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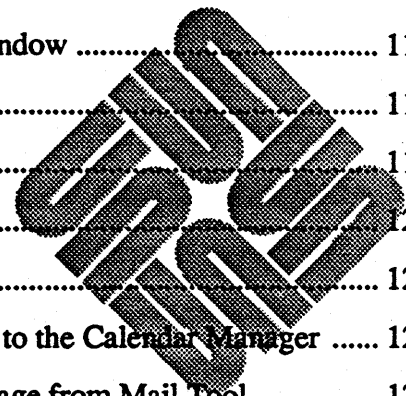
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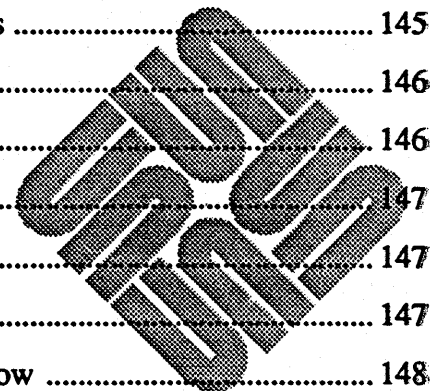


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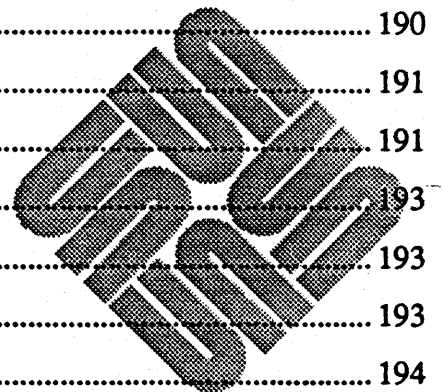
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Preface

This book describes the DeskSet™ Environment for OpenWindows™. The DeskSet Environment is a group of productivity applications.

Audience

This book is written for users who are familiar with Sun windowing environments and mouse and menu-driven applications. Refer to the *OpenWindows User's Guide* for information on how to use the mouse, icons, windows, menus, and the on-line Help facility. If you have used SunView™ applications, see Appendix A for a list of differences between the SunView and the OpenWindows DeskSet Environments.

How This Book Is Organized

Chapter 1, Getting Started, contains a brief summary of the DeskSet applications.

Chapter 2, File Manager, describes the DeskSet application that provides a graphical display of the UNIX® file system.

Chapter 3, Mail Tool, describes the DeskSet application that provides a convenient and intuitive way to use UNIX mail handling facilities.

Chapter 4, Calendar Manager, describes the DeskSet resource and schedule management tool.

Chapter 5, Text Editor, describes the DeskSet ASCII text editing application.

Chapter 6, Print Tool and Tape Tool, describes the DeskSet tools that provide an easy-to-use interface to the UNIX printing and tape archiving commands.

Chapter 7, Snapshot, describes the DeskSet application that you can use to take black and white or color snapshots of regions, windows, or the entire screen.

Chapter 8, Shell Tool, Command Tool, and Console, describes the three standard shell applications.

Chapter 9, Clock and Performance Meter, describes the clock and performance meter applications.

Chapter 10, Calculator, describes the DeskSet calculator.

Chapter 11, Icon Editor, describes the DeskSet application that you can use to edit and create your own icon images.

Chapter 12, Binder, describes the DeskSet application that you can use to connect or bind different types of files with printing methods, application opening and viewing methods, and File Manager icons and colors.

Appendix A, Differences between SunView and the OpenWindows DeskSet Environment, provides a list of functional differences between the two environments.

Appendix B, Keyboard Accelerators, provides a list of keyboard accelerators that are common to the DeskSet applications.

Appendix C, DeskSet Environment Application Man Pages, provides the system man page summaries for the DeskSet applications.

Conventions

The following conventions are used in this book:

- Terms introduced for the first time, variables, and book titles are in *italic type*.
- Names of buttons, menu items, and settings have Initial Capitals.
- Text that you type and system listing information is in Typewriter font.
- Names of keys on the keyboard have initial capitals (for example, "Press the Return key").
- Names of mouse buttons are referred to by function, not by location, and are capitalized. For example "Press SELECT" is used, not "Press left." The default mouse button function assignments are: "SELECT" = left mouse button, "ADJUST" = middle mouse button, and "MENU" = right mouse button.

Other Books

For additional information, refer to the following books that are available with the SunOS and OpenWindows documentation packages:

- *Getting Started*
- *SunOS User's Guide: Doing More with SunOS*
- *OpenWindows User's Guide*
- *OpenWindows Release Notes*
- *OpenWindows Installation and Start-up Guide*
- On-Line Help: Press F1 or the Help key

Support

For additional help, refer to the following resources:

- The *Read This First* information provided with this product contains a list of known problems and suggests solutions or workarounds. It also contains a support telephone number that you can use while your software is under warranty or under a service contract.

- The *Software Technical Bulletin* maintains an ongoing reference service. Check the cumulative index for relevant articles. If you have a Sun support contract, see the technical contact person named in that contract for a master copy of the *Software Technical Bulletin*.

You can order a support contract through your local Sun sales office.

Getting Started

This chapter introduces the DeskSet Environment for OpenWindows.

The DeskSet Environment contains the following applications:

- The *File Manager* application is a graphical file management program. A file is a collection of information — a document, an application, or a directory. With File Manager you can find, copy, move, open, close, create, delete, and print files.
- The *Mail Tool* application is a powerful tool for composing, sending, sorting, and storing electronic mail.
- The *Calendar Manager* application is an appointment and resource scheduling tool.
- The *Text Editor* application is a convenient, easy-to-use interactive text editor.
- The *Print Tool* application provides a convenient and intuitive way for you to print files.
- The *Tape Tool* application provides a convenient and intuitive way for you to archive and retrieve files using a streaming tape cartridge.
- The *Snapshot* application provides a convenient and intuitive way for you to take snapshots of regions, windows, or the entire workspace.
- The *Shell Tool* provides a *tty command-line interpreter*. When you type a command at the command line, the shell accepts and interprets the command and runs it as a separate process.
- The *Command Tool* and *Console* provide a text-editor based tty command-line interpreter.
- The *Performance Meter* provides a graphic display of system and network performance.
- The *Clock* provides an on-line time and date display.
- The *Calculator* application is a scientific calculator designed to perform a variety of mathematical functions in much the same way as many hand-held calculators.
- The *Icon Editor* provides a way to create and store your own icon images.

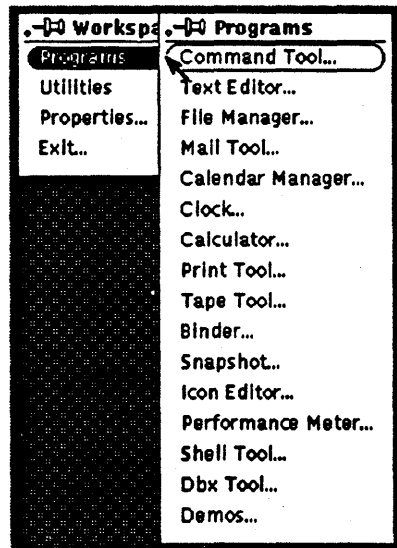
- The *Binder* provides a way to check the default system bindings, to customize the visual display of icons in the File Manager, and to specify default print scripts for use with the Print Tool.

One of the features of the DeskSet Environment is the way the applications are integrated with one another. The integration configuration enables you to “drag” files from one application and “drop” them on another application in order to perform functions such as copying, moving, printing, and backing up files. This *drag-and-drop* method of direct and intuitive manipulation is introduced in this chapter and explained in more detail in the chapter for each application.

1.1 Starting DeskSet Applications

You typically access DeskSet applications from the Programs Submenu of the Workspace menu, described in the *OpenWindows User's Guide*. When the DeskSet applications are installed on your system, they are automatically provided as items in the Programs submenu, as shown in Figure 1-1.

Figure 1-1 The Programs Submenu with DeskSet applications



You can also start any of the DeskSet applications from a system prompt in a Command Tool or Shell Tool window by typing *filename &* and pressing the Return key. Table 1-1 shows what you type to start each DeskSet application.

Table 1-1 What you type from a prompt to start up DeskSet applications

Application Name	What You Type
Binder	binder &
Calculator	calctool &
Calendar Manager	cm &
Clock	clock &
Command Tool	cmdtool &
Console	cmdtool -C &
File Manager	filemgr &
Icon Editor	iconedit &
Mail Tool	mailtool &
Performance Meters	perfmeter &
Print Tool	printtool &
Shell Tool	shelltool &
Snapshot	snapshot &
Tape Tool	tapetool &
Text Editor	textedit &

1.2 Drag and Drop

Many DeskSet applications allow you to drag icons or glyphs representing files and drop them onto other windows, icons, or glyphs. For example, you can print files by selecting one or several data file icons, dragging them onto the Print Tool icon, and dropping them. The term “drop” is a shortcut for the completion of a move or duplicate operation. Follow the steps below for any drag-and-drop operations:

1. Select an object by pointing at it and clicking SELECT. Select group of objects by pointing to an additional object and clicking ADJUST to add the object to the group or remove it from the group if it is already selected.
2. Initiate a move by pointing to one of the selected objects, pressing SELECT, and dragging the pointer. You initiate a *duplicate*, where an object is copied instead of moved, by pressing the Control key on the keyboard and then pressing SELECT.
3. When the *hot spot* of the pointer (the tip of the pointer arrow) is at an appropriate place, drop the selection by releasing SELECT. The selection is “dropped” to the new location.

When you drop the selection, the location of the hot spot of the pointer determines how the dropped selection is treated by the receiving application. The DeskSet applications follow these rules:

- When the selection is dropped on an icon or on the window, the object is *loaded* into the application, replacing any information that already exists. If the data being dropped will overwrite existing data, a Notice is displayed allowing you to choose whether to continue or cancel the operation.
- When the selection is dropped onto the pane of the Mail Tool Compose window, a Notice is displayed asking if you want the file encoded. When you choose Text, the data is *inserted* at the caret location. When you encode the message, the encoded file is appended to the text in the Compose window. See Chapters 2 and 3 for more information about encoding files with Mail Tool.

The following paragraphs list which of the DeskSet applications support drag-and-drop operations. This book describes drag-and-drop operations by discussing *source* applications (from which you can drag data) and *destination* applications (on which you can drop data). See Chapter 2 for information about the File Manager as a source application. See the appropriate chapter for each applications for information about how they support drag-and-drop operations.

File Manager glyphs can be dropped onto the following DeskSet applications:

- Text Editor
- Print Tool
- Tape Tool
- Mail Tool
- Wastebasket
- Icon Editor

Headers for mail messages from the Mail Tool application can be dropped onto the following DeskSet applications:

- Text Editor
- Print Tool
- File Manager
- Wastebasket
- Calendar (with specific format restrictions)

Text selections from Text Editor files can be dropped onto these applications:

- Mail Tool
- Text Editor

The following DeskSet applications cannot be dragged and do not accept dropped data because they do not provide and cannot accept editable text:

- Calculator Tool
- Command Tool
- Shell Tool

File Manager

The File Manager provides a graphical display of the UNIX file system. You can use it to find, copy, move, open, close, delete, undelete, and print files. A file can be a directory, a collection of data, or an executable program.

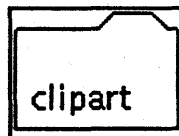
The File Manager displays folder icons that represent directories, and data file and application icons. You can select and operate on these icons within the File Manager either directly by dragging and dropping, or indirectly by using cut/copy/paste functionality. You can start applications from the File Manager, reorganize your file system by moving or copying files between folders, create new files, and print existing files. You can use the File Manager to link files (an alternative to the `ln` command) and to transfer files to other machines (an alternative to the `r cp` command).

In addition, the icons representing individual parts of the file system can be dragged out of the File Manager window onto the workspace or onto other DeskSet application icons or windows.

2.1 The File Manager Icons

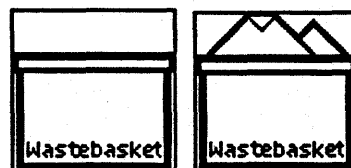
The icons for the File Manager and the Wastebasket base windows show you useful information about the File Manager application. The primary icon for the File Manager looks like a file folder. The name of the current directory is displayed inside the file folder, as shown in the example in Figure 2-1.

Figure 2-1 *The File Manager icon*



The Wastebasket icon looks like a wastebasket. When the Wastebasket contains files that you have not yet deleted, the icon shows papers sticking up out of the wastebasket. Figure 2-2 shows both views of the Wastebasket icon.

Figure 2-2 *The Wastebasket icon, empty and full*

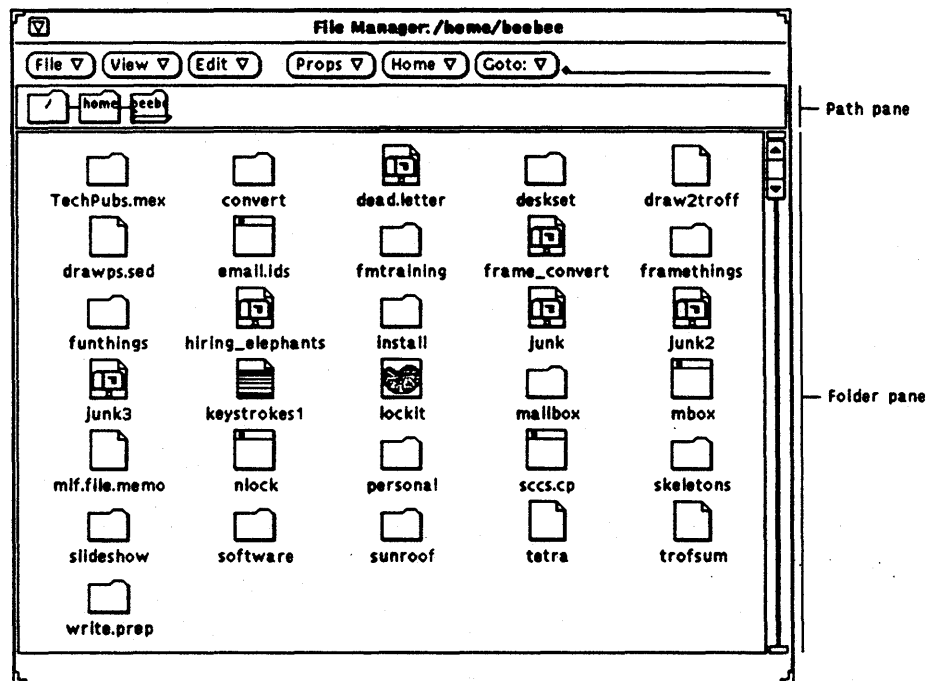


2.2 The File Manager Base Windows

The File Manager is organized in a slightly different way from most of the other DeskSet applications: It has two base windows instead of one. The primary base window displays your file system and allows you to manipulate it. The secondary base window is a Wastebasket that you can use to remove files from your file system. When you start the File Manager, the Wastebasket window is automatically started and displayed as an icon.

The File Manager base window, shown in Figure 2-3, provides a set of controls that you can use to manipulate your file system. The window has a path pane that you use to display the operating system hierarchy and a scrollable folder pane that always displays the contents of the open folder in the path.

Figure 2-3 The File Manager base window



File Manager Icons

The files in your file system are represented by three kinds of glyphs, which are similar to icons on the workspace. Directories are displayed as folders. Data files such as documents, graphic files, and spreadsheet files are displayed as dog-eared sheets of paper. Executable files (applications) display either the application icon or a small window. Figure 2-4 shows the three generic file type icons.

Figure 2-4 The three generic types of file icons

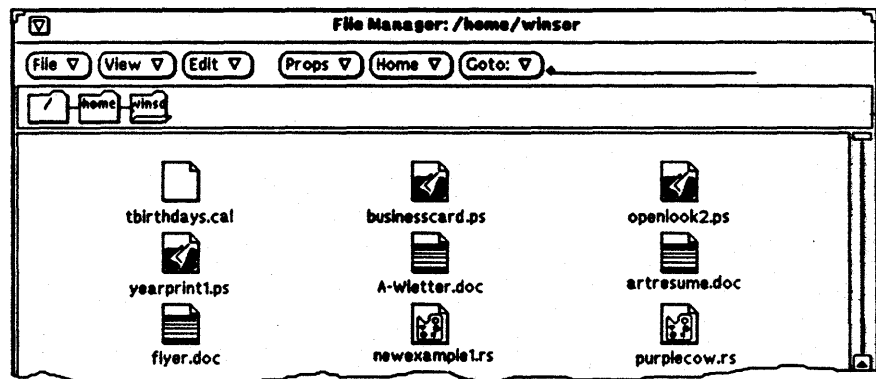


The File Manager logically connects or *binds* each data file to a specific application so that when you open the data file, the application is automatically started for you. The bindings are stored and displayed as part of the Binder application. You can

change the default bindings and add new ones using the Binder. See Chapter 12 for more information about the Binder.

As part of the binding, a small picture representing the type of application can be displayed inside the data file icon so that you can tell at a glance which data files represent different application data files. When a data file is not bound to a specific application, the generic icon is displayed. In the example shown in Figure 2-5, the first data file is generic. The other files are bound to three different application types.

Figure 2-5 Data file icons that also show the application type



You can create your own images for data files using the Icon Editor application, and bind them to the File Manager data file icons using the Binder. See Chapters 11 and 12 for more information.

Selecting and Operating on File Manager Icons

This section provides a brief introduction to how to select and operate on File Manager icons. You can perform the following kinds of operations on selected icons:

- Open files, folders, and applications
- Create new files and folders
- Move or copy files, folders, and applications
- Delete and undelete files and folders
- Link files so you can access them from more than one folder
- Transfer files to other systems
- Change file properties, such as the file name, permissions, and ownership

Detailed examples are provided later in this chapter.

You select a File Manager folder in the path pane by moving the pointer onto it and clicking SELECT. You can select single icons or groups of icons in the folder pane by clicking SELECT on the first icon and clicking ADJUST on each additional icon that you want to include in the group (or exclude by clicking ADJUST on an icon that is already selected). Selected icons are highlighted.

You operate on selected File Manager icons in any of the following ways:

- Dragging and dropping File Manager icons on other icons within the File Manager, on other windows or icons on the workspace, or on the workspace itself
- Choosing commands from the File Manager menus
- Using accelerator keys on the keyboard

Double-Click Accelerators

You can double-click SELECT on any individual icon to open it. Double-clicking SELECT on any folder in the path pane or the folder pane opens it and displays its contents in the folder pane. Double-clicking SELECT on a data file starts the application for that data file and usually displays its data. Double-clicking SELECT on an application icon starts the application.

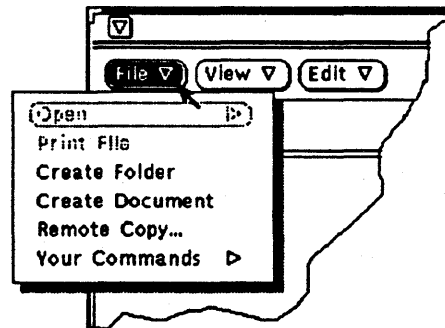
The Control Area

The control area has six menu buttons: File, View, Edit, Props, Home, Goto, and a text field. This section shows each of these controls and provides a brief introduction to each of the items.

The File Menu

File has a menu, shown in Figure 2-6, with choices that you can use to perform filing functions.

Figure 2-6 The File menu

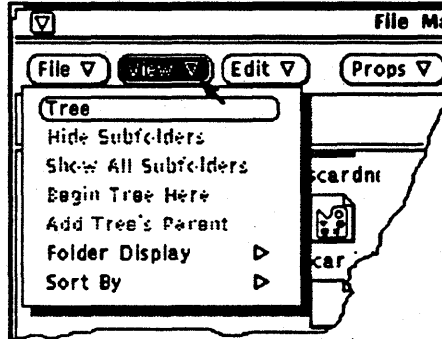


- Use Open to open selected folders and files. Open is inactive unless you have made a selection in the folder pane.
- Use Print File to print selected files. Print File is inactive unless you have made a selection in the folder pane.
- Use Create Folder to create a new folder.
- Use Create Document to create a new document.
- Use Remote Copy to open a pop-up window to allow you to perform remote transfers. See "Copying Files to Other Systems" later in this chapter for more information.
- Use Your Commands to create your own customized commands. See "Customizing Your File Manager" later in this chapter for more information.

The View Menu

View has a menu, shown in Figure 2-7, with choices for different ways to view the file system.

Figure 2-7 The View menu

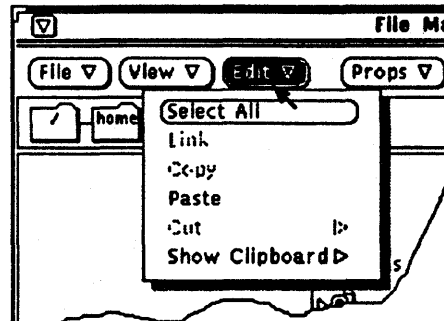


- Use Tree/Path to choose the way your file system is displayed in the Path pane.
- When you view your file system as a tree, you use Hide Subfolders, Show All Subfolders, Begin Tree Here, and Add Tree's Parent to customize the way the file system tree is displayed in the path pane. See "Customizing Your File Manager" later in this chapter for more information about these choices.
- Use Folder Display to choose how the contents of the folder pane are displayed:
 - As icons, to help you identify each file by type.
 - As a listing, to display more files in the pane and to show you more information about each individual file when you choose listing options from the File Manager Tool Properties window. See "File Manager Tool Properties" later in this chapter for more information.
- Use Sort By to choose how the contents of the folder pane are sorted:
 - Alphabetically by name.
 - In reverse chronological order by date.
 - In order of file size, largest to smallest.
 - In alphabetical groups by file type, with folders first, followed by data files, then by applications.

The Edit Menu

Edit has a menu, shown in Figure 2-8, with options that you use to perform editing functions.

Figure 2-8 The Edit menu

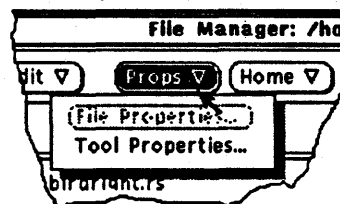


- Use Select All to select all the files in the folder pane.
- Use Link to create links between files. Link is inactive unless you have made a selection in the Folder pane. See "Linking Files" later in this chapter for more information.
- Use Copy to put a copy of selected file names on the clipboard. Copy is inactive unless you have made a selection in the Folder pane.
- Use Paste to paste the contents of the clipboard at the pointer location in the File Manager.
- Use Cut to remove selected file names from a folder and place them on the clipboard, in the Wastebasket, or really delete them, depending on which option you choose from the Cut submenu. Cut is inactive unless you have made a selection in the Folder pane.
- Use Show Clipboard to display the current contents of the clipboard used by the Cut/Copy/Paste commands.

The Props Menu

Props has a menu, shown in Figure 2-9, with a File Properties item that you can use to change file properties and a Tool Properties item that you can use to customize the File Manager. See "File and Folder Properties" and "Customizing Your File Manager" later in this chapter for more information.

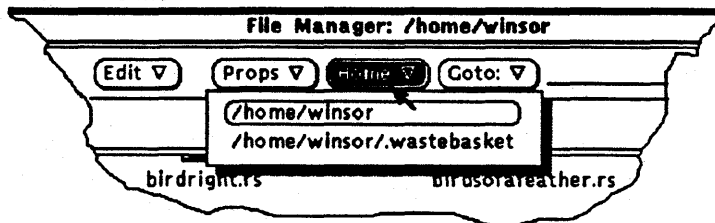
Figure 2-9 The Props menu



The Home Menu

Home has a menu, shown in Figure 2-10, with choices that you can use to quickly go back to your home directory or to other directories that you have accessed recently. See “Shortcuts” later in this chapter for more information.

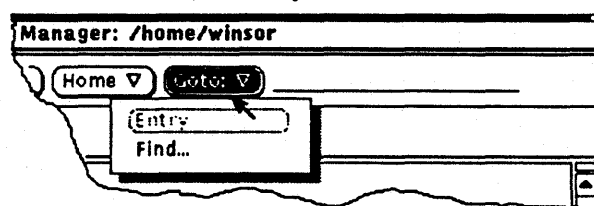
Figure 2-10 The Home menu



The Goto Menu and Text Field

Goto has a menu and a text field shown in Figure 2-11. Choosing Find from the Goto menu displays a pop-up window that you can use to find files. See “Finding Files and Folders” later in this chapter for more information.

Figure 2-11 The Goto menu and text field



The Path Pane

The path pane shows your file system. You can display it either as a path of connected folders or as a hierarchical tree that shows all or part of your file system structure.

The first time you start the File Manager, the file system will be displayed as a path. When you start the File Manager any time after that, the file system will be displayed in the same way it was displayed when you last quit the File Manager.

Parts of the Path and Tree

The path shows only the folders for the directory and subdirectories that lead to the *current folder*, which is the folder that is open. Any folders below it in the tree are *subfolders*. An example of a path is Figure 2-12, which shows the path for `/home/winsor`.

The hierarchical “family tree” structure is another way of showing the UNIX file system, using an analogy between the parts of a tree and the parts of the file system. The tree can show all parts of the file system. Alternatively, it can start at any directory or folder in the file system.

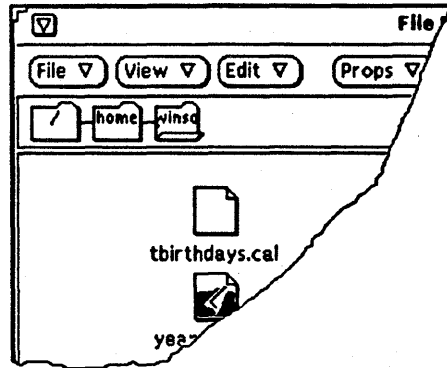
Root is the top directory in the file system. Under the root are various *branches*. For example, Figure 2-13 shows root and the branches that start with the directories `bin`, `home`, `lib`, and `usr1`.

Along with the tree analogy, there is a parent/child analogy. The root directory is the *parent directory*. A subdirectory is also a parent directory when there are one or more subdirectories below it. Each subdirectory is a *child* of the parent directory that is above it.

Which Path is Displayed

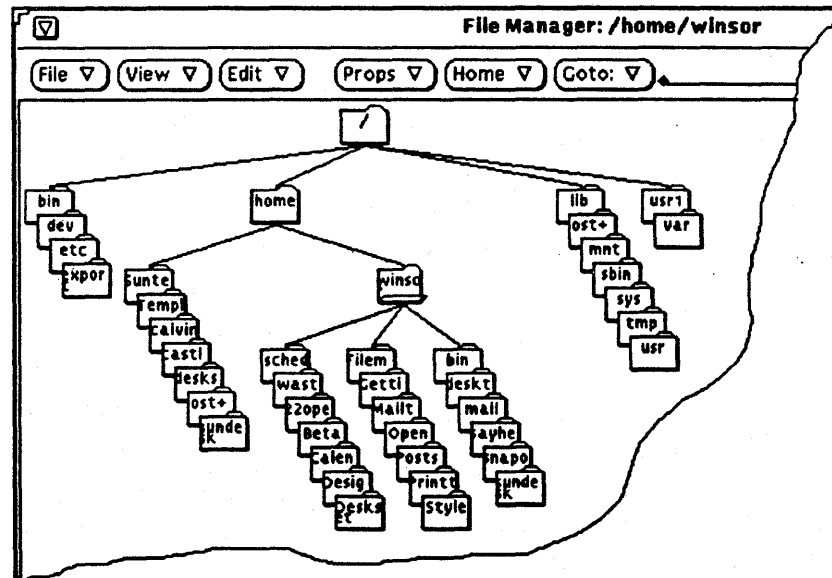
When you start the File Manager, it displays the path from which you started it. If you choose File Manager from the Programs submenu, it displays the path for your home directory. The last folder in the chain is open, and its contents are displayed in the folder pane, as shown in Figure 2-12.

Figure 2-12 An example of a home directory path in the path pane for a user named "winsor"



Use the items on the View menu to change the display of your file system in the path pane. Choosing Tree from the View menu changes the display to show the file system hierarchy, as shown in the example in Figure 2-13.

Figure 2-13 An example of a tree structure in the path pane



When you display a tree, the contents of the open folder are displayed in the folder pane (the contents of folder "winsor" in the example shown in Figure 2-13). As you move around from folder to folder by double-clicking SELECT to open each one, the tree display expands to show subfolders and rearranges the other branches of the tree.

You can expand or reduce the number of folders in the tree display using the Hide Subfolders, Show All Subfolders, Begin Tree Here, and Add Tree's Parent items from the View menu. Once you have chosen one of these items from the menu, the File Manager remembers it. When you change the display back to a path and then

choose Tree again, the tree is displayed using the last format that you chose for the tree display. See “Customizing Your File Manager” for examples of these other kinds of path displays.

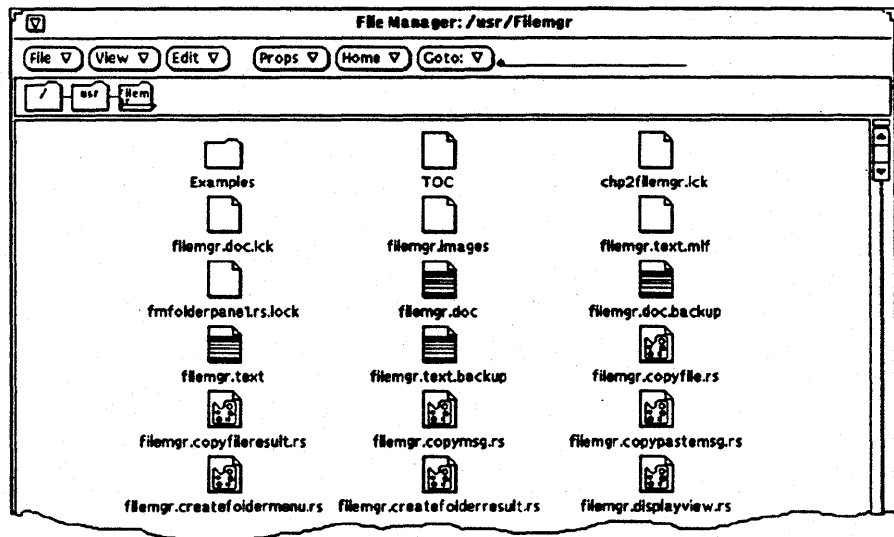
Path Commands Pop-up Menu

The path pane has a Path Commands pop-up menu that contains some of the commands from the control area. Choosing a command from the pop-up menu performs the same operation as choosing a command from the control area. See “Shortcuts” for more information about the Path Commands pop-up menu.

The Folder Pane

The folder pane displays the contents of the open folder in the path pane, regardless of how you choose to display the path. When you first start the File Manager, the folder pane displays icons with names beneath them, as shown in Figure 2-14.

Figure 2-14 Icons in the folder pane



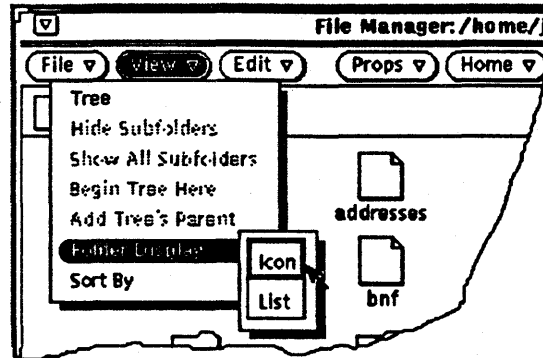
Folder Commands Pop-up Menu

The folder pane has a Folder Commands pop-up menu that contains some of the commands from the control area. Choosing a command from the pop-up menu performs the same operation as choosing a command from the control area. See “Shortcuts” for more information about the Folder Commands pop-up menu.

Alternative Display Options

You can change the way icons are displayed in the folder pane by choosing different options from the View Folder Display submenu shown in Figure 2-15.

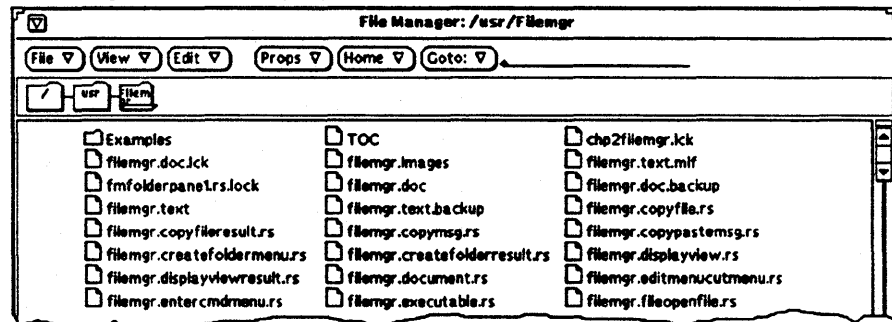
Figure 2-15 The Folder Display submenu



Icon Folder Display. Choosing the Icon option displays a list of standard-size icons with the name of the icon centered below it. When application images are specified by the Binder, those images are displayed.

List Folder Display. If you have a large number of files in a folder, displaying a list shows more file names in the same area, minimizing scrolling to view the entire folder. Choosing List shows a list of mini-icons and file names, as shown in Figure 2-16.

Figure 2-16 An example of a list display



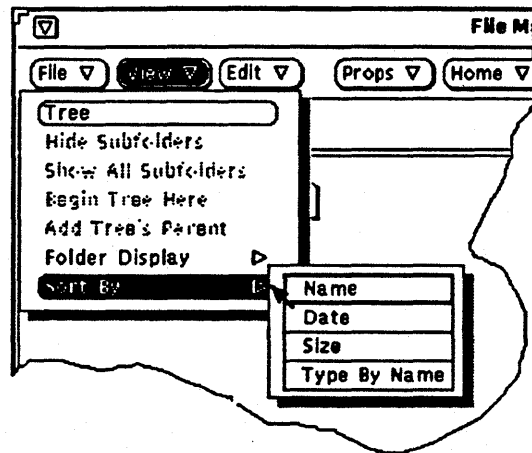
Mini-icons do not display the application images for data files. You can select and operate on mini-icons in the same way as for standard-sized icons.

When using the List option, you can choose to display additional information about each file such as the Permissions, Links, Owner, Group, Size, and Date. You choose the information to display by changing the default settings from the File Manager Tool Properties window. See "Customizing Your File Manager" later in this chapter for more information about setting tool properties.

Sorting the Contents of the Folder Pane

You can arrange the files in the folder pane in order by name, date, or size, or you can group them alphabetically by type by choosing the appropriate option from the View Sort By submenu shown in Figure 2-17.

Figure 2-17 The Sort By submenu



Changing Folders

You can easily change the display in the folder pane by opening a different folder either in the path pane or in the folder pane.

To open a folder, move the pointer onto any folder icon and double-click **SELECT**. The folder opens and its contents are displayed in the folder pane.

Alternatively, you can open a folder following the steps below:

1. Move the pointer onto a folder and click **SELECT** to select it.
2. Move the pointer onto the **File** menu button and press **MENU**.
3. Drag the pointer to highlight **Open**.
4. Release **MENU**.

The **Open** command is also provided on the **Path Pane** and **Folder Pane** pop-up menus. See "Shortcuts" for more information about pop-up menus.

Opening Files

When you select and open a data file, the appropriate application is started and the data of the opened file is displayed in the application's window. When you select and open an application or executable file, the application is started. Executable files that are not bound to a specific application display a **Notice** asking you if you want to start the application in a **Shell Tool**.

From the folder pane, you can select and operate on folders, data files, and applications in the following ways:

- Dragging and dropping selected folders, data files, and applications onto the workspace.
- Double-clicking **SELECT** on a data file or application icon.
- Selecting single or multiple data files and applications and choosing **Open** from the **File** menu or the **Folder Pane** pop-up menu.

The Open item on these menus has a submenu with the items File, With 'Goto' Arguments, and In Document Editor. Use this submenu in the following ways:

- Use the File item to open a file by starting up the appropriate application, as described above. This is the default.
- Use the With 'Goto' Arguments item to start up the application with command line arguments specified in the Goto text field on the File Manager header.
- Use the In Document Editor item to open the file in the Text Editor, regardless of the application that is bound to the file type.

NOTE When you open a data file or an application from the File Manager, you cannot close or quit it by dragging it back onto the File Manager. You quit any window or icon on the workspace by choosing the Quit item from the Window menu.

Creating New Files and Folders

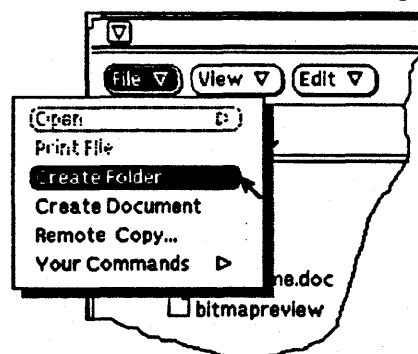
You can create new folders and files in the folder pane, which puts them into the open folder in the path pane.

To create a new file or folder, follow the steps below:

1. Check to be sure you are in the folder where you want to create the new file or folder. If necessary, change to a different folder in the path pane.
2. Move the pointer onto the File button and press MENU.
3. Drag the pointer to highlight either Create Folder or Create Document.

Figure 2-18 shows the File menu with Create Folder highlighted.

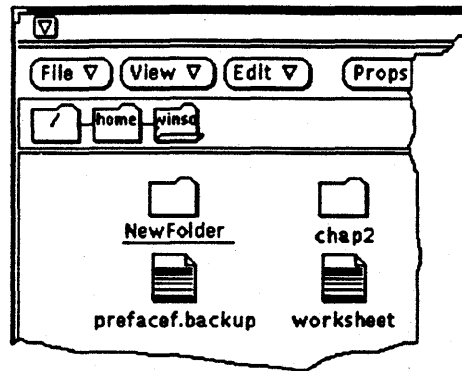
Figure 2-18 File menu with Create Folder highlighted



4. Release MENU.

An empty file called either `NewDocument` or `NewFolder` is created in the folder pane. Subsequent new documents or folders are numbered in sequence. For example, if a file called `NewDocument` already exists when you create a document, the new file will be called `NewDocument 2`. The name of the new document or folder is underlined when it is first displayed, which means it is ready to be renamed. Figure 2-19 shows a new folder in the folder pane.

Figure 2-19 A new folder in the folder pane



Naming a Document or Folder

When the name of a file or folder is underlined, the name is an editable text field. You can change the name of any folder or file by double-clicking SELECT on its name to select it and display an editable text field. You can edit the contents of this text field in the same way you edit any other text field. When you have changed the file name, press Return or click SELECT on the background of the folder pane. You can change properties of the file, including its name, using the File Properties window. See “File and Folder Properties” later in this chapter for more information.

2.3 Copying and Moving Files

You can copy and move icons that are displayed in the folder pane in two ways:

- Using drag and drop
- Using the clipboard

Drag and Drop

Using drag and drop, you can copy and move files to the following destinations:

- Into folders in the folder or path pane of the File Manager
- Onto the background of the folder pane of the File Manager
- Onto the Wastebasket icon or window
- Onto the Text Editor icon or window
- Onto the Mail Tool Compose icon or window
- Onto Print Tool or Tape Tool icons or windows
- Onto the Icon Editor icon or window
- Onto the workspace

To copy or move files using drag and drop, follow these steps:

1. Select the file or files you want to copy or move.
2. Move the pointer onto one of the selected files. To copy, press the Control key and SELECT. To move, press SELECT.

3. Drag the file or group of files so the hot spot of the pointer (the tip of the arrow) is on the destination object.
4. Release SELECT.

The Clipboard

You can copy or move files within the File Manager using the clipboard and the cut/copy/paste commands. Cut/copy/paste commands are provided on the Edit menu, the Folder Commands pop-up menu, and as function keys on the keyboard. When you cut material, it is not deleted. It is put on a clipboard, where it is stored temporarily. Only one item or group of items is stored on the clipboard at a time, so if you do another cut without using what is on the clipboard, the previous information is lost.

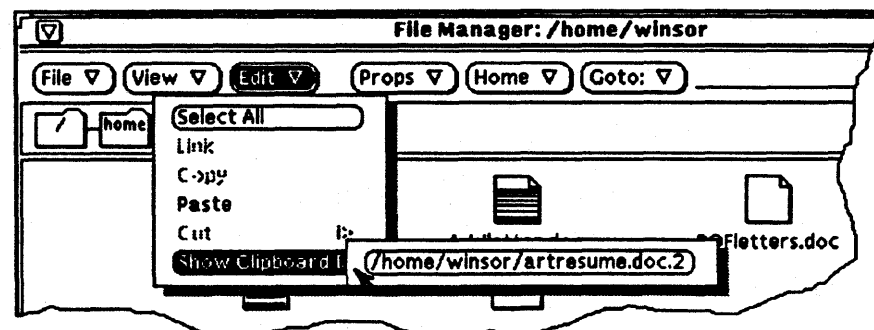
To copy or move files within the File Manager using the clipboard, follow the steps below:

1. Select the file or files you want to copy or move.
2. To copy the selected files, choose Copy from the Edit menu or press the Copy key on the keyboard to put the reference file name(s) on the clipboard.
3. To move the selected files, choose Cut from the Edit menu or press the Cut key on the keyboard to put the reference file name(s) on the clipboard.
4. Change to the folder where you want to copy or move the files.
5. Choose Paste from the Edit menu or press the Paste key on the keyboard to put the reference file name(s) from the clipboard into the folder.

NOTE *The File Manager puts a reference file name on the clipboard, not the entire contents of the file. When you paste the reference file name into the File Manager, the entire file is inserted. When you choose paste elsewhere on the workspace, only the name of the file is inserted from the clipboard.*

If you are not sure what is on the clipboard, you can view the contents at any time by using the Show Clipboard item on either the Edit or the Folder Commands pop-up menu. The submenu displays the first 30 characters of the contents of the clipboard, as shown in the example in Figure 2-20.

Figure 2-20 An example of the submenu for Contents of the Clipboard



NOTE *The following sections show some specific examples of moving files. You perform copying operations in the same way except that you use the Control key together with SELECT for drag and drop, and use Copy instead of Cut for clipboard operations.*

Moving Files and Folders Using Drag and Drop

This section shows examples of moving files and folders into another folder, onto an icon, and onto the workspace.

Moving Files and Folders Within File Manager

To move a file or folder into another folder within the File Manager when both the source and destination icons are visible, follow these steps:

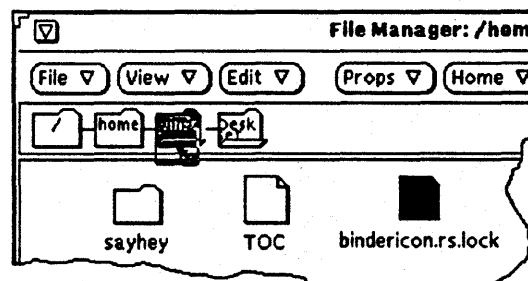
1. Click **SELECT** on a file or folder icon that you want to move.

The icon is selected. If you want to move a group of files or folders, click **ADJUST** on individual icons to add them to the group. If the icon is already selected, clicking **ADJUST** deselects it, removing it from the group.

2. With the pointer on the icon, Press **SELECT** and drag the pointer onto the destination folder.

The Move pointer is displayed. The tip of the arrow is the hot spot that defines the destination of the move operation. When the folder accepts input, it highlights and opens, as shown in the example in Figure 2-21. If the folder cannot accept the file, it displays a lock.

Figure 2-21 Moving a file to folder



3. Release **SELECT**.

The file or folder is moved to the new folder.

Moving a File onto an Application Outside of the File Manager

You can move a file onto another application outside of the File Manager regardless of whether the application is displayed as an icon or as an open window. When you drop a file onto an icon, the file is loaded into the application, but is not displayed until you open the icon. If you drop a file with an inappropriate format on an icon, the move is not performed. When you drop a file onto the window of an application, the file is loaded into the application.

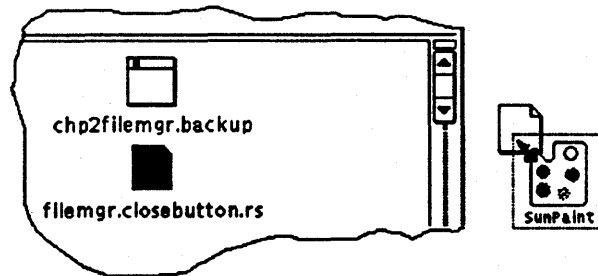
As a guideline, the following list describes the data formats that can be accepted for DeskSet applications:

- The Wastebasket accepts any data type.
- The Text Editor accepts ASCII file formats.
- Mail Tool Compose accepts ASCII file formats, and can encode any other file formats (such as raster or PostScript™) so that you can send them as part of an electronic mail message. When you drop any file onto the Mail Tool Compose window, a Notice is displayed asking you how you want the file to be handled. When you choose to encode a file, an "(E)" is automatically inserted at the beginning of the Subject field to show both the sender and the recipient that the message contains encoded files.
- Print Tool (duplicate copy only) accepts any file format that has an appropriate print script bound to it. You can specify a file format, a script, or a filter from the Print Tool window. See Chapter 6 for more information about the Print Tool.
- Tape Tool (duplicate copy only) accepts any file format.
- Icon Editor accepts any file in icon format.

Follow these steps to move a file onto an icon:

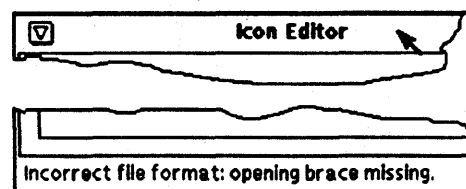
1. Click SELECT on the data file icon in the File Manager that you want to move.
2. Drag the file onto the icon on the workspace, as shown in Figure 2-22.
3. Release SELECT. The file is loaded into the application.

Figure 2-22 Moving a file onto an icon on the workspace



If the application cannot accept the file format, the file is not moved. When you drop an icon of an incompatible file type onto an open window, an error message is displayed in the footer of the destination window. In the example shown in Figure 2-23, a file that is not an icon was dropped onto the Icon Editor.

Figure 2-23 An error message that an inappropriate file has been dropped on an icon



Moving a Data File Icon onto the Workspace

You can move individual data file icons from the File Manager onto the workspace. When you drop the icon onto the workspace, it starts the appropriate application, displays it as an icon, and loads the file.

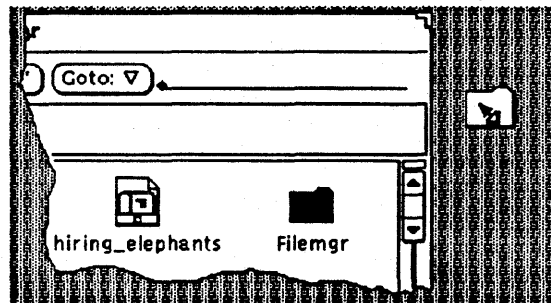
Moving a Folder onto the Workspace

You can move individual folders from the File Manager onto the Workspace. When you drop the folder onto the workspace, it is opened, and the contents of the folder are displayed in a pop-up window. If you switch frequently between directories, you can use this feature to display the contents of more than one folder at a time.

To move a folder onto the workspace, follow these steps:

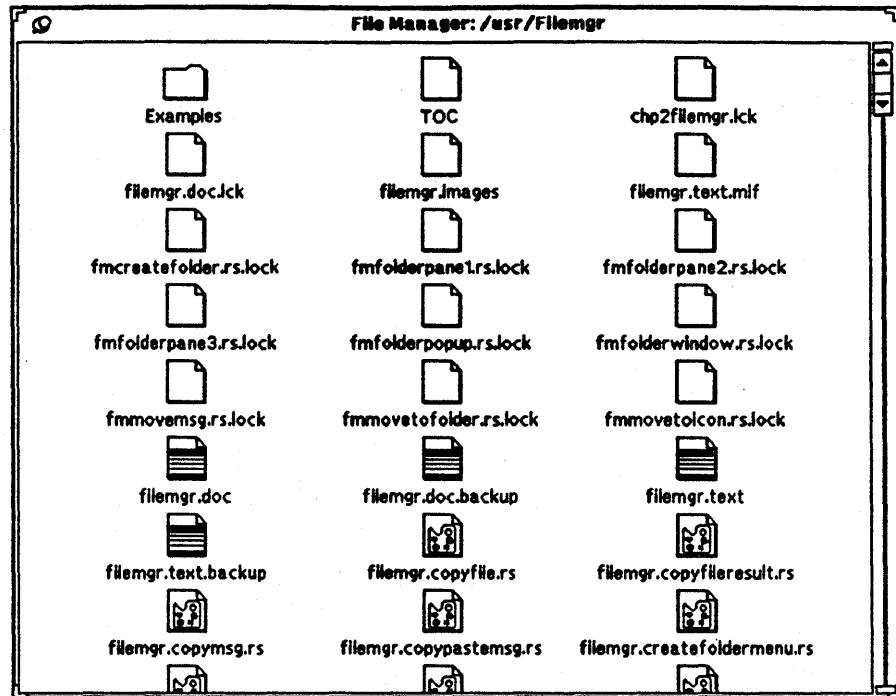
1. Click **SELECT** on a folder to select it.
2. Press **SELECT** and drag the folder onto the workspace background, as shown in Figure 2-24.

Figure 2-24 Dragging a folder onto the workspace



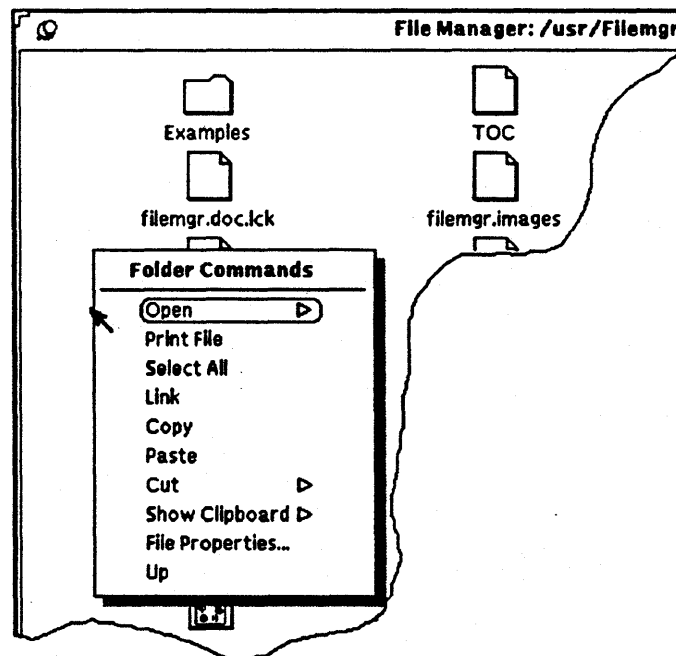
3. Release **SELECT**. The window is opened, and the contents displayed, as shown in the example in Figure 2-25.

Figure 2-25 A folder pop-up window



The folder pop-up window has a Folder Commands pop-up menu, shown in Figure 2-26, that you can use to operate on the contents of this folder.

Figure 2-26 The Folder Commands pop-up menu



The items on the Folder Commands menu are a subset of the commands you can access from the File Manager control area, and work in the same way as those commands.

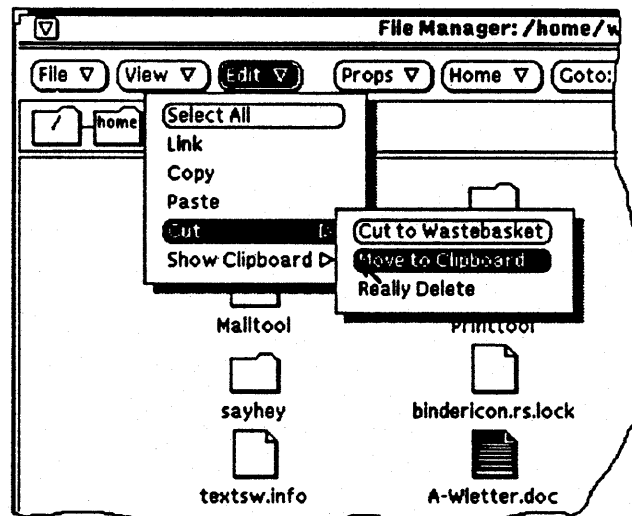
Moving Files and Folders Using Cut and Paste

To move folders and data files using the clipboard, follow the steps below:

1. Click **SELECT** on the file or folder to be moved to select it.
2. Move the pointer to the **Edit** button and press **MENU**.
3. Highlight **Cut** and drag the pointer to the right to display the **Cut** submenu.
4. Highlight **Move to Clipboard**, as shown in Figure 2-27.

NOTE If you choose *Cut to Wastebasket* the files are moved to the *Wastebasket* window. If you choose *Really Delete* the files are permanently removed from your system.

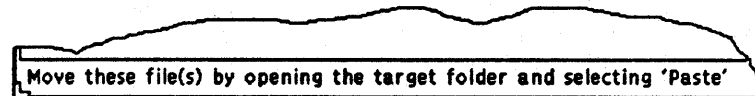
Figure 2-27 Starting a Move with Cut from the File Menu



5. Release **MENU**.

An instruction message is displayed in the footer, as shown in Figure 2-28.

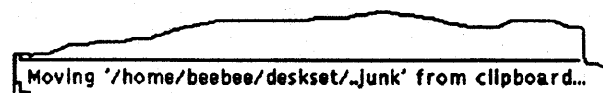
Figure 2-28 Information message when files are on the clipboard



6. Open the folder you want to receive the files.
7. Choose **Paste** from the **Edit** menu, the **Folder Commands** pop-up menu, or press the **Paste** key on the keyboard.

While the operation is in progress, an information message is displayed in the footer. Figure 2-29 shows an example of this message.

Figure 2-29 Information message while paste is in progress



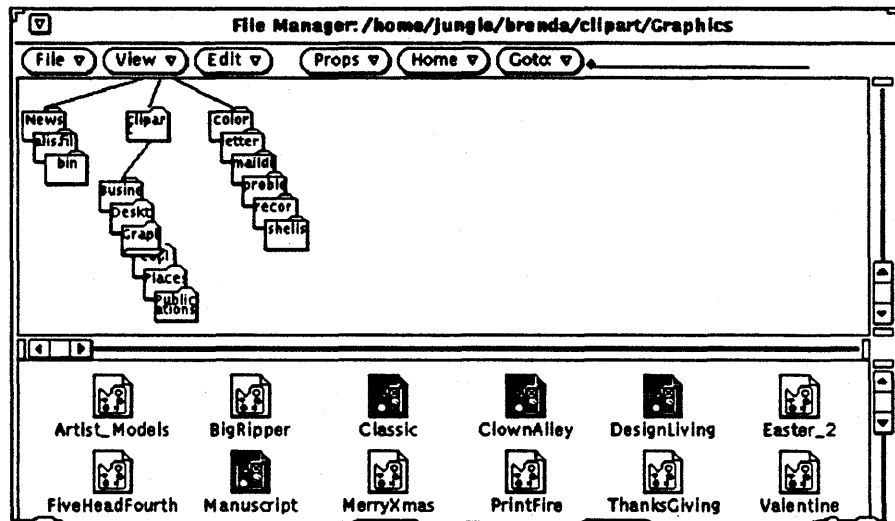
Moving and Copying Multiple Files

You can move or copy more than one file at a time to a common location using either drag and drop or the clipboard. To move or copy files using drag and drop, follow these steps:

1. Click **SELECT** to highlight the first file and then click **ADJUST** on each additional file that you want to include in the group. (Click **ADJUST** on a highlighted file to deselect it, removing it from the group).

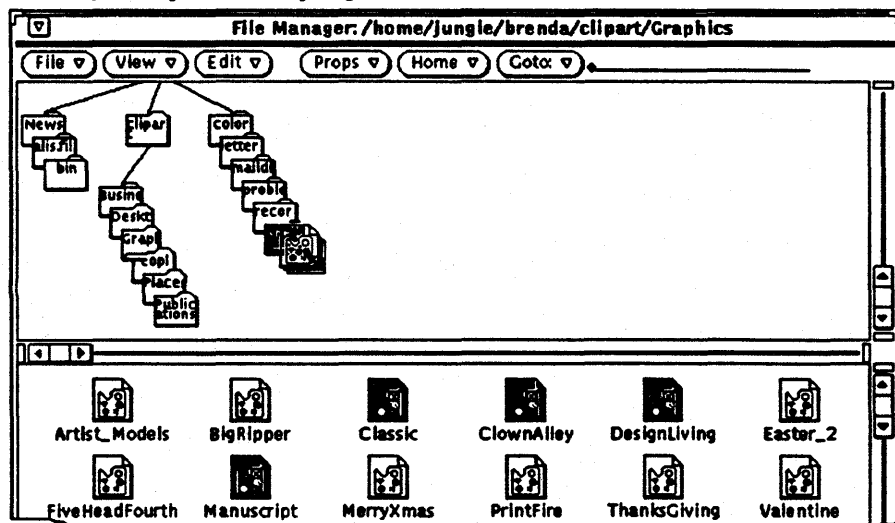
Figure 2-30 shows an example of a group of selected files.

Figure 2-30 Files highlighted for moving



2. To move, press **SELECT** on one of the highlighted files. To copy, press the **Control** key and then press **SELECT** on a highlighted file. Drag the file on top of the receiving folder, as shown in the example in Figure 2-31.

Figure 2-31 Move of multiple files in progress



The hot spot of the pointer specifies the destination folder for moving all of the selected files. All of the highlighted files move together.

3. Release SELECT and all the files will be placed in the folder.

You can also move or copy multiple files by using cut/copy/paste commands in the same way you use them to move or copy one file. To do this, follow these steps:

- 1. Select the files to move or copy by clicking SELECT to highlight the first file and then clicking ADJUST on each additional file you want to include.**
- 2. Choose Cut or Copy from the Edit menu as described in “Moving Files and Folders Using Cut and Paste”, or use the Cut or Copy keys on the keyboard.**
- 3. Open the folder where you want to put the files.**
- 4. Choose Paste from the Edit menu, or move the pointer into the folder pane and press the Paste key on the keyboard.**

The selected files are copied or moved into the new folder.

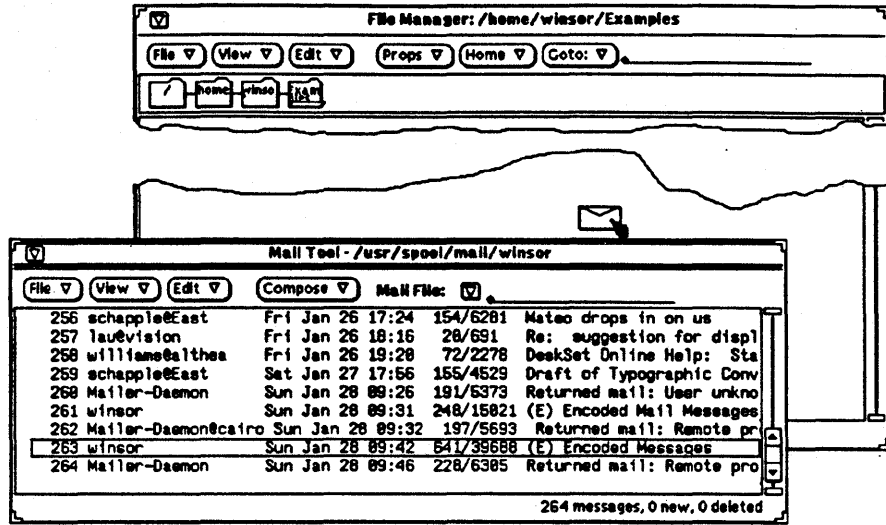
Copying or Moving Encoded Mail Messages onto File Manager

As mentioned previously, you can encode files by dragging and dropping them onto the Mail Tool Compose window. When you receive a mail message that contains encoded files, as shown by the “(E)” at the beginning of the subject line, you can decode them by dragging and dropping them onto the File Manager, as described in the following steps:

- 1. Open both the File Manager and Mail Tool windows.**
- 2. Open the folder in the File Manager where you want to put the encoded mail message(s).**
- 3. In the Mail Tool application, click SELECT on the header of the mail message that contains the encoded files.**
- 4. Press SELECT to move or press the Control key and SELECT to copy, and drag the pointer.**

A small envelope is displayed, as shown in Figure 2-32. You can release the Control key any time after the envelope is displayed.

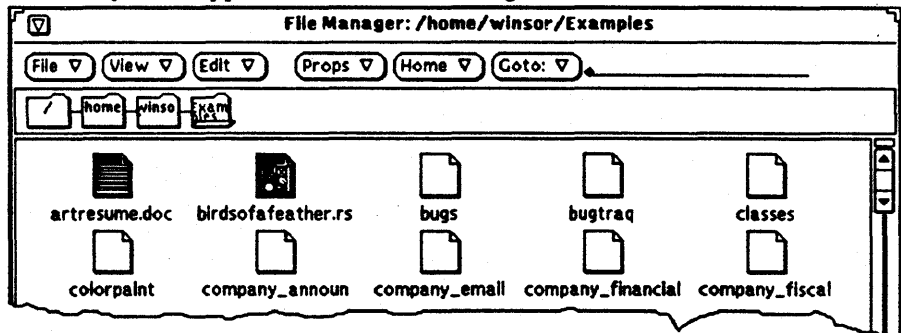
Figure 2-32 Dragging a mail message with encoded files



5. Drag the pointer onto the folder pane of the File Manager and release SELECT.

The mail message is decoded, and icons representing the encoded files are displayed and selected in the folder pane of the File Manager. In the example shown in Figure 2-33, two encoded files were included in the mail message, `artresume.doc` and `birdsofafaether.rs`.

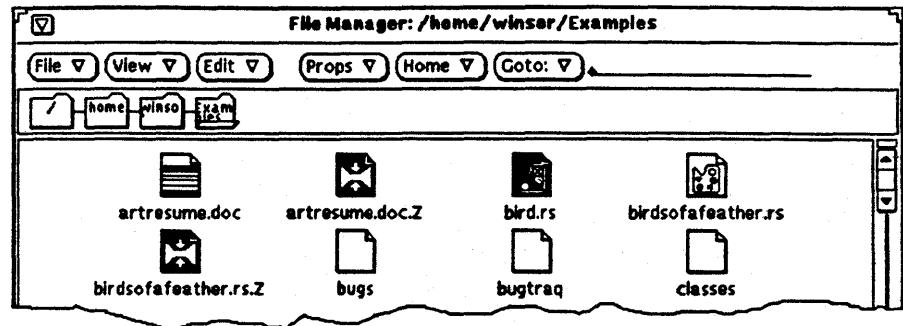
Figure 2-33 Decoded files dropped onto the File Manager



If you drop another message containing the same files, the files are not decoded because this would overwrite the existing files. Instead, the files are displayed with a *compress icon* and a `.Z` suffix is added to the file name. The compress icon shows two arrows compressing the data in a file.

In the example shown in Figure 2-34, three encoded files were included in a dropped mail message. The file `bird.rs` is decoded, displayed as an icon, and selected. The other two files `artresume.doc` and `birdsofafaether.rs` were already present in the `Examples` folder and did not overwrite the existing files. They therefore appear in the File Manager as encoded files.

Figure 2-34 Encoded files in the File Manager



Opening Encoded Files

To use an encoded .Z file that has the same prefix as an existing file, you must first rename one of the files. If you rename the encoded file, make sure to keep the .Z suffix. The first time you open the .Z file, File Manager uncompresses it. Then when you open the uncompressed file, File Manager starts up the appropriate application to display and edit the file.

If you try to open a .Z file that still has the same prefix as another file (for example, artresume.doc.Z in Figure 2-34), you get the following error message in the Console window:

```
<filename> already exists; not overwritten.
```

2.4 Printing Files

You can print files from the File Manager in two ways:

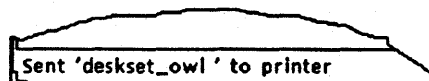
- ❑ Select files in the folder pane and drag and drop them onto the Print Tool application. Files are printed using the default print instructions bound to the icon. See Chapter 6 for more information about using the Print Tool and Chapter 12 for information about print bindings.
- ❑ Select files in the folder pane and choose Print File from the File menu, as shown in Figure 2-35. The Print item is inactive unless files are selected. Files are printed using the default print script that you specify from the File Manager Tool Properties window. See "Customizing Your File Manager" later in this chapter for information about tool properties.

Figure 2-35 Highlighting Print File in the File menu



When you print files from the File Manager, an information message is displayed in the footer, as shown in the example in Figure 2-36.

Figure 2-36 Example of message after file sent to Printer



2.5 Finding Files and Folders

The File Manager provides two ways to locate folders and files in your file system:

- The Goto text field and button
- The Find pop-up window

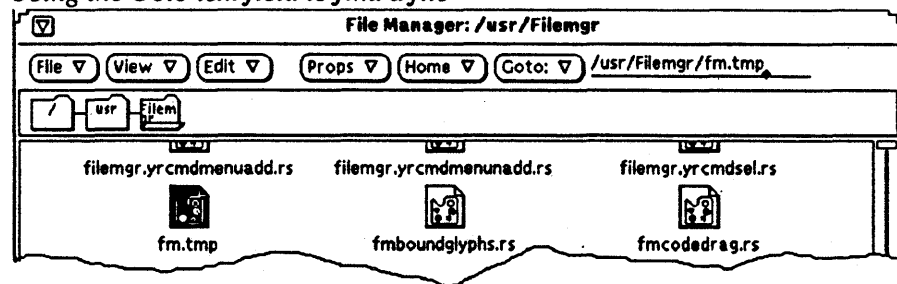
This section describes how to use these methods to find folders and files.

Using the Goto Text Field and Button

When you know the path of the folder you want to open or the path and file name of a specific data file that you want to select, you can type the path or the path and filename in the Goto text field, and either press Return or click SELECT on the Goto button.

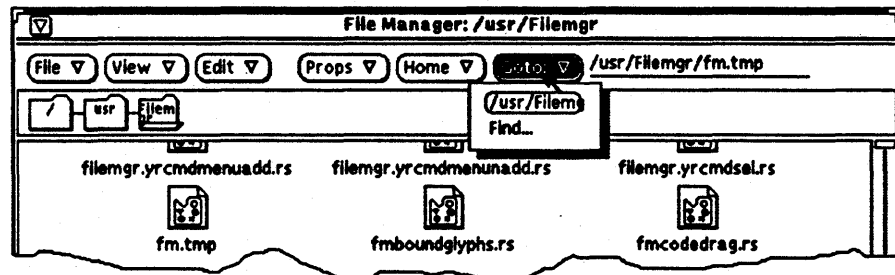
When you type a path, the folder you specify is opened and its contents are displayed in the folder pane. When you type a path and file name, the folder you specify is opened, its contents are displayed in the folder pane, and the file name is located, scrolled into view, and selected, as shown in the example in Figure 2-37.

Figure 2-37 Using the Goto text field to find a file



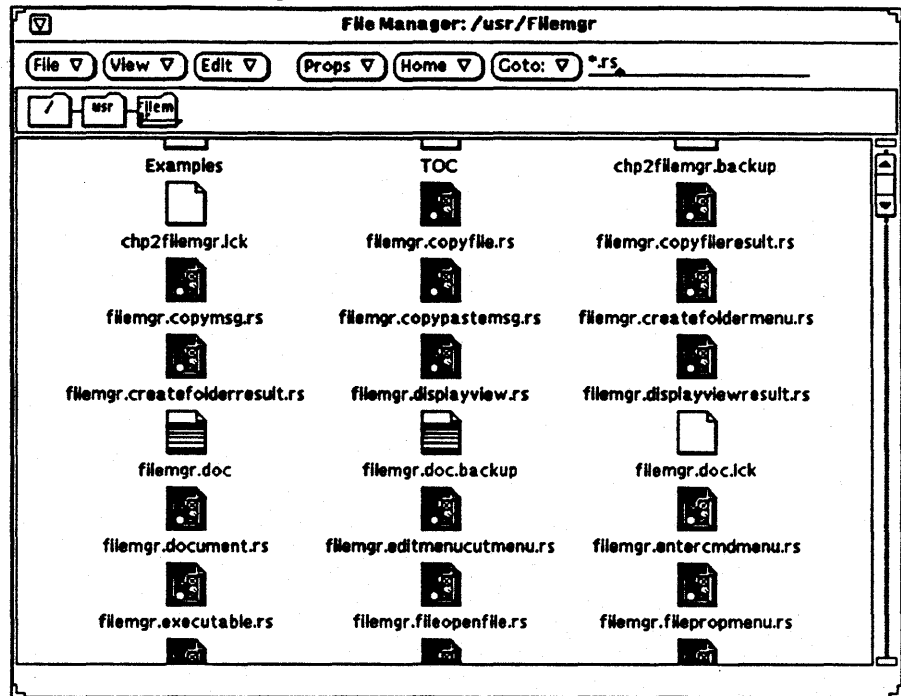
When you use the Goto text field to locate a file or directory, the information in the text field is displayed on the Goto menu. If you change your location in the file system, you can quickly return to that folder or file by clicking SELECT on the Goto button. When the text field is empty, clicking on the Goto button does not change your location in the file system. Figure 2-38 shows an example of an item on the Goto menu.

Figure 2-38 Goto menu with the most recently used destination



You can use wildcard characters to select groups of related files in the currently-displayed folder pane by typing a pattern-matching sequence. For example, the symbol * can be used to match any string, so typing *.rs in the Goto text field and either pressing Return or clicking SELECT on the Goto button will select all files ending in .rs. Figure 2-39 shows an example of a folder pane with all *.rs files selected.

Figure 2-39 Using pattern matching with Goto to select related files

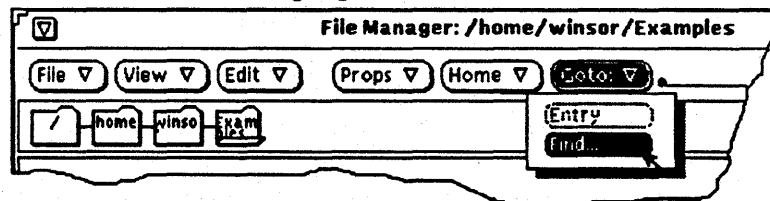


Using the Find Pop-up Window

When you do not know or cannot remember the specific location of a folder or file, or when you want to locate a group of files according to specific criteria, use the Find pop-up window. To display the Find window, follow these steps:

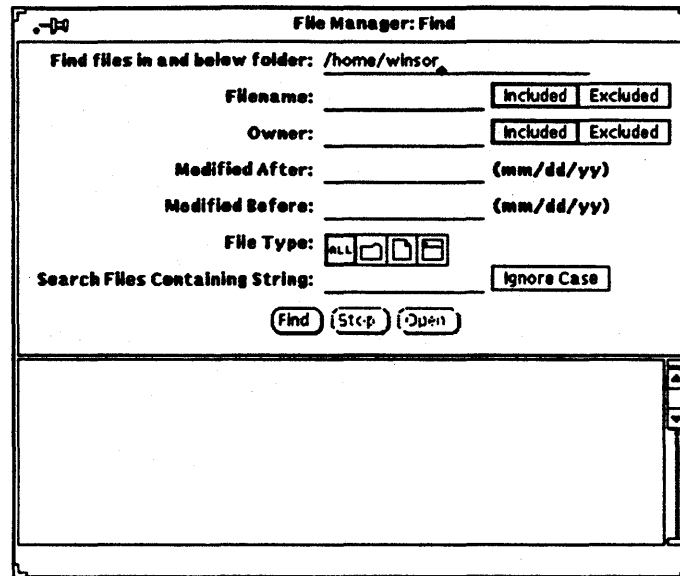
1. Move the pointer to the Goto button and press MENU.
2. Highlight Find, as shown in Figure 2-40.

Figure 2-40 Goto menu with Find highlighted



3. Release MENU. The Find pop-up window is displayed, as shown in Figure 2-41.

Figure 2-41 Find window



The Find window contains controls that allow you to perform the following kinds of searches:

- Search by specific file name.
- Search for file names by pattern matching, using wildcard characters.
- Include or exclude a specific file name or pattern from the search.
- Include or exclude a specific owner from the search.
- Find files that were modified either before or after a date that you specify.
- Search by specific file type.
- Search for files containing a specific text string (a word or phrase) that is either case sensitive or case insensitive. This feature uses the UNIX `grep` command.

Finding Files

To find a specific file or group of files, you can fill in some or all of the text fields, according to the type of search you want to perform.

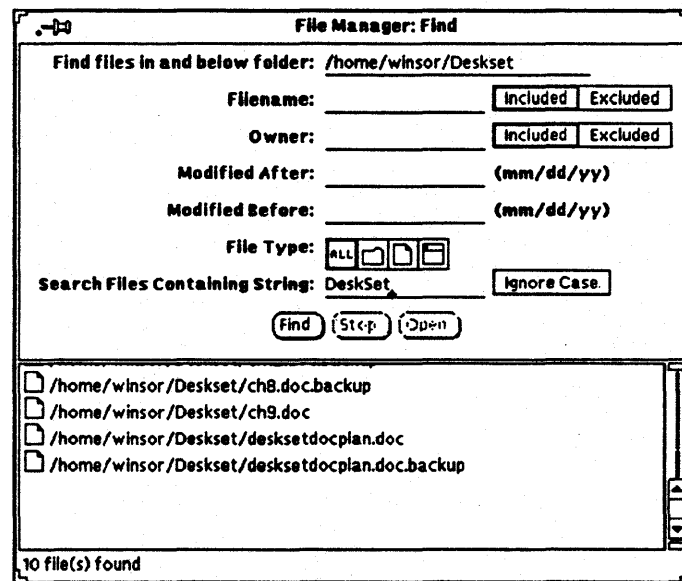
- Use the Find files in and below folder text field to specify where in your file system you want to start the search. The search begins in the folder you specify in this text field, and includes all subfolders in that path.
- Use the Filename text field to specify the file name or pattern you want to match. Use Included or Excluded to either include or exclude the pattern from the search.
- Use the Owner text field when you want to search for files by owner, or exclude a particular owner from the search.
- Use the Modified After and/or Modified Before text fields to specify a time frame for the search. You must specify, as a minimum, the month and day for each of these text fields.

- Use the File Type settings to specify whether you want to search all file types, only folders, only data files, or only executable files.
- Use the Search Files Containing String field when you want to find files with specific contents. For example, to find all files in which the DeskSet product is specifically named, you would type `DeskSet` in the text field. If you click **SELECT** to turn on the Ignore Case setting, all files with the word “DeskSet” will be listed in the scrolling list, regardless of how the word is capitalized.

When you have filled in the text fields, click **SELECT** on the Find button to start the search. Once you start a search, the Stop button is activated. You can stop the search at any time by clicking **SELECT** on the Stop button.

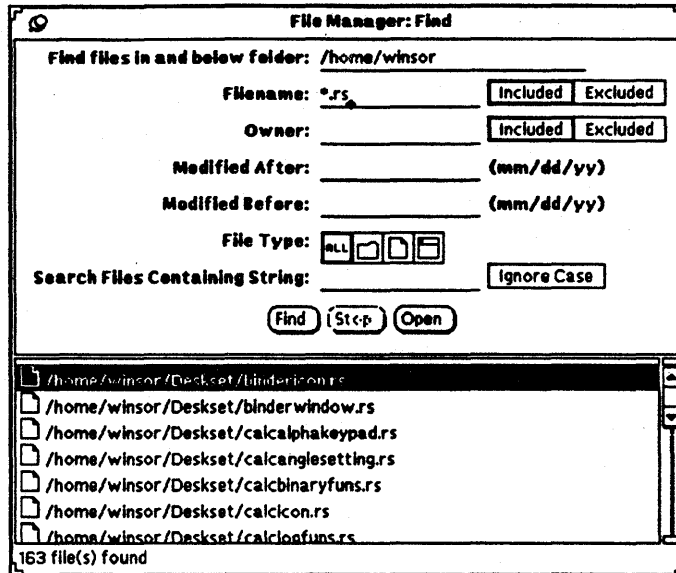
When the search is completed, all files that match the pattern are displayed in the scrolling list at the bottom of the Find window. Figure 2-42 shows an example of a file content pattern matching search. File Manager found 10 files containing the specified string.

Figure 2-42 An example of a find



You can select and open one file at a time from the Find window scrolling list. To select a file, move the pointer onto the line and click **SELECT**. The line is highlighted, and the Open button is activated, as shown in the example in Figure 2-43. To open the highlighted file, click **SELECT** on the Open button.

Figure 2-43 Opening a file from the Find window



2.6 Using the Wastebasket

The Wastebasket is a temporary storage area for files that you want to discard and that you probably will delete from your file system. When you start the File Manager, the Wastebasket is automatically opened and displayed as an icon, as shown in Figure 2-44. The default position for the Wastebasket icon is the lower right corner of the workspace. You can move this icon anywhere you want on the workspace, or quit it if you do not intend to use it.

Figure 2-44 The empty Wastebasket icon



You can move folders and files to the Wastebasket by selecting them and dragging and dropping them onto the Wastebasket icon or window, or by cutting them to the Wastebasket from the Edit menu.

Files that you put in the Wastebasket are stored in a `.wastebasket` folder in your home directory. After you have put a file in the Wastebasket, the Wastebasket icon's appearance is changed to remind you that at least one file is there.

Figure 2-45 shows the Wastebasket icon when there are files in the Wastebasket.

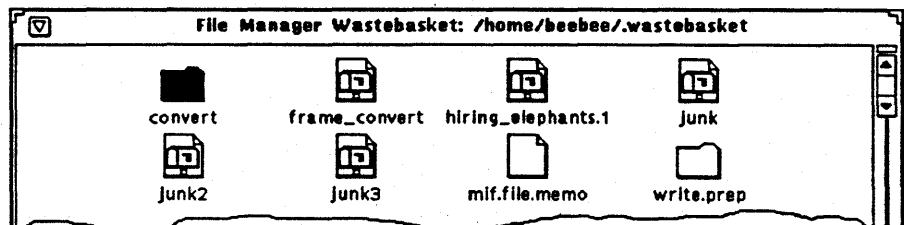
Figure 2-45 The Wastebasket icon when it contains files



The Wastebasket can hold up to 100 files before you must empty it. If the Wastebasket becomes full, a message warns you that you must empty it before you can add any more files.

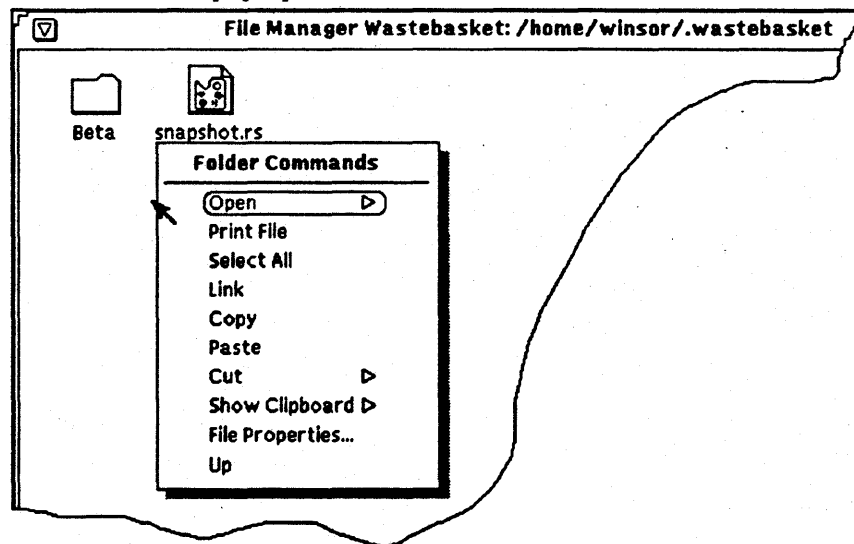
You can view the contents of the Wastebasket by opening the Wastebasket icon. A base window is displayed with a scrolling pane that shows you the files you have moved to the Wastebasket. Figure 2-46 shows an example of some files in a Wastebasket window.

Figure 2-46 The Wastebasket window



The Wastebasket window has the standard Folder Commands pop-up menu, shown in Figure 2-47, that you can use to operate on the files in the Wastebasket.

Figure 2-47 The Wastebasket pop-up menu



Creating a New Wastebasket

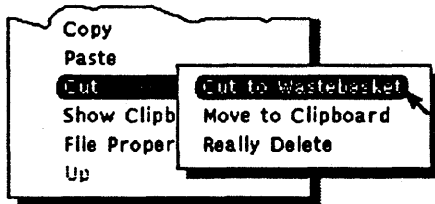
If you quit the Wastebasket window, you can create a new one by following these steps:

1. In the File Manager, select a folder or file that you want to put into the Wastebasket.

2. From the Edit menu, highlight Cut.
3. Drag the pointer to the right to display the Cut submenu, highlight Cut to Wastebasket, as shown in Figure 2-48, and release MENU.

A new Wastebasket is created to contain the files you selected.

Figure 2-48 Highlighting Cut to Wastebasket



Undeleting Files and Folders

You can move or copy files from the Wastebasket window in the same way that you move or copy files in the File Manager. As long as you have not chosen Really Delete from the Folder Commands Cut submenu, your files are accessible to you. You can move or copy them back into the File Manager using drag and drop or the clipboard.

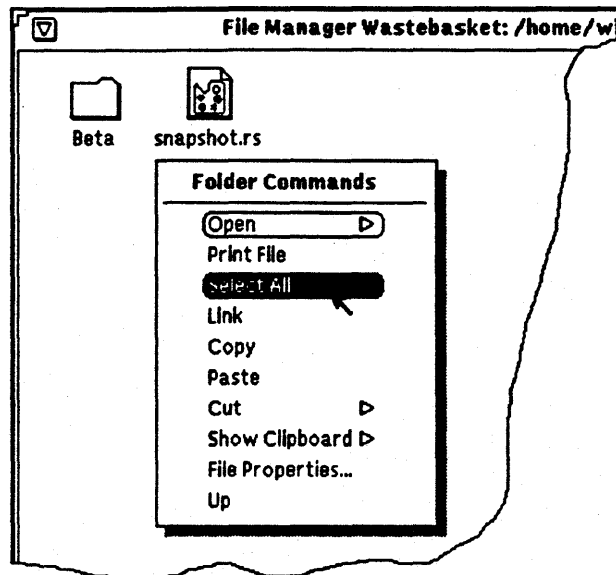
Emptying the Wastebasket

To empty the Wastebasket, follow these steps:

1. Open the Wastebasket window.
2. Move the pointer into the pane and press MENU to display the Folder Commands menu.
3. Highlight Select All, as shown in Figure 2-49, and release MENU.

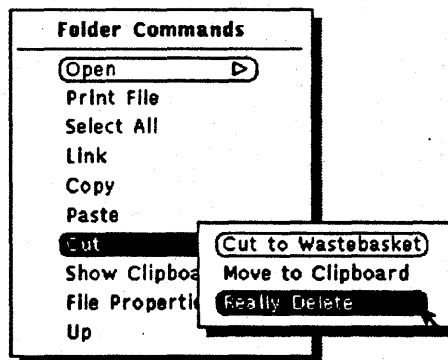
All of the folders and files in the Wastebasket are selected.

Figure 2-49 Folder Commands in the Wastebasket Window



4. Press MENU again to display the Folder Commands menu.
5. Highlight Cut and drag the pointer to the right to display the Cut submenu.
6. Highlight Really Delete, as shown in Figure 2-50.

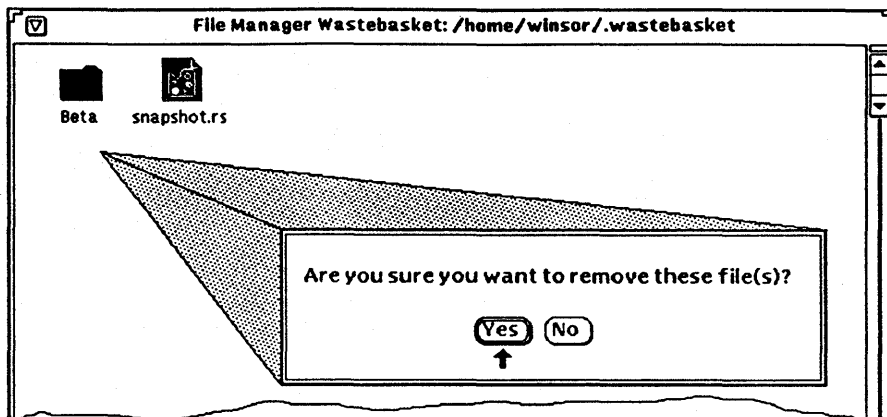
Figure 2-50 Wastebasket menu with Really Delete highlighted



7. Release MENU.

As a safeguard to be sure you intended to delete these files, the File Manager displays a confirmation Notice, as shown in Figure 2-51.

Figure 2-51 Wastebasket confirmation Notice for deleting files



If you click SELECT on Yes, all the selected items in the window are deleted, and the Wastebasket is emptied.

Caution: You cannot recover any files that you delete with Really Delete.

2.7 Linking Files

A *link* is a symbolic connection or pointer to a single file that allows you to access it from more than one directory. You can set up a link to a file in a restricted directory, allowing access to the file without providing access to the directory.

The Link command on the Edit menu executes the standard `ln` operating system command. A symbolic link is created when you link files between directories. When you link files in the same directory, a hard link is created. Refer to the man page for `ln` for a complete description.

For example, if you have a file named `Thin_man` in a folder called `Hammett`, you can link it to another folder called `Myrna_loy`. Once the link is established, you can access `Thin_man` from either folder. `Thin_man` has not been *copied* into `Myrna_loy`; it is *linked* with a pointer from one folder to another.

Any editing changes you make to a file with links are reflected in all of the folders, since there is really only one file, not multiple copies of it.

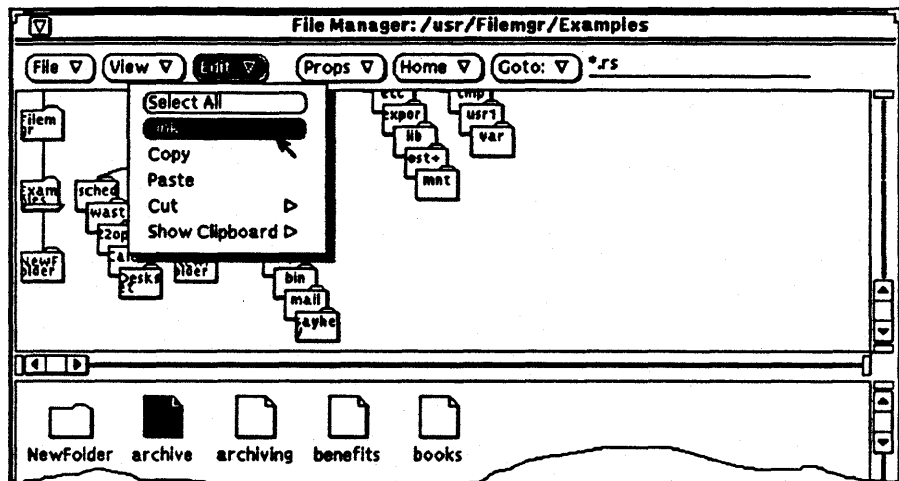
To use a linked file, you can drag and drop its icon from any folder it is linked to.

Creating a Link

To link files to folders, follow these steps:

1. Select the file (or files) you want to link.
2. Choose the Link command from the Edit menu, as shown in Figure 2-52.

Figure 2-52 Folder Commands menu with Link highlighted



An instructional message is displayed in the footer, as shown in Figure 2-53, telling you how to proceed.

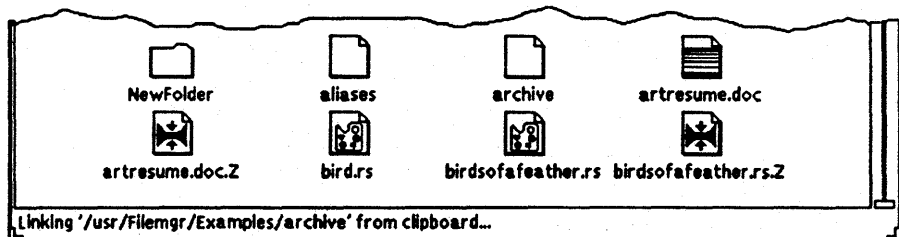
Figure 2-53 Instruction message after a link is initiated



3. Open the folder you want to link the file to.
4. Choose Paste from the Edit menu or the Folder Commands pop-up menu, or press the Paste key on the keyboard.

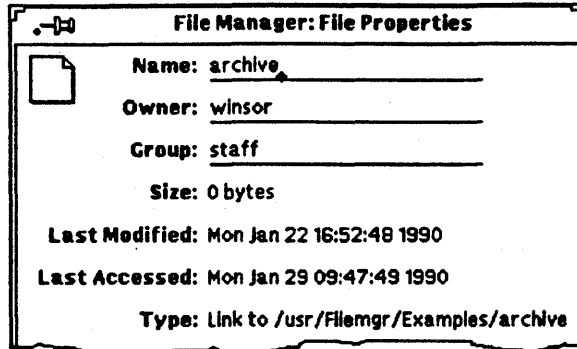
The file icon is displayed in the folder pane and a message confirming the link is displayed in the footer, as shown in the example in Figure 2-54.

Figure 2-54 An example of a link completion message



Link information is displayed as part of the properties of the file, as shown in the example in Figure 2-55. See "File and Folder Properties" later in this chapter for more information about file properties.

Figure 2-55 Links are displayed as part of the file type properties.

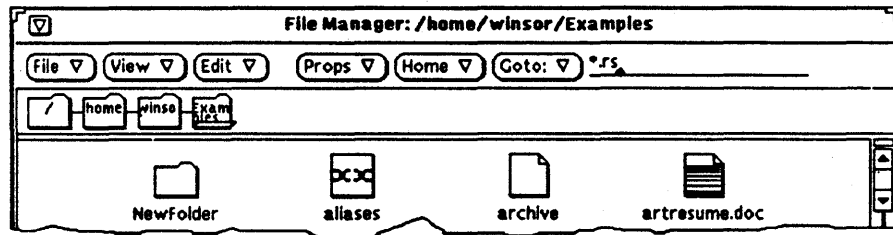


Removing a Link

You can remove a link by selecting the file and choosing Really Delete from the Cut submenu. Removing a link does not remove the original file.

If you remove the original file without also deleting the link, the icon for the link changes to display a broken chain. In the example shown in Figure 2-56, the original file named `aliases` has been deleted, but the linked file remains.

Figure 2-56 A broken link



2.8 Copying Files to Other Systems

If you are running the automounter, you can transfer files between systems in the same way that you move and copy files on your system. The `/net` folder contains all the machines on your local network.

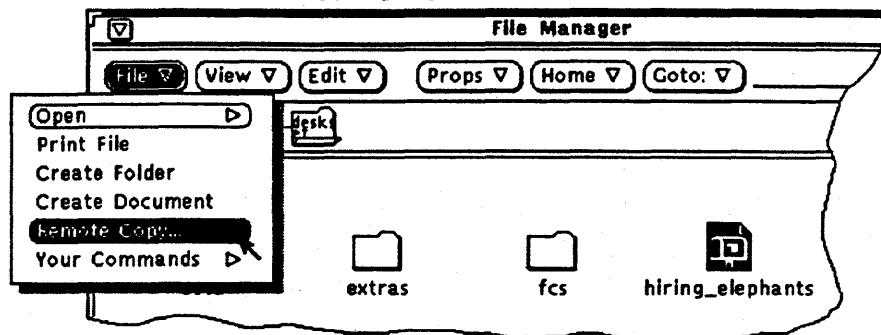
To find out if autmounter is running, in a Shell Tool or Command Tool type:

```
ps ax | grep automount
```

If the automounter is running, the system displays a message listing the process number and other information about automounter.

If you are not running the automounter, you can use the Remote Copy item on the File menu, shown in Figure 2-57, to execute the standard remote copy (`rcp`) operating system command, which allows you to transfer copies of files between systems. You can copy files from your system to another system, or from another system to yours, providing that the permissions and ownership of directories and files allow you to do so. See the `man` page for `rcp` for more information.

Figure 2-57 File Menu with Remote Copy highlighted

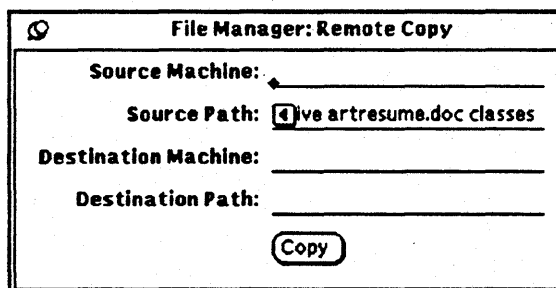


To transfer files from your system to another system, follow these steps:

1. Select the file or files you want to transfer.
2. Display the Remote Copy pop-up window by choosing Remote Copy from the File menu.

The file names are displayed in the Source Path field of the Remote Copy window, as shown in the example in Figure 2-58. The default for the Source Machine is your machine. It is not necessary for you to fill in the field if your machine is the correct Source Machine.

Figure 2-58 The Remote Copy pop-up window



3. Type in the name of the destination machine in the Destination Machine text field.
4. Type the destination path in the Destination Path text field.

In the example shown in Figure 2-59, two files, `artresuma.doc` and `classes`, will be copied to the `/tmp` directory on the machine named `shargola`.

Figure 2-59 An example of the Remote Copy window with entries in the fields

The screenshot shows a window titled "File Manager: Remote Copy". Inside the window, there are four text input fields arranged vertically. The first field is labeled "Source Machine:" and is empty. The second field is labeled "Source Path:" and contains the text "live artresume.doc classes". The third field is labeled "Destination Machine:" and contains the text "shargola". The fourth field is labeled "Destination Path:" and contains the text "/tmp". Below these fields is a button labeled "Copy".

5. Click SELECT on the Copy button to initiate the transfer.

While the transfer is in process, the Copy button displays the standard busy pattern. When the copy is complete, the Remote Copy window is dismissed unless you have pinned it.

To transfer files from another system to your system, you must know the path and file name of the files you want to transfer. To transfer a file from a remote machine to your machine, follow these steps:

1. Type the name of the remote machine in the Source Machine text field.
2. Type the path and file name of the file you want to transfer in the Source Path text field.
3. You can leave the Destination Machine field blank or type your machine name.
4. Type the path and file name for the file in the Destination Path text field.

If you want to change the name of the file as part of the transfer, type the new file name at the end of the path.

5. Click SELECT on the Copy button to start the transfer.

2.9 File and Folder Properties

Each folder and file in your file system has the following set of properties associated with it:

- Name
- Ownership
- Group
- Permissions (read, write, execute)

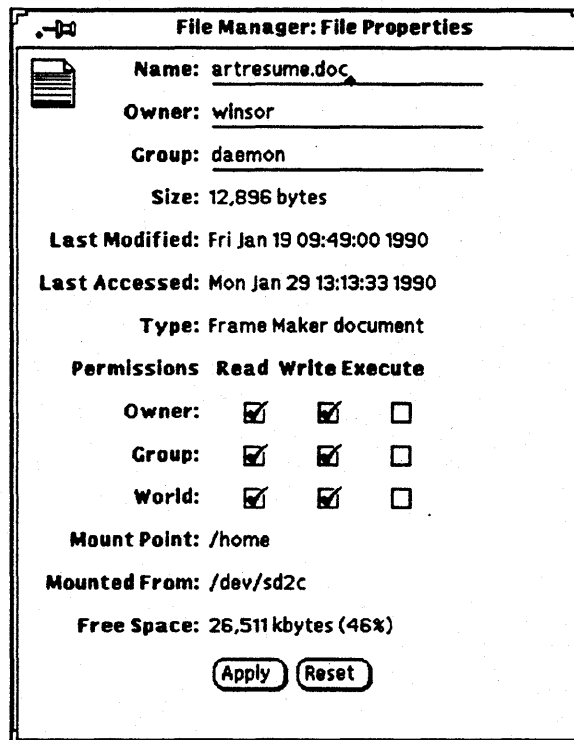
You can display these properties for an individual selected file using the File Properties pop-up window. You can change these properties if you own the file and have the correct permissions set.

The File Properties window also displays the following information about each file:

- Date the file was last modified
- Date the file was last accessed
- File type
- Mount point
- Mounted from
- Free space

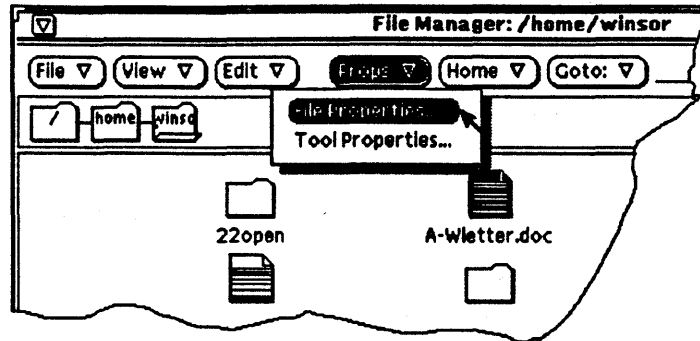
Figure 2-60 shows an example of a File Properties window.

Figure 2-60 An example of a File Properties window



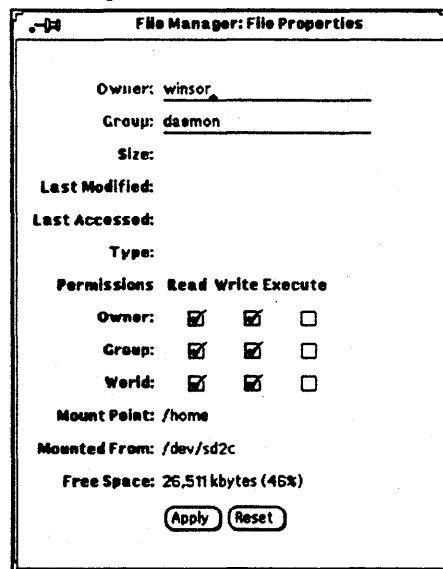
To display the File Properties window, select a file or a group of files and choose File Properties from the Properties menu, as shown in Figure 2-61, or from the Folder Commands menu. If you have not selected a file, the File Properties item is inactive.

Figure 2-61 The Properties menu



If you select more than one file, the File Properties window shows those properties that the selected files can share in common. Figure 2-62 shows an example of a File Properties window when multiple files are selected. The document names and specific document information are not displayed. You can change the permissions for the group of selected files to be the same by clicking SELECT on the check boxes to change the permissions and then clicking SELECT on the Apply button.

Figure 2-62 File Properties window



Changing Properties

Every file and directory has a security system organized around *permissions*. Permissions determine which users can read a file, write to (or change) it, or execute it (applications are executed). You must own the file to change its permissions. Users are categorized as owner, group, and world.

- Owner designates the owner of the file.
- Group designates the name of a specified group that can access the file.
- World allows access to anyone on your network.

You can change file properties for any file that you own. If you do not own the file, the write permissions determine whether you can access a file to change it.

To change file properties, type new information in the text fields. Click **SELECT** on a check box to either add or remove a check. The check boxes toggle between checked and unchecked.

When you have changed the properties, click **SELECT** on the **Apply** button to apply them. The changes take effect immediately.

You can change common properties on more than one file in the same way.

2.10 Customizing Your File Manager

You can customize your File Manager in the following ways:

- You can customize the tree display of folders in the path pane.
- You can set application-specific properties for the File Manager.
- You can create your own custom commands and add them to the **Your Commands** submenu that you access from the **File** menu.

These methods are described in the sections that follow.

Path Pane Display Options

The **View** menu contains commands that you can use to “prune” the tree view in the path pane so that it contains branches of the tree that are useful to you and suppresses other folders that you may not need to access.

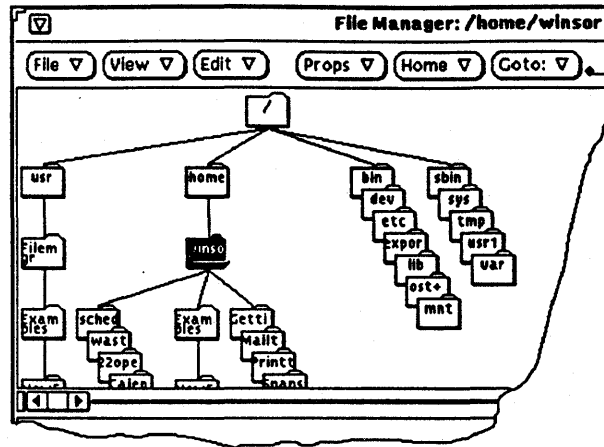
If you frequently move or copy files between folders, you may find that using the tree display allows you to perform more operations using drag and drop, since more folders can be displayed in the File Manager window with the **Tree** option than with the **Path** option.

When you display your path as a tree, you can choose the following options from the **View** menu:

- Hide Subfolders**
- Show All Subfolders**
- Begin Tree Here**
- Add Tree's Parent**

Subfolders are folders that are farther down the tree than the current folder. Figure 2-63 shows a tree that contains all folders from the root directory downward.

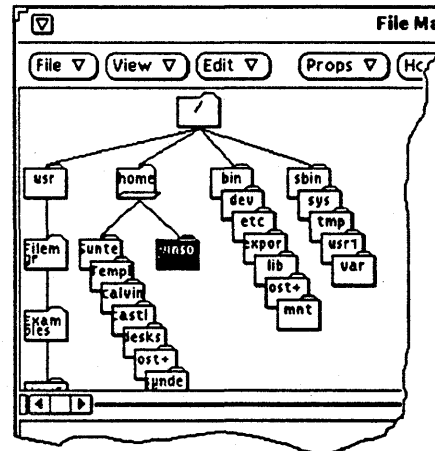
Figure 2-63 An example of a complete tree path



The following examples show a series of progressions, using each of the view modification commands from the View menu.

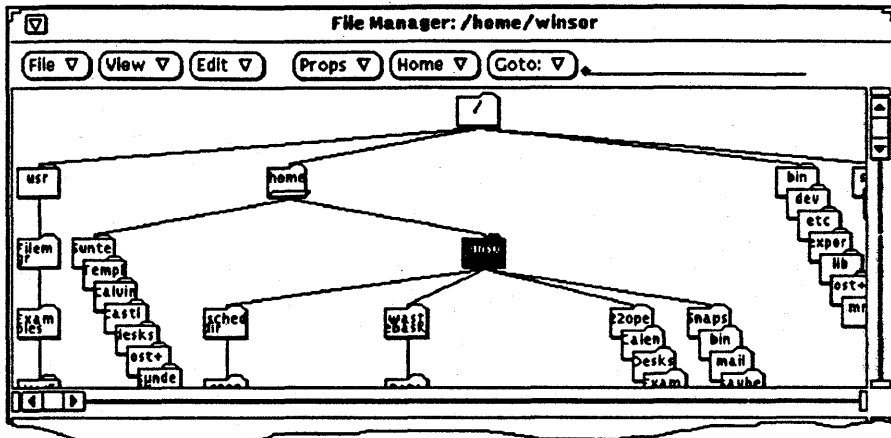
Clicking SELECT on the winsor folder and choosing Hide Subfolders results in the display shown in Figure 2-64. Compare that display with the one shown in Figure 2-63.

Figure 2-64 An example of hiding subfolders



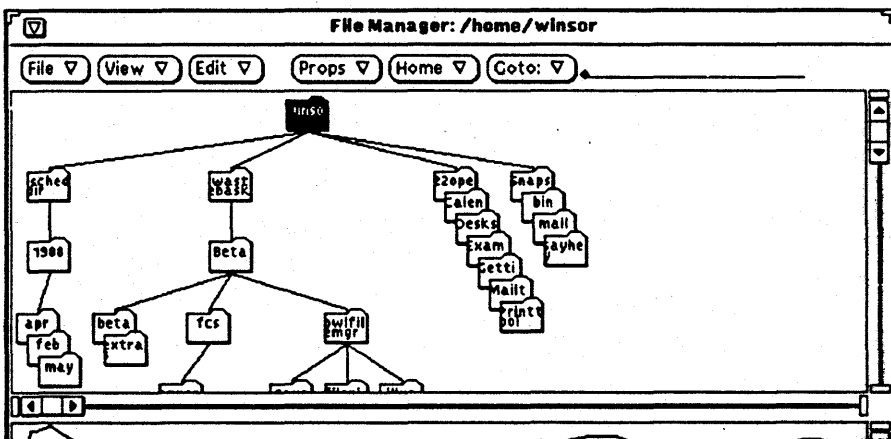
Choosing Show Subfolders without making any other changes to the display in the path pane produces the display shown in Figure 2-65.

Figure 2-65 An example of showing subfolders



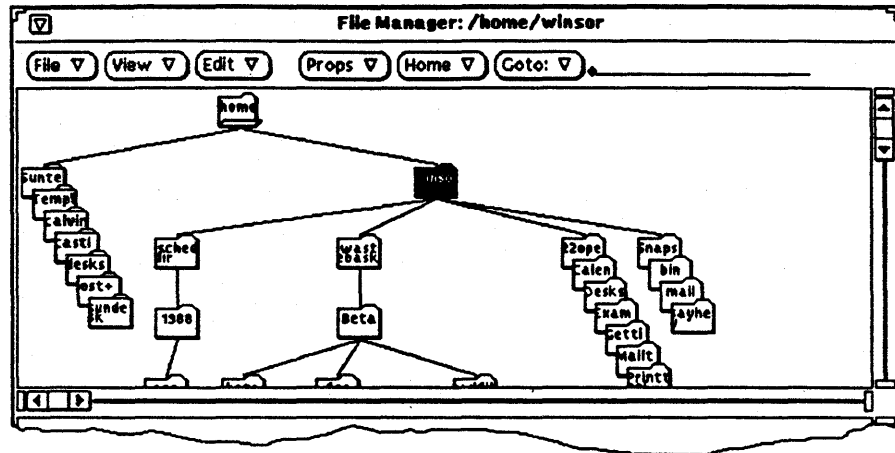
With the winsor folder selected, choosing Begin Tree Here changes the display as shown in Figure 2-66.

Figure 2-66 An example of changing the beginning point of the tree



Choosing Show Parent adds one folder farther up in the path, and its subfolders, as shown in Figure 2-67.

Figure 2-67 An example of adding a parent folder

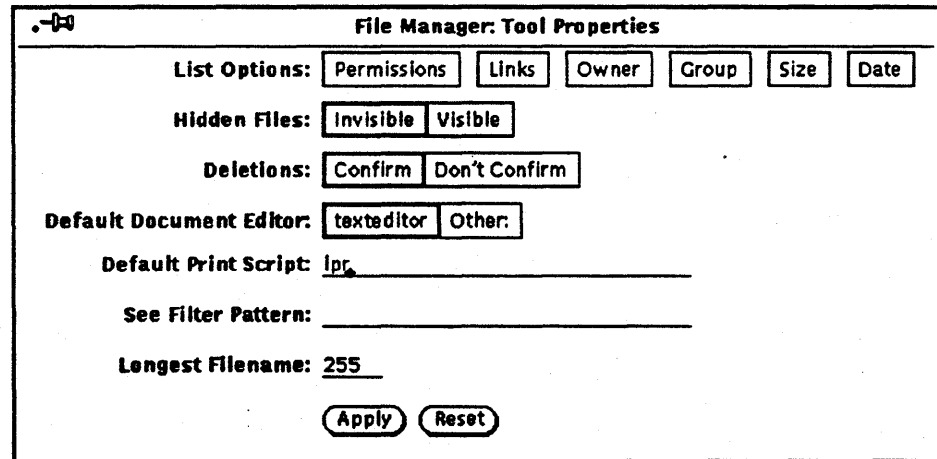


File Manager Tool Properties

You can change the way File Manger behaves and the way it presents certain information by changing controls in the Tool Properties window. To display the Tool Properties window, choose Tool Properties from the Properties menu or move the pointer onto the window background of the File Manager and press the Properties key on the keyboard.

The Tool Properties window is shown in Figure 2-68.

Figure 2-68 The Tool Properties window



When you have changed the desired file manager properties, click SELECT on the Apply button to record the changes. The tool property changes take effect immediately and are displayed in the File Manager window.

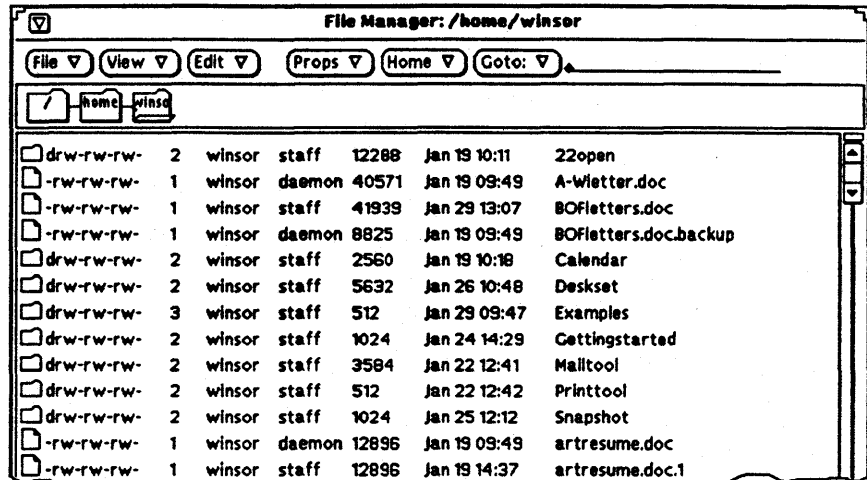
List Options

The List Options allow you to choose how much information is displayed when you display the contents of the folder pane as a list with mini-icons. To display the list with mini-icons, choose List from Folder Display on the View menu.

The List Options are nonexclusive settings. You can choose none, some, or all of the options. To set an option, click SELECT to toggle it from off to on, or from on

to off. Chosen options have a thickened border. Figure 2-69 shows an example of a list when all of the list options are chosen.

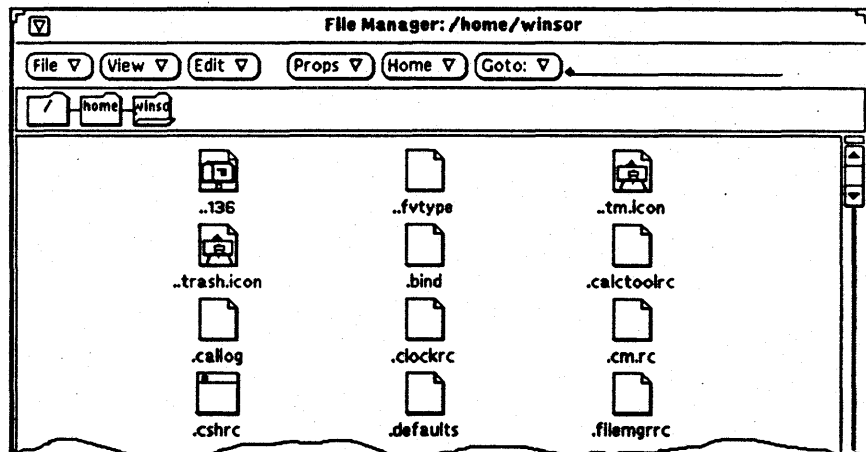
Figure 2-69 A folder pane with all of the List Options set



Hidden Files

The Hidden Files settings allow you to choose whether or not to display those files ordinarily not displayed. Most hidden files begin with at least one dot (.), and are often referred to as Dot Files. Click SELECT on the setting you want to use. Figure 2-70 shows an example of a listing with hidden files displayed.

Figure 2-70 A folder pane with Hidden Files visible



Deletions

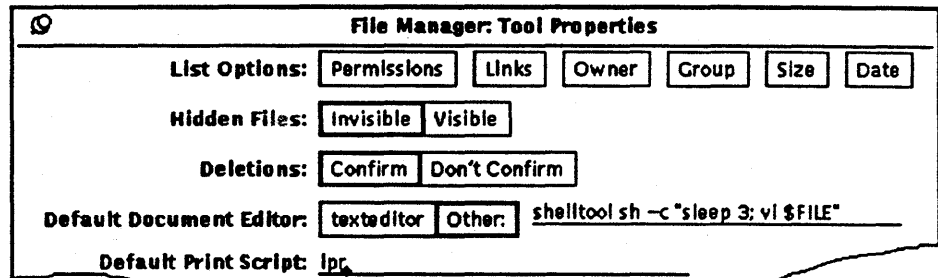
The Deletions settings allow you to choose whether File Manager displays confirmation notices for delete operations. It is generally a good idea to leave this option set to Confirm. If you choose Don't Confirm, you may inadvertently delete some information from your file system that you did not want to.

Default Document Editor

The Default Document Editor setting specifies what default editor the File Manager uses to display data file icons that are not specifically bound to another application. If you click SELECT on Other, a text field is displayed in which you can type the name of a different text editor application. If you specify a different text editor that does not display its own window, you must specify that a shelltool

is started before the text editor. You should also invoke the sleep command after the shelltool and before the text editor. The sleep command gives the shelltool enough time to start up before the text editor tries to determine the dimensions of the shelltool. Use the format shown in Figure 2-71, and replace the editor `vi` with the editor you want to use.

Figure 2-71 The Default Document Editor text field



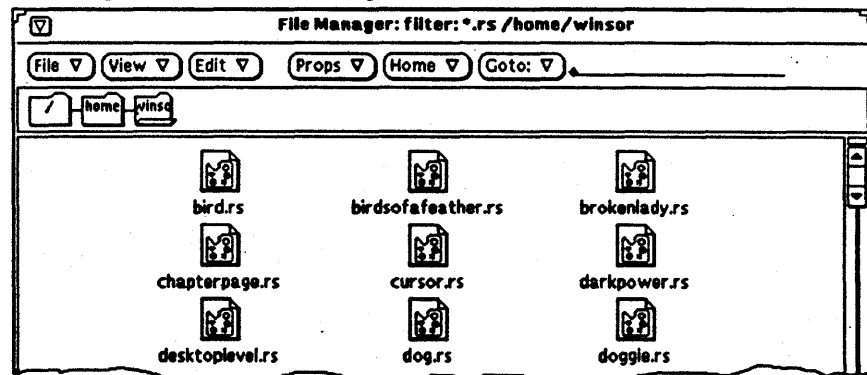
Default Print Script

The Default Print Script text field allows you to specify a different default print script for files that are printed from the File Manager. The default is the standard `lpr` operating system print command. If you want to print ASCII files using a PostScript filter and without a header page, type the following into the Default Print Script text field: `cat $FILE | mp | lpr -h`.

See Filter Pattern

The See Filter Pattern text field allows you to specify that only files of a certain type are displayed in the folder pane of the File Manager. In the example shown in Figure 2-72, the filter pattern `*.rs` shows only the raster files in a directory, even though other files are there. Note that the header of the window shows you what filter pattern is set.

Figure 2-72 A folder pane with a *.rs filter pattern set



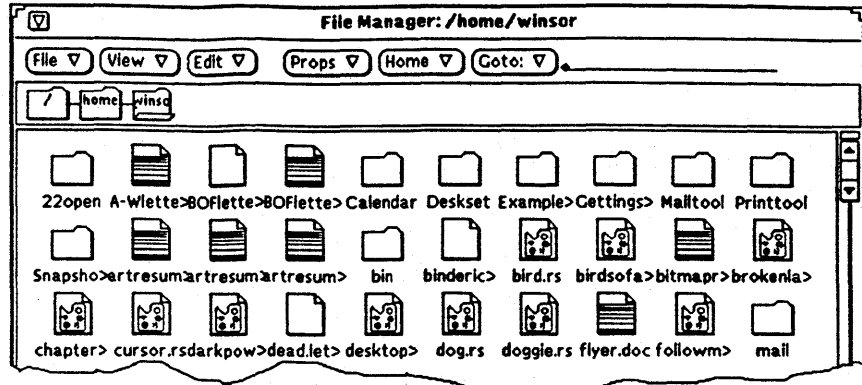
Longest File Name

The Longest File Name numeric field allows you to choose how many characters of each file name are displayed in the folder pane of the File Manager. You can type any number from 0 to 999. If you typically have very long file names, you can change the default number of 255 to a shorter length, say 8 or 10, to display more icons in the same area of the folder pane.

NOTE The number of characters is calculated for variable-width fonts to determine the length of the text that is displayed. The number of characters displayed for each file name may vary.

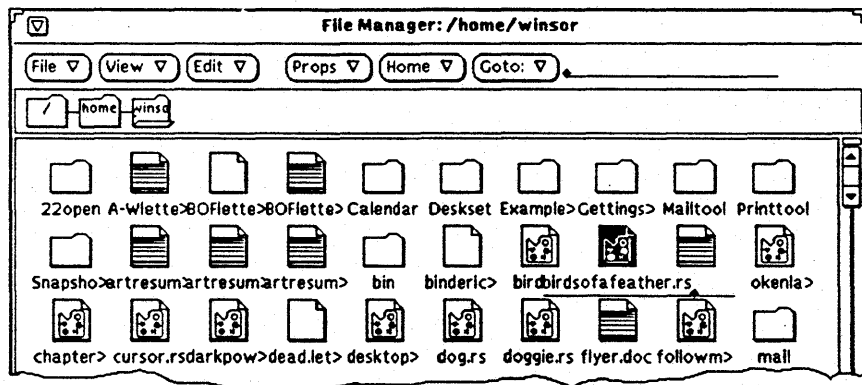
Names that do not fit within the specified length are followed by a > to show that the complete name is not displayed. Figure 2-73 shows an example of the folder pane with shorter file names set.

Figure 2-73 A folder pane with shorter file names specified



If you want to see the complete file name, you can double-click SELECT on the name. In this example, the file beginning "birdsofafeather" is selected, and the full name is displayed in an editable text field, as shown in the example in Figure 2-74.

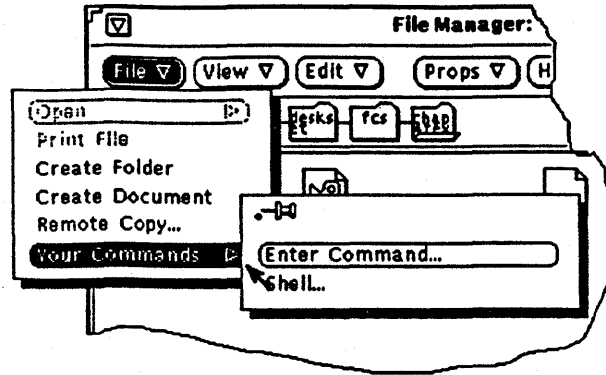
Figure 2-74 Displaying a complete file name when short names are specified



The Your Commands Menu

The Your Commands menu that you access from the File menu, shown in Figure 2-75, allows you to create and store commonly used operating system commands. Once you have added the commands to the menu, you can use them at any time by choosing them from the Your Commands submenu. Figure 2-75 shows the default items on the Your Commands submenu.

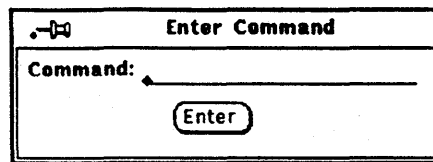
Figure 2-75 The Your Commands submenu



Use the Shell item as a convenient way to open a Shell Tool window.

Use the Enter Command item to display the Enter Command pop-up window, shown in Figure 2-76, that you use to create items to be included on the menu.

Figure 2-76 The Enter Command pop-up window



Creating Your Commands

You can type any SunOS operating system command on this menu. If the command requires a window in which to display its information, be sure to include the command for a window-based tool such as shelltool at the beginning of the command.

Suppose you want to print a file using a print script that is different from the default print script specified from the File Manager Tool Properties window. You can add that command to the Your Commands menu by following the steps below:

1. **Display the Enter Commands pop-up window.**

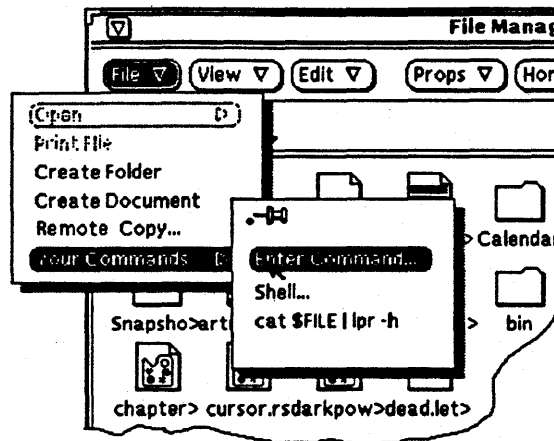
Type the command in the text field. In this example you would type the following: `cat $FILE | lpr -h`.

This command prints files you select in the File Manager without printing a header.

2. **Move the pointer to the Enter button and click SELECT.**

The command is stored in a `.fvcmd` file in your home directory, and is added to the Your Commands submenu. Figure 2-77 shows the menu with the new command.

Figure 2-77 The Your Commands submenu with a new command



To use the item, select a file or files to print, and choose the command from the Your Commands submenu. If you want to edit or remove commands from the submenu, you must edit the `.fvcmd` file in your home directory.

2.11 Shortcuts

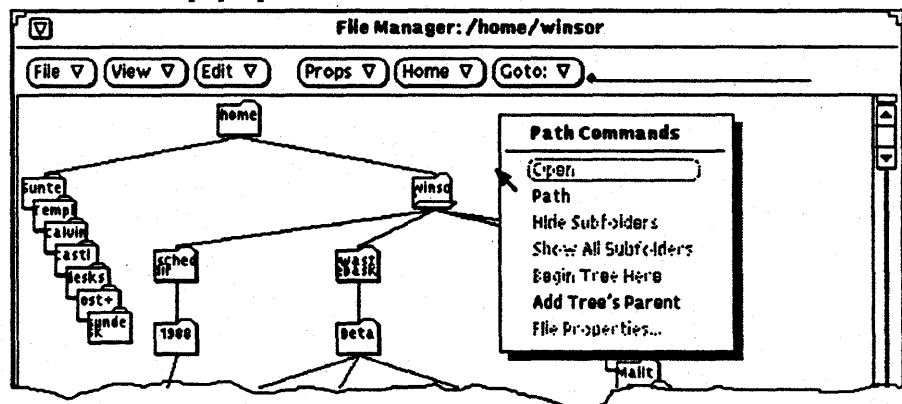
The File Manager provides you with pop-up menus for both the path and folder panes, and a Home menu to help you navigate through your file system. These shortcut features are described in the following sections.

Pop-up Menus

Pop-up menus in the DeskSet applications contain a subset of frequently-used commands from the control area. You can display and choose from a pop-up menu anywhere in the pane by pressing the MENU mouse button, choosing an item from the menu, and releasing MENU.

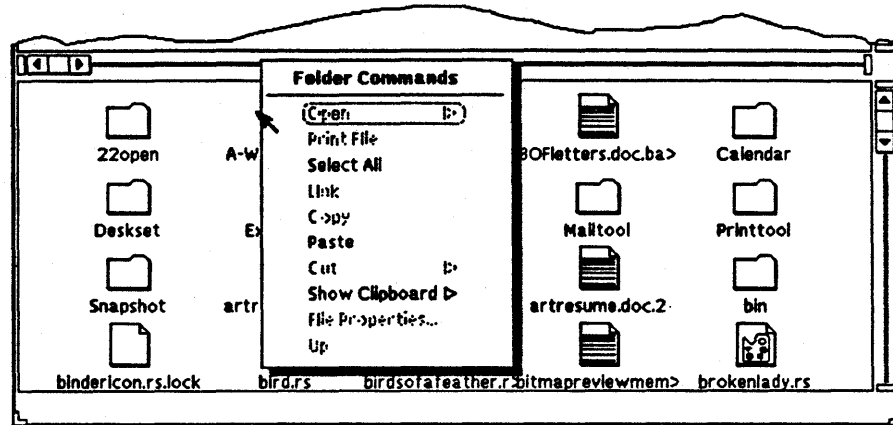
The commands on the path pane pop-up menu, shown in Figure 2-78, work the same way as they do when you choose them from the menus in the control area. As with other menu items in the File Manager and the other DeskSet tools, items that require a selection are inactive unless you have made a selection on which the command can operate.

Figure 2-78 The Path Pane pop-up menu



The Folder Commands pop-up menu, shown in Figure 2-79, contains a different set of commands that are more useful to the functionality of the folder pane.

Figure 2-79 The Folder Commands pop-up menu



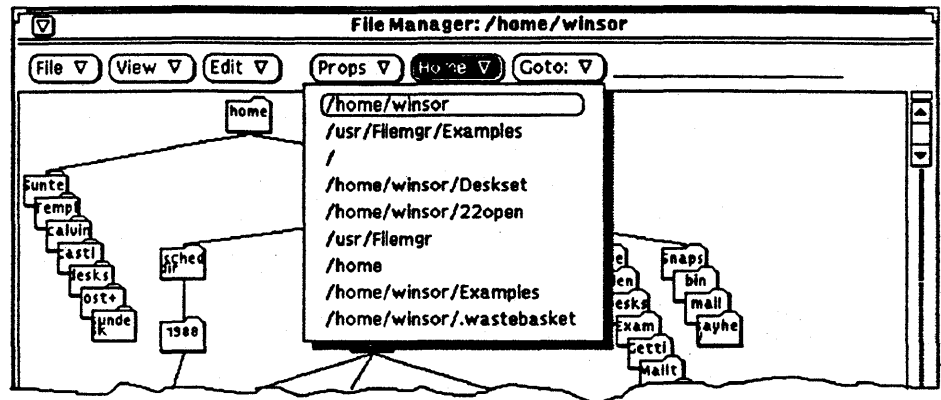
The only command that is unique to the Folder Commands pop-up menu is the Up command. The Up command is always inactive for the File Manager base window. It is active in Folder pop-up windows and in the Wastebasket, where it is possible to move down a path (by double-clicking SELECT on selected folders), but where there is no other way to move back up the path. When you are at the top level of the hierarchy in a Folder pop-up window (the folder you initially dragged onto the workspace) or in the Wastebasket (the topmost folder you dragged or cut to the Wastebasket), Up is inactive.

Using the Home Menu

One of the menu buttons in the control area is Home. By clicking SELECT on the Home button, you can quickly return to your home folder from anywhere in the file system.

The Home button also has a menu that stores a recent history of the folders that you have accessed since you started the File Manager. Your home folder is the default item on this menu and is always the item at the top of the menu. The rest of the items on the menu show you up to nine of your most recently-accessed folders. You can change back to any of these folders by choosing the appropriate path from the Home menu. Figure 2-80 shows an example of items on a Home menu.

Figure 2-80 An example of the Home menu



2.12 Troubleshooting

If files you expect to see in the folder pane are not being displayed, check to be sure that you have not specified a filter pattern from the File Manager Tool Properties window that suppresses the display of those files. When a filter is specified, it is always displayed in the header of the File Manager base window.

If you have trouble transferring files between remote systems, you may not have the correct permissions to access the file, directory, or system, or the remote system may not be accessible through the network. Contact the person who owns the files (or the person who asked you to transfer the files) to change permissions so the transfer will work. To find out if the remote system is available on your network, contact your system administrator.

Mail Tool

The Mail Tool application provides a convenient and intuitive way to use the UNIX mail handling facilities.

Using Mail Tool by itself, you can write, send, and receive electronic mail and organize your mail messages into logical groupings.

Using drag and drop, Mail Tool works in combination with File Manager, Print Tool, Text Editor, and Calendar Manager to provide an integrated workspace environment. You can organize information effectively and communicate not only with other users on the electronic mail network but with other applications on your workspace.

This chapter describes how to use the Mail Tool application and how you can use the intuitive drag and drop method to copy or move files into and out of Mail Tool and the other DeskSet applications.

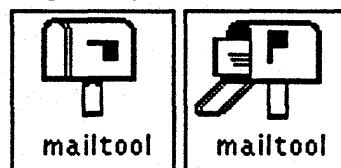
3.1 How Mail Tool Is Organized

The Mail Tool application has two base windows. The primary base window shows you a list of electronic mail messages that you have received. You read your mail messages in a View Message pop-up window. To respond to messages or to compose new messages you open a Compose base window that closes to its own icon. Once you have opened a Compose base window, you can use it to write and send electronic mail messages without opening the primary Mail Tool base window. Each of these windows is described in detail later in this chapter.

3.2 The Mail Tool Icons

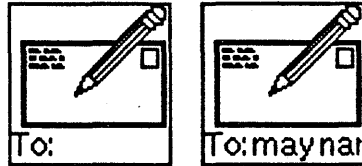
The icons for each Mail Tool base window show you useful information about the Mail Tool application. The primary icon for Mail Tool, for the window that shows you incoming mail messages, looks like a rural American mail box with the door closed and the flag down. When new mail arrives, the flag goes up and the door of the mail box opens to show you that you have new mail messages. Figure 3-1 shows these views of the mailbox icon.

Figure 3-1 The primary Mail Tool icon



The Compose Mail Tool icon shows an envelope, a pencil, and a label indicating the recipient of the message. When you close the Compose window before you have indicated the recipient(s), the "To:" label has no name. Figure 3-2 shows these views of the Compose icon.

Figure 3-2 The Compose Mail Tool icon

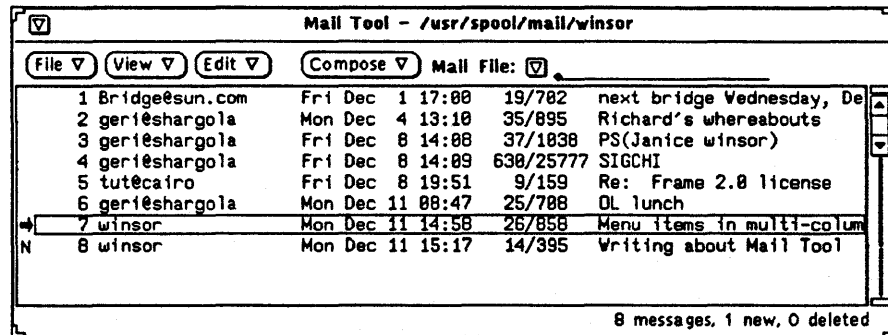


3.3 The Primary Mail Tool Base Window

The primary Mail Tool base window, shown in Figure 3-3, provides a set of controls with which you access other parts of the Mail Tool application, displays a list of your electronic mail messages, and shows you the status of your mail messages.

The primary Mail Tool base window, by default, shows you a list of the mail messages in your In Tray. See "Organizing Your Mail Messages" for information about moving or copying mail messages from your In Tray into mail files.

Figure 3-3 The primary Mail Tool base window



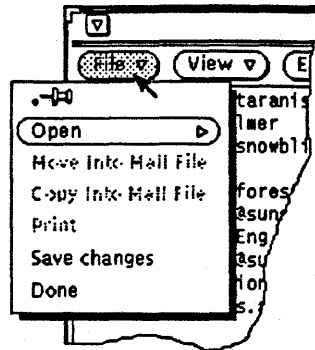
Controls

The control area has four menu buttons: File, View, Edit, and Compose. The following sections provide a brief introductory description of each of these controls.

The File Menu

File has a menu, shown in Figure 3-4, with choices that you can use to organize your mail messages, print them, or commit changes (such as deleting messages).

Figure 3-4 The File menu

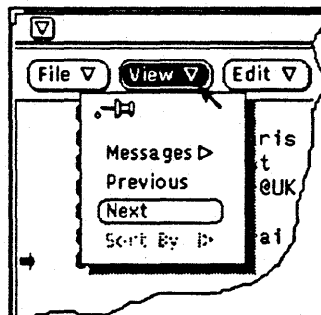


- Use Open to view messages from either your In Tray or your mail files. See “Organizing Your Mail Messages” later in this chapter for more information about mail files.
- Use Move Into Mail File and Copy Into Mail File to move or copy messages from your In Tray into mail files that you specify. See “Organizing Your Mail Messages” later in this chapter for more information about mail files.
- Use Print to print the selected messages. See “Printing Messages” later in this chapter for more information about printing.
- Use Save Changes and Done to incorporate changes to Mail Tool. See “Saving Changes for Mail Tool” later in this chapter for more information.

The View Menu

The View menu, shown in Figure 3-5, has choices for different ways to view messages and move between them.

Figure 3-5 The View menu



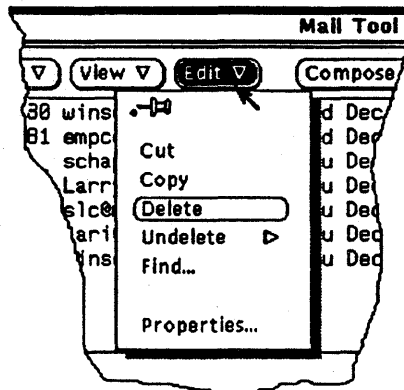
- Use Messages to view selected messages with either an abbreviated or full header.
- Use Previous to view the message before the current message.
- Use Next to view the message following the current message.
- Use Sort By to sort messages in your mail files. Since you cannot sort the messages in your In Tray, the Sort By item is inactive unless you are displaying mail headers in your mail files. See “Organizing Your Mail Messages” later in this chapter for more information about mail files.

See “Viewing Messages” later in this chapter for more information about using the first three items on the View menu.

The Edit Menu

Edit has a menu, shown in Figure 3-6, with choices for editing and deleting mail message headers, finding electronic mail messages, and configuring your Mail Tool from the Mail Tool Properties window.

Figure 3-6 The Edit menu

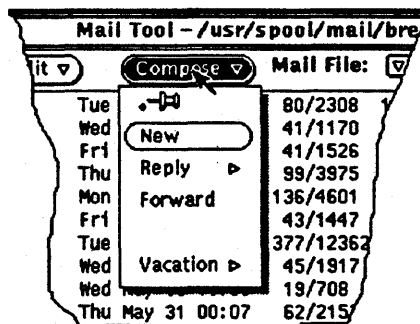


- Use Cut and Copy to put selected messages onto the clipboard. You can then paste these messages from the clipboard into other windows.
- Use Delete to delete selected messages.
- Use Undelete to restore deleted messages.
- Use Find to find messages in your In Tray by sender and/or by subject. See "Finding Messages" later in this chapter for more information about using the Find pop-up window.
- Use Properties to customize your Mail Tool application. See "Customizing Your Mail Tool" later in this chapter for more information about Mail Tool properties.

The Compose Menu

Compose has a menu, shown in Figure 3-7, with choices for opening Compose base windows from which you can write and send mail messages.

Figure 3-7 The Compose menu



- Use New to open a new Compose window.
- Use Reply to open a Compose window to respond to a selected message. See "Replying to Messages" later in this chapter for more information about Reply options.

- Use Forward to open a Compose window that includes selected message for forwarding.
- Use Vacation to initiate or stop an automatic response to incoming messages when you are away from your mail. See “Using the Vacation Notifier” later in this chapter for more information about Vacation options.

The Mail File Text Field

You use the Mail File text field and abbreviated menu button to create and view mail file messages. See “Organizing Your Mail Messages” later in this chapter for information on creating and viewing mail files.

Mail Message Headers

Each line in the scrolling list of the primary Mail Tool base window represents a single electronic mail message, and is called the *header* for the mail message. Each header has nine columns of information as follows:

- The first column shows you the status of the mail message:
 - An arrow points to the *current message*.
 - An N shows you that the message is *new*.
 - A U shows that a message is *unread*.
 - A blank is displayed when you have viewed the message.
- The second column contains a *message number* that is automatically assigned to messages by the Mail Tool in the order in which they arrive.
- The third column contains the electronic mail address of the *sender* of the message.
- The fourth column contains the day of the week the message was received.
- The fifth and sixth columns contain the month and date that the message was received.
- The seventh column contains the time the message was received.
- The eighth column tells you how big the message is. The first number tells you how many lines are in the message, the second number tells you the number of characters in the message. These numbers include the number of lines and characters of the full message header, as well as the text of the message.
- The ninth column contains the subject of the message when the person who sent the message provides a subject line. An (E) at the start of the subject text shows that the message is encoded.

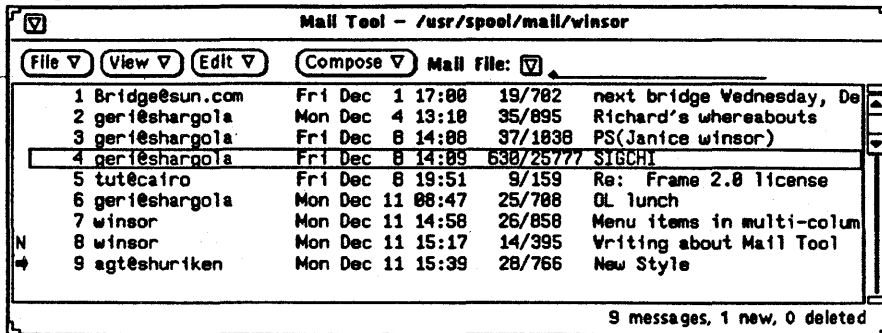
Status Messages

Status messages are displayed at the right side of the footer telling you how many messages are in your in tray, how many new messages you have and how many you have deleted.

Selecting Message Headers

You can select each message header by moving the pointer into the line and clicking SELECT. A selected header has a box around it, as shown in Figure 3-8.

Figure 3-8 The primary Mail Tool base window



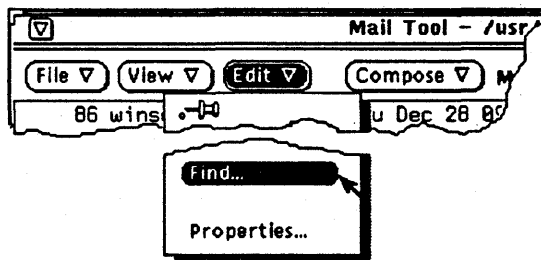
You can select more than one message at a time for most of the Mail Tool operations. To select additional messages, move the pointer into the line and click ADJUST. If a message is already selected, clicking ADJUST deselects it.

When a message or group of messages is selected, you can choose commands from a Mail Tool menu, or you can drag and drop the messages from Mail Tool onto other applications such as File Manager, Calendar Manager, Print Tool or Tape Tool.

Finding Messages

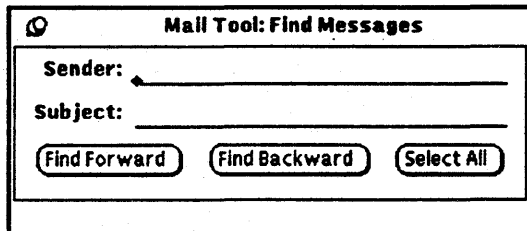
To help you find messages, you can search your In Tray or mail files for messages that have been sent to you by a specific person, or by subject. To find a message, first display the Find pop-up window by choosing Find from the Edit menu, as shown in Figure 3-9.

Figure 3-9 The Find item on the Edit menu



The Find pop-up window is displayed, as shown in Figure 3-10.

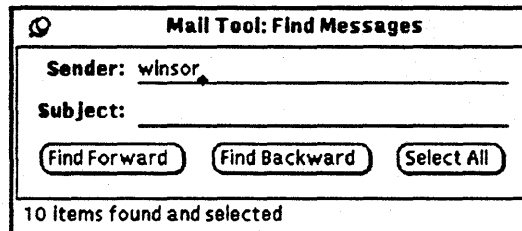
Figure 3-10 The Find pop-up window



You can search for messages by sender, by subject, or by subject and sender. The Search text fields are case-insensitive and match partial words and phrases. You do not need to type a complete sender name, and you can use keywords to match subjects. For example, typing the name "winsor" in the Sender text field will find files sent by "winsor@castle" as well as "jwinsor."

To search for messages by sender, type the sender name in the Sender text field. Clicking **SELECT** on the Find Forward button selects the next message header with the sender name you specify. Clicking **SELECT** on the Find Backward button selects the previous message header. Clicking **SELECT** on the Select All button selects all message headers with the sender name. An information message is displayed in the footer of the Find Messages window telling you how many messages are selected, as shown in the example in Figure 3-11.

Figure 3-11 An information message in the Find Messages window



To search for messages by subject, type a word or phrase in the Subject text field. To search for messages by sender and by subject, type the appropriate information in each text field and click **SELECT** on one of the buttons.

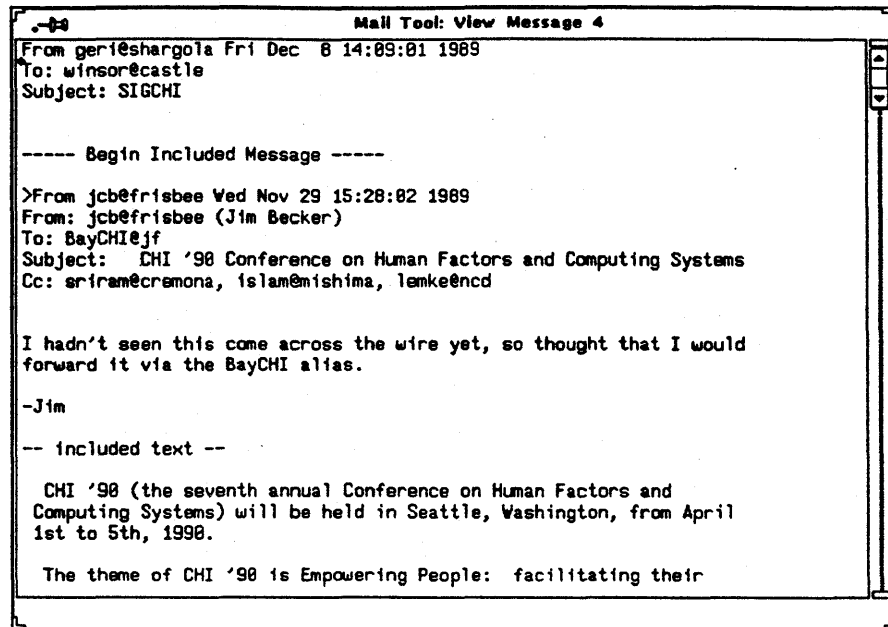
3.4 Viewing Messages

To view a message, follow these steps:

1. Move the pointer onto the line of a header and click **SELECT**.
A rectangular box is displayed around the selected header.
2. Move the pointer onto the View menu button and press **MENU**.
The View menu is displayed.
3. Drag the pointer to highlight Messages.
4. Release **SELECT**.

A View Message pop-up window is displayed showing you the text of the selected message, with an abbreviated header, as shown in Figure 3-12.

Figure 3-12 The View Message pop-up window



Alternatively, you can double-click **SELECT** on the header of a mail message to display the View Message window without using a menu.

The number of the message that is displayed is always shown in the window header of the View Message pop-up window (Message 4 in this example).

The View Message pop-up window uses the standard text editing pane and pop-up menu. You can edit the text in the View Message pane. If you have made editing changes to the message, and if you have set the Mail Tool properties so that you are asked for a confirmation, a Notice is displayed when you change messages or close the window, asking if you want to save the changes. See "Customizing Your Mail Tool" for more information about Mail Tool properties.

The View Message pop-up window can be split into two or more panes in order to view and edit different parts of the mail message at the same time. See Chapter 5 for information about editing text and splitting the text pane.

Using the Pushpin in the View Message Window

The View Message pop-up window has a pushpin that you can use to pin the window to the workspace if you want to keep a message (or several messages) visible.

If you do not click **SELECT** on the pushpin to pin the window, the View Message pop-up window is reused for subsequent mail messages that you view. If you do pin the View Message pop-up, a new View Message pop-up will be displayed for the next message you view.

Viewing the Next or Previous Message

When the View Message pop-up window is displayed but not pinned, you can view the next message in the same window by moving the pointer to the View menu button and clicking **SELECT**. The next message is displayed using the existing

View Message window. If no unpinned View Message window is displayed, choosing an item from the View menu automatically displays one.

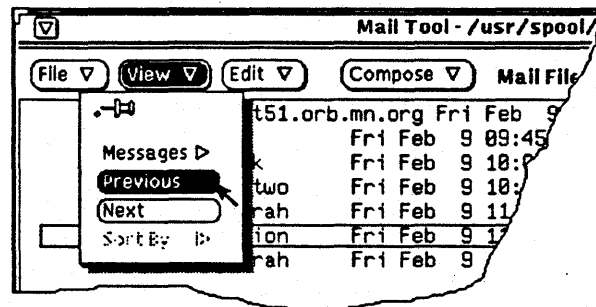
NOTE *Clicking SELECT activates the default item for the menu. If you have changed the default, you must display the View menu and choose Next.*

Alternatively, you can double-click SELECT on the header of the next message to display it in the View Message window.

When the last message in your In Tray is already displayed in the View Message window, choosing Next displays the previous message.

To display the previous message, move the pointer to the View menu button, press MENU, choose Previous, as shown in Figure 3-13, and release MENU.

Figure 3-13 Choosing Message from the Previous submenu



Viewing Messages With a Full Header

Mail Tool messages are normally displayed with an abbreviated header. The contents of this header are determined by the "ignore" variable in your .mailrc file. All mail headers are displayed except those listed after "ignore". For example, if you do not want to see the header fields Message-Id, Received, Return-Path, or Status, use any text editor to add the following line to the .mailrc file in your home directory:

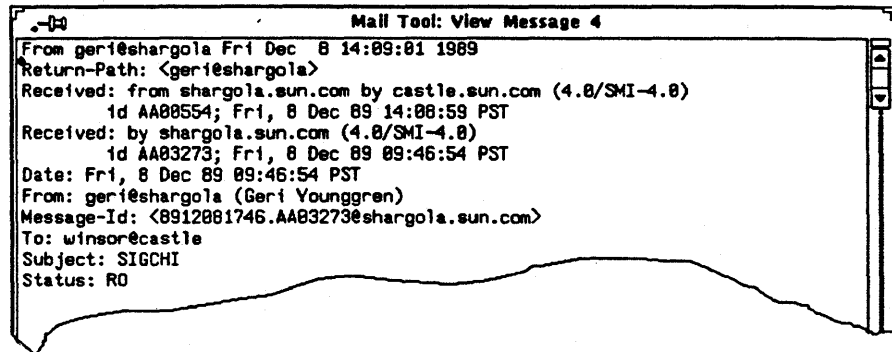
```
ignore message-id received return-path status
```

If you do not have the "ignore" variable in your .mailrc file, you will always see a full message header. If you have the "ignore" variable set, you will normally see an abbreviated header. To display a message with the full message header, regardless of the setting of the "ignore" variable, follow these steps:

1. Select a message.
2. Move the pointer to the View menu button and press MENU.
3. When the View menu is displayed, highlight Messages.
4. Drag the pointer to the right to display the Messages submenu.
5. Drag the pointer to highlight Full Header.
6. Release MENU.

Figure 3-14 shows an example of a full message header.

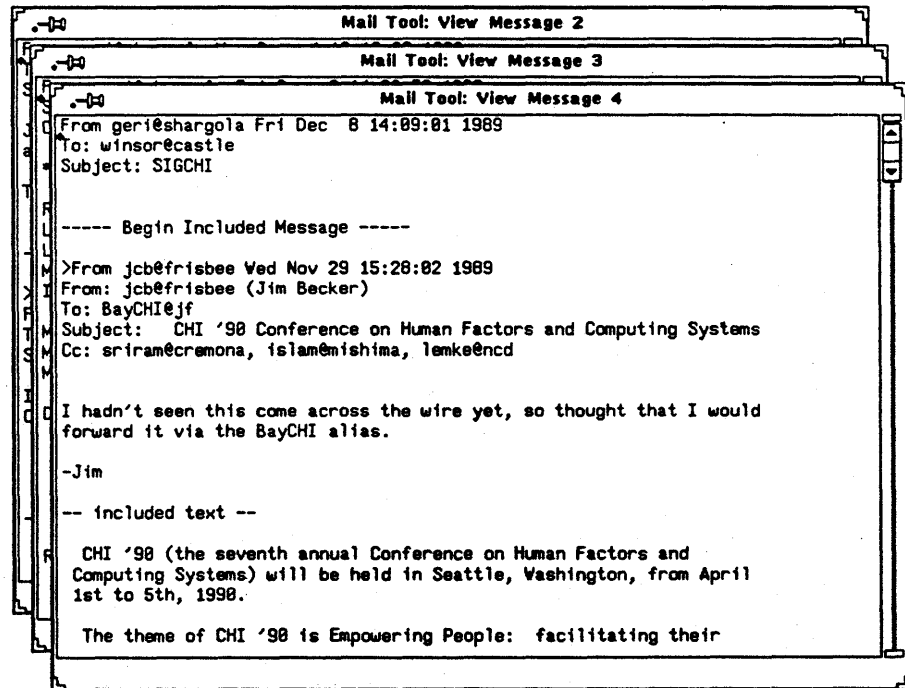
Figure 3-14 A full message header



Viewing Multiple Mail Messages

If you select multiple mail messages and display them, a View Message window is opened for each message, layered on top of one another in numerical order, as shown in the example in Figure 3-15.

Figure 3-15 Viewing multiple mail messages



NOTE The View Message windows are displayed in numerical order, not in the order that you selected them.

You can move the windows so they do not overlap one another, click **SELECT** on the header to bring an individual message window to the front of the screen, or dismiss each window individually after you have read the message.

Once you have displayed a message in a View Message window, it is marked as “read” whether or not you actually have read the message.

3.5 Printing Messages

You can print your electronic mail messages by using either Mail Tool or Print Tool.

To print your messages from Mail Tool, follow these steps:

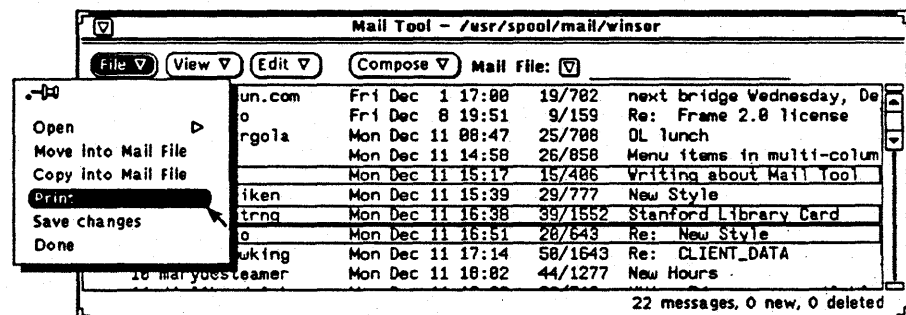
1. In the primary Mail Tool base window, select the headers for the messages you want to print.

Caution: It is best to never select more than five headers to be printed at one time. Selecting and printing many messages at one time uses a lot of swap space, which can potentially cause your server to crash.

2. Choose Print from the File menu.

Figure 3-16 shows these steps.

Figure 3-16 Printing multiple mail messages



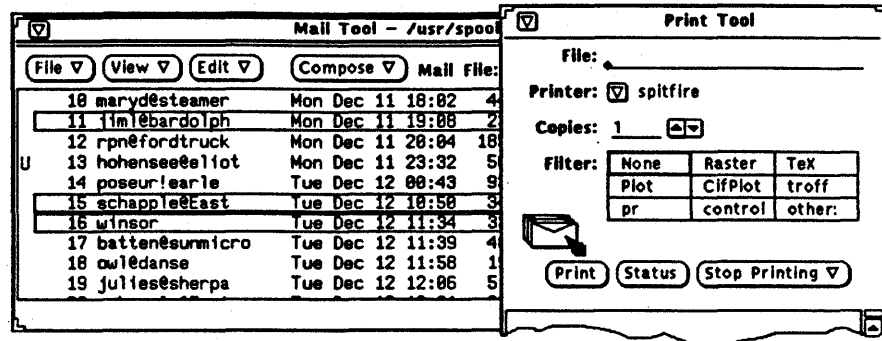
Alternatively, you can use Print Tool to print your mail messages, by following these steps:

1. With both Mail Tool and Print Tool running, select the headers for the messages you want to print.
2. Press the Control key and SELECT and drag the headers until the hot spot of the pointer is on either the Print Tool icon or the open Print Tool window.

NOTE The selected mail files will be deleted if you do not press the Control key before you press SELECT to drag them. Dragging with SELECT moves the files, removing them from the Mail Tool application. They are stored in the Undelete window, and you can recover them as long as you have not saved changes to Mail Tool.

The pointer changes to the duplicate pointer. A small envelope is displayed if you are dragging one mail header, or three small envelopes are displayed if you are dragging several mail headers. In the example shown in Figure 3-17, three overlapping envelopes move with the pointer.

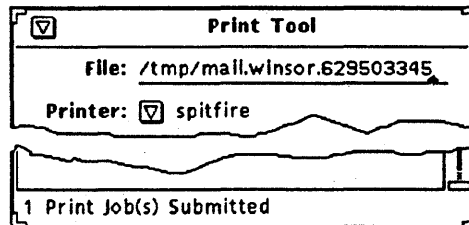
Figure 3-17 Printing using drag and drop



3. Release SELECT to drop the headers.

If the Print Tool window is open, information messages are displayed in the footer of the Print Tool window showing you the printing status. Figure 3-18 shows an open Print Tool window that has accepted Mail Tool messages for printing. See Chapter 6 for more information about the Print Tool application.

Figure 3-18 Print Tool printing mail messages



3.6 Deleting Messages

It is a good idea to periodically save or delete obsolete messages from your In Tray. See "Organizing Your Mail Messages" for information on how to move or copy messages from your In Tray into mail files. This section describes how to delete messages.

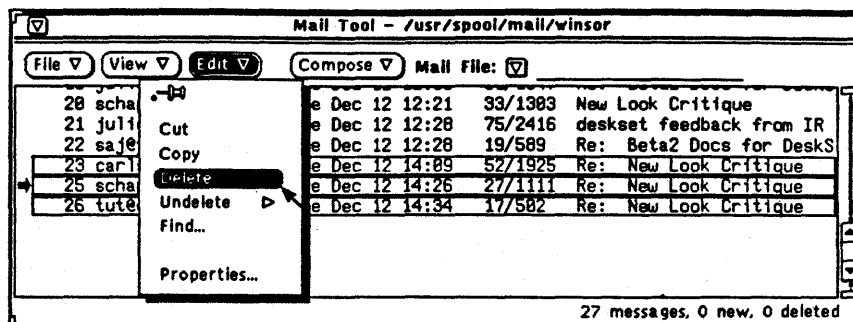
1. Select the message headers for messages you want to delete.

Click SELECT to select the first message, then click ADJUST on each subsequent message to either add it to the group or remove it from the group if it is already selected.

2. Choose Delete from the Edit menu.

Figure 3-19 shows some selected message headers and the Delete item highlighted on the Edit menu.

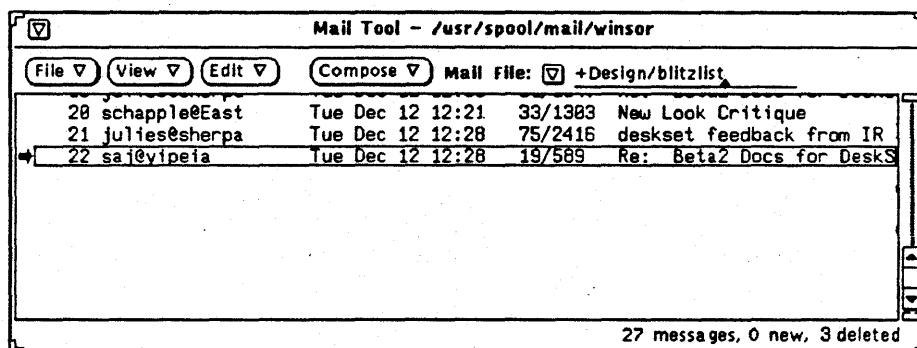
Figure 3-19 Deleting messages



3. Release MENU.

The mail messages are deleted from the In Tray display, and the status message in the footer updates to reflect the current state of your In Tray, as shown in the example in Figure 3-20.

Figure 3-20 Status message after deleting messages



3.7 Undeleting Messages

As long as you do not incorporate changes to Mail Tool by switching to another Mail File or by choosing either Save Changes or Done from the File menu, the deleted messages remain available and you can "Undelete" them. See "Saving Changes for Mail Tool" for more information about incorporating changes.

When there are no deleted messages available, the Undelete item on the File menu is inactive.

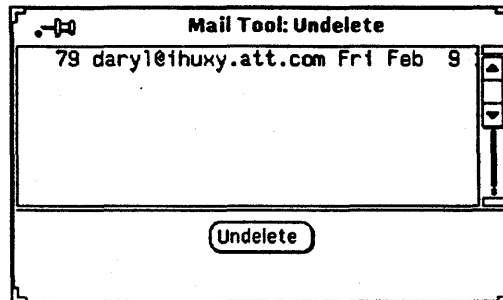
To undelete a message, follow these steps:

1. Move the pointer to the Edit menu button and press MENU.
The Edit menu is displayed.
2. Drag the pointer to highlight Undelete.
3. Drag the pointer to the right to display the Undelete menu.
4. Choose Last to undelete the last message you deleted.

Alternatively, choose From List to display the Undelete pop-up window, which contains a scrolling list of messages that you have deleted since you last saved changes in Mail Tool.

Figure 3-21 shows an example of the Undelete pop-up window.

Figure 3-21 Message headers in the Undelete pop-up window



Select the headers you want to undelete and click SELECT on the Undelete button.

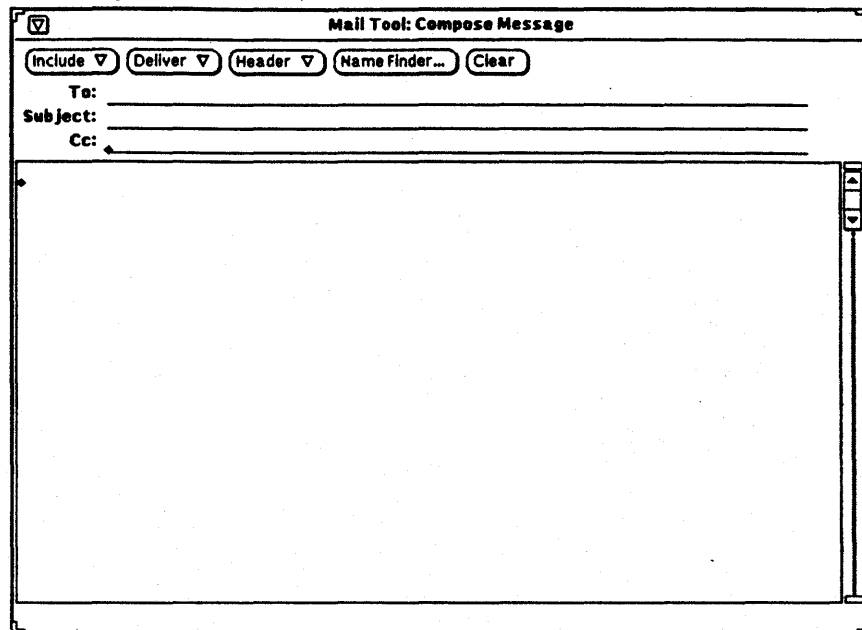
REMINDER: You can use the resize corners to adjust the size of the Undelete pop-up window.

3.8 The Compose Base Window

Any time you choose an item from the Compose menu (except for Vacation), a Compose base window is opened. See "Using the Vacation Notifier" at the end of this section for more information about Vacation.

A Compose window operates independently from the primary Mail Tool base window. You can close an opened Compose window to an icon for later use or keep a Compose window open while the primary Mail Tool window is closed to an icon. You can open as many Compose windows as you like at one time, working on replying to or composing several messages concurrently. The Compose window is shown in Figure 3-22.

Figure 3-22 The Compose base window



The Compose window has its own set of controls that you use to create and send mail messages:

- The Include menu button provides choices so that you can include selected messages as part of the message you are composing and also provides you with a set of templates for creating different types of messages. See “Using Templates” and “Template Properties” for more information about templates.
- The Deliver menu button provides choices for how the Compose window behaves once the message is delivered.
- The Header menu button provides choices for the number and type of text fields with which to create the message header.
- The Name Finder window button displays a pop-up window that you can use to search the Network Information Service (NIS) database in your NIS domain for names and email addresses.
- The Clear button clears the contents of the window.
- The To, Subject, and Cc text fields are used to type the email addresses, subject of the message, and email addresses for those to receive copies of the message.
- Bcc is also available for sending blind carbon copies. See “Composition Header Properties” for details.
- The pane of the Compose window is where you type the contents of the message you want to send. The Compose pane uses the standard text editing conventions available from the Text Editor application. See Chapter 5 for more information about editing.

Composing Messages

To compose a message, follow these steps:

1. Choose an option from the Compose menu or click **SELECT** on a Compose icon to open the window.
2. Move the pointer into the To text field and click **SELECT** to set the insert point. Type an email address or a series of addresses.

If you type more than one email address, separate each one with a comma and/or a space. For example, type this:

```
here@machine, there@elsewhere, outside@nowhere
```

3. Press **Tab** or **Return** to move the insert point to the Subject field and type the subject of your message.

Alternatively, you can move the pointer and click **SELECT** to reposition the insert point.

4. Press **Tab** or **Return** to move the insert point to the Cc field. Type the addresses of recipients.

Separate the addresses with a comma and/or a space. Many users routinely include their own email address as part of the Cc field and maintain a personal record of messages they have sent.

5. Press **Tab** or **Return** (or move the pointer into the pane and click **SELECT**) to set the insert point in the pane. Compose your message.

You can cut and paste information from other windows using the Copy and Paste keys on the keyboard.

You can include complete mail messages from your In Tray or from your Mail folders by selecting the header and choosing an option from the Include button at the top of the Compose window.

6. When you have finished composing the message, click **SELECT** on **Deliver**.

The message is delivered and the Compose window is quit.

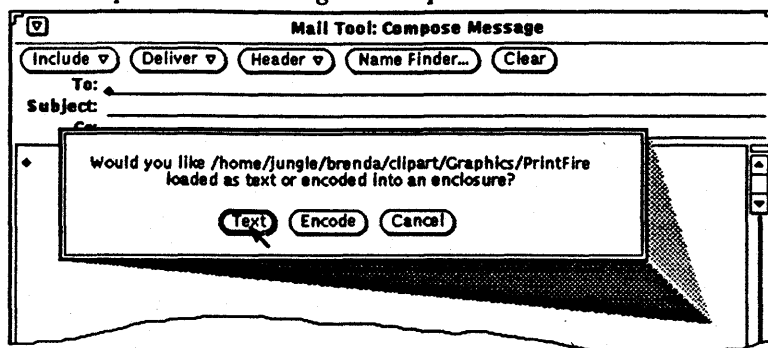
If you want to keep a compose window available as an icon, consider changing the default for the Deliver menu from Quit Window to Close Window. See the *OpenWindows User's Guide* for information on how to change a menu default.

Encoding Files

You can include files other than ASCII text, such as raster or PostScript files, by selecting file icons from the File Manager and dragging and dropping them onto the Compose window.

When you drop a file onto the Compose window, a Notice is posted, as shown in Figure 3-23, asking you how you want Mail Tool to process the contents of the file.

Figure 3-23 The Compose window drag and drop Notice



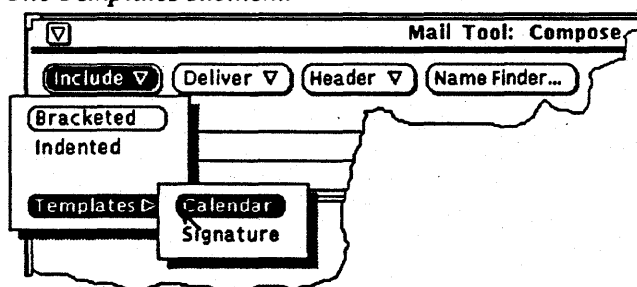
- Choose Text to insert the file as ASCII text at the caret location.
- Choose Encode to append the file to the end of the message and insert (E) at the beginning of the subject line to show that the mail message contains encoded data.
- Choose Cancel to stop the operation.

To decode an encoded message, select the header and drag and drop it onto the File Manager folder pane. See "Using Drag and Drop with Mail Tool" later in this chapter for more information about drag and drop and Chapter 2 for information about the File Manager.

Using Templates

You can create and store your own templates for composing messages. You might, for example, want to create a standard table format for status report information or a standard signature and closing message. See "Customizing Your Mail Tool" for information about how to create and store templates. When you have created a template file and added it to Mail Tool, it is displayed as an item on the Include Templates submenu. Figure 3-24 shows a Templates submenu with two templates.

Figure 3-24 The Templates submenu

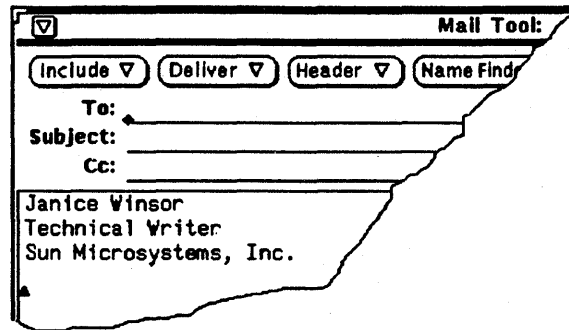


The Calendar template in this example creates messages in a form that Calendar Manager interprets when the message header is dragged and dropped onto the Calendar Manager application. See Chapter 4 for more information about Calendar Manager. The user-defined Signature template adds a standard signature.

Any template available from the Templates submenu can be added to a message at any time while you are composing it. When you choose the item from the Include menu, the template is inserted at the caret location.

Figure 3-25 shows an example of a signature template.

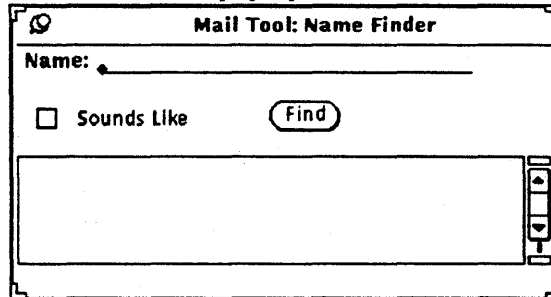
Figure 3-25 An example of a signature template



Using the Name Finder

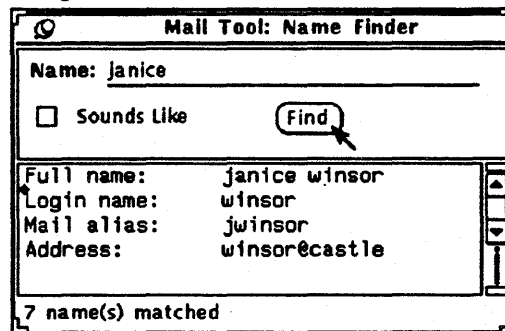
When you do not know the email address of a person, or when a message is returned as undeliverable because the email address is incorrect, you can use the Name Finder pop-up window, shown in Figure 3-26, to help you locate names and addresses available in your NIS database.

Figure 3-26 The Name Finder pop-up window



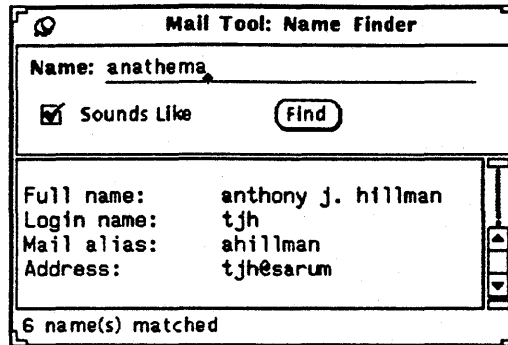
You can type in the first name, last name, or a fragment of a name. The Name Finder is case insensitive, so you do not need to use exact capitalization. In the example shown in Figure 3-27, the Name Finder matched seven people with the first name of "Janice." The finder displays the full name, login name, mail alias, and address for each of the seven names.

Figure 3-27 Using the Name Finder



If you are uncertain of the spelling of a name, and want the Name Finder to broaden the scope of the search to "sound alike" names, you can click SELECT to turn on the Sounds Like functionality. In the example shown in Figure 3-28, the Name Finder matched six names with the word "anathema."

Figure 3-28 Using the Sounds Like feature of the Name Finder

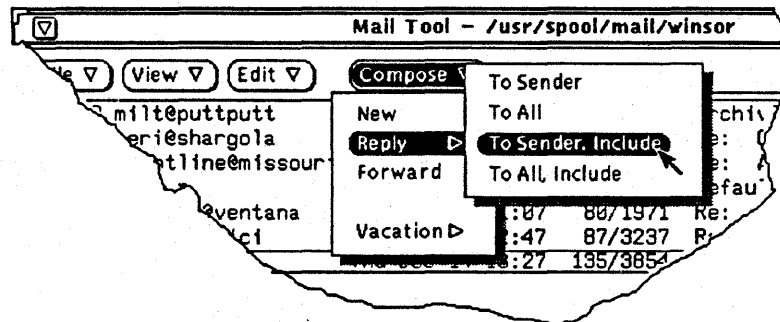


You can configure your own groups of frequently-used email addresses by creating an “aliases” file and then simply typing the name you assign to the group of names instead of typing individual email addresses. See “Creating and Using Mail Tool Distribution Lists” later in this chapter for more information.

Replying to Messages

When you choose one of the following options from the Reply submenu, shown in Figure 3-29, a Compose window is opened.

Figure 3-29 Choices on the Reply submenu



The Reply submenu options provide these functions:

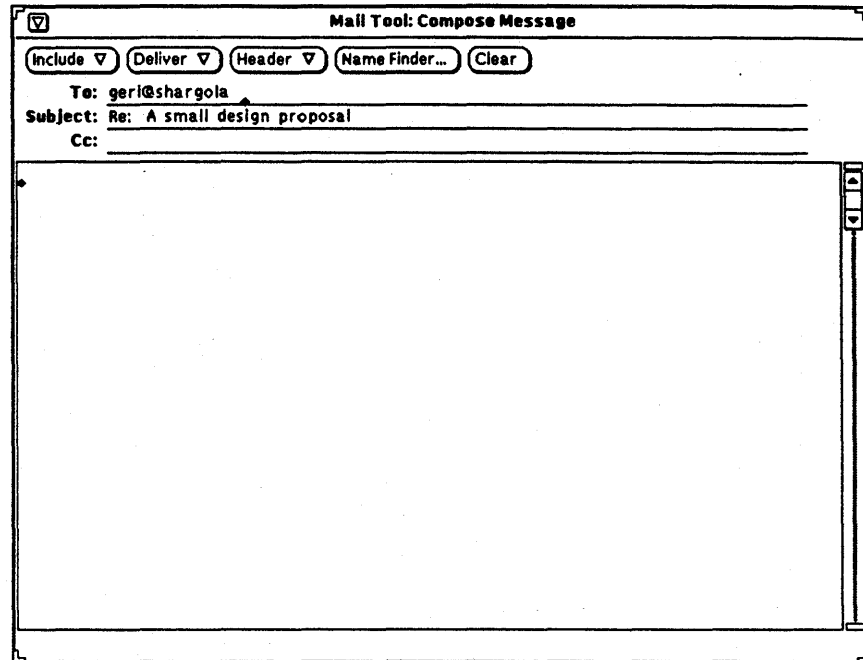
- To Sender fills in the To field with the originator of the selected message and the Subject text field using the information from the selected message’s Subject field.
- To All fills in the To and Cc fields with all the names in the header fields of the selected message, including the originator of the message, and fills in the Subject field with the Subject field from the selected message.
- To Sender, Include fills in the To and Subject text fields, and puts a copy of the text of the message into the Compose window pane.
- To All, Include fills in the To, Subject, and Cc text fields using all the names from the selected message, and puts a copy of the text of the message into the Compose window pane.

To reply to an individual message or to a group of messages, follow these steps:

1. Select the message header (or headers) that you want to answer.
2. Choose one of the four options from the Reply submenu.

A Compose window is opened. Figure 3-30 shows an example of a Compose window when To Sender is chosen.

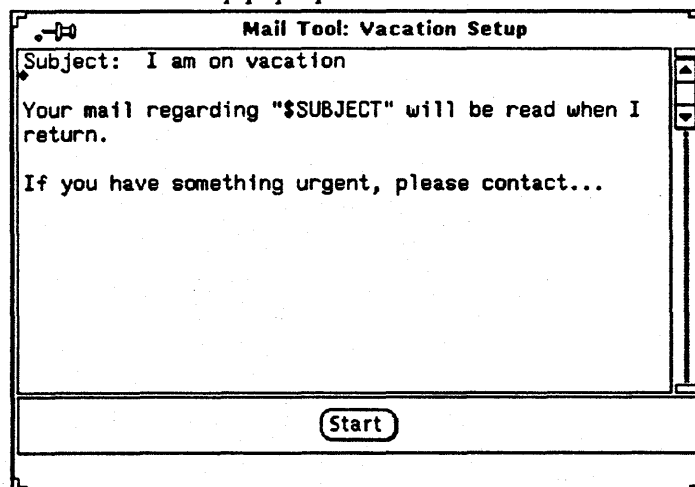
Figure 3-30 The Compose base window



Using the Vacation Notifier

When you are away from your office for business or on vacation, you can use the Vacation notifier that you access from the Compose menu to automatically respond to each email message you receive. Mail Tool provides you with a generic message form that you can edit and customize to suit your individual needs. Figure 3-31 shows the Vacation Setup pop-up window with the generic message.

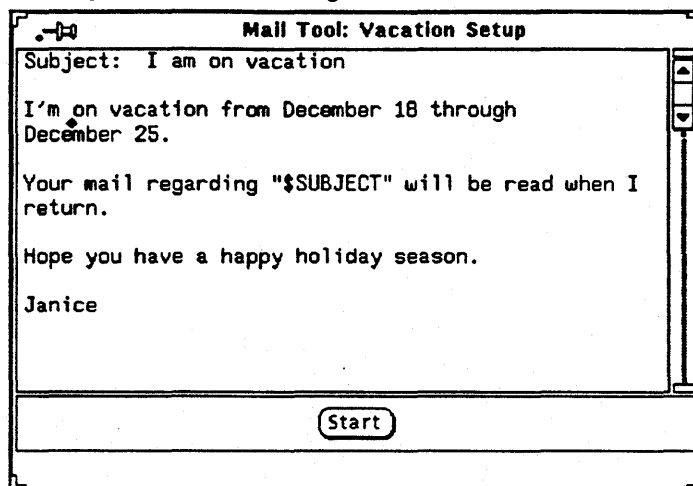
Figure 3-31 The Vacation Setup pop-up window



You can edit this message in the same way you edit messages in the Compose window. The \$SUBJECT part of the message automatically extracts the subject

from the message being responded to, and includes it as part of the reply message. Figure 3-32 shows an example of a message that has been modified.

Figure 3-32 A modified vacation message

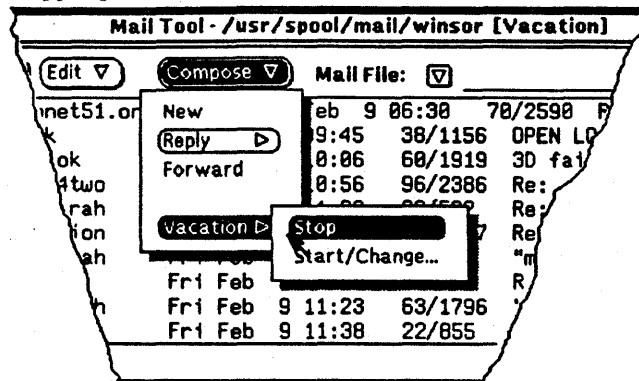


To start the vacation message, click **SELECT** on the Start button. The word “Vacation” is displayed in the header of the Mail Tool window to remind you that the vacation notifier is turned on.

While the vacation notifier is turned on, incoming mail messages are stored in your In Tray and are readily available when you return to the office. The vacation notifier replies to a sender when that sender is explicitly listed in the To text field. It does not respond to individual names that are grouped together under an alias that is available for public use. The vacation notifier will respond to names that are included as part of a private .mailrc file alias. See “Creating and Using Mail Tool Distribution Lists” later in this chapter for more information about aliases. The sender is notified only for the first message it receives from an individual for each seven-day period.

Once you have activated the vacation notifier, the Stop item on the Vacation submenu is also activated. To stop the vacation notifier and remove the word “Vacation” from the header, choose Stop from the Vacation submenu, as shown in Figure 3-33.

Figure 3-33 Stopping the Vacation notifier



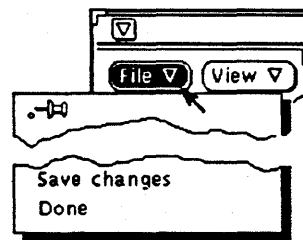
3.9 Saving Changes for Mail Tool

To improve system performance, the Mail Tool application does not automatically save changes that you make when you close it to an icon. Any messages that you have deleted remain available to you when you open the primary Mail Tool base window.

To free up file space and keep your mail box a manageable size, it is a good idea to periodically delete obsolete messages and save changes to renumber your mail messages.

You save changes from the File menu using either Save Changes or Done, as shown in Figure 3-34:

Figure 3-34 Items on the File menu you use to save changes

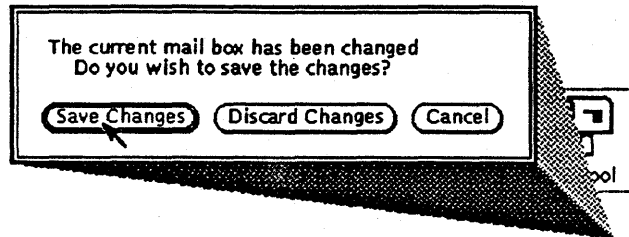


- Use Save Changes to commit changes and incorporate new mail without closing the primary Mail Tool base window.
- Use Done to close the primary Mail Tool base window to an icon, commit changes, and automatically incorporate new mail the next time you open the icon. Using Done leaves Mail Tool in a condition that permits you to read mail using another mail program without creating conflicts in the mail spooling files.

Mail Tool automatically checks and incorporates new mail messages using a time period specified from the Mail Tool Properties window. If you have a long time period set and want to see if you have new mail, you can use either the Save Changes or the Done items. Choosing Open In Tray from the File menu also checks for new mail messages. See "Customizing Your Mail Tool" for more information about Mail Tool properties.

When you quit the Mail Tool application, a Notice is displayed, as shown in Figure 3-35, asking you whether you want to save changes, quit without saving changes, or cancel the quit.

Figure 3-35 The quit Notice

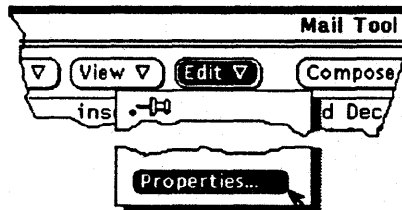


Choosing Save Changes commits the changes and quits Mail Tool. Choosing Discard Changes discards changes you have made, reincorporating any deleted messages as part of the In Tray, and quits Mail Tool. Choosing Cancel cancels the quit.

3.10 Customizing Your Mail Tool

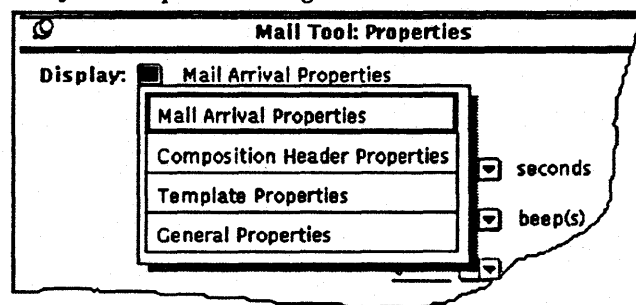
You can customize some of the properties of the Mail Tool application from the Mail Tool Properties pop-up window. You display that window by choosing Properties from the Edit menu, as shown in Figure 3-36.

Figure 3-36 The Properties item on the Edit menu



The Properties window has four categories of properties, as shown in Figure 3-37.

Figure 3-37 The four Properties categories



Each of these menu items has a set of properties associated with it. To display the properties for each item, choose the item from the Display menu. When you release MENU, the contents of the property window shows the properties you can set for that category. The new properties take effect immediately in most cases. In a few cases (such as Default Height and Width), you must quit and restart Mail Tool before the changes take effect.

You must apply changed properties for each category by clicking **SELECT** on the **Apply** button.

Mail Arrival Properties

The Mail Arrival Properties, shown in Figure 3-38, allow you to set how often Mail Tool checks for new mail, how you are notified of incoming mail, and whether headers are automatically displayed.

Figure 3-38 Mail arrival properties

Mail Tool: Properties

Display: Mail Arrival Properties

Check for Mail Every: 300 seconds

Signal New Mail With: 1 beep(s)

0 flash(es)

Automatically Display Headers: Yes No

Apply Reset

You can type a number in the numeric fields or click **SELECT** on the increment/decrement buttons to the right of the field to either increase or decrease the value of the number. You can set the numeric values for each numeric field from 0 to 9999.

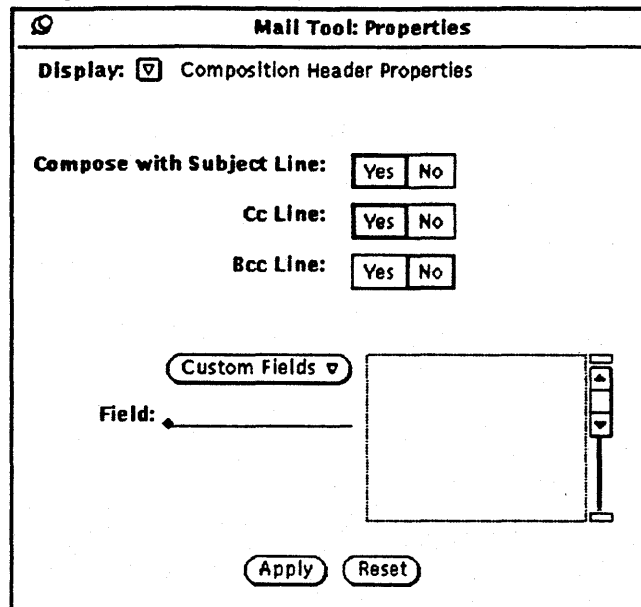
If you want Mail Tool to automatically display the headers for incoming mail messages, choose **Yes** for **Automatically Display Headers**. If you choose **No**, Mail Tool does not display headers for incoming messages unless you specifically request them by choosing **Open In Tray** or **Save Changes** from the **File** menu.

When you change Mail Arrival properties, click **SELECT** on the **Apply** button to apply them to the Mail Tool Application. Mail Arrival properties become effective immediately.

Composition Header Properties

You can customize the text fields at the top of the Compose window using the **Composition Header Properties** category shown in Figure 3-39.

Figure 3-39 Composition header properties



To automatically include a Subject, Cc, or Bcc line, click SELECT on Yes. To exclude a Subject, Cc, or Bcc line, click SELECT on No.

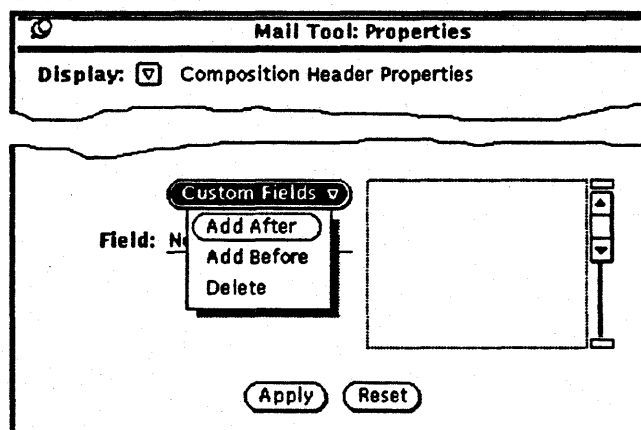
To create a custom field, follow these steps:

1. Type the label for the field in the Field line.

You do not need to type a colon following the label. The colon is automatically provided by Mail Tool.

2. Move the pointer to the Custom Fields menu button and press MENU.
3. Choose either Add Before or Add After from the Custom Fields menu, as shown in Figure 3-40, to put the new field at the top or bottom of the existing scrolling list.

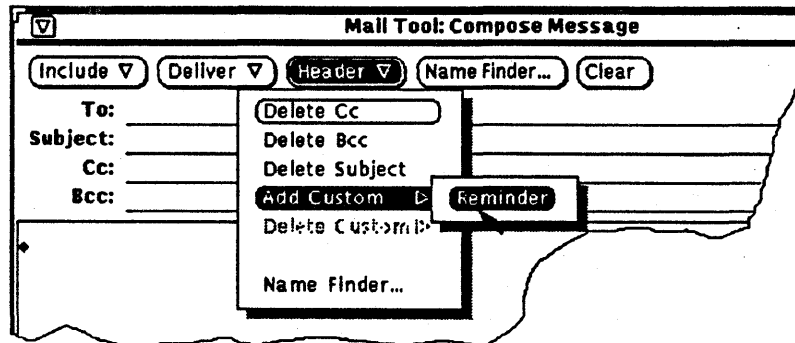
Figure 3-40 Custom Fields menu



4. Release MENU. The item is added to the scrolling list.

- To apply the change to Mail Tool, click **SELECT** on the **Apply** button.
The custom field is added to the header menu in the Compose window, as shown in Figure 3-41.

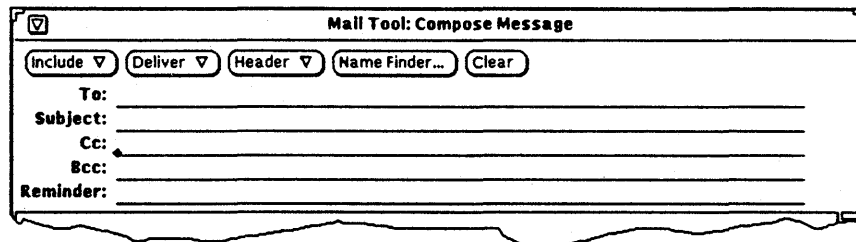
Figure 3-41 An example of a Custom field on the Add Custom submenu



- To include the custom label, choose the item from the **Add Custom** submenu.

Figure 3-42 shows an example of a custom field added to the Compose window.

Figure 3-42 An example of a Custom field added to the Compose window



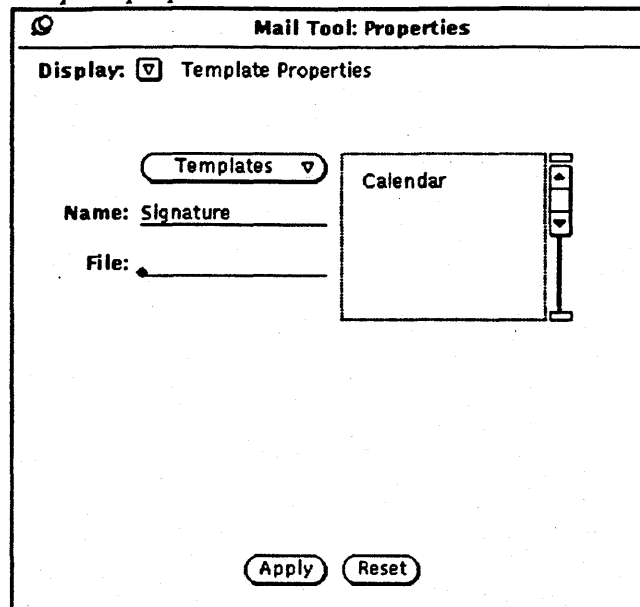
To delete a custom field, click **SELECT** on the item in the scrolling list, choose **Delete** from the **Custom Fields** menu, and click **SELECT** on **Apply**.

The **Composition Header Properties** become effective immediately when you click **SELECT** on **Apply**.

Template Properties

You can create your own templates to use when you compose messages. Each template is an individual file that you create outside of Mail Tool using any editor such as Text Editor or vi. When you have created the file, you can add it to Mail Tool using the **Template Properties** category, shown in Figure 3-43.

Figure 3-43 Template properties



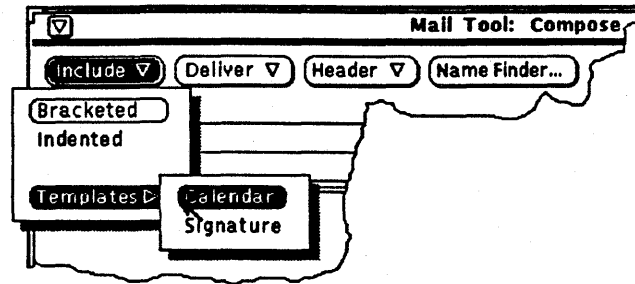
To add a template to the Template menu, follow these steps:

1. In the name field type the name of the template that you want to be displayed on the Compose Include Templates submenu. In this example, type *Signature*.
2. Press **Tab** or **Return** to move the insert point to the File field.
3. Type the path and name of the file containing the template.
4. Move the pointer to the Templates menu button and press **MENU**.
5. Choose **Add Before** or **Add After** from the Templates menu. The item is added to the beginning or end of the scrolling list.
6. Click **SELECT** on the Apply button. The items in the scrolling list are added to the Compose Include Templates submenu.

A Calendar template is provided as part of the DeskSet installation. If you want to use the Calendar template, you must add it to the Template menu yourself following the steps above. The location of the Calendar template is:
`$OPENWINHOME/share/xnews/client/templates/calendar.tpl`

Figure 3-44 shows an example of the Templates submenu with two template items.

Figure 3-44 The Templates submenu in the Compose window



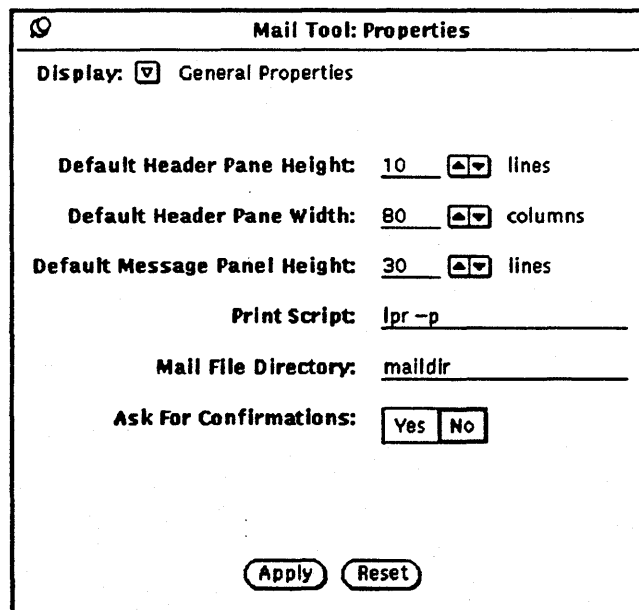
To use a template, choose the item from this menu and the text from the template file is displayed in the Compose text pane.

To delete a template name, click SELECT on the name in the scrolling list, choose Delete from the Templates menu, and click SELECT on the Apply button.

General Properties

The General Properties category, shown in Figure 3-45, allows you to specify general properties such as the size of panes, print scripts, the directory for mail files, and whether confirmation Notices are displayed when you make changes to a mail file.

Figure 3-45 General properties



You can specify the number of lines that are displayed in the Mail Tool message header pane, the number of columns in panes for all windows, and the number of lines in the pane of the View Message pop-up window. You can also specify a different print script and a file for mail file messages.

Use the Mail File Directory text field to specify the directory where mail files are stored when you move or copy them from your In Tray to mail files. Unless a full path name is specified, the directory is considered a subdirectory of your home directory. If the directory name you specify does not exist, when you click

SELECT on the Apply button, a Notice is displayed asking you if you want to create the directory. See “Organizing Your Mail Messages” for more information about using the Mail File directory.

If you choose Yes for the Ask for Confirmations setting, a Notice is displayed when you have made editing changes to a message in the View window and you display a new message or receive new incoming mail. If you choose No, any editing changes are automatically incorporated when you display a new message or receive new incoming mail without notification.

When you have changed properties, click SELECT on the Apply button. The changes to Mail Tool window sizes from the General Properties category do not become effective immediately. They take effect the next time you quit Mail Tool and start it again. The Print Script and Mail File Directory properties become effective immediately.

3.11 Organizing Your Mail Messages

In addition to scrolling through message headers in your In Tray and using the Find pop-up window to locate specific messages, you can organize your mail by grouping related messages together in a “Mail File.” A Mail File is a file that contains single or multiple mail messages. If you view a Mail File outside of Mail Tool, it looks like a single file with multiple mail messages appended to one another. When you view a Mail File using Mail Tool, however, each separate message header is displayed in the Mail Tool header pane, and you can view, edit, delete, and respond to each message individually.

Where do these Mail Files reside in your file structure? You specify the directory using the General Properties category in the Mail Tool Properties window. See “Customizing Your Mail Tool” for more information about setting properties. Any Mail Files that you create in this directory are displayed as items on the Mail File menu. If you have not specified a Mail File directory, the Mail File menu will not work.

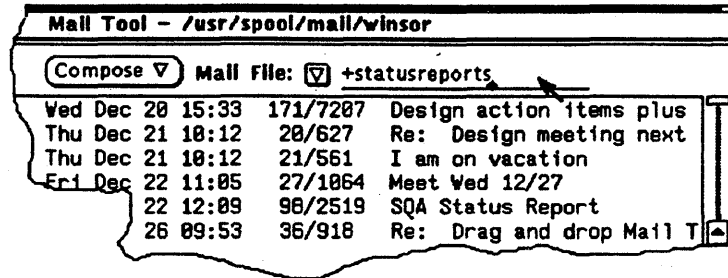
You can put Mail Files anywhere you like in your file structure. Typically, many users create a subdirectory named “mail” in their home directory. Be aware, however, that Mail Files you put outside of the Mail File directory specified from the Mail Tool Properties window will not be displayed as items on the Mail File menu.

Creating a New Mail File

Suppose you want to keep a Mail File history of status reports you receive for a particular project. To create a status report mail file, follow these steps:

1. Type `+statusreports` in the Mail File text field, as shown in Figure 3-46.

Figure 3-46 Creating a new mail file



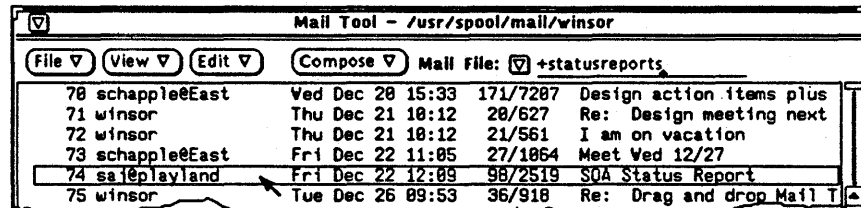
The + sign tells Mail Tool to put the mail file in the Mail File directory that you specify from the Mail Tool Properties window. If you type a file name without a + the mail file is created in the directory where you started Mail Tool, typically your home directory.

You can also type a complete path name (such as /home/username/mail/windows) or a relative pathname (such as mail/windows) to put the mail file somewhere else in your file structure. If you type a full or relative path name, do not use the + symbol. Relative path names are relative to your current directory, that is the directory from which you started Mail Tool. Typically the current directory is your home directory.

2. Select the items from your In Tray that you want to move or copy to the new mail file by clicking SELECT on the first item and then ADJUST on subsequent items.

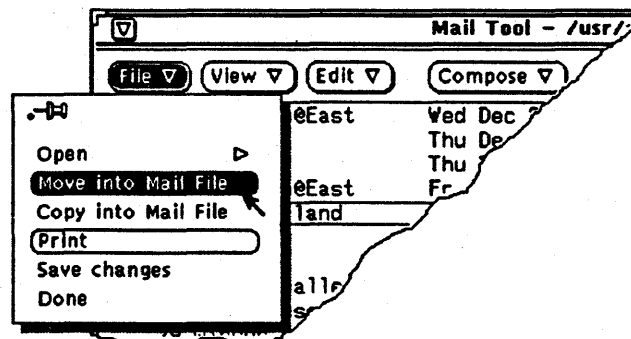
Figure 3-46 shows one selected item.

Figure 3-47 A selected message header



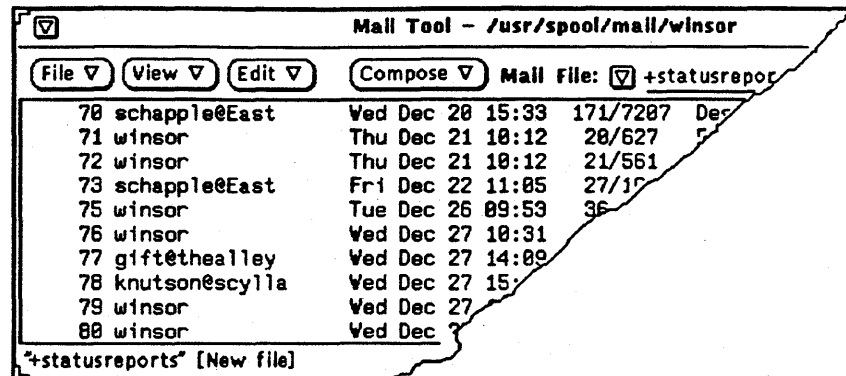
3. Choose Move into Mail File from the File menu, as shown in Figure 3-48.

Figure 3-48 The Move into Mail File item on the File menu



The message is moved to the new file, and an information message is displayed in the footer of the Mail Tool window, as shown in Figure 3-49.

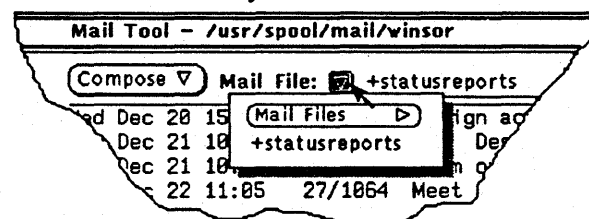
Figure 3-49 An information message after a mail file has been created



The Mail File menu contains a list of files in your mail file directory and also contains a history of most recently accessed mail files. This menu is called the Mail File history menu. The history is maintained until you quit the Mail Tool application.

The item +statusreports shown in Figure 3-50 is the history item. It is also included as part of the Mail Files submenu.

Figure 3-50 The Mail File history menu



If you create a new mail file outside of your mail directory, the file is displayed on the Mail File history menu, but is not included as part of the listing in the Mail Files submenu.

If you have a set of mail files that you want to always appear on the Mail File history menu, you can specify these files in your .mailrc file in your home directory. For example, if you want +statusreports and +openwindows to always appear on the Mail File history menu, without having to initially access these mail files, you can add the following line to your .mailrc file:

```
set filemenu='+statusreports +openwindows'
```

Adding Messages to an Existing Mail File

You can add subsequent mail messages to the statusreports file in one of three ways:

- Type +statusreports in the text field, or
- Choose +statusreports from the Mail File history menu, or
- Choose +statusreports from the Mail Files submenu.

Then select the additional mail messages and choose Copy into Mail File or Move into Mail File from the File menu to append those messages to those already filed in the statusreports file.

Viewing a Mail File

To view the messages that you have stored in a mail file, follow these steps:

1. Enter the name of the mail file in the Mail File text field.
2. Choose Open Mail File from the File menu.

The messages in the mail file are displayed as separate message headers in the header pane of the Mail Tool window. You select and operate on mail file messages in the same way you select and operate on In Tray messages.

To return to the In Tray, choose Open In Tray from the File menu.

Sorting the Contents of a Mail File

You can sort items in your mail files by time and date of receipt, by name of sender, or by subject. To sort files, follow these steps:

1. Enter the name of the mail file in the Mail File text field.
2. Choose Open Mail File from the File menu.
3. Move the pointer onto the View menu button and press MENU.
4. Highlight the Sort By item and drag the pointer to the right to display the Sort By submenu.
5. Highlight Time and Date, Sender, or Subject, and release MENU.

The message headers are redisplayed, sorted according to the item you chose.

To return to the In Tray, choose Open In Tray from the File menu.

3.12 Shortcuts

Each application in the DeskSet Environment provides you with the following shortcuts:

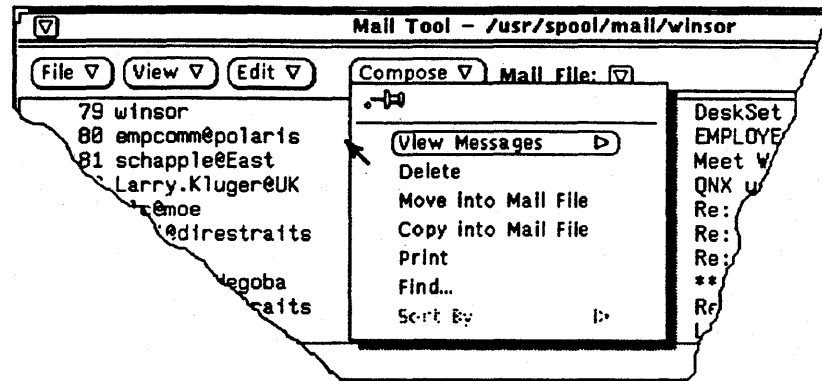
- Pop-up menus for each pane contain frequently-used items from the menus in the control area.
- Keyboard accelerators let you perform standard core and editing functions without moving your hands from the keyboard to the mouse. See Appendix B for a list of keyboard accelerators.

In addition to these shortcuts, the Mail Tool application provides a standard template for Calendar Manager appointments and allows you to create personalized distribution lists, called *aliases*. This section describes pop-up menus and tells you how to create templates and aliases.

Pop-up Menus

In addition to the commands on the File, View, Edit, and Compose menus, the Mail Tool application provides a pop-up menu in the header pane that contains a subset of controls from the File, View, and Edit menus, as shown in Figure 3-51.

Figure 3-51 The message header pane pop-up menu



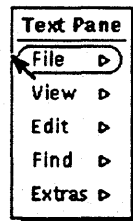
The View Messages, Delete, Move Into Mail File, Copy Into Mail File, Print, Find, and Sort By items work in the same way as already described whether you choose the item from a menu button or from this pop-up menu.

The message header pane pop-up menu has a pushpin that you can use to turn the menu into a pop-up window. It then becomes like a moveable control area that you can position at your convenience, keeping the choices on this menu visible and available to you.

Alternatively, you can choose any item from this menu without needing to move the pointer out of the pane by pressing the MENU mouse button anywhere in the pane, highlighting the item you want, and releasing MENU.

The text editing panes in the View Messages and Compose Messages windows contain the standard editing commands from the Text Editor application. Figure 3-52 shows the editing pop-up menu.

Figure 3-52 The Text Pane pop-up menu



For a description of the text editing commands, see Chapter 5.

Creating and Using Templates

The Mail Tool application allows you to create your own template files containing text that you frequently use for composing messages. DeskSet installation provides one standard template for reminders of appointments and meetings that is compatible with the Calendar Manager application.

When you create a template document, you can add it to the Templates submenu from the Mail Tool Properties window. See “Template Properties” earlier in this chapter for information about creating your own templates and “Using Templates” earlier in this chapter for information about using them.

Creating and Using Mail Tool Distribution Lists

You can create your own distribution lists containing groups of user names. Instead of typing a distribution list of ten names, you can type the single name that you specify as the name of the alias in the To text field.

There are two kinds of distribution lists, or aliases, you can create on your own system:

- Aliases in your `.mailrc` file that only you can use.
- Aliases in your `/etc/aliases` file that anyone can use.

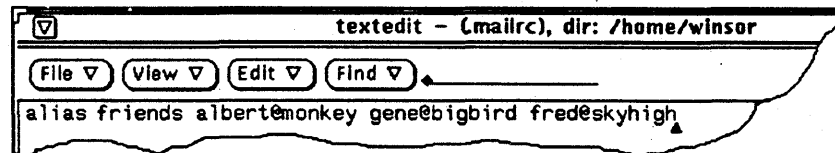
This section describes how to create each of these aliases.

Creating and Using Aliases in `.mailrc`

To create an alias in your `.mailrc` file, you must edit your `.mailrc` file in your home directory using any text editor. On a separate line in the file, type `alias aliasname username username`. Separate each item with a space and end the group with a Return.

Figure 3-53 shows an example of an alias line in a `.mailrc` file.

Figure 3-53 An example of an alias group in `.mailrc`



When the alias is complete, save the changes.

To use the alias, simply type the name of the alias (for example, `friends`) in the To, Cc, or Bcc line of the Compose Messages window. The names you typed in the file are expanded and included as part of the outgoing message.

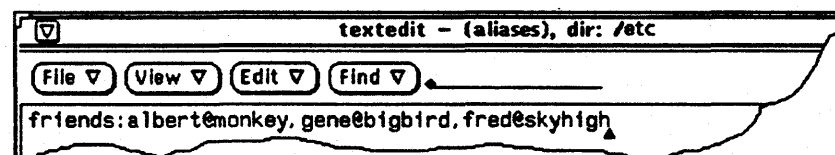
The Vacation notifier responds to individuals you have listed as part of aliases in your `.mailrc` file. See "Using the Vacation Notifier" earlier in this chapter for more information.

Creating and Using Local Aliases in `/etc/aliases`

To create an alias in your `/etc/aliases` file, you must have root access to your system. Edit your `/etc/aliases` file using any text editor. Under the Local Aliases category, on a separate line, type `aliasname:username,username`. Separate each item with a comma and end the group with a Return. You can include a space after each comma, if desired.

Figure 3-54 shows an example of an alias group in `/etc/aliases`.

Figure 3-54 An example of an alias group in `/etc/aliases`



When the alias is complete, save the changes, type `newaliases` and press Return to record the new alias grouping with the `sendmail` program.

To use the alias, type the name of the alias in the To, Cc, or Bcc line of the Compose Messages window. The names you typed in the file are not expanded as part of the outgoing message. The alias group itself is displayed as the user name when the message is received. To use an alias on someone else's system, type the alias name, @, and their machine name in the To line of the Compose Messages window. For example, someone else could send mail to the "friends" alias in the example by typing `friends@castle`.

3.13 Using Drag and Drop with Mail Tool

You can select single or multiple headers in the Mail Tool base window and copy or move them to other DeskSet applications.

You can drop message headers onto the following destinations:

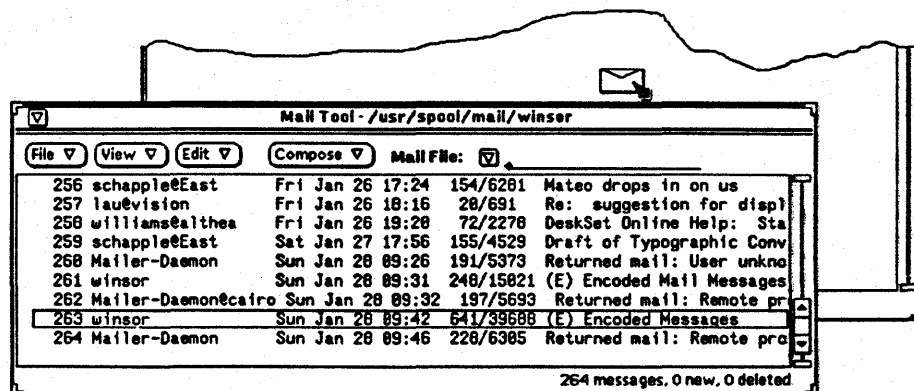
- File Manager
- Text Editor
- Print Tool
- Tape Tool
- Calendar Manager
- Mail Tool Compose window

To drag and drop a copy of a message header, follow these steps:

1. Click SELECT on the message header.
2. Press the Control key and then SELECT.
3. Release the Control key.
4. Drag the pointer to the destination.

A small envelope moves with the pointer to show you that you are dragging a mail message, as shown in the example in Figure 3-55. When you select multiple message headers, a group of envelopes is dragged with the pointer.

Figure 3-55 Dragging a copy of a message header



5. Release SELECT.

To move message headers, follow these steps:

1. Click **SELECT** on the message header.
The header is selected.
2. Press **SELECT**.
3. Drag the pointer to the destination.
4. Release **SELECT**.

Warning: *If you move message headers anywhere outside of the Mail Tool In Tray, the messages are deleted from the Mail Tool In Tray. You can, however, recover these messages from the Undelete pop-up window as long as you have not saved changes to Mail Tool.*

You can schedule appointments in Calendar Manager by dropping a copy of a message header onto the Calendar Manager icon or window. See Chapter 4 for more information about the Calendar Manager application.

The Mail Tool Compose window accepts dropped files from the File Manager and Text Editor.

3.14 Troubleshooting

It is not a good idea to run multiple versions of Mail Tool at the same time. Running multiple Mail Tool applications can cause the system to become confused about the state of the mail spool file that keeps track of messages in your In Tray. If you make changes and choose either Save Changes or Done from the File menu, that information is used to modify messages in your In Tray. When you have made changes using different versions of the Mail Tool application, or the Mail program, it is possible that you could lose messages that you intended to save.

You can avoid confusing Mail Tool about the state of your In Tray by getting into the habit of choosing Done from the File menu at the end of each day, or when it is likely that you will be logging into your machine and reading mail from a remote location.

If you forget to choose Done, and log into your machine to read mail, you can tell Mail Tool to choose Done by following the steps below:

1. From a shell prompt type `ps -ax | grep mailtool` and press Return.

The listing should look like the one shown in Figure 3-56.

Figure 3-56 An example of a `ps` listing for mailtool

```
[65]castle(winsor)% ps -ax | grep mailtool
  413 co I    2:18 /home/sundesk/bin/./bin.sun4/bin-2D/mailtool
11935 p1 S    0:00 grep mailtool
[66]castle(winsor)%
```

2. Look in the left-hand column of the listing for mailtool (not the listing for grep mailtool) to find the process number (PID).

The process number is the first number on each line.

3. Type `kill -30 PID` and press Return.

In the example above, the process number is 413, so you would type:

```
kill -30 413
```

4. Read your mail as you normally do from the remote location.

The next time you open your Mail Tool, the changes you make to your In Tray from the remote location are incorporated and recorded as part of the Mail Tool application.

Warning: *The steps above only work with the DeskSet Mail Tool application. Using these steps for other versions of Mail Tool will kill Mail Tool.*

The Mail utility uses a lock file to prevent two or more processes from altering your mail spool file at the same time. If Mail Tool quits unexpectedly and takes the Mail utility with it, the lock file may be left behind.

If Mail Tool takes a long time to open the In Tray, either when you specifically request it or when you open Mail Tool after you have chosen Done from the File menu, check `/var/spool/mail` for a file named `username.lock`, where `username` is your login name. To remove the file, from a system prompt, type `rm /var/spool/mail/username.lock` and press the Return key. For example, if your username is "fred", you would type `rm /var/spool/mail/fred.lock`.

Mail Tool lets you select and print several mail messages at one time. This uses a lot of swap space, which can potentially cause your server to crash. Therefore you should not select more than five messages to be printed simultaneously.

Calendar Manager

The Calendar Manager application is an appointment and resource scheduling tool with the following features:

- Displays a day, week, month, or year at a glance
- Schedules a single or repeating event
- Provides the following reminders of events that can be used individually or combined with one another:
 - Beeping, flashing, and/or opening a Reminder pop-up window
 - Sending a reminder mail message about an appointment
- Specifies security for your appointments
- Accesses, browses, and edits the calendar appointments of other users
- Prints high-quality output

This chapter describes these features of the Calendar Manager.

4.1 Calendar Manager Views

The Calendar Manager provides different ways to view your calendar appointments. This section describes all the ways you can view the calendar.

Icon

When the Calendar Manager application is displayed as an icon, it shows the current month with the current date highlighted, as shown in Figure 4-1. The current month and date are displayed in the icon regardless of the view you choose to display when the Calendar Manager window is open.

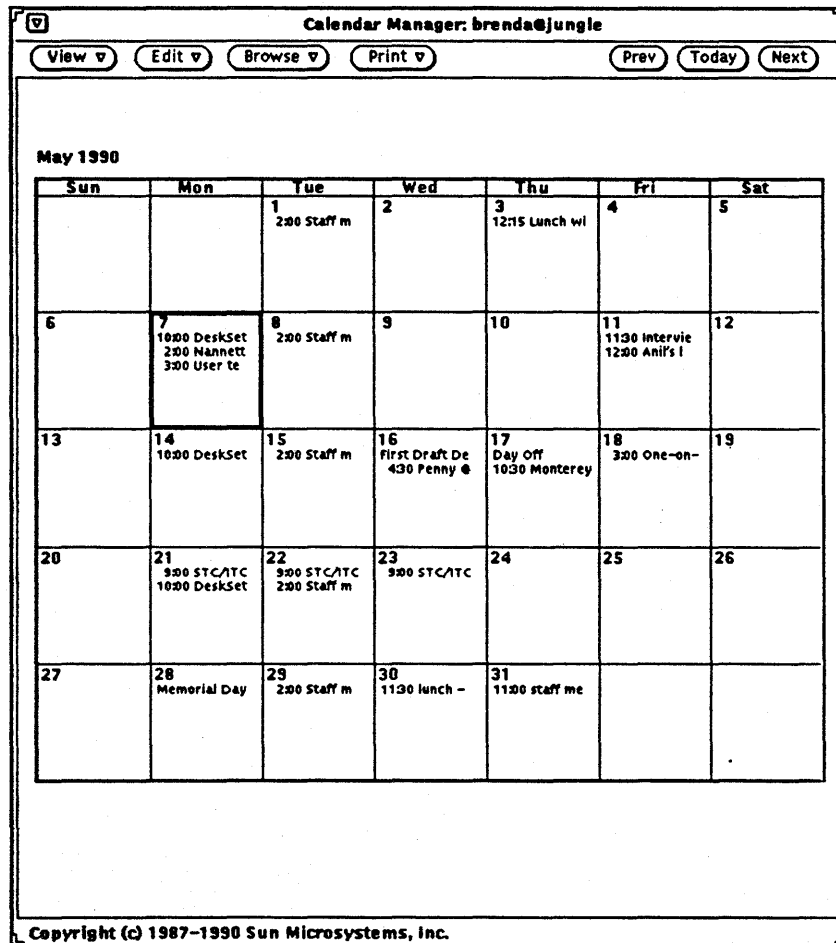
Figure 4-1 An example of the Calendar Manager icon

May 1990						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Window

The Calendar Manager base window has a control area and an area for displaying the calendar in the view you choose. The default display is the current month at a glance, which shows appointment scheduling for a one-month period. You can, however, change the default from the Properties window. See "Customizing Your Calendar Manager" later in this chapter for more information on changing defaults. Figure 4-2 shows an example of the default Calendar Manager window.

Figure 4-2 An example of the default Calendar Manager window

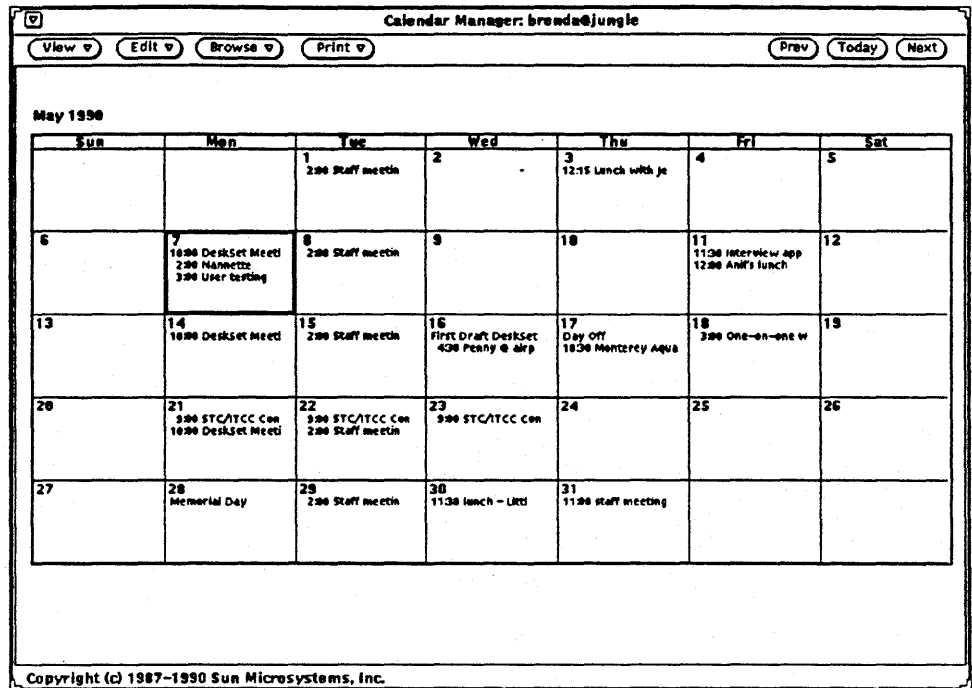


Note that one appointment is displayed for each line and the text for the appointments is clipped to accommodate the size of the date box.

The current day is automatically selected when you open the Calendar Manager window. A day that is selected has a double border. In Figure 4-2, above, May 7 is the selected day. You can select any other day by pointing to a different day and clicking SELECT.

The base window has resize corners that you can use to change its size. If you want to display more information on each line, use one of the resize corners to stretch the window horizontally, as shown in Figure 4-3.

Figure 4-3 A Calendar Manager window that has been resized

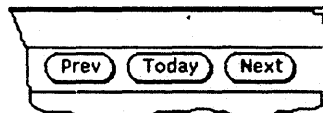


If you want to increase the number of lines for appointments, use one of the resize corners to stretch the window vertically.

The Navigation Controls

The control area of the Calendar Manager application has three buttons at the right, shown in Figure 4-4, that you can use to browse quickly through the view of the calendar currently displayed.

Figure 4-4 The navigation control buttons



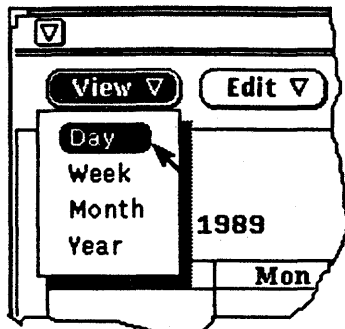
Clicking SELECT on Prev moves the view (whether it is day, week, month, or year) backward one unit. Clicking SELECT on Next moves the view forward one unit. Clicking SELECT on Today returns you to "today."

Day View

The day-at-a-glance view is useful when you have many appointments scheduled for a single day. To change the view in the Calendar Manager window so that it displays appointments for one day, follow these steps:

1. Move the pointer into the rectangle for the day you want to view and click SELECT.
2. Move the pointer to the View menu button.
3. Press MENU.
4. Drag the pointer to highlight the Day item on the menu, as shown in Figure 4-5.

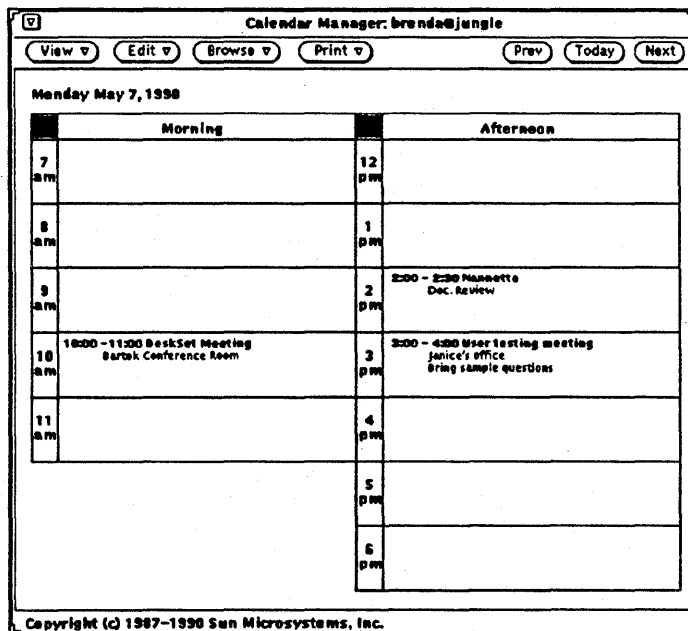
Figure 4-5 Highlighting the Day item



5. Release MENU.

The view in the Calendar Manager window changes to display the selected day. Figure 4-6 shows an example of a day display.

Figure 4-6 A day view



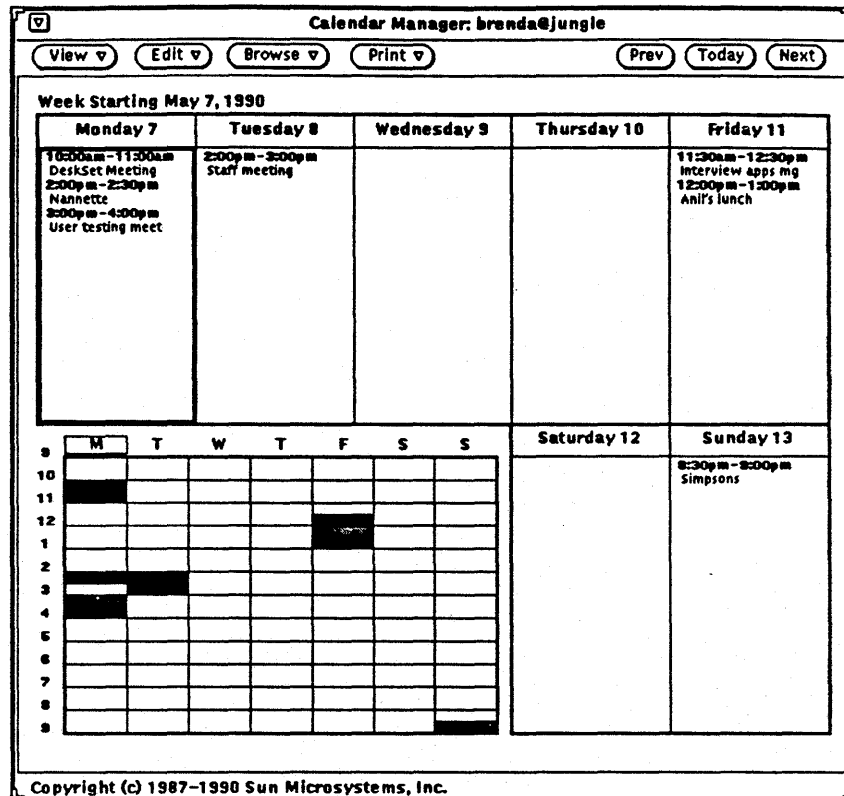
You can set the range of hours that are displayed for the day view from the Properties window. See "Customizing Your Calendar Manager" later in this chapter for more information. The day view displays all the information you enter about the appointment in the Appointment Editor pop-up window, not just the first line. See "Scheduling and Editing Appointments" later in this chapter for more information about the Appointment Editor.

Week View

To change the view in the Calendar Manager window so that it displays appointments for one week, choose Week from the View menu.

The view in the Calendar Manager window changes to display the week containing the current date, as shown in Figure 4-7. The week view in the lower left corner of the window shows you the blocks of time allocated for appointments during the week.

Figure 4-7 A week view



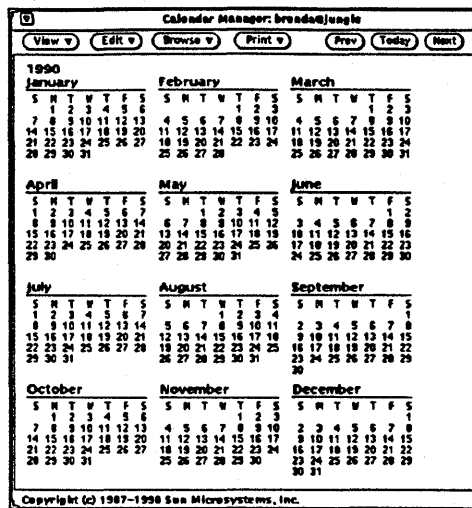
Alternatively, you can point to the number for an individual day in the Month view and click SELECT to change the view to the week containing that day.

Year View

To change the view in the Calendar Manager window so that it displays the calendar for the current year, choose Year from the View menu.

The view in the Calendar Manager window changes to display the current year. Figure 4-8 shows the Calendar Manager window with 1990 displayed.

Figure 4-8 A year view

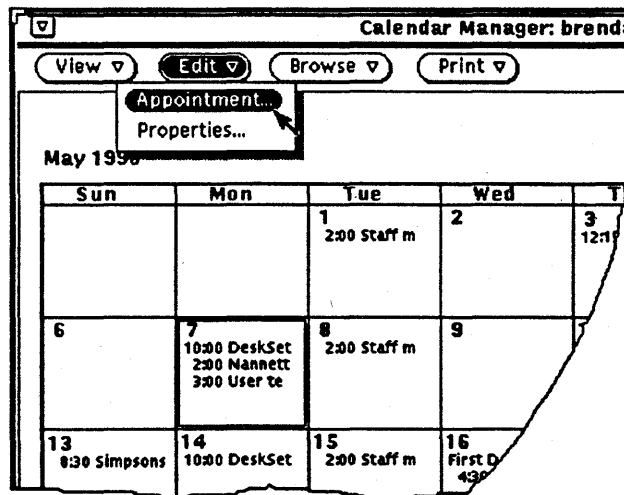


The Calendar Manager provides year-at-a-glance views for the years 1970 through 1999.

4.2 Scheduling and Editing Appointments

You schedule appointments from the Appointment Editor pop-up window. You display the Appointment Editor window by selecting a day and choosing Appointment from the Edit menu, as shown in Figure 4-9.

Figure 4-9 Choosing Appointment from the Edit menu



Alternatively, you can double-click SELECT on an hour (for Day view) or a day (for Week or Month view) to display the Appointment Editor.

Note that clicking SELECT when the pointer is on any date number in the Month view changes the view to a Week view and does not display the Appointment Editor. This is a quick method to display the Week view, as described in the "Week View" section earlier in this chapter.

The Appointment Editor pop-up window automatically displays the selected day and lists scheduled appointments in the scrolling list, as shown in Figure 4-10.

Figure 4-10 The Appointment Editor pop-up window

CM Appointment Editor

Date:

What:

10:00 DeskSet Meeting
2:00 Nannette
3:00 User testing meet

Start: End:

Repeat:

None	Daily
Weekly	Biweekly
Monthly	Yearly

Reminder: Advance: mins Repeat:

mins
 mins
 hours Mail To:

The Appointment Editor pop-up window has the following controls:

- A Date field that automatically displays the selected date. You can type in another date to schedule additional appointments using any format described in the next section, “Entering a New Appointment”. Note that there are several acceptable formats, and that you do not have to type in the day of the week even though the day of the week is displayed.
- A What field in which you type information about the appointment. The first line of this field is displayed in the Month view, so the first line should describe the appointment. You can also include details about the appointment in this field, such as the appointment place, a brief meeting agenda, or a reminder to bring something to the appointment.
- A scrolling list that displays existing appointments for the selected date.
- A Start and End set of controls that you use to set the time of the appointment. You can either use the time menu or type in a number in the text fields. The time menu is available via the Start and End abbreviated menu buttons. The choice of times on this menu is determined by the Day Bounds settings from the Properties window. See “Customizing Your Calendar Manager” later in this chapter for more information. When you set a start time, the end time is automatically set to one hour later. If the appointment is longer than an hour, you can set a different end time by choosing a time from the time menu or by typing a time in the text field. The last choice on the time menu is “None”, which you can use if you don’t want a time associated with an appointment. This is useful for “to do” list items or reminders, such as “Report Due”, or appointments that refer to the entire day, such as “Memorial Day.”

- Repeat controls that you use to indicate whether the appointment is individual, daily, weekly, biweekly, monthly, or yearly. When an appointment repeats at a regular interval, you can set the number of times the appointment is repeated.
- Reminder controls that determine how you are reminded of an appointment. You can use as many of the reminder controls as you like for each appointment. In the example shown in Figure 4-11, Beep, Flash and Open are set. Mail is not set. Note that the Mail To text field is inactive and therefore dimmed. When you click SELECT on Mail, the text field is automatically activated.

Figure 4-11 The Reminder settings in the Appointment Editor window

Reminder:	Beep	Advance:	5	mins	
	Flash		5	mins	
	Open		5	mins	
	Mail		2	hours	Mail To: winsor@castle

- Advance text fields that determine how far in advance of an appointment a reminder action takes place.
- Insert, Delete, Change, and Defaults buttons that you use to enter, remove, or modify appointments.

You can change the default settings for the Appointment Editor pop-up window from the Calendar Manager Properties window. See "Customizing Your Calendar Manager" later in this chapter for more information about properties.

Entering a New Appointment

To enter a new appointment on the day displayed, follow these steps:

1. If the caret is not already positioned in the What text field, move the pointer into the text field and click SELECT. Type information about the appointment.

You can type up to 255 characters on each line.

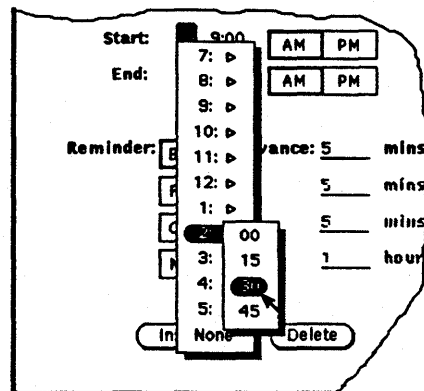
2. To set the time, move the pointer to the Start text field, click SELECT to set the insert point, and type in a time. If necessary, click SELECT on the PM setting.

Alternatively, you can move the pointer onto the abbreviated menu button and press MENU to display a menu from which you can choose hours that are determined by the setting of day boundaries from the Properties window. See "Customizing Your Calendar Manager" later in this chapter for more information.

Each hour item has a submenu with 00, 15, 30, and 45 minute items.

Figure 4-12 shows the Time menu and a submenu.

Figure 4-12 The Time menu and a submenu



Highlight the time you want and release MENU to enter the time in the text field. When you choose a time from the menu, the correct AM or PM setting is automatically chosen for you. If you choose "None", no time is associated with the appointment.

3. The time in the End text field is automatically set to one hour later than the time in the Start text field. To change the duration for the appointment from the default of one hour, move the pointer to the End text field, click SELECT to set the insert point, and type in a time. If necessary, click SELECT on the PM setting.

Alternatively, you can move the pointer onto the abbreviated menu button and press MENU to display the time menu as described in Step 2.

4. If the appointment is one that is repeated on a regular basis, choose the appropriate Repeat setting by moving the pointer onto it and clicking SELECT.

You can choose repeat intervals of None, Daily, Weekly, Biweekly (every two weeks), Monthly, or Yearly.

5. When Repeat is set to None, the Repeat text field is inactive and is dimmed to show you that it will not accept input.

When you choose a repeating appointment, the Repeat text field and abbreviated menu button are active and the units are displayed following the text field, as shown in Figure 4-13.

Figure 4-13 The Repeat text field

Repeat:	None	Daily
	Weekly	Biweekly
	Monthly	Yearly

Repeat: 12 months

You can choose the number of times you want the appointment to repeat. For example, you may know that a weekly meeting will be scheduled for the next two month period. Move the pointer onto the abbreviated menu button and

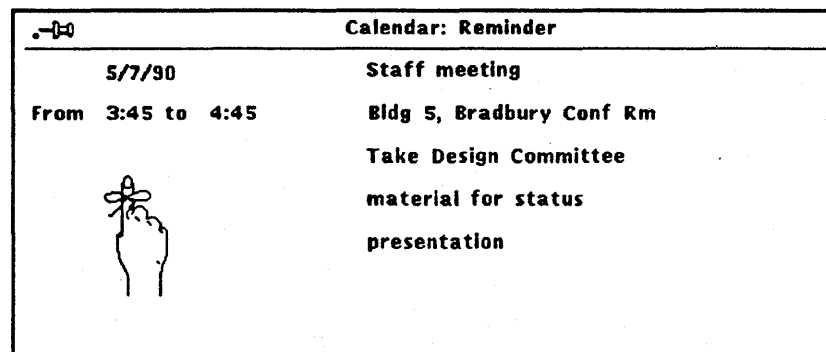
press **MENU** to display a menu containing repeat items from 2 through 14 and "forever". Highlight the item you want and release **MENU** to enter the repeat rate in the text field.

Alternatively, you can move the pointer to the Repeat text field and type in a number. The default number usually sets the appointment to repeat for a year. For example, the default number is 365 when the repeat interval is Daily, or 52 when the repeat interval is Weekly. The default number for the Yearly setting is two years. If you want the appointment to repeat indefinitely, you can type the word "forever" in the text field.

6. Choose the way you want to be reminded of this appointment.

You can set none, some, or all of the Reminder options. Beep and Flash cause the Calendar Manager icon to beep and flash if it is closed. The Calendar Manager window itself will beep and flash if it is open. If you choose Open, at the time specified for Open the appointment Reminder pop-up window is displayed showing the appointment information. Figure 4-14 shows an example of the Reminder pop-up window.

Figure 4-14 An example of the Reminder pop-up window



Choosing the Mail setting automatically mails a reminder to the email addresses you type into the To text field.

7. You can change the Advance times by typing a new whole number into the appropriate text field (decimals and fractions are not accepted formats).

You can also change the default Advance times from the Properties window. See "Customizing Your Calendar Manager" for more information.

8. When you have entered all the information for the appointment, click **SELECT on the Insert button.**

The appointment is added to the scrolling list in the Appointment Editor window and to the Calendar Manager window.

If you want to enter appointments for another day, double-click **SELECT** on the new day in the Calendar Manager base window or type a new date in the Date field using any of the formats listed below, and then follow the preceding steps.

You can type a new date using the following date formats:

- MM/DD/YY or M/D/YY (for example, 10/26/90 or 7/5/90)
- Mon Day, Yr or Month Day, Year (for example, Aug 26, 90 or August 26, 1990)
- Day Mon Day, Yr (for example, Sat May 12, 1990)
- Today
- Tomorrow
- Yesterday
- Next Weekday (for example, Next Wednesday)
- Last Weekday (for example, Last Wednesday)

When you are finished with the Appointment Editor window, dismiss it by clicking SELECT on the pushpin or choosing Dismiss from the pop-up Window menu.

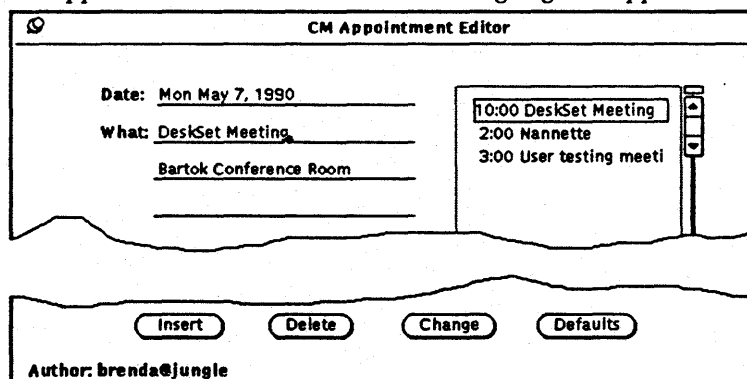
Deleting an Existing Appointment

To delete an existing appointment, follow these steps:

1. Select a date and display the Appointment Editor pop-up window.
2. Move the pointer over the appointment in the scrolling list that you want to delete and click SELECT.

The appointment is highlighted, as shown in Figure 4-15, the appointment information is displayed in the What field, and the author of the appointment is displayed in the footer.

Figure 4-15 An Appointment Editor window with a highlighted appointment



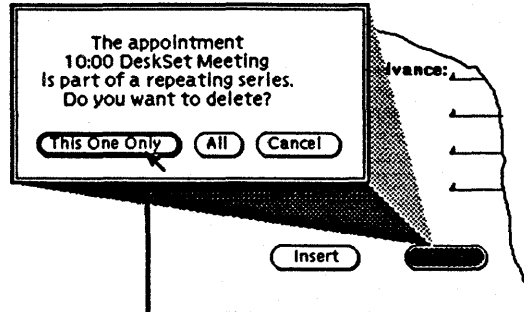
If you want to delete several appointments at one time, click SELECT on each additional appointment you want to delete.

3. Move the pointer onto the Delete button and click SELECT.

The appointment is deleted from both the scrolling list and the Calendar Manager base window.

If you select a repeating appointment and click **SELECT** on the Delete button, a Notice is displayed, as shown in Figure 4-16, allowing you to delete the appointment for the selected date only, for all dates, or to cancel the operation.

Figure 4-16 The Notice for repeating events



Editing an Existing Appointment

To edit an existing appointment, follow these steps:

1. Select an hour (from a Day view) or a day from a Week or Month view and display the Appointment Editor pop-up window.

Unless you have made a selection, the Appointment Editor displays appointments for the current date.

2. Point to the appointment in the scrolling list that you want to edit and click **SELECT**.

The appointment is highlighted, the appointment information is displayed in the What text field, and the author of the appointment is displayed in the footer.

3. Change the information in the Appointment Editor window to reflect the new information for the appointment.
4. Move the pointer onto the Change button and click **SELECT**.

The changes you made to the appointment are made to both the scrolling list and the Calendar Manager base window.

If you select a repeating appointment and click **SELECT** on the Change button, a Notice is displayed allowing you to change the appointment for the selected appointment only, for all appointments in the repeating series, or to cancel the operation.

Note that the Date entry cannot be changed for all appointments in a repeating series. If, for example, you want to change a repeating meeting from every Tuesday to every Wednesday, you need to first delete the repeating appointment, then reinsert it on the new day.

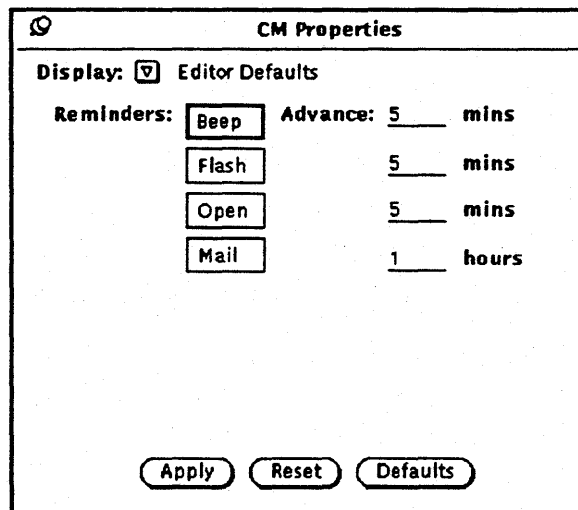
4.3 Customizing Your Calendar Manager

You can customize the following parts of the Calendar Manager application from the Properties window:

- Editor Defaults, for the Appointment Editor pop-up window.
- Day Boundaries and View, to specify boundaries for the Day view, time ranges on the Start and End menus in the Appointment Editor window, and the default View setting for the Calendar Manager base window.
- Browser Calendars, the set of user names automatically displayed on the Browse menu of the Calendar Manager base window and in the Browse pop-up window.
- Access List and Permissions, to specify security access defaults.

The Properties window has four separate displays that you use to modify the four different sets of properties listed previously. Figure 4-17 shows the Properties window with the default display of Editor Defaults.

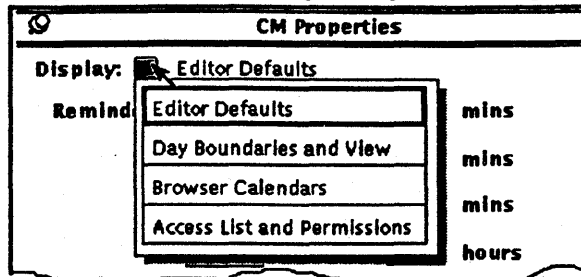
Figure 4-17 The Editor Defaults Properties window



You display the Properties window by moving the pointer into the control area or pane of the Calendar Manager window and pressing the Properties key (L3) on the keyboard. You can also display the Properties window by choosing Properties from the Edit menu.

You use the Display menu to choose a set or category of properties to display, as shown in Figure 4-18.

Figure 4-18 The four Calendar Manager Properties categories



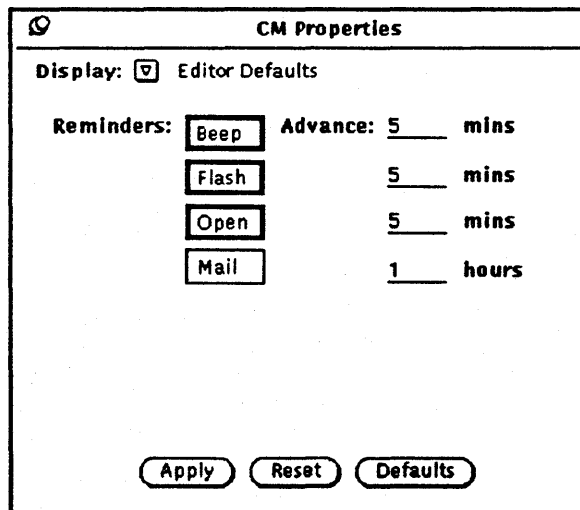
To display a particular category of properties, choose the appropriate item from the Display menu shown in Figure 4-18. When you release MENU, the contents of the property window shows the properties you can set for that category.

When you have changed properties, you must apply them by clicking SELECT on the Apply button. This only applies the properties currently displayed. To change properties of a different category, display the new category, change the desired settings, and click SELECT on the Apply button again.

Editor Defaults Properties

The Editor Defaults properties, shown in Figures 4-17 and 4-19, specify the defaults for the Appointment Editor pop-up window. When you set the editor defaults from the Properties window, they are automatically set each time you display the Appointment window.

Figure 4-19 The Editor Defaults Properties



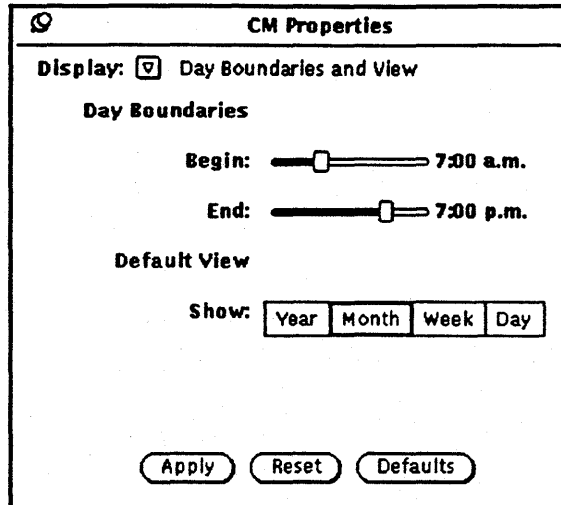
To change the defaults, click SELECT on the settings you want. Click SELECT in the text field and type a new number. Figure 4-19 shows an example of the Reminders with Beep, Flash, and Open set.

When you click SELECT on the Apply button, the new defaults become effective immediately. Changing the Reminders or Advance settings does not affect any appointments that have already been scheduled using the old default choices.

Day Boundaries and View Properties

The Day Boundaries and View controls, shown in Figure 4-20, specify the boundary times for your day, and the default View setting for the Calendar Manager base window.

Figure 4-20 The Day Boundaries and View Properties



Changing the Day Boundaries

You can specify the range of hours for both the Day view in the Calendar Manager base window and the Start and End time menus in the Appointment Editor window using the Day Boundaries sliders shown in Figure 4-20.

The current value is displayed to the right of each slider. To change the setting, follow these steps:

1. Move the pointer to the slider drag box (the open rectangle) and press **SELECT**.
2. Drag the pointer to the left or to the right.

Note that the time changes as you drag the slider. The pointer is "locked" onto the drag box as long as you keep **SELECT** pressed.

3. When the time you want is displayed, release **SELECT**.

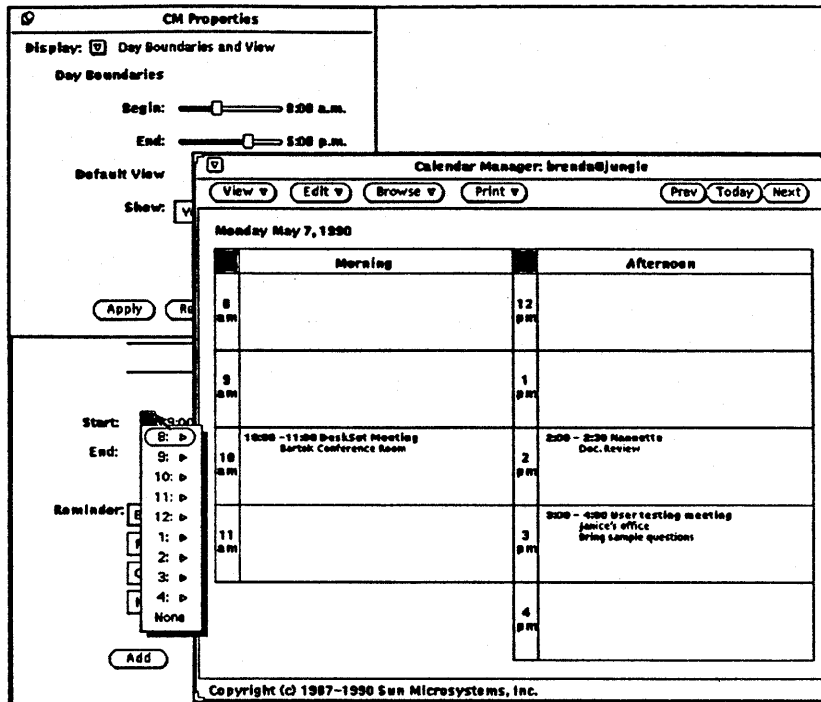
Alternatively, you can move the pointer onto the slider bar to the left or right of the drag box and click **SELECT** to change the time hour by hour.

NOTE You cannot set a day boundary that ends before it begins. When the values overlap, the drag boxes are synchronized and move together so that the end time is always at least one hour after the start time.

When you have set the day boundaries, click **SELECT** on the Apply button to record them. The changes are applied and take effect immediately.

Figure 4-21 shows the sliders with the day boundaries set for 8 AM and 5 PM, and the Day view and Appointment Editor menus that are affected.

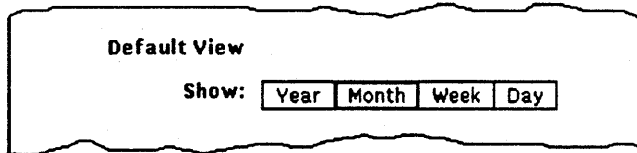
Figure 4-21 How the Day Boundaries sliders affect Calendar Manager



Changing the Default View of the Base Window

You can set the default view of the Calendar Manager base window to Year, Month, Week, or Day using the Default View settings shown in Figure 4-22.

Figure 4-22 The Properties window Default View settings

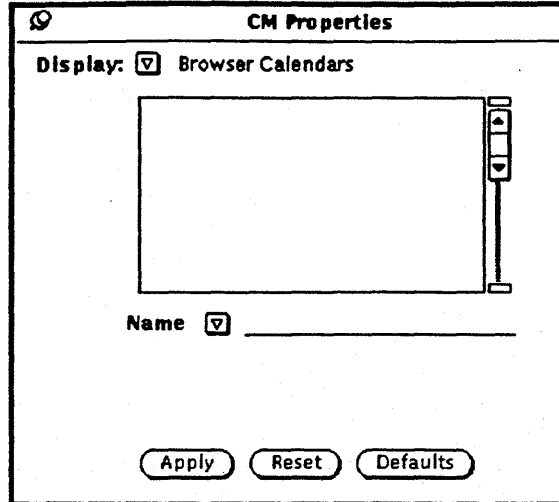


To change the default view, click SELECT on the setting you want and then click SELECT on the Apply button. The change is applied and takes effect immediately.

Browser Calendars Properties

You can use the Calendar Manager to display and edit appointments for other users. The user names (login and system name) you enter in the Properties window are recorded and displayed on the Browse menu of the Calendar Manager base window. If you quit the Calendar Manager application and start it up again, the login names on this scrolling list remain available on the Browse menu.

See "Browsing Remote Calendars" later in this chapter for information on how to browse. Use the Browser Calendars scrolling list and the Name button and text field, shown in Figure 4-23, to enter and edit the login names of those users whose calendar appointments you access most frequently.

Figure 4-23 *The Browser Calendars Properties*

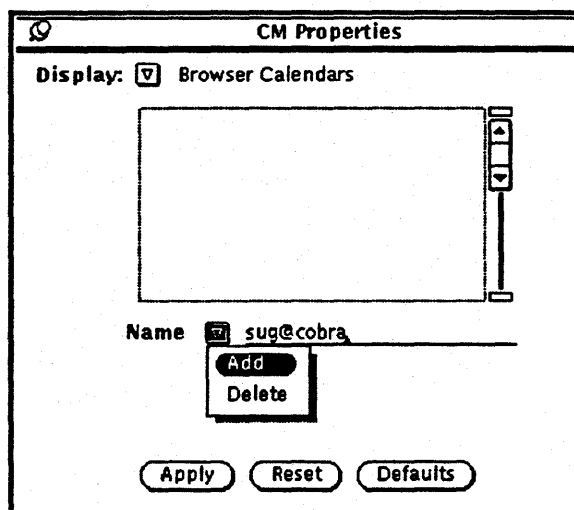
New user names are displayed on the Browse menu in the order you enter them in the Browser Calendars scrolling list. If you plan to add a number of user names to the Browse menu at the same time, you might want to enter them in an order that makes sense to you. Consider entering the most frequently accessed names first, putting the names in alphabetical order, or grouping them by departments.

Adding Users to the Browser

You add other users following the steps below:

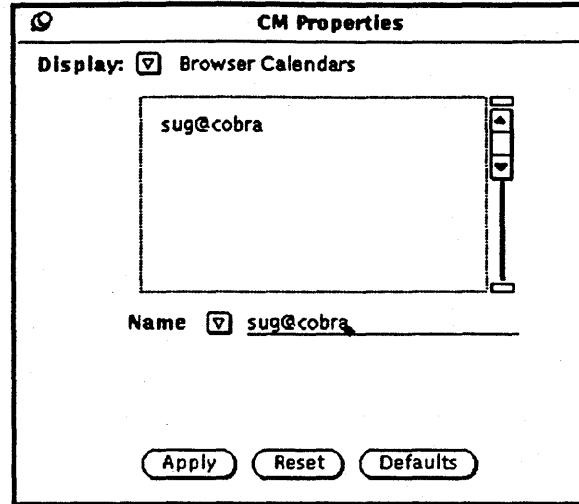
1. In the Name field, type the email address of the user you want to add to the Browse menu (for example, `sug@cobra`).
2. Press Return to add the name.

Alternatively, you can choose Add from the Name menu, as shown in Figure 4-24, or from the scrolling list pane pop-up menu.

Figure 4-24 *Choosing Add from the Name menu*

The name is added to the scrolling list, as shown in Figure 4-25.

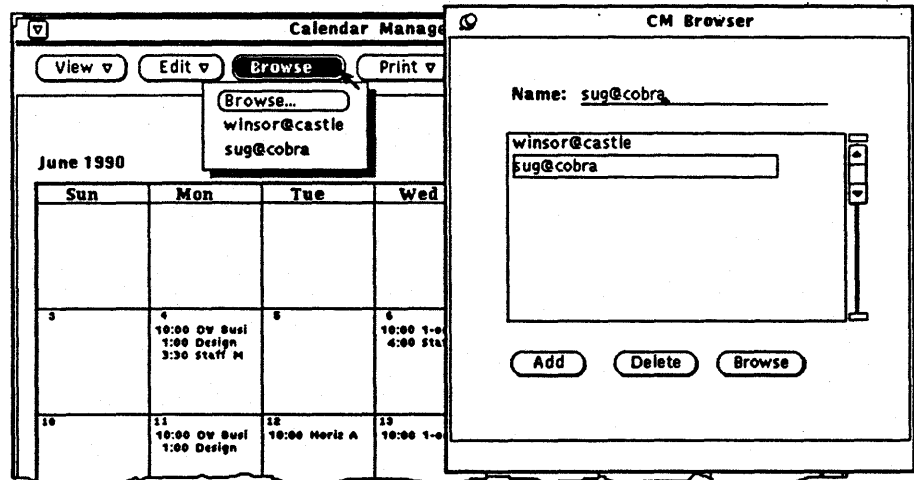
Figure 4-25 The Browse scrolling list with a user name added



You can enter any user name in this scrolling list. To improve system and network performance, the Calendar Manager does not confirm that the user name is valid or that the appointments for that user name are available when you enter that user name in the Browse scrolling list. Calendar Manager does this checking when you choose the Browse option from the Browse menu or the Browser pop-up menu.

When you have completed adding names to the Browser scrolling list, click SELECT on the Apply button to record the changes. These changes are not automatically displayed, since the Calendar Manager only looks at the list of browser calendars when you start it. To display these changes as part of the Calendar Manager, quit and restart the application. The changes are reflected in both the Browse menu and the Browser pop-up window, as shown in Figure 4-26.

Figure 4-26 How the Browser Calendar properties affect the Calendar Manager



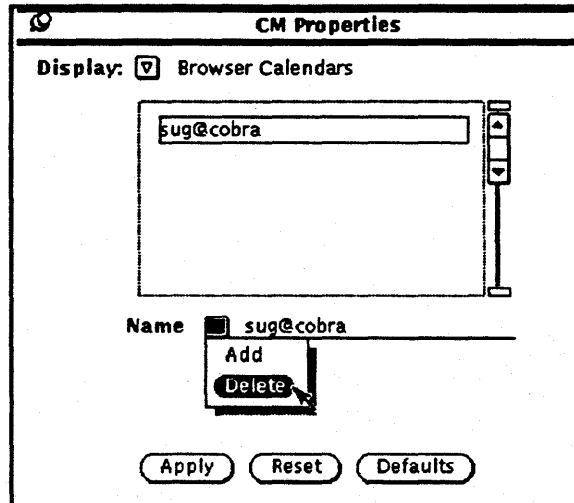
Deleting Users from the Browser

You delete a user name from the Browse menu by following these steps:

1. Display the Properties window.
2. Choose Browser Calendars on the Display menu.

3. Point to a name in the scrolling list and click **SELECT** to select it.
4. The line is highlighted.
5. Choose **Delete** from the Name menu, as shown in Figure 4-27, or from the scrolling list pane pop-up menu.

Figure 4-27 Choosing Delete from the Name menu



6. To record the changes to the Browser Calendars scrolling list, click **SELECT** on the Apply button.

The names are not deleted from the Browse menu until you quit Calendar Manager and start it up again.

Access List and Permissions Properties

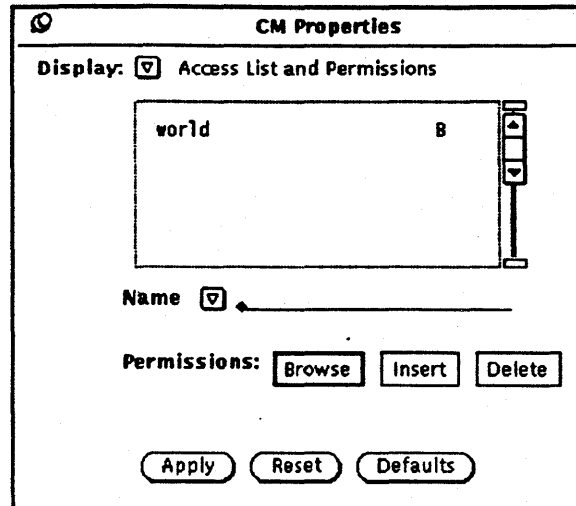
The Calendar Manager browser allows you to browse the appointments for others, as well as allowing other users to browse your appointments. See “Browsing Remote Calendars” later in this chapter for more information about browsing.

The Access List and Permissions properties let you specify who may browse or change your appointments.

NOTE *The permissions you give to a user apply to all of your appointments. If you give someone permission to change your appointments, that user will be able to change all your appointments, not just specific ones. Make sure the user is trusted before providing Insert or Delete permissions.*

The default access list, shown in Figure 4-28, gives all users permission to browse your calendar, but not to insert or delete appointments.

Figure 4-28 Access List and Permissions Properties



The scrolling list displays a list of everyone who has access to your calendar. The entry “world” means everyone who is using the DeskSet Environment. If you delete the world entry, only the users you specifically add will be able to read your appointments.

To the right of each name in the scrolling list are letters indicating the permissions that user has. The available permissions are “B” for Browse, meaning the user can read your appointments, “I” for Insert, meaning the user can insert new appointments in your calendar, and “D” for Delete, meaning the user can delete existing appointments from your calendar.

If you give more permissions to the world than you give to an individual, that individual will still have the world permissions. For example, if you give a user named Jim permission to browse your calendar, but the world has permission to browse and insert, Jim will inherit the world permissions and will be able to insert appointments as well as browse your calendar.

If you give someone both Insert and Delete permission, that person can also edit or change existing appointments. The name of the person who most recently edited an appointment is displayed in the footer of the Appointment Editor window when that appointment is selected.

You add to and delete users from the Access List in the same way as you do for the Browser Calendars scrolling list. You can also change the existing permissions for a user already on the Access List. The methods of editing the Access List are described below:

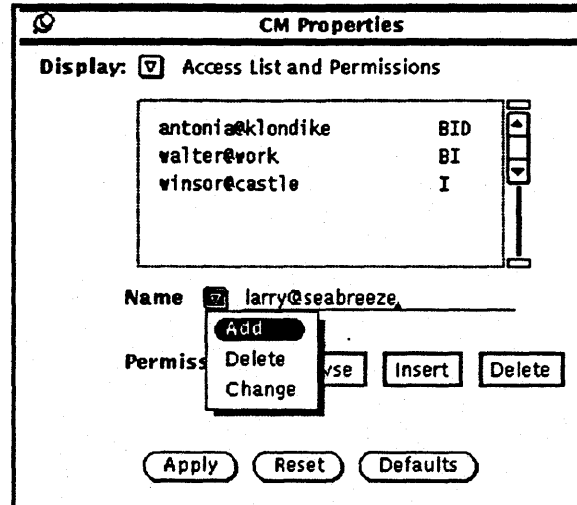
Adding Users to the Access List

To add a user, follow these steps:

1. In the Name field, type the email address of the user you want to add.
2. Select the permissions you want to give the user. In Figure 4-29, Browse, Insert, and Delete are all selected.

- To add the name, choose Add from the Name menu, as shown in Figure 4-29, or from the scrolling list pane pop-up menu.

Figure 4-29 Adding a name to the Access List



- Repeat the first three steps to add other users.
- When you have completed the list, click **SELECT** on the Apply button to record the changes.

Deleting Users from the Access List

To delete a user, follow these steps:

- Click **SELECT** on the user name in the scrolling list. If you want to delete several users at one time, click **SELECT** on each additional user name you want to delete.
- Choose **Delete** from the Name menu or the scrolling list pane pop-up menu.
- Click **SELECT** on the Apply button to record the changes.

Changing the Access List

To change the existing permissions for a user already on the Access List, follow these steps:

- Click **SELECT** on the user name in the scrolling list.

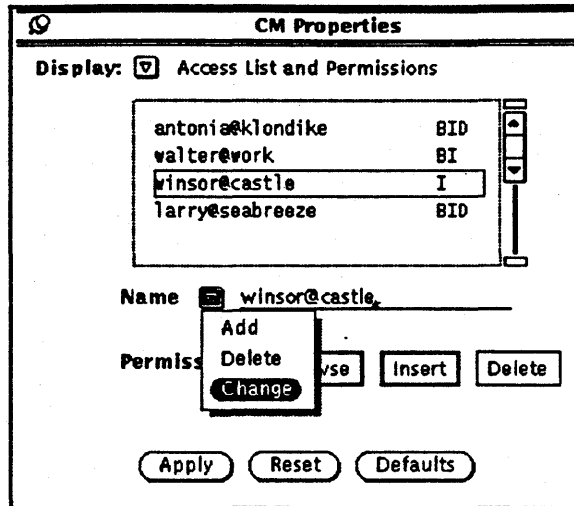
You can only change the permissions for one user at a time. If you click **SELECT** on more than one user, the Change item on the Name menu is dimmed.

- Select the new permissions you want to give the user.

In Figure 4-30, Browse and Insert are selected to replace the existing permission of Insert for winsor@castle.

- Choose **Change** from the Name menu, as shown in Figure 4-30, or from the scrolling list pane pop-up menu.

Figure 4-30 Changing an entry in the Access List



4. Click **SELECT** on the **Apply** button to record the changes.

4.4 Browsing Remote Calendars

The Calendar Manager application allows you to access the appointment schedules of other users if you are included on their Access List. This convenient feature allows administrative personnel and their staff to coordinate scheduling of appointments. It can, for example, allow individual users access to the appointments that coordinate scheduling of conference rooms.

The default is for the Calendar Manager application to allow you access to your own calendar appointments. You can add and delete other user names on the Browse menu from the Properties window, as described in the previous section. If you have not added names to the Browse menu from the Properties window, the Browse menu button initially contains two items: A Browse window item and an item for your login and machine name. Figure 4-31 shows an example of the default Browse menu.

Figure 4-31 An example of a default Browse menu

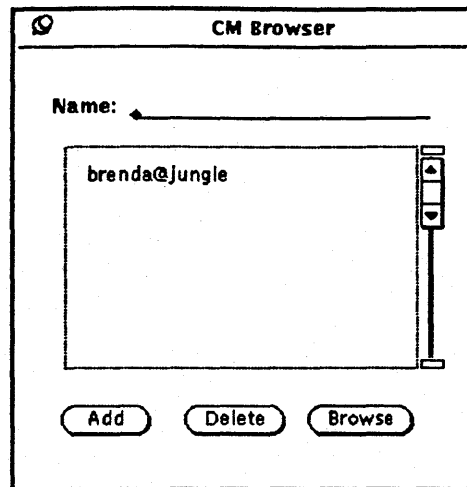


Adding Another User's Appointments to the Browser

You can temporarily add another user's appointment schedule to the Browse menu from the Browse pop-up window. User names that you add from the Browse pop-up window remain on the Browse menu until you quit the Calendar Manager application or delete them using the Delete button in the Browse pop-up window.

To display the Browse pop-up window choose the Browse item from the Browse menu. An example of the Browse pop-up window is shown in Figure 4-32.

Figure 4-32 The Browse pop-up window



The Browser scrolling list shows all the user names from the Browse menu, whether you added them from the Properties window or the Browse window.

You temporarily add other users to the Browse menu following the steps below:

1. In the Name field, type the email address of the user you want to add to your browser.
2. Move the pointer onto the Add button and click SELECT.

Alternatively, you can press the Return key. The user name is added to the scrolling list and to the Browse menu.

You can enter any user name in this scrolling list. The Calendar Manager does not confirm that the user name is valid or that the appointments for that user name are available until you click SELECT on Browse in the Browser pop-up window or choose the user name from the Browse menu. This checking can be a time consuming operation, so it is not done at the time you add a name to the scrolling list.

Browsing a Remote Calendar

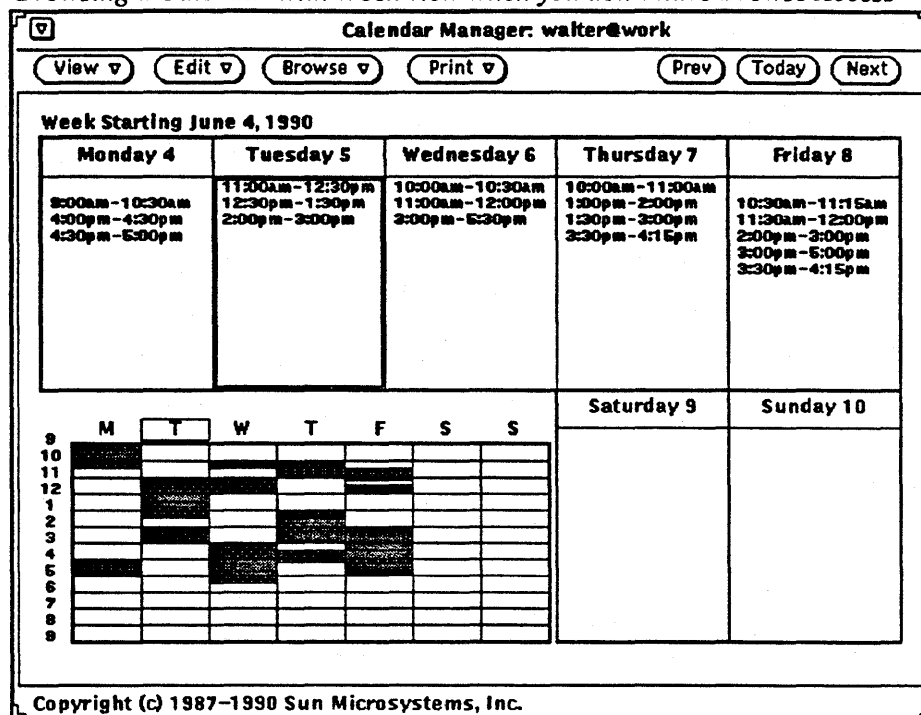
Once a user name has been added to the Browse menu, you can display and/or edit the appointments for that user, (depending on the access permissions that user has given you), by choosing the user name from the Browse menu. Alternatively, you can change the Calendar Manager base window to display appointments for another user from the Browser window. Click SELECT on the user name in the scrolling list to choose it and then click SELECT on the Browse button.

If the Calendar Manager cannot find the user name or access the appointments for that user, the error message "Unable to access *user@machine...*" is displayed in the footer of the Browser window. The appropriate user and machine names are displayed in the error message.

If the Calendar Manager can access the appointments for that user, they are displayed in the Calendar Manager base window, and the name of the user is displayed in the header following the words "Calendar Manager". If you do not

have browse access for that user you cannot see or edit any of their appointments, but you can see blocks of scheduled time, as shown in Figure 4-33.

Figure 4-33 Browsing a Calendar with Week view when you don't have Browse Access



To change back to your own calendar, choose your user name from the Browse menu.

Deleting A User from the Browse Menu

To delete another user's name from your Browse menu, follow these steps:

1. Choose the Browse window item from the Browse menu.
The Browser pop-up window is displayed.
2. Move the pointer onto the user name you want to delete and click SELECT.
The user name is highlighted.
3. Move the pointer onto the Delete button and click SELECT.

The user name is removed from the scrolling list, but remains displayed in the Name field. If you inadvertently deleted a name, you can add the name again by clicking on the Add button without retyping the name.

You can temporarily delete user names that you have added from the Properties window, as well as any user names you have added from the Browser pop-up window. When you delete names that you entered from the Properties window, the names are redisplayed the next time you quit the application and start it up again.

4.5 Printing Calendar Views

The Calendar Manager application provides high-quality printed output for day, week, month, and year views. You set the printer name and options from the Printer Options window that you access from the Print menu. You print Calendar Manager output by choosing the view you want to print from the Print menu.

The Printer Options Pop-up Window

You can set printing options from the Printer Options pop-up window. Figure 4-34 shows the default settings for the Printer Options window.

Figure 4-34 The Printer Options pop-up window

From this window, you can specify the following print options:

- The destination of the printed output (Printer or File)
- The printer name or file destination and file name
- The width and height of the printed image
- The left and bottom margin
- The number of units that print

In Figure 4-34 above, the unit is Months. When a day view is displayed, the unit is Days, and so on. You can tell what view will print from the label on this field. The selected unit (day, week, month, year) always begins the sequence. Subsequent units print according to the number you enter in this field.

To change the unit, choose a new option from the View menu.

- The number of copies to print

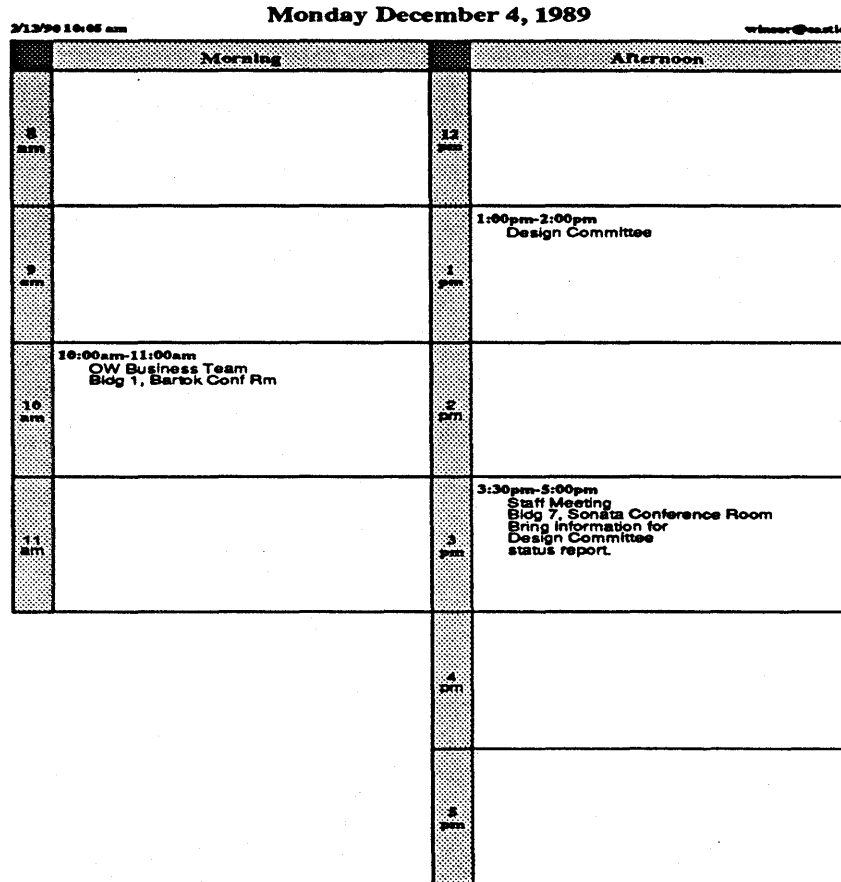
Clicking SELECT on the Print button in the Printer Options window prints the view that is displayed in the Calendar Manager base window. For example, if you are displaying appointments for a day at a glance, choosing Print prints a day view.

When you change the settings from the Printer Options window, they become the new default printer settings until you quit the Calendar Manager application and start it up again.

Day View

To print appointments for the current day, choose Day from the Print menu. To print appointments for a day other than the current one, move the pointer onto the day you want to print and click SELECT. Then choose Day from the Print menu. Appointments for the day are printed in the format shown in Figure 4-35.

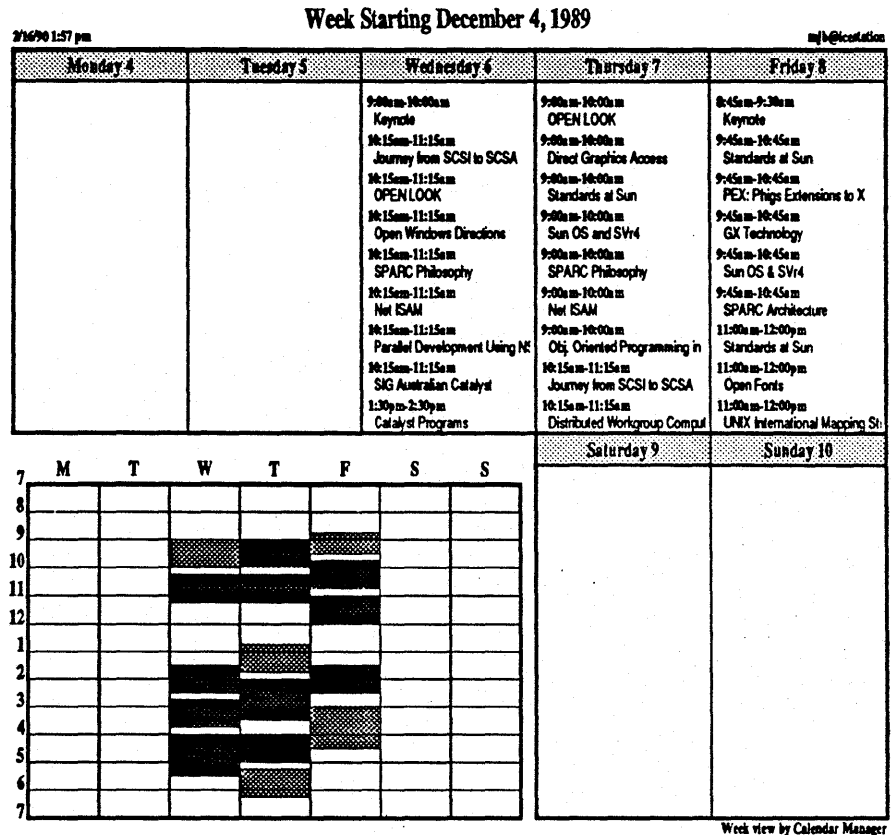
Figure 4-35 A printed day view



Week View

To print appointments for the current week, choose Week from the Print menu. To print appointments for a week other than the current one, move the pointer onto the day you want to print and click SELECT. Then choose Week from the Print menu. Appointments for the week are printed in the format shown in Figure 4-36.

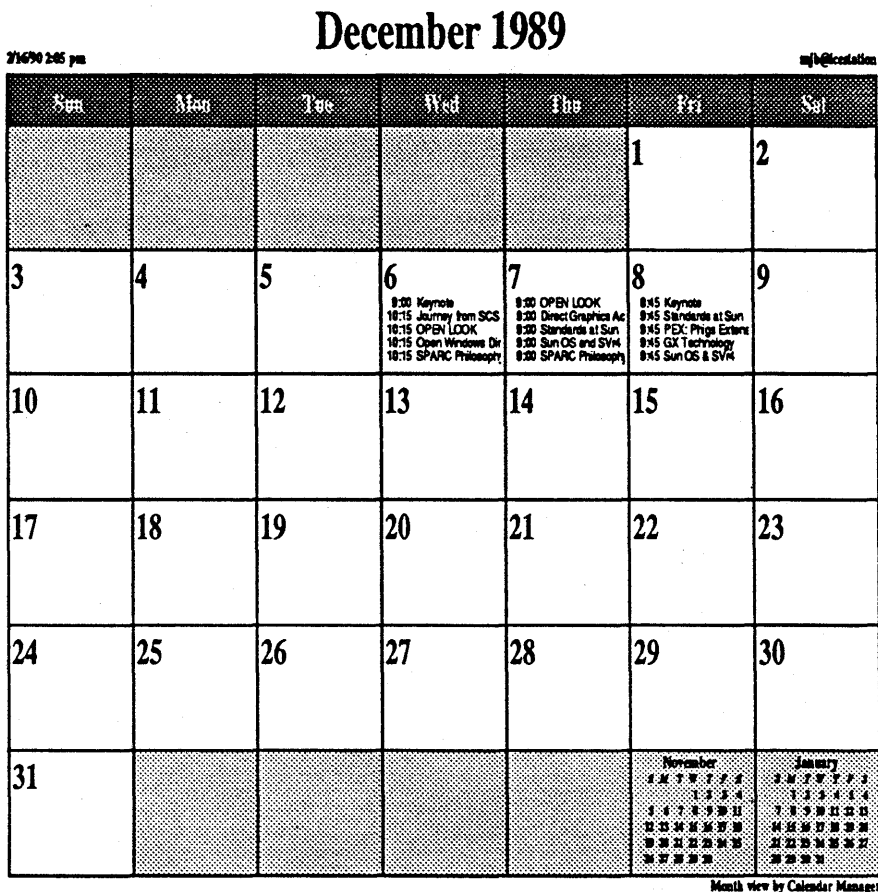
Figure 4-36 A printed week view



Month View

To print appointments for the current month, choose Month from the Print menu. To print appointments for a week other than the current one, move the pointer onto the day you want to print and click SELECT. Then choose Month from the Print menu. Appointments for the month are printed in the format shown in Figure 4-37.

Figure 4-37 A printed month view



Year View

To print the current year, choose Year from the Print menu. To print a year other than the current one, change the year view to the year you want to print. Then choose Year from the Print menu. You can print a standard view of the year, as shown in Figure 4-38, or a schedule view of the year, as shown in Figure 4-39.

Figure 4-38 A printed standard year view

1989

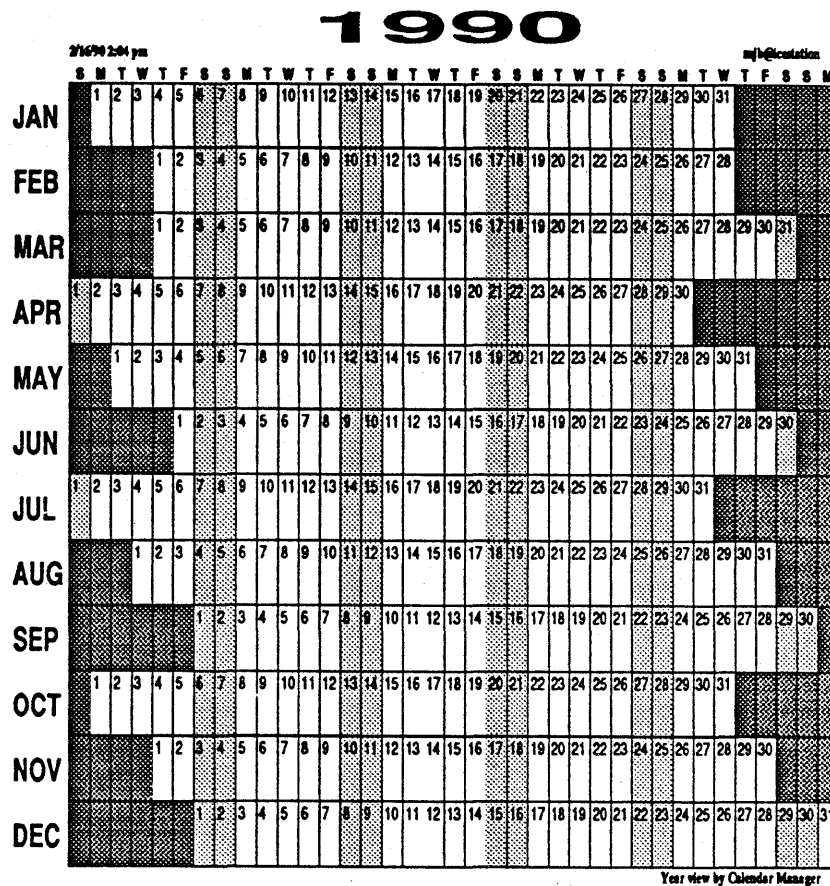
January							February							March						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4			1	2	3	4	
8	9	10	11	12	13	14	5	6	7	8	9	10	11	5	6	7	8	9	10	11
15	16	17	18	19	20	21	12	13	14	15	16	17	18	12	13	14	15	16	17	18
22	23	24	25	26	27	28	19	20	21	22	23	24	25	19	20	21	22	23	24	25
29	30	31					26	27	28					26	27	28	29	30	31	

April							May							June						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
						1			1	2	3	4	5	6				1	2	3
2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10
9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17
16	17	18	19	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24
23	24	25	26	27	28	29	28	29	30	31				25	26	27	28	29	30	
30																				

July							August							September						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
						1			1	2	3	4	5				1	2		
2	3	4	5	6	7	8	6	7	8	9	10	11	12	3	4	5	6	7	8	9
9	10	11	12	13	14	15	13	14	15	16	17	18	19	10	11	12	13	14	15	16
16	17	18	19	20	21	22	20	21	22	23	24	25	26	17	18	19	20	21	22	23
23	24	25	26	27	28	29	27	28	29	30	31			24	25	26	27	28	29	30
30	31																			

October							November							December						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4				1	2		
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30
														31						

Figure 4-39 A printed schedule year view



4.6 Drag and Drop from Mail Tool to the Calendar Manager

You can enter appointments into the Calendar Manager from Mail Tool by dragging and dropping a mail message header when the mail message provides the appointment information in a format that the Calendar Manager can interpret.

Creating an Appointment Message from Mail Tool

Mail Tool provides a template that you can use to create mail messages in the format that Calendar Manager can accept, as shown in Figure 4-40. See Chapter 3 for more information about Mail Tool templates.

Figure 4-40 The Mail Tool template for Calendar Manager messages

The screenshot shows a window titled "Mail Tool: Compose Message". At the top, there are five buttons: "Include ▾", "Deliver ▾", "Header ▾", "Name Finder...", and "Clear". Below these are three input fields labeled "To:", "Subject:", and "Cc:". The main body of the window contains a template for a calendar appointment, enclosed in double asterisks (**). The template fields are:

```

** Calendar Appointment **
Date:  |>mm/dd/yy<|
Start:  |>hh:mm pm<|
End:    |>hh:mm pm<|
What:   |>line 1<|
        |>line 2<|

```

Alternatively, you can type a message following the rules listed below.

- You can type either uppercase letters, lowercase letters, or a combination of the two. For example, "Date", "date", "DATE", and "DaTe" are all acceptable.
- Type a tab or white space(s) before the Date, Start, End, and What fields.
- After the words Date, Start, End, and What, type a colon and white space(s) or tab(s).
- Type Return after each line.
- Use any format for the Date field that is accepted by the Appointment Editor, as described previously.
- Type hours and minutes, separated by a colon, in the Start and End fields. You can follow the time with AM or PM, or you can use military time. If the date is not military time or is not followed by PM, Calendar Manager will assume the time is AM.
- You can type up to 5 lines of text in the What field, with a maximum of 255 characters per line. Follow each line with a Return, and type white space(s) or tab(s) before each of the second through fifth lines.

A mail message can contain several appointments and have explanatory text either before or after each appointment. The Calendar Manager application accepts only the information in the Date, Start, End, and What fields and ignores everything else in the mail message. The Calendar Manager application will accept multiple appointments in the same mail message as long as each message is in the acceptable format.

Dragging an Appointment Message from Mail Tool

When you receive a mail message that has appointment information in the correct format, or a mail reminder generated by another Calendar Manager application, you can drag and drop it onto the Calendar Manager to schedule your appointment by following these steps:

1. Open the Mail Tool window that displays your mail message headers.

2. Point to the header and click **SELECT** to select it.
3. Press the **Control** key on the keyboard and the **SELECT** mouse button.

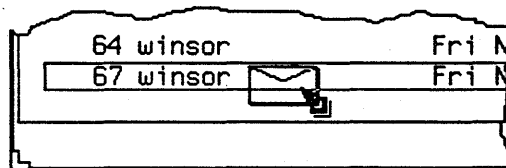
If you don't press the **Control** key first, the mail message is moved and deleted from the Mail Tool instead of copied.

Once you have pressed **SELECT**, you can release the **Control** key.

4. Drag the pointer a short distance.

The pointer changes to the duplicate pointer and a small envelope representing the mail message is displayed, as shown in Figure 4-41.

Figure 4-41 Dragging a mail message



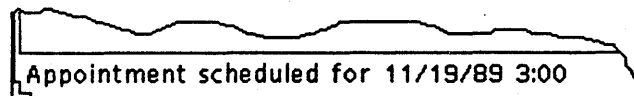
5. Drag the envelope onto the Calendar Manager.

You can drop it onto the Calendar Manager icon or anywhere on the open Calendar Manager window.

6. Release **SELECT**.

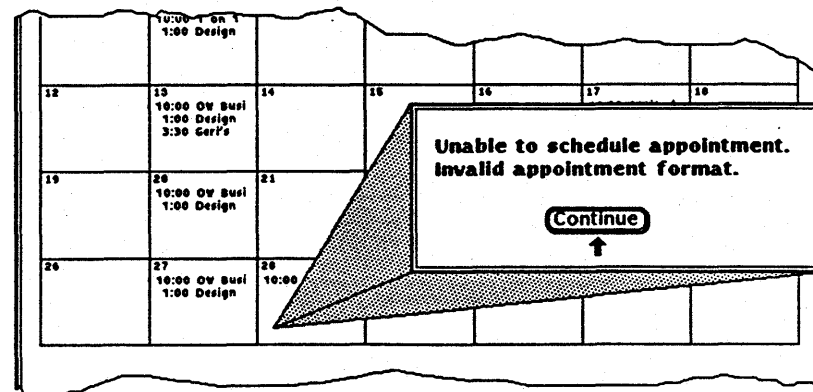
When the appointment has been successfully scheduled, an information message is displayed in the footer of the Calendar Manager base window. Figure 4-42 shows an example of such an information message.

Figure 4-42 An example of an information message for a scheduled appointment



If the appointment is in a format that Calendar Manager cannot understand, a Notice is displayed informing you that the appointment cannot be scheduled, as shown in Figure 4-43.

Figure 4-43 Invalid format Notice



4.7 Troubleshooting

The Calendar Manager application consists of two parts:

- A database manager, called `rpc.cmsd` (Calendar Manager service), that maintains the information for the Calendar Manager application
- The Calendar Manager application itself, called `cm`

The Calendar Manager application cannot function without the Calendar Manager service. In order for the Calendar Manager service to run, you must have run the `install_cmgr` script. See the *OpenWindows Installation and Start-up Guide* for information about `install_cmgr`.

If your Calendar Manager consistently does not display appointments, or if you get “RPC timeout” messages in the console window, `rpc.cmsd` is probably not running. To check your configuration, use these steps:

1. Open a Shell Tool or Command Tool.
2. At the system prompt, type `ps -axw | grep rpc.cmsd` and press Return.
3. Look at the listing displayed in the window.

Figure 4-44 shows a listing that contains the Calendar Manager service process.

Figure 4-44 A `ps` listing showing the `rpc.cmsd` process

```
% ps -axw | grep rpc.cmsd
196 co IW 0:07 rpc.cmsd
3759 p0 S 0:00 grep rpc.cmsd
%*
```

Note that you can ignore the entry `grep rpc.cmsd` in your `ps` listing.

If you do not have an `rpc.cmsd` process running, follow these steps:

1. If you have a Calendar Manager application running, quit the Calendar Manager by choosing Quit from the Window menu.
2. Become root.
3. At the system prompt, type `cd $OPENWINHOME/xview/bin` and press Return.
4. Type `install_cmgr` and press Return.
5. Start up another Calendar Manager application.
6. To make sure that the Calendar Manager Service is now running, type `ps -axw | grep rpc.cmsd` and press Return.

Text Editor

The Text Editor is an interactive ASCII text editor. The editing functionality provided in this DeskSet application is also available to you in the text editing panes of the Console and the Command Tool, and in the View and Compose windows of the Mail Tool.

The Text Editor application is integrated with the DeskSet drag and drop functionality. You can drag Text Editor files from the File Manager, or from the window background of the Text Editor window itself. You can drop Text Editor files onto the Print Tool, Tape Tool, and Mail Tool Compose windows.

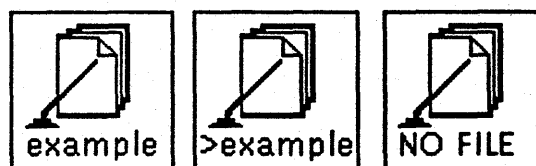
You can cut and paste directly between Text Editor windows and any other text window in the DeskSet.

This chapter describes how to use the Text Editor.

5.1 The Text Editor Icon

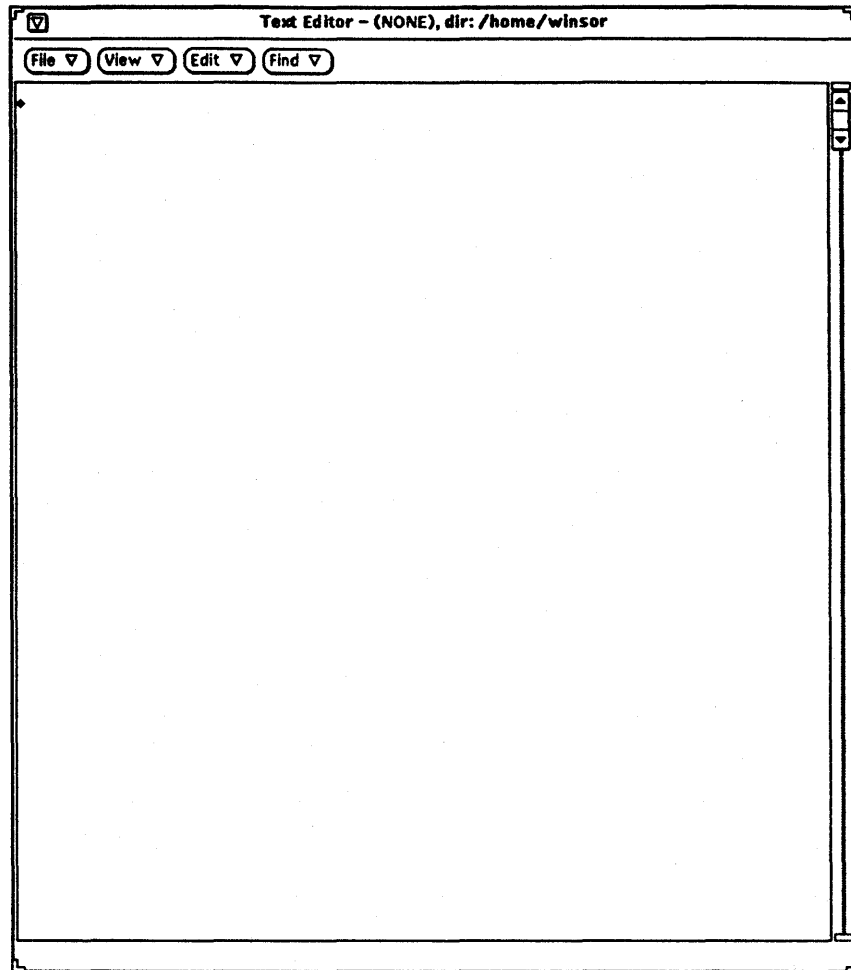
The Text Editor icon shows you as much as it can of the beginning of the file name. When the file has been edited and you have not saved the changes, the file name is preceded by a ">" symbol. When there is no file, or when you have created a new file but have not saved it, the icon displays the words "No File" in the icon. Figure 5-1 shows an example of three Text Editor icons. The one on the left contains a file named "example." The one in the middle contains a file named "example" that has been edited but not saved. The one on the right contains either no file at all, or a file that has never been saved.

Figure 5-1 Text Editor icons



5.2 The Text Editor Base Window

The Text Editor base window, shown in Figure 5-2, has a control area and a text pane that you use to compose and edit your text message. The header of the Text Editor window always displays the name of the file you are editing (or the word "None" when you have not assigned a name to the file), and shows you the directory where the file is located. When you have made editing changes, or have not yet saved a file, the word "edited" is displayed in parentheses following the file name.

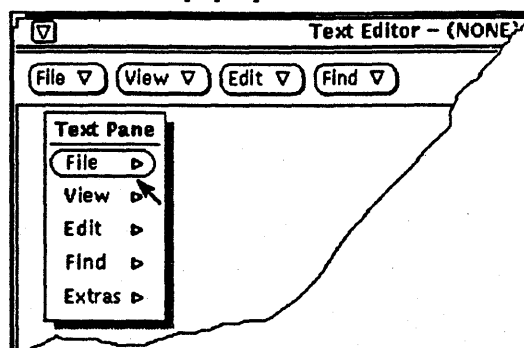
Figure 5-2 The Text Editor base window

The Control Area

The control area of the Text Editor has File, View, Edit, and Find buttons. The Text Editor pane has a pop-up menu, shown in Figure 5-3, containing these same commands. The Text Pane pop-up menu is also provided in the text editing panes of the Console, Command Tool, and Mail Tool applications.

The commands for each of the items in Text Pane pop-up menu operate in the same way as the controls in the Text Editor base window, described in the following sections. There is an additional item on the Text Pane pop-up menu called Extras, which is described later in this chapter.

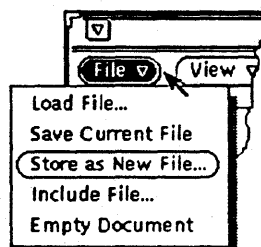
Figure 5-3 The Text Pane pop-up menu



The File Menu

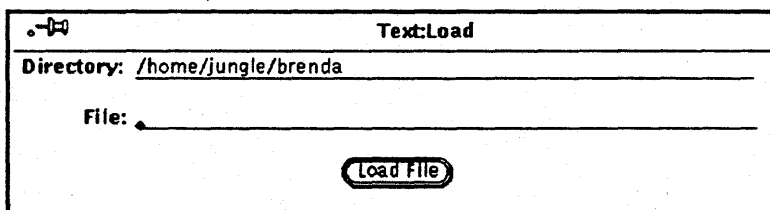
The File menu, shown in Figure 5-4, contains items that you can use to load and save your text files, and for other file-related functions.

Figure 5-4 The File menu



Use the Load File item to display the Text: Load pop-up window shown in Figure 5-5. Type the directory and name of the file you want to load. Clicking SELECT on the Load File button loads the file in the window, replacing any existing text.

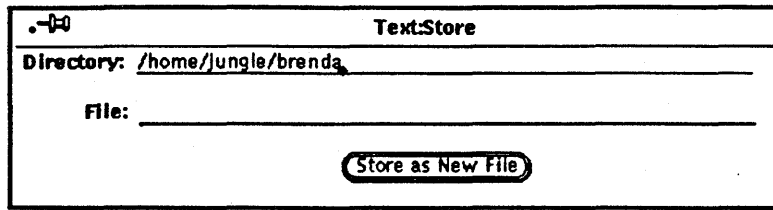
Figure 5-5 The Text: Load pop-up window



Use the Save Current File item to save the contents of the Text Editor pane in the current directory, using the file name displayed in the header of the Text Editor window. If "NONE" is shown as the file name, use the Store as New File option.

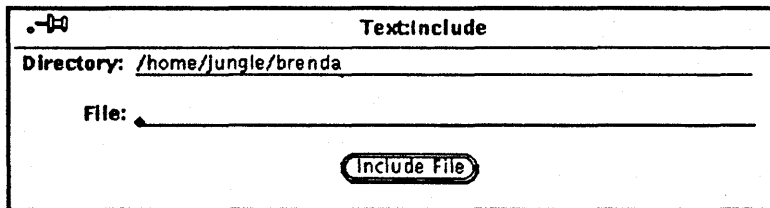
Use Store as New File to display a Text: Store pop-up window, shown in Figure 5-6. Type a directory and file name, and click SELECT on the Store as New File button to save the contents of the Text Editor pane. The Text: Store pop-up window automatically displays the current directory in the Directory text field.

Figure 5-6 The Text: Store pop-up window



Use the Include File item to display the Text: Include pop-up window shown in Figure 5-7. Type the directory and name of the file you want to include, and click SELECT on the Include File button to include the file you specify at the insert point in the text pane.

Figure 5-7 The Text: Include pop-up window

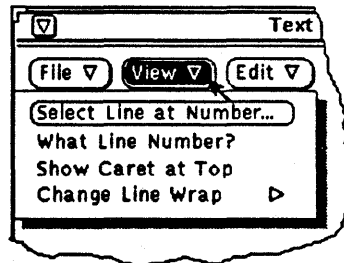


Use the Empty Document item to clear the contents of the text pane. If you have made editing changes and have not saved them, a Notice is displayed asking you to confirm or cancel the operation.

The View Menu

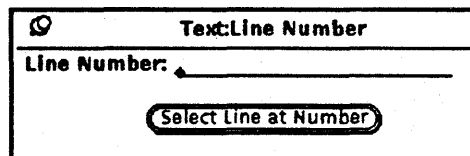
The View menu, shown in Figure 5-8, provides choices you can use to control the position of the cursor and the way the line wrap is used.

Figure 5-8 The View menu



Use the Select Line at Number item to display the Text: Line Number pop-up window shown in Figure 5-9. Type the number of the line that you want selected, and click SELECT on the Select Line at Number button. The text on the specified line is selected, and the insert point is moved to the end of the selected text.

Figure 5-9 The Text: Line Number pop-up window

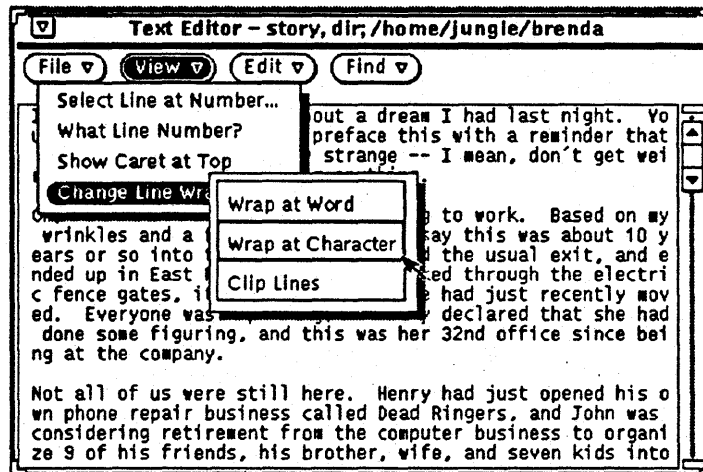


Use the What Line Number? item to locate the line number where the selected text begins. The line number is displayed in a Notice. When there is no current selection in the Text Editor window, the Notice displays an error message instead of a line number.

Use the Show Caret at Top item to move the line with the caret to the third line from the top of the text pane.

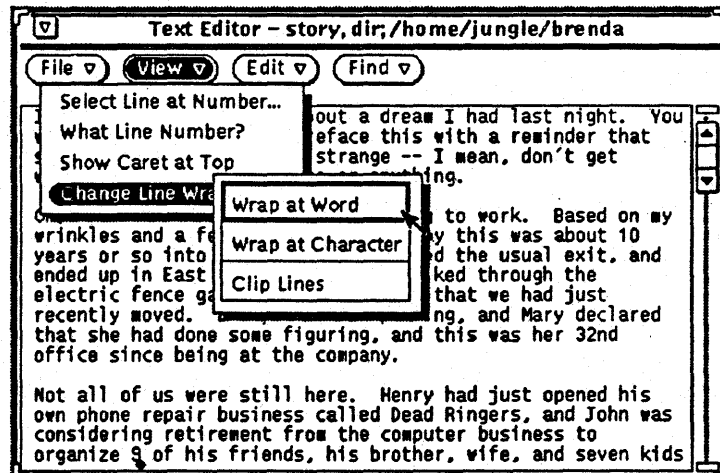
The Change Line Wrap submenu provides three choices for line wrapping: word, character, and clip lines. The text shown in Figure 5-10 is wrapped at a character, so words are broken at the end of lines.

Figure 5-10 Lines wrapped at a character



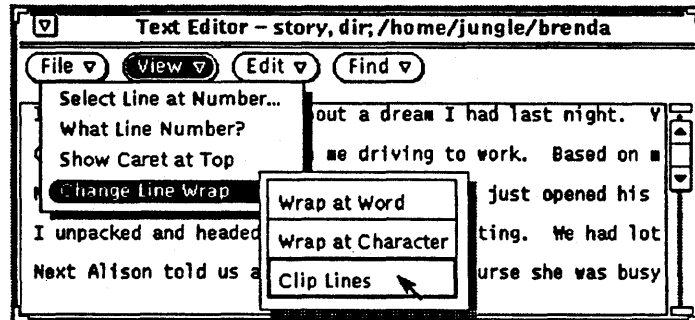
The most commonly used wrapping method is to wrap at the end of words. The text shown in Figure 5-11 is wrapped at the end of words.

Figure 5-11 Lines wrapped at a word



If you choose Clip Lines, the beginning of each line that ends with a Return is displayed. The text shown in Figure 5-12 has Returns only at the end of each paragraph.

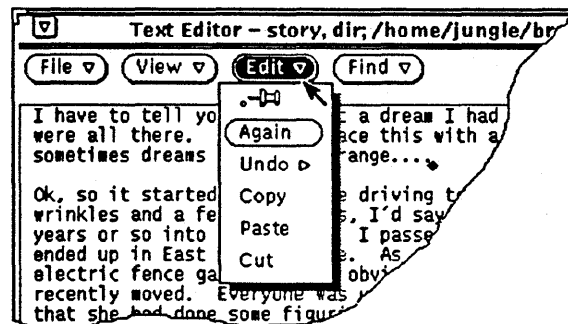
Figure 5-12 *Clipped lines*



The Edit Menu

The Edit menu, shown in Figure 5-13, provides standard editing functions.

Figure 5-13 *The Edit menu*

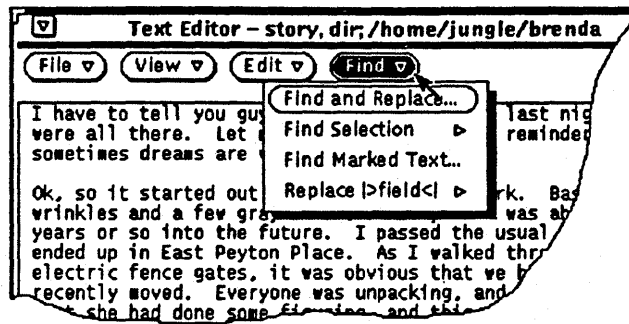


- Use Again to repeat the last editing action.
- Use Undo to undo the last editing action or all editing actions and restore what was there before, depending on which item you choose from the Undo submenu.
- Use Copy to store a copy of the selected text on the clipboard. Only one selection can be stored on the clipboard at a time. If something is already on the clipboard and you do a copy or cut, the contents of the clipboard are overwritten with the new information.
- Use Paste to insert the contents of the clipboard at the insertion point.
- Use Cut to remove the selected text and store it on the clipboard. Only one selection can be stored on the clipboard at a time.

The Find Menu

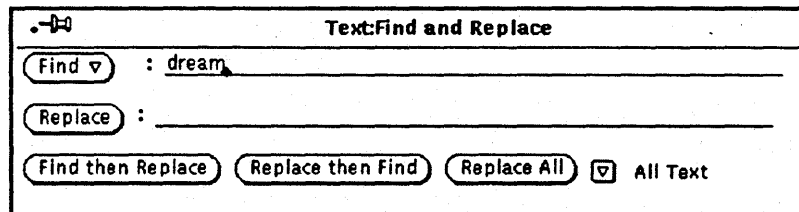
The Find menu, shown in Figure 5-14, includes items that help you to search for specific text strings, special characters, and delimiters to find a text string and replace it with another.

Figure 5-14 The Find menu



The Text: Find and Replace Item. Use the Find and Replace item to display the Text: Find and Replace pop-up window. If you have a current selection, it is automatically displayed in the Find text field, as shown in the example in Figure 5-15.

Figure 5-15 The Text: Find and Replace pop-up window



To find a text string and select it, type the text in the Find field and click SELECT on the Find button. Click SELECT on the Find button again to find and select the next occurrence of the text string.

To replace the current selection with a text string, type the text in the Replace field and click SELECT on the Replace button. You can use the Replace button together with the Find button to find a string and then replace it with another, or separately to replace highlighted text. You can replace a string with nothing by leaving the Replace text field blank.

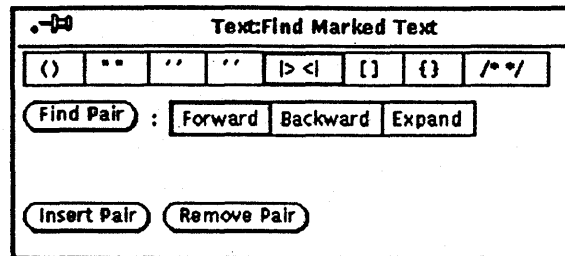
The buttons at the bottom of the Find and Replace window combine find and replace operations, allowing you to Find then Replace, Replace then Find, or Replace All.

You can specify whether you want the find and replace operations to apply to all of the text, or restrict the operation to the text between the insert point and the end of the document by using the abbreviated menu button to select either All Text or To End. The current setting is listed to the right of the abbreviated menu button.

The Find Selection Item. Use the Find Selection item of the Find menu to search the file for another occurrence of the text string that is highlighted as the current selection. You can search forward or backward from the insert point by choosing Forward or Backward from the Find Selection sub-menu.

The Find Marked Text Item. Use the Find Marked Text item of the Find menu to highlight text between a matched set of delimiters provided as options in the Text:Find Marked Text pop-up window, shown in Figure 5-16.

Figure 5-16 The Text:Find Marked Text pop-up window



You can search and highlight text for any of the matched delimiters provided as choices in the Text:Find Marked Text pop-up window by clicking SELECT on one of the sets of delimiters, and then clicking SELECT on the Find Pair button. Use the Backward or Forward choice to direct the search either backward or forward from the current insertion point. If you have nested delimiters, such as matched parentheses in code, you can use the Expand choice to select text outward from the current insertion point to the next outer pair of specified delimiters.

To surround the selected text with the selected delimiters, click SELECT on the Insert Pair button. To delete a matched pair of delimiters from the selected text, click SELECT on the Remove Pair button.

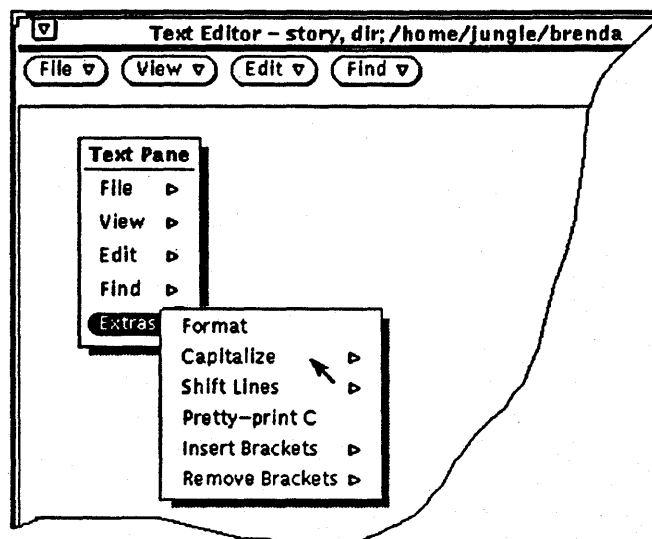
The Replace Field Item. The Text Editor pane recognizes any text between the characters `>` and `<` as a text field. You can search forward through the text from the insert point to find and select each field using the Replace `>field<` item of the Find menu. The Replace `>field<` submenu provides three options: Expand, Next, and Previous:

- When the caret in the Text Editor pane is between field delimiters, choose Expand to search in both directions and select the entire field and its delimiters.
- Use Next to search forward from the insert point and select the next field.
- Use Previous to search backward from the insert point and select the previous field.

The Extras Menu

There is an additional item on the Text Pane pop-up menu, called Extras, that is not also a button in the Control area. This menu contains some useful commands to format the selected text. See the section "Customizing Your Text Editor" later in this chapter for information about how to customize the Extras menu to contain your own commands. This section describes the default Extras menu, shown in Figure 5-17.

Figure 5-17 The Text Pane Extras sub-menu



The Format Item. Choose Format to reformat selected long lines of text into physical lines of no more than 72 characters. This is useful, for example, when reading mail with lines longer than the width of the window. It is also useful to format text with long lines before printing it, to make sure that lines will not be truncated by the printer.

Format uses the UNIX `fmt` command. It does not split words between lines, and it preserves blank lines and the spacing between words.

The Capitalize Item. You can use the Capitalize item to capitalize selected text. You use the first item on the Capitalize submenu, `abcd->ABCD`, to capitalize every letter of the selected text. Use the second item on the Capitalize submenu, `ABCD->abcd`, to turn all the letters of the selected text into lowercase. You can use the last item of the Capitalize submenu, `abcd->Abcd`, to capitalize the first letter of every selected word. Uppercase letters within a word are not changed.

The Shift Lines Item. Choose the Shift Lines item to insert or remove a Tab character at the beginning of each line in the selected text. Use the submenu of this item to specify whether to shift right or left. Choose shift right to insert a Tab character, and shift left to remove a Tab character.

The Pretty-print C Item. This item uses the UNIX `indent` command to format C program listings. It formats the selection according to standard specifications, or to the specifications of a `.indent.pro` file if you have one. For more information, refer to the *SunOS Reference Manual*.

The Insert Brackets Item. You can use the Insert Brackets item to quickly insert any of the following type of brackets around the selected text, depending on what item you choose from the Insert Brackets sub-menu: `()`, `[]`, `{ }` or `" "`.

The Remove Brackets Item. Choose the Remove Brackets item to remove any of the following brackets around the selected text, depending on what item you choose from the Remove Brackets sub-menu: `()`, `[]`, `{ }` or `" "`.

5.3 Selecting Text

You select text in the Text Editor pane in the same ways that you select and operate on text in the other DeskSet applications. See the *Open Windows User's Guide* for more information about selecting and operating on text.

Selected text is highlighted (shown in reverse video), and is *pending delete*: when you type a new character, highlighted text is replaced with the new information that you type.

You can select text in the following ways:

- Move the pointer and click SELECT to set the insert point, as shown by a triangular caret.
- To select a word, move the pointer onto the word and double-click SELECT.
- To select a paragraph, move the pointer onto the paragraph and triple-click SELECT.
- To select the entire document, quadruple-click SELECT.
- To select any continuous body of text, move the pointer to the place where you want to begin the select, press SELECT, drag the pointer over the text you want to select, and release SELECT.
- You can also select a continuous body of text by clicking SELECT to set the insert point, moving the pointer to the end of the selection and clicking ADJUST.
- You can expand text that is currently selected, adding to the beginning or the end of the text by moving the pointer and clicking ADJUST.
- You can adjust the selection, making it smaller by moving the pointer into the highlighted text and clicking ADJUST. The text is adjusted. Highlighting is removed from the selection. Reducing a selection in this way is usually fairly intuitive. However, it may not work exactly as you expect, since the adjustment depends on how you made the original selection and the starting position of the insert point.

5.4 Operating on Text

You operate on text in the Text Editor pane in the same ways that you operate on text in the other DeskSet applications, using the clipboard and cut/copy/paste functions from the Edit menu or from the keyboard.

To copy text, follow these steps:

1. **Select the text to be copied.**
2. **Choose Copy from the Edit menu or press the Copy key on the keyboard.**
A copy of the selected text is put on the clipboard.
3. **Move the pointer to the place where you want to insert the text and click SELECT to set the insert point.**
4. **Choose Paste from the Edit menu or press the Paste key on the keyboard.**

To move text, the steps are similar, except that you choose Cut instead of Copy, and the selected text is removed from its original location.

5.5 Splitting Panes

The Text Editor pane can be split into two or more panes so that you can view and edit different parts of the document at the same time. The document itself is not split, so any editing changes you make in one view are reflected in other views as well. See the *OpenWindows User's Guide* for detailed information on how to split panes and how to remove split panes. The following steps describe one method of splitting the Text Editor pane:

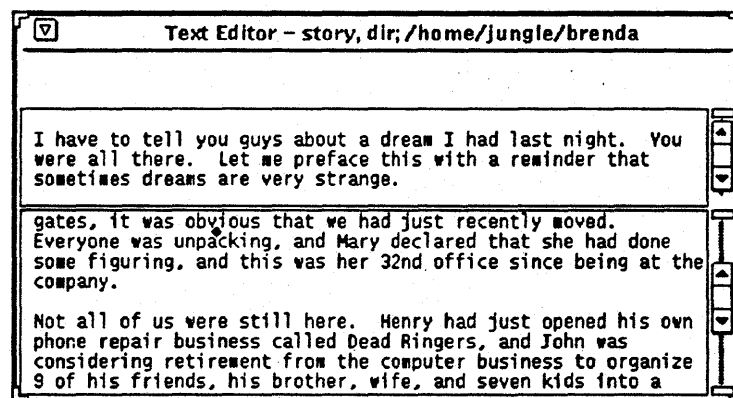
1. Move the pointer to the top cable anchor of the vertical scrollbar and press SELECT.
2. Drag the pointer downward into the pane.

A horizontal line is displayed from the left edge of the pane to the center of the cable anchor to show where the split will occur.

3. Release SELECT.

The pane is now split into two panes, such as the example in Figure 5-18.

Figure 5-18 A Text Editor Split Pane



One way to remove a split pane is to move the pointer to the top cable anchor in the pane you want to remove and press SELECT. Then drag the pointer downward until the top and bottom cable anchors overlap, and release SELECT.

5.6 Drag and Drop

You can drag and drop files onto the Text Editor window background or pane to load them.

You can drag and drop copies of selected text from a Text Editor window onto other Text Editor windows or onto the Mail Tool Compose window.

To drag a copy of text from the Text Editor, follow these steps:

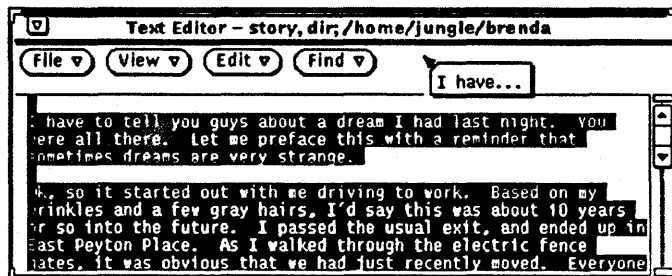
1. Select the text to be copied. If you want to copy the entire file, quadruple-click SELECT.
2. Press the Control key on the keyboard and the SELECT mouse button.

Once you have pressed SELECT you can release the Control key.

3. Drag the pointer a short distance.

A text duplicate pointer is displayed, as shown in Figure 5-19, with the first several characters of the selected text displayed inside the rectangle.

Figure 5-19 Dragging a copy of Text Editor text



4. Drag the pointer to its destination and release SELECT.

5.7 Customizing Your Text Editor

There are two files used by the Text Editor that you can modify to customize your Extras submenu and to specify function key mappings. This section describes these two files.

The .text_extras_menu File

You can customize the Extras pull-right menu of the text pane pop-up menu to include your own favorite commands by modifying the file `.text_extras_menu`. By default, the Text Editor uses the information found in the file `/usr/lib/.text_extras_menu`. You can create your own copy of this file and tell the Text Editor to use it instead of the default in either of the following two ways:

- Change the value of the `.Xdefaults` parameter: `text.extrasMenuFilename` or `Text.ExtrasMenuFilename` to the path and file name of your customized file. See the `XView` man page, included in Appendix C, for information about the `.Xdefaults` file.
- Set the environment variable "EXTRASMENU" to the desired file name.

If you specify both options, the `.Xdefaults` parameter will be used.

The standard Extras menu file is `/usr/lib/.text_extras_menu` and is shown in Figure 5-20. It will give you some ideas on how to implement your own extras menu file. Once you've created a custom file and told the Text Editor where to find it using one of the methods above, you can make changes to the file and see them immediately implemented in the Extras pull-right menu.

Figure 5-20 The Extras menu file in /usr/lib/.text_extras_menu

```

@(#)text_extras_menu 1.6 88/02/08 SMT
Copyright (c) 1987 by Sun Microsystems, Inc.
Text "Extras" menu
"Format"          fmt
"Capitalize"      MENU
  "abcd -> ABCD"  capitalize -u
  "ABCD -> abcd"  capitalize -l
  "abcd -> Abcd"  capitalize -c
"Capitalize"      END
"Shift Lines"    MENU
  "Right"         shift_lines -t 1
  "Left"          shift_lines -t -1
"Shift Lines"    END
"Pretty-print C" indent -st
"Insert Brackets" MENU
  "("            insert_brackets ( )
  "["            insert_brackets \[ \]
  "{"            insert_brackets { }
  "["            insert_brackets \[" \]"
"Insert Brackets" END
"Remove Brackets" MENU
  "("            remove_brackets ( )
  "["            remove_brackets \[ \]
  "{"            remove_brackets { }
  "["            remove_brackets \[" \]"
"Remove Brackets" END

```

The name of each Extras menu item is surrounded by double quotation marks. Each pull-right menu begins with a MENU statement and ends with an END statement.

To include a backslash (\) character in the `.text_extras_menu` file -- as in the troff inline font specifications `\fB` and `\fP` -- you must use *four* backslash characters; for example:

```
insert_brackets \\\fB \\\fP
```

The `.textswrc` File

You can associate filters (programs or routines) with unused function keys by modifying your own copy of the file `.textswrc`. When a text selection has been made and a function key pressed, the selected text is piped through the filter assigned to that key. The output is then piped back into the text at the caret, replacing the text that was selected.

If you want to specify your own set of bindings of filter keys to function keys, you must copy the file `/usr/lib/.textswrc` to a file called `.textswrc` in your home directory. The Text Editor application reads the file `.textswrc` from your home directory, if the file exists.

**Format of the .textswrc
File**

List the sample file, `/usr/lib/.textswrc`, to see an example of filters used with a right-handed keyboard. You can copy this file into your home directory, then modify it by adding filter bindings to unused function keys.

Here is the basic format of each `.textswrc` file entry:

```
key-name  FILTER  
command-line
```

A function is assigned to one of the function keys by including a statement like the following in your `.textswrc` file:

```
/*  
 * Note that:  
 * insert_brackets /* */ does NOT work  
 * double quotes are needed  
 */  
KEY_TOP(10) FILTER  
insert_brackets "/* " " */"
```

This example shows how to include C language comment markers around a piece of text. You could enter this example into your `.textswrc` file, and save the file. Then, to use this added function, start up a new Text Editor application. Changes to your `.textswrc` file are only effective when you bring up a new Text Editor. Then select the text and press the key. The text will be replaced with a copy of itself surrounded with `/*` and `*/`. Note the C-like syntax of comments in the `.textswrc` file.

When defining a filter in the `.textswrc` file, remember that the filter must appear in a directory accessible by your search path. If the command is not found, or if there is some other failure in the invocation of the filter, no change occurs in the document.

Print Tool and Tape Tool

Print Tool and Tape Tool are two DeskSet applications that provide a convenient and intuitive way to print and make backup copies of your files. You can use both Print Tool and Tape Tool in conjunction with File Manager and other DeskSet applications that support drag and drop operations.

This chapter describes how to use the Print Tool and the Tape Tool.

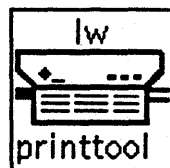
6.1 Print Tool

The Print Tool application provides a user interface to the UNIX `lpr`, `lprm`, and `lpq` printing functions.

The Print Tool Icon

You can print files by dragging and dropping files from the File Manager, a header from the Mail Tool application, or the contents of a Text Editor window onto the Print Tool icon, shown in Figure 6-1.

Figure 6-1 The Print Tool icon



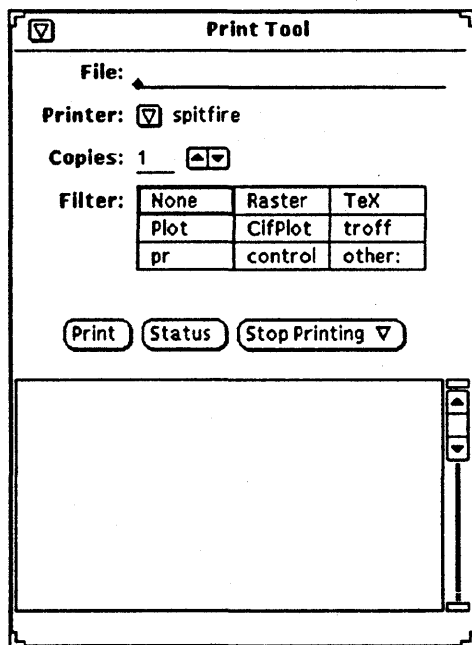
The name of the current printer is displayed in the upper left corner of the Print Tool icon. When a file is dragged and dropped onto the Print Tool application, the icon label "printtool" changes to the name of the file being printed, and may also change to display error messages.

The Print Tool Base Window

You can perform the following operations from the Print Tool base window, which is shown in Figure 6-2:

- Print files by typing the file name in the File text field and clicking SELECT on the Print button.
- Print files by dragging and dropping files from the File Manager, a header from the Mail Tool application, or the contents of a Text Editor window.
- Choose which of your available printers you want to use.
- Specify the number of copies you want to print.
- Specify a special file format for the file you want to print.
- Display print queue status.
- Stop printing a specific job or all jobs in your print queue.

Figure 6-2 The Print Tool base window



Printing a File

You can print a file using the default settings in the Print Tool window by following these steps:

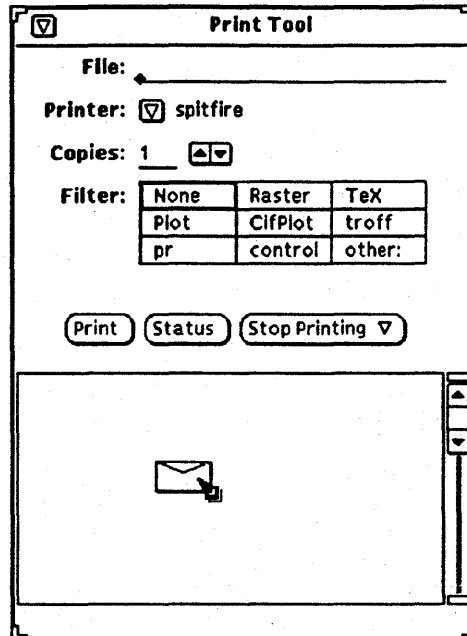
1. Type the complete path name of an ASCII file in the File text field.
2. Point to the Print button and click SELECT.

Alternatively, you can drag and drop a file (or multiple files) to be printed onto the Print Tool window by following these steps:

1. Select a file from the File Manager application or a mail header from the Mail Tool application. To print more than one file, press ADJUST on additional files to be printed.

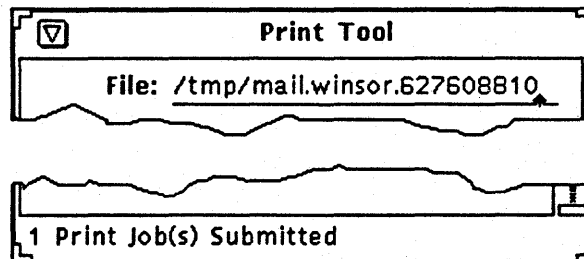
2. While holding down the SELECT mouse button, drag the file onto the Print Tool window, as shown in Figure 6-3, and release SELECT to drop it.

Figure 6-3 Dropping a mail message on the Print Tool window



The file name is automatically entered in the File text field, and an information message is displayed in the footer of the window, as shown in Figure 6-4.

Figure 6-4 An information message from Print Tool



Regardless of which method you use to print a file, status information messages are displayed in the footer of the Print Tool window, such as the following:

1. Printing `<filename>`
2. Printing `<filename>...`
3. No entries.

When the printing job is complete, the Print Tool window flashes and beeps.

NOTE Status messages are not provided for files that are printed without using the Print Tool.

Choosing Another Printer

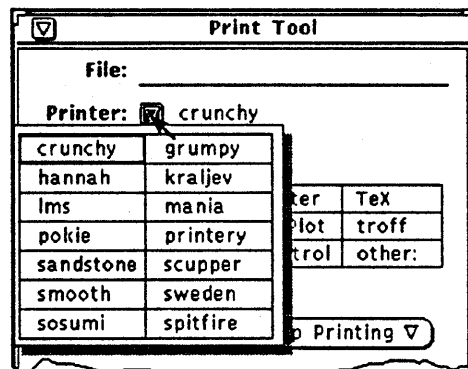
The Print Tool automatically displays the name of the first printer entry in your `/etc/printcap` file. All printers that are available to you are listed on the Printer menu. The names on the Printer menu are retrieved from the entries in your `/etc/printcap` file. The name used for each printer is the first or second name of the `/etc/printcap` entry, whichever is longest. Make sure there are no spaces before any of these printer names in your `/etc/printcap` file, or the Print Tool will not be able to print to that printer.

To choose another printer follow these steps:

1. Point to the abbreviated menu button next to the Printer label.
2. Press MENU.

The Printer menu is displayed, as shown in the example in Figure 6-5.

Figure 6-5 An example of the Printer menu



3. Drag the pointer to the name of the printer you want to choose.
4. Release MENU.

The name of the new printer you chose is displayed to the right of the abbreviated menu button.

To add other printers to your system configuration (and the Printer menu), contact your system administrator for information about configuring your `/etc/printcap` file.

Using the Print Tool Filters

When the file you are printing has a print filter script bound to it in either `/etc/filetype` or `.filetype` in your home directory, that script is automatically used by Print Tool. You can change the default print filter scripts for each application using the Binder. See Chapter 12 for more information about the Binder application.

The filter format is automatically chosen and displayed when you drop a file on Print Tool or type its file name in the Print Tool window and click SELECT on the Print button.

Here is a brief description of the seven standard filter formats:

- None provides no filter.
- Plot is a filter for files produced by the UNIX command `plot`, which produces plotting instructions, in particular for graphics terminals and printer/plotters.
- Pr prints text into pages headed by date, file name, and page number.
- Raster is a filter for raster images.
- CifPlot is a filter for files produced by the UNIX command `cifplot`.
- Control interprets the first character of each line as a standard FORTRAN carriage control character.
- TeX is a filter for tex documents.
- Troff is a filter for files containing troff commands.

None and troff are provided as part of the standard SunOS installation. The other filters may be provided as part of other printer installations.

If you occasionally need to print a file with another print method, you can choose Other. A text field is displayed into which you can type any command line print method, including UNIX pipes. This text field accepts three variables:

- \$FILE substitutes the name of the specified file in the print script.
- \$PRINTER substitutes the name of the printer currently selected in Print Tool.
- \$COPIES substitutes the number of copies currently specified in the Copies text field.

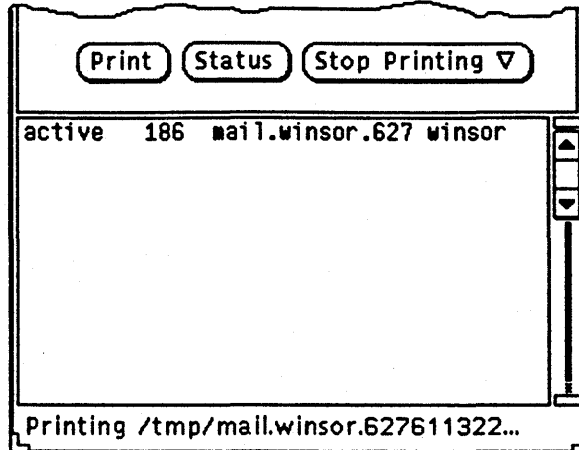
For example, if you want to pretty-print a C file using the `vgrind` command and pipe the output to `lpr`, you would follow these steps:

1. Click **SELECT** on **Other**.
2. In the text field, type `vgrind -t $FILE | lpr -P$PRINTER -t`
3. Type the name of the file in the File text field, or drag and drop the file you want to print onto Print Tool.

Checking the Print Queue Status

You can view jobs in the print queue by clicking **SELECT** on the **Status** button. When there are no entries, the message **No Entries** is displayed in the footer. When there are entries in the print queue, the list of all the jobs for that printer (not just yours) is displayed in the scrolling list in the lower part of the Print Tool window, as shown in Figure 6-6.

Figure 6-6 An example of jobs in the Print queue



Stopping Printing

You can stop printing all your jobs in the job queue by choosing All Print Jobs from the Stop Printing menu. To stop selected jobs, follow these steps:

1. Click **SELECT** on the Status button to display jobs in the print queue.
2. Point to a job in the scrolling list that you want to stop and click **SELECT**. To stop more than one job at a time, point to additional jobs and click **SELECT**.
3. When you have selected the jobs you want to stop, point to the Stop Printing button and press **SELECT**.

Alternatively, you can point to the Stop Printing button, press **MENU**, drag the pointer to highlight the Selected Print Job item, and release **MENU**.

NOTE When you stop printing one or more print jobs, the Print Tool remains busy and does not accept further input until the printer acknowledges the request. Depending on the number of jobs selected and the status of the printer queue, it may take a long time (several minutes) for the printer to respond to your request.

Troubleshooting

If a file has an inappropriate print script in `/etc/filetype` or `.filetype` in your home directory, the Print Tool may hang when you use it to print that file. The print script may be missing the `$FILE`, `$PRINTER`, or `$COPIES` variable. See Chapter 12 for information about how to change print scripts using the Binder.

NOTE The Print Tool and the File Manager read the `filetype` files when you start the application. If you make changes to the Binder, you must quit the tool and restart it for the changes to take effect.

When you print multiple mail headers by dragging and dropping them onto the Print Tool icon or window, they are batched together as one print job. Print Tool starts printing each new mail message at the top of a new page.

If you print a file and the appropriate filter is not available on the printer, you will receive an error mail message.

6.2 Tape Tool

The Tape Tool application provides a user interface to the UNIX `tar` tape archiving and retrieval functions. Refer to the man page for `tar` for more detailed information. The Tape Tool is designed to allow you to archive selected files and directories onto a streaming tape cartridge, and to list and retrieve files from a streaming tape cartridge that have been archived using the `tar` command. Alternatively, you can use Tape Tool to archive individual files to and from one large archive file instead of to and from a streaming tape cartridge. The Tape Tool is not intended to be an all-purpose system backup tool, and cannot read tapes that have been written using the `cpio` command.

The Tape Tool Icon

The Tape Tool icon has an image of a streaming tape cartridge, as shown in Figure 6-7.

Figure 6-7 The Tape Tool icon



You can select files and folders from the File Manager and the Mail Tool to be archived on tape. You can drag and drop them as a group or individually onto the Tape Tool icon or onto the open Tape Tool window to accumulate a list of files to be written to a streaming tape cartridge. When you drop a file or group of files onto the Tape Tool icon, the tape in the Tape Tool icon moves, as shown in Figure 6-8, to show you that you have selected files for archiving but have not yet completed the process.

Figure 6-8 The Tape Tool icon when files are listed for archiving



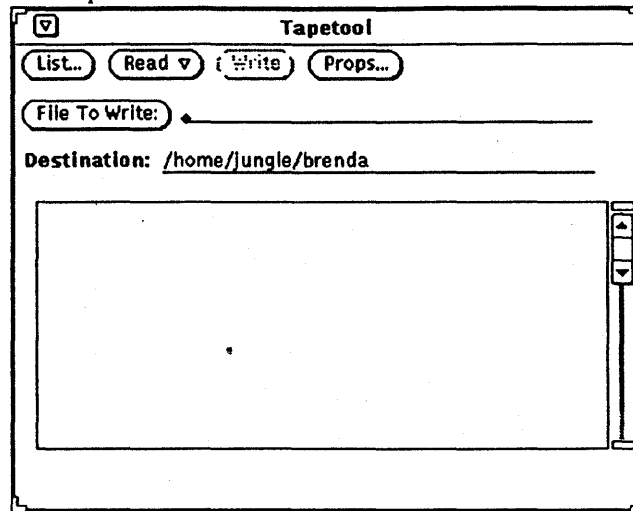
The Tape Tool Base Window

You can perform the following operations from the Tape Tool base window shown in Figure 6-9:

- List the files from a streaming tape cartridge or archive file that have been archived using the `tar` command.
- Read some or all of the files from the tape or archive file into the directory that you specify.
- Write specific files or directories that you specify onto a streaming tape cartridge or into an archive file.

- Display a window from which you set the properties for the `tar` command from the Tape Tool Properties window.

Figure 6-9 The Tape Tool base window



The control area provides controls for listing, reading to tape, writing from tape, and setting Tape Tool properties.

The File To Write button and text field allow you to type in the names of files that you want to write to tape. After typing in the name of a file to write, press the Return key or click SELECT on the File To Write button. The scrolling list displays a list of the files you specify by typing file names or by dragging and dropping icons from the File Manager.

The Destination field allows you to specify where files that are read from the tape are put in your file system when they were archived without a path name or with a relative path name. The default destination is your current working directory. You can change the destination to anywhere you want in the file system by typing the path name in the Destination text field.

Caution: If the files on a tape have a complete path (absolute path), the files are always put in the directory specified on the tape, regardless of what you type in the Destination field. To strip files of their absolute path name when you archive them, set the Delete Dir option in the Tape Tool Properties window to All and click SELECT on the Apply button.

Each of these functions is described in more detail in the following sections.

The Tape Tool Properties Window

Before you read to or write from a tape or archive file, it is a good idea to display the Tape Tool Properties window, shown in Figure 6-10, to confirm that the properties you want to use are set correctly.

Figure 6-10 The Tape Tool Properties window

Tapetool: Properties

Device:

Tar Options

Write:

Read:

Delete Dir:

Other:

- Use the Device text field to identify the tape drive to your system. The most common device numbers for a tape drive are `/dev/rst8` and `/dev/rst0`. Alternatively, you can specify a file name in this field if you wish to read or write files to and from one big archive file instead of to and from a streaming tape cartridge.
- Use the Write nonexclusive settings to choose none, some, or all of the write options listed here:
 - Use No SCCS to exclude all SCCS directories.
 - Use No SCCS+ to exclude all SCCS directories, files with a suffix `.o`, and files named `errs`, `core`, and `a.out`.
 - Use Block I/O to specify a blocking factor for better throughput. When you click SELECT on this setting, a text field is displayed in which you can type the blocking factor you want Tape Tool to use.
 - Use Sym Links to follow symbolic links as if they were normal files.
 - Use Show Errs to display error messages if all links to archived files cannot be resolved.
 - Use Suppress to suppress information showing owner and file modes for portability.
- Use the Read nonexclusive settings to choose none, some, or all of the read options listed here:
 - Use No Check to ignore directory checksum errors.
 - Use Mod Time to keep Tape Tool from resetting the modification time of files that it reads from the tape.

- Use Orig Mode to restore the named files to their original mode, ignoring the default `umask` setting of 2.
- Use the Delete Dir settings to choose whether you want selected files to be stripped completely of their path names, use complete path names, or use a specific path name. When you click SELECT on Pattern, a text field is displayed in which you can type the name of a path to use for all the files.
- Use the Other exclusive setting to choose none, one, or both of the following options for both read and write operations:
 - Use Err Exit to exit the operation as soon as an error is encountered.
 - Use Exclude to specify a file name that contains a list of files and/or directories that you want to exclude from reading from the tape. This item can be useful when the tape contains many files and you want to retrieve all but a few of them.

When you have set the options you want, click SELECT on the Apply button to apply the changes. These options will remain in effect until you quit the Tape Tool application.

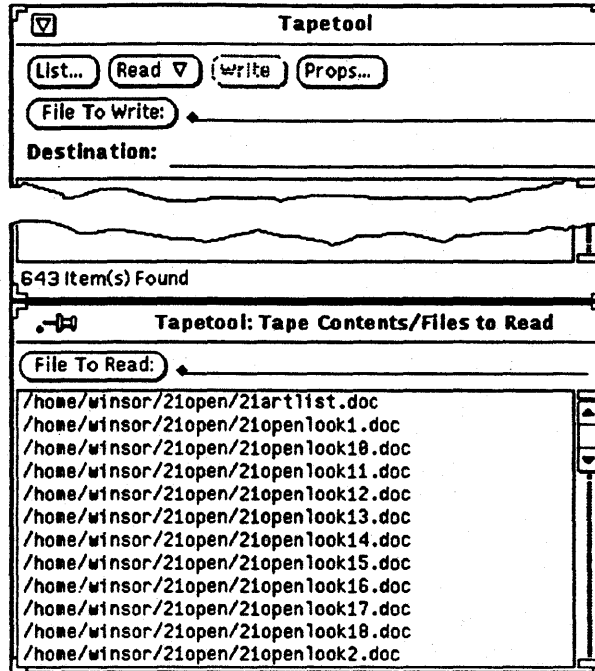
Listing Files from a Tape

To view a list of files from a tape, follow these steps:

1. Insert the tape in the tape drive.
2. Click SELECT on the List button.

A Tape Contents pop-up window displays a list of files from the tape in the scrolling list, and information messages are displayed in the footer of the Tape Tool base window, as shown in the example in Figure 6-11.

Figure 6-11 The Tape Contents pop-up window



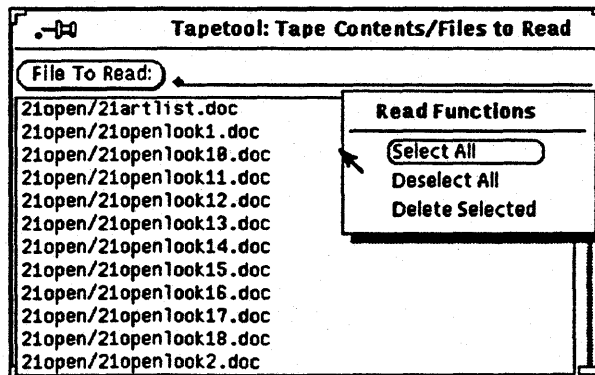
NOTE It may take from a few seconds to several minutes to list the files on the tape, depending on how many files are on the tape. While the files are listing, the Tape Contents window is busy and cannot accept any user input. You can, however, press the Stop key on the keyboard to stop the operation.

Editing the List of Files in the Tape Contents Window

Once the files are listed, you can retrieve all of the files in the list, retrieve specific selected files, or edit the list to remove files you do not want to retrieve. This section describes several ways that you can edit and select from the Tape Contents scrolling list.

The Tape Contents window has a pop-up menu, shown in Figure 6-12.

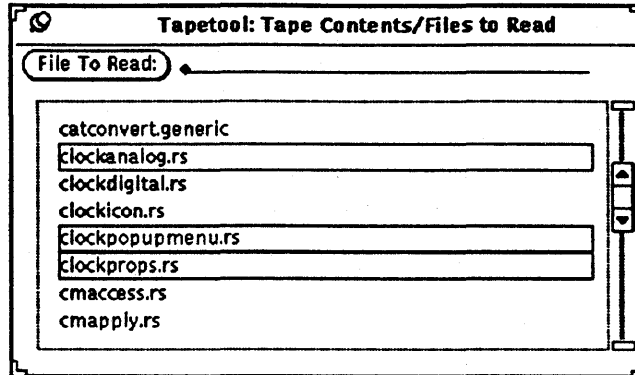
Figure 6-12 Selected files in the Tape Contents window



To select all the files on the tape, choose Select All from the Read Functions pop-up menu.

To edit the list, select a group of files by clicking SELECT on the name of each file that you want to delete. Clicking SELECT on a selected file deselects it. Selected files are highlighted, as shown in Figure 6-13.

Figure 6-13 Selected files in the Tape Contents window



To remove these files from the list, choose Delete Selected from the Read Functions pop-up menu. If you want to delete all the files from the list, choose Select All and then Delete Selected from the pop-up menu.

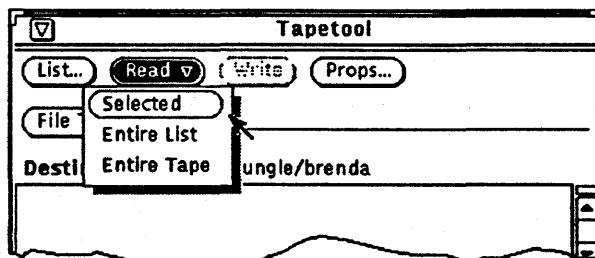
If you inadvertently delete a file that you want to restore, you can add it back to the list by typing the file name in the File To Read text field, then pressing the Return key or clicking SELECT on the File To Read button.

When you have edited the scrolling list to your satisfaction, you can choose an operation from the Read menu described in the next section.

Reading Files from a Tape

The Read menu, shown in Figure 6-14, has three options that you can use to read files from the tape or archive file to the destination directory specified in the Tape Tool base window.

Figure 6-14 The Read menu



Caution: When you read files that have a path name in front of them (an absolute path), as shown in the Tape Contents list, that path name is always used as the destination.

If the files are not preceded by a file name, the directory you specify in the Destination text field is used as the destination.

Using the Read Selected Item

When you have listed the contents of a tape and selected all or some of the files, choosing Selected from the Read menu copies the specified files to the destination directory shown in the control area.

When you have not listed the contents of a tape, choosing Selected displays the Tape Contents window without a listing. If you know the names of specific files that you want to retrieve, you can type a name in the File To Read text field, then press the Return key or click SELECT on the File To Read button to add them to the list.

Using the Read Entire List Item

When you have listed the files from a tape, choosing Entire List from the Read menu reads the entire list of files from the Tape Contents window.

When you have not listed the contents of a tape, choosing Entire List displays the Tape Contents window without a listing.

While the files are being read, information messages are displayed in the footer of the Tape Tool window showing you the percentage of files that have been read. As the files are read, they are removed from the Tape Contents window. When the process is complete, an information message is displayed in the footer of the Tape Tool window telling you how many files were read.

If there are a large number of files, it may take several minutes for the files to be copied to your system.

Using the Read Entire Tape Item

Choosing Entire Tape from the Read menu copies all of the files on the tape to the destination directory without displaying the Tape Contents window.

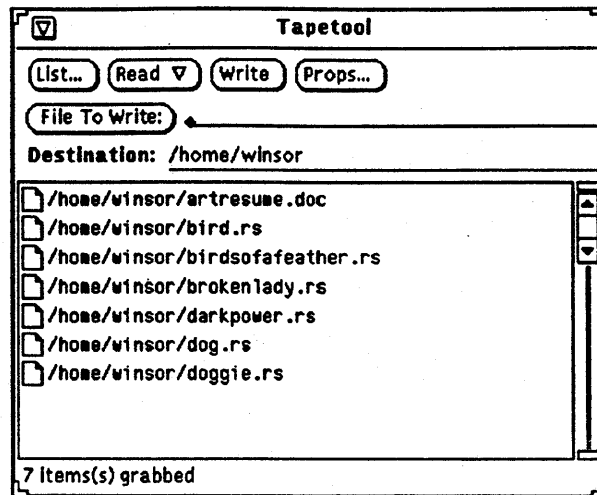
Writing Files to a Tape

To write files to a tape, first accumulate the list of files you want to archive. You can specify files in the following ways:

- Select files from the File Manager, and drag and drop a copy of those files onto the Tape Tool.

The files are accumulated in the scrolling list in the Tape Tool base window, as shown in Figure 6-15.

Figure 6-15 A list of files to be written to tape

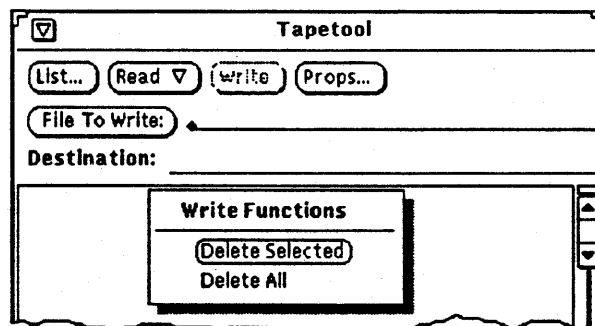


- Alternatively, you can type the name of a directory or of an individual file in the File To Write text field and then press the Return key or click SELECT on the File To Write button.

The information is added to the scrolling list.

The Tape Tool scrolling list has a pop-up menu, shown in Figure 6-16, that you can use to edit the list by deleting all of the files or selected files.

Figure 6-16 The Write Functions pop-up menu



To write the list of files to the tape, follow these steps:

1. Click SELECT on the Props button to display the Tape Tool Properties window and confirm that you have the correct options set.

It is a good idea to check the Tape Tool Properties window each time you write files to a tape, since the settings are not saved if you quit Tape Tool and start it up again.

2. Check the tape to be sure that it is not write-protected.
3. Insert the tape in the tape drive.
4. Click SELECT on the Write button.

Troubleshooting

If you receive a checksum error when reading files from a `tar` tape, there may be a mismatch between the block size on the tape and the block size you specify.

To correct the block size, choose **Block I/O** from the Tape Tool Properties window. In the text field that appears, type the correct block size (the one from the tape).

If you retrieve files from a tape and they are not copied to the destination directory you specify, list the contents of the tape to see if the file names are preceded by an absolute path name. When you retrieve files that have an absolute path name, that path is used as the destination directory.

Snapshot

The DeskSet Environment provides an application called Snapshot that you can use to take black and white or grayscale and color snapshots of regions, windows, or the entire screen. The snapshots are created and stored as raster files.

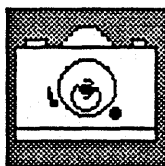
This chapter describes how to use the Snapshot application.

When you use Snapshot on a black and white monitor, the snapshots created are always black and white. When you take snapshots on a color monitor, the snapshots are usually in color. If you have a color monitor but you are running OpenWindows in black and white (in the overlay plane only), the snapshots created are black and white. Some applications can handle black and white snapshots but cannot handle grayscale or color snapshots. See "Troubleshooting" later in this chapter for information about how to determine whether a snapshot is black and white or color. See the *OpenWindows Installation and Start-Up Guide* for information about how to run OpenWindows in black and white on a color monitor.

7.1 The Snapshot Icon and Base Window

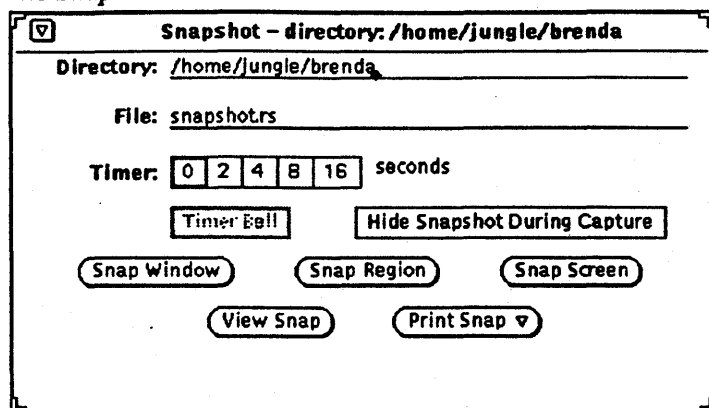
The Snapshot icon is an image of a camera, as shown in Figure 7-1.

Figure 7-1 The Snapshot icon



The Snapshot base window, shown in Figure 7-2, contains all the controls you need to take snapshots.

Figure 7-2 The Snapshot base window



7.2 Locating and Naming Snapshot Files

When you start it, the Snapshot application uses your current working directory (typically the home directory) and a file named `snapshot.rs` as the default for the Directory and File text fields.

You can put your Snapshot files anywhere you want in your file system. Type the path of the directory in the Directory field and the file name in the File text field.

It is a good idea to use `.rs` or some other common suffix for raster file names to make it easier for you to manage them as a group.

7.3 Setting the Timer

Snapshot has a timer that you can use to set the time period between when you initiate the snapshot and when it is taken. The timer is especially useful if you are taking snapshots of menus that you must display after you start the snapshot, or if you want to be sure the pointer is at a specific location when the snapshot is taken.

When the timer is set to 0 seconds, the snapshot is taken immediately. When the timer is set from 2 to 16 seconds, the Timer Bell setting is activated. When the Timer Bell setting is on, a bell beeps once each second between when you initiate the snapshot and when it is taken, followed by four quick successive bells when the snapshot is taken.

Click **SELECT** on the Timer setting that you want, and click **SELECT** on the Timer Bell setting to toggle it from off to on, or vice versa.

7.4 Hiding Snapshot During Capture

Sometimes you may want to take a snapshot of a large portion of the screen or of the entire workspace without showing the Snapshot window. In such cases, click **SELECT** on the Hide Snapshot During Capture setting to remove the Snapshot window from the screen while the snapshot is in progress.

When the Hide Snapshot During Capture setting is toggled on, Snapshot automatically adjusts the Timer setting to eight seconds. This is to guarantee that there will be enough time to remove the Snapshot window before the snapshot is taken. Remember to reset the Timer setting after you toggle the Hide Snapshot During Capture setting back off.

7.5 Snapshot Buttons

Snapshot provides you with three buttons for creating snapshots:

- Snap Window
- Snap Region
- Snap Screen

This section describes how to use each of these buttons.

Snapping a Window

You can take snapshots of windows and icons following these steps:

1. **Make sure the window or icon you want to snap is completely visible and is not partially obscured by overlapping windows unless you want to include them in the snapshot.**
2. **Type the name of the directory and the file name you want to use for the snapshot in the text fields at the top of the Snapshot base window.**
3. **Set the timer and timer bell if you want to use them.**
4. **If you want to hide Snapshot during the capture operation, click SELECT on that setting.**
5. **Click SELECT on the Snap Window button.**

If the file name you have specified already exists in that directory, a Notice is displayed asking for confirmation that you want to overwrite the file.

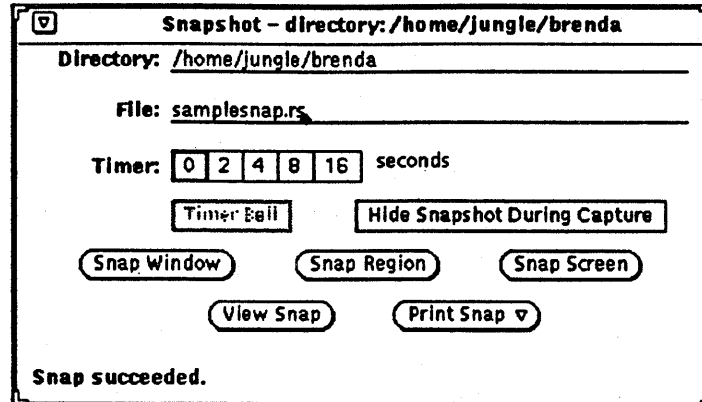
The Snap Window button displays the standard busy pattern and an information message is displayed in the footer.

6. **Move the pointer into the header of the window you want to snap and click SELECT to start the snapshot. To cancel the operation, click either the ADJUST or MENU mouse buttons.**

When the pointer is in the header of the window, the entire window is snapped, including the header. When the pointer is in a pane of a window, only that pane is snapped.

When the snapshot is complete, an information message is displayed in the footer of the Snapshot window telling you that the Snap succeeded. Figure 7-3 shows an example of an information message in the footer.

Figure 7-3 The Snapshot information message



NOTE When you have the timer set, and are taking snapshots of windows or icons, Snapshot records the window position when the snap is initiated. If you move the window before the snapshot is completed, you may not get all of the information you wanted in the snapshot.

You can view the snapshot in a pop-up window by clicking SELECT on the View Snap button. See "Viewing a Snapshot" later in this chapter for more information.

Snapping a Region

You can take snapshots of any rectangular area that you specify using the Snap Region button. The following example shows how to take a snapshot of the pop-up menu for the Command Tool pane.

1. Open a Command Tool window.
2. Type the path of the directory and the file name you want to use for the snapshot in the text fields at the top of the Snapshot base window.
3. Set the timer to four seconds (or longer), and turn the timer bell on.
4. Decide where in the Command Tool window you want to put the menu. Display the menu to determine how large a region you need to define.
5. Click SELECT on the Snap Region button.

The Snap Region button displays the standard busy pattern and an information message is displayed in the footer.

6. Move the pointer into the Command Tool window and click SELECT to define one corner of the region. Move the pointer and click SELECT again to define a rectangular region.

A bounding box is displayed. You can adjust the size of the bounding box by moving the pointer and clicking SELECT at a different place.

7. When the region is defined, click ADJUST to start the timer.
8. Move the pointer into the region and press MENU to display the Command Tool pane pop-up menu.

9. When the timer stops, and the information message is displayed, the snapshot is complete.

Snapping the Screen

You can take snapshots of the entire screen following these steps:

1. Make sure the screen is set up in the configuration you want.
2. Type the path of the directory and the file name you want to use for the snapshot in the text fields at the top of the Snapshot base window.
3. Click **SELECT** on **Hide Snapshot During Capture** unless you want the Snapshot window as part of the screen shot.
4. Set the timer and timer bell if you want to use them.
5. Click **SELECT** on the **Snap Screen** button.

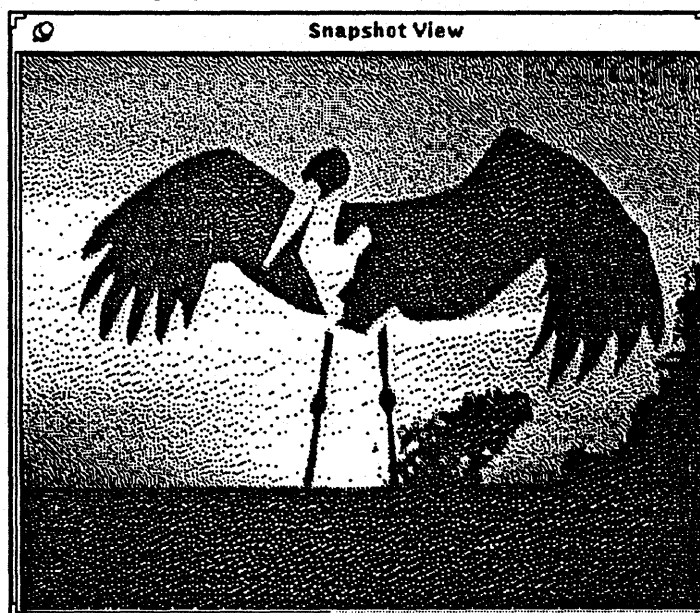
If you set the **Hide Snapshot During Capture** setting, the Snapshot window is removed from the display and is redisplayed when the snapshot is complete.

7.6 Viewing a Snapshot

You can view any snapshot file at any time by typing the directory and the name of the file in the text fields and clicking **SELECT** on the **View Snap** button.

A pop-up window is displayed, as shown in the example in Figure 7-4, showing the contents of the snapshot file.

Figure 7-4 The View pop-up window



In addition, you can view a raster file by dragging the file from the File Manager application and dropping it onto the View window or the Snapshot base window. The raster file will then be displayed in the View pop-up window.

You can view grayscale or color snapshots on a black and white monitor. Snapshot automatically converts a copy of the grayscale or color image to black and white so that it can display the file in the View Snap pop-up window. The file itself is not changed.

You can only view one snapshot at a time. When the View window is displayed, and you type a new snapshot file name in the text field and click SELECT on the View Snap button, the View window is reused and automatically resizes to match the size of the second snapshot file.

7.7 Printing a Snapshot

You can print your snapshot files by clicking SELECT on the Print Snap button. If the default settings in the Print Options window are incorrect for your system, you can change them by choosing Print Options from the Print Snap menu to display a pop-up window, shown in Figure 7-5, that allows you to change your printer settings for Snapshot.

Figure 7-5 The Print Options pop-up window

You can designate whether a snapshot is sent to a printer or to a file. When the Destination option is set to Printer, use the Printer text field to specify which printer you want to use.

When the Destination option is set to File, the text fields change to Directory and File, as shown in Figure 7-6.

Figure 7-6 The print to file text fields

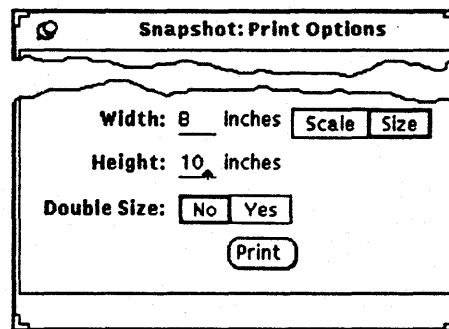
Choose the orientation of the printed image on the page by clicking SELECT on Upright to print a portrait image, or Sideways to print a landscape image.

You can change the margins for the printed image from 1/4 inch at the left and bottom by typing new values in the Positions text fields.

You can specify the width of the printed image on the page by choosing Scale and typing a value, either whole number or decimal, in the Width text field. The image is automatically scaled proportionate to the width you select.

When you click SELECT on Size, a Height text field is displayed, as shown in Figure 7-7, allowing you to specify an absolute width and height for the image to fit into.

Figure 7-7 The Size text fields



You can specify whether the file is printed in the size you specify, or whether it is doubled in size by clicking SELECT on the Double Size option.

Clicking SELECT on the Print button prints the file that is specified in the File field of the Snapshot base window.

Once you change the settings in the Print Options window, they are automatically recorded and used each time you click SELECT on the Print Snap button of the Snapshot window.

7.8 Troubleshooting

If the screen pointer does not show up in your snapshots, you are probably using the Snapshot application on a color workstation with a cgsix framebuffer. The only way to get the pointer to appear in your snapshots is to run Snapshot on a workstation with a different kind of framebuffer. To find out if a workstation is using a cgsix framebuffer, follow these steps:

1. Start up a Command Tool or Shell Tool.
2. At the system prompt, type `/etc/dmesg | grep cgsix`
3. Press Return.

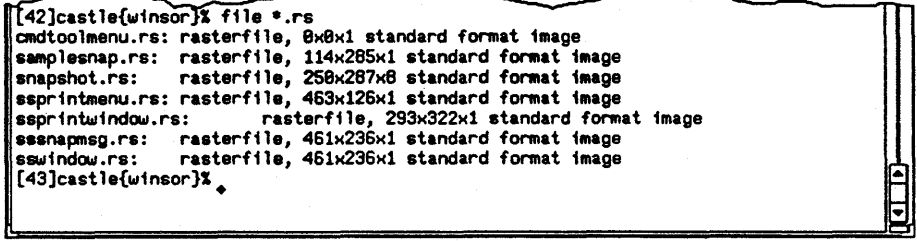
If the system replies with any messages containing the string "cgsix", you are using a cgsix frame buffer, so the screen pointer will not appear in your snapshots. If the system just returns another prompt, you are not using a cgsix frame buffer, so the screen pointer will appear in your snapshots.

If you experience difficulty in using Snapshot files with other applications, it may be because you are trying to incorporate a snapshot from a grayscale or color monitor into an application that can only handle black and white images.

Raster files have three dimensions: height, width, and depth. Black and white raster files are 1 bit deep. Grayscale and color raster files are 8 bits deep.

You can see if a raster file is 1 bit or 8 bits by typing `file rasterfilename` and pressing Return from a Shell Tool or Command Tool prompt, or by selecting the file from the File Manager and displaying the File Properties window. In the example shown in Figure 7-8, the listing shows the file properties for all files ending in `.rs`. As you can see from the listing, there is one 8-bit raster file (`snapshot.rs`) and the rest are 1-bit files.

Figure 7-8 An example of a file command listing



```
[42]castle(winsor)% file *.rs
cmdtoolmenu.rs: rasterfile, 0x0x1 standard format image
samplesnap.rs: rasterfile, 114x285x1 standard format image
snapshot.rs: rasterfile, 250x287x8 standard format image
ssprintmenu.rs: rasterfile, 463x126x1 standard format image
ssprintwindow.rs: rasterfile, 293x322x1 standard format image
ssnapmsg.rs: rasterfile, 461x236x1 standard format image
sswindow.rs: rasterfile, 461x236x1 standard format image
[43]castle(winsor)%
```

You can convert 8-bit images to 1-bit images using the `rasfilter8tol` command. To convert a file, type the following, then press Return:

```
rasfilter8tol inputfilename outputfilename
```

For example, to convert `snapshot.rs` from a color image to a black and white image called `convertedsnapshot.rs`, type the following, then press Return:

```
rasfilter8tol snapshot.rs convertedsnapshot.rs
```

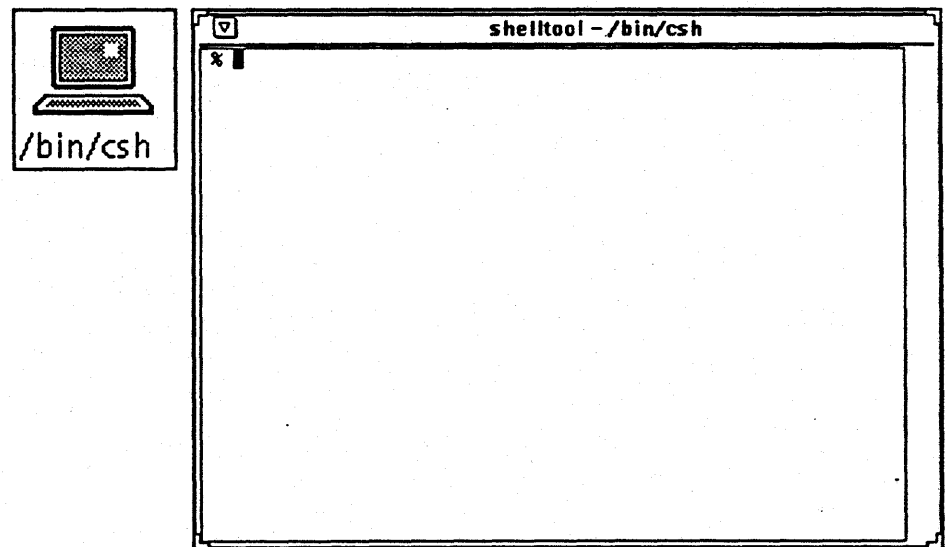
Shell Tool, Command Tool, and Console

This chapter provides information about the Shell Tool, Command Tool, and Console. Shell Tool and Command Tool are standard Open Windows shells, or command interpreters. The Console is a special Command Tool designated for displaying error and system messages sent by the SunOS operating system, OpenWindows, and some applications. The Shell Tool and Command Tool are essentially the same application, but with different default pane pop-up menus.

8.1 Shell Tool

Shell Tool is a command interpreter that accepts SunOS commands and can be used for shells or other programs that employ a standard teletype (tty) interface. Figure 8-1 shows the Shell Tool icon and an open Shell Tool window.

Figure 8-1 A Shell Tool icon and base window

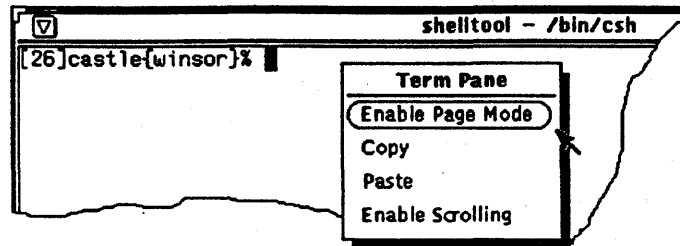


A Shell Tool window has a header with a Window menu button, a Window menu, resize corners, and a terminal emulator pane. A Shell Tool window does not have a scrollbar at start-up, but you can enable scrolling if desired. The insert point is shown by a *block cursor*. When the insert point is not in the Shell Tool, the block cursor is displayed as an outline of the block cursor. Editing is limited to the current line. For example, you can only delete characters on the current line. Once you press the Return key, the characters on the line are interpreted as a command.

The Shell Tool Pop-up Menu

The Shell Tool terminal emulator pane has a pop-up menu, shown in Figure 8-2.

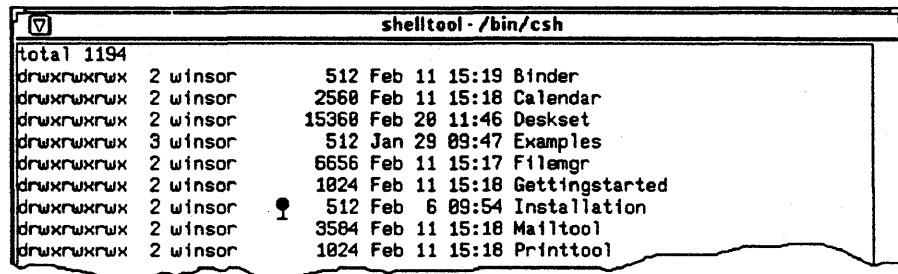
Figure 8-2 The Shell Tool Term Pane pop-up menu



Use the Enable Page Mode item to show you only one *page* or pane of text at a time, just as the Unix `more` command does.

When you choose Enable Page Mode the pointer changes to a stop sign when the window fills up, as shown in Figure 8-3.

Figure 8-3 The Shell Tool pop-up menu



Instead of continuing to flow the lines through the window, the display stops so that you can look at it as long as you like. In addition, the Enable Page Mode item on the Term Pane pop-up menu changes to Continue when there is more information that you can display.

When you want to see the next pane, press any key to display it. You can also choose Continue from the pop-up menu to display the next pane of information.

When there is no more data to display, the first item of the Term Pane pop-up menu changes to Disable Page Mode. You can choose Disable Page Mode from the pop-up menu to switch out of page mode.

Use the Copy item to copy highlighted text from the Shell Tool window to the clipboard.

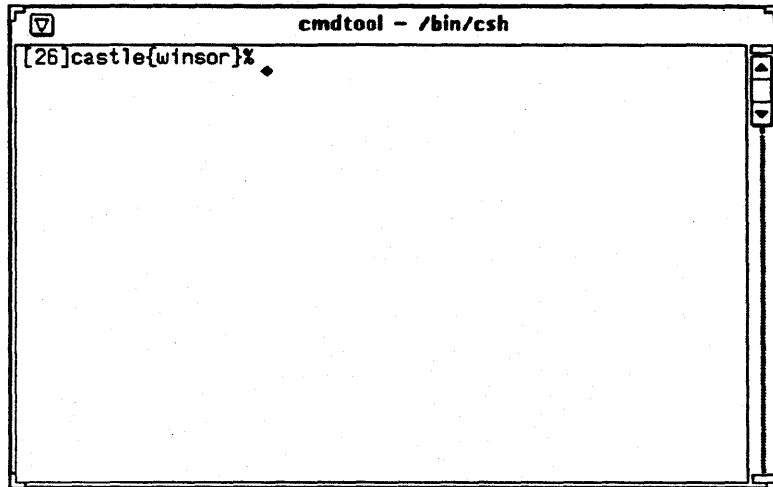
When there is text on the clipboard, you can use the Paste item to insert the contents of the clipboard at the insert point.

The Enable Scrolling item can be used to turn the Shell Tool into a Command Tool. When you choose Enable Scrolling, the name stripe at the top of the Shell Tool still says "shelltool", but the application acts like a Command Tool. See the next section for details about the Command Tool.

8.2 Command Tool

Command Tool is an enhanced Shell Tool. It provides a scrolling pane that acts as an editable command interpreter and can also provide a standard text editing pane. The Command Tool icon looks the same as the Shell Tool icon shown in Figure 8-1. Figure 8-4 shows an open Command Tool window.

Figure 8-4 A Command Tool base window

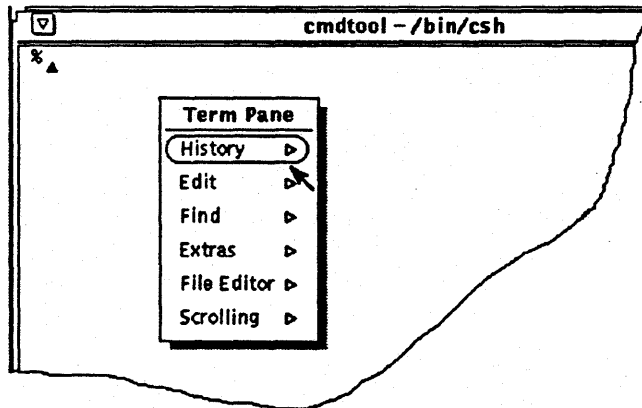


A Command Tool window has a header with a Window menu button, a Window menu, resize corners, a scrollbar, and a text/terminal emulator pane.

The Command Tool Pop-up Menu

The Command Tool Term Pane pop-up menu has the Edit, Find, and Extras items of the standard text editing pop-up menu (described in Chapter 5), plus three additional items: the History, File Editor, and Scrolling submenus. Figure 8-5 shows the Term Pane pop-up menu.

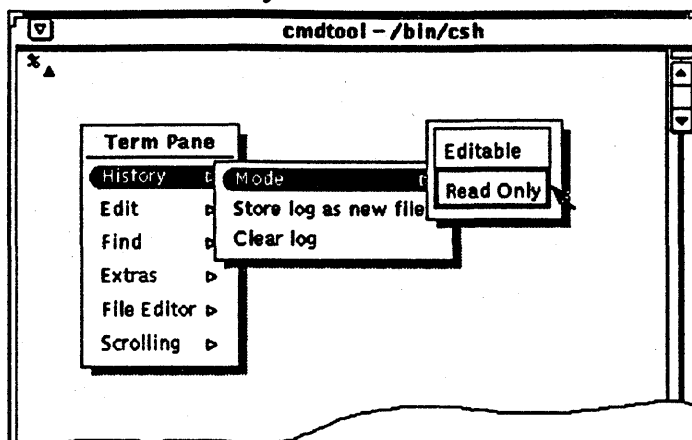
Figure 8-5 The Command Tool Term Pane pop-up menu



The History Submenu

The History of a Command Tool is a log of all the commands typed in that Command Tool. You can access this log by scrolling the Term Pane with the scrollbars or by saving the log to a file. This may be useful, for example, if you have performed a complicated sequence of operations that you want to save or send as part of a mail message for troubleshooting or debugging. The History submenu, displayed in Figure 8-6, provides options to modify the history log.

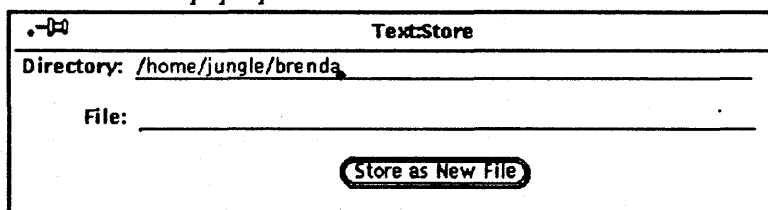
Figure 8-6 The Term Pane History submenu



The Mode setting determines whether the history log is Editable within the Command Tool, or Read Only. If you set the mode to Read Only, in order to protect against accidental changes, you can still save the log to a file and edit that file using the File Editor option described below. If the mode is editable, you can edit text anywhere in the Term Pane and use the editing items on the Term Pane pop-up menu. See Chapter 5, "Text Editor", for information on the editing functions.

Use the Store log as new file option to save the current history log to a file. When you choose this option, the Text: Store pop-up window, shown in Figure 8-7, is displayed.

Figure 8-7 The Text: Store pop-up window



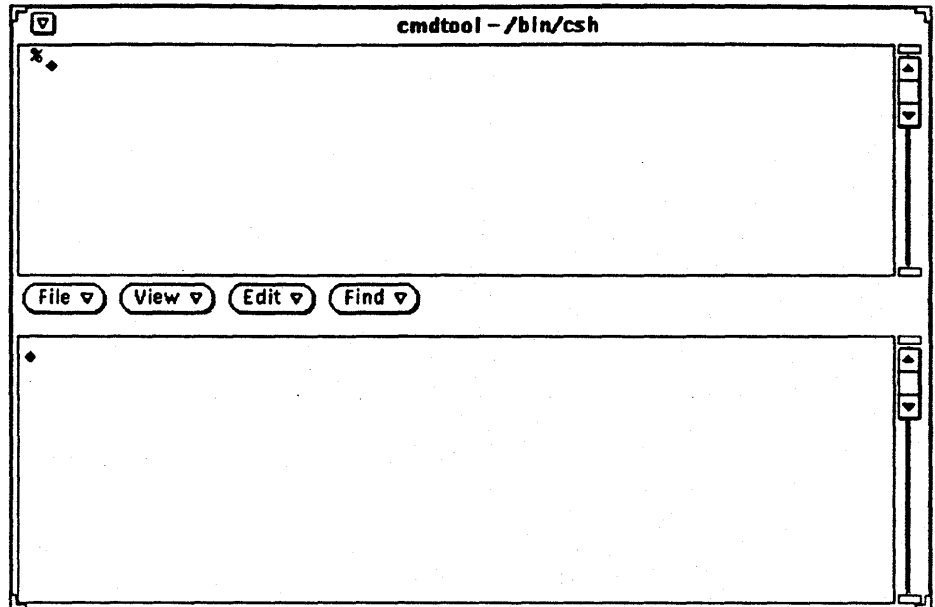
Type the directory and name of the file you want to save the history in, and click SELECT on the Store as New File button. You can treat this new file as you would any other text file. You can edit it and save it again or drag and drop it from the File Manager onto a Mail Tool Compose or Text Editor window.

Use the Clear log option to clear the current history log. This resets the Command Tool history log as if you just started the Command Tool application. (This does not change the output of the UNIX history command).

The File Editor Submenu

The choice from the File Editor submenu determines whether a Text Editor Pane is displayed. When you enable the File Editor, the Command Tool is split into two panes: a Command Tool pane and a Text Editor pane, described in Chapter 5. Figure 8-8 shows a Command Tool with the File Editor enabled.

Figure 8-8 The Command Tool with the File Editor



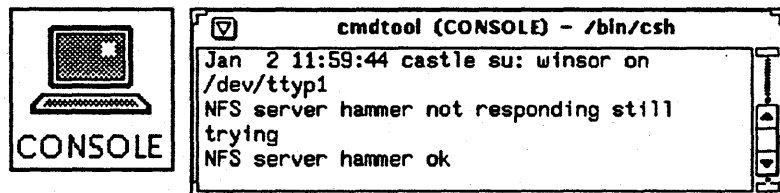
The Scrolling Submenu

The choice from the Scrolling submenu of the Command Tool Term Pane pop-up menu determines whether a scrollbar is displayed. When you disable scrolling, the Command Tool acts like a Shell Tool.

8.3 Console

The Console is a special Command Tool that is used to display error and system messages for the SunOS operating system, Open Windows, and some applications. Figure 8-9 shows the Console icon and base window.

Figure 8-9 The Console icon and base window



8.4 Troubleshooting

Always have one (and only one) Console window running. If you do not have a Console window, messages are displayed in large type at the bottom of the screen. To clear such messages, choose the **Redisplay All** utility from the **Workspace** menu. If you have more than one Console window running, messages are displayed in the most recently opened Console window. You may miss important system messages if you have more than one Console window running and do not look for messages in the newest one or if you have opened a new Console window and then quit the most recently opened one.

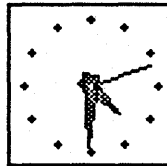
Clock and Performance Meter

This chapter provides information about the Clock and Performance Meter.

9.1 Clock

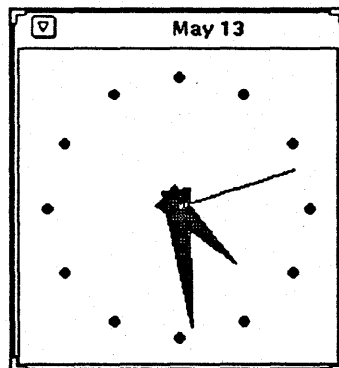
Clock is a tool that displays an analog clock face icon showing the current time of day. The icon displays a clock, as shown in the example in Figure 9-1.

Figure 9-1 The Clock icon



When you open the Clock icon, the clock is displayed in the pane of a base window, as shown in Figure 9-2.

Figure 9-2 The Clock base window

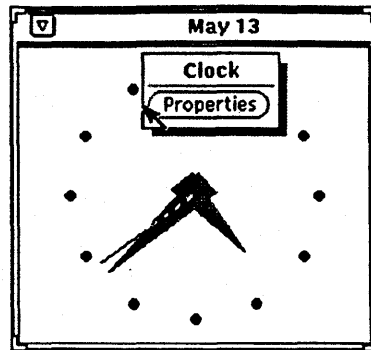


The Clock base window has a header and resize corners. You can use the resize corners to change the area of the window, making the clock larger or smaller.

Customizing the Clock

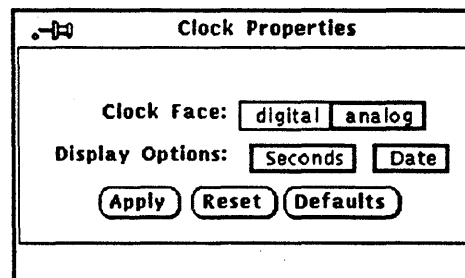
You can customize the Clock using the settings in the Clock Properties window. To display the Properties window, move the pointer onto the clock pane and press the Properties key on the keyboard. Alternatively, you can press MENU to display the Clock pop-up menu, as shown in Figure 9-3.

Figure 9-3 The Clock pop-up menu



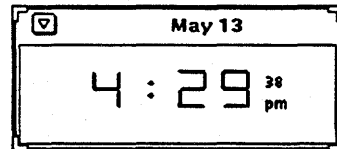
Choosing Properties from the pop-up menu displays the Clock Properties window, as shown in Figure 9-4.

Figure 9-4 The Clock Properties window



Choosing digital and clicking SELECT on the Apply button changes the display in the base window to a digital clock, as shown in Figure 9-5.

Figure 9-5 A digital clock display



The icon always displays an analog clock, regardless of the Clock Face property setting.

Choosing Seconds displays seconds on the icon and on the analog and digital clock faces.

Choosing Date displays the date in the header of the Clock base window but does not affect the icon display.

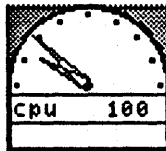
9.2 Performance Meter

The Performance Meter allows you to monitor many aspects of system performance, such as processor performance, network performance, and I/O performance.

You can run one or a combination of several Performance Meters at the same time. Each Performance Meter has its own icon that displays a speedometer-like gauge. The needles move as systems conditions change. The short needle, or “hour hand,” tracks average performance over a 20-second interval, and the long one, or “second hand,” tracks current performance over a 2-second interval. The display is updated every two seconds. You can change these default times from the Performance Meter Properties window described later in this chapter.

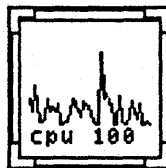
The performance option being measured is displayed in the lower left corner of the icon and its maximum value is shown in the lower right corner. Figure 9-6 shows an example of the Percent CPU Used Performance Meter icon.

Figure 9-6 The Percent CPU Used Performance Meter icon



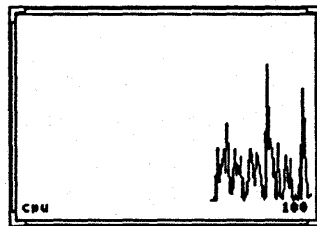
When you open a Performance Meter icon, a window that is the same size as the icon is displayed. Performance data is displayed as a strip chart. Figure 9-7 shows an example of the Percent CPU Used Performance Meter base window.

Figure 9-7 The Percent CPU Used Performance Meter base window



The window has resize corners that you can use to change the area of the window. A resized Performance Meter window is shown in Figure 9-8.

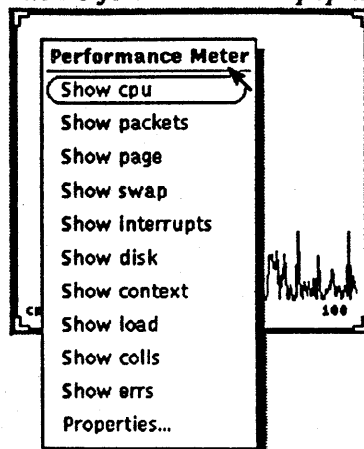
Figure 9-8 A resized Performance Meter base window



The Performance Meter Pop-up Menu

You can change the performance value to be monitored from any Performance Meter base window by choosing a different item from the pop-up menu shown in Figure 9-9.

Figure 9-9 *The Performance Meter pop-up menu*



Here are the performance values you can display and a description of their functions:

- Choose Show cpu to monitor the percent of CPU being used.
- Choose Show packets to monitor the number of Ethernet packets per second.
- Choose Show page to monitor the paging activity in pages per second.
- Choose Show swap to monitor the number of jobs swapped per second.
- Choose Show interrupts to monitor the number of job interrupts per second.
- Choose Show disk to monitor disk traffic in transfers per second.
- Choose Show context to monitor the number of context switches per second.
- Choose Show load to monitor the average number of runnable processes over the last minute.
- Choose Show colls to monitor the number of collisions per second detected on the Ethernet.
- Choose Show errs to monitor the number of errors per second on receiving packets.

Customizing Performance Meters

You can customize some aspects of the Performance Meter from the Properties window shown in Figure 9-10.

Figure 9-10 The Performance Meter Properties window

Perfmeter: Properties					
Monitor:	cpu	packets	page	swap	interrupts
	disk	context	load	colls	errs
Machine:	local	remote	Machine name: _____		
Sample time:	2	▲▼	seconds		
Hour hand:	20	▲▼	seconds		
Second hand:	2	▲▼	seconds		
		Apply	Reset		

Choosing one of the Monitor settings and clicking **SELECT** on the Apply button does the same thing as choosing one of the items from the Performance Meter pop-up menu described in the previous section.

You can monitor performance for your own system or for another system on the network. To monitor a remote system, follow these steps:

1. Click **SELECT** on Remote.

The Machine name text field is activated.

2. Click **SELECT** in the text field to set the insert point and type the name of the machine you want to monitor.
3. Click **SELECT** on the Apply button.

The Performance Meter displays the name of the remote system at the bottom of the pane under the name of the value you are monitoring.

To change back to your local system, click **SELECT** on Local, then click **SELECT** on the Apply button.

You can change the Sample Time, the frequency that the meters are updated, and the units measured by the Hour Hand and Second Hand on the icon scale. The default is for the hour hand to show a sample over a 20-second interval and the minute hand the average over a 2-second interval. If you change the values in these fields, remember to click **SELECT** on the Apply button to record the changes.

9.3 Troubleshooting

Displaying seconds for the clock may affect system performance.

Calculator

The DeskSet Calculator is a scientific and financial calculator designed to perform a variety of mathematical functions. It operates in much the same way as many hand-held calculators. There are financial, logical, and scientific modes. You can store numbers in ten different memory registers and retrieve and replace them easily. In addition, you can store up to 10 of your own functions and constants in menus.

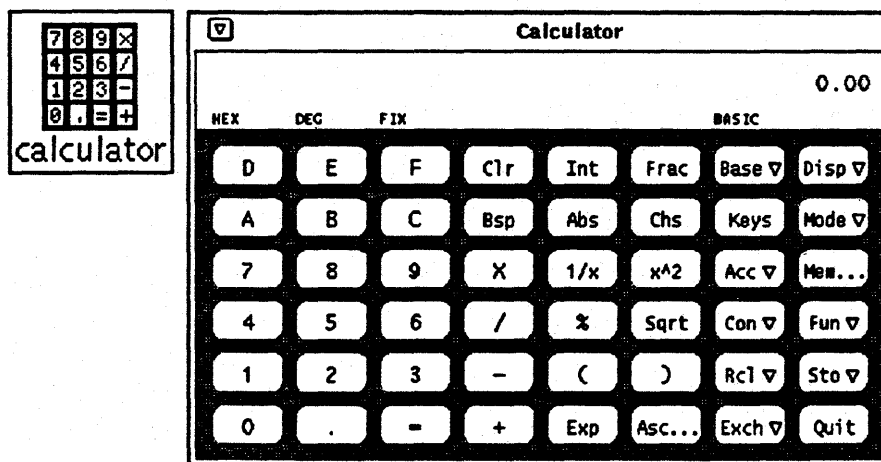
The DeskSet Calculator initially displays numbers in fixed point notation and in decimal base. You can also display numbers in engineering or scientific notation. You can change the base of operation from decimal to binary, octal, or hexadecimal.

This chapter describes how to use the Calculator.

10.1 The Calculator Icon and Base Window

The Calculator icon and base window are shown in Figure 10-1. The Calculator base window does not have resize corners or a control area, since the buttons of the calculator are the controls that activate its functions. The base window has six rows of eight buttons. Click SELECT on a button to activate it. Buttons that have a menu mark have pulldown menus associated with them. Press MENU to display the menu, highlight the item you want, and release MENU.

Figure 10-1 The Calculator icon and base window



10.2 Performing Simple Calculations

To perform a numerical operation, such as adding two numbers together, follow these steps:

1. Click **SELECT** on the first digit, for example, 7.

The number is entered in the display at the upper right corner of the Calculator. In Figure 10-1 the number 0.00 is displayed in the numeric display area.

2. Click **SELECT** on the operation you want to perform, for example, +, to add a number.
3. Click **SELECT** on the number you want to add to the first number, for example, 6.

The number 6 is displayed in the numeric display area.

4. Click **SELECT** on the = sign.

The result, 13 in this example, is displayed in the numeric display area.

Alternatively, you can use the keyboard to enter numbers and simple arithmetic functions. You can also use the Copy function key to store the numeric display to the clipboard, and the Paste function key to retrieve the contents of the clipboard.

If an operation needing more than one input is partially complete, the pending operation is displayed on the line beneath the current number as a reminder.

An important thing to remember about the Calculator is that calculations are performed from left to right, with no arithmetic precedence. If you need arithmetic precedence, then you should use parentheses. For example, the calculation:

$$2 + 3 * 4 =$$

as performed by the DeskSet Calculator gives a result of 20. The same equation performed with correct arithmetic precedence would give a result of 14. This can be achieved with the Calculator by using parentheses:

$$2 + (3 * 4) =$$

10.3 Modes of Operation

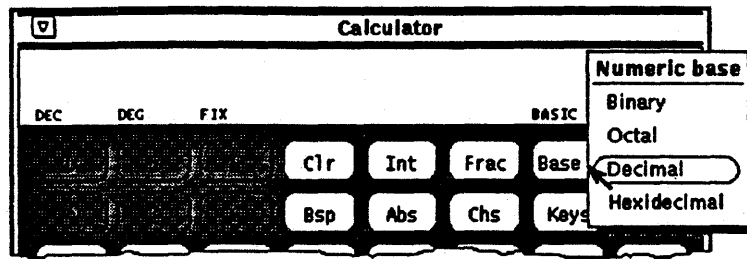
The Calculator has various modes of operation. The area below the header displays the current number, followed by a mode line that shows what the current mode settings are.

Numeric Bases

You can set the following numeric bases using the Base key pop-up menu, as shown in Figure 10-2:

- Binary
- Octal
- Decimal
- Hexadecimal

Figure 10-2 The Numeric base pop-up menu



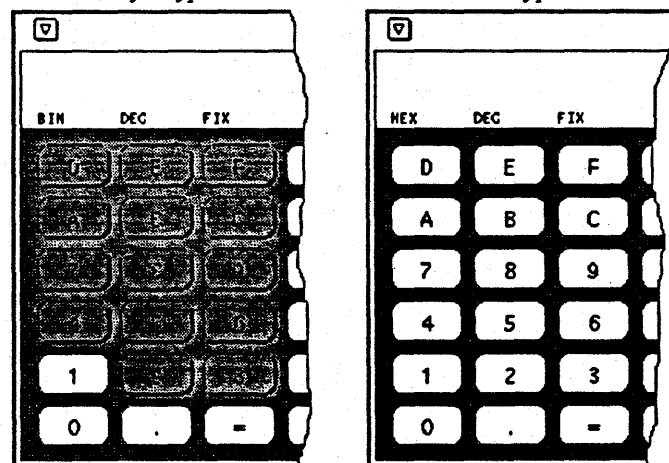
The current base setting is indicated as the first item in the mode line. In Figure 10-2, “DEC” indicates Decimal base.

Up to 40 digits can be entered for each number, regardless of the base, but internal accuracy may be lost for large numbers.

The numeric keypad changes to display only those numbers appropriate to the base mode that you choose. Inappropriate numbers are dimmed. For example, in Figure 10-2 above the hexadecimal letter keys (A-F) are dimmed. The numeric base in that figure is decimal, so the hexadecimal letters are not valid or accessible. Choosing Binary displays the digits 0 and 1 on the numeric keypad. Choosing Octal displays the digits 0 through 7. Choosing Decimal displays the digits 0 through 9. Choosing Hexadecimal displays the digits 0 through 9 and also activates the alphabetic keys at the top of the numeric keypad.

Figure 10-3 shows the keypads for both Binary and Hexadecimal numeric bases.

Figure 10-3 The Binary keypad and the Hexadecimal keypad

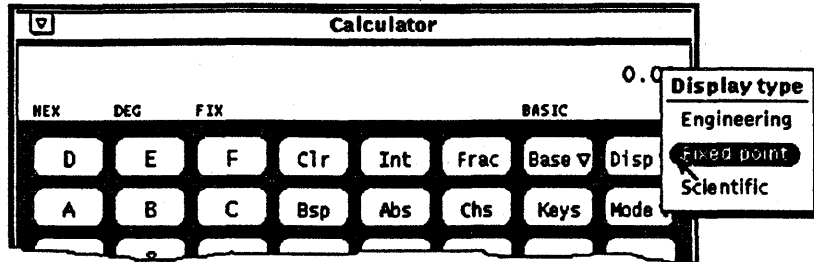


Display Notation

You can choose to display Calculator results in one of the following notations by using the Disp key pop-up menu, as shown in Figure 10-4:

- Fixed point notation
- Engineering notation
- Scientific notation

Figure 10-4 The Display type pop-up menu for display notation mode



The current display notation is displayed as the third item in the mode line. In Figure 10-4 above, the mode line shows "FIX", indicating Fixed Point notation. When the current display notation is Engineering, "ENG" appears on the mode line. When the current notation is Scientific, "SCI" is displayed.

When the current notation is Fixed Point, the Calculator will revert to Scientific notation if a number is larger than the display will allow.

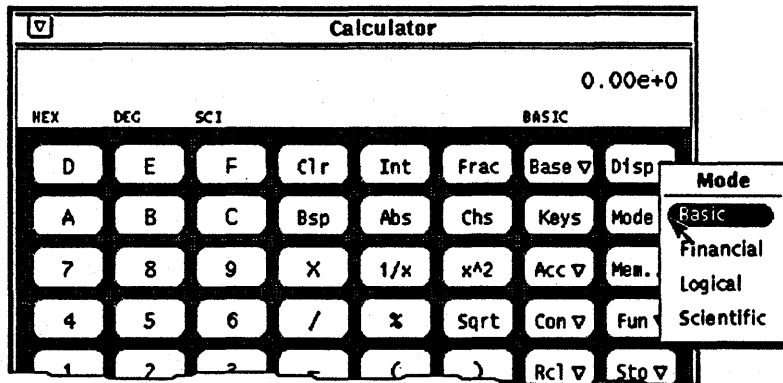
Major Calculator Modes

There are four major Calculator modes that determine the available functions:

- Basic
- Financial
- Logical
- Scientific

You can choose these four modes using the Mode key pop-up menu shown in Figure 10-5. The default mode is Basic mode, which uses the standard keys on the Calculator base window. The other three modes have extra buttons that appear on a pop-up window. For information on these modes, see "Financial Functions", "Logical Functions", and "Scientific Functions" later in this chapter.

Figure 10-5 The Mode pop-up menu

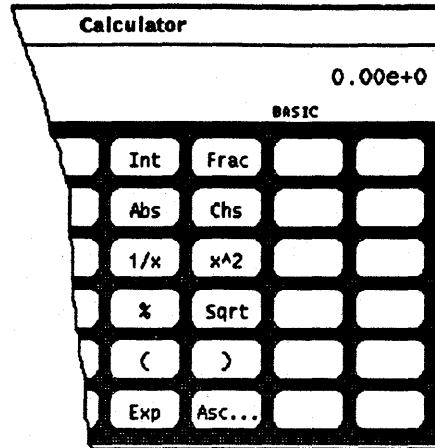


The current major mode is displayed on the mode line underneath and slightly to the left of the number display. In Figure 10-5 above, "BASIC" is listed as the current mode.

Number Manipulation Functions

The Calculator has twelve number manipulation functions, as shown in Figure 10-6.

Figure 10-6 Number Manipulation functions

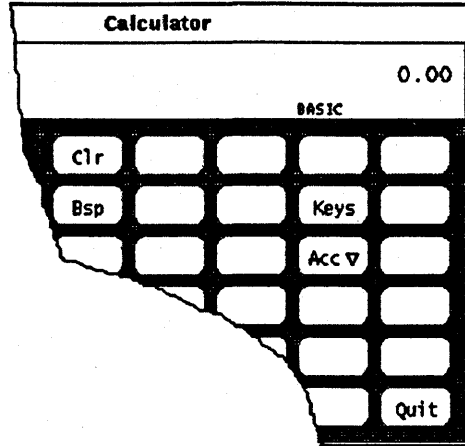


- Use Int to return the integer portion of the currently displayed value.
- Use Frac to return the fractional portion of the currently displayed value.
- Use Abs to return the absolute value of the currently displayed value.
- Use Chs to change the arithmetic sign of the currently displayed value, or of an exponent being entered with the Exp key.
- Use 1/x to return the value of 1 divided by the currently displayed value.
- Use x^2 to return the square of the currently displayed value.
- Use % to calculate the percentage of the currently displayed value specified by the next value entered. For example, to find out what 75% of 40 is, enter 40, click SELECT on %, enter 75, then click SELECT on =. The Calculator returns the result 30.
- Use Sqrt to return the square root of the currently displayed value.
- Use (and) to give a calculation arithmetic precedence. All calculations within parentheses are calculated first. Parentheses can be nested. The result of an operation containing parentheses is not performed until the last parenthesis is matched.
- Use Exp to start exponential input. Any number entered after you choose Exp is taken to be the exponent portion of this number. The numbers entered before the Exp key are taken to be the mantissa. If no numerical input has occurred when the Exp key is entered, a mantissa of 1.0 is assumed. You can use the Chs key after entering the exponent to change its arithmetic sign.
- Use Asc to display the ASCII value of a character in the appropriate numeric base. The Asc key displays its own small pop-up window.

10.4 Miscellaneous Functions

The Calculator has five miscellaneous functions, shown in Figure 10-7.

Figure 10-7 Miscellaneous functions



- Use Clear (Clr) to clear the current value from the display.
- Use Backspace (Bsp) to remove the rightmost character from the current display and recalculate its value. Note that internal accuracy is lost with this operation.
- Use Keys to change the display of the Calculator keys to show the keyboard equivalents of each Calculator key for mouseless operation of the Calculator.

Everything that can be done by clicking SELECT can also be done using the equivalent keyboard commands. Keys that have pop-up menus associated with them require two keyboard commands: the first to select the command, and the second to select the appropriate entry. When the pop-up menu contains numerical values, the numbers 0 through 9 can be used. For the logical shift pop-up menu, use the letters a through f for the numbers 10 through 15. Use the first letter in lower case of all other menu items.

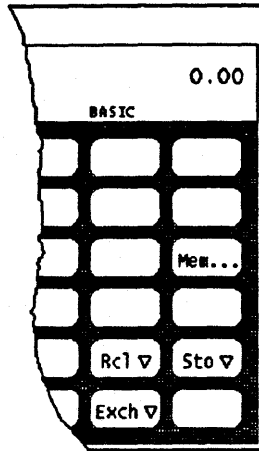
See the Calculator man pages included in Appendix C for more information about the keyboard mapping.

- Use Accuracy (Acc) to choose the number of digits of precision used in the calculator display. This key has a pop-up menu associated with it, which lets you specify 0 through 9 radix places. The default value is 2 radix places.
- Use Quit to quit the Calculator.

10.5 Memory Registers

The Calculator has 10 memory registers that you can access using the keys shown in Figure 10-8.

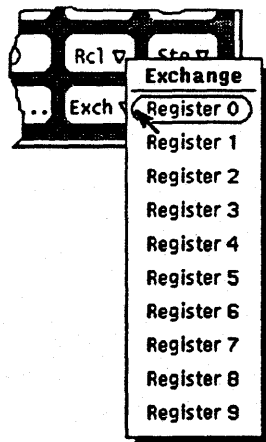
Figure 10-8 Memory Register functions



- Use Memory (Mem...) to display a pop-up window showing the values of the ten memory registers in the current base to the current accuracy.
- Use Store (Sto) to store the current value in the memory register number that you choose from the Store pop-up menu.
- Use Recall (Rcl) to retrieve a value from the memory register number that you choose from the Recall pop-up menu.
- Use Register Exchange (Exch) to exchange the contents of the current display with the current value in the memory register number that you choose from the Exch key pop-up menu.

The Exch, Sto, and Rcl keys have pop-up menus that you use to access the registers. Figure 10-9 shows the Exchange pop-up menu.

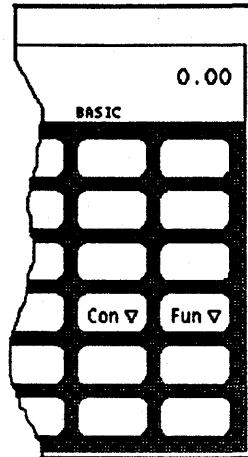
Figure 10-9 The Exchange menu



10.6 User Defined Functions

The Calculator allows you to enter your own set of constants and to define your own functions using the Con and Fun keys shown in Figure 10-10.

Figure 10-10 User-defined functions



Each of these keys has a pop-up menu associated with it. Choosing the first item on the menu displays a pop-up window that lets you enter the value of a constant or a function, and associate a name with that value. The numbers you enter are stored in a `.calctoolrc` file in your home directory.

Once you have entered the new value, by clicking **SELECT** on the button at the bottom of the pop-up window, the new value and its name are displayed in the pop-up menu associated with that Calculator key. To use the constant or function value, choose the desired item from the pop-up menu.

The following example describes how to create and save a function which, when chosen, adds together two numbers taken from memory registers, and stores the result in another memory register.

Note that when you enter a value for a new function, you must type the keyboard equivalents in the Value field. To display the keyboard equivalents for each Calculator key, click **SELECT** on the Keys button.

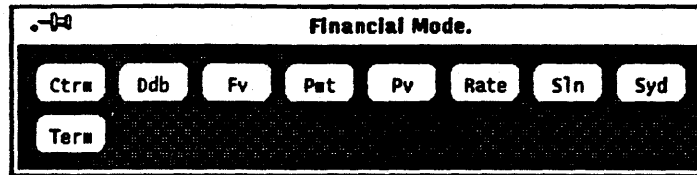
1. Move the pointer onto the **Fun** key and press the **MENU** mouse button.
2. Highlight **Enter Function** and release **MENU** to display the **Enter Function** pop-up window.
3. Type in the number of the function you wish to add or replace in the **Function No:** field.
4. Type a function name in the **Name** field, for example, **addition**.
5. Type a function into the **Value** field. To add the numbers in **Memory Registers 1 and 2**, and store the sum in **Register 5**, type **R1+R2=S5**.
6. Click **SELECT** on the **Enter Function** button to store the new function in your `.calctoolrc` file and add it to the **Functions** menu.

To use the new function, choose it from the **Functions** menu.

10.7 Financial Functions

The Calculator has the financial functions shown in Figure 10-11. This pop-up window is displayed when you choose Financial from the Mode key pop-up menu.

Figure 10-11 Financial functions



The financial functions retrieve needed information from the memory registers. For example, in order to determine the amount of an installment payment, the Calculator needs to know the amount of the loan, the interest rate, and the term of the loan. You must store this information in the appropriate registers before you click SELECT on the financial function button. See “Memory Registers” earlier in this chapter for information about how to store numbers in the registers.

The function descriptions below include information about what the Calculator is expected to find in each register for each function. To get a more detailed example of how to use each of these financial functions, press the F1 or Help key with the pointer over the Calculator button you want help for.

- Use Ctrn to compute the number of compounding periods it will take an investment of present value to grow to a future value, earning a fixed interest rate per compounding period. The Calculator expects to find the following numbers in the memory registers:
 - Register 0: Periodic interest rate
 - Register 1: Future value of the investment
 - Register 2: Present value of the investment
- Use Ddb to compute the depreciation allowance on an asset for a specified period of time, using the double-declining balance method. Store the following information in the memory registers:
 - Register 0: Amount paid for asset
 - Register 1: Salvage value of asset at end of life
 - Register 2: Useful life of an asset
 - Register 3: Time period for depreciation allowance
- Use Fv to determine the future value of an investment. The Calculator computes the future value based on a series of equal payments, earning a periodic interest rate over the number of payment periods in a term. The memory registers need to contain the following numbers:
 - Register 0: Amount of each payment
 - Register 1: Interest rate
 - Register 2: Number of payments

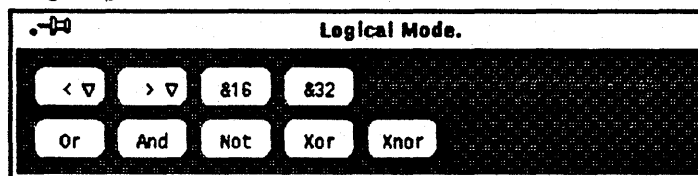
- Use **Pmt** to compute the amount of the periodic payment of a loan. Most installment loans are computed like ordinary annuities, in that payments are made at the end of each payment period. Store the following information in the memory registers:
 - Register 0: Principal or amount of the loan
 - Register 1: Periodic interest rate of the loan
 - Register 2: Term, or number of payments
- Use **Pv** to determine the present value of an investment. The Calculator computes the present value based on a series of equal payments discounted at a periodic interest rate over the number of periods in term. The following information is retrieved from the memory registers:
 - Register 0: Amount of each payment
 - Register 1: Periodic interest rate
 - Register 2: Term, or number of payments
- Use **Rate** to compute the periodic interest rate. It returns the periodic interest necessary for a present value to grow to a future value over the specified number of compounding periods in term. Store the following information in the memory registers:
 - Register 0: Future value
 - Register 1: Present value
 - Register 2: Term, or number of compounding periods
- Use **Sln** to compute the straight-line depreciation of an asset for one period. The straight-line method of depreciation divides the depreciable cost (actual cost minus salvage value) evenly over the useful life of an asset. The useful life is the number of periods, typically years, over which an asset is depreciated. Use the memory registers to store the following information:
 - Register 0: Cost of the asset
 - Register 1: Salvage value of the asset
 - Register 2: Useful life of the asset
- Use **Syd** to compute the sum-of-the-years'-digits depreciation. This method of depreciation accelerates the rate of depreciation so that more depreciation expense occurs in earlier periods than in later ones. The depreciable cost is the actual cost minus salvage value. The useful life is the number of periods, typically years, over which an asset is depreciated. Store the following information in the memory registers:
 - Register 0: Cost of the asset
 - Register 1: Salvage value of the asset
 - Register 2: Useful life of the asset
 - Register 3: Period for which depreciation is computed

- Use Term to compute the number of payment periods in the term of an ordinary annuity necessary to accumulate a future value earning a specified periodic interest rate. Store the following information in the memory registers:
 - Register 0: Amount of each periodic payment
 - Register 1: Future value
 - Register 2: Periodic interest rate

10.8 Logical Functions

The Calculator has the logical functions shown in Figure 10-12. This pop-up window is displayed when you choose Logical from the Mode key pop-up menu.

Figure 10-12 Logical functions

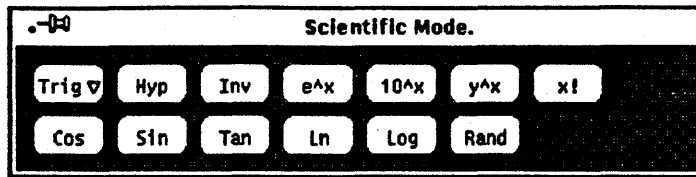


- Use < to shift the displayed value, treated as a 32 bit integer, to the left. This key has a pop-up menu. The number of places to shift can be selected from this menu, and ranges from 1 through 15.
- Use > to shift the displayed value, treated as a 32 bit integer, to the right. This key has a pop-up menu. The number of places to shift can be selected from this menu, and ranges from 1 through 15.
- Use &16 to truncate the current display to a 16-bit integer.
- Use &32 to truncate the current display to a 32-bit integer.
- Use Or to perform a logical OR operation on the last number and the next number entered, treating both numbers as 32-bit integers.
- Use And to perform a logical AND operation on the last number and the next number entered, treating both numbers as 32-bit integers.
- Use Not to perform a logical NOT operation on the currently displayed value.
- Use Xor to perform a logical XOR operation on the last number and the next number entered, treating both numbers as 32-bit integers.
- Use Xnor to perform a logical XNOR operation on the last number and the next number entered, treating both numbers as 32-bit integers.

10.9 Scientific Functions

The Calculator has the scientific functions shown in Figure 10-13. This pop-up window is displayed when you choose Scientific from the Mode key pop-up menu.

Figure 10-13 Scientific functions



- Use the Trig key pop-up menu to set the trigonometric base to Degrees, Radians, or Gradients. The current trigonometric base is indicated by the second item on the mode line.
- Use Hyp as a toggle for setting or unsetting the hyperbolic function flag. This flag affects SIN, COS, and TAN trigonometric functions. When this flag is set, the word "HYP" appears on the mode line beneath the numeric display.
- Use Inv as a toggle for setting or unsetting the inverse function flag. This flag affects SIN, COS, and TAN trigonometric functions. When this flag is set, the word "INV" appears on the mode line beneath the numeric display.
- Use e^x to return e raised to the power of the currently displayed value.
- Use 10^x to return 10 raised to the power of the currently displayed value.
- Use y^x to raise the last number entered to the power of the next number entered.
- Use $x!$ to return the factorial of the currently displayed value.
- Use Cos to return the trigonometric cosine, arc cosine, hyperbolic cosine, or inverse hyperbolic cosine of the current value, depending on the settings of the hyperbolic and inverse function toggles. (See Hyp and Inv above). The result is displayed in the current trigonometric base (degrees, radians, or gradients).
- Use Sin to return the trigonometric sine, arc sine, hyperbolic sine, or inverse hyperbolic sine of the current value, depending on the settings of the hyperbolic and inverse function toggles. (See Hyp and Inv above). The result is displayed in the current trigonometric base (degrees, radians, or gradients).
- Use Tan to return the trigonometric tangent, arc tangent, hyperbolic tangent, or inverse hyperbolic tangent of the current value, depending on the settings of the hyperbolic and inverse function toggles. (See Hyp and Inv). The result is displayed in the current trigonometric base (degrees, radians, or gradients).
- Use Ln to return the natural logarithm of the currently displayed value.
- Use Log to return the base 10 logarithm of the currently displayed value.
- Use Rand to return a random number between 0.0 and 1.0.

10.10 Troubleshooting

If the Calculator detects an error, such as division by zero, the word "Error" is displayed. The Calculator must then be cleared with the Clr key before any further calculations can take place.

Context-sensitive help is available for every Calculator function. Position the pointer over the item you want help with, and press the F1 or Help key. A pop-up window will be displayed giving detailed information.

Icon Editor

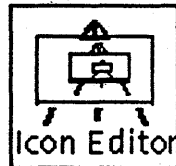
The Icon Editor allows you to create your own icon images. You can display your own icon images in the File Manager by binding them to applications and data files using the Binder. See Chapter 12 for information about how to use the Binder.

This chapter describes how to use the Icon Editor application.

11.1 The Icon Editor Icon and Base Window

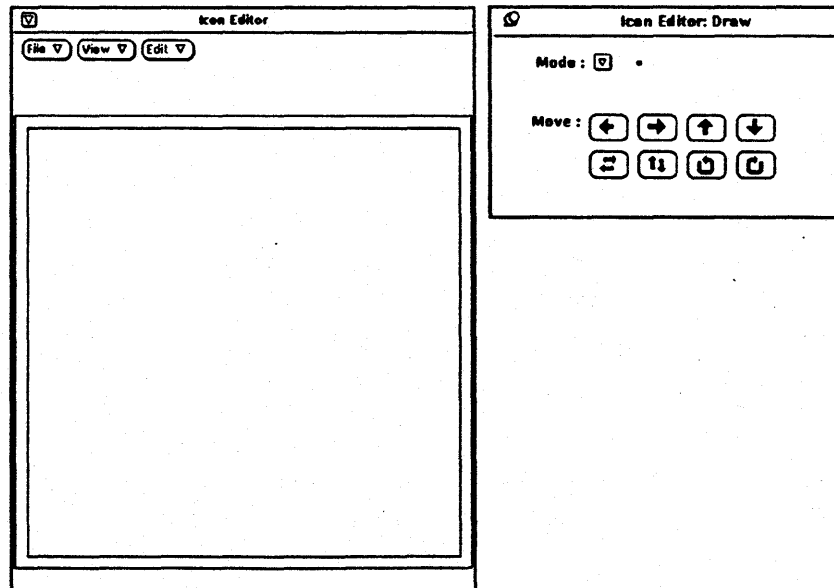
The Icon Editor icon displays an artist's easel, as shown in Figure 11-1.

Figure 11-1 The Icon Editor icon



When you start the Icon Editor, the base window and a Draw pop-up window are displayed, as shown in Figure 11-2.

Figure 11-2 The Icon Editor base window and the Draw pop-up window



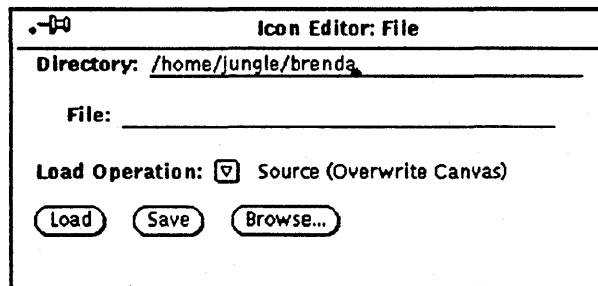
The Icon Editor base window has a control area with File, View, and Edit menu buttons; a preview area in the upper right corner that shows you the final image size of the icon you are creating in the pane; and a canvas that you use to create your image. When the canvas is blank, the preview area is also blank and is therefore not visible.

The Draw pop-up window contains the controls you use to draw an image in the canvas. To draw an image, choose a mode (point, line, square, circle, ellipse, or text). Information messages are displayed in the footer of the Icon Editor window. Click SELECT to draw a point. Press-drag-release SELECT to draw a line, square, circle, or ellipse. You can adjust your drawing by using ADJUST with any of the modes to draw in white, turning off pixels in the design. (Clicking ADJUST on an off pixel does not turn it on). Using the Move buttons, you can move the image or a region to the left, right, up, or down, or you can reverse or rotate it. The controls in the Draw pop-up window are explained in detail later in this chapter.

11.2 Filing Options

The File menu opens a File pop-up window, shown in Figure 11-3, that you use to load, save, and browse icon files.

Figure 11-3 The File pop-up window

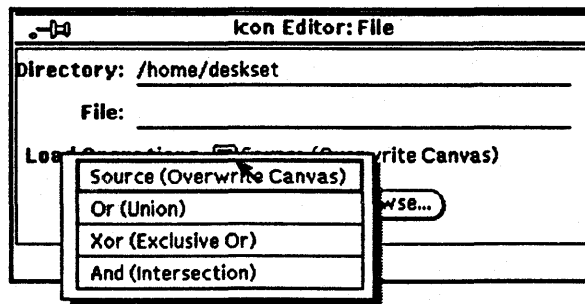


Loading a File

To load a file, type the directory in the Directory field and the file name in the File field.

You can choose how to load the file from the Load Operations menu shown in Figure 11-4.

Figure 11-4 The Load Operations pop-up menu



- Use Source (Overwrite Canvas) to load a file, overwriting any existing information on the canvas.
- Use Or (Union) to load a file transparently over another image, allowing any existing information on the canvas to show through the new file.
- Use Xor (Exclusive Or) to load a file transparently over another image, turning bits that are on in both images off and leaving the other bits unchanged.
- Use And (Intersection) to load a file transparently over another image, retaining only the bits that are on in both images and turning all other bits off.

When you have chosen the load operation you want to use, click **SELECT** on the Load button to load the file into the canvas.

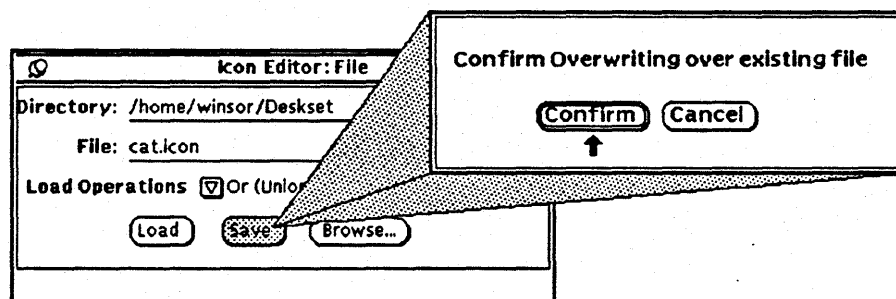
You can also load an icon file by dragging it from the File Manager and dropping it onto the Icon Editor.

Saving a File

To save a file, type the directory in the Directory field, the file name in the File field, and click **SELECT** on the Save button.

If a file of the same name already exists, a Notice is displayed, as shown in Figure 11-5, asking you whether you want to overwrite the existing file or cancel the operation.

Figure 11-5 The Save confirmation Notice

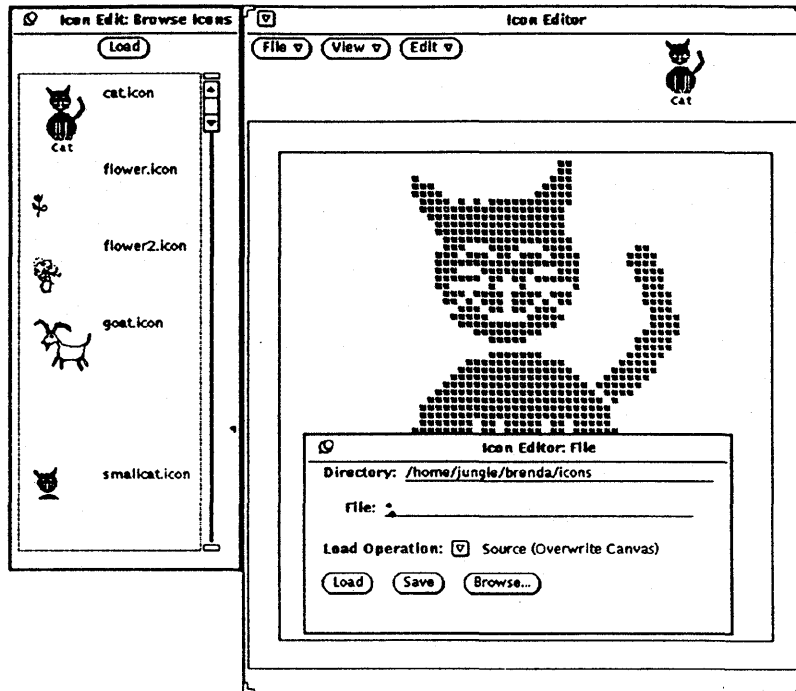


Browsing for Icon Files

You can browse a specific directory for icon files using the Browse button. To browse a directory, type the name of the directory in the Directory field and click **SELECT** on the Browse button.

The Icon Editor browses the specified directory and displays a message in the footer showing how many icon files are found. In addition, a pop-up window is displayed showing the icon files available in that directory. Figure 11-6 shows an example of the images and their file names found after browsing the entire directory specified.

Figure 11-6 Results of a Browse

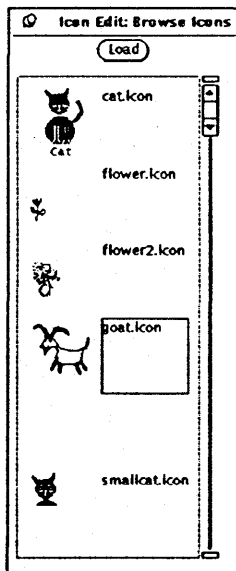


To load one of the browse files, follow these steps:

1. Press SELECT on one of the icon images or file names in the Browse window.

The file name of the image is selected, as shown in Figure 11-7.

Figure 11-7 A selected browse item



2. Press SELECT on Load at the top of the Browse menu.

When you release SELECT, the image is loaded. If there is an existing image on the canvas, a Notice is displayed asking you to confirm the overwrite.

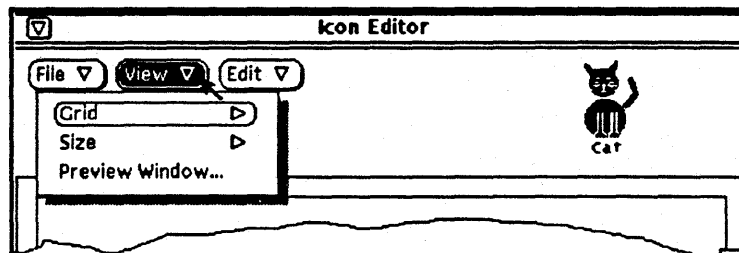
If you have directories with a large number of files, you can reduce browsing time by using wildcard characters in the File field to narrow the search. For example, typing *.icon searches only for all files with a .icon suffix.

11.3 The View Menu

The View menu, shown in Figure 11-8, provides the following display options:

- Grid (on or off)
- Size of the canvas area (64, 48, 32, 16 square)
- Preview background window

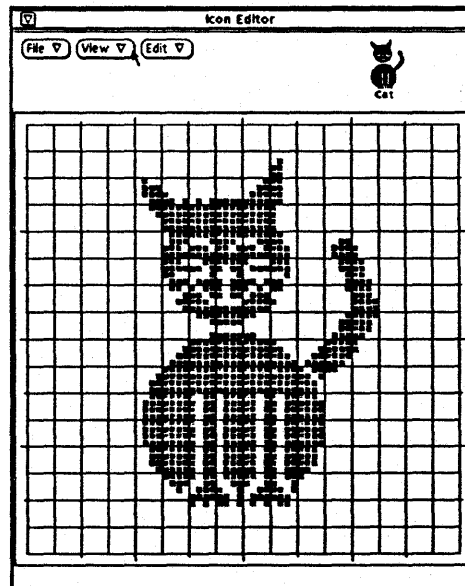
Figure 11-8 The View menu



Grid Display

Use the Grid item to choose whether or not to display a 4-pixel grid for the canvas. Figure 11-9 shows an example of the canvas with the grid turned on.

Figure 11-9 The grid



Icon Size

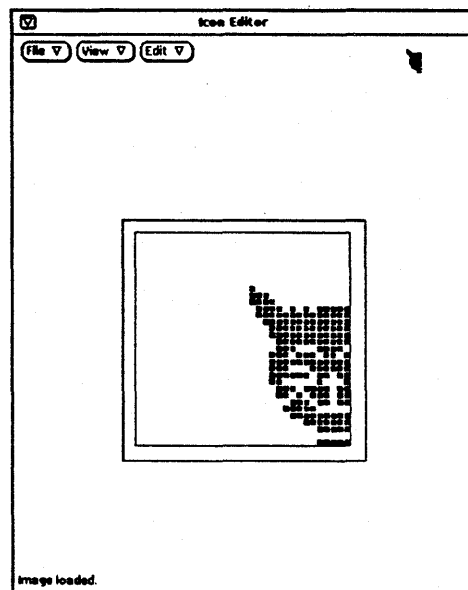
The Size item provides four standard icon image sizes:

- 64 by 64 pixels (the default icon size)
- 48 by 48 pixels

- 32 by 32 pixels (the default size for icons that can be used as File Manager data file icons)
- 16 by 16 pixels (typical cursor size)

The canvas is always centered in the Icon Editor window. If you change the size of the canvas when an icon file is loaded, or load an icon into a different canvas size, the file is read from the upper left corner. In the example shown in Figure 11-10, the canvas with the `cat .icon` file has been loaded into a canvas sized to 32 by 32 pixels.

Figure 11-10 Changing the size of an existing icon

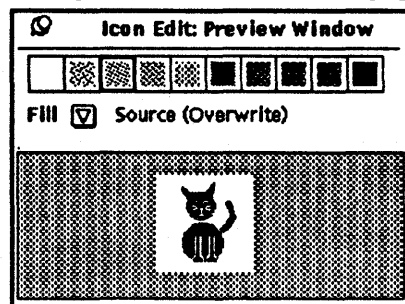


Larger images are cropped to fit the existing size of the canvas, but the full image is still available.

Preview Window

The Preview Window item displays a pop-up window, as shown in the example in Figure 11-11, that lets you preview how your icon file will look on different background patterns. To choose a different pattern, move the pointer onto the pattern and click SELECT.

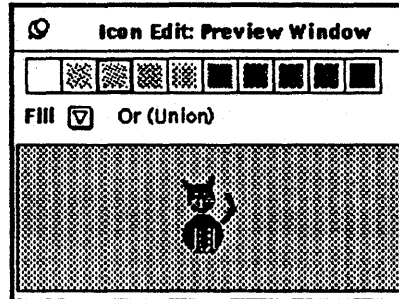
Figure 11-11 Background Preview Window pop-up with Source (Overwrite)



The Fill menu has the same four fill options that are also provided from the Load and Draw pop-up windows:

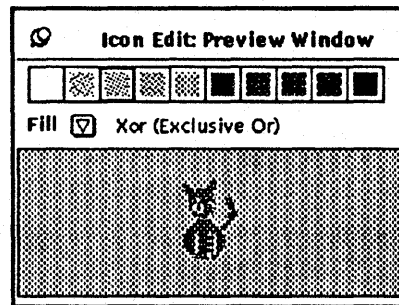
- Use Source (Overwrite Canvas) to display the icon file on top of the specified background, as shown in Figure 11-11, above.
- Use Or (Union) to display a background transparently over the preview image, allowing the background to show through the preview image, as shown in Figure 11-12.

Figure 11-12 Background Preview Window pop-up with Or (Union)



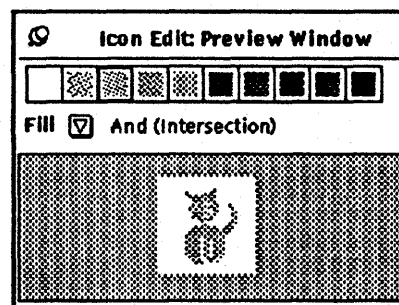
- Use Xor (Exclusive Or) to view the background transparently over the preview image, turning off bits that are on in both images and leaving the other bits unchanged, as shown in Figure 11-13.

Figure 11-13 Background Preview Window pop-up with Xor (Exclusive Or)



- Use And (Intersection) to view the background transparently over the preview image, retaining only the bits that are on in both images and turning off all other bits, as shown in Figure 11-14.

Figure 11-14 Background Preview Window pop-up with And (Intersection)



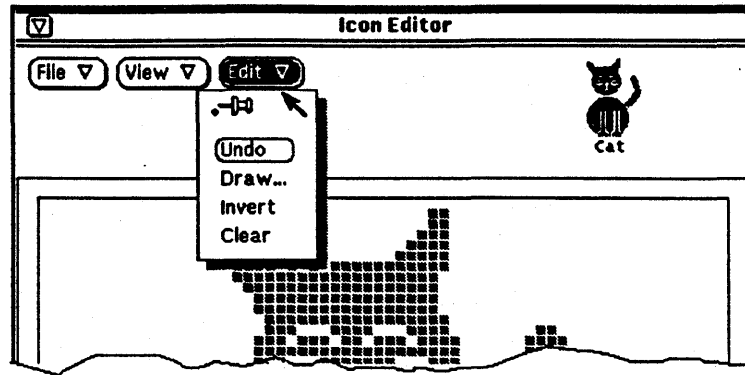
11.4 The Edit Menu

The Edit menu, shown in Figure 11-15, provides the following editing options:

- Undo
- Draw

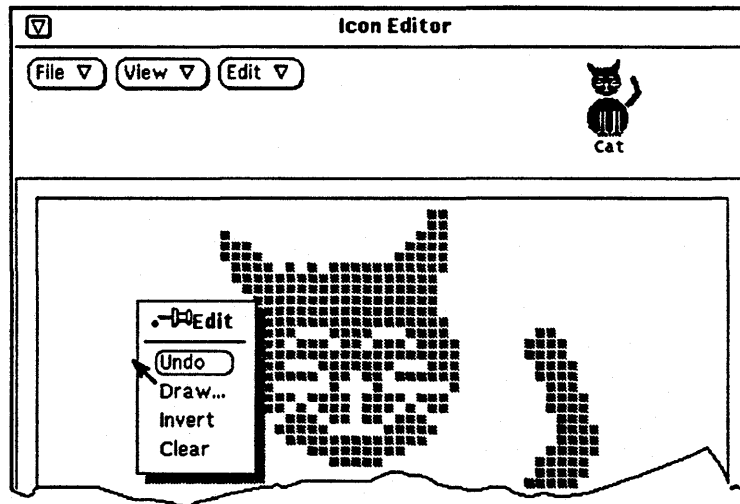
- Invert
- Clear

Figure 11-15 The Edit menu



The items on the Edit menu are also available on the pop-up menu in the Icon Editor pane, as shown in Figure 11-16. To use the pop-up menu without moving the pointer out of the pane, press MENU, choose an item from the menu, and release MENU.

Figure 11-16 The pop-up menu



Undo

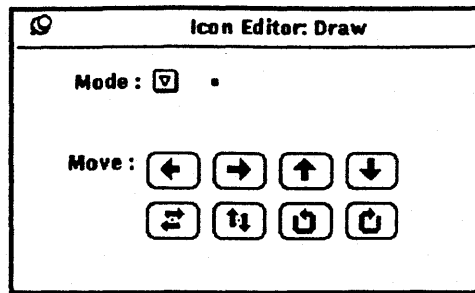
You can undo your last action by choosing Undo from the Edit menu. Choosing Undo a second time undoes the undo, restoring the canvas to its condition before you chose Undo the first time.

You can also use the Undo key from the keyboard.

Draw Pop-up Window

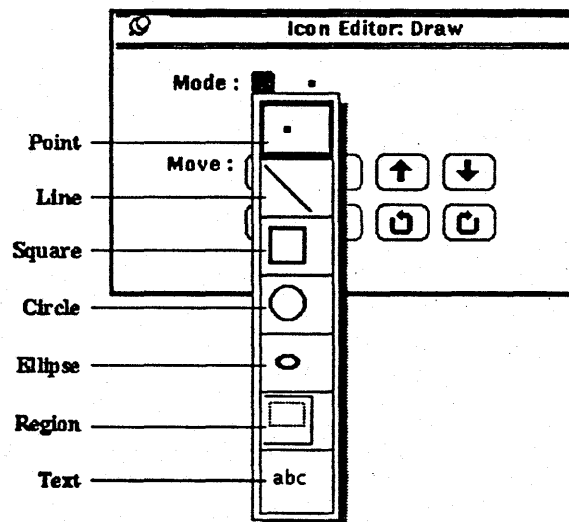
The Draw pop-up window, shown in Figure 11-17, is automatically displayed when you start the Icon Editor. If you dismiss the Draw pop-up window, you can display it again by choosing Draw from the Edit menu.

Figure 11-17 The Draw pop-up window



The Mode Menu. To draw an icon, choose the mode you want from the Mode menu, shown in Figure 11-18.

Figure 11-18 The Mode menu

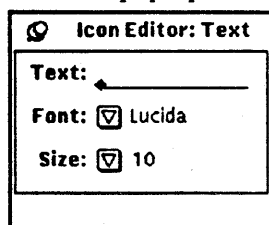


The Mode menu items function as follows:

- Choosing Point allows you to click SELECT to insert one black pixel at the hot spot of the pointer on the canvas. You can point to a black pixel and click ADJUST to turn the pixel from black to white.
- Choosing Line allows you to draw a black line 1-pixel wide. To draw a line, position the pointer at one end of the line, press SELECT, drag the pointer to the other end of the line, and release SELECT. You can draw a white line in the same way using the ADJUST mouse button.
- Choosing Square allows you to draw open or filled squares or rectangles using any of the fill patterns from the Fill menu, which is discussed later in this chapter. (The Fill menu is displayed only when the Draw option is a fillable shape, such as square, circle, or ellipse). Position the pointer at one corner of the square, press SELECT, drag the pointer to the opposite corner of the square or rectangle, and release SELECT. You can draw a white rectangle in the same way using the ADJUST mouse button.

- **Choosing Circle** allows you to draw open or filled circles using any of the fill patterns from the Fill menu. Position the pointer at the center of the circle and press SELECT, drag the pointer to the enclosing rectangle, and release SELECT. You can draw a white circle in the same way using the ADJUST mouse button.
- **Choosing Ellipse** allows you to draw open or filled ellipses using any of the fill patterns from the Fill menu. Position the pointer at the center of the ellipse and press SELECT, drag the pointer to the outside radius of the ellipse, and release SELECT. If you define a horizontal or vertical line, the ellipse is interpreted as a straight line. You can draw a white ellipse in the same way using the ADJUST mouse button.
- **Choosing Region** (the rectangle within a rectangle) allows you to define a rectangular region on the canvas and move, flip, or rotate it by clicking SELECT on any of the Move buttons.
- **Choosing Text** (abc) displays a pop-up window, shown in Figure 11-19, that allows you to type text in a text field.

Figure 11-19 The Text pop-up window



To add text to the canvas, follow these steps:

1. **Choose Text from the Mode menu.**

The Text pop-up window is displayed.

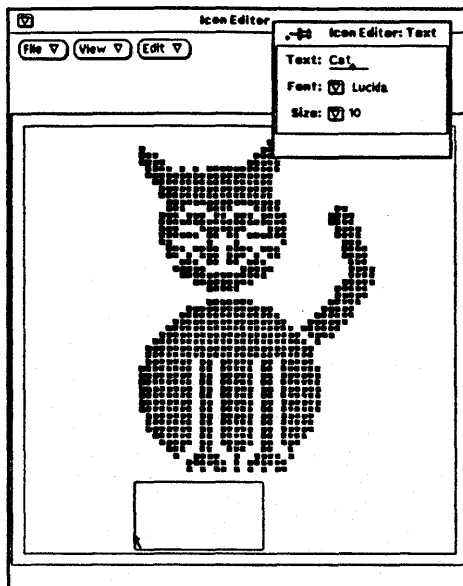
2. **Choose the font you want to use from the Font menu.**

Note that you can change the set of available fonts. See the section "Customizing Your Icon Editor" later in this chapter for information about how to change the set of available fonts.

3. **Choose the size you want to use from the Size menu.**
4. **Type the text you want in the Text field.**
5. **When you have typed the text in the text field, insert it in the icon by moving the pointer onto the canvas and pressing SELECT.**

A rectangle is displayed that shows you the size of the text to be inserted, as shown in the example in Figure 11-20. You can move the rectangle anywhere within the canvas to position it as long as you press SELECT.

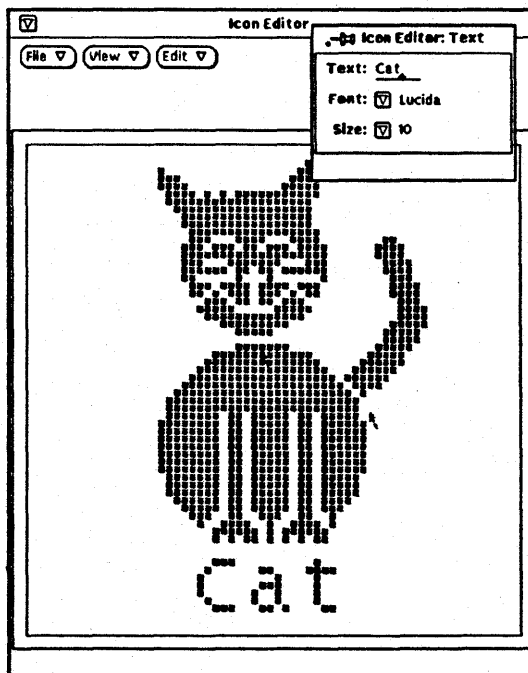
Figure 11-20 Adding text to your icon



6. Drag the pointer to position the rectangle, and when it is positioned correctly, release SELECT.

The text is added to the canvas, as shown in the example in Figure 11-21. You can add white text to a dark background in the same way using the ADJUST mouse button.

Figure 11-21 Text added to an icon

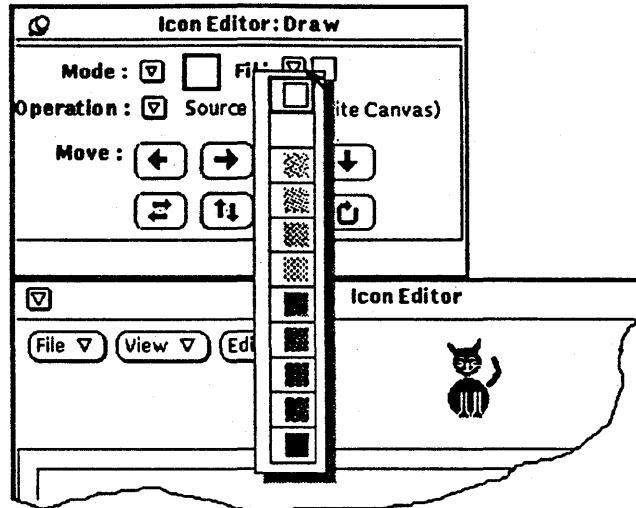


Once you have added text to the canvas, you can edit it as you would any other part of the image.

Fill Menu

The Fill menu, shown in Figure 11-22, allows you to choose an outline or one of ten fill patterns for drawing squares, circles, or ellipses. This menu is only visible when the current mode is a fillable shape (square, circle, or ellipse).

Figure 11-22 The Fill menu



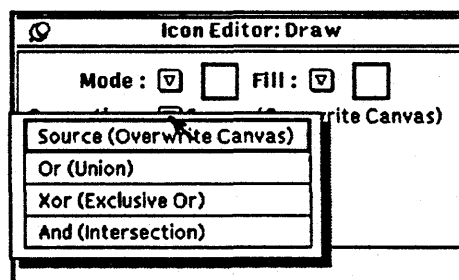
The first item on the menu, an open square, draws an outline of the chosen shape, using a 1-pixel wide black pattern when you use SELECT, and a 1-pixel white pattern when you use ADJUST.

The other items represent patterns, from white to black, that you can use to fill the square, circle, or ellipse modes.

Operation Menu

The Operation menu, shown in Figure 11-23, allows you to choose how you perform each filled draw operation. This menu is only visible when the current mode is a fillable shape.

Figure 11-23 The Operation menu



- Use Source (Overwrite Canvas) to draw, overwriting any existing information on the canvas.
- Use Or (Union) to draw transparently over another image, allowing any existing information on the canvas to show through.
- Use Xor (Exclusive Or) to draw transparently over another image, turning off pixels that are on in both images and leaving the other pixels unchanged.
- Use And (Intersection) to draw transparently over another image, retaining only the pixels that are on in both images and turning off all other pixels.

Move Buttons

Use the move buttons (left, right, up, and down arrows) to adjust the position of the drawing in the canvas, or to move a region within the canvas. To move a selected region, click **SELECT** on one of the arrow buttons to move the region one pixel in the designated direction. If no region is selected, the entire drawing is moved.

NOTE *If you move part of the image off the canvas, the pixels are cropped from the image and are not restored if you move the image in the opposite direction.*

To move a region, follow these steps:

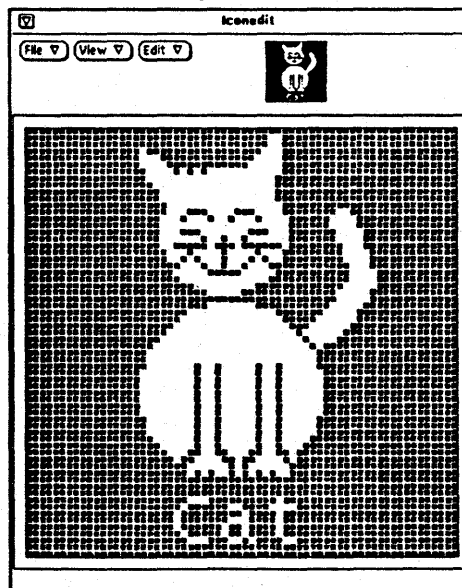
1. Choose **Regions** (the next to the last item) from the **Mode** menu.
2. Move the pointer to the corner of the region you want to move and press **SELECT**.
3. Drag the pointer to define the region and release **SELECT**.
4. Click **SELECT** on one of the arrow buttons to move the region one pixel in the designated direction. You can repeat this operation as often as you like.

The left two buttons in the bottom row flip the selected region from left to right or top to bottom. If no region is selected, the entire image on the canvas is flipped. The right two buttons rotate the region or the image 90 degrees in the direction of the arrow.

Invert

You can reverse video on the icon image by choosing **Invert** from the **Edit** menu. All pixels that are on are turned off, and all pixels that are off are turned on. Figure 11-24 shows the cat icon after choosing **Invert**.

Figure 11-24 An inverted image



Clear You can clear the canvas by choosing Clear from the Edit menu. No warning notice is displayed. If you change your mind, choose Undo from the Edit menu.

11.5 Customizing Your Icon Editor

If you would like to change the set of fonts available in the Icon Editor application, you can do so by editing the file `.iconedit` in your home directory. Follow these steps:

1. Start up a Command Tool or Shell Tool.
2. At the system prompt, type `cd` and press Return to move to your home directory.
3. To make sure you do not already have the `.iconedit` file, type `ls .iconedit` and press Return. If the system responds by listing the file `.iconedit`, skip step 4.
4. Type `cp $OPENWINHOME/bin/xview/.iconedit .iconedit` and press Return.

This copies the default system `.iconedit` file to your home directory so that you can customize your own version of this file.

5. Using any text editor, edit the `.iconedit` file to add or delete the fonts available in the Icon Editor application.

The format required by this file is described at the top of the file.

Binder

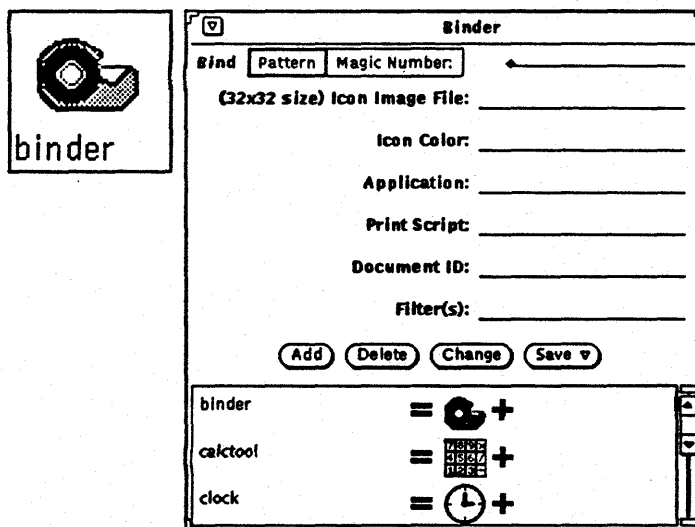
The DeskSet Environment provides an application called Binder that allows you to bind applications, icons, colors, and scripts to files. The Binder is a tool designed for use by a system administrator or a user with a working knowledge of SunOS operating system commands. Because the File Manager and Print Tool applications come with a default set of bindings, most DeskSet Environment users will not need to use the Binder application to set up the DeskSet Environment.

A *binding* is a logical connection between elements such as a type of file, an application, a print script, or other characteristics such as color and filters that the File Manager and Print Tool applications use to display and operate on files. This chapter explains how to use the Binder application.

12.1 The Binder Icon and Window

The Binder icon and base window are shown in Figure 12-1.

Figure 12-1 The Binder icon and base window



The Binder window has a control area and a scrolling list. The control area contains controls that you use to add a new binding or to modify or delete an existing binding. The scrolling list displays a list of existing bindings.

DeskSet Environment installation creates an `/etc/filetype` file that contains the default bindings for the DeskSet Environment. You can customize bindings

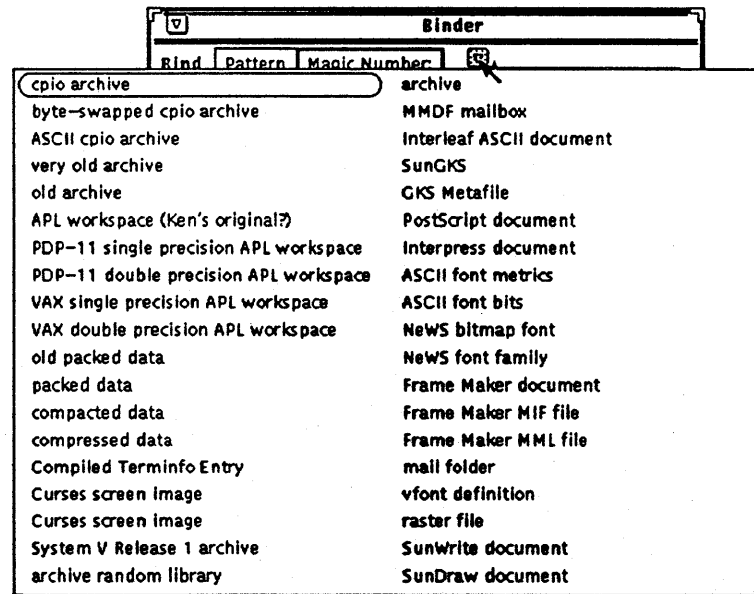
and store them in a `.filetype` file in your home directory using the Binder. The scrolling pane displays your current bindings from `/etc/filetype` if you have not created a `.filetype` file. If you have `.filetype` in your home directory, the bindings from that file are displayed in the Binder pane.

You cannot overwrite your `/etc/filetype` unless you are root, and start Binder by typing `binder &` in a Shell Tool or Command Tool. If you start Binder from the Workspace menu, you can only save changes to the `.filetype` file in your home directory.

Types of Bindings

You can specify files and/or applications in the Binder by using either a specific file name, a generic pattern, or a magic number. Magic numbers are identifying numbers that files and applications use to identify specific types of files. Magic numbers are stored in the `/etc/magic` file on your system. When you click SELECT on the Magic Number setting, an abbreviated menu button is displayed at the beginning of the text field. The menu shows the names for the items listed in the `/etc/magic` file on your system. Figure 12-2 shows an example of the Magic Number menu. Your system may display a slightly different list of entries.

Figure 12-2 An example of a Magic Number menu



The items on the menu are displayed in the same order they appear in the `/etc/magic` file.

When should you use a magic number instead of a pattern? The decision depends on the type of file and whether a standard convention for file name patterns is used. When a magic number exists for a common type of file, it is probably advantageous to use it. For example, many applications that create raster files use the raster file magic number to create the files. If you bind raster files using a suffix such as `.rs`, the binding may not apply to all of the raster files you create if you forget to use the suffix as part of the file name. However, when standard suffix conventions exist, using a pattern is faster.

Binder Options

The Binder base window fields currently in use function as follows:

- Use the Bind setting to enter the name of the application, the pattern for filenames, or the magic number.
- Use the Icon Image File field to type the path and file name of the icon image file to be used by the File Manager when displaying files.
- Use the Icon Color field to specify the color that the File Manager uses to distinguish different file types on color monitors. When an icon color is specified, and a black and white monitor is used, the Icon Color is ignored.
- Use the Application field to enter the name of an application or to type a script which can be used to start or execute a file.
- Use the Print Script field to enter a customized print script. The default is lpr.

You can bind the following combinations:

- Application to icon file
- Data file to application
- Data file to application with an icon file
- Application to print script
- Data file to application with a print script
- Icon color to any combination

You can create a binding by typing information in the text field, clicking SELECT on the Add button, and choosing either /etc/filetype or /home/user/.filetype from the Save menu.

To delete a binding, click SELECT on an entry in the scrolling list, click SELECT on the Delete button, and choose either /etc/filetype or /home/user/.filetype from the Save menu.

To change a binding, click SELECT on a binding to display the information in the text fields. Make your editing changes in the text fields, then click SELECT on the Change button, and choose either /etc/filetype or /home/user/.filetype from the Save menu.

The following sections show some examples of binding combinations.

12.2 Creating a New Binding

You create a new binding by typing information in the text fields, clicking SELECT on the Add button, and saving the changes to .filetype (or to /etc/filetype if you start Binder as root). The example below shows how to bind an icon image to an application.

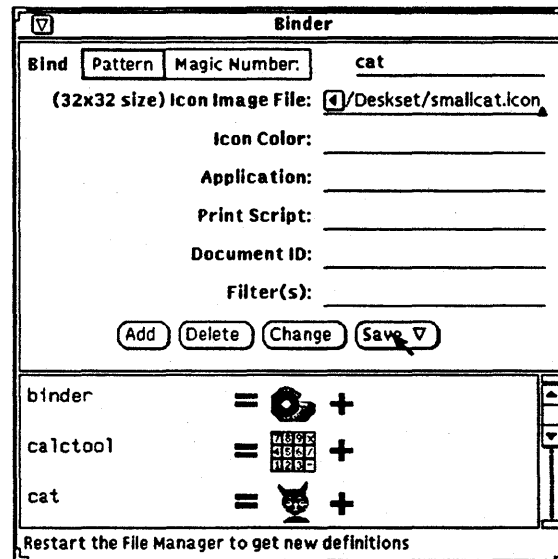
To bind the cat icon created in Chapter 11 to the cat file in your /bin directory, follow these steps:

1. If the icon does not exist, use Icon Editor to create a 32 by 32 pixel icon.

2. Click **SELECT** on **Pattern** (if necessary) and type the application name, **cat** in this example, in the **Bind** text field.
3. Press **Return** or click **SELECT** in the **Icon Image File** text field to change the insert point.
4. Type the path and file name of the icon image, **/home/winsor/Deskset/smallcat.icon** in this example.
5. Click **SELECT** on the **Add** button.
6. Click **SELECT** on the **Save** button to save the current bindings in your **.filetype** file.

The binding is saved and is displayed in the scrolling list, as shown in the example in Figure 12-3.

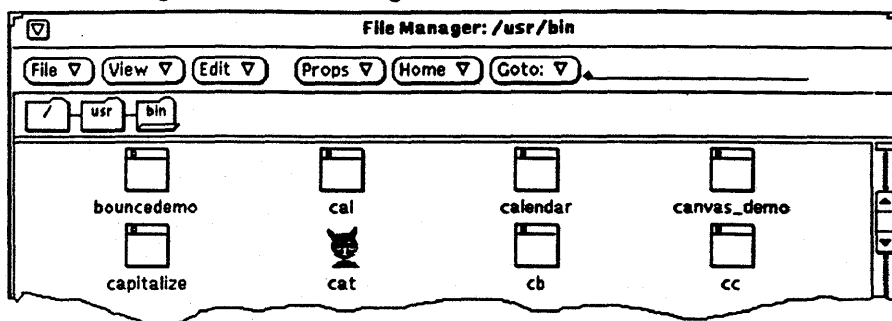
Figure 12-3 Binding a new image to an application



Both the Binder and the File Manager read the filetype file when you start them. An information message in the footer of the Binder reminds you that you must quit File Manager and start it again before the changes you made are displayed.

Figure 12-4 shows the bound image after quitting File Manager and starting it again.

Figure 12-4 The new image in the File Manager



12.3 Specifying Color

You can specify colors for icons displayed by File Manager using the Icon Color text field. This field accepts red/green/blue (RGB) saturation values from 0 through 255. If you want to display a red icon, for example, type 255 0 0 in the Icon Color text field. Color values are ignored on a monochrome display.

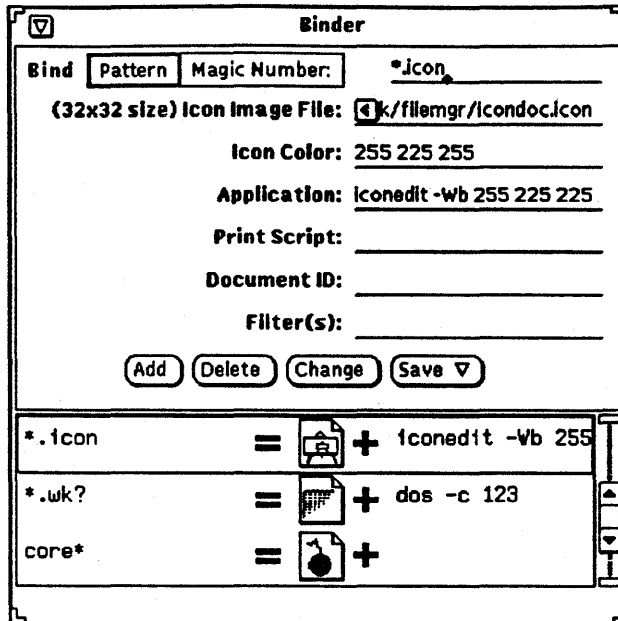
12.4 Binding an Application to Data Files

You bind file types to applications using the Bind and Application text fields. You can bind data file types by their magic number or pattern matching without using an icon. If you want to include an icon, type the path and file name of the icon in the Icon Image File text field.

Figure 12-5 shows an example of a binding for data files with the following characteristics:

- A *.icon suffix
- An icon image
- An icon color
- An application name with an argument specifying the color of the application window when it is open. The same color is specified for the application window and for the icon. You can specify different colors for the icon and the open window if you like.

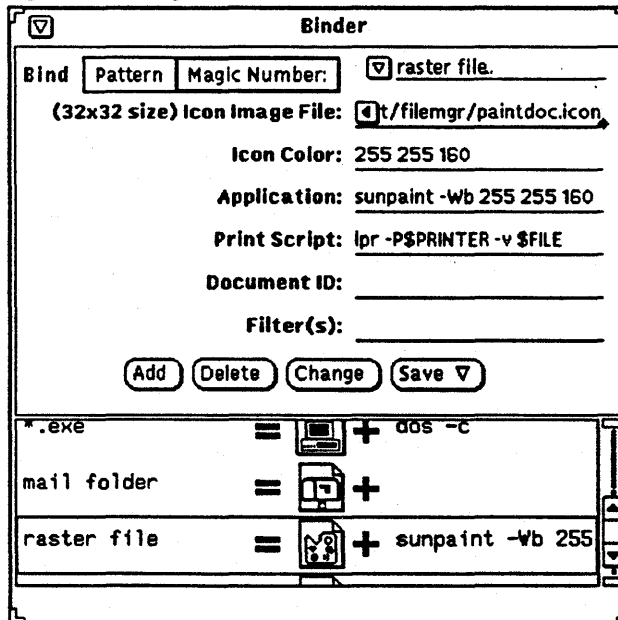
Figure 12-5 An application bound to a data file pattern



12.5 Binding a Print Script

You bind print scripts to a data file or an application, using the Print Script text field. In the example shown in Figure 12-6, raster files are bound by magic number to the SunPaint icon and the SunPaint application, and they use the print script `lpr -P$PRINTER -v $FILE`. When no script is specified, the default binding is to `lpr`.

Figure 12-6 A print binding



12.6 Document ID and Filter(s)

These fields are included for future use, but are not currently used. The intended function of these fields is to specify file format conversion filters. When a file is dropped onto an application, the File Manager will use these filters to convert the file to the format expected by the application.

12.7 Troubleshooting

If you change bindings and store the changes in the `.filetype` file in your home directory, and then find that the bindings do not work correctly, check to be sure that you have quit the application that does not register the change and started it again. The Binder, Print Tool, and File Manager applications only read the `.filetype` when they are started.

If you have quit and restarted the applications and the bindings still do not work, you can return to the system default bindings by removing your `.filetype` file.

If you enter Binder as root, make changes in the `/etc/filetype` file, and find that the bindings do not work correctly, you can reinstall the `/etc/filetype` file by running `install_filemgr` following these steps:

1. Quit the current File Manager application if you have one running.
2. From a Shell Tool or Command Tool, become root.
3. Type `cd $OPENWINHOME/bin/xview` and press Return.
4. Type `install_filemgr` and press Return.

The `/etc/filetype` file is reinstalled using the default bindings, and any new items are appended to your `/etc/magic` file. See the *OpenWindows Installation and Start-up Guide* for more information about `install_filemgr`. Table 12-1 shows a list of the default DeskSet Environment bindings from `/etc/filetype`. The path name for all icons in Table 12-1 is: `$OPENWINHOME/include/images/<iconfilename>`

Table 12-1 The default DeskSet Environment bindings from /etc/filetype

Pattern	Application	Icon File	Color	Print Binding
	binder	bind.icon		
	calctool	calctool.icon		
	clock	fm_clock.icon		
	cmdtool	fm_cmdtool.icon		
	dbxtool	fm_dbxtool.icon		
	filemgr	filemgr.icon		
	fontedit	fm_fontedit.icon		
	iconedit	fm_iconedit.icon		
	mailtool	fm_mailtool.icon		
	maze	maze.icon		
	perfmeter	perfmeter.icon		
	printtool	printer.icon		
	rolo	rolo.icon		
	sched	sched.icon		
	shelltool	fm_cmdtool.icon		
	snapshot	snapshot.icon		
	sundraw	sundraw.icon		
	sunpaint	sunpaint.icon		
	sunwrite	sunwrite.icon		
	tapetool	tapetool.icon		
	textedit	fm_textedit.icon		
	traffic	fm_traffic.icon		
	vitool	vitool.icon		
	xcalc	calctool.icon		
	xpuzzle	puzzle.icon		
	xsol	xsol.icon		

Pattern	Application	Icon File	Color	Print Binding
*.wk?	dos -c 123	spreadsheet.icon	255 225 255	
*.icon	iconedit -Wb 255 225 225	icondoc.icon	255 225 255	
*.wk?	dos -c 123	spreadsheet.icon	255 225 255	
core*		coredoc.icon	255 0 0	
*.exe	dos -c	dos.icon	206 192 255	
*.Z	uncompress	compress.icon	255 0 0	
Frame Maker document		framedoc.icon	255 255 194	
mail folder		maildoc.icon	0 255 204	
raster file	sunpaint -Wb 255 255 160	paintdoc.icon		
SunWrite document	sunwrite -Wb 255 198 192	writedoc.icon		
vfont definition	/usr/bin/fontedit	fontdoc.icon	206 192 255	
SunDraw document	sundraw -Wb 192 255 255	drawdoc.icon		

Differences Between SunView and the OpenWindows DeskSet Environment

This appendix lists some of the differences between the SunView user interface and the DeskSet Environment. See the *OpenWindows User's Guide* for a description of the DeskSet Environment.

A.1 Select then Operate

The DeskSet Environment is based on the *select-then-operate* paradigm. First you select an object by pointing at it with the pointers, then pressing and releasing a button on the mouse. Then, using either the pointer or the keyboard, you choose the operation to be applied to the selected object. One advantage to this paradigm is that you can operate on windows and icons directly, opening, closing, resizing, and moving them without having to first choose an operation from a menu.

A.2 Drag and Drop

One of the primary differences between the SunView user interface and the DeskSet Environment is the integrated workspace provided with the *drag and drop* paradigm. The DeskSet applications allow you to freely move data files between windows by selecting them and then dragging and dropping them onto a destination application.

A.3 Mouse Buttons

The DeskSet Environment assigns three specific functions to the mouse buttons, and the location of these functions is different from the SunView environment:

- SELECT (usually the left mouse button) is used for highlighting objects such as windows, icons, text, and graphics that are to be used for a subsequent action and for activating buttons and choosing settings.
- ADJUST (usually the middle mouse button) is used to increase or reduce the group of items in the selection.
- MENU (usually the right mouse button) is used to display and choose from menus.

A.4 Pushpin

Another innovation in the DeskSet Environment is that some menus and all pop-up windows except Notices have a pushpin, shown in Figure A-1.

Figure A-1 An unpinned and pinned pushpin



When the pushpin is unpinned (on its side), the menu or pop-up window is displayed and dismissed in a way similar to SunView menus and subwindows. You can click SELECT on the pushpin to pop it into its hole, pinning the menu or window to the workspace. As long as the pushpin is pinned, the menu or window remains displayed and available to you for repeated actions. Clicking SELECT on a pinned pushpin pops the pin out of the hole and dismisses the menu or window.

A.5 Double-Click to Open Icon

To open an icon in the DeskSet Environment, you double-click SELECT, or choose Open from the Window menu.

A.6 Mail Tool Changes

Users familiar with the SunView Mail Tool will find a number of enhancements and changes in the DeskSet Mail Tool application. See Chapter 3 for an in-depth discussion of Mail Tool features. Here is a summary of some of the changes:

- View multiple messages at one time using multiple message windows.
- Drag-and-drop messages from the In Tray into mail files that are represented graphically in the File Manager application.
- Open and view the contents of mail files by dragging and dropping the files from File Manager onto the Mail Tool View pane.
- Open one or several composition windows that operate independently of the Mail Tool base window, so that you can compose and send messages whenever you want without needing to open the Mail Tool icon.
- Maintain a history of mail files you have opened in your current session so that you can locate messages with ease.
- Recover deleted messages in any order.
- Perform operations on multiple messages: print, delete, move, and select several messages to reply to at one time. When you choose multiple messages for reply, a Compose window is opened for each reply.

B

Keyboard Accelerators

The following key combinations are keyboard equivalents for mouseless operation. You do not need to use capital letters with the Shift and Control keys. For example, Control-b works the same as Control-B.

B.1 Erase Functions

Backspace: erases character to the left of the insert point.

Shift-Backspace: erases character to the right of the insert point.

Control-W: erases word to the left of the insert point.

Shift-Control-W: erases word to the right of the insert point.

Control-U: erases to the beginning of the line.

Shift-Control-U: erases to the end of the line.

B.2 Move Caret Functions

Control-B: moves the caret one character to the left.

Shift-Control-F: moves the caret one character to the left.

Control-F: moves the caret one character to the right.

Shift-Control-B: moves the caret one character to the right.

Control-,: moves the caret one word to the left.

Control-.: moves the caret to the end of the word.

Control-A: moves the caret to the start of line.

Control-E: moves the caret to the end of the line.

Control-P: moves the caret up one line, maintaining column position.

Control-N: moves the caret down one line, maintaining column position.

Control-Return: moves the caret to the end of text.

Shift-Control-Return: moves the caret to beginning of text.

B.3 Function Keys

Stop (L1): stops the current operation.

Again (L2): repeats the previous operation.

Props (L3): displays the property window for the application at the pointer location.

Undo (L4): undoes previous operation.

Front (L5): brings the window at the pointer location to the front of the screen. When the window is already at the front, moves it to the back of the screen.

Copy (L6) copies selection to the clipboard.

Open (L7): opens the icon at the pointer location or closes the window at the pointer location.

Paste (L8): copies clipboard selection to the insert point.

Find (L9): finds selection to the right of the caret.

Shift-Find: finds selection to the left of the caret.

Cut (L10) cuts selection and puts it on the clipboard.

Help (F1): displays a help window with context-sensitive help for the object at the pointer location.

B.4 Calculator Function Keys

Every function in the Calculator application has a keyboard accelerator associated with it. See the Calculator man page, included in Appendix C, for a listing of each Calculator function and its keyboard equivalent.

DeskSet Environment Application Man Pages

This appendix provides the system man page summaries for DeskSet applications. These are quick reference documents that you can view in a Command Tool or Shell Tool by typing `man <entry name>`. The man page entries included in this appendix are listed below, with each entry name in bold type:

- **binder**, an application used to modify the DeskSet bindings database
- **calctool**, a desktop calculator
- **clock**, an application that displays the time in an icon or window
- **cm**, the Calendar Manager, an appointment and resource scheduling tool
- **cmdtool**, an application to run a shell or other program in a text-based command window
- **filemgr**, a mouse-based graphical file management program
- **iconedit**, a tool to create and edit small images for use in icons, cursors and panel items
- **mailtool**, an application used for reading, storing, composing and sending electronic mail messages
- **perfmeter**, a tool to display system performance values in a meter or strip chart
- **printtool**, an application used to print files
- **rpc.cmsd**, the Calendar Manager service daemon
- **shelltool**, an application to run a shell or other program in an interactive terminal emulator window
- **snapshot**, a tool to capture and save some or all of a screen
- **tapetool**, a tool for reading files from tape and archiving files to tape
- **textedit**, an Xview window- and mouse-based text editor
- **xview**, a user-interface toolkit that supports interactive, graphics-based applications running under the X window system. This man page includes information about the `.Xdefaults` file used to store and retrieve OpenWindows resource settings.

NAME

binder – modify deskset bindings data base

SYNOPSIS

binder

AVAILABILITY

This command is available with the OpenWindows environment. For information about installing OpenWindows, refer to the *OpenWindows Installation and Start-Up Guide*.

DESCRIPTION

binder is an OpenWindows XView tool that allows the user to modify a data base. This data base describes bindings between types of files, and how they will be displayed and manipulated by the icon that the file will be displayed with, the color of the icon, the method to use for printing that file, and the program to be used for viewing that kind of file.

Files may be described in one of 2 ways; by a name pattern or by their magic number (as defined in the */etc/filetype* file).

The user has 2 data bases available to them. When *install_filemgr* is run on their system, a data base is installed in */etc/filetype*. With the **binder**, the user may also set up another data base in *\$HOME/.filetype* that will override the entries in the */etc/filetype* data base. By doing this, the user may customize their working environment without affecting others.

Applications that use the bindings data base in OpenWindows Version 2 are:

filemgr(1)
binder(1)
printtool(1)
mailtool(1)

FILES

/etc/magic
/etc/filetype
\$HOME/.filetype

BUGS

Changing your bindings will not automatically update all those tools that read the bindings data base. Each tool will have to be quit and restarted to make the new bindings effective.

install_filemgr must be run as root, and requires that *\$OPENWINHOME* be set for the root user. Most root users do not have that variable set.

NAME

calctool – a desktop calculator.

SYNOPSIS

calctool [-a *accuracy*] [-m] [-r] [-v]

AVAILABILITY

This command is available with the OpenWindows environment. For information about installing OpenWindows, refer to the *OpenWindows Installation and Start-Up Guide*.

DESCRIPTION

Calctool is a desktop calculator. It has been designed to be used with either the mouse or the keyboard. It is visually similar to a lot of hand-held calculators. There are financial, logical and scientific modes. Similar operations are color coded on color workstations. Each key is discussed in more detail below.

Caution: One of the most important things to remember about calctool is that calculations are performed from left to right, with no arithmetic precedence. If you need arithmetic precedence, then you should use parentheses.

Internal arithmetic is done with double precision floating point numbers. Accuracy can be adjusted from zero to nine numeric places in fixed notation, but numbers can be displayed in engineering and scientific notation as well. The calculator reverts to scientific notation when the number is larger than the display would allow in fixed notation. The base of operation can be changed between binary, octal, decimal and hexadecimal. Numbers are initially displayed in fixed notation to two numeric places, in the decimal base.

You can use the *Copy(L6)* and the *Paste(L8)* function keys in conjunction with the numeric display to store or retrieve characters from the text shelf. You can also remove the last digit entered, and the whole display can be cleared.

There are ten memory registers. Numbers can be stored or retrieved in these locations, and arithmetic can be performed upon register contents.

The display window contains the current numerical value plus the current base and trigonometric type. There are also indicators that show if the hyperbolic and inverse function switches are set and which numerical mode is currently in operation. If an operation needing more than one numerical input is partially complete, the operation is also displayed in this window as a reminder.

Context sensitive help is also available. Position the cursor over the item you need help with, and press the F1 or Help key. A pop-up will be displayed giving detailed information on this facility.

On startup, *calctool* will look for a *.calctoolrc* file in the user's home directory. This file allows the user to define their own constant and function definitions, plus set up the initial values for the ten memory registers. It then looks for a *.calctoolrc* file in the current directory, and if present, uses the contents of this file in place of any previously defined values.

With the *.calctoolrc* file, there are currently four valid record types. These are comments, constant and function definitions, and initial memory register values.

Lines starting with a '#' are treated as comments and ignored.

Lines starting with 'c' or 'C' in the first column are definitions for constants. The character is followed by a digit from 0 through 9 then a space. This is followed by a number in fixed or scientific notation. Following this is an optional comment, which, if found, will be used in the pop-up menu for the constants. If the comment is present, then there must be at least one space between this and the preceding number.

Lines starting with 'f' or 'F' in the first column are definitions for functions. The character is followed by a digit from 0 through 9 and then a space. This is followed by a function definition. Following this is an optional comment, which, if found, will be used in the pop-up menu for the functions. If the comment is present, then there must be at least one space between this and the preceding function definition.

Lines starting with 'r' or 'R' in the first column are definitions for the initial contents of the memory registers. The character is followed by a digit from 0 through 9 and then a space. This is followed by a number in fixed or scientific notation. The rest of the line is ignored.

All other lines are ignored. There should be no embedded spaces in the function definitions. Whenever a backslash is found, this and the following character signify a control character, for example `\g` would be ASCII 7.

OPTIONS

- `-a accuracy` Initial number of digits displayed after the numeric point. This value must be from 0 through 9. The default is two numeric places.
- `-m` Always display in monochrome, even on a color screen.
- `-r` Start up a "right-handed" version of the `calctool` program.
- `-v` Print the version number of this release of the `calctool` program.

CALCULATOR BUTTONS

This section describes the calculator keys present in the main `calctool` window. Apart from this basic mode, `calctool` has three other modes, and the keys associated with each of these modes are described in separate sections below.

Keyboard equivalents appear in the square brackets. Note that `^` followed by a letter indicates that the Control key and this key should be pressed together.

Numerical Keys [0-9 a-f . = <Return>].

Enter a digit (decimal digits 0-9 or hexadecimal digits A-F) into the display. The `'.'` character acts as the numeric point, and `'='` (or Return) is used to complete numerical entry.

Up to forty digits may be entered, but internal accuracy will be lost for large numbers.

Arithmetical Operations [+ - x * /].

Perform an arithmetical operation using the previous entry and the next entry as operands. Addition, subtraction, multiplication and division are denoted by the characters `'+'`, `'-'`, `'x'` and `'/'` respectively (`'*'` is also synonymous with multiplication).

Number Manipulation Operators.

- | | | |
|-------------|---------------------|---|
| Int | [<code>^i</code>] | Return the integer portion of the current entry. |
| Frac | [<code>^f</code>] | Return the fractional portion of the current entry. |
| Abs | [<code>^u</code>] | Return the absolute value of the current entry. |
| Chs | [<code>C</code>] | Change the arithmetic sign of the current entry. |
| 1/x | [<code>r</code>] | Return the value of 1 divided by the current entry. |
| x^2 | [<code>@</code>] | Return the square of the current entry. |
| % | [<code>%</code>] | Perform a percentage calculation using the last entry and the next entry. |
| Sqrt | [<code>s</code>] | Perform a square root operation on the current entry. |
| Asc | [<code>^a</code>] | A separate window is displayed that allows you to enter any character. The ASCII value of this character is then displayed in the current base. |

Menu Operations.

Each of these operations has a pop-up menu associated with it. This menu can be displayed using MENU and then you can make a selection. You can select the default item from the menu using SELECT.

It is also possible to use just the keyboard to achieve the same results. The first keyboard value selects the menu operation; the second keyboard character selects the new value for this operation. Unlike the menu facility available with the mouse, there is no visual feedback on what choices are available to you, so the user has to know what item they wish to select.

- | | | |
|-------------|--------------------|--|
| Base | [<code>B</code>] | Change the base that calculations are displayed in. The available choices are binary [<code>b</code>], octal [<code>o</code>], decimal [<code>d</code>] and hexadecimal [<code>h</code>]. Digits that are inappropriate for a particular base selection are greyed out in the main <code>calctool</code> window. |
|-------------|--------------------|--|

- Disp [D]** Change the numerical display mode. The choices are engineering [e], fixed point [f], and scientific [s] notation.
- Mode [M]** Change the calculator mode. By default, *calctool* is in basic mode, and just the keys on the main *calctool* window are visible. There are also three other modes; financial [f], logical [l] and scientific [s]. Selection of one of these modes will display an extra window with more keys. These special operations are described in more detail in the sections below.
- Acc [A]** Set the display accuracy. Between 0 and 9 [0-9] significant digits can be displayed.
- Con [#]** Retrieve and display a constant value. There are ten constant values [0-9], and each one has a default value which can be overridden by entries in the users *.calctoolrc* file. The ten default values are:
- | | | |
|---|-----------|--------------------------------|
| 0 | 0.621 | kms per hour / miles per hour. |
| 1 | 1.41421 | square root of 2. |
| 2 | 2.71828 | e. |
| 3 | 3.14159 | pi. |
| 4 | 2.54 | cms / inch. |
| 5 | 57.29578 | degrees in a radian. |
| 6 | 1048576.0 | 2 to the power of 20. |
| 7 | 0.0353 | gms / oz. |
| 8 | 0.948 | kilojoules / British thermals. |
| 9 | 0.0610 | cubic cms / cubic inches. |
- Fun [F]** Retrieve and execute a function expression. There are ten function definitions [0-9]. These are set up with entries in the user's *.calctoolrc* file.
- Rcl [R]** Retrieve memory register value. There are ten memory registers [0-9].
- Sto [S]** Store value in memory register. There are ten memory registers [0-9]. The register number may be preceded by an arithmetic operation (addition, subtraction, multiplication or division), in which case the specified operation is carried out between the displayed entry and the value currently in the selected memory register, and the result is placed in the memory register.
- Exch [X]** Exchange the current display with the contents of a memory register. There are ten memory registers [0-9].

Other Operations.

- Clr [Delete]** Clear the calculator display.
- Bsp [Back Space]** Remove the rightmost character of the current entry, and recalculate the displayed value. Note that internal accuracy is lost with this operation.
- (and) [(and)]** Parentheses. Allow precedence with arithmetic calculations. Note that parentheses can be nested to any level, and *calctool* provides a visual feedback of what is being typed in, in the calculator display. The calculation doesn't take place until the last parenthesis is matched, then the display is updated with the new result.
- Exp [E]** This is used to allow numbers to be entered in scientific notation. The mantissa should be initially entered, then the Exp key selected. The exponent is then entered. If no numerical input had occurred when the Exp key was selected, then a mantissa of 1.0 is assumed.
- Keys [k]** Toggle the labels on the *calctool* buttons between the mouse and keyboard equivalents.

Mem [m] Display the window with the ten memory register values. These values are displayed in the current base to the current degree of accuracy using the current numerical display notation.

Quit [q or Q] Exit without user verification.

FINANCIAL MODE

An example of how to use each of these financial calculations is available via the context sensitive help facility.

Ctrm [^t] **Compounding term.** Computes the number of compounding periods it will take an investment of present value *pv* to grow to a future value of *fv*, earning a fixed interest rate *int* per compounding period.

Memory register usage:

Register 0	<i>int</i>	(periodic interest rate).
Register 1	<i>fv</i>	(future value).
Register 2	<i>pv</i>	(present value).

Ddb [^d] **Double-declining depreciation.** Computes the depreciation allowance on an asset for a specified period of time, using the double-declining balance method.

Memory register usage:

Register 0	<i>cost</i>	(amount paid for asset).
Register 1	<i>salvage</i>	(value of asset at end of life).
Register 2	<i>life</i>	(useful life of the asset).
Register 3	<i>period</i>	(time period for depreciation allowance).

Fv [v] **Future value.** This calculation determines the future value of an investment. It computes the future value based on a series of equal payments, each of amount *pmt*, earning periodic interest rate *int*, over the number of payment periods in *term*.

Memory register usage:

Register 0	<i>pmt</i>	(periodic payment).
Register 1	<i>int</i>	(periodic interest rate).
Register 2	<i>n</i>	(number of periods).

Pmt [P] **Periodic payment.** Computes the amount of the periodic payment of a loan. Most installment loans are computed like ordinary annuities, in that payments are made at the end of each payment period.

Memory register usage:

Register 0	<i>prin</i>	(principal).
Register 1	<i>int</i>	(periodic interest rate).
Register 2	<i>n</i>	(term).

Pv [p] **Present value.** Determines the present value of an investment. It computes the present value based on a series of equal payments, each of amount *pmt*, discounted at periodic interest rate *int*, over the number of periods in *term*.

Memory register usage:

Register 0	<i>pmt</i>	(periodic payment).
Register 1	<i>int</i>	(periodic interest rate).
Register 2	<i>n</i>	(term).

Rate	[^r]	Periodic interest rate. Returns the periodic interest necessary for a present value of <i>pv</i> to grow to a future value of <i>fv</i> over the number of compounding periods in <i>term</i> . Memory register usage: Register 0 <i>fv</i> (future value). Register 1 <i>pv</i> (present value). Register 2 <i>n</i> (term).
Sln	[^s]	Straight-line depreciation. Computes the straight-line depreciation of an asset for one period. The straight-line method of depreciation divides the depreciable cost (cost - salvage) evenly over the useful life of an asset. The useful life is the number of periods (typically years) over which an asset is depreciated. Memory register usage: Register 0 <i>cost</i> (cost of the asset). Register 1 <i>salvage</i> (salvage value of the asset). Register 2 <i>life</i> (useful life of the asset).
Syd	[^y]	Sum-of-the years-digits depreciation. The sum-of-the-years'-digits method of depreciation accelerates the rate of depreciation, so that more depreciation expense occurs in earlier periods than in later ones. The depreciable cost is the actual cost minus salvage value. The useful life is the number of periods (typically years) over which an asset is depreciated. Memory register usage: Register 0 <i>cost</i> (cost of the asset). Register 1 <i>salvage</i> (salvage value of the asset). Register 2 <i>life</i> (useful life of the asset). Register 3 <i>period</i> (period for which depreciation is computed).
Term	[T]	Payment period. Returns the number of payment periods in the term of an ordinary annuity necessary to accumulate a future value of <i>fv</i> , earning a periodic interest rate of <i>int</i> . Each payment is equal to amount <i>pmt</i> . Memory register usage: Register 0 <i>pmt</i> (periodic payment). Register 1 <i>fv</i> (future value). Register 2 <i>int</i> (periodic interest rate).

LOGICAL MODE

<	[<]	Shift the current entry to the left. The shift can be between 1 and 15 places [1-9, a-f]. This calculator key has a pop-up menu associated with it.
>	[>]	Shift the current entry to the right. The shift can be between 1 and 15 places [1-9, a-f]. This calculator key has a pop-up menu associated with it.
&16	[]]	Truncate the current entry to a 16 bit unsigned integer.
&32	[[]	Truncate the current entry to a 32 bit unsigned integer.
Or	[]	Perform a logical OR operation on the current entry and the next entry, treating both numbers as unsigned long integers.
And	[&]	Perform a logical AND operation on the current entry and the next entry, treating both numbers as unsigned long integers.
Not	[~]	Perform a logical NOT operation on the current entry.
Xor	[^]	Perform a logical XOR operation on the current entry and the next entry, treating both numbers as unsigned long integers.

Xnor [n] Perform a logical XNOR operation on the current entry and the next entry, treating both numbers as unsigned long integers.

SCIENTIFIC MODE

Trig [T] Set the current trigonometrical base. This can be in degrees [d], gradients [g] or radians [r]. This key also has a pop-up menu associated with it.

Hyp [h] Toggle the hyperbolic function indicator. This switch affects the type of sine, cosine and tangent trigonometric functions performed.

Inv [i] Toggle the inverse function indicator. This switch affects the type of sine, cosine and tangent trigonometric functions performed.

e^x [{] Returns e raised to the power of the current entry.

10^x [}] Returns 10 raised to the power of the current entry.

y^x [y] Take the last entry and raise it to the power of the next entry.

x! [!] Return the factorial of the current entry.

Cos [^c] Return the trigonometric cosine, arc cosine, hyperbolic cosine or inverse hyperbolic cosine of the current display, depending upon the current settings of the hyperbolic and inverse function switches. The result is displayed in the current trigonometric units (degrees, radians or gradients).

Sin [^s] Return the trigonometric sine, arc sine, hyperbolic sine or inverse hyperbolic sine of the current display, depending upon the current settings of the hyperbolic and inverse function switches. The result is displayed in the current trigonometric units (degrees, radians or gradients).

Tan [^t] Return the trigonometric tangent, arc tangent, hyperbolic tangent or inverse hyperbolic tangent of the current display, depending upon the current settings of the hyperbolic and inverse function switches. The result is displayed in the current trigonometric units (degrees, radians or gradients).

Ln [N] Return the natural logarithm of the current entry.

Log [G] Return the base 10 logarithm of the current entry.

Rand [?] Return a random number between 0.0 and 1.0.

FILES

`~/calctoolrc`

User's personal calctool startup file.

SEE ALSO

DeskSet Environment Reference Guide.

NAME

clock - display the time in an icon or window

SYNOPSIS

clock

AVAILABILITY

This command is available with the OpenWindows environment. For information about installing OpenWindows, refer to the *OpenWindows Installation and Start-Up Guide*.

DESCRIPTION

clock is an OpenWindows XView utility that displays the current time in a window or icon. When the window is open, clock can display the time in either analog or digital format. The clock window is scalable in either format.

USAGE

When the clock window is open, it has a floating menu from which you can bring up a property window. From this property sheet, you can modify the display of the tool by selecting either the Analog or Digital choice box.

Seconds:

On the analog version, this selection starts a second hand on the face of the clock. On the digital version, it adds two digits to the digital readout.

Date:

Turns on a date display for both analog and digital versions of clock.

BUGS

If you reset the system time, clock will not reflect the new time until you change its window state from open to icon, or vice versa. To reset the system time, see date (1V).

The date display does not go well with the round clock face.

Occasionally, when clock is uncovered, the face will be visually corrupted. Use the Refresh button from the frame menu to repair.

NAME

cm – calendar manager, appointment and resource scheduling tool

SYNOPSIS

cm [*generic-tool-arguments*]

AVAILABILITY

The man page you are currently viewing refers to the cm that is available with OpenWindows. All OpenWindows standard tools use the OPEN LOOK Graphical User Interface (GUI). For more information about the OPEN LOOK UI, refer to the *OpenWindows User's Guide*. For information about installing OpenWindows, refer to the *OpenWindows Installation and Start-Up Guide*.

DESCRIPTION

cm is an appointment and resource scheduling tool that allows you to do the following:

- Display day, week, month, year views
- Schedule single or repeating events
- Browse and edit calendars of other users
- Set beeping, flashing, or pop-up reminders
- Integrate with mail
- Restrict access to your own calendar
- Print high-quality hardcopy

A full appointment editor is available for inserting and editing appointments. Most settings on the appointment editor can be preloaded through a Properties window available from the main panel.

OPTIONS

generic-tool-arguments

cm accepts the generic tool arguments described in `xview(1)`.

USAGE

cm operates via a set of pulldown menus from button stacks in a control panel. The menu commands are described below.

The Control Area**View Menu**

- Day** Displays the appointments for a day. The default is today.
- Week** Displays the appointments for a week. A graphed display is also displayed with the times for the appointments shaded. The default is the current week.
- Month** Displays the appointments for an entire month. The default is the current month.
- Year** Displays a full year.

Edit**Appointment**

Schedule appointments by either selecting the day and choosing Appointment from the Edit menu or by double-clicking on day (in the month or week view) or on an hour (in the day view). Inserts and deletes appointments.

Date: Automatically set by this tool, but may be changed.

What: Filled in with information about the appointment. This information will be displayed on the various views.

Scrolling List

Automatically set with the current appointments for that day. It will be updated as appointments are added and deleted.

Start: and End:

Sets the time of the appointment. A choice of times is found on the pull-down menus. The choices are determined by the Day Bounds settings from the Properties window.

Repeat:

Indicates whether the appointment is a repeating event of a daily, weekly, biweekly, monthly or yearly interval. The number of times the appointment repeats is controlled by the Repeat Abbreviated Choice below the toggles.

Reminder:

Determines what action will be taken in advance of the appointment.

- | | |
|--------------|--|
| Beep | Produces an audible sound. |
| Flash | Inverts the frame of the tool or the icon if the tool is closed. |
| Open | Pops up a reminder window with the text of the appointment showing. |
| Mail | Composes a message with the text of the appointment and sends it to recipients in the Mail To field. |

Advance

Specifies the amount of time preceding the event the Reminder will be activated.

Add Adds the appointment to the calendar.

Delete Deletes the appointment selected in the scrolling list from the calendar.

Change Changes the appointment selected in the scrolling list to the edited values from the appointment editor.

Defaults:

Clears the appointment editor of context and sets default values from the Properties window.

Properties Sets default values for this tool. These values are used for setting default values in the Appointment Editor, setting display characteristics of the views, and granting access to the calendar.

Editor Defaults

Sets default reminder values and advance times for appointments.

Day Boundaries

Sets default begin and end times for the day that are used in drawing the chart on the week view and the grid on the day view.

Browser Calendars

Sets a default list of remote calendars to be automatically loaded at startup time. The entries have the format `name@host`. These entries will be available using the Browse menu.

Access List and Permissions

Sets default access to the calendar. Access can be Browse (Read), Insert (Add), Delete (Remove). The keyword `world`, opens up the calendar to everyone. The entries have the format `name@host`. At this time, traditional UNIX groups are not supported.

Apply Adds any changes made.

Reset Reestablishes the values before you started editing.

Defaults Reestablished the tool default values.

Browse Sets the tool's context to a named calendar. You can display and edit appointments for other users. Entries have the format **name@host** and are entered by typing into the **Name** text field and pressing **Add**. The entry will be added to the scrolling list and can then be selected for browsing.

Print Displays the choices for printing hardcopy output.

Day, Week, Month, or Year

CM Printer Options

Postscript output can be sent to a file or to a printer named in the **Printer** text field. The default printer is **lw**. Output width, height, positions from the left and bottom, and number of copies can be set in their respective text fields.

Previous

Changes the display to the previous logical unit of calendar data.

Today Changes the display to today's logical unit of calendar data.

Next Changes the display to the following logical unit of calendar data.

FILES

/usr/spool/calendar/callog.username

\$HOME/.cm.rc

/usr/etc/rpc.cmsd or **\$OPENWINHOME/rpc.cmsd**

SEE ALSO

rpc.cmsd(1)

NAME

cmdtool – run a shell (or other program) in an OpenWindows enhanced terminal window

SYNOPSIS

cmdtool [**-C**] [**-M bytes**] [**-P count**] [**-B boldstyle**] [**-I command**] [*generic-tool-arguments*] [*program* [*program-arguments*]]

AVAILABILITY

This command is available with the OpenWindows user environment. For information about installing OpenWindows, refer to the *OpenWindows Installation and Start-Up Guide*.

DESCRIPTION

cmdtool is the standard *OpenWindows* support facility for shells and other programs. When invoked, **cmdtool** runs a program (usually a shell) in a text-based command window. Characters typed on the keyboard are inserted at the caret. If the program is a shell, that shell accepts and runs commands in the usual manner. **cmdtool** also supports programs that perform cursor motions directly, such as *vi*(1).

The text of the current command line can be edited using normal *textedit*(1) functions. The command window displays a log of the session, which can be scrolled through using the scrollbar (unless the escape command mode is in effect). This log can be edited, and saved by choosing the 'Store as New File' item in the text facility's pop-up menu.

OPTIONS

- C** Console **cmdtool**. Redirect system console output to this shelltool. Display console messages in this **cmdtool**, which might otherwise appear in unexpected places on the workstation screen. Since a **cmdtool** window can be scrolled, console error messages can be recorded for later examination.
 - M bytes** Set the log to wrap-around after the indicated number of *bytes*.
 - P count** Checkpoint the log after every set of *count* editing operations.
 - B boldstyle** Set the style for displaying bold text to *boldstyle*. *boldstyle* can be a string specifying one of the choices for the *term.boldstyle* default, see Defaults Options, below, or it may be a numerical value for one of those choices, from 0 to 8, corresponding to the placement of the choice in the list.
 - I command** Pass *command* to the shell. SPACE characters within the command must be escaped.
- generic-tool-arguments*
cmdtool accepts the generic tool arguments listed in *xview*(1).
- program* [*program-arguments*]
 If a *program* argument is present, **cmdtool** runs it and passes any remaining arguments to that *program*. If no *program* is given, **cmdtool** runs the program indicated by the SHELL environment variable, or */bin/sh* by default.

USAGE**.Xdefaults File Options**

You can specify a number of defaults using the options in the *.Xdefaults* file that effect the behavior of **cmdtool**. The ones of interest are those that begin with *text*, *term*, or *keyboard*. See *xview*(1) for more detailed information.

cmdtool Windows

The window created by **cmdtool** is based on the text facility that is described in the *textedit* man page. The user is given a prompt at which to type commands and pop-up menus from which to select command options.

cmdtool windows support cursor motions, using an */etc/termcap* entry called *sun-cmd*. Command windows automatically set the TERM environment variable to *sun-cmd*. So, if you *rlogin*(1C) to a machine that does not have an entry for *sun-cmd* in its */etc/termcap* file, the error message 'Type *sun-cmd* unknown' results. To rectify this, type the command 'set TERM=sun'. Programs written using the

`curses(3X)` or `curses(3V)` library packages will work in a command window, but programs hard-coded for sun-type terminals may not. When supporting a program that performs cursor motions, the command window automatically takes on the characteristics of a tty window (as with `shelltool(1)`). When that program terminates or sleeps, the full command window functionality is restored.

`cmdtool` supports programs that use `CBREAK` and `NO ECHO` terminal modes. This support is normally invisible to the user. However, programs that use `RAW` mode, such as `rlogin(1C)` and `script(1)`, inhibit command-line editing with the mouse. In this case, however, tty-style `ERASE`, `word-kill` and `line-kill` characters can still be used to edit the current command line.

The `cmdtool` Menu

The `cmdtool` window menu is called the **Term Pane** menu and contains the following options and their submenus:

- History** Creates a list of commands used during the `cmdtool` session.
- Mode**
 - Editable** You can edit the contents of the window.
 - Read Only** You can only read from the window.
- Store Log as new file** Create a new file that contains the contents of the log.
- Clear log** Clears all entries from the log.
- Edit** Provides a set of editing functions for this window.
 - Again** Repeats the last action.
 - Undo**
 - Undo Last Edit**
 - Undoes the last edit made in `cmdtool`.
 - Undo All Edits**
 - Undoes all edits made during this session of `cmdtool`.
 - Copy** Makes a copy of the selected text and places it on the clipboard.
 - Paste** Pastes a copy of the text stored on the clipboard at the cursor location.
 - Cut** Deletes the selected text and places it on the clipboard.
- Find** Provides a set of find and replace functions.
 - Find and Replace**
 - Brings up a pop-up menu containing text fields and command buttons that allow you to search forward and backward through the file being edited for specific text strings. Allows you to specify options for the replacement of text.
 - Find Selection**
 - Forward** Searches forward to find a selected text string.
 - Backward** Searches backward to find a selected text string.
 - Find Marked Text**
 - Brings up a pop-up menu that allows you to find text that is included between specified bracket pairs. Also allows you to insert or remove bracket pairs around selected text.
 - Replace |>field<| >**
 - Allows you to replace selected text forward and backward throughout the file.
- Extras** A user-definable pull-right menu controlled by the `/usr/lib/.text_extras_menu` file. This can be overridden in two ways:
 - 1) Change the value of the `.Xdefaults` parameter `text.extrasMenuFilename` to the correct file path.
 - 2) Set the environment variable `EXTRASMENU` to the file desired.

Note that option 1 overrides option 2 if both are used. For more information see the *DeskSet Environment Reference Guide*.
- File Editor**
 - Enable** Allows you to edit files from within `cmdtool`.
 - Disable** Turns off the ability to edit files from within `cmdtool`.

Scrolling**Enables Scrolling**

Enables scrolling within `cmdtool`.

Disable Scrolling

Turns off the ability to scroll within `cmdtool`. Once scrolling in `cmdtool` is disabled, its functionality is identical to `shelltool` and a more restricted menu appears. Selecting the **Enable Scrolling** option from the restricted menu restores the full menu and functionality of `cmdtool`.

User Defined Keyboard Remapping

The file `~/textswrc` specifies filter programs that are assigned to (available) function keys. These filters are applied to the contents of the primary selection. Their output is entered at the caret.

Accelerators

Text facility accelerators that are especially useful in command windows are described here. See `textedit(1)` for more information.

CTRL-RETURN Position the caret at the bottom, and scroll it into view as determined by `Text.LowerContext`.

CAPS-lock

Toggle between all-upper-case keyboard input, and mixed-case.

FILES

`/tmp/tty.txt.pid` log file
`~/textswrc`
`~/ttyswrc`
`usr/lib/.text_extras_menu`
`$HOME/.TextExtraMenu`
`/etc/termcap`
`/usr/bin/sh`

SEE ALSO

`rlogin(1C)`, `script(1)`, `shelltool(1)`, `textedit(1)`, `vi(1)`, `xview(1)`, `curses(3V)`, `curses(3X)`

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BUGS

Typing ahead while `cmdtool` changes between its scrollable and cursor motion modes will sometimes freeze `cmdtool`.

Full terminal emulation is not complete. Some manifestations of this deficiency are:

- File completion in the C shell does not work.
- Enhanced display of text is not supported.

NAME

filemgr – OpenWindows mouse-based file manager

SYNOPSIS

filemgr [**-d** *directory*] [**-i** *secs*] [**-a**] [**-?**]

AVAILABILITY

Available with the OpenWindows environment. For information about installing OpenWindows, refer to the *OpenWindows Installation and Start-Up Guide*.

DESCRIPTION

filemgr is a graphical file management program. It allows you to navigate through and manipulate files. You can find, copy, move, link, open, and print existing or new files. You can find files, change file properties and view multiple directories at the same time.

INSTALLATION

filemgr should not be used until the program `install_filemgr` has been run (as root).

OPTIONS

filemgr accepts all the generic tool arguments described in `xview(1)`. In addition, it can accept these options:

-d *directory*

This will start the filemgr in the given *directory*.

-i *secs* This will set the timer to check on folder and/or file modification times every *secs* seconds.

-a This will force the filemgr to check both folder and file modification times. By default, filemgr only checks the folder modification times. Be careful, as this option will severely affect performance.

-? This will display a partial list of command line options that can be passed to filemgr. For additional generic options that can be passed to filemgr, type `man shelltool -?`.

USAGE

filemgr operates via a set of pulldown menus from button stacks in a control panel. Most menu commands operate on the currently selected files. To select a file, click **SELECT** on its icon. To select additional files, click **ADJUST** on additional files. The menu commands are described below.

File >

Open >

File Opening a document puts the document into the document window. Opening a folder puts that folder into the folder window. Opening an application starts the application.

With 'Goto' Arguments

Treats the text typed in the Goto line as a command line argument (for applications only).

In Document Editor

Opens documents and applications in the default document editor. See *Tool Properties* (below).

Print File Prints files using the default print script. See *Tool Properties* below.

Create Folder

Creates an empty subfolder in the current folder.

Create Document

Creates an empty document in the current folder.

Remote Transfer...

Displays a command window which allows you to copy files to and from remote machines. You can make a reference to files on a remote machine by using the format *machine_name:file_name*. See *rcp(1)*.

(Your Commands)

You can add your own entries to this menu by adding items to the file *.fvcmd* in your home directory. Each line in this file corresponds to a menu item you can execute. Use the abbreviation *%FILE* to stand for the name of the selected file.

View >**Tree (or Path)**

Toggles between a hierarchical display of folders and a more compact view showing only the path of the current folder being viewed.

Show/Hide Subfolders

Shows or hides the subfolders of the selected folder (tree view only).

Show All Subfolders

Shows the entire subfolder tree that branches from the selected folder. Note that this can be quite time consuming (tree view only).

Begin Tree Here

Makes the selected folder the root of the tree view (tree view only).

Add Tree's Parent

Adds the root's parent to the display. This moves the view up one level (tree view only).

Folder Display >

Icon Displays files with 32x32 icons.

List Displays files with 16x16 generic icons. Also display any list options chosen (see *Tool Properties*, below).

Sort By Determines the category by which the files are to be sorted in the display: name, modification date (youngest first), size (largest first), and type (folders, documents, applications).

Edit >

Select All Selects all files in the current folder.

Link Places selected files on the clipboard for a pending link operation.

Copy Places selected files on the clipboard for a pending copy operation.

Paste Pastes files from clipboard into the current folder. Pasted files are linked, copied, or moved, depending on how they were first stored in the clipboard.

Cut >**Cut to Wastebasket**

Places selected files in the wastebasket for a pending delete operation.

Move to Clipboard

Places selected files in the clipboard for a pending move operation.

Really Delete

Removes files from folder (see *Tool Properties*, below).

Show Clipboard

Displays contents of system clipboard.

Props >

File Properties...

This property sheet allows you to see and change file attributes. When several files are chosen at once, you must replace the indeterminate setting from owner, group, and permissions to apply them to the selected files.

Tool Properties...

This property sheet allows you to customize filemgr.

Home > A menu that always contains your home folder in the first position. Thereafter, it stores the last nine folders you have visited. Selecting a folder causes that folder to be opened.

Goto >

Entry This is grayed out unless there is an entry on the Goto line (located at the right of the Goto button). To change directories, type the directory name on the Goto line and then press Goto.

Find Selecting this option brings up a command window that allows you to search for files within the specified directories.

SEE ALSO

egrep(1), find(1)

FILES

/etc/filetype

This file contains a database of file types and actions to be performed when files of each type are opened.

\$HOME/.fvcmd

This file contains your own commands, which can be referenced by the "Your Commands" menu.

\$HOME/.filetype

User's personal copy of the file types database. It follows the same format as /etc/filetype.

NAME

iconedit – create and edit images for OpenWindows icons, cursors and panel items

SYNOPSIS

iconedit [*filename*] [*XView command-line arguments*]

AVAILABILITY

This command is available with the OpenWindows user environment. For information about installing OpenWindows, refer to the *OpenWindows Installation and Start-Up Guide* . For information about the XView command-line arguments see the *XView Programming Manual* .

OPTIONS

filename Contains the image.

XView command-line arguments

iconedit accepts the XView command-line arguments listed in xvew(1).

DESCRIPTION

iconedit is part of the OpenWindows DeskSet. proIt requires the pixrect library for its operation. With iconedit you can create and edit small images for use in icons, cursors, panel items, etc. iconedit has several submenus. Two of the submenus are visible at startup, the Main window and the Draw pop-up menu.

Main Window

Contains the drawing area (or canvas) together with the command panel and the message area underneath the canvas. From the control panel, you have the following pull-down menus.

File

Directory Specify the directory where the image is located.

File Specify the name of the file with the image. If you are not sure of the file name, use a regular expression for the File field or leave it blank, and it switches to Browse when you press Load. If you already have an image in the canvas, it asks for confirmation before loading. You can also load a file by dragging the file icon from File Manager and dropping it into iconedit.

Load Operation:

Choose one of the operations using the abbreviated menu button.

Source (Overwrite Canvas)

Loads a file overwriting any existing information on the canvas.

Or (Union)

Loads a file transparently over another image, allowing any existing information on the canvas to show through the new file.

Xor (Exclusive Or)

Loads a file transparently over another image, turning bits that are on in both images off and leaving the other bits unchanged.

And (Intersection)

Loads a file transparently over another image, retaining only the bits that are on in both images and turning all other bits off.

Load This button loads in the file named in the Directory and File fields. Choose the raster operation to load it with.

Save Saves your current image in the file specified in the Directory and File fields. If the file exists, iconedit asks for confirmation before overwriting the file.

Browse Searches the directory specified in the Directory: field for image files with names matching the regular expression in the File field. If the File field is empty, it

assumes the regular expression * (search all files). If images are found, they are displayed in a pop-up, scrollable window for browsing. If no images are found, iconedit will report this in the menu area. From the browse window you can load an image by selecting it with the left mouse button. The Load operation will take into account the current load operation specified in the pop-up.

View

- Grid** Turns a grid on or off in the display area. One grid square is a 4x4 area of pixels.
- Size** Changes the size of the canvas. There are four sizes: 64x64 (icon size); 48x48; 32x32; and 16x16 (cursor size). When you switch to a smaller size, the rest of the canvas is hidden but not lost. Editing operations, however, will only affect the visible portion of the canvas. Saving will save only the visible portion of the image.
- Preview** Opens the preview window for previewing a life-size version of the image being edited.

Gray Shades

Ten varying gray shades are available for filling the background. Click the left mouse button on the desired shade to load it.

- Fill** Select one of the four raster operations available from the abbreviated menu button. The source for the raster operation is the preview image and the destination is the preview background.

Source (Overwrite Canvas)

Overwrites any existing information on the canvas.

Or (Union)

Any existing information on the canvas shows through.

Xor (Exclusive Or)

Bits in both images are turned off and any other bits are unchanged.

And (Intersection)

Only the bits that are on in both images are left on. All other bits are turned off.

- Edit** This menu is attached to the canvas.

- Undo** Undoes the last operation. Restores the canvas to the state it was in before the last Edit operation. A second Undo undoes the previous Undo.

Draw Window

Displays the options available for drawing. To draw in black, use the left mouse button; to draw in white (erase), use the middle mouse button. As you draw, an enlarged version of the image appears in the canvas while a life size version of the image appears in the control panel as well as in the preview window.

- Mode** Choose one of the following modes. The gray shade selected in the Fill pop-up and the operation selected from the Operation pop-up will be used.

- Dot** Paints a single dot at a time.

- Line** Draws a line. Point to the first endpoint and press and hold the left (or middle) button. Drag to another endpoint and release the button to draw the line.
- Rectangle** Draws a rectangle. Press the mouse button (left or middle) at one corner of the desired rectangle. Drag to the opposite corner and release. For different rectangle shades, select the desired shade from the Fill menu.
- Circle** Draws a circle. Press the mouse button at the center and drag to the edge and release the button. For different shades, select the desired shade from the Fill menu.
- Oval** Draws an oval. Press the mouse button at the center of the oval and drag to the edge of the enclosing rectangle. For different shades, select the desired shade from the Fill menu.
- Region** Select the desired rectangular region by pressing the left (or middle) mouse button at one corner, drag it to the opposite corner, and release. A boundary box shows you the selection. After specifying the region, choose the move operation desired from the Draw window.
- Text** Writes text on the image. Pops up the Text window that has a field for typing the string to be added to the icon. Once you press either the left or middle mouse button, a box appears. Position the box where the text is desired and release the mouse button. It also has a menu of available fonts and their sizes. To switch fonts, select from the menus provided. To change the set of available fonts, edit the file .iconedit. A default .iconedit file can be found in \$OPENWINHOME/bin/xview. You may copy this default file into your home directory and edit it. The format is explained in the default file.

Operation:

Source (Overwrite Canvas)

Overwrites any existing information on the canvas.

Or (Union)

Any existing information on the canvas shows through.

Xor (Exclusive Or)

Bits in both images are turned off and any other bits are unchanged.

And (Intersection)

Only the bits that are on in both images are left on. All other bits are turned off.

Move

Shows eight arrows that indicate the ways of moving your image. If you have selected region from the draw menu, only the specified region is affected by the move operation. If region is not selected, the entire image is moved.

Invert	Invert all pixels on the canvas. Toggles from Off to On or vice versa.
Clear	Clears the canvas.

SEE ALSO

Open Windows User's Guide.
The XView Reference Manual.

NAME

mailtool - OpenWindows interface for the mail program

SYNOPSIS

mailtool [*-Mx*] [*-Mi interval*] [*generic-tool-arguments*]

AVAILABILITY

This command is available with the OpenWindows environment. For information about installing OpenWindows, refer to the *OpenWindows Installation and Start-Up Guide*.

DESCRIPTION

mailtool is the standard OpenWindows interface to mail(1). It provides a menu-driven facility for reading, storing, composing, and sending mail messages. Scrollable windows allow easy access to mailbox and mail folders.

The full editing capabilities of textedit(1) are available for modifying and composing mail messages as well as text fields within command panels.

OPTIONS

-Mx Expert mode. Do not ask for confirmation after potentially damaging mail commands. This has the same effect as setting the expert variable.

-Mi interval Check for new mail every *interval* seconds. This has the same effect as specifying a value for the interval variable.

generic tool arguments

mailtool accepts the generic tool arguments described in xview(1).

USAGE

mailtool operates through the use of a set of command panel buttons, message windows, menus, and other components that conform to the OPEN LOOK Graphical User Interface Functional Specification. Mail messages are edited using the menus and commands of the textedit program. For more information about the general usage of OPEN LOOK software applications, see the *OpenWindows User's Guide*. For more information about textedit conventions, see the textedit(1) man page.

Command Panel Buttons

The mailtool command panel is located near the top of the main window, under the window header. Select a command panel button to reveal the menu for that button.

File**Open**

InTray Used to read mail from the user's system mail file into mailtool.

Mail File Opens the mail file specified in the Mail File text field in the command panel.

Move into Mail File

Moves all selected messages from the current mail file to the file named in the Mail File text field in the command panel. If the file exists, the messages are appended.

Copy into Mail File

Copies all selected messages from the current mail file to the file named in the Mail File text field in the command panel. If the file exists, the messages are appended. Unlike Move into Mail File, the messages are not deleted from the InTray.

Print

Sends copies of all the selected mail items to your default printer. If there are no selected items, mailtool sends copies of those items you are currently viewing.

Save Changes

Causes all the deletions and changes you have made to the mail file to become permanent and opens your InTray for any new mail.

View

Messages Displays messages you have selected.

Abbreciated Header

Strips unnecessary header fields from the messages you view. Specify these fields by setting the ignore variable in your .mailrc file.

Full Header

Displays the currently selected messages with all of the message header fields.

Previous Displays previous messages in your mailbox.

Next Determines the message following the last one displayed and displays it. The message is chosen from all the messages in the current mail file.

Sort By**Time and Date**

Sorts the messages in the mail folder by chronological order.

Sender Sorts the messages in the mail folder alphabetically by sender.

Subject Sorts the messages in the mail folder alphabetically by subject.

Edit

Cut Deletes the selected mail messages, placing copies in the Clipboard.

Copy Copies the selected mail messages, placing copies in the Clipboard.

Delete Deletes the selected mail messages, without placing copies in the Clipboard. If no mail messages are selected, the messages currently being viewed are deleted.

Undelete

Last Restores the last message deleted to your mail header display. This may be done until all messages deleted since the last commit are restored. This option also restores messages deleted through cut and move commands.

From list Causes a command frame to appear that contains a list box with all the mail items that have been deleted since the last commit operation. You can select any number of these, and press the button on the command frame. All the selected items will be returned to the mail header window.

Find

Sender: Enter text that is in the Subject field of the message you want. Capitalization is ignored.

Subject: Enter text that is in the **From** field (mail address) of the message you want. Capitalization is ignored.

Find Forward

After entering text for **Sender:** or **Subject:** or both, click **SELECT** on **Find Forward** to locate the next message that matches the text.

Find Backward

After entering text for **Sender:** or **Subject:** or both, click **SELECT** on **Find Backward** to locate the previous message that matches the text.

Select All After entering text for **Sender:** or **Subject:** or both, click **SELECT** on **Select All** to select all messages that match the text.

Properties Displays the **Mail Tool: Properties** window. The various categories of properties you can modify are displayed in a pop-up menu from the **Display** abbreviated menu button.

Mail Arrival Properties

Check for Mail Every:

Specifies in seconds how often **Mail Tool** checks for new mail.

Signal New Mail With:

Specifies how many beeps or flashes or both that are used to notify you of the arrival of new mail.

Automatically Display Headers:

Specifies whether headers are displayed automatically or not.

Apply

When this button is selected, any changes you have specified are made.

Reset

When this button is selected, any changes you have made in the window are deleted.

Composition Header Properties

Compose with Subject Line:

Specifies whether a **Subject:** line appears in the **Composition** window.

Cc Line: Specifies whether a **Cc:** line appears in the **Composition** window.

Bcc Line: Specifies whether a **Bcc:** line appears in the **Composition** window.

Custom Fields

Allows you to specify a list of header fields in addition to **To:**, **Subject:**, **Cc:**, and **Bcc:**.

Add After

Field is inserted into list after the selection point.

Add Before

Field is inserted into list before the selection point.

Delete Deletes the selected field from the list.

Field

Specifies the name of a custom field. The scrolling box displays all custom field names.

Apply When this button is selected, any changes you have specified are made.

Reset When this button is selected, any changes you have made in the window are deleted.

Template Properties

Allows you to specify template files that you have created. These files can be included in mail messages.

Templates Use the following to specify when the template is to be used. One must be selected.

Add After

File is inserted into list after the selection point.

Add Before

File is inserted into list before the selection point.

Delete Deletes the file from the list.

Name: Specifies the template name.

File: Specifies the location of the template.

Apply When this button is selected, any changes you have specified are made.

Reset When this button is selected, any changes you have made in the window are deleted.

General Properties

Default Header Pane Height:

Specifies the number of lines for the header pane.

Default Header Pane Width:

Specified the width of the header pane in columns.

Default Message Pane Height:

Specifies the number of lines for the message pane.

Print Script:

Script executed when File -> Print is selected.

Mail File Directory:

Specifies the name of the mail directory.

Ask For Confirmations:

Specifies whether Mail Tool asks for confirmations.

Apply When this button is selected, any changes you have specified are made.

Reset When this button is selected, any changes you have made in the window are deleted.

Compose >

This panel button allows users to create new mail to be sent, reply to existing messages with or without including the current message, and to forward messages as needed.

New Opens a composition window without the message headers being filled in. If an unused mail message window currently exists on the screen, it will be brought forward to be used and no new window is

created. If an unused mail message window current exists and is fully displayed on the screen, there will be no change in the display.

Reply > Opens a composition window with the message headers filled in appropriately and allows you to write and deliver your response. If an unused mail message window current exists on the screen, it will be brought forward to be used and no new window is created. If an unused mail message window current exists and is fully displayed on the screen, there will be no change in the display. Options to this sub-menu are described below:

To Sender:

Opens a composition window. In the window, the address field contains the originator's address for the selected message.

To All: Opens a composition window. In the window, the address field contains addresses for the person who sent the selected message as well as all the people that the selected message was sent to.

To sender, include:

Opens a composition window. In the window, the address field contains the originator's address for the selected message. The window also contains the selected message in the body of the new message.

To All, Include:

Opens a composition window. In the window, the address field contains addresses for the person who sent the selected message as well as all the people that the selected message was sent to. The window also contains the selected message in the body of the new message.

Forward > Forwards the currently selected message. Opens a composition window with the currently selected message included in the new message body.

Vacation Lets you compose a message that is automatically delivered in response to incoming messages. Use this when you can't read your mail for a period of time and want Mail Tool to respond to messages for you.

The Composition Window

This window has its own control panel with the following buttons.

Include

Bracketed Pastes the currently selected messages into the body of the message you are composing. The included messages are bracketed with special lines.

Indented Pastes the currently selected messages into the body of the message you are composing. Each line of the included message is indented, using the standard indentation string.

Templates Displays file names of templates.

Deliver**Quit Window**

Mails the message you have composed and then dismisses the compose window.

Close Window

Mails the message you have composed and then closes the compose window to an icon.

Clear Window

Mails the message and then clears the compose window to prepare it for re-use.

Leave Message Intact

Mails the message and leaves the message in the compose window.

Headers > Selecting an option affects the header of the mail message.

Add/Delete Cc:

Adds or deletes the Cc: line from the message you are composing.

Add/Delete Bcc:

Adds or deletes the Bcc: line from the message you are composing.

Delete Subject

Adds or deletes the Subject: line from the message you are composing.

Add Custom >

Add a custom header field already created in the Properties window.

Delete Custom >

Delete a custom header field already created.

Name Finder

Displays a pop-up window that lets you ask for the mailing addresses of individuals in the NIS database.

Name: Type the requested name.

Sounds Like

Looks for names that sound like the one you entered. The first letter must match exactly.

Find Click SELECT to start the search.

Clear Clears the contents of the compose window.

Mailtool Variables

In addition to the variables recognized by mail(1), mailtool recognizes those listed below. They can be set by editing your .mailrc file. Unless otherwise noted, the default for the following variables is *off*. Some of these variables can be set using the Properties menu.

allowreversescan

When set, allows you to step through messages in latest-first, oldest-first order if you choose. The next message depends on the order of travel.

askbcc Prompt for the Bcc: field when composing or replying.

bell The number of times to ring the bell when new mail arrives. The default is 0.

editmessagewindow

Request confirmation before the first editing operation to a message in the message window (as opposed to composing a reply). The default is not to request confirmation of the first edit.

- expert** Set expert mode in which no confirmation are requested.
- filemenu** A list of files from which to initialize the Mail File: menu. These can be absolute path names, path names relative to the working directory for **mailtool** (typically your home directory), or filenames prefixed with a + , which are taken as relative to the directory specified in the folder variable (see **mail** (1)).
- filemenusize**
Specifies the maximum size of the .File: menu.
- flash** The number of times to flash the window or icon when new mail arrives. The default is 0.
- headerlines**
The number of lines in header window. The default is 10.
- retrieveinterval**
The interval in seconds to check for new mail. The default is 300.
- moveinputfocus**
Move the input focus into the composition window for Compose and Reply. This only works for click-to-type.
- popuplines** The number of lines in pop-up message composition window. The default is 30.
- printmail** The command to use to print a message. The default is **lpr -p**.
- trash** The name of trash bin, which may be accessed just like any other folder. If set, all deleted messages are moved to the trash bin. The trash bin is emptied when you commit changes.
- suppressautoretrieve**
Does not automatically retrieve new mail messages. Default is to automatically retrieve new mail.
- additionalfields:**
A list of header fields to access via the Add Custom field in the Header menu.
- templates** A list of *name:path* pairs to access via the Include > Templates menu. *name* appears in the menu; *path* is the file included when name is selected.
- toolcols** Default width of windows in columns. Default is 80.

FILES

- /var/spool/mail/*** System mailboxes
- ~/mailrc** Start-up file for **mail** and **mailtool**.
- ~/mailtool-init** Contains manu default and layout information. Generated by selecting Save Workspace in the root menu.

SEE ALSO

binmail(1), mail(1), textedit(1), aliases(5), newaliases(8), sendmail(8)

OpenWindows User's Guide

NAME

perfmeter – display system performance values in a meter or strip chart

SYNOPSIS

perfmeter [*-s sample-time*] [*-h h-hand-int*] [*-m m-hand-int*] [*-M smax minmax maxmax*]
[*-v value*] [*hostname*]

AVAILABILITY

This command is available with the OpenWindows environment. For information about installing OpenWindows, refer to the *OpenWindows Installation and Start-Up Guide*.

DESCRIPTION

perfmeter is an OpenWindows XView utility that displays performance values (statistics) for a given *hostname*. If no host is specified, statistics on the current host are metered. The *rstatd(8C)* daemon must be running on the machine being metered.

When open, **perfmeter** displays a performance value in the form of a strip chart. When closed, it displays a meter dial. By default, the display is updated with a *sample-time* of 2 seconds. The hour hand of the meter represents the average over a 20-second interval; the minute hand, the average over 2 seconds. The default value displayed is the percent of CPU being utilized.

The maximum scale value for the strip chart will automatically double or halve to accommodate increasing or decreasing values for the host machine. This scale can be restricted to a certain range with the *-M* option.

OPTIONS

-s sample-time

Set the sample time to *sample-time* seconds.

-h h-hand-int

Set the hour-hand interval to *h-hand-int* seconds.

-m m-hand-int

Set the minute hand interval to *m-hand-int* seconds.

-M smax minmax maxmax

Set a range of maximum values for the strip chart. Values for each of the arguments should be powers of 2. *smax* sets the starting maximum-value. *minmax* sets the lowest allowed maximum-value for the scale. *maxmax* sets the highest allowed maximum-value.

-v value

Set the performance value to be monitored by pressing MENU and sliding the pointer to one of the following options:

cpu Percent of CPU being utilized.

pkts Ethernet packets per second.

page Paging activity in pages per second.

swap Jobs swapped per second.

intr Number of device interrupts per second.

disk Disk traffic in transfers per second.

cntxt Number of context switches per second.

load Average number of runnable processes over the last minute.

colls Collisions per second detected on the ethernet.

errs Errors per second on receiving packets.

USAGE**Commands**

You can change the statistic being displayed by clicking MENU , and bringing up the property sheet for the tool. The property sheet will allow you to modify what the perfmeter is monitoring and how often it checks. Other meter parameters can be modified through the use of keyboard accelerators. Move the pointer into the window and type one of the following keyboard keys:

- m** Decrease *minutehandintv* by one
- M** Increase *minutehandintv* by one
- h** Decrease *hourhandintv* by one
- H** Increase *hourhandintv* by one
- 1-9** Set *sampletime* to a range from 1 to 9 seconds.

FILES

`/etc/inetd.conf` starts statistics server

SEE ALSO

`xview(1)`, `netstat(8C)`, `rstatd(8C)`, `vmstat(8)`

NAME

printtool - OpenWindows tool for printing files

SYNOPSIS

printtool [*generic-tool-arguments*]

AVAILABILITY

This command is available with the OpenWindows environment. For information about installing OpenWindows, refer to the *OpenWindows Installation and Start-Up Guide*.

DESCRIPTION

printtool is a user interface to the **lpr(1)**, **lprm(1)**, and **lpq(1)** operating system printing functions.

printtool is an OpenWindows based XView application that uses the **lpr(1)** command to print files. By specifying a filename, printer name, number of copies to be printed and any optional filters, the user can print files, get status on files printed, and remove files from a printer queue.

You can drag and drop a file from **filemgr(1)** onto an open **printtool** or icon, instead of typing a name in the **File:** text field.

The printer names are derived from the **/etc/printcap** file. By convention, the format of the first line for each printer entry in the **/etc/printcap** file is:

printer number|logical name|description:

For example:

3|laserbeam|printer near Fred's office:

The printer name used by **printtool** is the longest of the first two fields. This field should not contain blanks.

OPTIONS

generic-tool-arguments

printtool accepts the generic tool arguments described in **xview(1)**.

USAGE

printtool is part of the OpenWindows user environment. For a description of the basic concepts of OpenWindows, see the *OpenWindows User's Guide*.

File: Must specify a *filename* in the text field.

Printer:

Must select a printer. It can be from the **Printer:** options or the default can be left.

Copies: Must specify the number of copies to print or leave the default of one.

Filter: Optional.

None Default and provides no filter.

Raster File contains a raster image, see **rasterfile(5)**. The printer must support an appropriate imaging model such as PostScript in order to print the image.

TeX The files contain data from **tex** (DVI format from Stanford).

Plot The files contain standard plot data as produced by the **plot(3X)** routines (see also **plot(1G)** for the filters used by the printer spooler).

CifPlot The files contain data produced by **cifplot**.

troff The files contain **troff(1)** data.

pr Prints pages headed with the date, filename and page number.

control Interprets the first character of each line as a standard FORTRAN carriage control character.

other Used for printing a file with another command line print method, including pipes. Will accept the following variables:

\$FILE filename from drag and drop operation or name specified in File: text field.

\$PRINTER printer specified in Printer: text field.

\$COPIES number of copies specified in Copies: text field

Print The named file is printed.

Status Displays the status of the printer specified in the Printer: text field.

Stop Printing

Removes a printing job.

Selected Print Job

Stops the printing of the job or jobs you have selected in the scroll window.

All Print Jobs

Stops all of your print jobs that are currently queued. See `printcap(5)` for more information.

These filter options offer a standard user interface, and all options may not be available for, nor applicable to, all printers. The `troff` filter is provided as part of the standard SunOS installation.

FILES

`/etc/printcap` Printer capabilities data base

SEE ALSO

`filemgr (1)`, `lpg (1)`, `lpr (1)`, `lprm (1)`, `troff(1)`, `pr (1V)`, `plot (3X)`, `printcap (5)`, `rasterfile (5)`

DIAGNOSTICS

See `lpr(1)` diagnostics.

printer: unknown printer:

Probably an incorrect entry in the `/etc/printcap` file.

The `/etc/printcap` file must exist with valid printer entries for `printtool` to work.

BUGS

See `lpr(1)` bugs.

NAME

rpc.cmsd - calendar manager service daemon

SYNOPSIS

/usr/etc/rpc.cmsd

or

\$OPENWINHOME/bin/rpc.cmsd

DESCRIPTION

rpc.cmsd is a small data base manager for appointment and resource-scheduling data. It's primary client is Calendar Manager, a window-based tool.

FILES

/usr/spool/calendar/callog.username

/etc/inetd.conf

\$OPENWINHOME/bin/install_cmgr

NAME

shelltool – run a shell (or other program) in an OpenWindows terminal window

SYNOPSIS

shelltool [**-C**] [**-B boldstyle**] [**-I command**] [*generic-tool-arguments*] [*program* [*arguments*]]

AVAILABILITY

This command is available with the OpenWindows user environment. For information about installing OpenWindows, refer to the *OpenWindows Installation and Start-Up Guide*.

DESCRIPTION

shelltool is a standard *OpenWindows* facility for shells or other programs that use a standard tty-based interface.

When invoked, **shelltool** runs a program, (usually a shell) in an interactive terminal emulator based on a tty subwindow. Keyboard input is passed to that program. In the OpenWindows version of **shelltool**, a restricted pop-up menu is available from the main display area that allows you to enable scrolling. Selecting the **Enable Scrolling** option from the restricted menu gives **shelltool** the full functionality of the **cmdtool** window, included a larger pop-up menu from which to select options. Selecting **Disable Scrolling** from the pop-up submenu will return **Shelltool** to its original state.

OPTIONS

- C** Redirect system console output to this **shelltool**.
 - B boldstyle** Set the style for displaying bold text to *boldstyle*. *boldstyle* can be a string specifying one of the choices for the **term.boldstyle** default, see **Defaults Options**, below, or it may be a numerical value for one of those choices, from 0 to 8, corresponding to the placement of the choice in the list.
 - I command** Pass *command* to the shell. SPACE characters within the command must be escaped.
- generic-tool-arguments*
shelltool accepts the generic tool arguments listed in **xview(1)**.

USAGE

.Xdefaults File Options

You can specify a number of defaults using the options in the **.Xdefaults** file that effect the behavior of **shelltool**. The ones of interest are those that begin with **text**, **term**, or **keyboard**. See **.xview(1)** for more detailed information.

The Terminal Emulator

The tty subwindow is a terminal emulator. Whenever a tty subwindow is created, the startup file **~/ttypswrc** is read for initialization parameters that are specific to the tty subwindow.

The .ttypswrc File

The command format for this file is:

#	Comment.
set <i>variable</i>	Turn on the specified variable.
map <i>i key text</i>	When <i>key</i> is typed pretend <i>text</i> was input.
mapo <i>key text</i>	When <i>key</i> is typed pretend <i>text</i> was output.

The only currently defined variable is **pagemode**. *key* is one of L1-L15, F1-F15, T1-T15, R1-R15, LEFT, or RIGHT (see note below). *text* may contain escapes such as **\E**, **\n**, **\X**, etc. (ESC, RETURN, and CTRL-X, respectively). See **termcap(5)** for the format of the string escapes that are recognized. Note: **map*i*** and **mapo** may be replaced by another keymapping mechanism in the future.

When using the default kernel keyboard tables, the keys L1, LEFT, RIGHT, BREAK, R8, R10, R12, and R14 cannot be mapped in this way; they send special values to the tty subwindow. Also, when using the default kernel keyboard tables, L1-L10 are now used by **XView**. See **input_from_defaults(1)** and **kbd(4S)** for more information on how to change the behavior of the keyboard.

It is possible to have terminal-based programs drive the tool in which its tty subwindow resides by sending special escape sequences. These escape sequences may also be sent by typing a key appropriately mapped using the `mapo` function described above. The following functions pertain to the tool in which the tty subwindow resides, not the tty subwindow itself.

<code>\E[1t</code>	– open
<code>\E[2t</code>	– close (become iconic)
<code>\E[3t</code>	– move, with interactive feedback
<code>\E[3;TOP;LEFTt</code>	– move, to TOP LEFT (pixel coordinates)
<code>\E[4t</code>	– stretch, with interactive feedback
<code>\E[4;HT;WIDTHt</code>	– stretch, to HT WIDTH size (in pixels)
<code>\E[5t</code>	– front
<code>\E[6t</code>	– back
<code>\E[7t</code>	– refresh
<code>\E[8;ROWS;COLSt</code>	– stretch, to ROWS COLS size (in characters)
<code>\E[11t</code>	– report if open or iconic by sending <code>\E[1t</code> or <code>\E[2t</code>
<code>\E[13t</code>	– report position by sending <code>\E[3;TOP;LEFTt</code>
<code>\E[14t</code>	– report size in pixels by sending <code>\E[4;HT;WIDTHt</code>
<code>\E[18t</code>	– report size in characters by sending <code>\E[8;ROWS;COLSt</code>
<code>\E[20t</code>	– report icon label by sending <code>\E]Llabel\E\</code>
<code>\E[21t</code>	– report tool header by sending <code>\E]lheader\E\</code>
<code>\E]ltext\E\</code>	– set tool header to text
<code>\E]lfile\E\</code>	– set icon to the icon contained in file; file must be in <i>iconedit</i> output format
<code>\E]Llabel\E\</code>	– set icon label to label
<code>\E[>OPT;...h</code>	– turn SB OPT on (OPT = 1 => pagemode), for example, <code>\E[>1;3;4h</code>
<code>\E[>OPT;...k</code>	– report OPT; sends <code>\E[>OPTl</code> or <code>\E[>OPTH</code> for each OPT
<code>\E[>OPT;...l</code>	– turn OPT off (OPT = 1 => pagemode), for example, <code>\E[>1;3;4l</code>

See **EXAMPLES** for an example of using this facility.

shelltool Windows

The window created by `shelltool` is based on the text facility that is described in the `textedit` man page. The user is given a prompt at which to type commands and pop-up menus from which to select command options.

`shelltool` windows support cursor motions, using an `/etc/termcap` entry called `sun-cmd`. Command windows automatically set the `TERM` environment variable to `sun-cmd`. So, if you `rlogin(1C)` to a machine that does not have an entry for `sun-cmd` in its `/etc/termcap` file, the error message 'Type `sun-cmd` unknown' results. To rectify this, type the command 'set `TERM=sun`'. Programs written using the `curses(3X)` or `curses(3V)` library packages will work in a command window, but programs hard-coded for `sun`-type terminals may not. When supporting a program that performs cursor motions, the command window automatically takes on the characteristics of a tty window (as with `shelltool(1)`). When that program terminates or sleeps, the full command window functionality is restored.

`cmdtool` supports programs that use `CBREAK` and `NO ECHO` terminal modes. This support is normally invisible to the user. However, programs that use `RAW` mode, such as `rlogin(1C)` and `script(1)`, inhibit command-line editing with the mouse. In this case, however, tty-style `ERASE`, `word-kill` and `line-kill` characters can still be used to edit the current command line.

The shelltool Menu

The `shelltool` window menu is called the **Term Pane** menu and contains the following options and their submenus:

Enable Page Mode

Enables page mode within `shelltool`.

Copy

Places the highlighted text on the clipboard.

- Paste** Puts the contents of the clipboard at the location pointed to by the cursor.
- Scrolling** Enables scrolling within shelltool .

EXAMPLES

The following aliases can be put into your `~/.cshrc` file:

```
# dynamically set the name stripe of the tool:  
alias header 'echo -n "\E]I!*\E\"'  
# dynamically set the label on the icon:  
alias iheader 'echo -n "\E]L!*\E\"'  
# dynamically set the image on the icon:  
alias icon 'echo -n "\E]I!*\E\"'
```

FILES

```
~/ttyswrc  
/usr/lib/ttyswrc  
/usr/bin/xview/shelltool  
/usr/demo/*
```

SEE ALSO

`cmdtool(1)`, `more(1)`, `xview(1)`, `rlogin(1C)`, `kbd(4S)`, `termcap(5)`

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BUGS

If more than 256 characters are input to a terminal emulator subwindow without an intervening NEWLINE , the terminal emulator may hang. If this occurs, an alert will come up with a message saying 'Too many keystrokes in input buffer'. Choosing the Flush Input Buffer menu item may correct the problem. This is a bug for a terminal emulator subwindow running on top of or `rlogin(1C)` to a machine with pre-4.0 release kernel.

NAME

tapetool - OpenWindows tool for reading files from tape or archiving files to tape

SYNOPSIS

tapetool [*generic-tool-arguments*]

AVAILABILITY

Although this command is available with the OpenWindows Application Environment software installation options. For information about installing OpenWindows, refer to the *OpenWindows Installation and Start-Up Guide* .

DESCRIPTION

tapetool is an OpenWindows based XView application that uses the tar(1) command to write files to tape, extract files from tape, or list the contents of a tape.

OPTIONS

generic-tool-arguments

tapetool accepts the generic tool arguments described in xview(1).

USAGE

tapetool is part of the OpenWindows user environment. For a description of the basic concepts of OpenWindows, see the *OpenWindows User's Guide* .

There are two windows associated with tapetool, the main window and the read window. The main window that appears when the tool is initially brought up is for writing files to tape. The read window appears when you List the contents of a tape or choose either Read Selected or Read Entire List.

List.. Brings up a Tape Contents window that lists the files on tape. It may take some time listing the entire contents of a tape if it contains many files. If you want to extract just a few files and you know the exact names of the files, you may use Read Selected that will bring up an empty Tape Contents window. Use File To Read to put in the file names and then do a Read Entire List. File names can be added using File To Read . File names can be deleted using the scrolling list pop-up menu Read Functions .

Select All Selects all the files listed in the window.

Deselect All

Removes the highlight (deselects) all the files you have selected.

Delete Selected

Removes all the files you have selected.

Read The Tape Contents window does not have to be showing to do this. The files are put into the directory specified by the Destination field if they do not contain fully qualified path names.

Selected Reads the files selected in the Tape Contents window.

Entire List Reads all the files listed in the Tape Contents window.

Entire Tape

Reads the entire tape.

Write Writes the file names listed in the main window to tape.

File To Write

Adds file names to the main window scrolling list. This list has a pop-up menu for deleting files.

Write Functions

Deselect Selected

Deletes the files you have selected.

Deselect All

Deletes all the files displayed in the window.

Destination:

Specifies the directory for the location of files read from tape. This field is only used when the files on the tape do not have absolute path names.

Props Property sheet for specifying tar(1) options.**Device:**

/dev/rmtn Half inch magnetic tapes drives
/dev/rarn Quarter inch tape drives
/dev/rstn SCSI tape drives

Tar Options**Write:**

No SCCS F option to tar(1). Excludes all directories named SCCS from tarfile.
No SCCS+ FF option to tar(1). Excludes all directories named SCCS, all files with .o as their suffix, and all files named errs, core, and a.out.
BlockI/O b option to tar(1). This is the blocking factor for tape records. The default blocking factor is 20 blocks. The block size is determined automatically when reading tapes. The determination of the blocking factor may be fooled when reading from a pipe or a socket. The maximum blocking factor is determined only by the amount of memory available to tar when it is run. Larger blocking factors result in better throughput, longer blocks on nine-track tapes, and better media utilization.
Sym Links h option to tar(1). Follows symbolic links as if they were normal files or directories. Normally, tar does not follow symbolic links.
Show Errs l option to tar(1). Displays error messages if all links to archived files cannot be resolved. If not used, no error messages are printed.
Suppress o option to tar(1). Suppresses information specifying owner and modes and modes of directories that tar(1) normally places in the archive.

Read:

No Check i option to tar(1). Ignores directory checksum errors.
Mod Time m option to tar(1). Do not extract modification times of extracted files. The modification time will be the time of extraction.
Orig Mode p option to tar(1). Restores the named files to their original modes, ignoring the present umask(2). SetUID and sticky information are also extracted if you are the super-user.

Delete Dir:

For writing files to tape
None Retains filename path exactly as specified.
All Extracts the entire path from *filename* and writes just the *filename*.
Pattern Extracts the pattern specified and writes the *filename* left over.

Other:

Err Exit e option to tar(1). If any unexpected errors occur, tar aborts immediately with a positive exit status.
Exclude X option to tar(1). Specifies a file containing a list of named files or directories to be excluded when reading from tape. Only one file can be specified.

Apply Applies the options that have been set.

Reset Resets the options to the defaults.

You may drag and drop files from `filemgr(1)` onto the `tapetool` write window for writing files to tape. You can also drop files onto the `tapetool` icon for writing.

FILES

`/dev/rmt` Half-inch magnetic tape interface
`/dev/rar/n` Quarter-inch magnetic tape interface
`/dev/rst/n` SCSI tape interface

BUGS

See bugs for `tar(1)`.

SEE ALSO

`filemgr(1)`, `tar(1)`, `tar(5)`

NAME

textedit - XView window- and mouse-based text editor

SYNOPSIS

```
textedit [ generic-tool-arguments ] [ -Ea on | off ] [ -adjust_is_pending_delete ] [ -Ei on | off ]
[ -auto_indent ] [ -Eo on | off ] [ -okay_to_overwrite ] [ -Er on | off ] [ -read_only ]
[ -Ec N ] [ -checkpoint count ] [ -EL lines ] [ -lower_context_lines ] [ -Em pixels ]
[ -margin pixels ] [ -En N ] [ -number_of_lines lines ] [ -ES N ]
[ -multi_click_space radius ] [ -Et N ] [ -tab_width tabstop ] [ -ET N ]
[ -multi_click_timeout intrvl ] [ -Eu N ] [ -history_limit max ] [ -EU N ]
[ -upper_context_lines ] filename
```

AVAILABILITY

This command is available with the OpenWindows environment. For information about installing OpenWindows, refer to the *OpenWindows Installation and Start-Up Guide*.

DESCRIPTION

textedit is a window-based XView application that provides both mouse and pointer operations and keyboard accelerators for the editing of text. In general, text editing throughout the OpenWindows user environment uses textedit conventions, both in text display areas such as mail message windows and command panel text fields.

textedit operates via a set of command panel buttons and text fields and a set of menus and submenus accessible from the main editing window.

OPTIONS

generic-tool-arguments

textedit accepts the XView generic tool arguments described in the *XView Reference Manual*.

-Ea on | off

-adjust_is_pending_delete

Choose whether or not an adjustment to a selection makes the selection "pending-delete." The default is off. This option corresponds to, and overrides, the `adjust_is_pending_delete` Text defaults entry.

-Ei on | off

-auto_indent

Choose whether or not to automatically indent newly-opened lines. The default is off. Corresponds to the `auto_indent` Text default.

-Eo on | off

-okay_to_overwrite

Set behavior to the `Store as New File` menu item. If on a `Store as New File` to the current file is treated as a `Save Current File`. If off (the standard default), `Store as New File` operations using the current filename results in an error message. Corresponds to `Store_self_is_save`.

-Er on | off

-read_only

Turn read-only mode on or off. When on, text cannot be modified.

-Ec *N*

-checkpoint *count*

Checkpoint after every *count* editing operation. If *count* is 0 (the standard default), no checkpointing takes place. Each character typed, each Paste, and each Cut counts as an editing operation. Corresponds to `checkpoint_frequency`.

-EL *lines*

-lower_contextlines

Specify the minimum number of lines to keep between the caret and the bottom of the text subwindow. The default is 2. Corresponds to `lower_context`.

- Em *pixels*
- margin *pixels*
Set the scrollbar margin width in pixels. The default is 4. Corresponds to `left_margin`.
- En *N*
- number_of_lines *lines*
Set the number of lines in the bottom subwindow. The default is 45.
- ES *N*
- multi_click_space *radius*
Set the radius in pixels, within which clicks must occur to be treated as a multi-click selection. The default is 3 pixels. Corresponds to `multi_click_space`.
- Et *N*
- tab_width *tabstop*
Set the number of SPACE characters displayed per TAB stop. The default is 8. This option has no effect on the characters in the file. Corresponds to `tab_width`.
- ET *N*
- multi_click_timeout *intrvl*
Set the interval, in milliseconds, within which any two clicks must occur to be treated as a multi-click selection. The default is 390 milliseconds. Corresponds to `multi_click_timeout`.
- Eu *N*
- history_limit *max*
Set the maximum number of editing operations that can be undone or replayed. The default is 50. Corresponds to `history_limit`.
- EU *N*
- upper_context *lines*
Set the minimum number of lines to keep between the caret and the top of the text subwindow. The default is 2. Corresponds to `upper_context`.

USAGE

`textedit` is part of the OpenWindows user environment. For a descriptions of the basic concepts of OpenWindows, see the *OpenWindows User's Guide*.

Signal Processing

If `textedit` hangs, for whatever reason, you can send a `SIGHUP` signal to its process ID, which forces it to write any changes (if possible):

```
kill -HUP pid
```

The edits are written to the file `textedit.pid` in its working directory. If that fails, `textedit` successively tries to write to a file by that name in `/var/tmp`, and then `/tmp`. In addition, whenever `textedit` catches a fatal signal, such as `SIGILL`, it tries to write out the edits before aborting.

Defaults Options

You can specify a number of defaults using the `.Xdefaults` file that affect the behavior of the text-based facilities. See `xvview(1)` for more detailed information.

Selections

Selections in `textedit` are defined as selected portions of text to which editing operations can be applied. For example, a selection can be *deleted*, *moved*, *copied*, etc.

`textedit` provides two types of selections: primary and secondary. Primary selections allow you to select a set of text on which to perform an editing function. Secondary selections allow you to define a *second* block of text without undefining your primary text selection or repositioning your cursor. Being able to define two sets of text at once allows you to take advantage of the advanced editing functions described below in the section called **Function Keys**.

Using a Mouse and Pointer:

Single characters can be selected using the SELECT.

Blocks of text can be selected by selecting a starting point with the SELECT and selecting an ending point with ADJUST.

Or blocks of text can be selected using OPEN LOOK's *wipe through* feature by pointing at a beginning character and depressing the select button while moving the pointer to the end of a block of text.

Selections can also be made by using *clicking* (rapidly pressing) the select button. Click once to select a single letter; click twice to select a word; click three times to select a complete line of text; click four times to select the entire document being edited.

Visual Feedback

All primary selections are indicated visually by inverse video of the text selected and are *pending delete*. Pending delete selections are replaced if you type or paste while the text is selected.

Secondary selections that are not *pending delete* are indicated by underlining of the text.

Secondary selections pending delete are indicated by underlining of the text and strike through of the individual characters.

Secondary Selections

Secondary selections are made using any of the selection methods described above in addition to holding down one of the four function keys corresponding to the commands Cut, Find, Paste, or Copy.

Secondary selections are made pending delete by holding the CTRL key when making the secondary selection. If a secondary selection is pending-delete, it is deleted when the function key is released, except in the case of the Find, which deselects the secondary selection.

You can make adjusted selections switch to pending-delete using the `adjust_is_pending_delete` defaults entry, or the `-Ea` option. In this case, CTRL-Middle makes the selection *not* pending-delete.

Commands that operate on the primary selection do so even if the primary selection is not in the window that issued the command.

Inserting Text and Command Characters

For the most part, typing any of the standard keys either inserts the corresponding character at the insertion point, or erases characters. However, certain key combinations are treated as commands. Some of the most useful are:

Command	Character	Description
Cut-Primary	META-X	Erases, and moves to the Clipboard, the primary selection.
Find-Primary	META-F	Searches the text for the pattern specified by the primary selection or by the Clipboard, if there is no primary selection.
Copy-to-Clipboard	META-C	Copies the primary selection to the Clipboard.
Paste-Clipboard	META-V	Inserts the Clipboard contents at the insertion point.
Copy-then-Paste	META-P	Copies the primary selection to the insertion point (through the Clipboard).
Go-to-EOF	CTRL-RETURN	Moves the insertion point to the end of the text, positioning the text so that the insertion point is visible.

Function Keys

The commands indicated by use of the function keys are:

Command	Sun-2 3 Key	Description
Stop	L1	Aborts the current command.
Again	L2	Repeats the previous editing sequence since a primary selection was made.
Undo	L4	Undoes a prior editing sequence.
Front	L5	Makes the window completely visible (or hides it, if it is already exposed).
Copy	L6	Copies the primary selection, either to the Clipboard or at the closest end of the secondary selection.
Open	L7	Makes the window iconic (or normal, if it is already iconic).
Paste	L8	Copies either the secondary selection or the Clipboard at the insertion point.
Find	L9	Searches for the pattern specified by, in order, the secondary selection, the primary selection, or the Clipboard.
Cut	L10	Erases, and moves to the Clipboard, either the primary or the secondary selection.
Help	F1	Produces help text.

Find usually searches the text forwards, towards the end. Holding down the SHIFT key while invoking Find searches backward through the text, towards the beginning. If the pattern is not found before the search encounters either extreme, it "wraps around" and continues from the other extreme. Find starts the search at the appropriate end of the primary selection, if the primary selection is in the subwindow that the search is made in; otherwise it starts at the insertion point, unless the subwindow cannot be edited, in which case it starts at the beginning of the text.

CTRL-Find invokes the Find and Replace pop-up frame.

Menu Items

File	A pull-right menu item for file operations.
Edit	A pull-right menu item equivalent of the editing function keys. The Edit submenu provides Again, Undo, Copy, Paste, and Cut (same as function keys L2, L4, L6, L8, and L10).
Display	A pull-right menu item for controlling the way text is displayed and line display format.
Find	A pull-right menu item for find and delimiter matching operations.
Extras	A user definable pull-right menu item. The Extras standard submenu is controlled by /usr/lib/.text_extras_menu, which has the same format as .rootmenu file. This can be overridden in two ways: <ol style="list-style-type: none"> 1) Change the value of the .Xdefaults parameter text.extrasMenuFilename to the correct file path. 2) Set the environment variable EXTRASMENU to the file desired. Note that option 1 overrides option 2 if both are used. For more information see the <i>DeskSet Environment Reference Guide</i> . See also xview(1).

Only those items that are active appear as normal text in the menu; inactive items (which are inappropriate at the time) are "grayed out".

User Defined Commands

The file `/usr/lib/text_extras_menu` specifies filter programs that are included in the text subwindow Extras pull-right menu item. The file `~/textswrc` specifies filter programs that are assigned to (available) function keys. These filters are applied to the contents of the primary selection. Their output is entered at the caret.

The file `/usr/lib/textswrc` is a sample containing a set of useful filters. It is not read automatically.

FILES

<code>~/textswrc</code>	Specifies bindings of filters to function keys
<code>/usr/lib/text_extras_menu</code>	Specifies bindings of filters for the extras menu pull-right items
<code>/usr/bin</code>	Contains useful filters, including <code>shift_lines</code> and <code>capitalize</code> .
<code>filename %</code>	Prior version of <code>filename</code> is available here after a Save Current File menu operation
<code>textedit.pid</code>	Edited version of <code>filename</code> ; generated in response to fatal internal errors
<code>/tmp/Text*</code>	Editing session logs

SEE ALSO

`kill(1)`

Introduction to the OpenWindows User Environment

DIAGNOSTICS

Cannot open file '`filename`', aborting! `filename` does not exist or cannot be read.

`textedit` produces the following exit status codes:

- | | |
|---|--|
| 0 | normal termination |
| 1 | standard OpenWindows help message was printed |
| 2 | help message was requested and printed |
| 3 | abnormal termination in response to a signal, usually due to an internal error |
| 4 | abnormal termination during initialization, usually due to a missing file or running out of swap space |

BUGS

Multi-click to change the current selection does not work for **Adjust Selection**.

Handling of long lines is incorrect in certain scrolling situations.

There is no way to replay any editing sequence except the most recent.

NAME

XView – XView toolkit information

SYNOPSIS

There is no XView command per se, but this manual page will describe XView features and functions.

AVAILABILITY

This command is available with the XView software distribution.

DESCRIPTION

XView (X Window-System-based Visual/Integrated Environment for Workstations) is an Open Look user-interface toolkit which supports interactive, graphics-based applications running under the X Window System. For detailed information see the XView Programming Manual.

USAGE**Compiling XView Programs**

XView programs are compiled with the following command line:

```
cc sourcefile.c -o outputfile -lxview -lglx -lX11
```

Generic XView Functions

xv_init() Establishes the connection to the server, initializes the Notifier and the Defaults/Resource-Manager database, loads the Server Resource-Manager database, reads the ~/.Xdefaults database and any passed attributes, and installs a default X10 Errorhandler..

```
void
xv_init(attrs)
    <attribute-value list> attrs;
```

xv_create() Creates an object.

```
Xv_object
xv_create(owner, package, attrs)
    Xv_object    owner;
    Xv_pkg       package;
    <attribute-value list> attrs;
```

xv_destroy() Destroys an object.

```
int
xv_destroy(object)
    Xv_opaque object;
```

xv_find() Finds an object that meets certain criteria; or if the object doesn't exist, creates it (default behavior which can be defeated using XV_AUTO_CREATE, FALSE).

```
Xv_opaque
xv_find(owner, package, attrs)
    Xv_object    owner;
    Xv_pkg       package;
    <attribute-value list> attrs;
```

```

xv_get()      Gets the value of a single attribute.

                Xv_opaque
                xv_get(object, attrs)
                   Xv_object      object;
                   <attribute-value list> attrs;

xv_set()      Sets the value of one or more attributes.

                Xv_opaque
                xv_set(object, attrs)
                   Xv_object      object;
                   <attribute-value list> attrs;

```

Command Line Resource Arguments

In XView, display characteristics can be specified by adding command line arguments to the starting application's start-up command. The usage is as follows:

```
% program -argument1 value1 -argument2 value2...
```

In the tables below, **Argument(s)** shows the short argument followed by the long argument--either can be used. **Type** describes the type of value the arguments can receive. **Resource Name** describes the X resource name modified by the arguments. **Default** is the default value. **Description** describes what the arguments do. **Example** shows an example of a command using the argument.

Argument(s): -Wx, or -scale
Type: string ("small", "medium", "large", "extra_large")
Resource Name: Window.Scale
Default: medium
Description: Sets the initial scale of the application (larger or smaller). **small** is 10 pixels, **medium** is 12 pixels, **large** is 14 pixels and **extra_large** is 19 pixels. The font.name resource will override the scale.
Example: cmdtool -scale extra_large

Argument(s): -Wt, -fn, or -font
Type: string
Resource Name: Font.Name
Default: lucida-sans
Description: Sets the name of the font used for the application (not control areas). To find out what fonts are available, use the **xlsfonts** command (see reference manual page for more information). It is also possible to see the available fonts for the Open Windows server with one of the NeWS demo programs in the demo Navigator. Start this by choosing "demos..." from the default root menu. If the font you specify cannot be found, you see will an error message such as:

```
XView warning: Cannot load font 'galant-24' (Font package)
XView warning: Attempting to load font
```

Example: cmdtool -fn fixed

Argument(s): -Ws, or -size
Type: integer integer
Resource Name: Window.Width and Window.Height
Default: depends

Description: Sets the width and height of the application's base frame. The values are in pixels.
Example: cmdtool -Ws 400 500

Argument(s): -Wp, or -position

Type: integer integer

Resource Name: Window.X and Window.Y

Default: depends on window manager

Description: Sets the initial position of the application's base frame in pixels. The upper left corner of the screen is at position (0,0), with the x-axis increasing to the left, and the y-axis increasing downward. To determine framebuffer size, one can use the <eeprom> command on the local machine. To determine screen size for a remote display, one can use Xlib functions (see the Xlib Programmers Manual). These values will also be generated by the "Save Workspace" option on the root menu into the \$HOME/.openwin-init file when using the Open Look Window Manager.

Example: cmdtool -Wp 100 200

Argument(s): -WG, or -geometry

Type: string of the format {WxH} {[+|-]X[+|-]Y}

Resource Name: Window.Geometry

Default: depends

Description: This sets both the size and the placement of the application's base frame. This option has priority over the -size and -position arguments. The size and placement parts of the value are optional. You can set just the size, just the position, or both. The size values are measured in pixels, and the position values use the same semantics as -position. However, if you use the '-' in front of an X value, it will be taken as relative to the right hand side of the screen, instead of the left. Likewise, if you use the '-' with the Y value, it will be taken relative to the bottom of the screen instead of the top.

Examples:

cmdtool -geometry 500x600

(will make the base frame 500x600 pixels, with the position set by the window manager)

cmdtool -WG +10+20

(will make the base frame of default size with the left hand side of the frame 10 pixels from the left hand side of the screen, and the top of the frame 20 pixels from the top of the screen)

cmdtool -WG -10+20

(will make the base frame of default size with the right hand side of the frame 10 pixels from the right hand side of the screen, and the top of the frame 20 pixels from the top of the screen)

cmdtool -geometry 400x300-0-0

(will make the base frame 400x300 pixels with the right hand side of the frame flush against the right hand side of the screen, and the bottom of the frame flush with the bottom of the screen)

Argument(s): -WP, -icon_position

Type: integer integer

Resource Name: Icon.X Icon.Y

Default: depends on window manager

Description: Sets the position of the application's icon in pixels. Uses the same semantics as -position for base frames.

Example: cmdtool -WP 400 20

Argument(s): -Wl, -label, or -title
Type: string
Resource Name: Window.Header
Default: depends on the application
Description: Sets a default label for the base frame's header. However, the application can overwrite this setting and display its own header.
Example: cmdtool -Wl "Header Text"

Argument(s): -Wi, and +Wi
Type: boolean
Resource Name: Window.Iconic
Default: +Wi
Description: These options control how an application will come up, open or closed (iconified).
Examples: cmdtool +Wi (will make the cmdtool come up open)
 cmdtool -Wi (will make the cmdtool come up closed)

Argument(s): -Wf, or -foreground_color
Type: integer integer integer
Resource Name: Window.Color.Foreground
Default: 0 0 0
Description: See Description in -Wb below.

Argument(s): -Wb, or -background
Type: integer integer integer
Resource Name: Window.Color.Background
Default: 255 255 255
Description: These options allow the user to specify the foreground color (e.g., the color of the text in a textsw), or the background color (e.g., the color that the text is painted on) of an application. The three values should be integers between 0 and 255. They specify the amount of red, green and blue that is in the color. See -fg and -bg below for information on similar functions.
Example: cmdtool -Wf 0 0 255 -Wb 100 100 100
 (would come up with a blue foreground, with a gray background)

Argument(s): -fg, or -foreground
Type: string (color name, or hexadecimal color specification)
Resource Name: Window.Color.Foreground
Default: black
Description: See Description in -bg below.

Argument(s): -bg, or -background
Type: string (color name, or hexadecimal color specification)
Resource Name: Window.Color.Background
Default: white
Description: These options are similar to the -Wf and -Wb options, except that they take a color argument in the form of a predefined color name (lavender, grey, goldenrod, etc.) from \$OPENWINHOME/lib/rbg.txt, or a hexadecimal representation. The hexadecimal representation is of the form pound sign (#) followed by the hexadecimal representation of the red, green and blue aspects of the color.

Examples: cmdtool -fg blue -bg gray
 (comes up with a blue foreground, with a gray background)
 cmdtool -fg #d800ff -bg white
 (comes up with a purple foreground, with a white background)

Argument(s): -WI, or -icon_image
Type: string
Resource Name: Icon.Pixmap
Default: depends on application
Description: Sets the default filename for the icon's image. However, the application can overwrite this setting and display its own icon image. The file must be in XView icon format. The program <iconedit> will allow one to create an image in the icon format. Several icons have been provided in the directory \$OPENWINHOME/include/images. By convention, icon format files end with the suffix ".icon".

Example: cmdtool -WI /usr/include/images/stop.icon

Argument(s): -WL, or -icon_label
Type: string
Resource Name: Icon.Footer
Default: depends on application
Description: Sets a default label for the base frame's icon. However, the application can overwrite this setting and display its own icon label.

Example: cmdtool -WL "Icon Label"

Argument(s): -WT, or -icon_font
Type: string
Resource Name: Icon.Font.Name
Default: depends
Description: Sets the name of the font used for the application's icon. To find out what fonts are available, use xlsfonts (see reference manual page for more information).

Example: cmdtool -WT '*century schoolbook*'

Argument(s): -Wd, or -default
Type: string string
Resource Name: given by the first string
Default: none
Description: This option allows the user to set resources that don't have command line equivalents. The format is -default resource-name value . The XView resources without specific command line arguments are discussed in the following section.

Example: cmdtool -default OpenWindows.ScrollbarPlacement left

Argument(s): -xrm
Type: string
Resource Name: given in the string
Default: none
Description: This option allows the user to set resources that don't have command line equivalents. This is similar to the -default option, but it takes only one argument, a string in the form of resource-name:value.

Example: cmdtool -xrm OpenWindows.ScrollbarPlacement:right

Argument(s): -WH, or -help
Type: none
Resource Name: none
Default: none
Description: Prints a description of the valid command line arguments for the application.

Argument(s): -sync or -synchronous, and +sync or +synchronous
Type: boolean

Resource Name: Window.Synchronous
Default: +synchronous
Description: These options allow you to make the connection that the application has with the X11 server either synchronous (-sync) or asynchronous (+sync).

Argument(s): -Wr, or -display
Type: string (host:display { .screen })
Resource Name: Server.Name
Default: taken from the DISPLAY environment variable
Description: Sets the name of the X11 server on which to connect. host is the name or address of the machine on whose server you have permission to display. display is a number corresponding to the server on which to display for that machine, and screen corresponds to which screen for the server. See reference manual page on <xhost> for more details on adding to permissions list.
Examples:
 cmdtool -display foobar:0
 (will bring up a cmdtool on the default screen of the display #0 of host foobar)
 cmdtool -display foobar:0.1
 (will bring up a cmdtool on screen #1 of display #0 of host foobar)

Argument(s): -Wdr, or -disable_retained
Type: boolean
Resource Name: Window.Mono.DisableRetained
Default: Not Retained on color systems, and Retained on monochrome systems
Description: This option is useful for applications running on a monochrome display, where server memory is at a minimum. For performance reasons, monochrome windows are by default retained by the server. Using retained windows will use more memory in the X11 server; however, it also speeds up repainting when the window is covered and uncovered by other windows. When true, monochrome windows are not retained, thus saving server memory.

Argument(s): -Wdxio, or -disable_xio_error_handler
Type: boolean
Resource Name: none
Default: enable xio handler--this option disables it
Description: This option is useful for debugging an application. Whenever there is a fatal XIO error, the server will print an error message before exiting. XView installs a error handler to keep those messages from appearing. If you would like to see these messages, use this option.

Argument(s): -Wfsdb, or -fullscreendebug
Type: boolean
Resource Name: Fullscreen.Debug
Default: FALSE
Description: Enables/disables fullscreen debugging mode during which XGrabs (XGrabServer(), XGrabKeyboard(), XGrabPointer()) are not done. When using FULLSCREEN, the X11 server will be grabbed which prevents other windows on the server from responding until the grab has been released by the one window which initiated the grab. Refer to the Appendix F in the XView Reference Manual: Converting SunView Applications for further details.

Argument(s): -Wfsdbs, or -fullscreendebugserver
Type: boolean
Resource Name: Fullscreen.Debugserver

Default: FALSE
Description: Enables/disables server grabbing (XGrabServer()) that is done via the fullscreen pkg. Refer to the Appendix F in the XView Reference Manual: Converting SunView Applications for further details.

Argument(s): -Wfsdbk, or -fullscreendebgkbd
Type: boolean
Resource Name: Fullscreen.Debugkbd
Default: FALSE
Description: Enables/disables keyboard grabbing (XGrabKeyboard()) that is done via the fullscreen pkg. Refer to the Appendix F in the XView Reference Manual: Converting SunView Applications for further details.

Argument(s): -Wfsdbp, or -fullscreendebgptr
Type: boolean
Resource Name: Fullscreen.Debugptr
Default: FALSE
Description: Enables/disables pointer grabbing (XGrabPointer()) that is done via the fullscreen pkg. Refer to the Appendix F in the XView Reference Manual: Converting SunView Applications for further details.

.Xdefaults File

The .Xdefaults file is used to store and retrieve resource settings. We recommend, however, that you use the command line arguments described above in order to change display characteristics. Changing the resources in the .Xdefaults file will modify the behaviour of the user's session. Novice users should not casually hand modify these settings. Before attempting edits to this file please read the appropriate sections of the Xlib Programming Manual on the file format and the specific properties you intend to change.

Note that resources documented below do not have command line arguments. It is still possible, however, to change them without altering the .Xdefaults file. Refer to the command line arguments -xrm and -defaults for instructions on how to do this. Additional resources that have command line arguments are documented the previous section.

The resources are documented in the following format:

Resource: *Resource Name (Props if resource can be modified by the OpenWindows Property Sheet)*

Values: *Possible Values, and/or Format of Values to be Assigned to Resource (Default Value)"*

Description: *Description of Resource.*

Resource: window.synchronous, +sync -sync

Values: True, False (False)

Description: Useful when debugging or tracking down a problem since the error codes emitted from Xlib will correspond to the immediate request made. Running in a synchronous mode will cause the application to run significantly slower.

Resource: mouse.modifier.button2

Values: Shift, Ctrl, any valid modifier keysym (Shift)

Description: When using a mouse with less than three buttons, this resource gets an equivalent mapping for the second button which is the ADJUST button on a three button mouse. For more information on keysyms, see the <xmodmap> reference manual page, Xlib documentation, and the include file \$OPENWINHOME/include/X11/Xkeymap.h.

- Resource:** mouse.modifier.button3
Values: Shift, Ctrl, any valid modifier keysym (Ctrl)
Description: When using a mouse with less than three buttons, this resource gets an equivalent mapping for the third button which is the MENU button on a three ' button mouse. For more information on keysyms, see the <xmodmap> reference manual page, Xlib documentation, and the include file \$OPENWINHOME/include/X11/Xkeymap.h.
- Resource:** OpenWindows.beep (Props)
Values: never, notices, always (always)
Description: When the value is **notices**, the audible bell will ring only when a notice pops up. When the value is **never**, the audible bell will never ring. When the value is **always**, the audible bell will always ring when the bell function is called by a program.
- Resource:** alarm.visible
Values: True, False (True)
Description: When ringing the bell in an XView program, flash the window as well to warn the user.
- Default** OpenWindows.windowColor (Props)
Values: any valid X11 color specification (#cccccc--80% grey)
Description: Specify the base color for control areas for 3-D look. Takes hexadecimal representation. Three other colors used for shading and highlighting are calculated based upon the value of the specified control color. The actual calculated values are done by the OLGX library to provide a consistent color calculation between XView and OLWM. The desktop properties program allows a full range of customization and previews what the chosen 3-D look will look like. Does not apply to monochrome displays.
- Resource:** OpenWindows.workspaceColor (Props)
Values: any valid X11 color specification (#cccccc--80% grey)
Description: Specifies the color for the root window and the background color for icons that blend into the desktop.
- Resource:** xview.iccmmcompliant
Values: True, False (True)
Description: When False, tell XView to set window manager hints in a way that was used before the ICCCM was adopted. Useful for window managers that are released before X11R4. Not needed with the Open Look Window Manager provided with Open Windows.
- Resource:** OpenWindows.3DLook.Color
Values: True, False (True on all but monochrome screens)
Description: When False, do not use the 3-D look on a color or greyscale screen.
- Resource:** OpenWindows.dragRightDistance (Props)
Values: N (100)
Description: Used by menus to determine when a pullright submenu would display when dragging over the menu item near a submenu. N is an integer greater than 0. A reasonable value might start at 20 and go to 200 or so. May need to try different values to see what feels right to each person.
- Resource:** OpenWindows.selectDisplaysMenu (Props)
Values: True, False (False)
Description: When True, the SELECT button (usually left mouse) will display the menu as well as the MENU button (usually right mouse).

- Resource:** OpenWindows.popupJumpCursor (Props)
Values: True, False (False)
Description: When False, do not warp the mouse to the notice when it appears.
- Resource:** notice.beepCount
Values: N (1)
Description: Where N is an integer to specify how many times to ring the bell when a notice appears. Ringing the bell can consist of either an audible beep and/or a visual flash.
- Resource:** OpenWindows.scrollbarPlacement (Props)
Values: Left, Right (Right)
Description: When set to **Left**, put all scrollbars on the lefthand side of the window or object.
- Resource:** OpenWindows.multiClickTimeout (Props)
Values: N (4)
Description: Where N is an integer greater than 2. Set the number of tenths of a second between clicks for a multi-click. A click is button-down, button-up pair.
- Resource:** text.delimiterChars
Values: string (' \011!\\"#\$%&\'()*+,-./:;<=>?@[\\]^_`{|}~')
Description: This resource allows the user to select the delimiter characters that are used when doing word level selections in the XView package. It was added because of the needs of the international marketplace, and it allows the user to define the local delimiters for the character set that is being used with the current keyboard and Sun workstation.
- The selection of delimiters will be automatically available to the user once the SunOS 4.1 becomes the default operating system environment, however this resource is used as a bridge during that period.
- Note that the octal characters can be scrambled by Xrm during a rewrite of the value of text.delimiter.Chars. Xrm interprets the text.delimiterChar string when it is loaded. Specifically it will decode the backslashed portions of the string and convert them to octal representations. When this is passed to the client application, the logic will function correctly. However, this misbehavior of Xrm causes the string to be stored incorrectly if the user saves the .Xdefaults file using the Xrm content of the string. The specific problem(s) that occur are the stripping of the backslash characters and the expansion of the tab character (11).
- To correct this problem, one can put the text.delimiterChar entry into an .Xdefaults file that will not be overwritten when saving the workspace properties (for example, a system wide defaults file). Or a copy of the text.delimiterChar entry can be inserted after .Xdefaults file saves.
- Resource:** scrollbar.jumpCursor (Props)
Values: True, False (True)
Description: When False, the scrollbar will not move the mouse pointer when scrolling.
- Resource:** scrollbar.repeatDelay
Values: N (100)
Description: Where N is some integer greater than 2. Specifies the time in milliseconds when a click becomes a repeated action.

- Values:** N (100)
Description: Where N is some integer greater than 2. Specifies the time in milliseconds between repeats of a single page scroll.
- Resource:** scrollbar.lineInterval
Values: N (1)
Description: Where N is some integer greater than 0. Specifies the time in milliseconds between repeats of a single line scroll. How long to pause scrolling when holding down the SELECT button on the scrollbar elevator. Scrollbar sets up a timer routine for repeats.
- Resource:** keyboard.deleteChar
Values: C (177 = octal for Delete)
Description: Where C is some character either typed into an editor or specified with an octal equivalent. Specifies the delete character. This resource applies to text windows only and not to panel text items. This would work in either cmdtool or textedit or the compose window of mailtool.
- Resource:** keyboard.deleteWord
Values: C (27 = octal for ^W)
Description: Where C is some character either typed into an editor or specified with an octal equivalent. Specifies the delete word character. This resource applies to text windows only and not to panel text items. This would work in either cmdtool or textedit or the compose window of mailtool.
- Resource:** keyboard.deleteLine
Values: C
Description: Where C is some character either typed into an editor or specified with an octal equivalent. Specifies the delete line character. This resource applies to text windows only and not to panel text items. This would work in either cmdtool or textedit or the compose window of mailtool.
- Resource:** text.maxDocumentSize
Values: N (2000)
Description: Where N specifies the bytes used in memory before a text file is saved to a file on disk. Once this limit is exceeded, the text package will send a notice to the user to tell them that no more insertions are possible. If the file being edited is saved to a file, or it is a disk file being edited, then the limit does not apply.
- Resource:** text.retained
Values: True, False (False)
Description: If True, retain text windows with server backing store.
- Resource:** text.extrasMenuFilename
Values: filename (/usr/lib/.text_extras_menu)
Description: Where filename is an absolute location to a file. Can also be set via environment variable EXTRASMENU. This file is used for the text package's Extras menu. The commands specified in the extras menu are applied to the contents of the current selection in the textsw window and then it inserts the results at the current insertion point.
- Resource:** text.enableScrollbar
Values: True, False (True)
Description: When False, do not put a scrollbar on the text window.

Resource:	text.againLimit
Values:	N (1)
Description:	Where N is an integer between 0 and 500. Number of operations the "again history" remembers for a textsw.
Resource:	text.autoIndent
Values:	True, False (False)
Description:	When True, begin the next line at the same indentation as the previous line as typing in text.
Resource:	text.autoScrollBy
Values:	N (1)
Description:	Where N is an integer between 0 and 100. Specifies the number of lines to scroll when type-in moves insertion point below the view.
Resource:	text.confirmOverwrite
Values:	True, False (True)
Description:	When False, do not give user confirmation if a save will overwrite an existing file.
Resource:	text.displayControlChars
Values:	True, False (True)
Description:	When False, use an up arrow plus a letter to display the control character instead of the character that is available for the current font.
Resource:	text.undoLimit
Values:	N (50 maximum of 500)
Description:	Where N is an integer between 0 and 500. How many operations to save in the undo history log. These operations will be undone when you press the "Undo" key in the text window.
Resource:	text.insertMakesCaretVisible
Values:	If_auto_scroll (Always)
Description:	Controls whether insertion causes repositioning to make inserted text visible.
Resource:	text.lineBreak
Values:	Clip, Wrap_char, Wrap_word (Wrap_word)
Description:	Determines how the textsw treats file lines when they are too big to fit on one display line.
Resource:	text.margin.bottom
Values:	N (0)
Description:	Where N is an integer between -1 and 50. Specifies the minimum number of lines to maintain between insertion point and bottom of view. A value of -1 turns auto scrolling off.
Resource:	mouse.multiclick.space
Values:	N (4)
Description:	Where N is an integer between 2 and 500. Specifies the maximum number of pixels between successive mouse clicks to still have the clicks considered as a multi-click event.
Resource:	text.storeChangesFile
Values:	True, False (True)

Description	When False, do not change the name of the current file being edited to the name of the file that is stored. The name of the current file is reflected in the titlebar of the textedit frame.
Resource:	text.margin.top
Values:	N (2)
Description	Where N is an integer between -1 and 50. Specifies the minimum number of lines to maintain between the start of the selection and the top of the view. A value of -1 means defeat normal actions.
Resource:	text.margin.left
Values:	N (8)
Description	Where N is an integer between 0 and 2000. Specifies the margin in pixels that the text should maintain between the left hand border of the window and the first character on each line.
Resource:	text.margin.right
Values:	N (0)
Description	Where N is an integer between 0 and 2000. Specifies the margin in pixels that the text should maintain between the right hand border of the window and the last character on each line.
Resource:	text.tabWidth
Values:	N (8)
Description	Where N is an integer between 0 and 50. Specifies the width in characters of the tab character.
Resource:	term.boldStyle
Values:	None, Offset_X, Offset_Y, Offset_X_and_Y, Offset_XY, Offset_X_and_XY, Offset_Y_and_XY, Offset_X_and_Y_and_XY, Invert (Invert)
Description	Specify the text bolding style for a terminal based window.
Resource:	term.inverseStyle
Values:	Enable, Disable, Same_as_bold (Enable)
Description	Specify the text inverting style for a terminal based window.
Resource:	term.underlineStyle
Values:	Enable, Disable, Same_as_bold (Enable)
Description	Specify the text underlining style for a terminal based window.
Resource:	term.useAlternateTtyswrc
Values:	True, False (True)
Description	When True, and a \$HOME/.ttyswrc is not found, look for an alternate ttyswrc file. When False, do not look for an alternate file is one is not found in the home directory, \$HOME/.ttyswrc.
Resource:	term.alternateTtyswrc
Values:	filename (\$XVIEWHOME/lib/.ttyswrc)
Description	Where filename specifies a complete filename and absolute path of an alternate ttyswrc file. This is only used if a .ttyswrc file is not found in \$HOME/.ttyswrc and term.useAlternateTtyswrc is True.
Resource:	term.enableEdit

Values: True, False (True)
Description When False, do not keep an editlog of what has been typed into the term window. This is set to false automatically when switching from a scrollable term to one that is not scrollable.

ENVIRONMENT

\$OPENWINHOME is recognized as where OpenWindows is installed.
\$DISPLAY is the name of the server and screen to which applications should display.
\$LD_LIBRARY_PATH is the SunOS shared library search path.
\$HELPPATH is the path that applications will search for Open Look Help files.

FILES

\$OPENWINHOME/include/images	(XView images)
\$OPENWINHOME/lib	(XView Library)
\$OPENWINHOME/include	(include files)
\$OPENWINHOME/bin/xview	(binaries)
\$OPENWINHOME/share/src/sun/xview/demos	(XView demo programs)
\$OPENWINHOME/share/src/sun/xview/examples	(XView example programs)

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