11 shows the Meta5 tools that can supply data to the clipboard.

Table 11. Data transfer formats to the clipboard

Data copied or moved from this tool	Is converted to this data format
Envelope	TXT
Layout	RTF
Plot	BMP
Query	RTF
Reporter	RTF
Screen Capture	BMP
Spreadsheet (all data)	WK1
Spreadsheet (selected data)	RTF
Text (graphic region)	BMP
Text	TXT

If you want your clipboard to contain RTF data, transfer data from an Envelope or Text tool to a PC.RTF icon and from there to the clipboard.

To copy or move data from an Meta5 tool to the clipboard:

1. Open the appropriate tool window and select the data you want to copy or move.

2. Copy or move the data, selecting the closed Clipboard icon as the destination. The data is placed on the clipboard, replacing the data previously stored there.

3. Switch to your workstation application and paste the desired data into your application.

Using PC Directory Tool

The PC Directory tool enables you to open a window on Meta5 that displays information about the contents of directories on your workstation operating system. You can view the information in the PC Directory window from different perspectives by changing the sort order. For example, you might want to sort the contents of a directory by date to quickly find your most recent changes or by file-name extension to group together all files stored in a particular file format.

You can also use the PC Directory tool to:

- Rename a file or directory
- Delete one or more files with a few quick point-and-click operations
- Transfer files between your workstation file system and the Meta5 environment. This capability that is especially useful if you want to transfer data from or to your favorite workstation applications during a capsule processing sequence.

Specifying a Directory

After copying a PC Directory icon to your developer's desktop, you can set it to access a particular directory on your workstation file system. If you frequently exchange data between your workstation file system and Meta5, you can copy multiple PC Directory icons to your developer's desktop and configure each to access a different directory.

The PC Directory tool allows you to access directories that are not physically on your workstation, but are mounted over the network. File systems that are accessible through your operating system are supported, such as LAN Manager and NetWare.

For network-mounted drives, the PC Directory tool:

- Supports Novell** and NFS drives using IBM TCP/IP Version 2.0 or later
- Shows in its window only what you could see under your operating system using the DIR command

To specify a directory for a PC Directory icon to access:

1. Open the Icon Options window of a PC Directory icon and select `Other Data` as the `Display` choice.
2. In the `Directory Name` field, enter the path name to the directory you want to work with. If you prefer, you can specify a root directory (for example, C:\). Then, when you open the icon, you can double-click on any subdirectory listed in the PC Directory window to display the contents of that subdirectory.

Viewing Directories

When you open a PC Directory icon, you see a list of the files and subdirectories that are contained in the workstation directory specified in the Icon Options window.
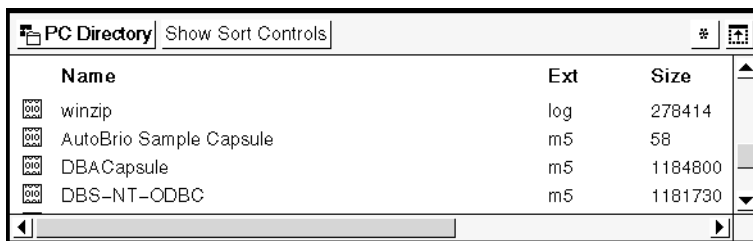
To view the contents of a subdirectory, double-click on a subdirectory listed in the PC Directory window.

Another PC Directory window opens, showing the contents of the subdirectory.

From the second PC Directory window, you can open subsequent subdirectories. Opening subdirectories this way is convenient when you want to locate a file and do not remember its path name, but you could end up with multiple open PC Directory windows. For this reason, it is more practical to set the PC Directory icon to take you directly to the desired subdirectory (as described in "Specifying a Directory" on page 112).

Scrolling a File to the Top of the Window

To quickly scroll the window so a selected file is displayed at the top of the window, from the `Special` menu, select `Focus on Selection`.

Sorting the Contents of a PC Directory Window

By default, the contents of your disk are listed in the PC Directory window in ascending order (that is, from A–Z, then 0–9), sorted first by extension, and then within each extension grouping, by file name. As a result, subdirectories (which normally have no extension) and files without extensions are listed first.

To change the sort order:

1. In the PC Directory window header, click on the `Show Sort Controls` button. The Sort Controls window opens.

2. Set the primary sorting instructions using the `Sort Level 1` field.

   • `Unsorted` sorts the entries in the order in which they are read from the workstation file system. If you select `Unsorted`, you cannot set any other sorting options.

   • `Ascending` sorts the entries in alphabetic order (A–Z), and then in ascending numeric order (0–9), based on the name, extension, file size, or date, as set in the `Sort Order` field.

- Descending sorts the entries in descending numeric order (9–0), and then in reverse alphabetic order (Z–A), based on the name, extension, file size, or date, as set in the Sort Order field.

3. Set secondary sorting instructions using the Sort Level 2 field.

   The secondary sorting instructions affect the order of items that have been grouped based on the primary sorting instructions. For example, if the primary sort order is alphabetic by extension and there are five files with the TXT extension, the secondary sorting instructions tell the PC Directory tool whether these five files should be sorted alphanumerically by name, numerically by size, or chronologically by the date each file or directory was last changed.

4. Click on the Apply button or close the window to put your change into effect.

The sort controls you set in the original PC Directory window affect any subdirectories you open from that window. These controls are saved when you close the icon. If you set different sort controls in a subdirectory window, however, those sort controls affect the current display but are not saved when that subdirectory window is closed.

Renaming a File or Subdirectory

To change the name of a file or subdirectory on your workstation file system:

1. In the PC Directory window, select the relevant file or subdirectory and open the File Name options window.

2. Enter a new name and extension for your file. The name can be up to eight characters, and the extension can be up to three characters.

3. Close the window to put your changes into effect.

Deleting Files from Your Workstation File System

Before you can delete files, you must change the deletion setting in the File Controls window.

To change the deletion setting:

1. In the PC Directory window header, click on the Show File Controls button. The File Controls window opens.

2. Select a choice in the On Delete, Files Are field.

- Protected is the default setting. When this choice is selected, you cannot delete files from the PC Directory window.

- When Discarded is selected, files that you delete are imported to Meta5 and transferred to the Discard folder on your developer's desktop. This means that you can get a file back if you accidentally delete it. However, the Discard folder normally holds only four files, so be sure to retrieve your file immediately if you change your mind.

- Deleted causes files you delete to be permanently removed from the system. If you select this choice, you cannot retrieve deleted files.

3. Click on the Apply button or close the window to put your change into effect.

To delete a file from your workstation file system using the PC Directory tool:

1. In the PC Directory window, select the file or files that you want to delete.

2. Press the Delete function key or activate the delete function on the pop-up function pad.

To delete files from a diskette, make sure the diskette is not write-protected.

Transferring Data from Your Workstation File System to Meta5

From a PC Directory window, you can copy files stored in a variety of formats to your developer's desktop. By default, the PC Directory tool instructs Meta5 to convert your workstation files into icons that you can use directly on your developer's desktop. If you are not going to work with the incoming data in the Meta5 environment, you can set conversion options to instruct Meta5 to store this incoming data in a different format.

If the incoming workstation file has a file-name extension that the PC Directory tool does not recognize, you must add to or modify the list of extension mappings. For instructions, see "Assigning File-Name Extensions to File Formats" on page 118.

To set the conversion options for importing files:

1. Open the PC Directory icon.

2. From the PC Directory window's `Special` menu, select `Show Conversion Controls`. The Conversion Controls window opens, displaying the file import options.

Conversion Controls	Apply	Cancel	Reset	⬆

Display	File Import File Export
From TXT to	Text Icon TXT
From RTF to	Text Icon RTF
From RFT-DCA to	Text Icon RFT
From WK1 to	Spreadsheet WK1
From DIF to	Spreadsheet DIF
From PCX to	Text Icon PC Graphics
From TIF to	Text Icon PC Graphics
From WIN-BMP to	Text Icon PC Graphics
From OS2-BMP to	Text Icon PC Graphics
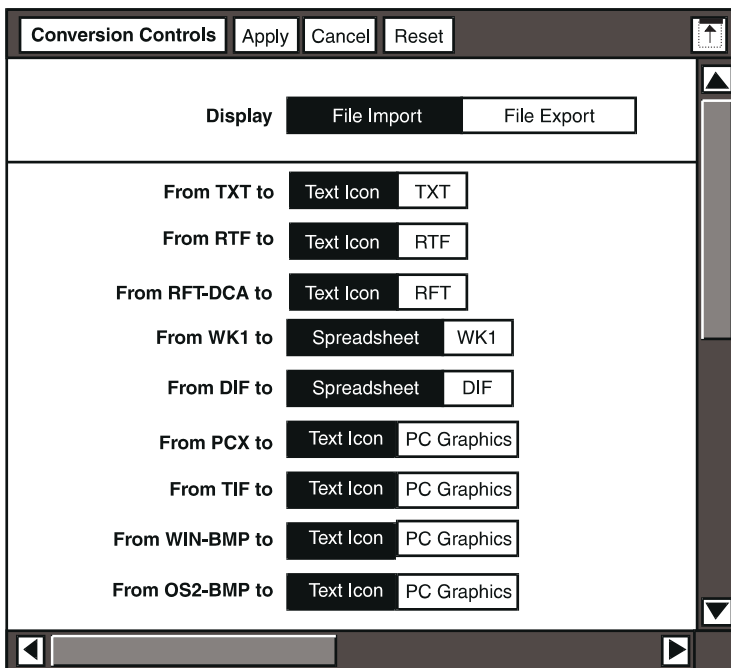
3. Select formats you want to use for various types of incoming data files. By default, the conversion options are set so that you can use incoming data with Meta5 tools.

4. Close the Conversion Controls window.

When you transfer a spreadsheet from Meta5 to a WK1 file on a workstation and back to Meta5, the alignment of text in cells is not preserved. For example, suppose you transfer a spreadsheet from Meta5 to a workstation and the text is set to general alignment. When you transfer the spreadsheet back to Meta5, the text alignment changes to centered.

After setting the appropriate conversion options, copy or move the file you want out of the PC Directory window to convert it to the appropriate Meta5 icon.

Transferring Data from Meta5 to Your Workstation File System

You can use a PC Directory window to transfer Text, Spreadsheet, Screen Capture, Plot, and PC Data icons from Meta5 to your workstation file system. The transferred icon is converted into a workstation file in an appropriate format.

Before you transfer an icon, you can change the extension mappings or the conversion settings for file export, although the defaults are set to the most common workstation formats. Changing the extension mappings is explained in

"Assigning File-Name Extensions to File Formats" on page 118. Changing the export conversion controls is explained in "Setting Conversion Controls for Exporting Files" on page 117.

Before moving or copying files, you can also change the protection options for your files. For instructions, see "Changing the Protection Options" on page 117.

Setting Conversion Controls for Exporting Files

To set the conversion controls for exporting files from Meta5:

1. Open the relevant PC Directory icon.

2. From the PC Directory window header, select `Show Conversion Controls`.

3. In the Conversion Controls window, click on `File Export`.

```
┌──────────────────────────────────────────────────────────────┐
│ Conversion Controls  Apply  Cancel  Reset              ↑      │
│                                                        ▲      │
│              Display   │ File Import │  File Export │          │
│                                                               │
│  From Text Icon to    │ TXT │  RTF  │ RFT-DCA │                │
│                                                               │
│  From Spreadsheet to  │ WK1 │ DIF │ TXT │                     │
│                                                               │
│  From Graphics to     │ PCX │  TIF  │ WIN-BMP │ OS2-BMP │   ▼ │
│  ◄ │                                             │ ► │         │
└──────────────────────────────────────────────────────────────┘
```
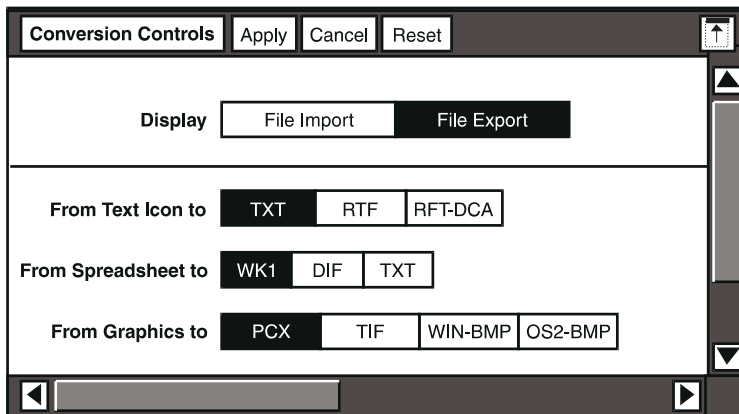
4. Select the formats you want to use for various types of outgoing Meta5 files.

   For example, you can choose to have the contents of your Spreadsheet icon exported in WK1 format if you are going to use the data in a spreadsheet application that uses that format, or you can choose to export the data in TXT format if you are going to use the data in a word-processing application.

   The setting in the `From Graphics to` field affects the direct export of Screen Capture icons. It can also affect how Plot, Clipboard, and Text data is exported when you use PC Directory in a capsule application. For more information, see the *Capsule User's Guide*.

5. Close the Conversion Controls window.

Changing the Protection Options

Workstation file systems do not allow more than one file of the same name (including extension) in the same directory. If you try to copy an icon from your Meta5 developer's desktop into a workstation directory that already contains a file

of the same name, one of three things happens, depending on the settings in the File Controls window:

- PC Directory does not let you transfer the icon to the workstation file system (this is the default setting).

- PC Directory allows the transfer, but renames the previous file instead of overwriting it.

- PC Directory overwrites the previous workstation file with the data from the Meta5 icon.

To change the protection for files being copied or moved from Meta5 into the PC Directory window:

1. From the PC Directory window's `Special` menu, select `Show File Controls`. The File Controls window opens.

2. Set the `On Move/Copy, Destination Files Are` field.

    - `Protected` is the default setting. When this choice is selected, you cannot copy or move an Meta5 icon into a workstation directory that contains a workstation file of the same name.

    - `Renamed` tells Meta5 to resolve a naming conflict by renaming the existing workstation file instead of overwriting it.

      For example, suppose there is a file named DEMO.TXT in a workstation directory, and you copy an Meta5 icon of the same name into that directory. The existing workstation file is renamed DEMO1.TXT, and the Meta5 icon is converted to a new file named DEMO.TXT.

    - `Overwritten` tells Meta5 to replace the data in an existing file with data from an Meta5 icon of the same name. Use this setting with caution.

3. Close the File Controls window.

Moving or Copying Meta5 Icons to Your Workstation File System

To move or copy a Text, Spreadsheet, Screen Capture, Plot, or PC Data icon from Meta5 to your workstation file system:

1. Open the PC Directory window to the subdirectory where you want to place the Meta5 file.

2. Move or copy the Meta5 icon to the appropriate subdirectory window:

    - Select the blank area at the top or bottom of the appropriate subdirectory window as the destination.

    - Select the name of a subdirectory in the window to move the file into that subdirectory.

Assigning File-Name Extensions to File Formats

File-name extensions can help you to remember the type of data contained in various files. The PC Directory tool uses extension mapping to recognize the format of incoming data and to assign file-name extensions to files as they are exported from Meta5.

To see how the extensions are currently mapped, from the PC Directory window's `Special` menu, select `Show Extension Mappings`. The Extension Mappings window opens.

Extension Mappings	Apply	Cancel	Reset	Add Mapping

Format	Extension
TXT	TXT
TXT	DOC
DIF	DIF
WK1	WK1
RFT	RFT
	EXE
PCX	PCX
RTF	RTF
BMP	BMP
OS2	OS2
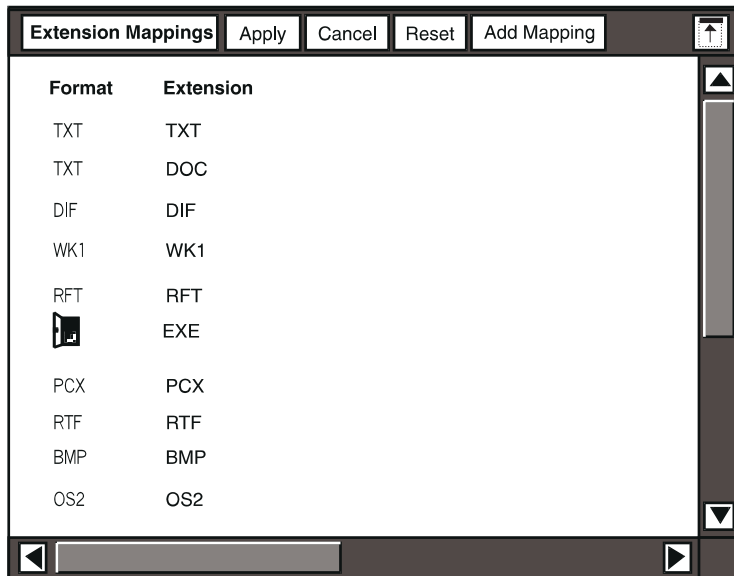
Figure 30. Extensions Mappings window

If a format is mapped to more than one extension, Meta5 assigns the first extension in the list to the file you are exporting unless you have included an extension in the icon's name that matches a different extension in the window.

For example, in Figure 30 on page 119, the TXT format has two extensions mapped to it: TXT and DOC. When you export a Text icon from Meta5 whose name does not include an extension, the TXT extension is automatically used because TXT is displayed first on the list in the Extension Mappings window. If you specify an extension that is listed in the Extension Mappings window, the extension you specify is used regardless of its placement in the window.

The default extension for Meta5 Capsules copied out to the PC directory is ".m5". These files can be treated like any other file in Windows, but are only viewable once imported back into a Meta5 developer's desktop.

Changing the Priority of Multiple File Extensions

To change the priority of multiple file extensions for the same file format:

1. Move the lowest-priority extension to the bottom of the Extension Mappings window.

2. Click on the `Apply` button or close the Extension Mappings window to put your change into effect.

Adding a New Extension

To add a new extension to the list:

1. Select `Show Extension Mappings` from the PC Directory window's `Special` menu. The Extension Mappings opens.

2. In the Extension Mappings window header, click on the `Add Mapping` button. The Add Mapping window opens.

Figure 31. Add Mapping window

3. In the `Meta5 Icon Type` field, select one of the icon types.

4. In the `Extension` field, enter a one to three letter extension. Generally, three-letter extensions are the most useful.

5. If you want to add another extension, click on the `Apply` button in the window header, then repeat steps 3 and 4. When you finish adding mappings, close the window.

Changing an Existing Extension Mapping

To change an existing extension mapping:

1. From the PC Directory window's `Special` menu, select `Show Extension Mappings`.

2. In the Extension Mappings window, select an extension and open the options window.

3. In the Mapping Options window, change the current extension mapping. The Mapping Options window looks and acts like the Add Mapping window shown in Figure 31.

4. Click on the `Apply` button or close the Mapping Options window to put your change into effect.

Deleting an Extension Mapping

To delete an extension mapping:

1. From the PC Directory window's `Special` menu, select `Show Extension Mappings`.

2. In the Extension Mappings window, select an extension, then press the Delete function key or activate the delete function on the pop-up function pad.

3. Click on the `Apply` button or close the Show Extension Mappings window to put your change into effect.

You might want to delete an extension mapping if you do not want a file to change formats. For example, if you want to bring a binary file, such as a CMD, EXE, COM, or BAT file, into Meta5 to mail it to someone else and do not want to change it to a PC Application file, you can delete the appropriate file extension from the Extensions Mapping window before you import the binary file. The person receiving the binary file must also delete that file extension from their PC Directory Extensions Mapping window.

Updating Directories

You cannot create or delete directories using the PC Directory tool, but you can easily switch to your workstation operating system to create or delete a directory.

To switch from Meta5 to your workstation operating system, from the Meta5 `Special` menu, select `Minimize`.

To switch back to Meta5 from your workstation operating system, double-click on the Meta5 Desktop icon on your workstation desktop.

If you make changes in your workstation file system (for example, if you create or delete a file or directory), and then you switch back to Meta5, you will not be able to see your change in a PC Directory window that is currently open on your developer's desktop.

To update the window, select `Update Directory` from the PC Directory window's `Special` menu.

PC Directory is automatically updated when you close, then reopen the window.

Using the PC Application Tool

Use the PC Application tool to use a workstation application within a capsule application, or to quickly open a workstation application by double-clicking on an icon on your developer's desktop. You can choose to open the application, or you can open the application and a specific file created by that application.

For example, you could use the PC Application tool to open your Windows word-processing application, or to open the word-processing application and a specific text file at the same time.

The application must be an executable file with one of the following file-name extensions: EXE, COM, or BAT.

You might want to place multiple copies of the PC Application icon on your developer's desktop and configure each one to access a different application or application plus file. Using the PC Application's Icon Options window, you can then name each icon to show the application or file it accesses.

System administrators can use the PC Application tool to open a remote file console session. For more information, see the *System Administration Guide and Reference*.

Specifying an Application to Start

Two methods are available for setting up a PC Application icon.

- You can copy an executable file from the PC Directory window. Use this method to quickly and automatically set up a PC Application icon for use directly on your developer's desktop (rather than in a capsule application).

- You can enter the necessary information in the PC Application's Icon Options window. This method provides additional options to customize how the icon works. If you plan to use the PC Application icon in a capsule application or if your application requires command-line parameters, you must use the Icon Options window to set up the icon.

To quickly set up a PC Application icon for stand-alone use, copy an executable file out of the PC Directory window onto your developer's desktop. The executable file is converted to a PC Application icon and is automatically set to access the correct application. For more information about the PC Directory tool, see "Using PC Directory Tool" on page 112.

To set up a PC Application icon using the Icon Options window:

1. Open the PC Application's Icon Options window and select `Other Data` as the `Display` option. Notice that the `Execution Information` field is set to `Global`.
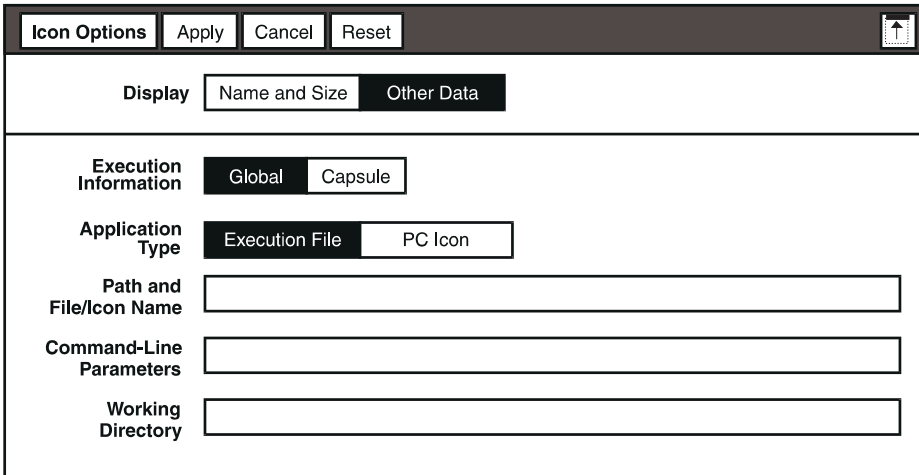
Figure 32. PC Application's Icon Options window

2. In the `Application Type` field, select either `Execution File` or `PC Icon`, then fill in the `Path and File/Icon Name` field to specify an application to open.

- If you select `Execution File`, use up to 255 characters to enter a path and file name in the `Path and File/Icon Name` field. This must be a complete path name including the drive, directory, and file name, unless you specify a working directory (described in step 4 on page 124). If you specify a working directory and the application is in that directory, you need only enter the application's file name.

   For example, you could specify `c:\windows` as the working directory and type `e.exe` in the `Path and File/Icon Name` field, or you could leave the `Working Directory` field blank and type `c:\windows\e.exe` in the `Path and File/Icon Name` field.

- If you selected `PC Icon`, enter the name of your workstation application icon in the `Path and File/Icon Name` field. If the icon resides directly on the operating system desktop, no path information is necessary. If the icon is in a folder, specify the path to the icon using a backslash to represent folders. For example:

   ```
   windows system\productivity\windows system editor
   ```

   On the Windows 95 operating systems, any icon contained in the Programs window can be selected.

   If you want to use the Windows icon properties, see the information in "Using the Windows Icon Properties".

3. Enter parameters in the `Command-Line Parameters` field required by your application. These are parameters that you would typically type at a command-line prompt.

If you want your application to open a specific data file, type the command required to start the application here. See your application's documentation for more information about parameters.

If you are using a Windows application, you must include the path name when specifying files in the `Command-Line Parameters` field.

4. Enter a working directory if desired, or if required by your application.

If you specify a working directory, it becomes the current directory when you open the PC Application icon. When you close the application, the directory you were working in previously becomes the current directory. The main benefit of specifying a working directory is that you do not need to enter a complete path in the `Path and File/Icon Name` field, and any files created by the application are placed in the working directory.

5. If you plan to use the icon in a capsule application, set the capsule application's options, as described in the *Capsule User's Guide*. Otherwise, close the Icon Options window.

Now you can use the icon to start the application directly from your developer's desktop.

Using the Windows Icon Properties

The PC Application `Command-Line Parameters` and `Working Directory` fields override the Windows properties if you enter values in both places. For more information about these properties, see your Windows documentation.

Chapter 11.   Where Do You Go From Here?

Now that you are familiar with the developer's desktop, what you do next and which Meta5 tools you use depend on tasks you are responsible for in your organization. Application developers create capsule applications. System administrators monitor and control system activities, such as user access. Database administrators configure data sources for use with Meta5 and test those sources.

This chapter overviews the tools available in Meta5. This chapter also provides references to other Meta5 books that can help you get started.

Browsing and Entering Data

Meta5 provides tools for browsing, entering data, forms, and running SQL queries. The tools are designed primarily for building capsule applications, but they are also useful when performing database and system administration tasks.

The Browser Tool

Use the Browser tool to retrieve, organize, and display columns of data from specified tables in a database category. Use the Browser tool to select items from a database by constraining columns, and then displaying only the items that meet the criteria you specify.

A Browser tool can be used for various purposes, for example:

- As a stand-alone tool that quickly displays dimension data from a database (either a large part of the list or a small set of selected items)
- As an interface tool used to set constraints on database items, view the result, and transfer the desired constraints into other Meta5 tools

For more information on the Browser tool, see the *Data Access Tools User's Guide*.

Query Tool

Use the Query tool to retrieve data that is stored in your company's databases. Using your mouse, you can select the tables you want to access, and then specify various types of selection criteria. Use the Query tool to:

- Access databases
- Choose information
- Apply constraints to further define the data

- Create calculated columns of retrieved data
- Update database information

For more information on the Query tool, see the *Data Access Tools User's Guide*.

Data Entry Tool

Use the Data Entry tool as a form to set parameters for a capsule application or database. Use the Data Entry tool created by the Form Design tool to perform tasks such as entering, retrieving, and deleting from a database.

For more information on the Data Entry tool, see the *Forms User's Guide*.

Forms Design Tool

Use the Forms Design tool to create Data Entry tools.

For more information on the Forms Design tool, see the *Forms User's Guide*.

Reporter Tool

Use the Reporter tool to retrieve multidimensional views of data and perform calculations on data from a database and to display the data in a report-like format you specify. This report can be printed or transferred to other tools such as the Spreadsheet, Plot, or Text tools.

Reporter uses a basic column and row format, but you determine how the columns and rows are arranged, the types of calculations used, and whether or not special formatting is used to highlight data.

For more information on the Reporter tool, see the *Data Access Tools User's Guide*.

SQL Entry

The SQL Entry tool processes Structured Query Language (SQL) commands, including SQL extensions supported by the relational database management systems (RDBMS) used by Meta5.

Using the SQL Entry tool, you can:

- Design complex applications by entering SQL statements into a source document
- Use logic statements for flow control and conditional processing
- Use functions and @-variables in generic applications
- Run complex SQL programs in capsule applications or on the developer's desktop.

For more information on the SQL Entry tool, see the *Data Access Tools User's Guide*.

Calculating Data with the Spreadsheet Tool

The Spreadsheet tool is an electronic version of the traditional accounting worksheet. Using the Spreadsheet tool, you can:

- Perform calculations and analyses, such as summing and cross-totaling balances
- Perform variance analyses and market studies
- Change any number or calculation and have your entire spreadsheet updated
- Schedule projects using the date functions to track work over time
- Design your spreadsheet to be included in presentations or written reports
- Select all or a portion of your spreadsheet and copy it directly into a Plot, Layout, Text, or Transformer tool
- Perform calculations automatically in a capsule application

For more information on the Spreadsheet tool, see the *Spreadsheet User's Guide*.

Formatting and Presenting Data

You can use the Plot, Layout, and Text tools to format your data in capsule applications before sending the results to an Meta5 Open Client.

Plot Tool

Use the Plot tool to visually present tabular data from other Meta5 tools, including the Query, Reporter, Spreadsheet, Transformers, and SQL Entry tools, as graphs. You can use graphs in reports and presentations to help your audience visualize the data. You can also use the Plot tool with other tools in a capsule application to produce a graph automatically.

You can create two types of graphs with the Plot tool:

- A two-dimensional graph, which shows several sets of data in a bar, line or point format, enabling you to make correlations and show numeric relationships that are difficult to present using only numbers.
- A pie graph, which shows individual values in proportion to the total of the values.

For more information on the Plot tool, see the *Plot User's Guide*.

Layout Tool

Use the Layout tool to create reports using *tabular data* (data arranged in columns and rows) from many Meta5 tools, including the Query, Spreadsheet, and SQL Entry tools.

After you transfer data from another tool into the Layout tool, you can format the data, add sort levels and calculations, and arrange the report layout. You can also modify the data that is displayed by adding spreadsheet-like computations, changing column headings, and hiding columns.

For more information on the Layout tool, see the *Layout User's Guide*.

Text Tool

Use the Text tool to:

- Create simple memos, detailed reports, and polished presentations with embedded graphics
- Log activities from other tools such as the SQL Entry, Query, Forms Design, DBA, Reporter, BASIC, and Data Entry tools
- Consolidate information automatically within a capsule application
- Create templates for frequently used forms and letters

For more information on the Text tool, see the *Text User's Guide*.

Transforming Data

Meta5 provides five types of transformers:

- Basic Transformers
- Advanced Transformers
- Significance and Sample Testing Transformers
- Regression and Time Series Analysis Transformers

Each type of transformer is designed to perform a specific set of tasks or analyses. Although each transformer performs a different function, all transformers are similarly designed.

For more information on each type of transformers, see the *Transformers Guide*.

Basic Transformers

You can use basic transformers to manipulate tabular data copied from other Meta5 tools, such as the Spreadsheet, Query, and SQL Entry tools. This data can either be copied or moved manually, or transferred within a capsule application.

There are several basic transformers available; each transformer is set to perform a specific function. For example, you can use the Join transformer to join matching columns of data from two tables, then use the Sort transformer to rearrange the data in alphabetic, numeric, or chronological order.

Advanced Transformers

With advanced transformers, you can create sophisticated Meta5 applications that enhance the data-manipulation capabilities of the statistical transformers, data access tools, and other application programs. These transformers provide computational and formatting enhancements that include splitting, joining, transposing, reformatting, cleaning rows, and reporting errors.

Each advanced transformer is designed to perform a specific function. For example, you can use the Row Clean transformer to selectively remove rows of data provided by a spreadsheet, query, or other row-oriented data source, or use the Write SQL transformer to translate row- and column-formatted data into SQL statements that can load the data into a database within a capsule application.

Significance and Sample Testing Transformers

Significance and sample testing transformers allow you to determine the statistical significance of differences in data samples and to perform distribution comparisons of sets of data. Each significance and sample testing transformer performs a specific function. For example, you can use the ANOVA (analysis of variance) transformer to examine differences in distributions of a variable across several groups of data, or you can use the CrossTab transformer to study the distribution of cross-classified data.

Regression and Time Series Analysis Transformers

Regression and time series analysis transformers perform the following tasks:
- Smooth time series
- Create summary statistics on groups of data
- Calculate seasonality factors
- Forecast trends
- Identify relationships
- Regression analysis

Using these transformers in a capsule, you can create multiple-regression applications that include full-modeling, forward, backward, and step-wise procedures, and identification and removal of outlying data. Statistics generated through these transformers include significance level, tolerance, auto correlation, Durbin-Watson, F-statistics, t-statistics, and multiple indexes of determination.

Accessing Additional Computing and Data Resource Using CAS

Cooperative Application Services (CAS) is a set of utilities that connect your Meta5 client desktop to a host server to give you access to new data sources and additional computing resources. Because CAS is implemented as a transformer, you can easily integrate it into an capsule application.

Using CAS, an application developer can include host data or processing steps in an Meta5 capsule application. Host processing can be invoked by an application that uses a CAS transformer, and data can be exchanged between desktop and host. Instructions for host processing are contained in a command script, to which the transformer refers, inside the capsule application.

For more information on the CAS, see *Developing Applications with Cooperative Application Services* and *Administering Host Services for MVS: DB2 and Cooperative Application Services*.

Automating Processes with Capsule Applications

The Capsule tool lets you combine the powerful capabilities of all the tools discussed in this chapter. It encapsulates a set of Meta5 tools, allowing them to automatically work together. With the Capsule tool, you can harness all the complex relational data in your company database to produce reports and generate analyses. Capsule applications can be run from the Meta5 Open Clients.

For more information on the Capsule tool, see the *Capsule User's Guide*.

Administering Databases

You can administer databases using the DBA tool or the SA tool. For more information on these two methods, see *Administering Databases with Meta5*.

The DBA Tool

The DBA tool lets you define data as the user sees it by providing DBA access to the Workstation Tools Data Dictionary (WTDD). The DBA tool also lets you run SQL statements. To run macros, however, you must use the SA tool.

The SA Tool

The SA tool provides a graphical interface to administrative functions for several Meta5 features, including database access. You can enter or copy SQL statements in the SA tool window using the SQL Input Service. You can also use SQL Entry tools to run SQL statements. The SA tool is the only Meta5 tool from which you can run macros and use the SAVE FOR command.

Administering Meta5 Using the SA Tool

As a system administrator, your primary job is to maintain the capabilities of Meta5. Your general responsibilities include:

- Performing regular system backups of all disks so that users do not lose vital data
- Storing important information off site for security purposes
- Cataloging backup tapes and maintaining a tape library
- Providing selective backup and recovery services when users request them
- Ensuring the system components and software remain functional by viewing details about system components and by performing any corrective actions
- Registering new equipment to the network (such as workstations, printers, and servers) and making sure it operates correctly
- Establishing and maintaining security of system information and data
- Providing specific users with access to the software and databases that they require, while denying access to other users
- Creating, removing, and modifying desktops
- Troubleshooting and tracking system problems
- Monitoring space on disks and informing users of capacity problems
- Creating file drawers and folders for specific and general use
- Creating and maintaining distribution lists for electronic mail

You perform many of these functions through the use of the SA tool, on any authorized desktop. Some functions require use of a system desktop designated specifically for the system administrator. Administration of file services requires typing commands at the file-service interface.

For more information on administering Meta5 and on the SA tool, see the *System Administration Guide and Reference*.

Developing Custom Meta5 Interfaces

Use the custom Visual Basic controls, Open Data Access Service (ODAS) API, and Basic tool to develop custom interfaces for Meta5 and interact with BASIC applications that operate on your data.

Custom Visual Basic Controls

The custom Visual Basic controls are application controls that you can use to rapidly develop custom applications on the Windows platform. The custom Visual Basic controls are designed to work with the ODAS component of Meta5.

For more information on the custom Visual Basic controls, see *Developing Applications with Open Data Access Service*.

Open Data Access Service API

Application programs can be written in the C or Visual Basic languages. Such programs can be used to present a simple, push-button user interface for:

- Listing the contents of any desktop container (a desktop, file drawer, envelope, folder or capsule application)
- Copying or moving a desktop object from one container to another
- Deleting or renaming a desktop object
- Determining the existence of a desktop object
- Converting the format of a desktop object
- Exchanging mail or other files between the desktop and the client, with or without translation of text, spreadsheet, and other formats
- Examining or changing capsule variables
- Executing previously assembled capsule applications
- Querying the status of capsule applications
- Cancelling capsule applications that are in progress

For more information on the ODAS API, see *Developing Applications with Open Data Access Service*.

BASIC Tool

The BASIC tool gives you access to an independent BASIC environment within which you can create and run Microsoft Beginner's All-purpose Symbolic Instruction Code (MS-BASIC) programs. In the BASIC environment, you can perform operations that MS-BASIC supports, such as load and run, and you can save programs and data files. The Meta5 BASIC tool is used to run BASIC programs in Meta5 or to interact with the Spreadsheet tool or with an Meta5 transformer in a Capsule tool.

For more information on the BASIC tool, see the *BASIC Tool User's Guide*.

PC Integration Tools

Meta5 provides integration capabilities with Microsoft Word, Excel, Outlook, Lotus Notes, Business Objects and Brio Query. The ability to communicate with these products allows you to export and distribute data efficiently and effectively.

Meta5 provides integration capabilities with many common PC applications. The core PC Integration tools are:

Sendmsg - Integration with Microsoft Outlook, Lotus Notes and SMTP mail.

XLaunch - Integration with Microsoft Excel for data output and reporting.

Xtract - Integration with Microsoft Excel for data input.

Wordtool - Integration with Microsoft Word.

M5123 - Integration with Lotus 1-2-3 spreadsheets for data output and reporting.

BOConnect - Integration with Business Objects.

AutoBrio - Integration with Brio Query.

For more information on the PC Integration Tools, see the PC Integration Tools Manual.

Appendix A.   Text Conversion Limitations

This appendix covers the limitations of converting an Meta5 Text file to RTF and converting an RTF file to the Meta5 Text format.

Limitations on RFT-to-Text Conversion

The following list describes the limitations of the RFT-to-Text conversion process.

- The DCA carriage-return character (equivalent to the Text tool's new line character), page-end, subscript, and superscript characters are not translated.

- The DCA required-carriage-return character (equivalent to the Text tool's new paragraph character) is translated into a new paragraph character.

- The DCA auto-outline control sequence is translated correctly only when its default values are used.

- The DCA required-page-end character is translated into a new page character; it is not adjusted during pagination.

- Characters that cannot be translated are displayed as block characters (n) in the Text window or are discarded.

- Some Symbol characters are not translated. These characters include:

$$\textbf{E0,}\ Đ,\ P\dagger s,\ þ,\ þ,\ \vec{O}$$

- Fonts are translated as shown in Table 12.

Table 12. DCA font to Text font translations

DCA font	Text font
GFID 1-79	Fixed 12
GFID 80-220	Fixed 16
GFID 221-255	Fixed 20
All others	Fixed 16

- Headers and footers that are the same for all pages are always flush left. Headers and footers that differ on odd- and even-numbered pages are not translated. A maximum of 99 header or footer characters are converted. If the header or footer contains more than 99 characters, the remaining

characters are not transferred. Multi-line headers and footers are translated as one line.

- Page numbers are always flush right.
- Tab stops might be in different positions from the original document and some text lines might be broken into two lines. You can manually correct the tab settings in the Text window.
- Footnote parameters cannot be translated.

Limitations on Text-to-RFT Conversion

The following list describes the limitations of the Text-to-RFT conversion process.

- All Text icon fonts (except the Symbol font) are translated to the default font of GFID 26, which is a 10-pitch fixed font.
- Some Symbol font characters are not translated. These characters include:
  £, ,¹,¥,`,©,†,‡,8,·,´,,, and ›
- Symbol characters that are not translated are not displayed in the PC.RFT file.
- Bold, underline, and overstrike formats are converted, but italic and double underline typeface formats are not converted.
- All `Lines in Paragraph` option settings are translated as 6 lines per inch.
- Tab stops might be in different positions from the original Text document and some text lines might be broken into two lines.
- New paragraph characters are translated as required carrier return characters.
- A Text icon paragraph is divided into two paragraphs if the margin control setting for `Line 1` is different from the setting for `Other Lines` in the Text Options window. The first and second lines might line up incorrectly when printed. If the text alignment in the Text icon is justified in these cases, the first line of the resulting document will not be justified; additional lines will be justified.

Appendix B.   Spreadsheet Conversion Limitations

The conversion capabilities in the PC Directory tool can convert only WKS, WK1, and WRK file types. The PC.WK1 data format icon always shows WK1 in the icon depiction, even when the file name extension is WRK or WKS.

All Lotus 1-2-3 files in the WK3 and WK4 formats must be converted to a WK1 format to be used in Meta5 tools.

Using the Translation Log

Upon conversion, either through the PC Directory icon or moving data to a PC.WK1 data icon, a Logs folder is displayed on your desktop. The Translation Log is a capture document that provides an explanation of problems or changes that occurred during the data translation. If there is any information that cannot be converted, it is recorded in the Translation Log. The Translation Log has the same name as the original spreadsheet, with the date and time of the conversion appended.

Understanding the Conversion Limitations

The conversion process imposes certain size and function limits on the spreadsheet. These limits are described below.

Spreadsheet Size

A very large workstation spreadsheet might be only partially translated. You can usually translate a spreadsheet of 5,000 to 10,000 cells, depending on the size of the cell.

Region Copy/Move Control Setting Changes

In the Spreadsheet icon, the region Copy/Move Controls window options are set to `Values`, `Formats`, and `Formulas`. The default in a blank Spreadsheet tool is `Values` and `Formats` only. You can also set these options for spreadsheet regions using the Spreadsheet Options window and the capsule tool's Arrow Options window.

Date Inconsistencies

A few inconsistencies exist in the handling of dates between Lotus spreadsheets and the Spreadsheet tool.

- Dates before March 1, 1900 (day 61) translate incorrectly (they are off by one day) due to a difference in the way that Lotus and Meta5 handle date calculations. Lotus calculates February 29, 1900, which was not a leap year.

- Lotus spreadsheets and the Spreadsheet tool compare text strings differently. Lotus cannot compare a text string with a number. The Spreadsheet tool can compare a text string with a number and returns an evaluation of either True or False. For example, the formula `10='ten'` returns ERR in a Lotus spreadsheet. When the formula is translated into a Spreadsheet icon, the result is False.

- If the day, month, and year functions take numeric arguments, you must add a conversion factor because Lotus spreadsheets use a different day zero than the Spreadsheet tool. For example, `@day(12345)=18` in Lotus translates to `datenum(((12345)-25569),day)` in the Spreadsheet tool.

Formula Size Differences

The Spreadsheet tool allows a maximum of 100 characters for a formula, while Lotus 1-2-3 allows 2,048 characters. For this reason, some formulas are not translated because they are too large. When the Spreadsheet Translator tool encounters a large formula, it records the cell in the Translation Log window and includes the original Lotus formula to help you rebuild it in the Spreadsheet cell.

Header and Footer Inconsistencies

A few inconsistencies exist in the handling of headers and footers between the Lotus spreadsheet and the Spreadsheet tool.

- All headers and footers are translated flush left, with a maximum of 100 characters.

- Lotus has special embedded commands that signal the printing of dates and page numbers, similar to the @date variable used in Text icon headers and footers. These commands are translated as text strings.

Function Inconsistencies

A function that does not get translated is listed in the Spreadsheet cell and highlighted with two asterisks; for example, `**SIN`. For functions that do not get translated, you must print a list of the Lotus 1-2-3 or Symphony spreadsheet formulas to reconstruct them in the Spreadsheet tool.

Table 13 on page 139 lists each Lotus function along with an explanation of its translation. For more information about these functions, see the *Spreadsheet User's Guide*.

Table 13. PC.WK1-to-Spreadsheet conversion translations

Lotus function	Translation in the Meta5 Spreadsheet tool
#AND#	Translates to the `and` expression
#NOT#	Translates to the `not` expression.
#OR#	Translates to the `or` expression.
string|string	Translates to the `concat` function.
@@	Does not translate.
@ABS	Translates to the `abs` function.
@ACOS	Does not translate.
@ASIN	Does not translate.
@ATAN	Does not translate.
@ATAN2	Does not translate.
@AVG	Translates to the `average` function.
@CELL	Does not translate.
@CELLPOINTER	Does not translate.
@CHAR	Does not translate.
@CHOOSE	Does not translate.
@CLEAN	Does not translate.
@CODE	Does not translate.
@COLS	Does not translate.
@COS	Does not translate.
@COUNT	Translates to the `count` function.
@CTERM	Translates to an equivalent arithmetic expression. For example, `@CTERM(B1,B3,B2)` translates to `ln((b1)/(b3))/ln(1+(b2))`.
@DATE	Translates to the `datebuild` function.
@DAVG	Does not translate.
@DATEVALUE	Translates to the Spreadsheet date function. Depending on the format of the date string in the Lotus spreadsheet, the formula might translate incorrectly. Check the cell for an error. For example, `@DATEVALUE('15-May-88')` translates to `date('15-May-88')`, which returns `Error` because the hyphenated format is not acceptable for calculations in Spreadsheet dates.
@DAY	Translates to the datenum function. For example, `@DAY(B10)` translates to `datenum(b10,day)`.
@DCOUNT	Does not translate.

Table 13. PC.WK1-to-Spreadsheet conversion translations

Lotus function	Translation in the Meta5 Spreadsheet tool
@DDB	Does not translate.
@DMAX	Does not translate.
@DMIN	Does not translate.
@DSTD	Does not translate.
@DSUM	Does not translate.
@DVAR	Does not translate.
@ERR	Does not translate.
@EXACT	Converts to the `exact` function.
@EXP	Converts to the `exp` function.
@FALSE	Converts to the `false` function.
@FIND	Converts to the `find` function.
@FV	Converts to the `fv` function.
@HLOOKUP	Converts to the `hlookup` function.
@HOUR	Translates to the `datenum` function. For example, `@HOUR(B10)` translates to `datenum(b10,hour,day)`.
@IF	Translates to the `if` expression.
@INDEX	Does not translate.
@INT	Translates to the `int` function.
@IRR	Translates to the `irr` function. Because the Lotus function requires two arguments, a correction is included for the Spreadsheet function so that only the second argument is used.
@ISERR	Translates to the `error` expression. For example, `@ISERR(v6)` translates to `error=v6`.
@ISNA	Translates to the `na` expression. For example, `@ISNA(v6)` translates to `na=v6`.
@ISNUMBER	Does not translate.
@ISSTRING	Does not translate.
@LEFT	Translates to the `left` function.
@LENGTH	Translates to the `len` function.
@LN	Translates to the `ln` function.
@LOG	Translates to the `log` function.
@LOWER	Translates to the `case` function with the L argument, for lowercase. For example, `@LOWER(F1)` translates to `case(f1,'L')`.
@MAX	Translates to the `max` function.

Table 13. PC.WK1-to-Spreadsheet conversion translations

Lotus function	Translation in the Meta5 Spreadsheet tool
@MIN	Translates to the `min` function.
@MINUTE	Translates to the `datenum` function. For example, `@MINUTE(B10)` translates to `datenum(b10,minute,hour)`.
@MOD	Translates to the `mod` function.
@MONTH	Translates to the `datenum` function. For example, `@MONTH(B10)` translates to `datenum(b10,month,year)`.
@N	Does not translate.
@NA	Translates to the `na` function.
@NOW	Translates to the `now` function with the `second` argument. For example, `@NOW` translates to `now(second)`.
@NPV	Translates to the `npv` function, but always returns an error. You must insert the initial investment value in the cash flow region of the Spreadsheet, adjust the region size, and delete the ** from the formula.
	For example, `@NPV(rate, range of future payments)` would translate to `** npv(rate, range of future payments)` where range of future payments might be the cell references d7,d8,d9. After editing, it would be displayed as `npv(rate, range of future payments)`, where rate is a value or cell reference and range of future payments is a region that contains the investment (as a value or cell reference) and the cell references d7:d9.
@PI	Translates to the number 3.14159265.
@PMT	Translates to an equivalent arithmetic expression. For example, `@PMT(B1,B3,B2)` translates to `((b19)*(b18)/(1-(1+(b18))^-(b21)))`.
@PROPER	Translates to the `case` function with the I argument, for initial capitalization. For example, `@PROPER(F1)` translates to `case(f1,'I')`.
@PV	Translates to the `pv` function.
@RAND	Translates to the `random` function.
@RATE	Does not translate.
@REPEAT	Translates to the `repeat` function.
@REPLACE	Translates to the `edit` function with the arguments rearranged.
@RIGHT	Translates to the `right` function.
@ROUND	Translates to the `round` function.
@ROWS	Does not translate.

Table 13. PC.WK1-to-Spreadsheet conversion translations

Lotus function	Translation in the Meta5 Spreadsheet tool
@S	Does not translate.
@SIN	Does not translate.
@SECOND	Translates to the `datenum` function. For example, `@SECOND(B10)` translates to `datenum(b10,second, minute)`.
@SLN	Translates to an equivalent arithmetic expression. For example, `@SLN(B1,B3,B2)` translates to `(((b2)-(b19))/(b21))`.
@SQRT	Translates to an equivalent arithmetic expression. For example, `@SQRT(B1)` translates to `if((a35)>0,(a35)^.5,error)`.
@STD	Translates to the `std dev` function.
@STRING	Translates to the `string` function.
@SUM	Translates to the `sum` function.
@SYD	Does not translate.
@TAN	Does not translate.
@TERM	Translates to an equivalent arithmetic expression. For example, `@TERM(B1,B3,B2)` translates to `ln+(1+((b20)*(b18)/(b21)))/ln(1+(b18))`.
@TIME	Translates to the `timenum` function. For example, `@TIME(B10,B11,B12)` translates to `timenum(b10,b11,b12)`.
@TIMEVALUE	Does not translate.
@TODAY	Translates to the `now` function with the `second` argument. For example, `@TODAY` translates to `now(second)`.
@TRIM	Translates to the `clean` function.
@TRUE	Translates to the `true` expression.
@UPPER	Translates to the `case` function with the U argument, for uppercase. For example, `@PROPER(F1)` translates to `case(f1,'U')`.
@VALUE	Translates to the `val` function.
@VAR	Translates to the `variance` function.
@VLOOKUP	Converts to the `vlookup` function.
@YEAR	Translates to the `datenum` function. For example, `@YEAR(B10)` translates to `datenum(b10,year)`.

Appendix C.   Working with PC Data Icons

For the most part, you can transfer data between your workstation file system and your developer's desktop by simply copying files from the PC Directory window to your desktop and copying Meta5 icons into the PC Directory window. But if you have an older capsule application, it might use a PC Data icon as an intermediary.

The following table lists all the available PC Data icons.

PC Data icon name	Type of support provided
PC Graphics	Bitmap graphics
PC.BIN	Binary code files or non-determined format
PC.DIF	Tabular Data Interchange Format primarily used for spreadsheets
PC.RFT	Revisable Form Text
PC.RTF	Rich Text Format
PC.TXT	Simple ASCII files
PC.WK1	WK1 table format primarily used for spreadsheets

The PC Graphics icon enables you to transfer bitmaps between Meta5 icons or between an Meta5 icon and a workstation file, both interactively and in a capsule application.

To copy a graphics file from the workstation file system into Meta5:

1. Open the PC Directory tool.
2. Select `Show Conversion Controls` from the `Special` menu.
3. In the Conversion Controls window, select `File Import` in the `Display` field.
4. Set the appropriate field to `PC Graphics`. For example, if the file you are importing is a PCX file, set the `From PCX to` field to `PC Graphics`.
5. Close the Conversion Controls window.
6. In the PC Directory window, select the graphics file to transfer.
7. Copy the file to your developer's desktop.

To copy graphics from a Text document for use on your workstation file system:

1. Open the Text document.
2. Select the graphics region.
3. Copy the region onto a PC Graphics icon.

4. Rename the PC Graphics icon to reflect its contents.

5. Select `Show Conversion Controls` from the `Special` menu.

6. In the Conversion Controls window, select `File Export` in the `Display` field.

7. Select the desired bitmap format in the `From Graphics to` field.

8. Close the Conversion Controls window.

9. Copy the PC Graphics file from your developer's desktop into the PC Directory window.

Appendix D.   Language and Sort Tables

Table 14 shows the languages and corresponding sort tables that Meta5 4.1 supports. The languages are based on the code page conversions that are currently supported. There are 16 sort tables in Meta5: Arabic, Cyrillic, Danish, Estonian, Greek, Hebrew, Icelandic, Latin 1, Latin 2, Latvian, Lithuanian, Norwegian, Spanish, Swedish and Finnish, Thai, and Turkish. The ideographic languages (Chinese, Korean, and Japanese) are sorted in binary Unicode order only.

Table 14. Sort tables used with languages

Language	Sort Table/Sort Order
Albanian	Latin 2
Arabic	Arabic
Belorussian	Cyrillic
Bulgarian	Cyrillic
Catalan	Latin 1
Chinese	Binary Unicode order
Croatian	Latin 2
Czech	Latin 2
Danish	Danish
Dutch	Latin 1
English	Latin 1
Estonian	Estonian
Finnish	Swedish and Finnish
French	Latin 1
German	Latin 1
Greek	Greek
Hebrew	Hebrew
Hungarian	Latin2
Icelandic	Icelandic
Italian	Latin 1
Japanese	Binary Unicode order

Table 14. Sort tables used with languages

Language	Sort Table/Sort Order
Korean	Binary Unicode order
Latvian	Latvian
Lebanon	Arabic
Lithuanian	Lithuanian
Macedonian	Cyrillic
Norwegian	Norwegian
Polish	Latin 2
Portuguese	Latin 1
Romanian	Latin 2
Russian	Cyrillic
Serbian-Cyrillic	Cyrillic
Serbian-Latin	Lain 2
Slovakian	Latin 2
Slovenian	Latin 2
Spanish	Spanish
Swedish	Swedish and Finnish
Thai	Thai
Turkish	Turkish
Ukrainian	Cyrillic

Glossary

This glossary defines terms that are used in this book and throughout the Meta5 library. If you do not find the term you are looking for, see the index of this book.

access key.   A code number, assigned by the system administrator to a user or a group of users, that can be used to restrict access to an Meta5 icon.

access privileges.   A set of permissions assigned by an icon's owner to control who might view or change the icon.

Apply.   A window header button that puts into effect any changes that the user has specified in an options or controls window.

ASCII.   American Standard Code for Information Interchange. A code that assigns numeric values to alphabetic, numeric, punctuation, and certain other characters. ASCII was developed to enable information interchange among data processing systems, data communication systems, and associated equipment.

ASCII file.   A file that contains only characters coded in ASCII. Also referred to as text file, text-only file, and ASCII text file.

@date.   A system-defined @-keyword that returns the day and time.

@-keyword.   A system-defined variable that returns current values within a capsule application.

@time.   A system-defined @-keyword that returns the day of the week, date, and time.

@user.   A system-defined @-keyword that returns the user ID of the user executing a capsule application.

@-value.   The value assigned to an @-variable in the capsule's User Input Controls window.

@-variable.   A control variable used to represent a value in any tool that can be run inside a capsule application. These values are frequently used as constraints and variable titles in the Query, Plot, Spreadsheet, Layout, and other Meta5 tools.

banner page.   A printed page that provides a record of the time a document was sent to the printer, the time it was printed, and the name of the desktop from which it was sent.

batch file.   A DOS file that contains a list of commands that are processed sequentially as a set. The file-name extension BAT identifies a DOS batch file.

BIN.   A file-name extension indicating that the file is stored in a binary format (a format that can be read by machines and is unintelligible to humans).

*Blank Icons file drawer.   A file drawer icon that contains one of each icon that an Meta5 user is likely to need.

block.   A fixed number of consecutive bytes that are read, written, or transmitted as a group. An Meta5 disk block is 1024 bytes.

button.   An object, in a window or window header, that contains graphics or text and is used to open other windows, open a menu, perform an action, or set a condition.

byte.   A standard unit of measure for workstation information. In Meta5, a text character uses two bytes.

Cancel.   A window header button that closes an options or controls window without saving any changes other than those that were saved the last time the user clicked on `Apply`. The difference between the `Cancel` and `Reset` buttons is that the `Cancel` button closes the window and the `Reset` button does not.

Cancel Changes.   A window header button or a choice in a `Special` menu that closes the icon without saving the changes that the user has made since opening the icon.

Capsule.   A tool for building an automated processing sequence using icons that represent Meta5 tools and desktop applications.

choice button.   In an Meta5 window, a field choice that opens a menu of additional choices. Choice buttons are rectangular in shape and shaded on the bottom.

Clipboard tool.   A tool used to exchange data between Meta5 tools and the clipboard used by workstation applications.

color palette.   A window in which colors can be selected for a desktop object.

container.   An icon, such as the Folder and File Drawer icons, that can hold other icons.

controls window .   A window that displays settings that the user can view or modify. Usually, to open a controls window the user clicks on a button (often named `Show Controls`) or selects a choice from a menu.

database administrator (DBA).   The person who issues administrative instructions to a database service. The database administrator defines the data tables used by data access tools, monitors database performance, and assigns user access.

DBA.   Database administrator.

deselect.   To cause a selection to no longer be selected.

DIF.   Data Interchange Format, a spreadsheet file format.

Discard.   A container icon that temporarily holds an icon that is deleted.

distribution list.   A Text document that is stored in the Distribution List file drawer and that contains a list of user IDs or the names of other distribution lists. The name of a distribution list can be used in place of individual names to address an envelope. For example, if a distribution list called Marketing includes ten user IDs, the user can address an envelope to all ten employees by typing `Marketing` on the `To` line.

dynamic data exchange (DDE).   A feature available in the Microsoft Windows that enables application programs to request and exchange data automatically.

enclosure .   An icon that is enclosed in an Envelope icon.

end mark .   A small square symbol that marks the end of all text and figure content in a Envelope window.

Envelope .   A tool used to create messages and to send messages and icons to other users.

executable file.   A workstation file that contains computer-readable code used to start and run an application (program). Executable file names have one of the following extensions: EXE, COM, orBAT.

field.   In a window, an identifiable area where the user can enter information, select a choice, or view information.

file drawer.   A container, created or renamed by the system administrator, that can be shared among desktops. A file drawer typically contains folders.

file format.   The structure of information in a workstation file. File-name extensions are often used to identify a file's format. For example, PCX identifies a particular kind of graphics format and WK1 identifies a particular kind of spreadsheet format.

file-name extension.   Three letters at the end of a file name. A file-name extension is preceded by a period and usually identifies the kind of information in the file. For example, in the file name AUTOEXEC.BAT, the extension is BAT, which indicates that the file is a batch file.

folder.   An organizing container that resides on a single desktop and is used to store icons and other folders. Folders are represented on the Meta5 desktop by the Folder icon, on which a file folder is depicted.

function keys.   A set of keyboard keys, labeled F1, F2, F3, and so on, located across the top or at the left side of the keyboard. In Meta5, function keys are used to perform tasks such as deleting an object or opening a help window.

Help button .   The button on the right side of the message bar that opens a window providing online help for using many of the Meta5 tools and services. The Help button

looks like this: ![?]

highlighted.   Changed in appearance to denote selection. Selected objects, such as text or icons, are highlighted either by being shown in reverse video or in a different color.

icon .   A graphic representation of a tool or service. An icon usually consists of a picture

(called the *icon graphic*) and a label on a rectangular background.

icon graphic.   The small picture in the title block of a tool window header and in the tool icon. The icon graphic usually depicts a tool's function, so a tool window or icon can be easily identified.

Icon Options.   A window in which the user can reset values or view information about an icon. Each icon has its own Icon Options window. The content of this window varies depending on the icon.

Important Message.   A window that displays a message that requires an acknowledgment from the user. An important message can be generated by a tool or service, or by the system administrator.

insertion point.   The symbol (usually a blinking vertical bar) that shows where mouse or keyboard input will be displayed in a document or field.

key holder.   A user to whom the system administrator has assigned an access key.

log on screen.   The screen on which the user enters a user ID and password to start Meta5.

mail service.   A service that controls the exchange of Envelope tools within Meta5.

Mail Tray.   An Meta5 container icon that sends and receives mail by relaying it through the mail service.

message bar.   The rectangular area along the bottom of the desktop, where advisory or error messages are displayed.

Message Log button .   The button on the right side of the message bar that opens a window in which the user can view desktop messages. The Message Log button looks

like this: ![▲]

Minimize button . The window header button that reduces the size of a window so that only the window header is displayed on the desktop. The Minimize button looks like this:

minimized window. An Meta5 window that is open but has been reduced to the size of its window header.

More button. The window header button that opens a menu of other window header buttons that cannot be displayed for space reasons. The More button looks like this:

mouse. A pointing device with buttons that the user manipulates to perform operations on the workstation screen. The user slides the mouse on a flat surface to control the position of the pointer.

network. A set of desktops, servers, and other devices connected together for the interchange of information.

New Icons. A file drawer that contains the *Public File Drawers file drawer and the *Blank Icons file drawer.

new-line character. The format character that is used to move the print or display position to the beginning of the next line without beginning a new paragraph. In Meta5, the new-line character is typed by pressing Shift+Enter and is represented by this symbol: ↵

new-paragraph character. The format character that is used to move the document content or display position to the next paragraph. In Meta5, the new-paragraph character is typed by pressing Enter and is represented by this symbol: ¶

numeric keypad. On a keyboard, the set of keys that looks similar to the keypad on a calculator.

options window. Any window that the user can open by using the Options function key or the options function on the pop-up function pad. Options windows enable the user to view and modify the properties of the selected object.

page. (1) In a window, an alternate view that provides a different set of options for setting controls and defining the behavior of an icon. (2) In a window, the amount of information that can be displayed at one time.

page orientation. The direction in which printed information is placed on a page. The two orientations are vertical (in which the length is greater than the width), and horizontal (in which the width is greater than the length).

panel. A page upon which a section of a spreadsheet or report is printed when there are more columns or data items than can be accommodated by the paper width.

panel page. An illustration that shows how to assemble printed output. A panel page is printed when an Meta5 report or spreadsheet is wider than the specified paper and thus, must be printed in panels.

password. A unique string of characters known to a workstation system and to a user, who must specify the character string to gain access to a desktop, gateway, database, system, or service within a system.

path name . A designation for the location of a file or icon in a file system.

PC Directory. A tool that provides a window view of the local workstation file directory and that can be used to open, close, and sort directories and to move or copy files between the workstation file system and the Meta5 desktop.

PC Application.   A tool used to start DOS, and Windows programs directly from the developer's desktop or to use such programs in an Meta5 capsule application.

PC.BIN.   A Meta5 icon that can store a binary file.

PC Data Icons.   A file folder in the *Blank Icons file drawer that holds the PC Directory icon and the icons (such as PC.TXT and PC.RFT) that can store data in standard workstation file formats.

PC.DIF.   A Meta5 icon that can store a DIF file.

PC.RFT.   A Meta5 icon that can store an RFT file.

PC.TXT.   A Meta5 icon that can store a TXT file.

PC.WK1.   A Meta5 icon that can store a WK1 file.

PCX.   A bitmap file format supported by some graphics applications.

pixel.   An acronym for picture element, the smallest element on a video display screen to which a color or light intensity can be assigned.

pointer .   The symbol displayed on the workstation screen that the user moves by moving the mouse or other pointing device. Usually, the pointer looks like an arrow, but it assumes other shapes depending on the operation taking place. For example, the stopwatch pointer indicates that a process is in progress.

pop-up function pad .   An image that is displayed on the desktop when the user presses both mouse buttons at the same time. The pad is used to delete, move, or copy icons, or to open or close an options window.
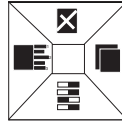
printing service .   A service that controls the formatting, queuing, and printing of printable objects.

read-only field .   A field that contains text that the user cannot change. For example, the Icon Options window is a read-only field that displays the size of the icon.

realm.   In Meta5 networks, a collection of Meta5 resources that are maintained as a logical group (that is, a group that is determined not by physical boundaries, but rather by virtue of being associated with one another). A realm must contain at least a primary file service and a directory service. Other components such as desktops, and Data Access Services can be added to form a functional Meta5 local area network (LAN).

region marker .   Region markers identify an area in a text document or envelope where data is inserted from other sources.

Region marker symbols look like: ⌈ ⌋

Reset.   A window header button in an options or controls window that restores the settings that were in effect when the user opened the window, or those that were saved the last time the user clicked on `Apply`. The window remains open. The difference between the `Cancel` and `Reset` buttons is that `Cancel` closes the window and `Reset` does not.

Restore button .   The window header button that expands a minimized window to its full size. The Restore button looks like this:restore

RFT-DCA.   IBM Revisable Form Text Document Content Architecture, a text file format.

RTF.   Rich Text Format, a desktop file format that supports formatted text and graphics.

screen capture.   An image of a window or of the Meta5 desktop that has been transferred to an icon for viewing, printing, placing in a text document, sending to another user, or transferring to desktop applications outside Meta5.

scroll .   To move the image in a window up, down, left, or right to view information that is not otherwise visible within the boundaries of the window.

scroll bar .   A bar, at the bottom or right edge of a window, that shows that is used to move the image in a window.

scroll box .   The part of a scroll bar that indicates the position and proportion of information currently visible in a window relative to the total amount of information available. The user can drag the scroll box to a different location in the scroll bar to bring different information into view.

scroll button.   The part of a scroll bar that contains an arrow. Click on a scroll button to move the window up, down, left, or right.

select .   To identify one or more objects on the workstation screen so that they can be operated on. The user selects icons and choices in fields by clicking on them.

Select All button.   The button in a window header that causes everything in the window. The `Select All` button looks like this:

selection.   An icon, text, or other item on the desktop or in a window that has been selected. Selections are highlighted.

service .   A software process that provides facilities to other parts of Meta5, such as a file service, a mail service, a mail gateway service, and a data access service.

Special button .   A button in some window headers and on the far-right side of the message bar. The `Special` button, which opens a menu, looks like this:

Special menu.   A menu that is displayed when the user points to the `Special` button and presses the left mouse button (or, in the case of a left-handed mouse, the right mouse button). In tool windows, the menu choices are usually reserved for special functions or controls associated with the icon.

system administrator.   In Meta5, the person who is responsible for maintaining and configuring Meta5, including its desktops, servers, and network.

system unit.   The part of a desktop that contains the processing unit and devices, such as disk and diskette drives. The system unit controls and integrates other components of the desktop (such as the monitor, keyboard, and mouse) and provides for the interchange of information with the network and with other equipment, such as an attached printer.

tab stop.   A preset point in a text line to which the insertion point goes when you press the Tab key. Tab stops are often used to group text into columns.

tab symbol.   The symbol (▶) that indicates where a tab is set.

Text.   A tool used to write and format text documents, format the results of data access tools, and receive data and images from other tools and desktop applications.

TIF.   Tag Image File Format (TIFF), a bitmap file format supported by some

desktop-publishing and graphics applications.

title block.   A window header button that contains the icon graphic and the window title. The user can click on the title block to close the window.

toggle button.   A button that switches between two states or modes. For example, `Italic` is a toggle button that, when highlighted, sets selected text in italics, and when not highlighted, returns the selected text to normal (non-italic) face.

tool .   An Meta5 desktop program, such as Text, Reporter, or Query. Every tool is represented by an icon.

tool window.   A window that opens when the user double-clicks on an icon. A tool window is the user's view of a tool.

trackball.   A pointing device with buttons that can be used instead of a mouse to perform operations on the workstation screen. A trackball is a stationary unit containing a ball that the user rotates to control the position of the pointer.

user ID .   A name used to gain access to a desktop, system, gateway, or database service.

wild card.   A special character, such as a percent sign, that can be used to represent one or more characters.

WIN-BMP.   A bitmap file format supported by some Windows applications.

window.   A rectangle that displays a window header and display area, the contents of which vary depending on the type of window. For example, a tool window displays a view of the tool and the data associated with it.

window header .   The area at the top of a window that contains the title block, command buttons, and other buttons.

WK1.   A Lotus 1-2-3 spreadsheet file format.

working directory.   The directory in which the user is currently working. The operating system searches the working directory for a file name that the user enters without specifying a directory name.

workstation.   A workstation at which the user can use Meta5 to perform work. Workstation components include the monitor, keyboard, mouse or trackball, and system unit, which can house a disk drive.

workstation application.   A Windows program. The terms application and program are often used interchangeably.

Meta5 Publications

This section lists Meta5 publications. To order copies of the books listed here, or to get more information about a book, see your Meta5, Inc. representative.

- **Meta5 Volume 1**

    Getting Started with the Meta5 Developer's Desktop

    PC Integration Tools

- **Meta5 Volume 2**

    Spreadsheet User's Guide

    Plot User's Guide

- **Meta5 Volume 3**

    Text User's Guide

    Layout User's Guide

- **Meta5 Volume 4**

    Capsule User's Guide

    BASIC Tool User's Guide

- **Meta5 Volume 5**

    Data Access Tools User's Guide

- **Meta5 Volume 6**

    Forms User's Guide

- **Meta5 Volume 7**

    Transformers Guide

- **Meta5 Volume 8**

    Error Messages and Codes

- **Meta5 Volume 9**

    Installing Meta5 LAN Components

    System Administration Guide and Reference

- **Meta5 Volume 10**

    Database Gateway Services Guide

    Administering Databases with Meta5

- **Meta5 Volume 11**

    Installing and Configuring Meta5 Open Clients

    Developing Applications with Open Data Access Service

- **Meta5 Volume 12**

Administering Host Services for MVS:DB2 and Cooperative Application Services

Planning and Installing Host-to-LAN Communications for MVS

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