VMS Software

VSI OpenVMS

Using DECwindows Motif for OpenVMS

Document Number: DO-DUSEDW-01A

Publication Date: May 2024

Operating System and Version: VSI OpenVMS IA-64 Version 8.4-1H1 or higher
VSI OpenVMS Alpha Version 8.4-2L1 or higher

Software Version: DECwindows Motif for OpenVMS Version 1.7F

VMS Software, Inc. (VSI)
Boston, Massachusetts, USA

Using DECwindows Motif for OpenVMS

VMS Software

Copyright © 2024 VMS Software, Inc. (VSI), Boston, Massachusetts, USA

Legal Notice

Confidential computer software. Valid license from VSI required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

The information contained herein is subject to change without notice. The only warranties for VSI products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. VSI shall not be liable for technical or editorial errors or omissions contained herein.

HPE, HPE Integrity, HPE Alpha, and HPE Proliant are trademarks or registered trademarks of Hewlett Packard Enterprise.

Preface ..... **ix**
1. About VSI ix
2. Intended Audience ix
3. Document Structure ix
4. How to Use This Book ix
5. VSI Encourages Your Comments ix
6. OpenVMS Documentation x
7. Conventions x

Part I. Getting Started with DECwindows

Chapter 1. Introduction **3**
1.1. What Are Windows? 3
1.2. Interacting with DECwindows 3
1.3. DECwindows Components 4
1.4. Parts of a Window 5
1.5. Applications Overview 6
1.6. Deciding Where to Begin 7

Chapter 2. Opening and Closing DECwindows **9**
2.1. Starting a Session 9
2.2. Starting the Online Tutorial 10
2.3. Pausing a Session 10
2.4. Ending a Session 11

Chapter 3. Interacting with DECwindows **13**
3.1. Using a Mouse 13
3.1.1. Mouse Techniques 14
3.2. Working with Menus 15
3.2.1. Selecting Menus 15
3.2.2. Choosing Items from Pull-Down Menus 16
3.2.3. Choosing Items from Pop-Up Menus 16
3.2.4. Choosing Items from Options Menus 17
3.2.5. Choosing Items from Submenus 18
3.3. Managing Windows 18
3.3.1. Making Windows Active 18
3.3.2. Moving Windows 19
3.3.3. Sizing Windows 20
3.3.4. Minimizing Windows 21
3.3.5. Restoring Icons to Windows 22
3.3.6. Maximizing Windows 23
3.3.7. Restoring Maximized Windows 23
3.3.8. Storing Icons in an Icon Box 23
3.3.9. Additional Ways to Manage Windows 23
3.3.10. Arranging Windows 24
3.3.11. Customizing Your Windows 25
3.4. Working with Dialog Boxes 25
3.4.1. Supplying Information in Dialog Boxes 26
3.4.2. Moving and Changing Settings in a Dialog Box 26
3.4.3. Saving Your Settings 27
3.4.4. Making Selections from List Boxes 27
3.4.5. Using File Selection Boxes 27
3.5. Scrolling 27

Chapter 4. Performing Common Tasks 29
4.1. Getting Help 29
4.1.1. Invoking Help 29
4.1.2. Exiting Help 30
4.2. Editing Text 30
4.2.1. Selecting Text 31
4.2.2. Copying Text 31
4.2.3. Moving Text Between Windows 32
4.2.4. Deleting Text with Pending Delete 32
4.2.5. Text Editing Key Definitions 33
4.3. Printing Files 33
4.3.1. Printing Files from Applications 33
4.3.2. Using Advanced Print Settings 35
4.4. Mixing Colors 35
4.4.1. Color Models 35
4.4.1.1. Picker 36
4.4.1.2. Hue, Lightness, Saturation (HLS) 37
4.4.1.3. Red, Green, Blue Color Model 38
4.4.1.4. Browser 39
4.4.1.5. Greyscale 40
4.4.2. Scratch Pad 41
Chapter 5. Using Session Manager 43
5.1. Running Applications 43
5.2. Using Application Qualifiers 44
5.2.1. Running an Application on a Multiscreen System 45
5.3. Keeping Track of Work in Progress 45
5.3.1. Canceling a Task 46
5.3.2. Looking at Task Output 46
5.4. Defining Logical Names 47
5.4.1. Displaying a Logical-Name Definition 47
5.4.2. Deleting a Logical Name 48
5.5. Setting Process Privileges 48
5.6. Customizing Your Session 49
Chapter 6. Using FileView 51
6.1. Updating the File List 52
6.2. Selecting and Filtering Files 52
6.2.1. Selecting a File from Your File List 52
6.2.2. Selecting Adjacent Files 52
6.2.3. Selecting Scattered Files 53
6.2.4. Selecting All Files in the Current Directory 53
6.2.5. Selecting File Names in Other Windows 53
6.2.6. Displaying a Partial File List 53
6.3. Working with Files 54
6.3.1. Applying Your Settings 54
6.3.2. Comparing the Contents of Files 54
6.3.3. Copying Files 56
6.3.3.1. Copying One File to Another File or Directory 56
6.3.3.2. Copying Groups of Files 57
6.3.4. Deleting Files 58
6.3.5. Editing Files 59
6.3.6. Printing Files 60

6.3.7. Protecting Files ... 61
6.3.8. Purging Files ... 62
6.3.9. Reading Files ... 64
6.3.10. Changing the Name of a File ... 64
6.3.10.1. Renaming a File ... 65
6.3.10.2. Renaming Groups of Files ... 66
6.3.11. Running Programs ... 67
6.3.12. Searching Files for Text Strings ... 68
6.3.13. Displaying Information About Files ... 69
6.4. Opening a New View ... 70
6.5. Accessing Files and Applications Quickly ... 71
6.5.1. Using Pop-Up Menus to Execute Commands ... 71
6.5.2. Using Double-Click Commands ... 71
6.6. Working with Directories ... 71
6.6.1. Creating a Directory ... 72
6.6.2. Deleting a Subdirectory ... 72
6.6.3. Navigating a Directory Structure ... 73
6.6.4. Using Wildcards in the File Filter ... 73
6.6.4.1. Using the Ellipsis (...) Wildcard ... 73
6.6.4.2. Using the Hyphen (-) Wildcard ... 74
6.7. Executing a DCL Command ... 75

Part II. Customizing Your DECwindows Environment

Chapter 7. Customizing Session Manager ... 79
7.1. Applying Your Settings ... 79
7.2. Starting Applications Automatically ... 79
7.3. Changing Your Keyboard Settings ... 80
7.4. Setting Another Session Language ... 82
7.5. Changing Your Pointer Settings ... 83
7.6. Changing Your Session Manager Window Settings ... 85
7.7. Changing Your End Session Prompts ... 86
7.8. Writing Your Own Pause Screen Messages ... 86
7.9. Changing Your Screen Background Settings ... 87
7.10. Changing Your Window Color Settings ... 88
7.11. Changing Your Security Settings ... 89
7.12. Changing Message Window Settings ... 90
Chapter 8. Customizing Menus and Menu Bars ... 93
8.1. Customizing Menus ... 93
8.1.1. Looking at the Contents of a Menu ... 94
8.1.2. Adding an Item to a Menu ... 94
8.1.3. Removing an Item from a Menu ... 94
8.1.4. Looking at a Menu Item Definition ... 95
8.1.5. Changing a Menu Item Definition ... 95
8.1.6. Adding a User-Defined Menu Item ... 96
8.1.7. Deleting a User-Defined Menu Item ... 96
8.1.8. Defining a New Menu Name ... 96
8.1.9. Deleting a User-Defined Menu Name ... 97
8.2. Customizing Menu Bars ... 97
8.3. Combining Session Manager and FileView ... 98
Chapter 9. Customizing FileView ... 99

9.1. Changing the Look of Your File List 99
9.1.1. Changing the Fields in Your File List 100
9.1.2. Displaying File Version Numbers 100
9.1.3. Changing the File Order in Your File List 100
9.1.4. Saving Your File List Changes 101
9.2. Changing Your FileView Window Settings 101
9.3. Building Pop-Up Menus and Defining Double-Click Commands 102
9.3.1. Looking at Pop-Up Menu Definitions 103
9.3.2. Adding a Menu Item to a Pop-Up Menu 103
9.3.3. Removing a Menu Item from a Pop-Up Menu 104
9.3.4. Looking at Double-Click Menu Item Definitions 104
9.3.5. Changing a Double-Click Menu Item Definition 104
9.3.6. Adding a File Type 105
9.3.7. Removing a File Type 105
9.3.8. Saving Your File Types Changes 105
9.4. Working with Views 106
9.4.1. Designing a View 106
9.4.2. Saving a View 108
9.4.3. Looking at Built-In Views 108
9.4.4. Saving Your Startup View 108
9.4.5. Replacing a Saved View 108
9.4.6. Restoring a Saved View 109
9.4.7. Deleting a Saved View 109
9.5. Using FileView as a Menu Bar 110

Chapter 10. Customizing the Window Manager 111

10.1. Applying Your Changes 111
10.2. Customizing Your Workspace 111
10.3. Customizing Your Window Borders 112
10.4. Customizing Your Window Border Colors 113
10.5. Customizing Icons 115
10.6. Customizing Icon Colors 116
10.7. Customizing the Matte 117
10.8. Running the XUI Window Manager 118
10.9. Advanced Customization 119

Part III. Advanced User Techniques

Chapter 11. Using Hyperapplications 123

11.1. A Simple Example 123
11.2. Linkable Objects 124
11.3. The Link Menu 124
11.4. Creating Links 125
11.5. Following Links 126
11.6. Adjusting the Highlighting 128
11.7. Showing and Deleting Links 130
11.8. Using Other Hyperapplication Features 130
11.9. Advanced LinkWorks Concepts 131

Chapter 12. Running Applications Across the Network 133

12.1. Enabling Network Access to Your Workstation Display 133
12.1.1. Authorizing Workstation Access in a DECnet Network 134
12.1.2. Authorizing Workstation Access in an Internet (TCP/IP) Network 135

12.1.3. Disabling Workstation Access 136
12.2. Displaying Remote Applications on Your Workstation Monitor 137
12.2.1. Enabling a Remote Display 137
12.2.2. Disabling a Remote Display 138
12.2.3. Directing a Remote Display to a Third System 138
12.2.4. Directing a Remote Display to Your Own System 138
12.3. Running Applications from a DCL Command Line 138

Chapter 13. Changing the Startup Environment 141

13.1. The Startup Sequence 141
13.2. Customizing the System Startup Environment 141
13.3. Changing Your Logo 142
13.4. Creating Dedicated Accounts 143
13.4.1. Modifying the Session Manager Command Procedure 143
13.4.2. Modifying the Session Manager Executable File 145
13.4.3. Modifying the Session Manager Profile File 147

Chapter 14. Sharing Customization Files 149

14.1. Using Shared Customization Files 149
14.2. Creating Shared Customization Files 150

Chapter 15. Using Task Messages 151

15.1. Using Task Messages in Command Files 151
15.2. Task Messages 151
15.3. Creating a Command File 157
15.4. Adding Target Screen Options to Application Menu Items 158

Chapter 16. Using MIT Utilities 161

16.1. Bitmap Utility 161
16.1.1. Changing Grid Squares 162
16.2. Convert ASCII to Bitmap Utility 162
16.3. Convert Bitmap to ASCII Utility 163
16.4. Display Information Utility 163
16.5. Event Monitoring Utility 163
16.6. List Atoms Utility 164
16.7. List Fonts Utility 164
16.8. List Windows Utility 165
16.9. Magnify Portion of Screen Utility 165
16.10. Modify Keymap Utility 167
16.11. Display Properties Utility 167
16.11.1. Constructing Formats and Deformats 169
16.12. Modify Resource Database Utility 170
16.13. Refresh Utility 172
16.14. Set Options Utility 173
16.15. Set Root Window Options Utility 175
16.16. Window Dump Utility 177
16.17. Display Window Information Utility 177
16.18. Window Undump Utility 179

Chapter 17. Changing DECwindows X Window System Resources 181

Bookreader 182
Calculator 183
Calendar 184
Cardfiler 184
CDA Viewer 184

Clock 185
DECterm 185
FileView and Session Manager 186
LinkWorks Manager 186
Mail 186
Motif Window Manager 188
Customizing MWM Resources for an Application 188
Customizing MWM Menus 190
MWM Keyboard and Mouse Accelerators 191
Modifying the MWM Resource Configuration File 192

Part IV. Appendixes

Appendix A. Understanding DECwindows Architecture 195
A.1. DECwindows OpenVMS Environment 195
A.2. DECwindows Architecture 196
A.2.1. Applications 197
A.2.2. Motif Toolkit 197
A.2.3. XUI Toolkit 198
A.2.4. X Window System Intrinsics 198
A.2.5. Xlib Programming Library 198
A.2.6. Transport Layers 198
A.2.7. X11 Display Server 198
A.2.7.1. Display Server Components 199
A.2.8. Device Drivers 199
A.2.9. Extending the Architecture 200
A.2.10. Architecture Summary 200
Appendix B. Differences Between the XUI and Motif Interfaces 201
B.1. Comparing Window Components 201
B.2. Comparing Interface Objects 202
Appendix C. Using DECwindows with a Keyboard 205
C.1. Traversing Menu Bars and Pull-Down Menus 205
C.2. Traversing Windows 208
C.2.1. Moving Between Windows 208
C.2.2. Moving Within Windows 209
C.3. Traversing Dialog Boxes 210
Appendix D. Understanding Files, Directories, and Devices 215
D.1. Understanding the OpenVMS Directory Structure 215
D.2. About Files 216
D.3. About Directories and Devices 216
D.4. Using Wildcards in File Specifications 217
D.4.1. Using the Asterisk (*) Wildcard 217
D.4.2. Using the Percent Sign (%) Wildcard 217
D.5. Using Wildcards in Directory Specifications 218
D.6. About Logical Names 218
Appendix E. System Messages 221

Preface

1. About VSI

VMS Software, Inc. (VSI) is an independent software company licensed by Hewlett Packard Enterprise to develop and support the OpenVMS operating system.

2. Intended Audience

This guide is designed to help new and experienced users learn and use VMS DECwindows Motif software.

3. Document Structure

This book is intended to cover everything a successful DECwindows user needs to know. Its task-oriented chapters describe and illustrate DECwindows features. Topics are easy to find because the book is divided into four parts:

- Part I includes all the information you need to get started. It describes how to start a session, use windows, work with files, and run applications.
- Part II explains how to customize your environment to suit your needs.
- Part III contains advanced user information.
- Part IV includes DECwindows background information, keyboard techniques, a list of system messages, other reference information, and a Glossary.

4. How to Use This Book

How you use this book depends on how you like to learn and how much you already know about DECwindows. Whether you like to explore new things on your own or learn a few concepts before experimenting, this book will help you learn DECwindows quickly and efficiently. If you use the trial and error method—looking at every menu and trying things that look interesting—this book explains what you see. If you want to understand some concepts first,this book eases you into the DECwindows environment.

If you are new to graphical user interfaces, you should read Part I. When you're comfortable with basic DECwindows techniques, you can move onto other parts of the book for customization and advanced information.

If you are familiar with graphical user interfaces,take a few minutes and look over the first page of each part. Each part page gives a quick summary of the contents of the part. You can quickly review what is familiar about DECwindows and identify the areas you want to know more about.

5. VSI Encourages Your Comments

You may send comments or suggestions regarding this manual or any VSI document by sending electronic mail to the following Internet address: `<docinfo@vmssoftware.com>`. Users who have VSI OpenVMS support contracts through VSI can contact `<support@vmssoftware.com>` for help with this product.

6. OpenVMS Documentation

The full VSI OpenVMS documentation set can be found on the VMS Software Documentation webpage at https://docs.vmssoftware.com.

7. Conventions

VMScluster systems are now referred to as OpenVMS Cluster systems. Unless otherwise specified, references to OpenVMS Cluster systems or clusters in this document are synonymous with VMScluster systems.

The contents of the display examples for some utility commands described in this manual may differ slightly from the actual output provided by these commands on your system. However, when the behavior of a command differs significantly between OpenVMS Alpha and Integrity servers, that behavior is described in text and rendered, as appropriate, in separate examples.

In this manual, every use of DECwindows and DECwindows Motif refers to DECwindows Motif for OpenVMS software.

The following conventions are also used in this manual:

Convention	**Meaning**
Ctrl/ *x*	A sequence such as **Ctrl/** *x* indicates that you must hold down the key labeled Ctrl while you press another key or a pointing device button.
PF1 *x*	A sequence such as PF1 *x* indicates that you must first press and release the key labeled PF1 and then press and release another key or a pointing device button.
Return	In examples, a key name enclosed in a box indicates that you press a key on the keyboard. (In text, a key name is not enclosed in a box.)
…	A horizontal ellipsis in examples indicates one of the following possibilities: • Additional optional arguments in a statement have been omitted. • The preceding item or items can be repeated one or more times. • Additional parameters, values, or other information can be entered.
. . .	A vertical ellipsis indicates the omission of items from a code example or command format; the items are omitted because they are not important to the topic being discussed.
( )	In command format descriptions, parentheses indicate that you must enclose the options in parentheses if you choose more than one.
[ ]	In command format descriptions, brackets indicate optional choices. You can choose one or more items or no items. Do not type the brackets on the command line. However, you must include the brackets in the syntax for OpenVMS directory specifications and for a substring specification in an assignment statement.
[|]	In command format descriptions, vertical bars separate choices within brackets or braces. Within brackets, the choices are options; within braces, at least one choice is required. Do not type the vertical bars on the command line.

Convention	Meaning
{ }	In command format descriptions, braces indicate required choices; you must choose at least one of the items listed. Do not type the braces on the command line.
bold text	This typeface represents the introduction of a new term. It also represents the name of an argument, an attribute, or a reason.
italic text	Italic text indicates important information, complete titles of manuals, or variables. Variables include information that varies in system output (Internal error *number*), in command lines (/PRODUCER= *name*), and in command parameters in text (where *dd* represents the predefined code for the device type).
UPPERCASE TEXT	Uppercase text indicates a command, the name of a routine, the name of a file, or the abbreviation for a system privilege.
`Monospace type`	Monospace type indicates code examples and interactive screen displays. In the C programming language, monospace type in text identifies the following elements: keywords, the names of independently compiled external functions and files, syntax summaries, and references to variables or identifiers introduced in an example.
-	A hyphen at the end of a command format description, command line, or code line indicates that the command or statement continues on the following line.
numbers	All numbers in text are assumed to be decimal unless otherwise noted. Nondecimal radixes—binary, octal, or hexadecimal—are explicitly indicated.

Part I. Getting Started with DECwindows

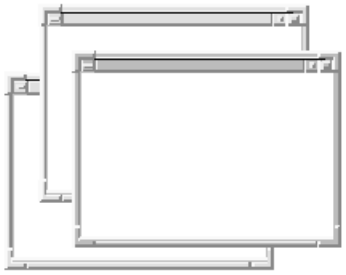
Chapter 1. Introduction

You are about to realize the full potential of your workstation.

DECwindows lets you divide your workstation screen into windows and design your own working environment. Using DECwindows,you can run multiple applications simultaneously on a single screen and switch between them. This means that you can run a program in one window, read a mail message in a second window, and write a memo in a third.

The screen for a typical DECwindows session looks like this:

1.1. What Are Windows?

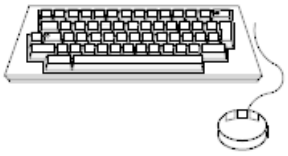


Think of your workstation screen as a desktop with overlapping sheets of paper on it. You can shuffle the sheets of paper to place them in front of or behind other papers.

In DECwindows, these sheets of paper are called windows. A **window** is an area on your workstation screen that represents all or part of an application. For example, you can open one window that displays Bookreader. In this window, you can read online documentation. Other windows can display such applications as Mail, which enables you to send and receive electronic mail, and DECterm, which looks and functions like a VT300-series terminal.

To find out how to move, size, and arrange windows, see Chapter 3.

1.2. Interacting with DECwindows



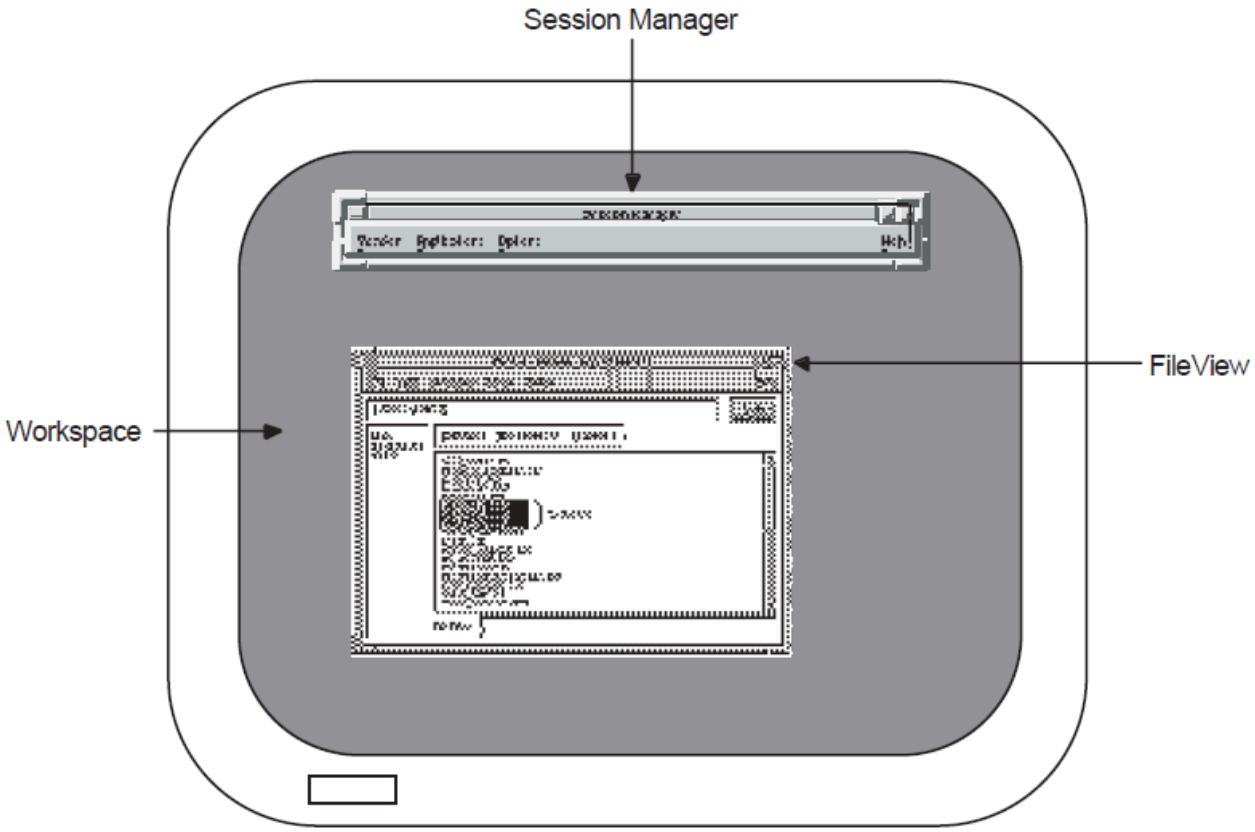
DECwindows is an environment in which all applications look and respond in a similar way. This means that you use the same kinds of graphic objects and the same techniques to interact with each application.

You can use either the **mouse**—the hand-held pointing device attached to your workstation monitor—or your keyboard to work with DECwindows applications. As you become familiar with DECwindows, you will develop a working style that fits your needs. You will find that some tasks are easier to perform with a mouse, some with the keyboard. For more details about interacting with DECwindows, see Chapter 3.

1.3. DECwindows Components

DECwindows contains several components for performing specialized tasks. Figure 1.1 illustrates these components;the descriptions that follow briefly explain them. For more information about working with Session Manager,File View, and the Window Manager,refer to the appropriate chapter in Part I.

Figure 1.1. DECwindows Components



- The **Workspace** is the screen on your workstation and is the background of your DECwindows environment. All windows and objects appear on the Workspace.

- The **Window Manager** controls the size, placement, and operation of windows on the workspace by providing menus (Workspace and Window)that let you manage your windows. Because the Window Manager is a program, you can't see it on your screen. But you know it's there every time you open, move, or resize a window.

  DECwindows includes the OSF/Motif Window Manager as the default window manager. The DECwindows X User Interface(XUI) Window Manager is also available. For more information about running the XUI Window Manager, see Chapter 10.

- **Session Manager** helps control the look and feel of your DECwindows session. Use it to start DECwindows applications and to adjust workstation settings, such as keyboard features and pointer shape.

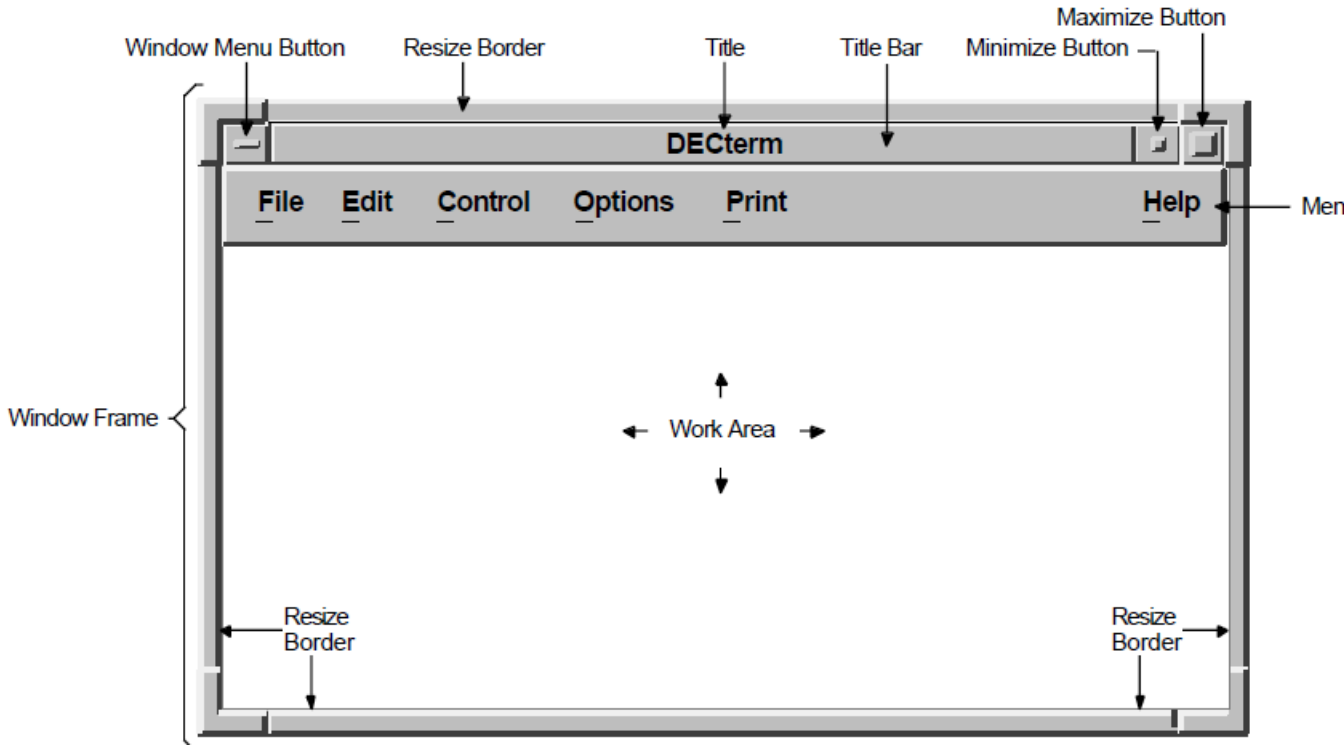
- **FileView** is a graphical interface to the OpenVMS operating system,which provides commands for you to work with your files and directories.

1.4. Parts of a Window

You interact with DECwindows by finding an object on the screen that represents the task you want to perform,selecting that object, and completing the task. Typical interface objects include menu bars, resize borders, and buttons.

Figure 1.2 shows the objects that you use to work with windows; the descriptions that follow briefly explain them. To find out how to use these objects to manage your windows, see Chapter 3.

Figure 1.2. Parts of a Window



- The **window frame** surrounds a window and usually consists of resize borders,a title bar, a window menu button, a minimize button,and a maximize button.
- The **resize border** surrounds an application window and lets you resize the application's window.
- The **title bar** shows the name of the application and contains window management buttons that you can use to rearrange your screen display. Most windows have a title bar.
- The **window title** identifies the function of a window. For a main window, it usually contains the name of the application. For a dialog box, it may also contain specific information about the use of the window.
- The **window menu button** displays the window menu,which contains menu items for working with windows.
- The **minimize button** lets you shrink a window to an icon on the workspace. An **icon** is a small graphic representation of an object, usually an application.
- The **maximize button** lets you increase the size of a window to its maximum allowable size.
- The **menu bar** contains the names of menus you can choose from to work with the application.

- The **client area** or **work area** is the area in a window where you interact with the application.
- The **matte** is an optional decorative border between the window frame and the work area.

1.5. Applications Overview

DECwindows applications “automate,” or perform automatically, basic tasks. For example, Mail automates sending and receiving interoffice mail; the Cardfiler automates creating and filing index cards.

This book doesn't include detailed instructions for using every application. Instead, it describes the techniques you use to run applications, work with windows, and manage your DECwindows environment. Once you are running an application, you can use DECwindows Help to find application-specific information. For more information about DECwindows Help, see Chapter 4.

Table 1.1 briefly describes the applications available with DECwindows.

Table 1.1. DECwindows Applications

Application	Use it to do this
Bookreader	Read online documentation on your screen.
CDA Viewer	Display the contents of compound documents and graphics,images, and text files on your screen. (May also be used to display PostScript documents on a workstation that has a Display PostScript extension.)
Calculator	Perform simple arithmetic functions, such as addition,subtraction, multiplication, division, percentages, and square roots.
Calendar	Keep track of appointments and plan your schedule.
Cardfiler	Create an electronic box of index cards for organizing information.
Clock	Display the time and date.
DECsound	Play back recorded messages, record audio messages,mail recorded messages, and include recorded messages in compound messages.
DECterm	Emulate a VT300-series terminal. From DECterm,you can then enter DCL commands or use any other command-line interface.
FileView	Work with files and directories.
Mail	Exchange messages with other computer users.

Application	Use it to do this
Message Window	Display messages, such as new mail notices and warnings about problems.
Notepad	Edit text.
Paint	Create a simple picture using an assortment of art tools.
Print Screen	Take a snapshot of an entire screen or portion of a screen and print the file containing the snapshot now or later.
Puzzle	Solve a classic, sliding-tile puzzle on your screen.

Tip

Because DECwindows is based on the industry standard X Window System,you can use other vendors' applications as well as Digital applications. For more information about the standard X Window System, see Appendix A. For more information about running other vendors' applications, see Chapter 12.

1.6. Deciding Where to Begin

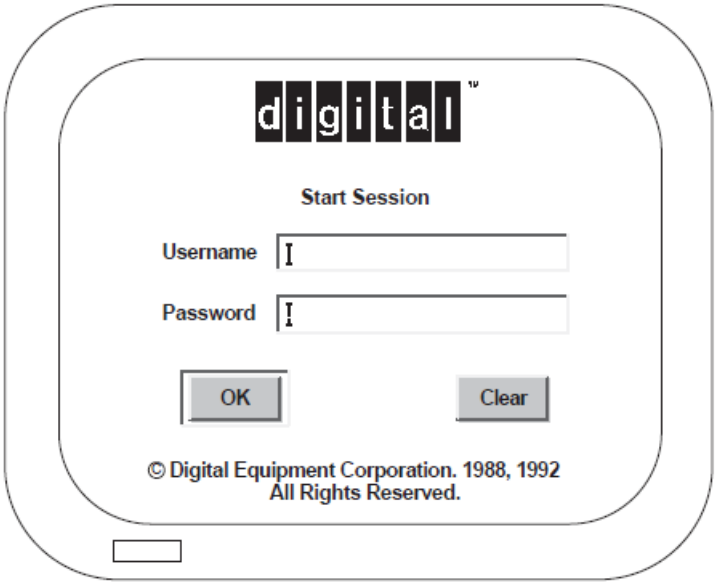
The best way to learn DECwindows is to use it. You can do this by working through the online DECwindows tutorial or by working though the procedures in this book. To use the tutorial, see " Section 2.2" in Chapter 2. To practice the procedures,read Chapter 2 to learn how to start a DECwindows session. Then go to Chapter 3.

Chapter 2. Opening and Closing DECwindows

To use DECwindows, you have to start a session. In this chapter you will learn how to start, pause, and end a DECwindows session. If any of the terms or techniques are new to you, refer to Chapter 3for more information.

2.1. Starting a Session

If the system startup procedure has been successful, DECwindows displays Session Manager's Start Session screen.



The Start Session screen is the gate through which you become authorized to use your workstation. It prompts you for your user name and password. When you or your system manager installed DECwindows, you may also have established an account for yourself with an associated user name and password. Your user name is unique and identifies you to the system. In many cases, a user name is your first or last name. Your password is for your protection. Keep it secret so that other users cannot access your account.

To start a session:

1. Type your user name.

2. Select the Password entry box by pointing to the Password entry box and clicking MB1.

3. Type your **password**. To preserve the secrecy of your password, the letters you type are not displayed on the screen.

4. Click on the OK button or press Return if you have entered your user name and password correctly.

If you provide wrong information or make a typing mistake and do not correct it, your system does not let you start a session. Instead, it displays a warning that some information is incorrect.

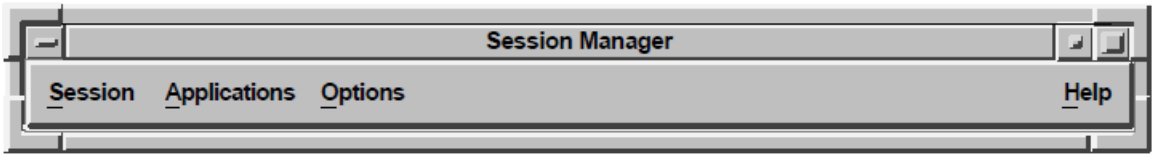
Press Return or click on the OK button to acknowledge the message. Then retype your information and press Return.

If you repeatedly make typing mistakes (without correcting them) while entering your user name and password,you may exceed the number of allowable attempts. Your system manager decides how many attempts to start a session are permitted. When you exceed this number, you'll be denied access even when you correctly enter your user name and password. This security feature prevents unauthorized users from gaining access to your system. If you encounter this security feature, see your system manager.

Tip

The DECwindows screen timeout feature periodically causes the screen to go blank. To restore the screen image, move the mouse or press any key.

If your user information is correct, your session begins and DECwindows displays Session Manager's menu bar.



To find out how to use Session Manager to run applications and manage your session, see Chapter 5.

2.2. Starting the Online Tutorial

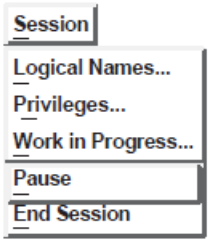
Now that you have started a DECwindows session, you can quickly gain some hands-on experience by running the online DECwindows tutorial.

To start the tutorial:

1. If you don't know how to work with menus, read “ Section 3.2.2” in Chapter 3.
2. From Session Manager's Help menu,choose Tutorial.

   The online tutorial starts and gives you instructions for using it.

2.3. Pausing a Session



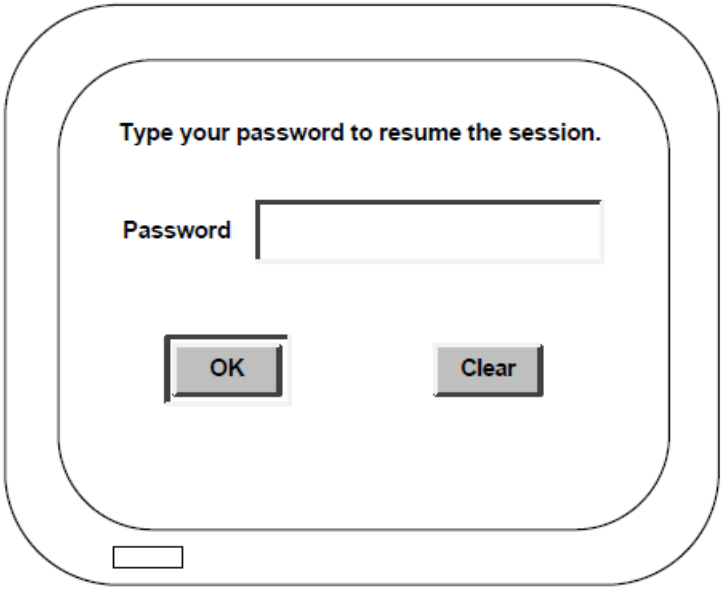
When you are working in a DECwindows session, you can put your current session on hold indefinitely and lock your workstation without ending your session. When you put your session on hold, your screen

is cleared but your session is maintained exactly as it was. Any applications you started continue to run, and you can resume working without having to re-create your screen environment.

Tip

Before you put your session on hold, make sure you save any files. Then, if your system fails, you won't lose any information.

To put your current session on hold, choose Pause from Session Manager's Session menu. Your screen is cleared and the Pause Session screen is displayed.

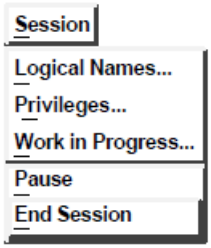


To continue your session, type your password. If you make a mistake while typing, click on the Clear button to cancel what you've entered so far. Then retype your password correctly and press Return.

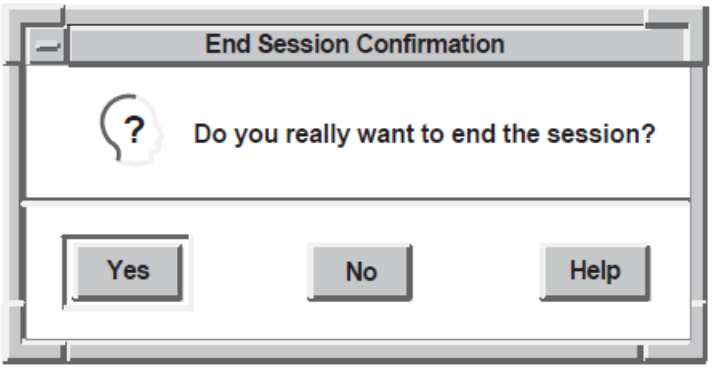
Once the system verifies your password, your session resumes. If you make a typing mistake and do not correct it, DECwindows notifies you that your password is incorrect. Press Return to acknowledge the message. Then retype your password and press Return.

At this point, just as when you started a session,you may exceed the number of allowable attempts to resume it. This happens if you repeatedly make typing mistakes while typing your password. If you enter your password again and continue to make mistakes,you will exceed the number of allowable attempts. Then you won't be able to resume your session even when you enter the correct password. If you trigger this security feature, see your system manager.

2.4. Ending a Session

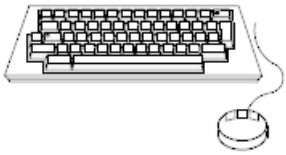


To end your session, choose End Session from Session Manager's Session menu. Even if you choose End Session, you can still return to your session. Session Manager displays a dialog box asking you to confirm that you want to end your session.



To return to your session, click on the No button. To end your session, click on the Yes button. All windows are closed. DECwindows displays the DIGITAL logo and the Start Session screen.

Chapter 3. Interacting with DECwindows



You can interact with DECwindows applications by using either a mouse or a keyboard. As you work with DECwindows, you will find that some tasks are easier to perform with a mouse and some are easier with a keyboard. Try both mouse and keyboard techniques and use each where it works best for you.

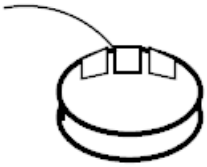
Whether you use a mouse or a keyboard to interact with DECwindows, you use the same techniques for each application. This chapter describes basic DECwindows techniques using mouse procedures and summarizes keyboard techniques. For more information about keyboard techniques and procedures, see Appendix C.

Note

Before you try any of the procedures described in this chapter, you must start a DECwindows session. If you have not started a session, see Chapter 2.

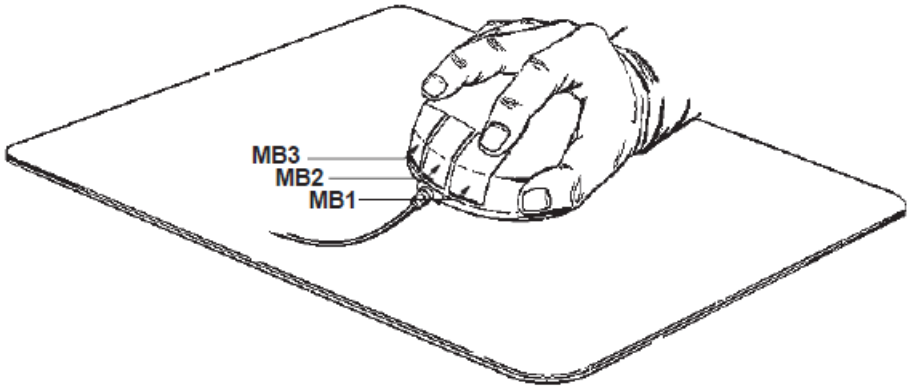
When you start a DECwindows session, DECwindows displays Session Manager on your screen. You can use Session Manager's window to practice the techniques you will read about in this chapter. If you want to practice with another application, read Section 5.1 in Chapter 5.

3.1. Using a Mouse



Traditional computing requires you to interact with your screen by typing text and pressing keyboard keys. A mouse makes using DECwindows as easy as pointing to an object on your screen and clicking a button. You can use the mouse to choose commands from a menu, to enlarge and shrink windows, and to rearrange windows on your screen.

A mouse has three buttons. MB1 (for “mouse button 1”) is on the left, MB2 is in the middle, and MB3 is on the right. Most often you use MB1to interact with applications. This button arrangement naturally suits right-handed users; if you are left-handed, you can easily rearrange this configuration. See Chapter 5 for information about customizing the mouse buttons.



When you work with the mouse, make sure that the cable connecting it to the workstation is pointing away from you. Place the mouse on a smooth surface. As you move the mouse, watch your screen to see how moving the mouse moves the **pointer** on the screen in exactly the same way. If you are using the mouse and run out of room on your desk, just lift the mouse and put it down where you have more room. The pointer does not move when you lift the mouse.

Usually the pointer is shaped like an arrow, but it can change shape to reflect the state of an application. For example, it becomes an hourglass or a wristwatch when DECwindows is performing a task that needs a little more time to complete.

3.1.1. Mouse Techniques

By mastering the following mouse techniques, you can work with any DECwindows application.

- **Point**: Using the mouse, move the pointer to where you want the next action to occur.
- **Click**: Quickly press and release MB1. You should hear and feel a faint click.
- **Press**: Point to the menu name, to the scroll bar stepping arrow, or wherever you want the action to occur. Without moving the mouse, press and hold MB1.
- **Drag**: Press and hold MB1 (or MB2), move the pointer, and release MB1 (or MB2).
- **Double click**: Point to the object and click MB1 twice in quick succession. For more information about double clicking with files, see Chapter 6.
- **Shift click**: Point to the object. Press and hold the Shift key and click MB1. Release the Shift key.

3.2. Working with Menus

Menus contain items that let you tell DECwindows what you want to do or what you want to work with. To interact with DECwindows,you select a menu and choose a menu item from that menu. The names of menus available in an application appear on the menu bar.

DECwindows provides three types of menus:

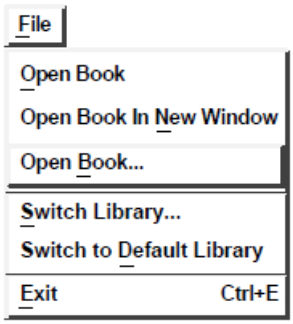
- Pull-down menus
- Pop-up menus
- Options menus

Each of these types of menus can contain submenus. An arrow next to a menu item indicates that DECwindows will display a submenu when you choose that menu item.

Any menu item followed by three periods (...) is your cue that a dialog box will be displayed if you choose that menu item.(More information about dialog boxes appears later in this chapter.)

The following sections describe how to work with menus and submenus.

3.2.1. Selecting Menus



To select a menu:

1. On the menu bar, point to the name of the menu you want to display.
2. Press and hold MB1.

   This highlights the menu name and displays or pulls down the menu.
3. If you click MB1 on the menu name, the menu will be displayed until you choose a menu item or click MB1 outside the menu.

Note

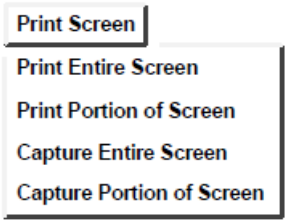
Menus contain two shortcuts that you can use with your keyboard: accelerators and mnemonics.

An **accelerator** is a key on your keyboard that you can use to execute a function in a menu. Accelerators are listed in the menu to the right of the function items if they are available for that function.

A **mnemonic** is an underlined letter in a menu name or a menu item. Mnemonics let you display menus and perform tasks by typing letters on your keyboard.

For more information about using keyboard accelerators, see “Section 3.3.9” and Appendix C.

3.2.2. Choosing Items from Pull-Down Menus



Some **pull-down menus** contain commands. Others list the names of items you can work with.

To choose an item from a pull-down menu:

1. On the menu bar, point to the name of the menu you want to display.
2. Press and hold MB1.
3. While holding MB1, drag to the menu item you want.
4. Release MB1.

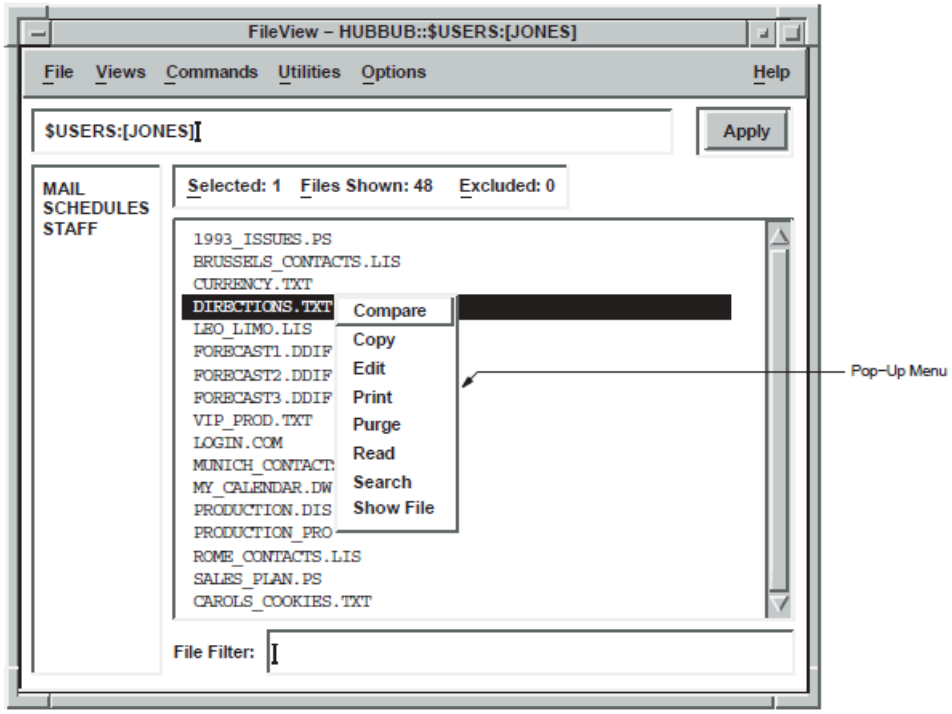
If you change your mind while looking at a pull-down menu, drag the pointer outside the menu and release MB1. The menu disappears and no action is taken.

Tip

Some applications, such as Mail, offer rectangular **push buttons**to duplicate frequently used commands that are also available as menu items. Push buttons are usually found underneath an application's work area—where the application's text and graphics are displayed. To execute these commands quickly, click MB1 on the push button.

3.2.3. Choosing Items from Pop-Up Menus

Pop-up menus make it easier for you to work with files and applications by giving you quick, direct access to an application's commands and functions. Pop-up menus duplicate commands and functions available on pull-down menus. Unlike pull-down menus, which require you to move the pointer to the menu bar, you can display a pop-up menu anywhere in an application's work area.



To display a pop-up menu:

1. Press and hold MB3 on the application's work area.
2. Drag to the menu item you want.
3. Release MB3.

If you change your mind while looking at a pop-up menu, drag outside the menu and release MB3. The menu disappears and no action is taken.

3.2.4. Choosing Items from Options Menus

An **options menu** is a menu that appears in a dialog box and is represented by a graphic rectangle next to the option. An options menu allows you to choose one option from many. In the dialog box, only the current option is displayed. To see the other options from which you can choose, you display the option menu.

To display an options menu:

1. Press and hold MB1 on the current option.

   The options menu is displayed.

2. Drag to the menu item you want.

3. Release MB1.

   The options menu disappears. The option you chose is now the current option.

If you decide not to change the original option, drag outside the menu and release MB1. The menu disappears and no changes occur.

3.2.5. Choosing Items from Submenus

A menu item with a submenu icon—an arrow pointing to the right—indicates that a corresponding submenu is available. If you choose that menu item, the submenu is displayed and you need to refine your choice by choosing a menu item from that submenu.

To display a submenu and choose a menu item from it:

1. On the application's menu bar, press and hold MB1 to display the pull-down menu

2. Drag to the menu item you want.

3. If the menu item has a submenu associated with it, the submenu will appear to the right of the menu.

4. Drag to the menu item you want to choose from the submenu.

5. Release MB1.

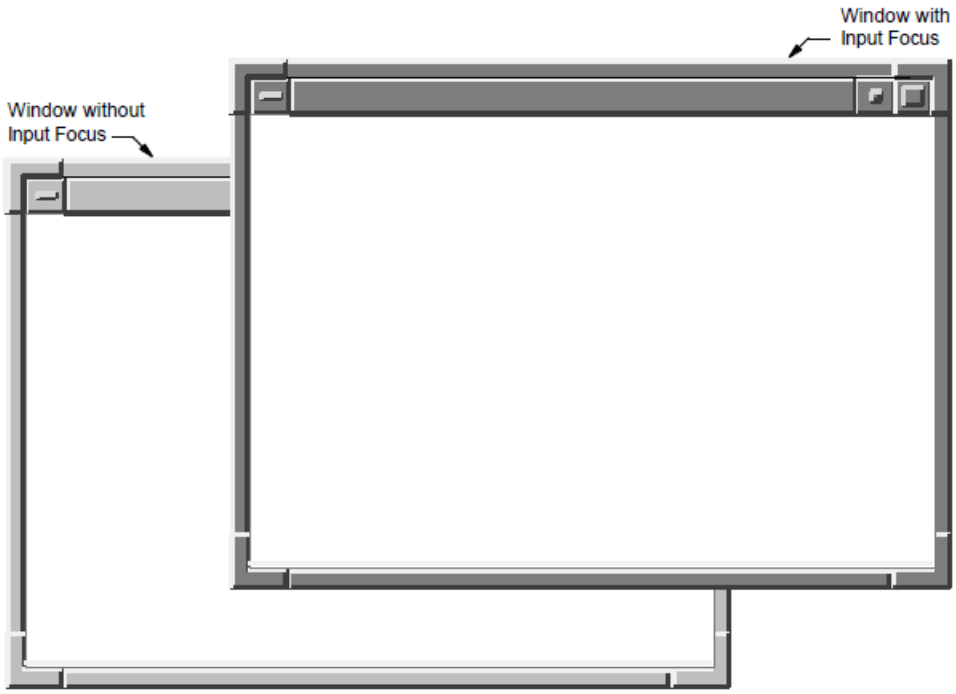
3.3. Managing Windows

When you work with DECwindows, you can have one window or many windows open at the same time. Using multiple windows lets you work with many applications and switch between them. This section explains how to move, size, and arrange windows.

If you're not familiar with the basic components of a window, see Section 1.4 in Chapter 1.

3.3.1. Making Windows Active

When you have more than one window open, DECwindows needs to know which one you're currently working on so that the commands you choose and the text you type end up in the right place. To work with a window,you must make it active, or give it **input focus**.When you make a window active, by default it moves to the front of the stack of overlapping windows and its window frame is highlighted. Any keystrokes you type appear in this window. When you make another window active, the new window is given input focus. Only one window can have input focus at a time.



To make a window active:

1. Point to a location in the window or window frame.

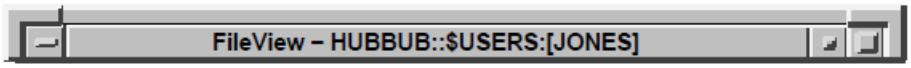
2. Click MB1.

DECwindows provides two ways to give windows input focus: **explicit focus** and **implicit focus**. With an explicit-focus policy, you must move the pointer to a window and click on a mouse button or press a key on the keyboard. This is the default focus policy for DECwindows. With an implicit-focus policy, moving the pointer into a window gives the window input focus. For more information about changing your input focus policy, see Chapter 10.

3.3.2. Moving Windows

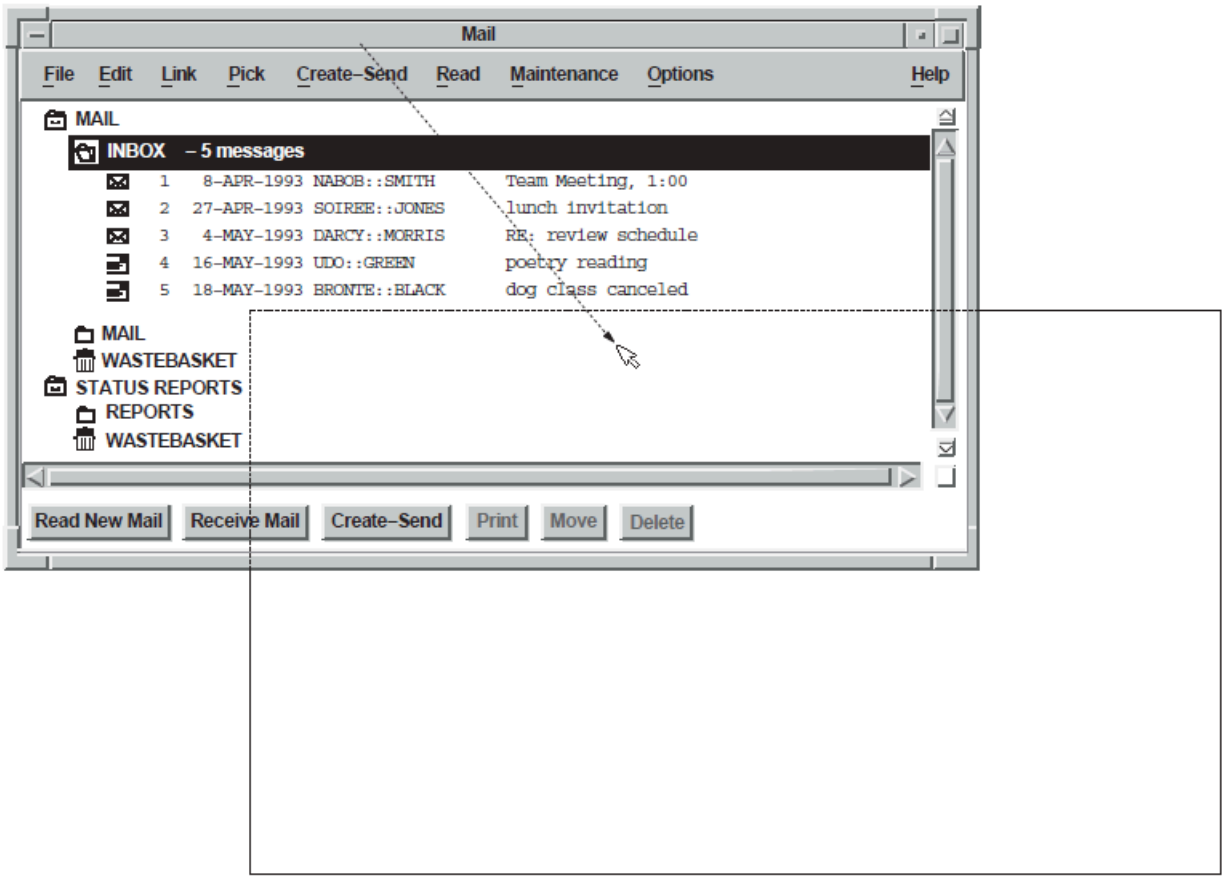
If one window partially obscures another, you might want to arrange them so that each is completely visible. To move a window:

1. Position the pointer anywhere in the window's title bar (except on a button).



2. Press and hold MB1.

   An outline of the window appears.



3. Drag the window outline to the new location.

4. Release MB1.

   If the window was partially obscured by other windows, by default it moves to the front of the stack of windows and is given input focus.

To cancel a move operation, press the Escape key (or F11).

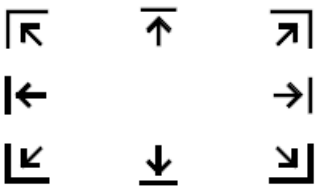
3.3.3. Sizing Windows

Sometimes you want to make one window very large so you can see everything in it. At other times, you want to work with small windows, such as when several applications are running simultaneously. You can change the size of your windows to suit your needs by using the window's resize borders.

To change the size of a window:

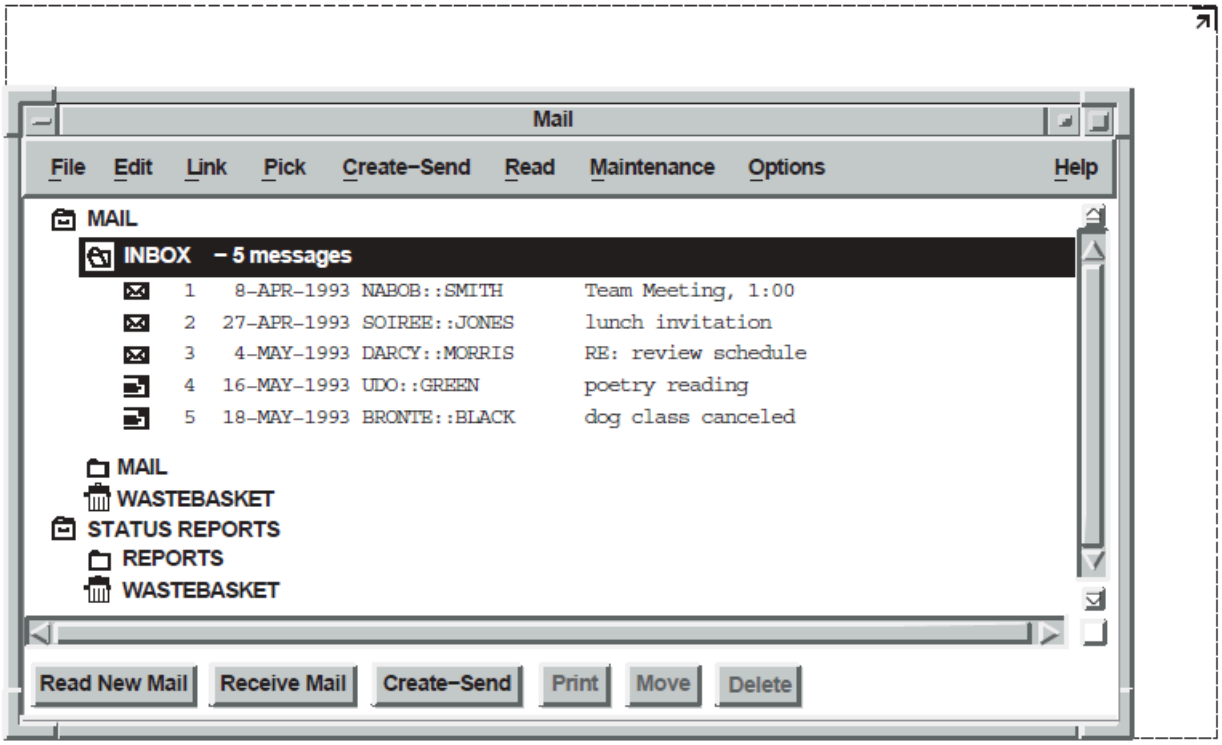
1. Position the pointer on one of the window's resize borders. Note that the resize operation is limited by the side or corner that you select.

   The pointer changes into one of the following **resize cursors**:



2. Press and hold MB1.

3. Drag the resize cursor to the size you want.



   To make the window larger, drag the resize cursor beyond the window border. To make the window smaller, drag the resize cursor inside the window border. The outline stops moving when the window is as small as it can get.

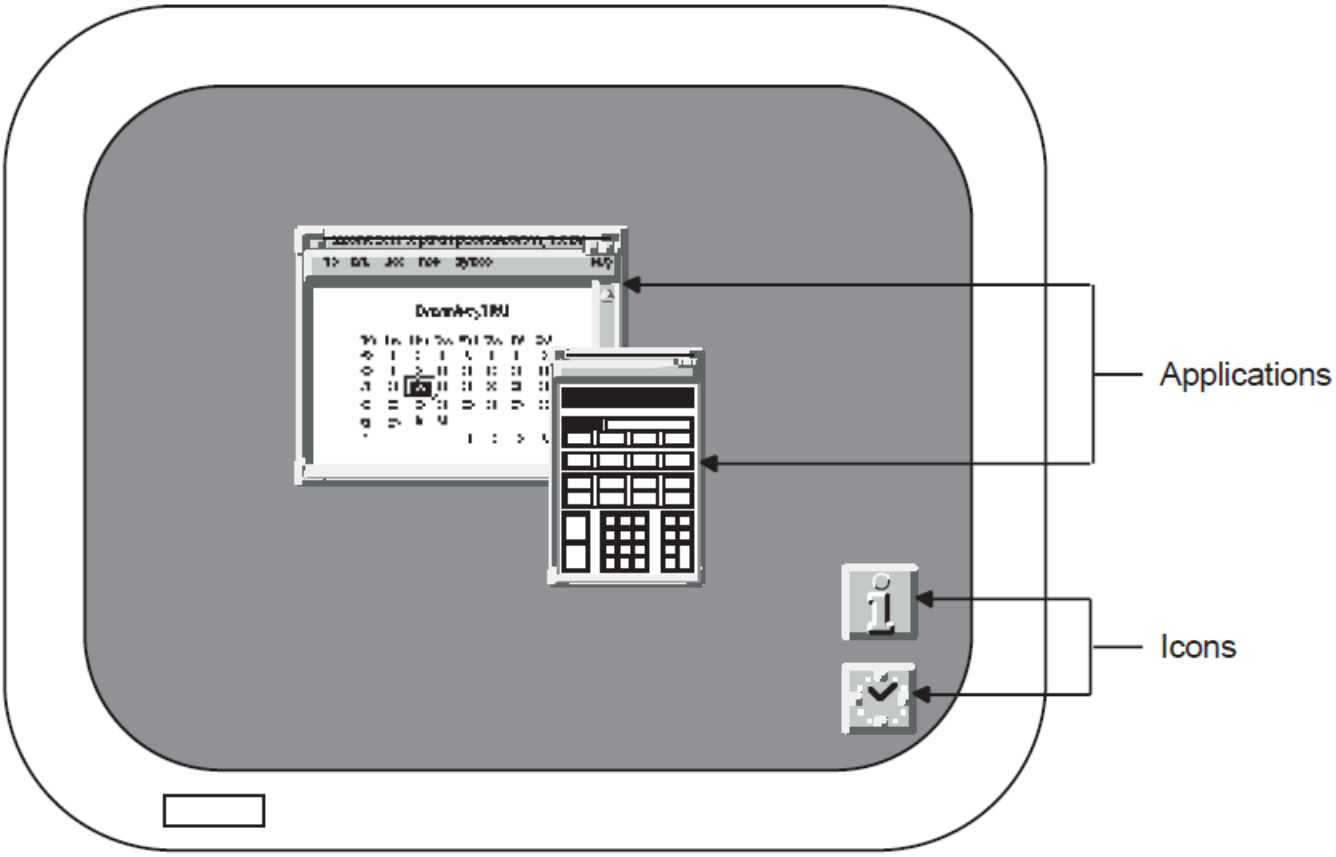
4. Release MB1.

To cancel the operation, press the Escape key (or F11).

3.3.4. Minimizing Windows

If you have several applications running at the same time,you can “free up” space on your screen to run another application by minimizing a window, which means that you shrink the window to an **icon**.An icon is a symbol on your screen that represents an application or window.

When you minimize a window, the application it represents continues to run and remains easily accessible. All processes continue to execute while the application is stored as an icon.



To minimize a window:

1. Point to the window's minimize button.
2. Click MB1.

   The window closes and its icon appears on the Workspace.

Tip

You can also minimize a window by double clicking MB1on the window's title.

3.3.5. Restoring Icons to Windows

When you restore an icon, you open a window for that application. If you have more than one window open and restore an icon to a window, by default the new window is placed at the front of the stack of overlapping windows.

To restore an icon to a window:

1. Point to the icon on the Workspace.
2. Double click MB1.

The window opens, is given input focus, and is available for your use.

3.3.6. Maximizing Windows

If you are working with only one application,you might want to maximize (enlarge) the application window so that it fills your screen. When you maximize a window, your other windows and icons stay on the screen,but they are covered by the maximized window.

To maximize a window:

1. Point to the window's maximize button.
2. Click MB1.

   The window expands to its maximum allowable size.

3.3.7. Restoring Maximized Windows

To restore a maximized window:

1. Point to the window's maximize button.
2. Click MB1.

   The window returns to its original size.

3.3.8. Storing Icons in an Icon Box

By default, icons are displayed as separate windows on the lower right side of the screen. You can move them anywhere on your screen.

If you want to display your icons in one central place,you can store them in an **icon box**. An icon box is a window that contains the icons for all the windows on the screen. To find out how to create an icon box, see Chapter 10.

In an icon box, if you double click on any icon,the window becomes active by default and is raised to the top of the screen. Using the keyboard, you can press Return on a highlighted icon to make the window active. If you Shift+double click on any icon, it will minimize that window.

When a window is restored from an icon, the icon is dimmed. If you do not use an icon box, the icon is not dimmed when you restore a window. Instead, the icon is removed from the screen.

Tip

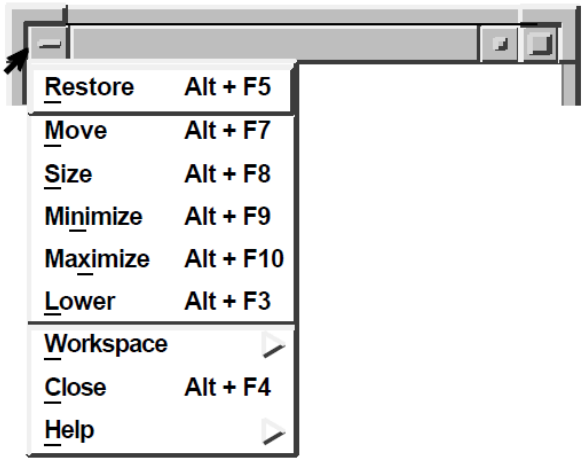
If you store your icons in an icon box, as you close windows your icon box develops gaps where the icons used to be. To rearrange the icons in the icon box to fill in these gaps,choose Pack Icons from the Workspace menu.

Packing icons can also help you to locate icons that are obscured by windows.

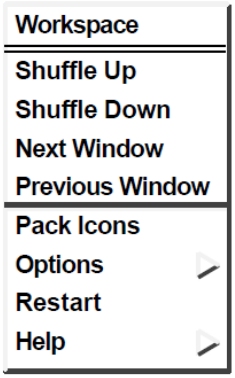
3.3.9. Additional Ways to Manage Windows

The preceding sections describe how to manage your windows by using the buttons and resize borders on the window frame. You can also access many of these window features by using the Window menu and the Workspace menu.

The Window menu contains menu items for working with windows. To display the Window menu, click on the Window Menu button on the left corner of the title bar.



The Workspace menu contains general information for arranging windows and customizing the Window Manager. To display the Workspace menu, click MB1 or MB3 on the Workspace. You can also display the Workspace menu by choosing Workspace... from the Window menu.



3.3.10. Arranging Windows

When you are working with stacked windows and select a window, it moves to the front of the stack and is given input focus. But if a larger window obscures a smaller window, you can't select that small window without moving the larger window out of the way. If you use the title bar to move the larger window, you disrupt your work arrangement.

By using the window-arranging options on the Workspace menu, you can shuffle your windows without moving them to another location. Shuffle Down and Shuffle Up lower and raise windows on the screen without affecting input focus. Next Window and Previous Window change which window is active. By default, they also raise the window to the top of the screen.

To	Do this
Raise the bottom-most window to the top of the screen	Choose Shuffle Up from the Workspace menu.
Lower the top-most window to the bottom of the screen	Choose Shuffle Down from the Workspace menu.
Give input focus to a previously active window	Choose Next Window from the Workspace menu.
Give input focus in the reverse order of Next Window	Choose Previous Window from the Workspace menu.

The Shuffle Up and Shuffle Down menu items are useful if you are working in a large window and want to refer to a window that is obscured. You can shuffle the windows on the screen until the hidden window is displayed and then continue to type in the large window. If no windows are obscuring other windows, then shuffling the windows has no effect.

Next Window and Previous Window are useful if you want to circulate through all the windows on the screen. Using these options differs from shuffling windows. Next Window always brings you to the next window even if it is not obscured and always makes that window active.

For example, suppose you have three windows: a clock, Session Manager, and a DECterm window. The DECterm window is active. If you select Next Window, then the clock may become active. If you select Next Window again, then Session Manager becomes active. If you choose Previous Window, then the clock becomes active again.

Tip

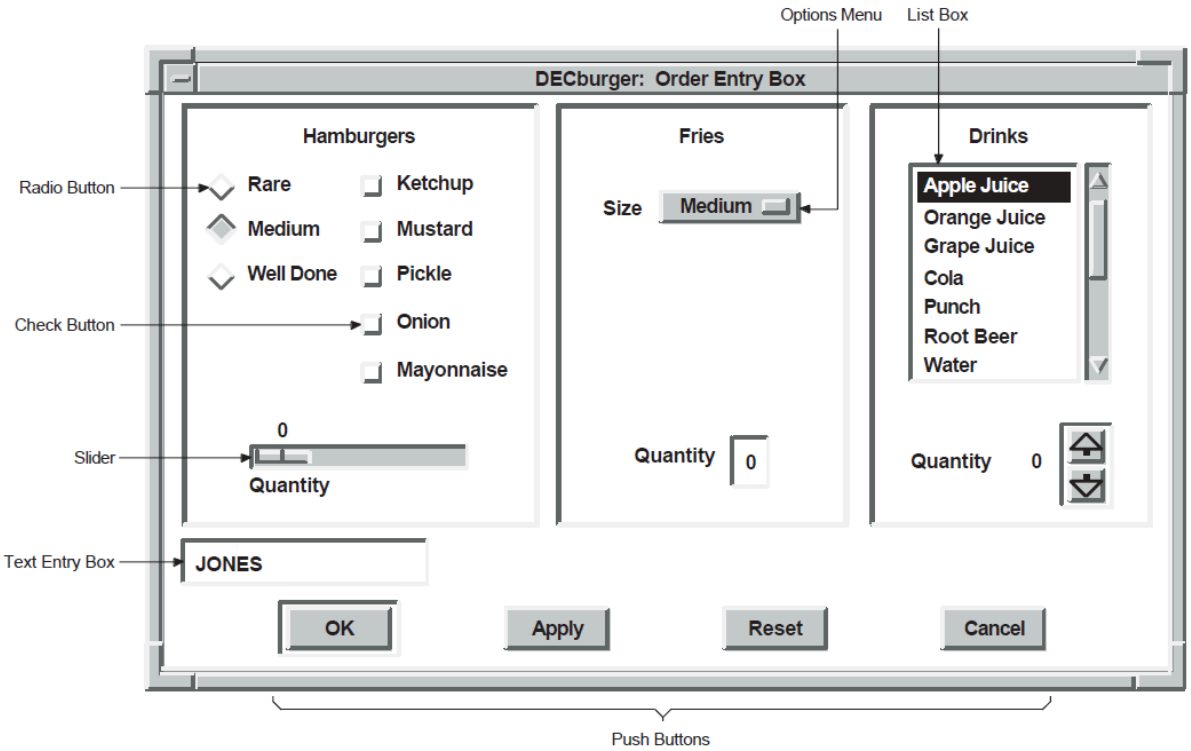
To raise a window that you lowered or shuffled, click on the title bar.

3.3.11. Customizing Your Windows

The DECwindows Motif Window Manager controls the way your windows look(for example, the style and contents of the title bar) and the way they behave when you are working with them. By using the Window Manager's customize menu options,you can customize your workspace and windows to suit your working needs and style. For more information about using the Window Manager's customize options, see Chapter 10.

3.4. Working with Dialog Boxes

DECwindows displays a dialog box whenever it needs additional information from you to carry out a task. Sometimes you need to type text; at other times, you need only click on a button to change a setting.



3.4.1. Supplying Information in Dialog Boxes

Dialog boxes offer various ways to supply information to an application:

- By typing text in a **text-entry box**. A text-entry box is a box in a dialog box where you type information that DECwindows needs to perform a specific task.

  A **text insertion cursor** is visible in each entry box. The text cursor, which blinks when an entry box has input focus,shows you where the text you type will appear. What you type appears to the left of the text cursor. Use the key to correct typing mistakes.

- By clicking on diamond-shaped **radio buttons** or square **check buttons**. Radio buttons let you select one option from many. Check buttons let you turn a setting on or off.

- By dragging the slider in a **scale**. Dialog boxes often contain a scale and slider when you need to supply a numeric value. The arrow in the slider points to the current value.

- By selecting choices (for example, file names) from a list box. Scroll bars appear if the choices do not fit in the list box.

- By clicking on push buttons. Push buttons, such as OK, Apply, and, Cancel,let you tell DECwindows what to do with the information you supplied in the dialog box.

Tip

A double border around a push button indicates that it is the **defaultoption**. Default options are those you will choose most frequently. Usually the OK button is the default option in a dialog box. Whenever you see a button with a double border, pressing the Return key achieves the same result as clicking on that button.

3.4.2. Moving and Changing Settings in a Dialog Box

How you move focus in a dialog box depends on the object—for example, a check button or text-entry box—you want to work with. The following table describes the ways you can move focus and change settings in a dialog box.

To	Do this
Move forward between text-entry boxes	Press the Tab key, or point to the text entry box to which you want to move and click MB1.
Move backward between text-entry boxes	Press Shift+Tab, or point to the text-entry box to which you want to move and click MB1.
Move the text cursor within a text-entry box	Point where you want the text inserted and click MB1, or use the right and left arrow keys to move the text cursor right or left. New characters push existing ones to the right.
Change the numeric value on a scale	Drag the slider on the scale right or left, or point to another location on the scale and click MB1.
Change a radio or check button setting	Point to the radio or check button and click MB1. Or press Return or the space bar.
Arrow keys	Use the arrow keys to move between items in the same group of objects, such as radio buttons.

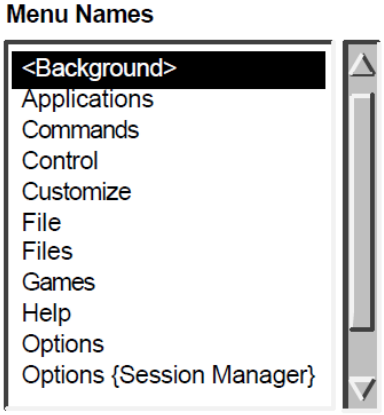
3.4.3. Saving Your Settings

Once you change the settings you want, click on either the OK or the Apply button and the new settings will take effect. If you decide not to change the settings, click on the Cancel button. Some applications save or apply settings in different ways. For more information about saving your Session Manager, File View,or Window Manager settings, refer to the appropriate chapter in Part II.

3.4.4. Making Selections from List Boxes

A **list box** is part of a dialog box that contains a list of items,often file names, from which you can choose. Many applications display a list box when you open or save a file.

To select an item from a list box, point to the item and click MB1. The item you select is highlighted.



3.4.5. Using File Selection Boxes

If an application needs a file name to complete a task, it displays a file selection box. A **file selection box** contains a list box that displays a list of files in the current directory.

If you select a file name in the list box,you can click on OK to open the file. DECwindows also gives you a shortcut for opening files from list boxes: Double clicking on the file name produces the same results as selecting that file name and clicking on OK.

If you want to work with a file that does not appear in the list box, type the name of the file in the Selection entry box and click on OK. Alternatively, use the File Filter entry box to list a subset of files that you can then select from. For example, to list all the files in another directory with the file type TXT, enter the complete directory specification—[JONES.LETTERS]*.TXT—in the File Filter entry box and click on the Filter button. The list of files that meet the qualifications is displayed. Double click on the name of the file you want to open.

3.5. Scrolling

Some application windows display **scroll bars**, which let you view the text that does not fit in a single window. Some windows have both horizontal and vertical scroll bars.

A scroll bar consists of **stepper arrows** at either end of the **scroll region**. The **slider** is the thicker box that overlays some of the scroll region. If the slider is at the top of the scroll region, the beginning of the file or list is visible. If the slider is at the bottom of the scroll region, the end of the file or list is visible.

The length of the slider is relative to the total amount of text in the document and indicates how much more text remains to be displayed. For example, a short slider indicates that much text remains to be displayed. A long slider that completely fills the scroll bar indicates that all the text is currently displayed.

The following table describes how to use scroll bars:

To scroll	**Do this**
One line at a time	Click MB1 on the stepper arrows.
Forward one window of text at a time	Point to the scroll region below the slider and click MB1.
Back one window of text at a time	Point to the scroll region above the slider and click MB1.
Continuously through the list or file one line at a time	Press and hold MB1 on either stepper arrow.
Continuously through the list or file one window of text at a time	Press and hold MB1 in the scroll region.
Move slider to a particular position	Press MB2 in the scroll region.
To another location in the list or file	Drag the slider to a position in the scroll region that corresponds to the general location you want to see. If the slider is at the top of the scroll region, you are viewing the beginning of the list or file. If the slider is in the middle of the scroll region, you are viewing the middle of the list or file. Cancel the drag by clicking another mouse button before releasing MB1.

Chapter 4. Performing Common Tasks

DECwindows applications let you perform many basic tasks the same way. For example, Mail and File View display the same dialog boxes for printing files and mixing colors. This chapter describes such commonly used DECwindows tasks as getting help, editing text, printing files, and mixing colors.

4.1. Getting Help

You can get help in DECwindows applications by using the application's Help menu,the Help button in a dialog box, or the Help key on the keyboard (for some applications).

Help displays information about the application, screen objects,tasks you can perform, and general concepts. You can quickly change your inquiry using any of the following methods:

- Double-clicking on hotspots in the text. (See “Section 4.1.1.”)
- Selecting Search Book from the Search menu to search for a particular string in the help text.
- Scanning through the topics using the screen or topic arrow buttons in the Help window.
- Scanning through the topics by selecting Next or Previous Topic from the View menu.
- Viewing the full list of topics by selecting Open Navigation Window from the File menu.
- Retracing any of your steps by selecting the Go Back button in the Help window or from the View menu.

You can also copy help text and paste it in another window, save help information in a file, and print help text.

4.1.1. Invoking Help

To get help for any application, display the Help menu by clicking on Help on the menu bar. Choose one of the following menu items for the information you want to display.

- For general information about the application, choose On Window.
- For product information such as the version, choose On Version.
- To look up terms specific to the application, choose Glossary.
- For context-sensitive help, choose On Context.

Although the items in the Help menu may vary, all applications should contain On Window and On Version menu items.

When you select On Window, a Help window opens with general help for the application. Additional topics are often listed at the end of each help topic or in the help text. These topics are called **hotspots** and are highlighted when you move the pointer over the text. To select these topics, point to them and double click MB1. To highlight all the hotspots, choose Hotspots from the View menu.

You can navigate through the help text by using the buttons at the bottom of the Help window.

- Use the Screen arrow buttons to move to the next or previous window.

If there are no more windows, Help automatically moves to the next or previous topic.

- Use the Topic arrow buttons to move to the next or previous topic.

  To view a topic in a separate window, click on the topic in the help text and choose Open Topic in New Window from the File menu.

- Use the Go Back button to return to any help topic that you already displayed.

  You can continue to use Go Back until you have reached your first help topic.

- To view a list of all the help topics,choose Open Navigation Window from the File menu.

  Help displays a new window with the topic list. Double click on a topic to display the help text. Some topics contain subtopics,which are displayed with right arrows or down arrows before the topic name. Double-click on the right arrow to view the subtopics. Double-click on the down arrow to remove the sub-topics from the view. You can also select one or more topics and then choose Expand or Collapse from the View menu.

To get help about specific screen objects such as menu items and text-entry boxes,

1. Choose On Context from the Help menu.

   The pointer changes to a question mark.

2. Click on the screen object.

   The Help window displays information about the object you selected.

4.1.2. Exiting Help

To exit Help, click on Close in the Help window or choose Close Topic from the File menu.

For more information about Help, choose Using Help from the Help menu in the Help window.

4.2. Editing Text

DECwindows provides many ways to edit text, which save you from retyping long file names or large blocks of text. Most applications, including the desktop applications, let you move and copy text

- From one place in a window to another.

- From one window to another window. For example, you can copy text from one Create–Send window in Mail to another.

- From one application to another application. For example, you can move a picture from Paint onto a Cardfiler card.

In addition, most applications provide an Edit menu that allows you to cut,copy, and paste text and graphics.

Finally, most applications define specific keys to let you perform basic text editing. These keys, described in “ Section 4.2.5,” let you move the cursor and delete small amounts of text efficiently.

4.2.1. Selecting Text

Before you can copy or move text to other locations within a window or between windows, you must select the text. You can copy text in increments of any size, including a word, a line, or a paragraph at a time. Repeatedly clicking MB1increases the amount of text you select. In other words, every time you press MB1, you select more text.

The following table describes how to select text.

To	Do this
Position the cursor where you want the selection to start	Point to the location and click MB1.
Select a word	Point to the word and double click MB1.
Select a line	Point to the line and triple click MB1.
Select continuous text, from the original selection point to the point where the button is released	Press and hold MB1 and drag the pointer through the text.
Extend the current selection	Simultaneously press and hold the Shift key and MB1 while dragging the pointer through the additional text.
Extend the current selection to where the pointer is positioned	Press and hold the Shift key and click MB1.

In addition, some applications provide a way for you to select larger blocks of text at a time. For example, you can select an entire mail message by pointing to the text and clicking MB1 five times.

You can select only one piece of text at a time. By selecting text in one application, you cancel any other text selection established in the same window or in another application.

4.2.2. Copying Text

If you can type text in a window, you can select and copy that text from one place to another in the same window, between windows of the same application(between Mail's main window and the Create–Send window, for example), or between different applications.

You can also copy text from a FileView window—including FileView's file list—into an application that supports text entry.

To copy text in a window, between windows in the same application, or between applications:

1. Select the text you want to copy, using the text selection techniques described in Section 4.2.1.
2. Position the cursor where you want the text copied by pointing and clickingMB1.
3. Click MB2.

   The text is copied to the new location.

Some applications use different methods for copying text. See each application's manual for an explanation of how to copy text in that application.

The window from which you selected the text takes input focus. If you copied that text back to the window you were working in, you had to reestablish input focus for that window. Sometimes, however, you just want to grab a piece of text from another window without worrying about which window has

input focus. That's where the QuickCopy feature comes in handy: You can quickly copy text from another window to your current window without losing input focus in your current window.

To use QuickCopy:

1. In the current window, position the cursor where you want the text to be copied to by pointing and clicking MB1.
2. In the other window, point to the text you want to copy.
3. Press and hold MB2.
4. Drag across the text you want to copy.

   The text is highlighted as you drag across it.
5. Release MB2.

   The text is copied to the new location in your current window.

4.2.3. Moving Text Between Windows

DECwindows also lets you work in one window, select text from another, and move that text to the current window without losing input focus in your current window. The text is deleted from its original location.

To move text from one window to another:

1. In the current window, position the cursor where you want the text pasted by pointing and clicking MB1.

   Make sure the window has input focus.
2. In the other window, point to the text you want to move.
3. Press and hold Ctrl+MB2.
4. Drag across the text you want to move.

   The text is highlighted as you drag across it.
5. Release Ctrl+MB2.

   The text is moved to the new location and deleted from the old.

Some applications use different methods for moving text. See each application's manual for an explanation of how to move text in that application.

4.2.4. Deleting Text with Pending Delete

When you mark text for pending delete, you can delete large blocks of text with one keystroke instead of pressing the key repeatedly. You mark text for pending delete by selecting it as described in “ Section 4.2.1.” The selected text is deleted when you press the once. You can then type new text.

To cancel a pending delete selection (once you select the text but before you press a key), point to the selected text and click MB1.

4.2.5. Text Editing Key Definitions

You can use the text editing techniques described in the following table to move the cursor or delete text in most DECwindows applications. Use the arrow keys to move the cursor one character at a time.

To	Press
Move the cursor to the next word	Shift+right arrow keys.
Move the cursor to the previous word	Shift+left arrow keys.
Move the cursor to the beginning of the line	F12 key or Ctrl+H keys.
Move the cursor to the end of the line	Shift+F12 keys or Ctrl+E keys.
Move the cursor forward between entry boxes	Tab key.
Move the cursor backward between entry boxes	Shift+Tab keys.
Delete the characters to the left of the cursor up to and including the beginning of the word	F13 key or Ctrl+J keys.
Delete the characters to the right of the cursor up to and including the end of the word	Shift+F13 keys.
Delete the character to the left of the cursor and move all text to the right of the deleted character one space to the left	key.
Delete the character after the cursor and move all text to the right of the deleted character one space to the left	Shift+ keys. In overstrike mode, Shift+ deletes the character under the block cursor.
Delete all characters to the start of the line	Ctrl+U keys.
Refresh the window	Ctrl+R keys.

4.3. Printing Files

DECwindows allows you to print the files that you create and work with in applications. For example, you can print a mail message or a drawing you created in Paint. This section describes how to print files.

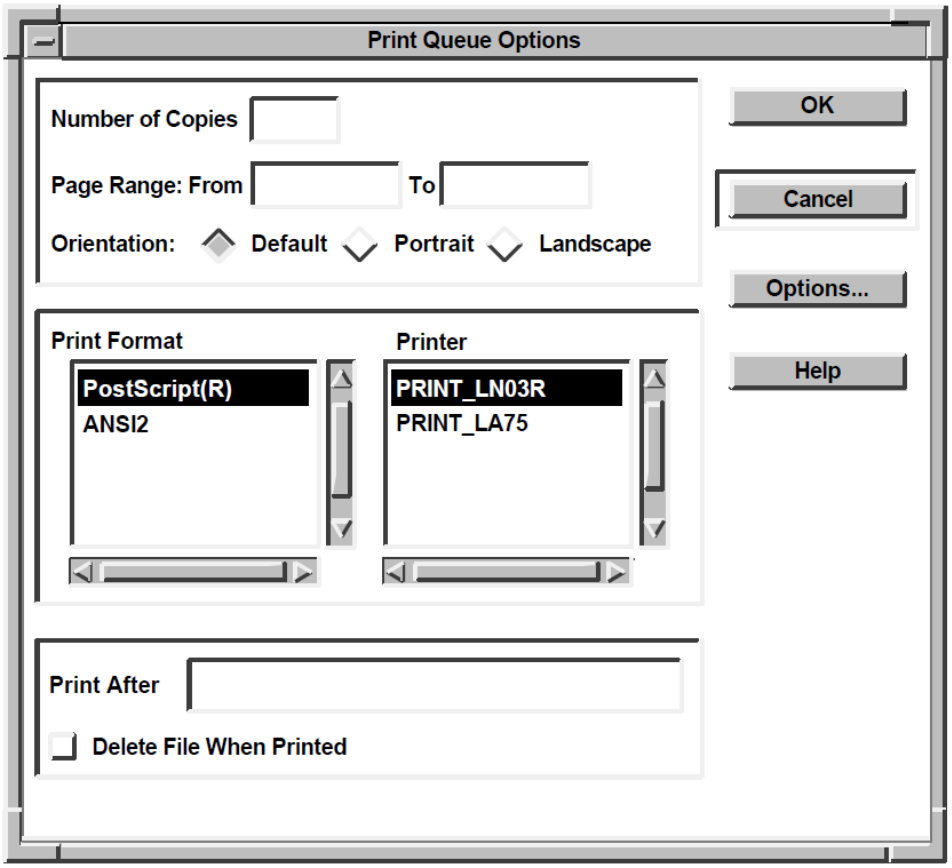
Whenever you choose the Print command in an application, the application creates a file that it then sends to the printer. You can also specify further printing instructions if you want to execute more sophisticated printing tasks. While your job is being printed, you can continue to work in your current application or go on to other tasks.

4.3.1. Printing Files from Applications

To print something currently being displayed on your screen—for example,a mail message—choose Print from the application's menu options. The file is sent to a print queue,which holds jobs that are waiting to be printed. Your print job is sent to the next available printer that can accept print jobs from that application.

DECwindows also lets you provide additional information about how you want your job printed. For example, you can specify the print queue to which you want your job sent and how many copies you want printed.

To provide this additional printing information, choose Print... from the application's File menu. The application displays a dialog box.



From the Print dialog box, you can change any of the following settings: By default, one copy of a job is printed. To print more copies, type the number of copies you want. When you print a file, the entire file is printed. However, if you want to see page 2 of a five-page mail message, you can save paper by printing only that page. To change the page number at which the file starts printing, type a number in the From entry box. Do the same in the To entry box. For example, to print only page 2 of a five-page mail message, type a 2 in both entry boxes. The Print Format list box contains the file formats produced by the current application for printing. These formatted files can be printed only on printers that recognize the specific format.

If your system manager assigned the appropriate print queues to each print format, the Printer list box displays only those printers that can support the chosen print format. If you choose another print format, the Printer list box changes its display accordingly.

For example, card files you create with Cardfiler are formatted as text files. Every print queue that can accept text files—from line printers to sophisticated laser printers—is listed in the Printer list box. Paint,however, produces files formatted for PostScript and ANSI2 output. If the chosen print format is PostScript, the Printer list box displays LN03Rand LPS40 print queues. If the chosen print format is ANSI2, only LN03,LN03R, and LPS40 print queues are displayed.

Note that FileView and Mail display all print formats that are supported by DECwindows, no matter what the file type of the file you selected for printing. Neither FileView nor Mail converts files from one format to the print format you choose. For example, if you select a TXT file in FileView,choose the Print command from FileView's Files menu, click on the Show Queue Options button in the Print dialog box, and click on OK, the Print Format list box displays all print formats, not just the text format.

The first print format in the list is the default option. If your system manager assigned the appropriate print queues to each print format, the Printer list box lists the print queues that can accept the chosen print format.

If the queue defined on your system as SYS$PRINT can accept print jobs in the chosen print format, that queue is listed first. The first print queue in the list is the default option; your print job is sent to the chosen queue. To change the print queue to which your print job is sent, select another print queue. Use the scroll bars to view the list of available print queues. All printers except line printers can print pages in two different page orientations—portrait and landscape. In **portrait** orientation,characters print parallel to the short edge of the paper. For example, this page is printed in portrait orientation. In **landscape**orientation, characters print parallel to the long edge of the paper. Note that the definitions of portrait and landscape can be altered if you choose advanced print settings.

Your system manager has assigned each printer a default orientation. The printer uses this default orientation when it prints your job. To change the orientation for your print job, point to the portrait or landscape option and click MB1. Once you choose your print settings, your job is immediately submitted to the chosen print queue. You can change the time at which your job is actually printed by changing the information in the Print After entry box. By requesting that a print job be held until a specific time, you can ensure that a large print job is printed after hours, when fewer users are sharing printers.

To change the time at which your job is printed, double click on the Print After entry box and type the time, using the following format:

```
19-APR-1993 14:32
```

This print job will be held for printing until 2:32 p.m. on April 19, 1993.When you tell DECwindows to print a text or graphics file, it sends a copy of that file to the printer. These print files are not deleted once they are printed. This setting is indicated by an unshaded button. If you want to delete the print file after it is printed, click on the Delete File When Printed button.

This button might not be displayed in all applications.

4.3.2. Using Advanced Print Settings

Click on the Options... button in the Print dialog box to display another print dialog box that lets you specify advanced print settings for your print job.

Some of these settings, including File Start Sheet and Message Log, correspond to qualifiers available from the DCL command PRINT. Other settings, including Sides and Layup Definition, correspond to options available on certain PostScript printers. See the manual that accompanies your printer for more information about specifying these settings.

4.4. Mixing Colors

Many applications let you change default colors by choosing your own colors. If an application provides this option, it displays a color-mixing dialog box when you choose certain settings.

This section describes color-mixing dialog boxes and explains how to use them to specify your own colors.

4.4.1. Color Models

The color mixer offers the following color models for selecting and defining colors:

- Picker color model
- Hue, Lightness, Saturation (HLS) color model

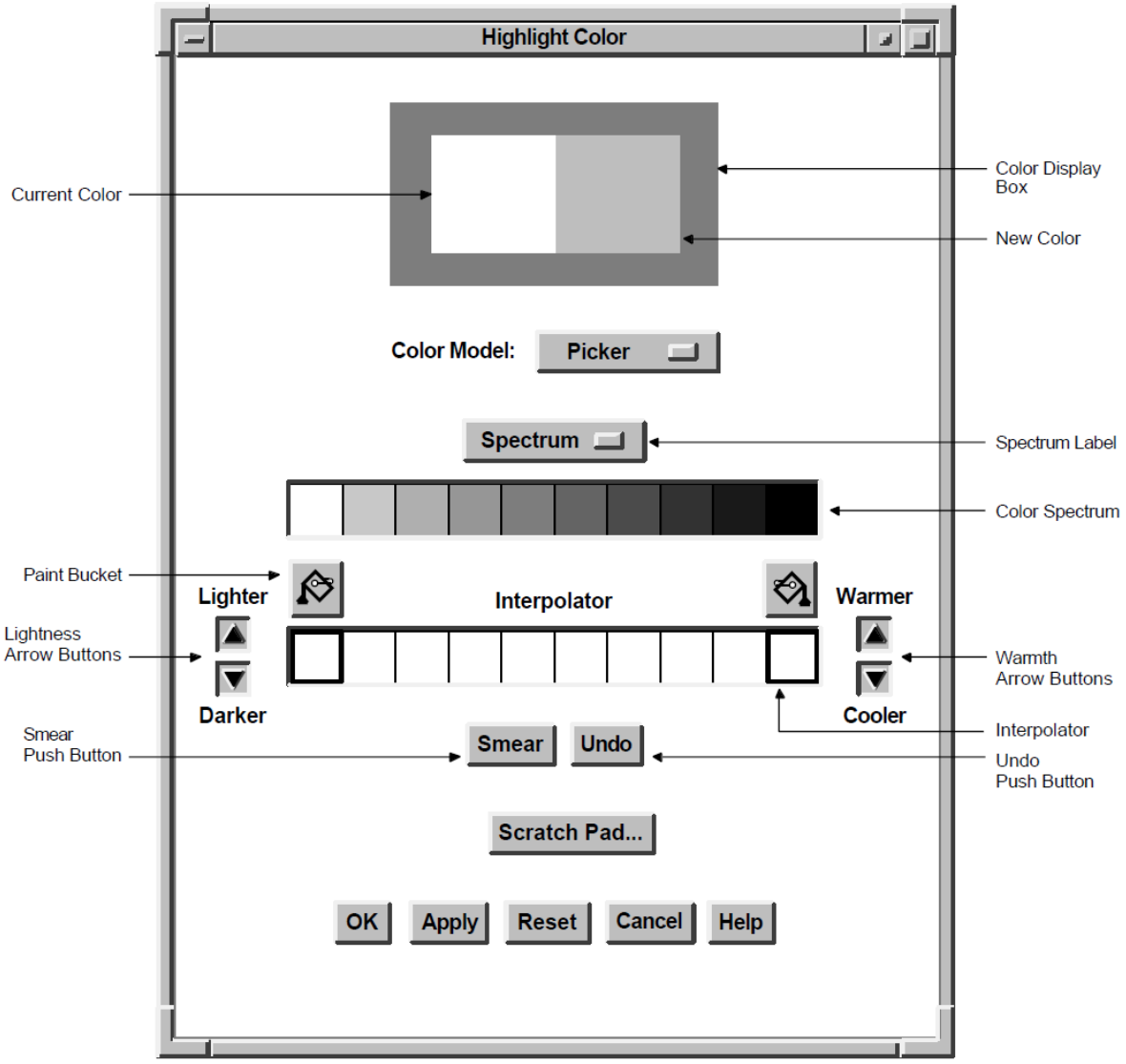
- Red, Green, Blue (RGB) color model
- Browser color model
- Greyscale color model

You can use each of these models alone, or you can use them in any combination. For example, you can use any color model to select a color and then use the Picker color model to blend the selected color.

The following subsections describe how to use each of the color models to choose your own colors.

4.4.1.1. Picker

The Picker is the default color model for the color mixer. It contains the following components:



The color display box displays colors as you mix them.

The color spectrum is a static collection of colors.

The Spectrum options menu lets you set the spectrum to one of the following common color palettes:

- “Rainbow” spectrum (white, red, orange, yellow,green, blue, blue-violet, violet, brown, and black)

- Pastels
- Vivids
- Earthtones

These four color palettes provide a wide variety of colors from which you can choose. The Spectrum options menu also includes any palettes specific to an application.

When you click MB1 on a spectrum tile or interpolator tile,that color becomes the new color. The tile also becomes highlighted, which identifies it as the currently selected color.

You can use the selected color without modification, or you can do one or more of the following tasks:

- Use the interpolator to smear (blend) the selected color into various shades.
- Use the arrow buttons to make the color lighter or darker,warmer or cooler.
- Switch to another color model and use the features of that model to modify the current selection.

Use the two paint buckets to load the interpolator with the colors to blend:

1. Click MB1 on a spectrum tile or interpolator tile.

   The color display box displays the color of that tile.

2. Click on a paint bucket, which fills the interpolator end tile below it with the selected color.
3. Fill both interpolator end tiles or only one; the color of the empty interpolator end tile defaults to white.

As an alternative to the paint buckets, you can use the eyedropper to load the interpolator. Clicking and holding MB1 on a spectrum or interpolator tile, the original-color tile, or the new-color tile causes the pointer to become an eyedropper filled with the color of that tile.

You can move this eyedropper to the interpolator and use it to fill one of the two end tiles by clicking MB1 on one of the tiles. If you do not position the eyedropper directly on one of the two end tiles, the tile closest to the end is filled with the eyedropper color. Note that the cursor must be inside the interpolator.

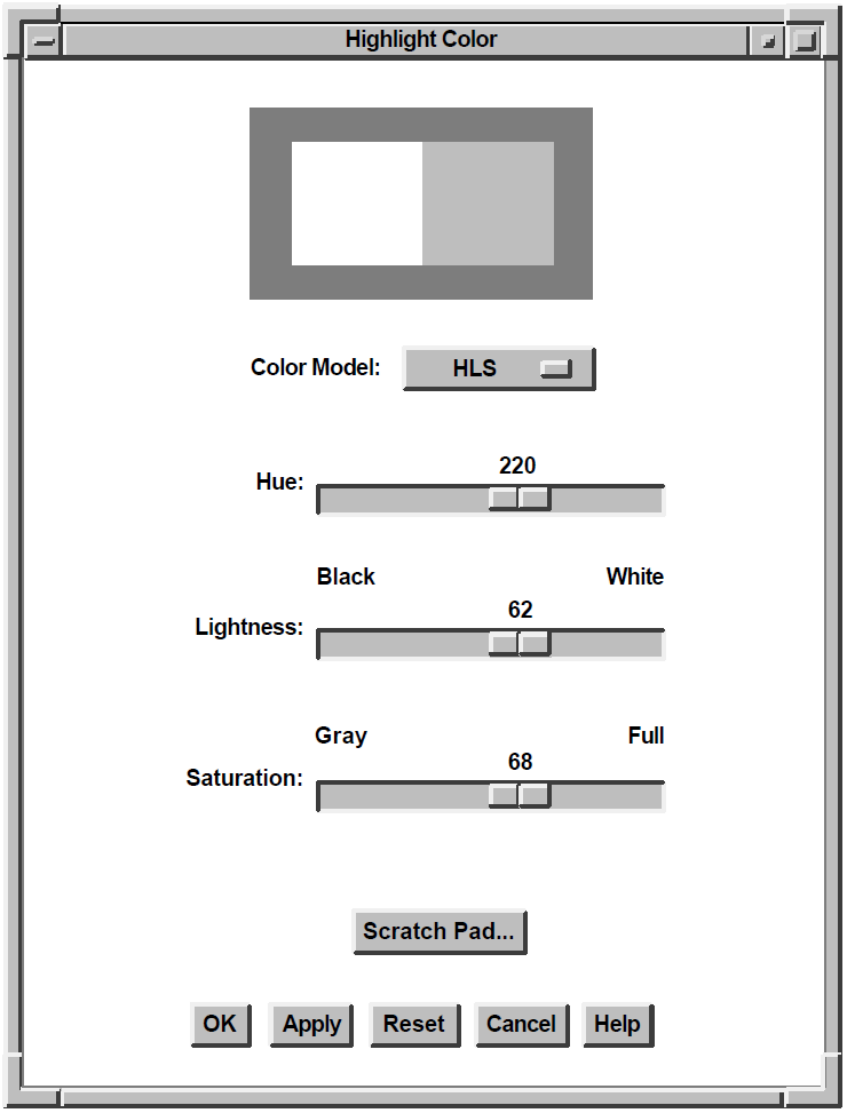
Use the Undo button to reverse the last interpolator action, which can be a smear, the filling of an end tile, or the activation of one of the warmth or lightness adjustment buttons.

4.4.1.2. Hue, Lightness, Saturation (HLS)

In the Hue, Lightness, Saturation (HLS) color model, you specify a color in terms of three characteristics: hue, lightness, and saturation.

- Hue is color.
- Lightness is color intensity—that is, the amount of the color.
- Saturation is the purity of the color, or how much the color is diluted by white.

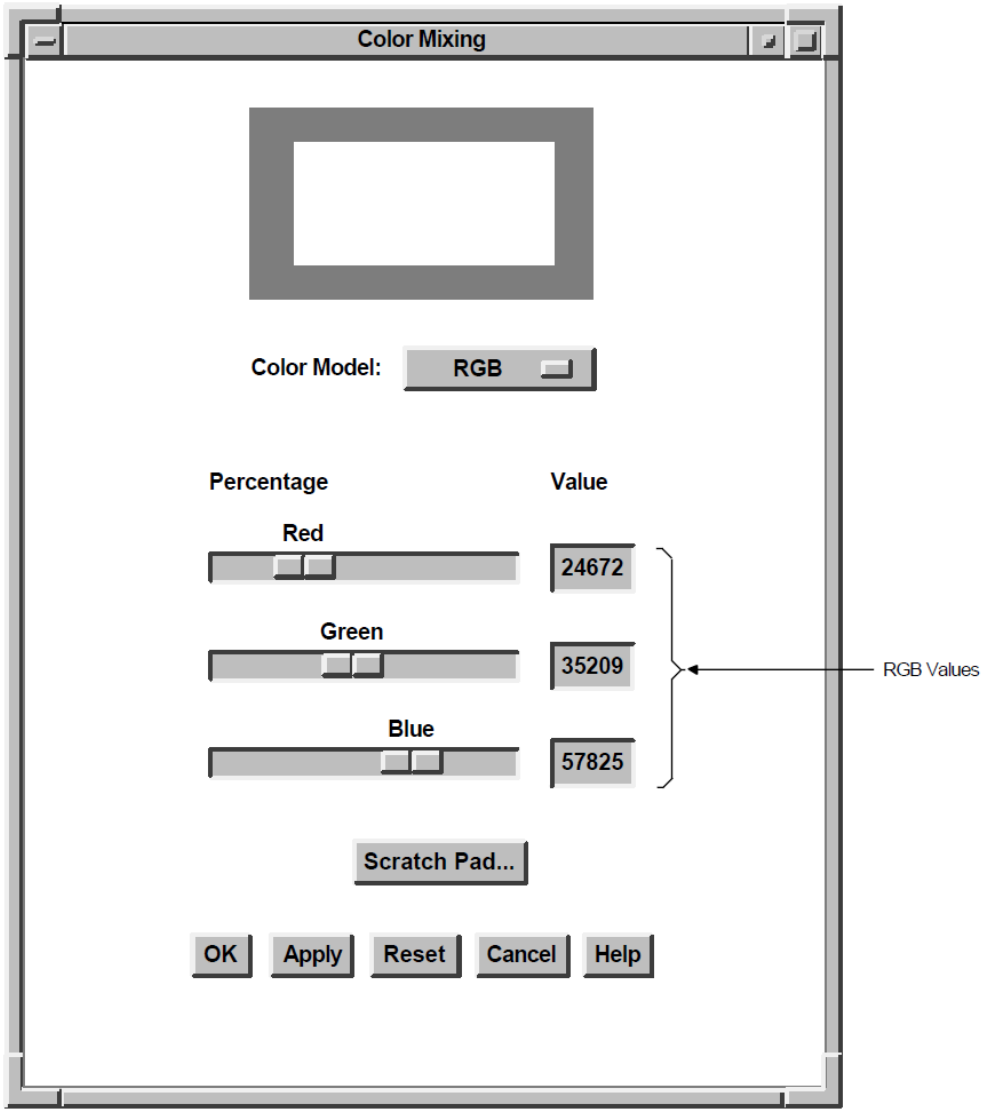
The HLS color model contains three scales that represent the ranges of hue, lightness, and saturation.



4.4.1.3. Red, Green, Blue Color Model

In the RGB color model, you specify a color as a mixture of different intensities of red, green, and blue.

The RGB color model contains three scales that represent the ranges of intensity of red, green, and blue.

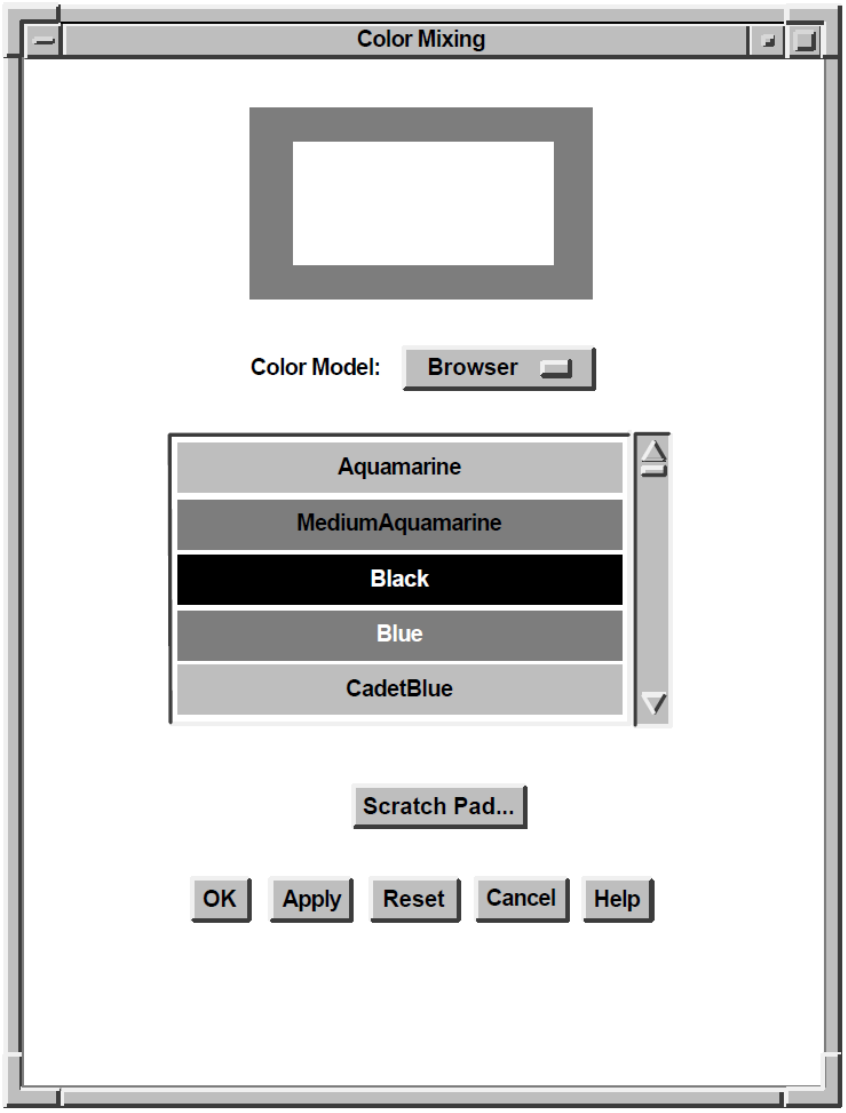


The RGB color model is the default color model on monochrome systems.

4.4.1.4. Browser

The Browser color model is a scrolled window that displays a list of X11 named colors. Each button in the scrolled window shows the name of anX11 color. Use the scroll bar to scroll through this color list.

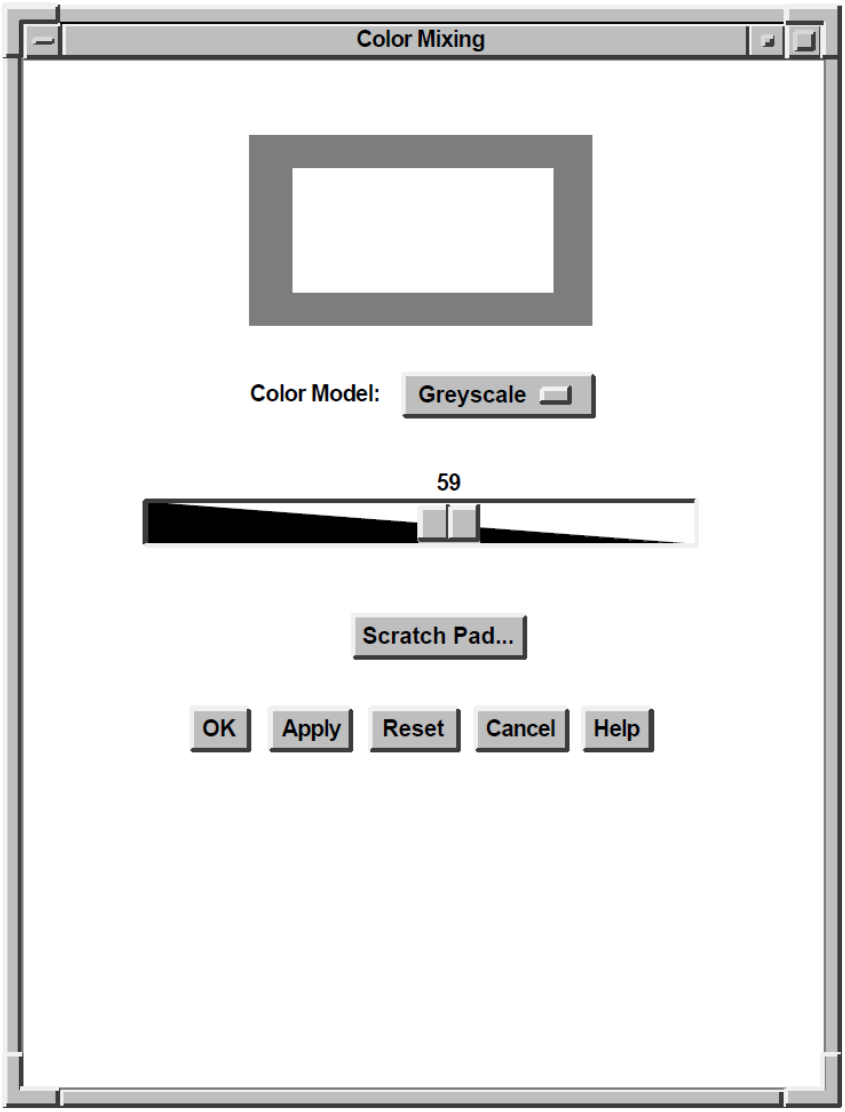
When you click MB1 on a color in the list, the color display box becomes filled with that color.



The color browser is available on all systems.

4.4.1.5. Greyscale

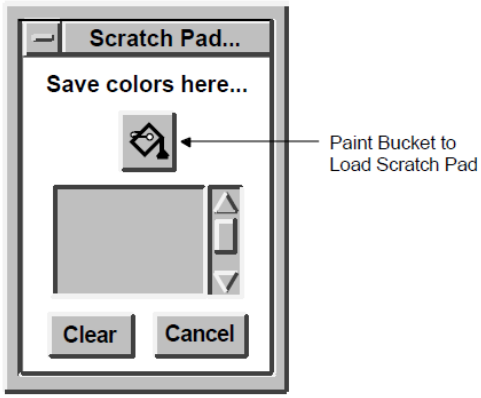
The Greyscale color model contains a scale that lets you mix gray shades ranging from black to white. Note that switching to the Greyscale color model converts the current new color to gray.



4.4.2. Scratch Pad

The scratch pad lets you store intermediate colors for later use in color mixing.

To access the scratch pad, click on the scratch pad button in any of the color models.



To store the currently selected color in the scratch pad, click on the paint bucket above the scratch pad color tile. The scratch pad adds that color to its list of stored colors. You can scroll through the list with the scroll bar.

Use the Clear button to cancel this list and return the scratch pad to its initial state.

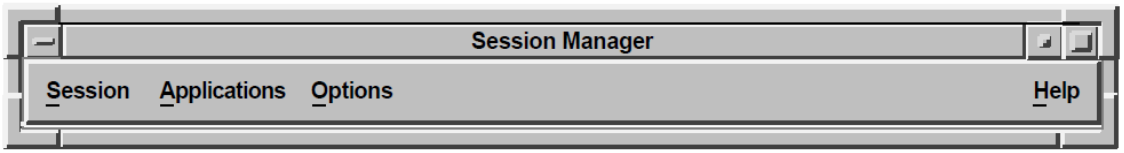
Note that the currently selected color can be one of many color tiles on the Picker model. When using other color models, however, you can select only the new-color and original-color tiles.

To set the new-color tile to a scratch pad color, scroll to the new color and click on the scratch pad color tile. The new-color tile changes, and the scratch pad tile is highlighted. In the Picker model, this highlighting indicates that you can now dump the scratch pad color into one of the interpolator end tiles by using the paint bucket buttons.

Chapter 5. Using Session Manager

Session Manager is the key to using DECwindows. After you start a DECwindows session, you use Session Manager to manage your session and your workstation environment.

When you start a session, DECwindows displays Session Manager's menu bar.



This chapter describes how you can use Session Manager to run applications,keep track of work in progress,define logical names, and set process privileges.

For information about how to start, pause, and end a session, see Chapter 2.

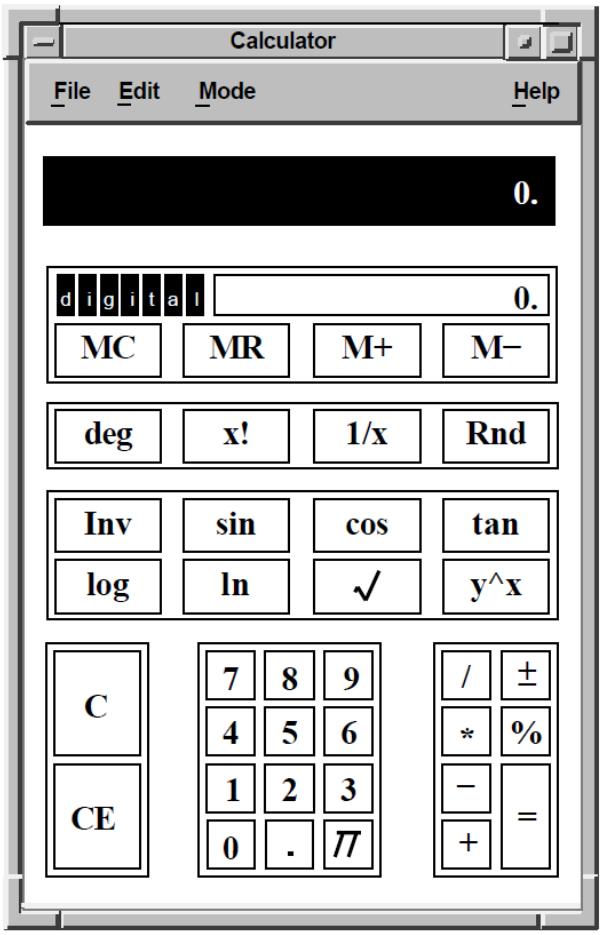
5.1. Running Applications

To run an application:

- Click MB1 on Session Manager's Applications menu to display the applications available on your system.

- From Session Manager's Applications menu,choose the application you want to use.

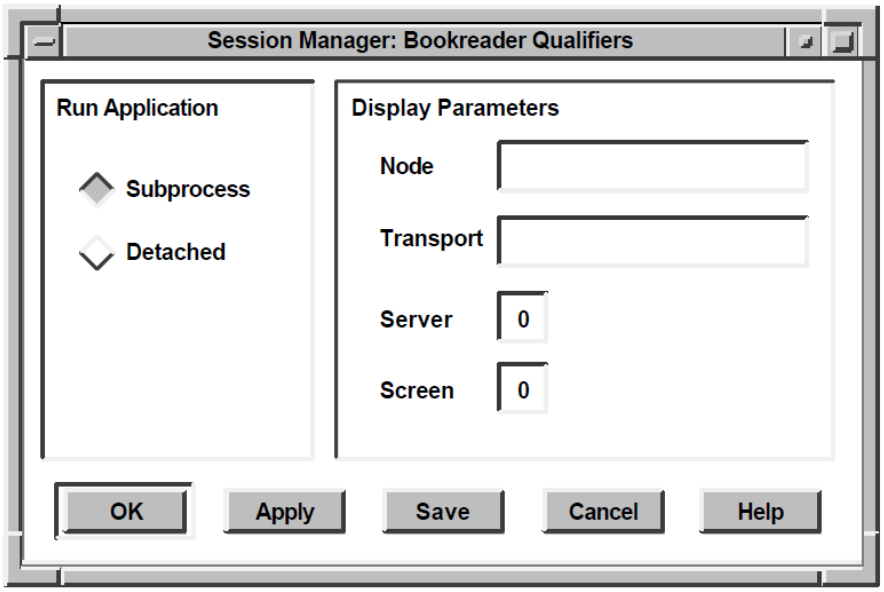
  DECwindows displays the application in a window. For example, if you choose Calculator from Session Manager's Applications menu, DECwindows displays the following window:



As noted in Chapter 1, you can get help on any DECwindows application by using DECwindows Help. For more information about DECwindows Help, see Chapter 4.

5.2. Using Application Qualifiers

By default, Session Manager runs applications by using a set of default qualifiers. To change theway DECwindows runs an application,choose the ellipsis (...) next to the application on Session Manager's Applications menu. Session Manager displays the application's Qualifiers dialog box.



From the application's qualifier dialog box, you can change the following settings: When you start an application, the application automatically runs as a subprocess of Session Manager's process or as a detached process. A subprocess of Session Manager's process shares Session Manager's quotas and environment. A detached process is a fully independent process.

To run an application as a subprocess, click on the Subprocess button. To run an application as a detached process, click on the Detached button. You can change the following application display parameters:

- Node
- Transport
- Server
- Screen

  For more information about using the Screen display parameter, see “ Section 5.2.1.”

By default, an application runs with the same display parameters as Session Manager. For more information about using display parameters to run remote applications, see Chapter 12.

5.2.1. Running an Application on a Multiscreen System

If you are using a workstation that supports more than one screen, you can display applications on any of the available screens. To do this, enter the screen number in the Screen entry box in the application's Qualifiers dialog box.

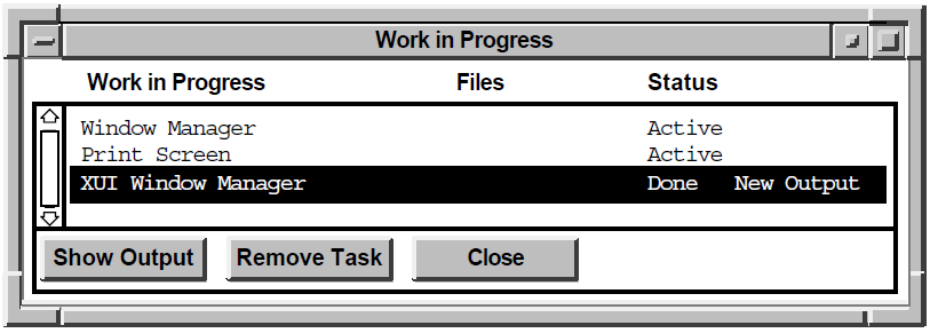
DECwindows displays the application on the screen you specified.

5.3. Keeping Track of Work in Progress

Session Manager keeps track of your currently running applications and FileView tasks in a Work in Progress dialog box.

To display the Work in Progress dialog box, choose Work in Progress... from Session Manager's Session menu.

Session Manager displays the Work in Progress dialog box.



The Work in Progress dialog box remains open until you close it.

The Status column tells you the task's status. This status can be any of the following:

Status	Meaning
Starting	Application is starting but is not yet displayed.
Active	Task is currently executing.
Pending	Task cannot execute because you have exceeded the number of tasks—called subprocesses—you are allowed to execute. If several other tasks are executing, this status changes to Active when those tasks are completed.
Error	Session Manager cannot execute the task successfully.
Done	Task is complete.
Stopped	Task has been requested to exit, but it is not terminated. When the task stops, Session Manager removes the task entry in the Work in Progress box, unless the task produces output.
Show Output	Task has produced output. To display task output,click on the Show Output button.

5.3.1. Canceling a Task

To cancel a task while it is pending or executing,select it in the Work in Progress dialog box and click on the Stop Task button. If the task does not respond immediately,it will be put in the stopped state. To remove a task entry that is stopped,click on the Remove Task button.

5.3.2. Looking at Task Output

If you use an application that produces output,the Show Output button in the Work in Progress dialog box is not dimmed. To display task output,click on the Show Output button. Session Manager opens a Task Output window.

Tip

If an application fails to start or terminates unexpectedly, you can use task output windows to read application error messages.

5.4. Defining Logical Names

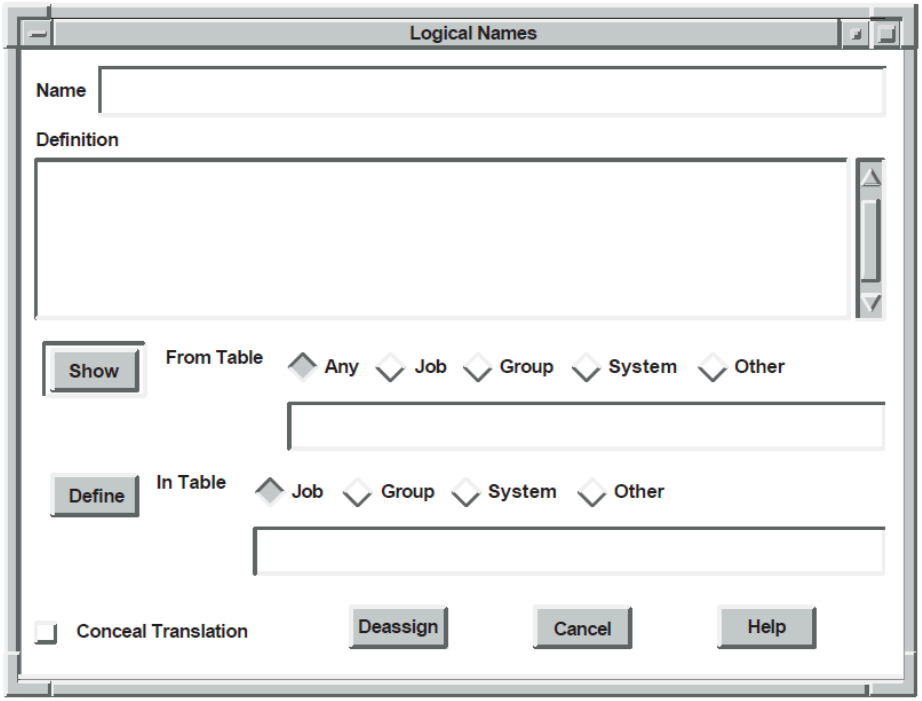
Logical names let you give frequently used files, directories, and devices meaningful names that are easier to remember and type than the full file specifications. For example, you can define WORK as the logical name for your device DUA0, or STAFF as the logical name for the file specification $USERS:[JONES.STAFF].

This section describes how to use Session Manager to define logical names. For more information about how you can use logical names, see Appendix D.

To define a logical name:

1. Choose Logical Names... from Session Manager's Session menu.

   Session Manager displays a dialog box.



2. Type the logical name in the Name entry box.
3. Type the definition you want to assign to the logical name in the Definition entry box.

   For example, define STAFF as the logical name for the file specification $USERS:[JONES.STAFF].

4. To define the logical name as concealed, click on the Conceal Translation check button.
5. Click on Define to add the logical name to your job logical-name table.

   Click on another option button to add the logical name to another table. To add the logical name to another logical-name table, click on the Other option button, type the name of the logical-name table, and click on Define.

5.4.1. Displaying a Logical-Name Definition

To display the definition of a logical name and the name of the logical-name table in which it is stored:

1. In the Name entry box, type the logical name whose definition you want to display.

2. If you do not know the logical-name table in which the logical name is stored, click on the Any button next to the From Table label. Click on the Job, Group,or System button if you want to see the definition in a specific table. Click on the Other button and type the name of the logical name in the text-entry box provided to display a logical-name definition from another table.

3. Click on Show.

   Session Manager displays the definition of the logical name and the name of the table in which it is stored.

If you choose the Any option, Session Manager searches the logical-name tables specified by the logical name LNM$FILE_DEV. If the logical name exists in more than one logical-name table, Session Manager displays the logical-name definition and the name of the logical-name table in which the definition was first encountered.

5.4.2. Deleting a Logical Name

To delete a logical-name definition:

1. In the Name entry box, type the logical name you want to delete.

2. Click on Deassign.

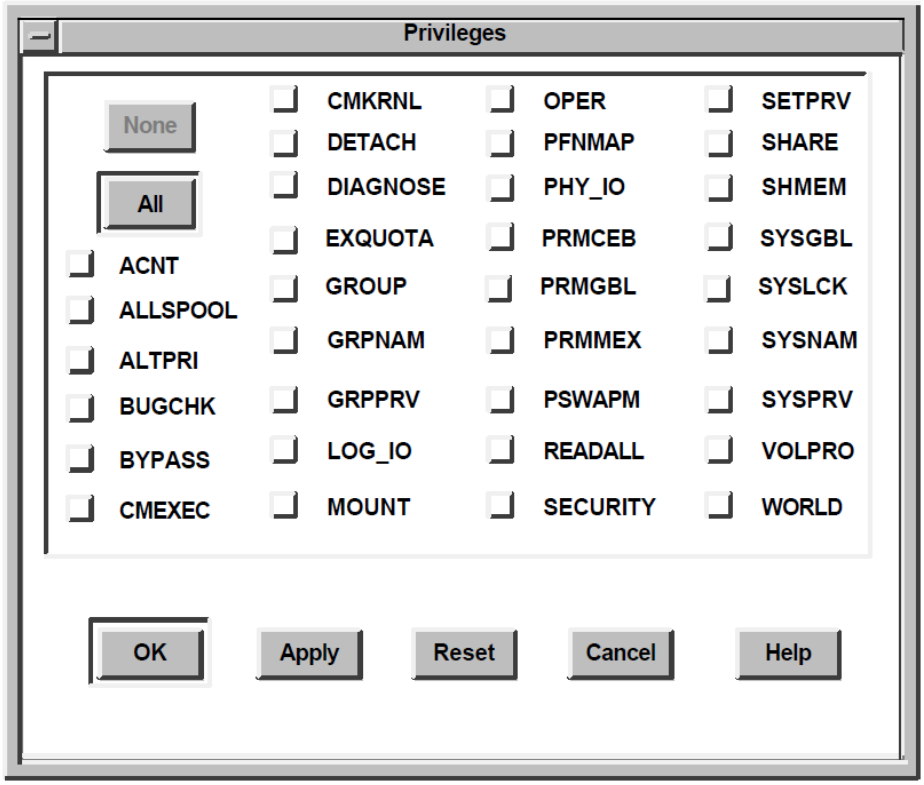
   Session Manager deletes the logical-name definition.

If you choose the Any option and the logical-name definition is not found in any logical-name table, Session Manager reports that the logical name is not defined.

5.5. Setting Process Privileges

Your process privileges determine what commands and functions you are authorized to execute from your account. Your system manager authorized these privileges when your account was created.

Some tasks require more powerful privileges. You can see which privileges are currently authorized by choosing Privileges... from Session Manager's Session menu.



Click on the privileges you need to perform a specific task. You are granted only those privileges you are authorized to hold; privileges that you are not authorized to hold are dimmed.

5.6. Customizing Your Session

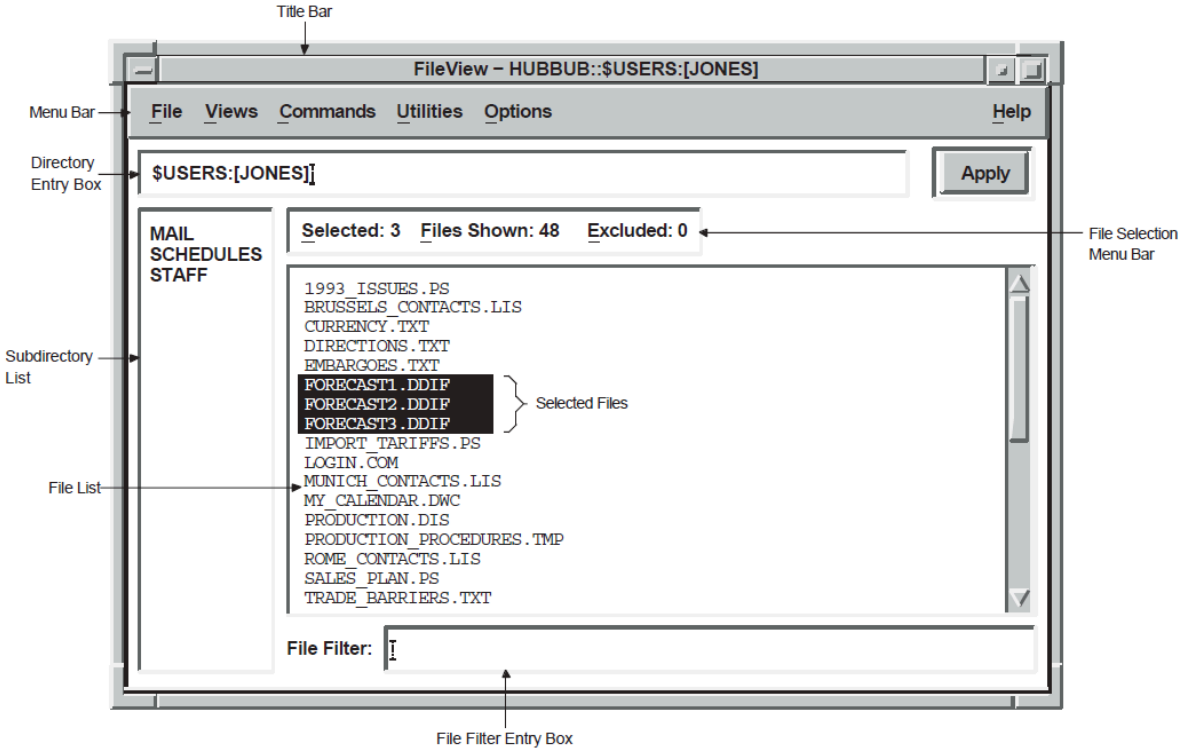
You can use Session Manager's Options menu to customize your DECwindows environment. To find out how to do this, see Chapter 7.

Chapter 6. Using FileView

FileView is a graphical representation of the OpenVMS operating system that lets you use a mouse to work with files and directories.

This chapter describes how you can use FileView to work with files, display information about files,and create, and use directories to organize your files.

The FileView window looks like this:



- The title bar displays the name of the window.
- The menu bar displays FileView's menu names.
- The **Directory** entry box displays the name of the current, or default, device and directory. Unless you specify otherwise, FileView places you in your top-level directory whenever you start FileView.
- The **Parent Directory** button lets you navigate your directory structure. This button appears when you select a file in the subdirectory list. As you navigate through your subdirectories,this button label changes to reflect the name of the parent directory.
- The **subdirectory list** displays your subdirectories. Using the subdirectory list, you can descend the directory structure in the current window.
- The **File Selection menu bar** contains menus you can use to select and filter files.
- The **Apply** button lets you renew your file list according to the contents of the File Filter entry box and the Directory entry box.
- The **file list** can contain different kinds of information, such as the creation date or size, about the files in the current directory or those specified by the File Filter. The first time you start FileView, the file list contains the names of the files in your top-level directory only.

- The **File Filter** entry box lets you list a subset of files—for example, all *.TXT files—in the current file list.

  FileView displays the number of files you filter on the File Selection menu bar next to the Files Filtered menu.

6.1. Updating the File List

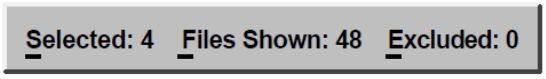
When you use the Apply button to create a new file list,you can use a wildcard in the File Filter or in another directory specification in the Directory entry box. For example, to list only the TXT files in your current directory, type *.TXT in the File Filter entry box and click on the Apply button. The file list displays the files you requested.

The Apply button changes to an Update button when you make changes to the contents of the current directory. If that change affects your file list,clicking on the Update button displays the altered version of the file list. For example, if you rename or delete a file in the file list, the Apply button changes to an Update button to remind you to update the file list. You can continue to work with other files and perform other tasks, updating the file list at your convenience.

When you start an update operation, the Apply or Update button becomes a Cancel button. Clicking on the Cancel button stops the file search as soon as possible. FileView displays whatever file information was already collected, along with a pop-up message box that indicates what information is missing.

6.2. Selecting and Filtering Files

To perform a FileView task, you must select the file with which you want to work. FileView highlights the selected file, and the next command you choose affects that file. When you select or filter files,FileView displays the number of currently selected and filtered files on the File Selection menu bar.



If you do not select a file name before choosing a FileView command, FileView displays a dialog box that asks you to type the name of the file or files on which you want to perform the command.

6.2.1. Selecting a File from Your File List

To select a file from your file list:

1. Point to the file you want to select.
2. Click MB1.

   The file name is highlighted.

Selecting one file at a time cancels the previous file selection.

6.2.2. Selecting Adjacent Files

To select adjacent files from the file list:

1. Point to the first file in the range.
2. Drag the pointer through the files you want to select.

The files are highlighted. FileView displays the number of files selected on the File Selection menu bar.

6.2.3. Selecting Scattered Files

To select files scattered throughout the file list:

1. Point to the first file you want to select and click MB1.
2. Press and hold the Ctrl key while you click MB1 on the other files you want to select.
3. Release the Ctrl key.

6.2.4. Selecting All Files in the Current Directory

To select all the files in the current directory, choose Select All from the Selected menu on the File Selection menu bar. You can then remove individual files from the selection by pointing to them,pressing and holding the Ctrl key, and clicking MB1. You can remove multiple files from the selection by pointing to them, pressing and holding the Ctrl key and MB1, and dragging the pointer over them.

To cancel your file selection, choose Select None from the Selected menu on the File Selection menu bar.

6.2.5. Selecting File Names in Other Windows

You can also select file names that appear in other windows by either dragging the pointer through the file name or double clicking on it. For more information about selecting text, see Chapter 3.

6.2.6. Displaying a Partial File List

Sometimes you want to screen some files out of the full file list and display only a subset of files. Perhaps you want to display only those files with a LOG file type or those whose version number is 1. By using the File Filter entry box, you can limit the list of files displayed.

To display a partial file list:

1. Click on the File Filter entry box.
2. Type the file or files you want listed.

   For example, to list all LOG files in your current directory, type *.LOG. When you use the asterisk wildcard, FileView lists only the files that match the characters you specified.

3. Click on Apply.

You can specify a search list in the File Filter entry box. A **searchlist** is a logical name that has more than one equivalence name. It provides FileView with a list of places to look for a file. If you use a search list in the File Filter, the file list automatically displays the directory in which the file is located.

Tip

You can also use the Exclude filter to display a partial file list. To do this, choose Show Exclude Text Field from the Excluded menu on the File Selection Menu Bar. FileView displays an Exclude File Filter entry box below the File Filter entry box.

6.3. Working with Files

When you choose a command from FileView's Commands menu, you can execute the command immediately or you can choose to display a command dialog box. From a command's dialog box you can choose options to tailor the file operation. For example, you can request that the Copy command display a confirmation prompt each time you copy a file.

To execute a command without displaying a dialog box,select a file and choose the command you want to use from FileView's Commands menu.

To display a dialog box when you use a command, choose the ellipsis (...) next to the command you want to use from FileView's Commands menu. If you do not select a file, FileView automatically displays a dialog box.

Note

The procedures in the following sections describe how to use FileView's commands by displaying command dialog boxes.

6.3.1. Applying Your Settings

Every FileView command dialog box contains push buttons that you can use to apply and save your settings, to cancel the dialog box, or to display help.

Click on	To
OK	Start a task and dismiss the dialog box.
Apply	Start a task without dismissing the dialog box. Note that when you use the Apply button,the OK, Apply, and Cancel buttons are disabled until the task has been completed. When the task is complete,FileView re-enables the OK, Apply, and Cancel buttons. You can then perform another operation of the same type from the same box. For example, you can choose Search to search repeatedly for different strings on the selected file list without choosing Search again.
Save	Save your new settings until you change them.
Cancel	Dismiss the dialog box without changing any settings. If you made any changes without applying them, clicking on the Cancel button cancels those changes.
Help	Display help about the command.

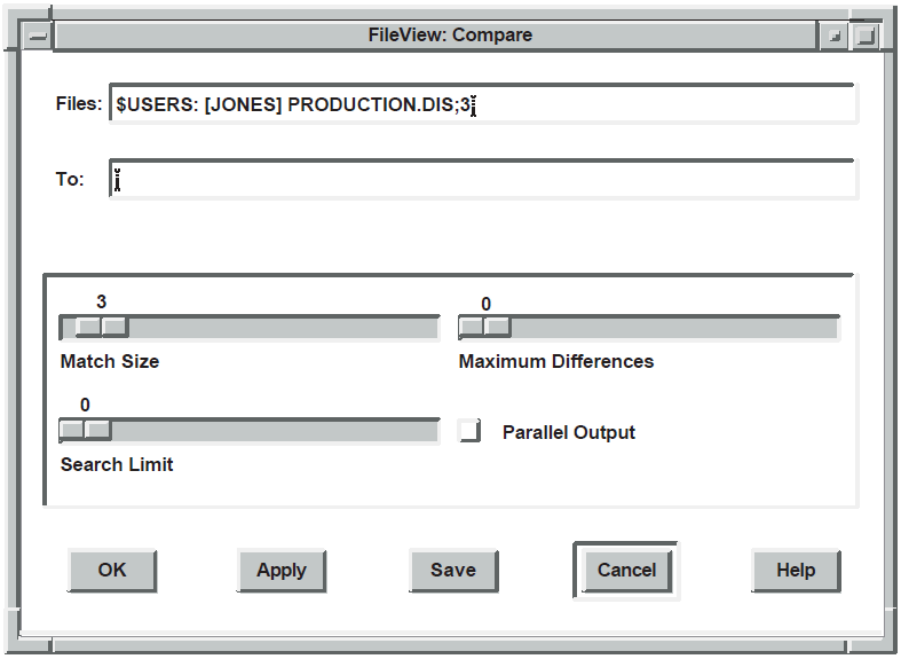
6.3.2. Comparing the Contents of Files

To compare the contents of two files and to view a listing of the lines that do not match:

1. Select the first file you want to compare.

2. Choose the ellipsis (...) next to the Compare command on the Commands menu.

   FileView displays a dialog box.



   By default, the selected file will be compared with its previous version. To compare the selected file with a file other than its previous version, double click on the text in the To entry box and type another file specification.

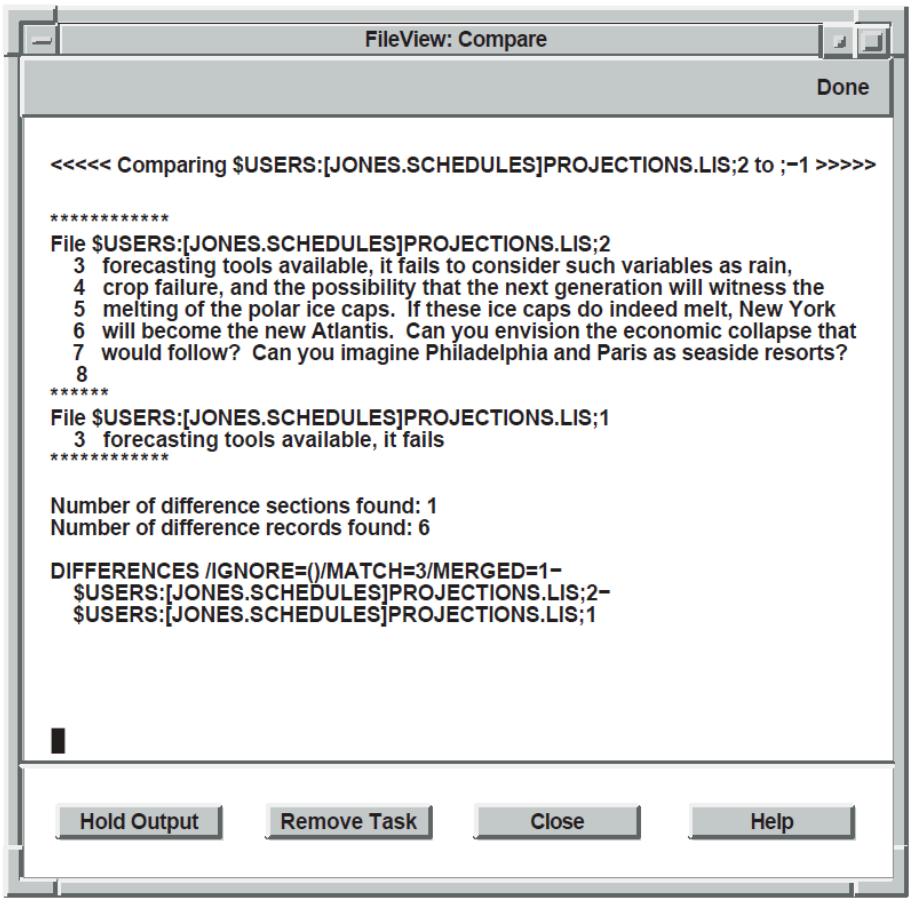
3. To perform a simple compare operation, click on OK.

   To alter the way each compare operation matches lines, choose any of the following options and click on OK.

Enable this option	**To**
Parallel Output	List the lines with differences side by side.
Match Size	Specify the number of lines that should again indicate matching data after differences are found. Once the Compare command finds unmatched lines, it considers the files matching once again after it finds three sequential lines that match. Use the Match slider to override the match size of 3.
Maximum Differences	Terminate the compare operation after the specified number of unmatched lines is found. This number can be from 0 to100, where 0 indicates no maximum.
Search Limit	Specify how many lines should be searched before aline is considered unmatched. Unless you specify otherwise, the Compare command searches to the ends of both files being compared before it lists aline as unmatched. This number can be from 0 to 100, where 0 indicates no maximum.

If you choose the Compare command without first selecting a file, type the names of the file you want to compare with its previous version.

The following example shows the results of an operation in which the files PROJECTIONS.LIS;2 and PROJECTIONS.LIS;1 are compared.



6.3.3. Copying Files

You can make a copy of a file to create a file with a new file name, concatenate two or more files into a single file, or copy a group of files to a group of new files. You can also enhance a copy operation by choosing several options from the Copy dialog box.

When you copy a file, the original file remains unchanged.

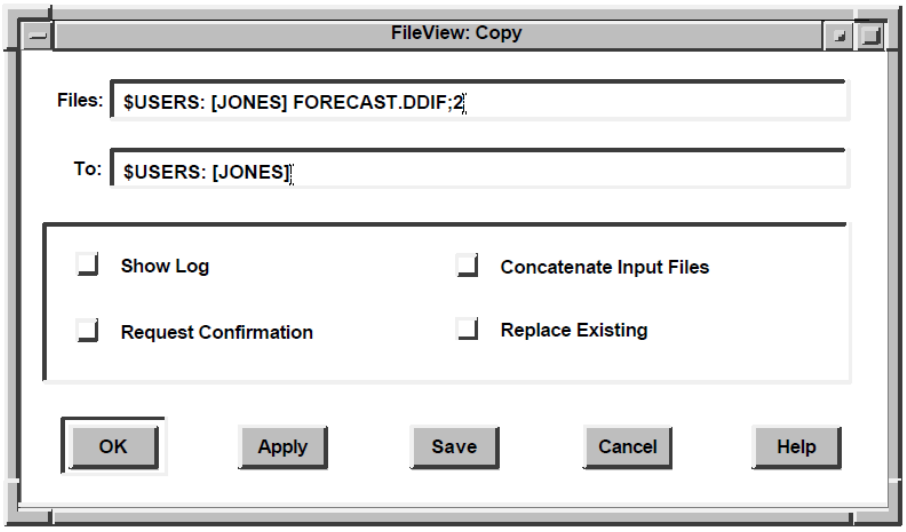
6.3.3.1. Copying One File to Another File or Directory

To copy a file to a new name or to a different subdirectory:

1. Select the file you want to copy.

2. Choose the ellipsis (...) next to the Copy command on the Commands menu.

   FileView displays a dialog box.



3. Type the new file name or the name of the device and directory to which you want to copy the file.

4. To perform a simple copy operation, click on OK.

   To alter the way a copy operation is performed, choose any of the following options and click on OK.

Enable this option	To
Show Log	Display the name of each copied file. This check button is especially helpful for checking whether multiple input files were copied to multiple output files as you intended.
Request Confirmation	Display prompts asking whether to copy each selected file.
Concatenate Input Files	Create one output file from multiple input files if wildcard characters are not used in the output file specification.
Replace	Replace the file that already exists with the output file specification you entered. The copied file receives that file specification because two files cannot have exactly the same file specification; that is, at least the version number must be different.

6.3.3.2. Copying Groups of Files

You can concatenate two or more files into a single file, and you can copy multiple input files to multiple output files. To copy a group of files at the same time, you select the files and then copy them in one operation. You can also tailor this copy operation by choosing options from the Copy dialog box.

To copy a group of files in one operation:

1. Select the files you want to copy.

2. Choose the ellipsis (...) next to the Copy command on the Commands menu.

FileView displays the Copy dialog box.

3. Type the new file name or names or the name of the device and directory to which you want to copy the files.

4. Click on OK.

If you specify multiple input files in the Copy dialog box, separate them with commas. To create multiple output files, specify multiple input files and include at least one of the following:

- An asterisk wildcard in the output directory, file name, file type, or version number entry box

- Only a directory specification as the output file specification

When you create multiple output files, the corresponding field from each input file specification is used in the output file specification. If you do not specify a version number for the input and output files, the Copy command assigns to the output files a version number that is either of the following:

- The version number of the input file

- A version number one greater than the highest version number of an existing file that has the same file name and file type

If you specify a version number in the output file specification, the Copy command uses that number for the output file specification. If a higher version of the output file already exists, a warning message appears in the Task Output window, but the file is still copied. If an equal version of the output file already exists, a message is issued and the file is not copied.(Click on the Replace button in the Copy dialog box to overwrite the existing file.)

The following example copies the files DIRECTIONS.TXT;1 and PROVISIONS.LIS;1 to produce two output files, HOLIDAY.TXT;1 and HOLIDAY.LIS;1.

```
From: $USERS:[JONES]DIRECTIONS.TXT;1,$USERS:[JONES]PROVISIONS.LIS;1
To: $USERS:[JONES]HOLIDAY.*;*
```

6.3.4. Deleting Files

By using the Delete command to delete the files you no longer need, you make room on your disk for other files.

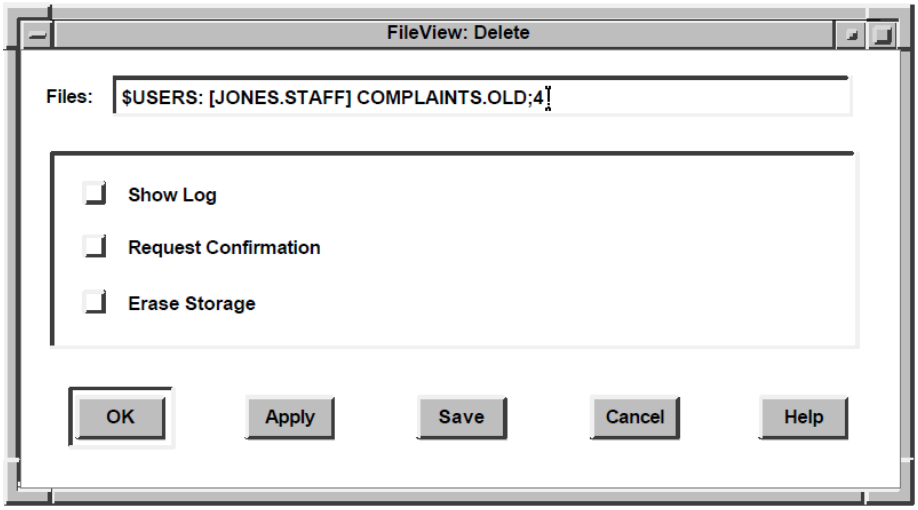
You can also delete a subdirectory if it does not contain files. See “ Section 6.6.2” for more information.

To delete one or more files:

1. Select the files you want to delete.

2. Choose the ellipsis (...) next to the Delete command on the Commands menu.

   FileView displays a dialog box.



3. To perform a simple delete operation, click on OK.

   To alter the way a delete operation is performed, choose any of the following options and click on OK.

Enable this option	To
Show Log	Display the file specification of each file as it is deleted.
Request Confirmation	Display a prompt asking whether to delete the file.
Erase Storage	Erase the selected files from your disk so that the deleted data no longer physically exists.

If your file list does not include version numbers and you select a file for deletion, FileView deletes all versions of the file.

To use wildcards in the file specifications of the files you want deleted,choose the Delete command without first selecting any files. In the following example, choosing the Delete command and entering the file specifications as shown will delete all versions of the files FORECAST1.DDIF, FORECAST2.DDIF,and FORECAST3.DDIF. The second and third file specifications use the file type of the first input file. Note, however, that some form of version number (here specified as wildcards) must be included in each file specification.

```
Files: FORECAST1.DDIF;*,FORECAST2;*,FORECAST3;*
```

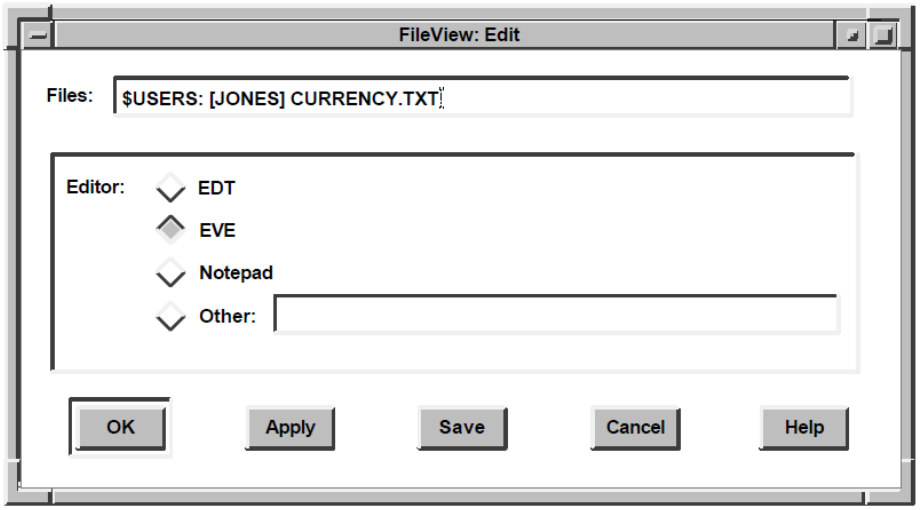
6.3.5. Editing Files

To edit a file:

1. Select the file you want to edit.

2. Choose the ellipsis (...) next to the Edit command on the Commands menu.

   FileView displays a dialog box.



3. Click on the editor you want to use.

   To use an editor other than those listed, type the appropriate DCL command for invoking the editor in the entry box provided. FileView appends the file name of each selected file to this Edit command.

4. Click on OK.

If you clicked on EVE, FileView starts the DECwindows EVE editor. If you clicked on EDT, FileView opens a Task Output window where you can edit your file using EDT. If you clicked on Notepad, a Notepad window opens.

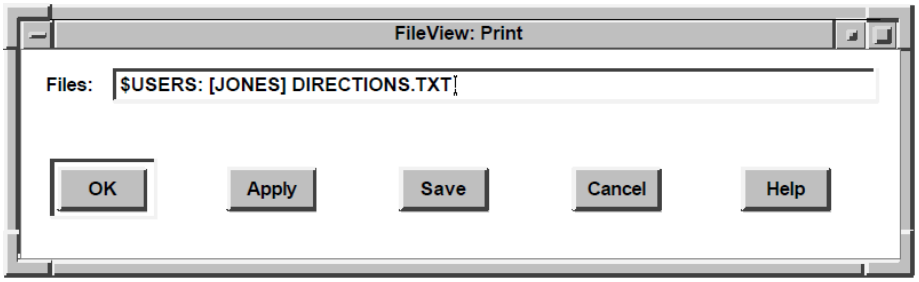
6.3.6. Printing Files

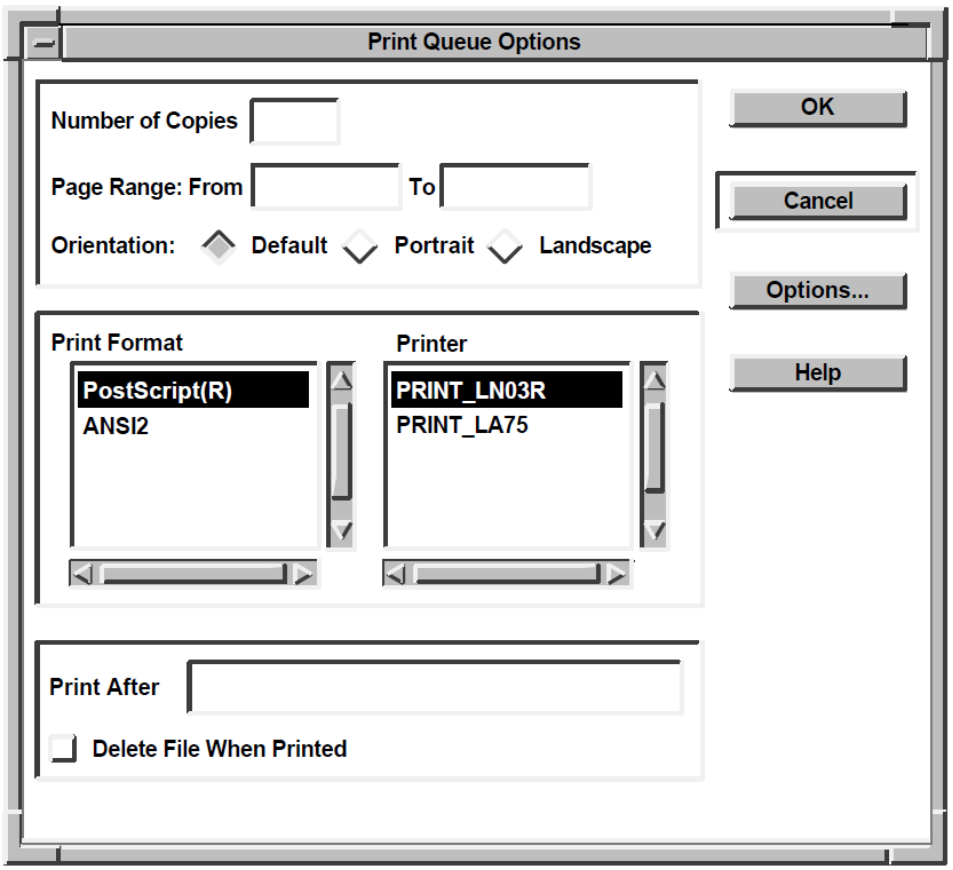
To send one or more files to a printer:

1. Select the files you want to print.

2. Choose the ellipsis (...) next to Print command on the Commands menu.

   FileView displays two dialog boxes.





3. In the Print Queue Options dialog box, you can provide additional information about how you want to print your file. This information might include the print queue to which you want to send your file and how many copiesyou want to print. For a detailed description of these print options, see " Section 4.3.1" in Chapter 4.

4. If the Work in Progress dialog box is open, FileView reports that your print job has been sent to the printer. Session Manager displays a message when your job is printed.

To use wildcards in the file specifications of the files you want to print,choose the Print command without first selecting any files. In the following example, choosing the Print command and entering the file specifications as shown submit the files DIRECTIONS.TXT and CURRENCY.TXT and the highest versions of all files with file type COM as a single print job.

```
Files: DIRECTIONS.TXT,CURRENCY,*.COM
```

For more information about printing files, see Chapter 4.

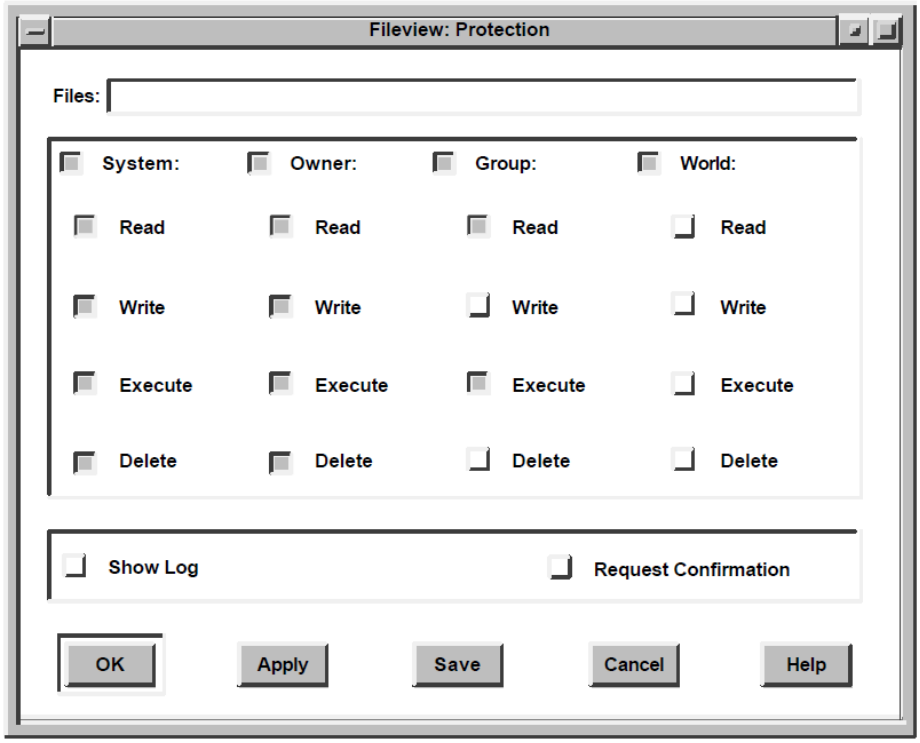
6.3.7. Protecting Files

To protect one or more files from being accessed by other users:

1. Select the files you want to protect.

2. Choose the ellipsis (...) next to the Protection command on the Commands menu.

   FileView displays a dialog box.



Note that the protection settings displayed in the Protection dialog box reflect a user's default protections, not the files' protections.

3. Set and clear the check buttons in the Protection dialog box to change the file protection on the selected files.

6.3.8. Purging Files

Every time you modify a file, another version of the file is added to your directory. If you find yourself with multiple versions of a file, use the Purge command to delete all older versions. Purging your directory makes room on your disk for other files.

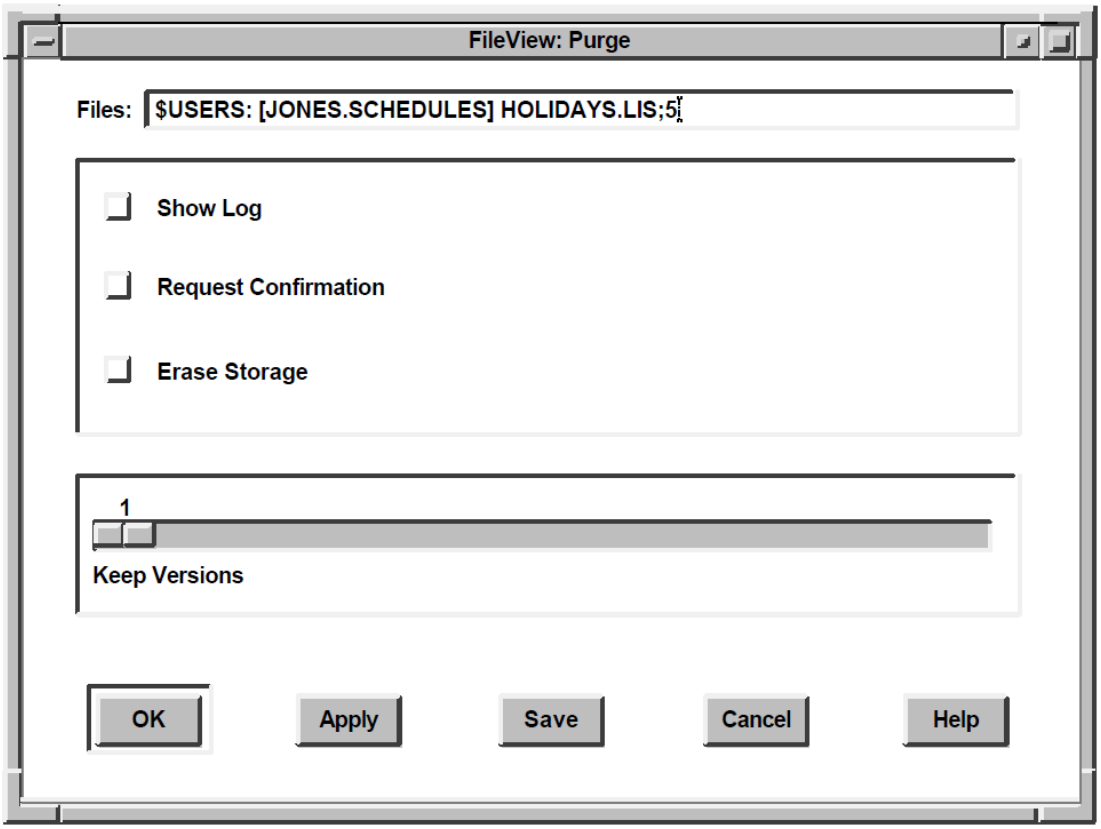
By default, the file list displays only the highest version of each file. If you have not changed this setting, you can purge your entire directory in one operation by selecting all the files. If your file list displays all versions of your files, you must select only the highest versions of each file for purging.

To purge one or more files:

1. Select the files you want to purge.

2. Choose the ellipsis (...) next to the Purge command on the Commands menu.

   FileView displays a dialog box.



3. To perform a simple purge operation, click on OK.

   To alter the way a purge operation is performed, choose any of the following options and click on OK.

Enable this option	To
Show Log	Display the file specifications of each file as it is deleted.
Request Confirmation	Display a prompt asking whether to purge the file.
Erase Storage	Erase the selected files from your disk so that the purged data no longer physically exists.
Keep Versions	Retain the specified number of versions (starting with the highest) of each file. Unless you specify otherwise, all but the latest versions of the specified files are deleted. Use the Keep Versions slider to keep more than the highest version of each file.

If you choose the Purge command without first selecting the file, you are prompted to type the name of the file you want to purge.

To use wildcards in the file specifications of the files you want purged,choose the Purge command without first selecting any files. In the following example, choosing the Purge command and entering the file specification as shown purge all files with the letter L in their file name and a file type of COM.

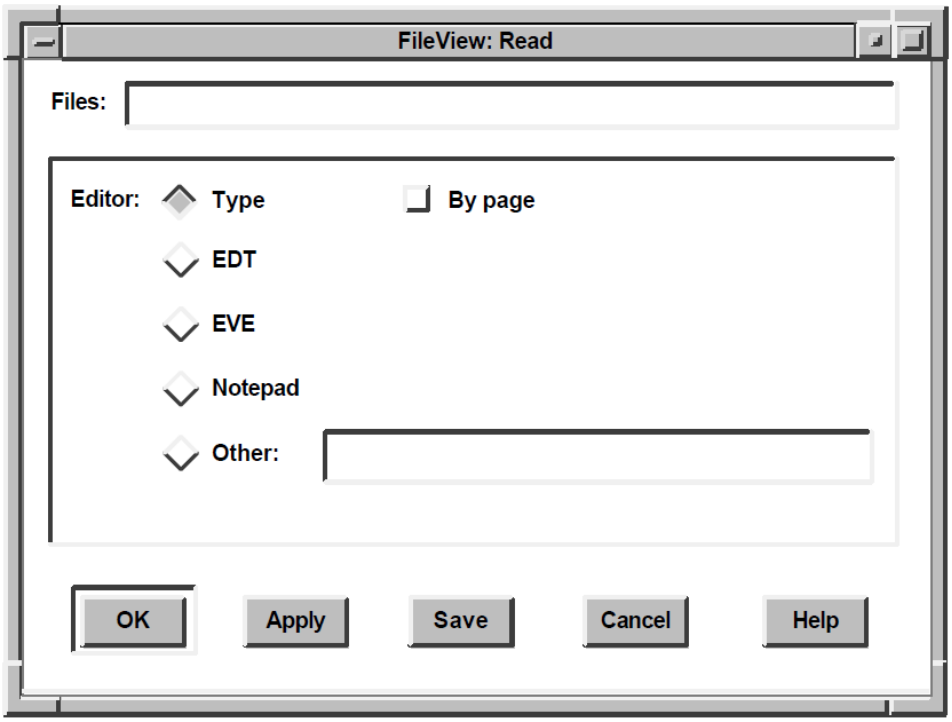
```
Files: *L*.COM
```

6.3.9. Reading Files

Use the Read command to view the contents of one or more files without making any changes:

1. Select the files you want to read.
2. Choose the ellipsis (...) next to the Read command on the Commands menu.

   FileView displays a dialog box.



3. To display a file, click on OK.

   To alter the way a file is displayed, choose any of the following options and click on OK.

Enable this option	To
Reader	Specify the editor you want to use to read the file.
By Page	Display the file one page at a time.

4. Click on OK to display the selected file.

6.3.10. Changing the Name of a File

You can use the Rename command to

- Change all or part of a file specification of one or more existing files
- Rename a group of files in one operation
- Change the name of the file or keep the same file name and move the file to another directory

You cannot, however, use the Rename command to change the device on which a file is located. When you rename a file, a copy of that file no longer exists under its original name.

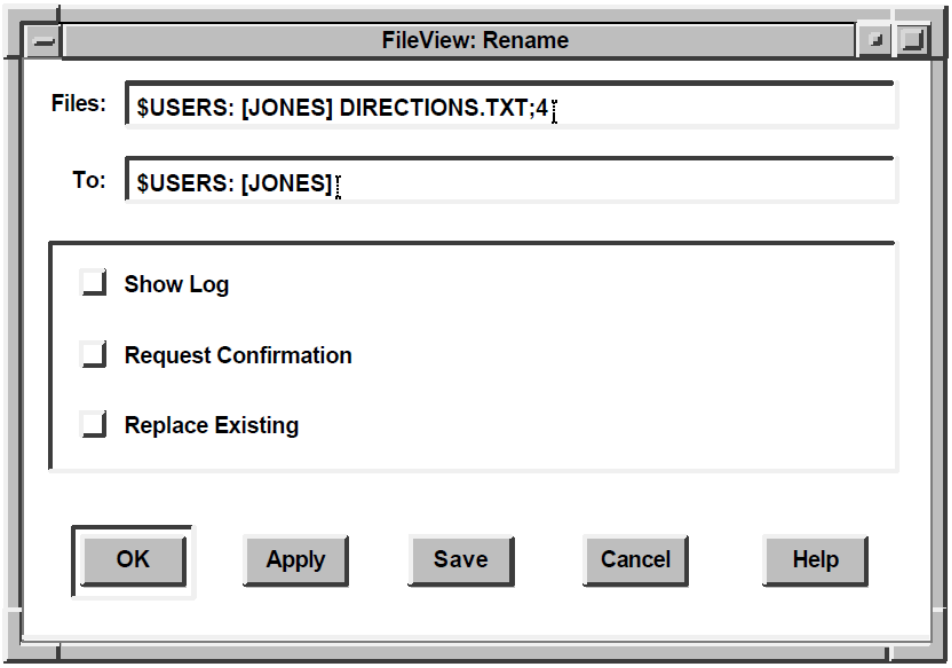
6.3.10.1. Renaming a File

To change all or part of a file specification of an existing file:

1. Select the file you want to rename.

2. Choose the ellipsis (...) next to the Rename command on the Commands menu.

   FileView displays a dialog box.



3. Type the new file name.

4. To perform a simple rename operation, click on OK.

   To alter the way a rename operation is performed, choose any of the following options and click on OK:

Enable this option	To
Show Log	Display the file specification of each file as it is renamed. This check button is especially helpful for verifying whether multiple input files were renamed to multiple output files as you intended.
Request Confirmation	Display a prompt asking whether to rename the file.
Replace Existing Files	Replace the file that already exists with the output file specification you entered. The renamed file is given that file specification because two files cannot have exactly the same file specification.

If you choose the Rename command without first selecting a file, type the name of the file you want to rename in the Rename dialog box.

If FileView cannot rename the file, it displays the word Error in the Work in Progress dialog box. To open the Task Output window to see the error message, click on the Show Output button. Click on the OK button in the Task Output window when you finish viewing the message.

In the following example, choosing the Rename command and entering the file specifications in the Rename dialog box as shown change the directory specification of DIRECTIONS.TXT from your top-level directory to the SCHEDULES subdirectory. (DIRECTIONS.TXT is moved to the SCHEDULES subdirectory.)

```
From: DIRECTIONS.TXT
To: [.SCHEDULES]
```

6.3.10.2. Renaming Groups of Files

You can rename multiple files in one operation. The simplest way to rename multiple files is to select them in your file list and rename them as you would rename one file.

You can also rename multiple input files to multiple output files by specifying wildcard characters in corresponding entry boxes of the input and output file specifications. Just as when you renamed one file, you can tailor this operation by choosing options from the Rename dialog box.

If entry boxes in the output file specification are omitted or are replaced by wildcard characters, the Rename command uses the device, directory, file name,and file type of the input file specification to name the corresponding fields in the output file specification.

The version number is determined in the following ways:

- If you specify an explicit version number in the output file specification,that version number is used.
- If you specify a wildcard as the version number in the output file specification, the version number of the input file is used.
- If you specify a wildcard as the version number in the input file specification, the version number of each input file is used to name a corresponding output file.
- If no file exists with the same file name and type as the output file, aversion number of 1 is used.
- If a file already exists with the same file name and type as the output file, the next higher version number is used.

To rename multiple files in one operation using wildcards:

1. Choose the ellipsis (...) next to the Rename command on the Commands menu.

   FileView displays a dialog box.

2. Type the file specifications of the files you want to rename.

   Separate them with commas.

3. Type the file specification to which you want the files renamed.

4. Click on OK.

In the following example, choosing the Rename command and entering the file specification in the Rename dialog box as shown rename all versions of all files in $USERS:[JONES] with the file type TXT to the file type OLD. The file names and version numbers are not changed.

```
From: *.TXT;*
To: $USERS:[JONES]*.OLD;*
```

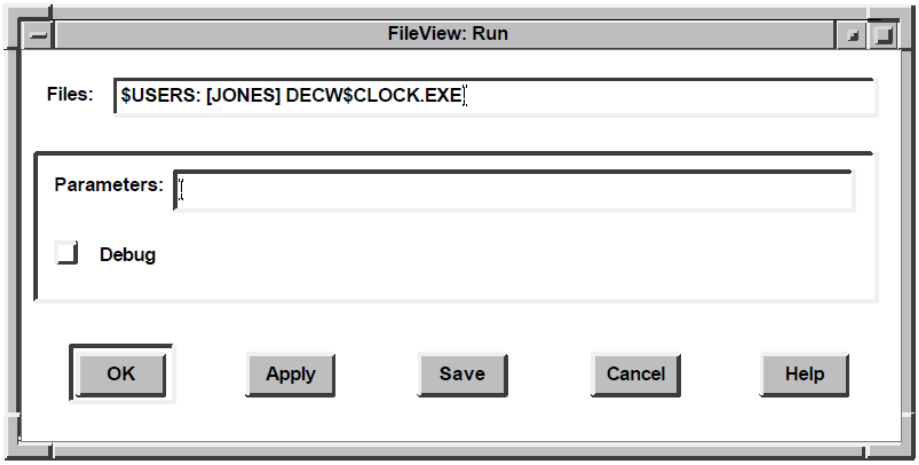
6.3.11. Running Programs

You can use the Run command to run a program or to invoke a DCL command file. A program usually has an EXE file type. A DCL command file has a COM file type.

To run a program:

1. Select the file you want to run.
2. Choose the ellipsis (...) next to the Run command on the Commands menu.

   FileView displays a dialog box.



3. To run a file, click on OK. If you want to add a parameter to the RUN command, type the parameter in the text-entry box provided. If the file you want to run is a DCL command file,these parameters are passed to it.

   To alter the way a file is run, choose any of the following options and click on OK.

Enable this option	To
Parameters	Add any parameter to the Run command. Type the parameter in the text-entry box provided. If the file you want to run is a DCL command file, these parameters are passed to it.
Debug	Run the program under the control of the OpenVMS Debugger. To run without the debugger an image that has been linked with DEBUG, be sure this button is disabled.

4. Click on OK.

If the Work in Progress dialog box is displayed, it reports that the file is being run.

In the following example, choosing the Run command and entering the file specification as shown execute the program MORTGAGE.EXE.

```
Files: [.SCHEDULES]MORTGAGE.EXE
```

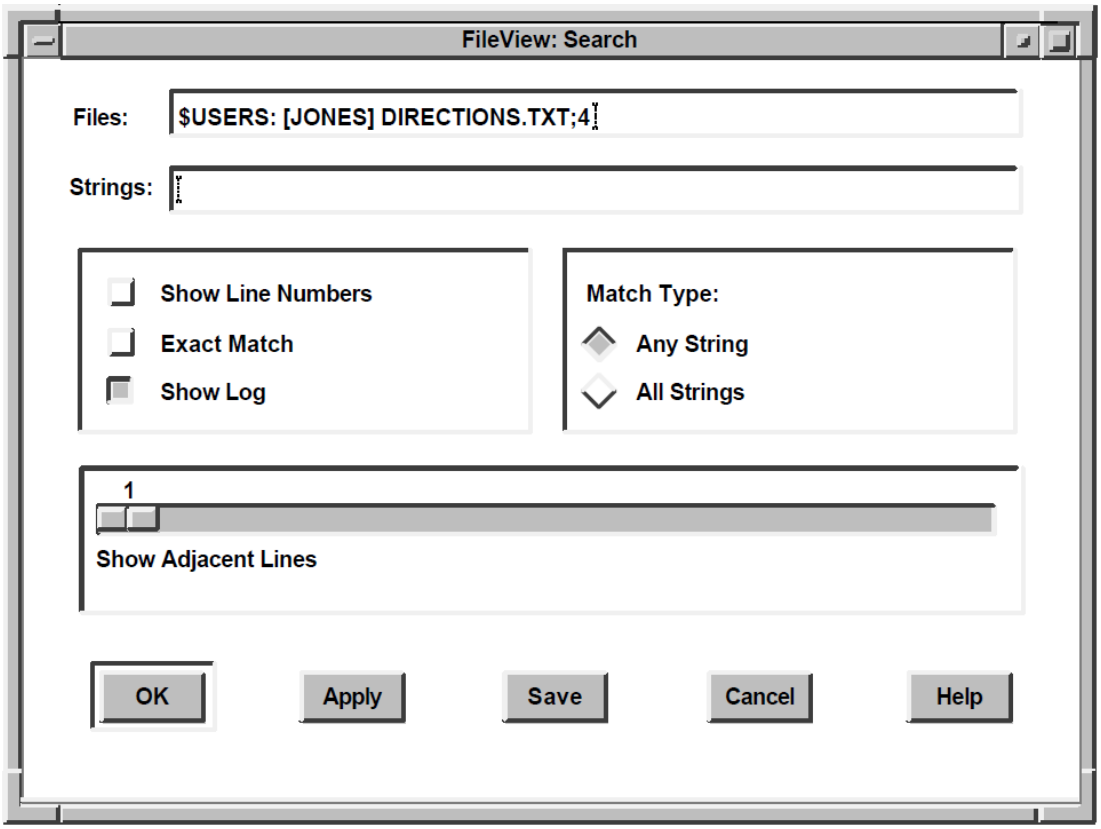
6.3.12. Searching Files for Text Strings

To search one or more files for one or more text strings:

1. Select the files you want to search.

2. Choose the ellipsis (...) next to the Search command on the Commands menu.

   FileView displays a dialog box.



3. Enter the text string for which you want to search.

4. To perform a simple search operation, click on OK.

   To alter the way a search operation is performed, choose any of the following options and click on OK.

Enable this option	To
Exact Match	Find only those strings that exactly match the string you specified. Use this option if you want the Search command to differentiate between upper-case and lower-case letters.
Show Log	Display the file specification of each file as it is searched.
Match Type	Produce output only if the line contains all the strings when you specify multiple search strings. Click on the Any String button to produce output if the line contains any of the strings.

Enable this option	To
Show Line Numbers	Display the line number on which the text string is located in the file being searched.
Show Adjacent Lines	Specify the number of lines to be displayed with the search string. By default, only the line containing the search string is displayed.

To use wildcards in the file specifications of the files you want to search,choose the Search command without first selecting any files. In the following example, choosing the Search command and entering the file specification as shown search all versions of all files in the current directory with the file type COM for the text string WRITE.

```
Files: *.COM
Strings: WRITE
```

6.3.13. Displaying Information About Files

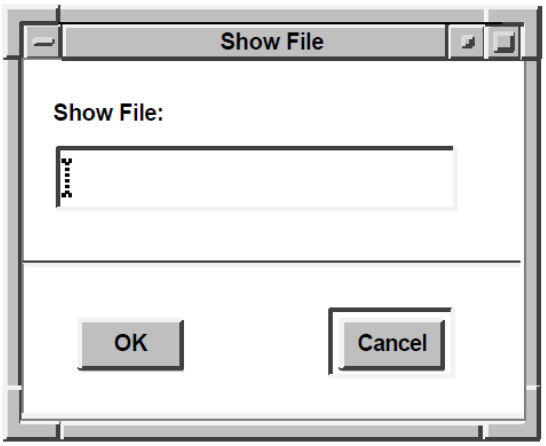
You can obtain information about a file or group of files by using the Show File command. This information can include the file's size, creation date,protection settings, and last backup date.

To obtain information about a file:

1. Choose the ellipsis (...) next to the Show File command on the Commands menu.

2. Type the name of the file about which you want information.

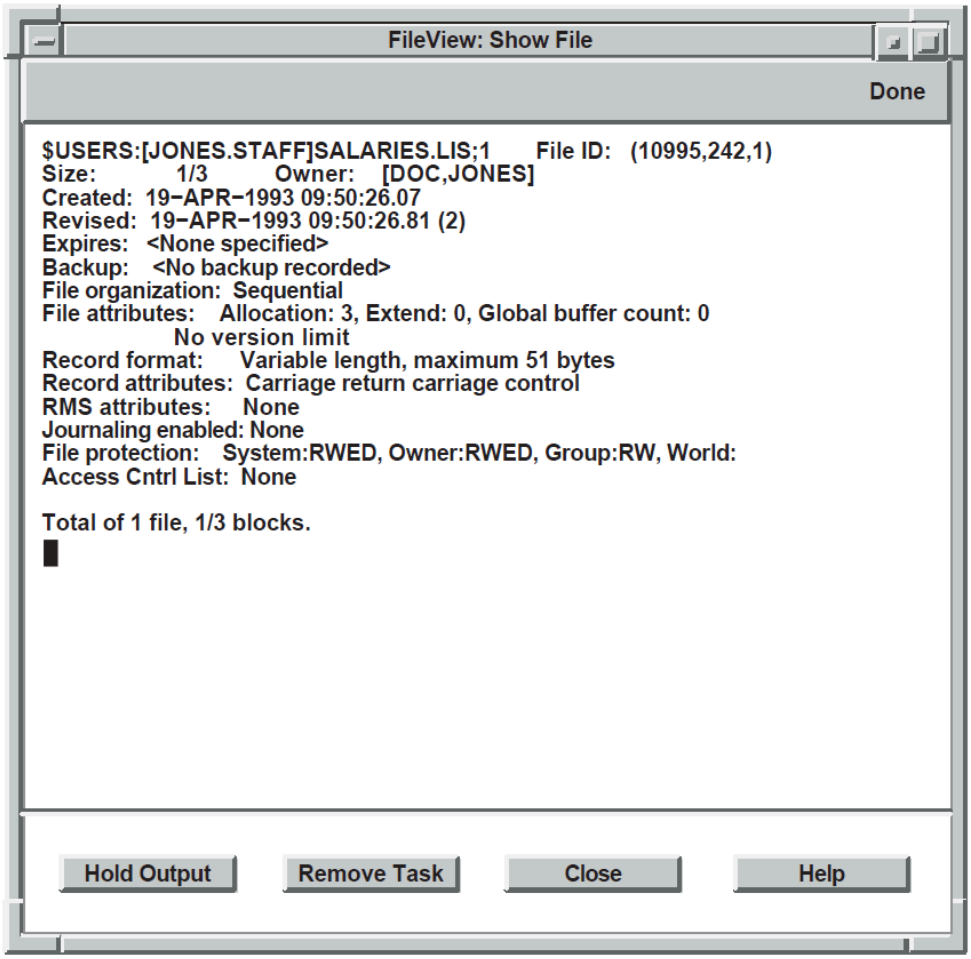
FileView displays a dialog box.



To use wildcards in the file specifications of the files you want information about, choose the Show File command without first selecting any files. In the following example, choosing the Show File command and entering the file specification as shown display information about all files in the $USERS:[JONES]with the file type PS.

```
Show File: $USERS:[JONES]*.PS
```

Output from the Show File command looks similar to this:



6.4. Opening a New View

You can open a new FileView window that maintains the file and directory context of the current FileView window. When you choose New View... from FileView's File menu, FileView copies the display from the current FileView window into the new window and updates it, leaving the current FileView window in its original state. Any changes you make to the current FileView window(such as deleting a file or changing the information in the File Filter entry box)without applying them are reflected in the new FileView window.

You can also open a new FileView window that reflects changes you make to the File Filter or Directory entry boxes in the current FileView display. To open a new FileView window:

1. Edit the File Filter or Directory entry box to reflect the information you want to display in the new FileView window.

2. Choose New View... from the File menu.

3. Do *not* click on the Apply button.

A new FileView window is opened that reflects the new file and directory information you specified. The File Filter and Directory entry boxes in the current FileView window are reset to the original text.

6.5. Accessing Files and Applications Quickly

FileView gives you two shortcuts for accessing files and applications quickly: pop-up menus and double-click commands.

6.5.1. Using Pop-Up Menus to Execute Commands

You probably execute the same few commands on each specific type of file. For example, you might edit, type, or copy a TXT file, but you would never run it. To help you perform file tasks more quickly, each file type has a corresponding pop-up menu that contains the commands you are most likely to use on that kind of file.

To see the contents of a pop-up menu for a specific type of file, press and holdMB3 on a file name in your file list. Choose the command you want to execute on that file. The next time you display this pop-up menu, the command that you last chose will be positioned under the pointer.

If you don't like the pop-up menu that is defined for a specific file type, you can change it. See Chapter 9 for information about customizing pop-up menus.

6.5.2. Using Double-Click Commands

FileView executes a predefined command when you double click on some types of files. By using double-click commands, you can start file tasks quickly. For example, double clicking on a CARD file opens Cardfiler. Double clicking on an EXE file runs that program.

To see the double-click command defined for a specific file type:

1. Choose File Types... from the Options menu.

   FileView displays the File Types dialog box, which is described in detail in Chapter 9.

2. Click on a file type in the File Types list box.

   The double-click command defined for that file type is displayed below the File Types list box.

If you don't like the double-click command that is defined for a specific file type,you can change it. See Chapter 9 for information about changing a double-click command definition.

6.6. Working with Directories

To access files on your system, you need to work with and navigate the directory structure. You might alsoneed to work with devices other than your default device.

You can access your own and other directory structures that have been set up to allow public access. With the correct **process privileges**, you can access files and directories on other devices or nodes. Your privilege classification controls what commands and functions you are authorized to execute from your account. For more information about setting process privileges, see Chapter 5.

With FileView you can perform the following device and directory operations:

- Create a directory
- Delete a directory

- Change directories
- Change devices
- Search a directory structure with wildcards

6.6.1. Creating a Directory

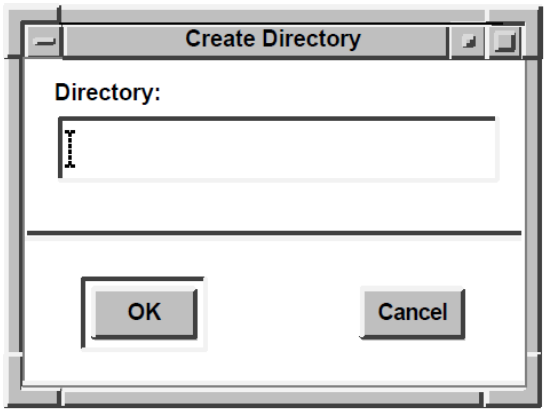
You can do all your work—including using files and running applications—in your top-level directory and never move from it. However, by creating and using subdirectories, you can organize your files into groups.

If you have the SYSPRV privilege, you can also create a top-level directory. See “ Section 5.5” for more information.

To create a directory:

1. Choose Create Directory from the Utilities menu.

   FileView displays a dialog box.



2. Type the name of the directory you want to create.

   For example, to create a subdirectory from the top-level directory [JONES] with the directory specification [JONES.TRAVEL], type TRAVEL. To create a subdirectory from[JONES] with the directory specification [JONES.TRAVEL.MILEAGE], type TRAVEL.MILEAGE.

3. Click on OK.

6.6.2. Deleting a Subdirectory

Before you attempt to delete a subdirectory file, you must confirm that it contains no files. Select the subdirectory from the subdirectory list. If the subdirectory contains files, delete them. To delete the empty subdirectory file:

1. In the subdirectory list, move up one level in the directory structure.
2. Select the subdirectory file you want to delete from the file list.

   The subdirectory file has a file type of DIR.

3. Choose Delete from the Commands menu.

FileView displays the dialog box described in “ Section 6.3.4.”

4. Click on OK.

   If the subdirectory is empty, FileView displays another dialog box that asks you to confirm that you want to delete the subdirectory file.

5. Click on OK.

6.6.3. Navigating a Directory Structure

If you have subdirectories, FileView displays a subdirectory list that lets you move up and down your directory structure to access your subdirectories and the files they contain. By **setting default** to another directory, you change your current directory.

FileView appends the subdirectory name to the directory name in the Directory entry box and displays the contents of that subdirectory in the current file list.

If you have subdirectories in your new default directory,they are now displayed in the subdirectory list. The subdirectories that were previously displayed are displayed in a sibling directory list to the left of the subdirectory list.

6.6.4. Using Wildcards in the File Filter

From any point in a directory structure, you can search a subdirectory in that structure or another directory by using the ellipsis (...)or hyphen (-) wildcard character.

You do not have to change directories to search the contents of another directory. By entering a full file specification (including a directory and device name, if appropriate) in the File Filter entry box, you can search the contents of that directory without changing directories. Any output produced by a FileView command continues to be directed to your current directory.

6.6.4.1. Using the Ellipsis (...) Wildcard

Use the ellipsis wildcard to search down the directory structure. You can list the contents of directories or search for one file in a directory. Using the ellipsis wildcard allows you to conduct a broad search of an entire directory structure.

The following example shows how to use the ellipsis wildcard to list the contents of the subdirectories under [JONES]. Note that the current directory is not changed.

```
File Filter: [JONES...]
Directory: $USERS:[JONES.STAFF]
```

The following example lists the latest versions of all files named DIRECTIONS.TXT in [JONES] and all subdirectories under [JONES].

```
File Filter: [JONES...]DIRECTIONS.TXT
Directory: $USERS:[JONES.STAFF]
```

If you begin the directory specification with an ellipsis, the search begins from the current directory. This example searches all subdirectories under[JONES] named PROJECT and lists the latest versions of all files named SALARIES.LIS.

```
File Filter: [...PROJECT]SALARIES.LIS
Directory: $USERS:[JONES]
```

In the following example, the current directory is [JONES]. This example searches [JONES] and all subdirectories under [JONES] and lists the latest versions of all files named HOLIDAYS.LIS.

```
File Filter: [...]HOLIDAYS.LIS
Directory: $USERS:[JONES]
```

However, if you begin the directory specification with a period, only the subdirectory that is one level lower in the directory structure than the current directory is searched. In the following example, the current directory is [JONES]. This example searches only the [JONES.LETTERS] subdirectory for the file OFFER.TXT, and not [JONES.STAFF.LETTERS].

```
File Filter: [.LETTERS]OFFER.TXT
Directory: $USERS:[JONES]
```

To search all top-level directories and their subdirectories from wherever you are in the directory structure, use the asterisk (*) wildcard followed by an ellipsis. The following example (which might require the READALL or the BYPASS privilege) searches all the directories and subdirectories on the device except for the master file directory (MFD). Note that this search might take a long time if you search the directory structure on a large device.

```
File Filter: [*...]
Directory: $USERS:[JONES]
```

6.6.4.2. Using the Hyphen (-) Wildcard

When you learned how to navigate a directory structure, you saw how to use the hyphen wildcard to move up the directory structure one level at a time. By using the hyphen wildcard in a file specification in the File Filter entry box, you can list the contents of a directory or search for a file within a directory structure. Each hyphen refers to the directory one level up from the current one. You can follow the hyphens with directory and subdirectory names to move up and down the directory structure on another path.

Unlike the ellipsis wildcard, the hyphen wildcard limits your search to one level of the directory structure at a time.

The following example lists the contents of $USERS:[JONES] while the current directory remains [JONES.STAFF].

```
File Filter: [-]
Directory: $USERS:[JONES.STAFF]
```

In the following example, the current directory is [JONES.SCHEDULES]. This example lists the latest version of FUNDING.TXT in [JONES.STAFF].

```
File Filter: [-.STAFF]FUNDING.TXT
Directory: $USERS:[JONES.SCHEDULES]
```

You can specify more than one hyphen. The following example displays the contents of the directory [JONES], which is two levels up in the directory hierarchy, while the current directory remains [JONES.SCHEDULES.CURRENT].

```
File Filter: [-]
Directory: $USERS:[JONES.SCHEDULES.CURRENT]
```

If you enter so many hyphens that you point above the master file directory(MFD), FileView displays an error message.

6.7. Executing a DCL Command

You can execute a DCL command directly from FileView by choosing DCL Command from the Utilities menu. FileView opens a DCL Command window and displays the DCL prompt ($). Any DCL command you enter is executed in the context of the current directory.

To close the DCL Command window temporarily, shrink the window to an icon by clicking MB1on the window's minimize button. By continuing to choose DCL Command from FileView's Utilities menu, you create additional Task Output windows that you can close and reopen.

Part II. Customizing Your DECwindows Environment

Chapter 7. Customizing Session Manager

Session Manager's Options menu includes menu items for customizing session features such as your keyboard, language, window colors, and security settings.

This chapter describes how to customize your session. Where appropriate, it also explains how to customize the screen display for three types of workstations: the monochrome system, which supports black-and-white output only;the intensity system, which supports shades of gray;and the color system, which supports a full spectrum of colors.

7.1. Applying Your Settings

Choosing each menu item from the Options menu displays a dialog box. Every Options dialog box contains push buttons you can use to record your settings, to cancel the dialog box, or to display help.

Click on	**To**
OK	Save new settings and dismiss the dialog box.
Apply	Save new settings without dismissing the dialog box.
Defaults	Reinstate the system default settings defined when you installed the DECwindows software. (Note that the Defaults button does not save your changes. You must click on the OK or Apply button to save the default settings.)
Cancel	Dismiss the dialog box without changing any settings. If you made any changes without applying them, clicking on the Cancel button cancels those changes.
Help	Display help about the specific option dialog box.

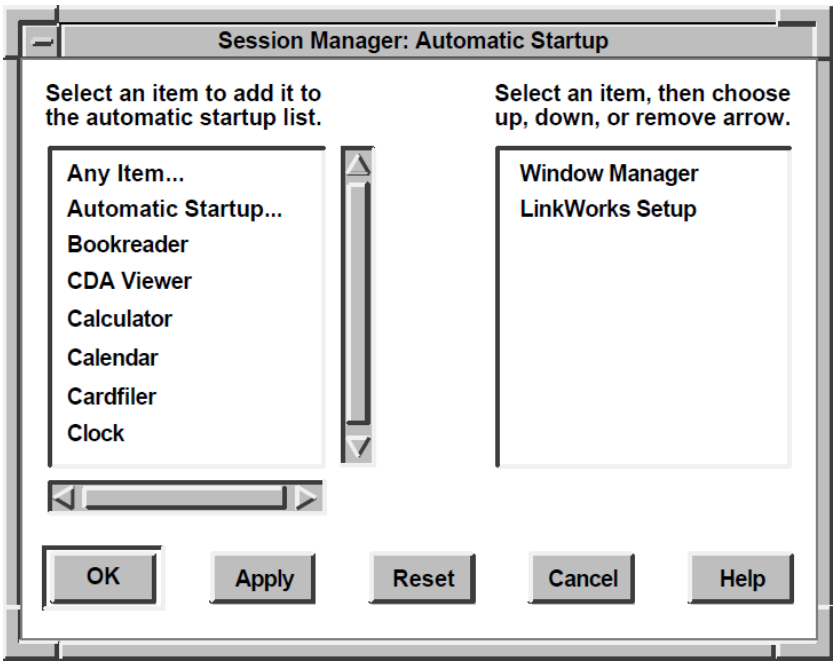
7.2. Starting Applications Automatically

If you begin every workday by logging in and starting the same few applications—perhaps DECterm, Calendar, and Mail—you can save yourself the effort of re-creating that environment by customizing Session Manager to start them for you.

To customize your startup environment:

1. Choose Automatic Startup... from Session Manager's Options menu.

   Session Manager displays the Automatic Startup Options dialog box.



2. Click on an item in the left-hand list box to add it to your automatic startup list.

   The item is displayed in the list box on the right, and arrows appear between the two list boxes.

3. Click on the up and down arrows to move the item up or down on the list in the right-hand list box.

   The applications are executed in the order in which they appear in this list.

   If you want to start one application several times, click on the application to add it repeatedly to the Automatic Startup list. For example, click on DECterm three times to open three DECterm windows at the start of every session.

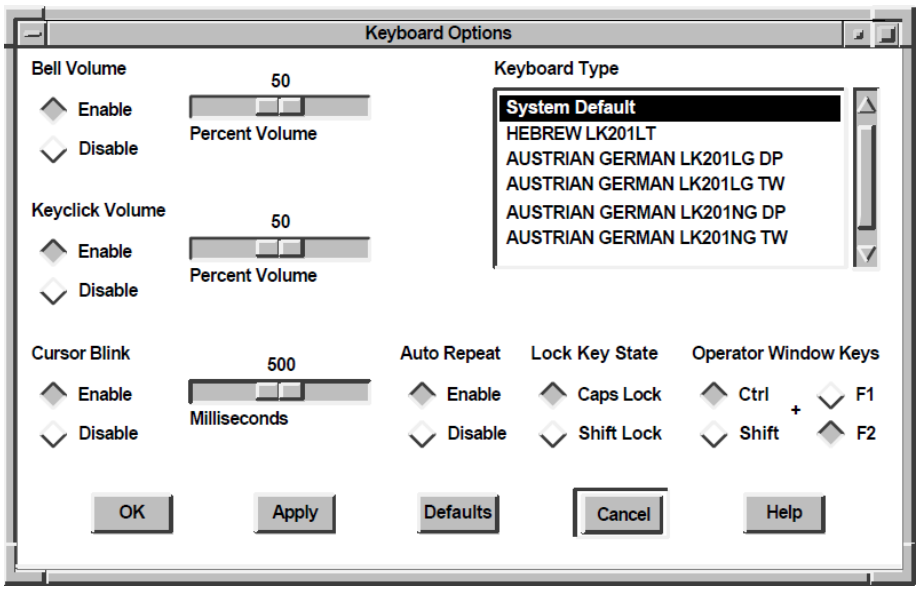
4. To remove the item from the automatic startup list, click on the middle arrow.

Note

The Window Manager is a main component of your DECwindows working environment. Do not remove the Window Manager from your automatic startup list unless you are replacing it with another window manager.

7.3. Changing Your Keyboard Settings

To change your keyboard settings, choose Keyboard... from Session Manager's Options menu. Session Manager displays the Keyboard Options dialog box.



From the Customize Keyboard dialog box, you can change any of the following settings:

Bell Volume

A warning bell sounds to alert you to system messages. Adjust the bell's volume by dragging the arrow in the Percent Volume slider right or left, or move the pointer to a location on the slider and click MB1. Click on the Disable button to disable the bell.

Keyclick Volume

Each time you press a key, the keyboard makes a clicking sound. This setting is indicated by a shaded button. Adjust the clicking volume by dragging the arrow in the Percent Volume slider right or left, or move the pointer to a location on the slider and click MB1. To disable the keyclick sound,click on the Disable button.

Cursor Blink

DECwindows displays a blinking insertion cursor in every text-entry box. This setting is indicated by a shaded radio button. Adjust the cursor blink rate by dragging the arrow in the Milliseconds slider right or left, or move the pointer to a location on the slider and click MB1. To disable the blinking cursor, click on the disable button.

Auto Repeat

When a key is pressed longer than normal, it repeats until it is released. This setting is indicated by a shaded button. To disable Auto Repeat,click on the Disable button.

Lock Key State

Normally, you can produce capital letters but not shifted number keys when you press the Lock key on your keyboard. You can, however, make your keyboard work just like a typewriter keyboard by clicking on the Shift Lock button. Choosing the Shift Lock option means that pressing the Lock key produces both capital letters and shifted number keys.

Operator Window Keys

Normally, you press Ctrl+F2 to open the operator window. You might, however,want to assign other definitions to those keys. To change how you open the operator window,click on any combination of the Ctrl or Shift and F2 or F1 buttons.

Keyboard Type

The location of specific characters on the keyboard varies depending on the keyboard model. Selecting the keyboard type that matches your keyboard model allows the system to display the correct character when you press the corresponding key.

The system default keyboard type is North American. When you installed DECwindows, you might have chosen another keyboard type, such as French, to correspond to your keyboard model. This keyboard type became the new system default. This means that every DECwindows session that is started on that workstation uses the French keyboard type.

If the keyboard on your workstation does not match the keyboard type that was specified when DECwindows was installed, you must set the keyboard type to match the keyboard model. This changes the keyboard type temporarily without permanently changing the system default keyboard type. (For example, you might plug an Austrian German keyboard into a workstation whose system default keyboard type,specified when DECwindows was installed, is French.)

To find your keyboard model number, turn the keyboard upside down and look fora label that specifies the model number. The model number should be in a format similar to LK201- *xx*. (The model number might also be listed as simplyLK201. In this case, the *xx* you need is in another place on the label. Look for a number similar to *nn-nnnnn-xx*.) Use this number to select a keyboard type from the Keyboard Type list box. For example, if you are using an Austrian German keyboard and your keyboard model is LK201-NG, select the Austrian German LK201-NG keyboard type.

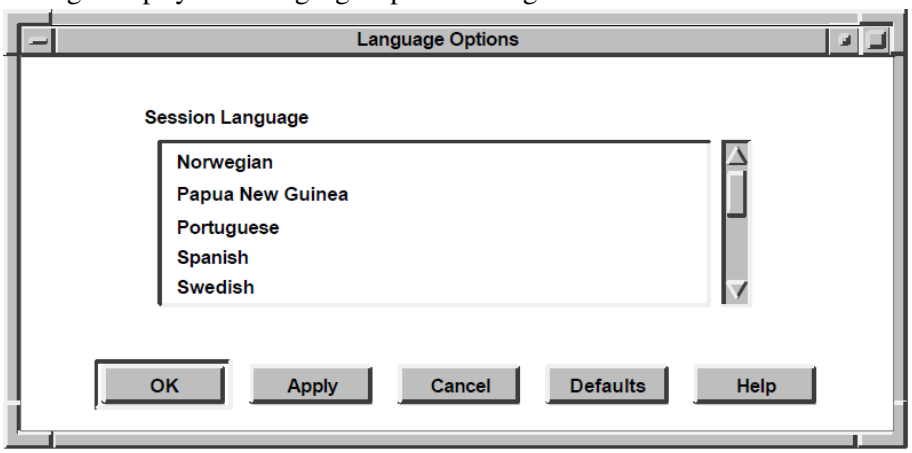
For any language other than North American or U.S., you can also specify whether you want your keyboard to act as a data processing (DP) or typewriter (TW)keyboard. Selecting a data processing keyboard type enables the characters on the right half of the keycaps. Selecting a typewriter keyboard enables the characters on the left half of the keycaps.

To use this new keyboard type for subsequent sessions, you must save the new setting before you end the current session. The new keyboard type is in effect for your sessions only after DECwindows verifies your password at the start of each new session.

7.4. Setting Another Session Language

DECwindows applications are displayed in American English,but they are available in multiple languages. If you have the correct language support installed on your system, you can use DECwindows in another language.

To set another session language, choose Language... from Session Manager's Options menu. Session Manager displays the Language Options dialog box.



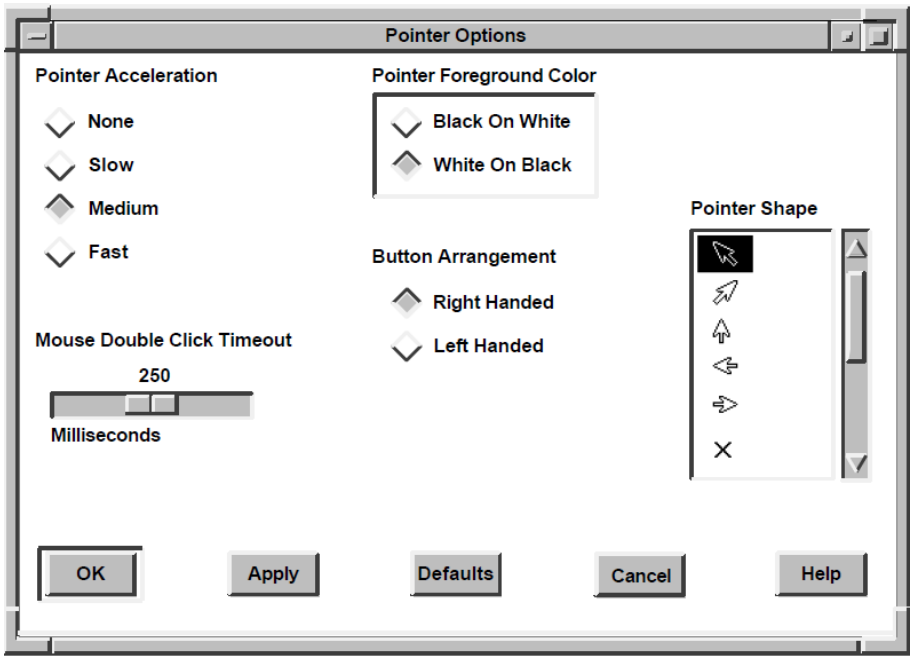
Scroll through the list of languages and select the one you want. The next application you start is displayed in that language. If your system does not support the selected language, the application is displayed in American English.

Language capabilities might vary between systems. For example, your system might have the language support required to display applications in French. If you select French as your session language, any applications you run on your workstation are displayed in French. However, if you run an application on a remote node that does not support French, and you direct the display to your workstation with the SET DISPLAY command, the application is displayed in American English.

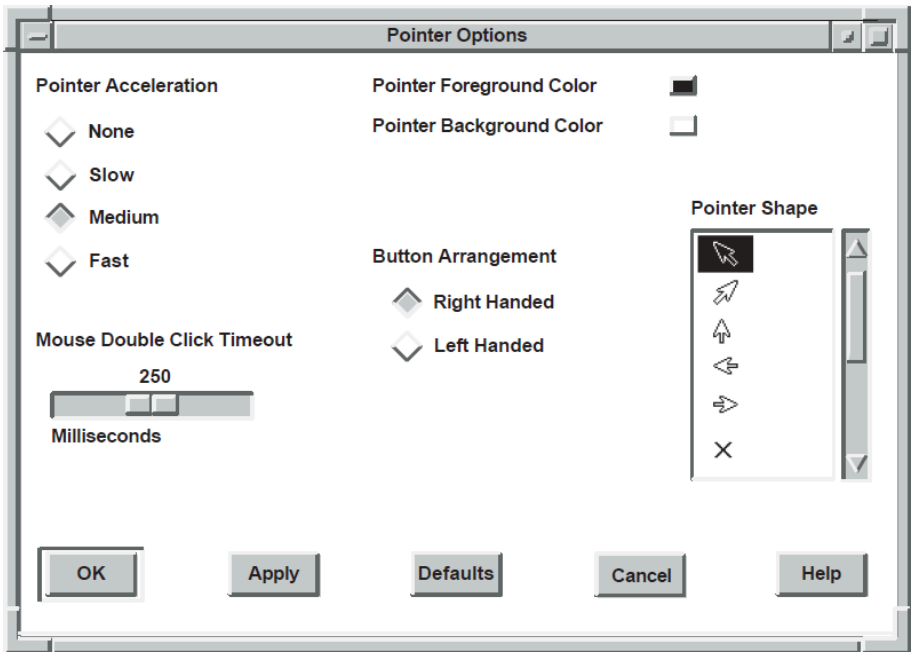
To find out whether an application is available in another language, see the documentation for that application.

7.5. Changing Your Pointer Settings

You can change the shape and color of the pointer, as well as certain mouse characteristics. To change your mouse and pointer settings, choose Pointer... from Session Manager's Options menu. Session Manager displays the Pointer Options dialog box, which looks like this on a monochrome system:



The Customize Pointer dialog box looks like this on intensity and color systems:



From the Pointer Options dialog box, you can change any of the following settings.

Pointer Acceleration

Click on one of the four options to vary the rate at which the pointer moves in relation to the mouse. The None setting keeps the pointer speed constant. The Fast setting makes the pointer move farther as you move the mouse faster. Thus you can move the pointer to another part of the screen without moving the mouse the same relative distance. The preset option is Medium.

Mouse Double-Click Timeout

DECwindows can distinguish between two successive single clicks and a double click. To change the speed by which DECwindows expects one click to follow another in a double-click sequence, drag the arrow in the Mouse Double Click Timeout scale to the right to increase the speed. Drag the arrow to the left to decrease the speed. You can also move the pointer to a location on the scale and click MB1.

Pointer Foreground Color

The pointer consists of an outline and a filled center.

On a monochrome system, the pointer's filled area is white with a black outline by default. Click on the Black On White button to reverse the fill and outline colors.

On intensity and color systems, the pointer's filled area or foreground is black by default. To change this setting, click on the Pointer Foreground Color button. Session Manager displays a color-mixing dialog box. For more information about mixing colors, see Chapter 4.

To see your changes, click on Apply or OK in the Pointer dialog box.

Pointer Background Color

This setting applies to color and intensity systems only. To change the default pointer background color,click on the Pointer Background Color button. Session Manager displays a color-mixing dialog box. For more information about mixing colors, see Chapter 4.

To see your changes, click on Apply or OK in the Pointer dialog box.

Button Arrangement

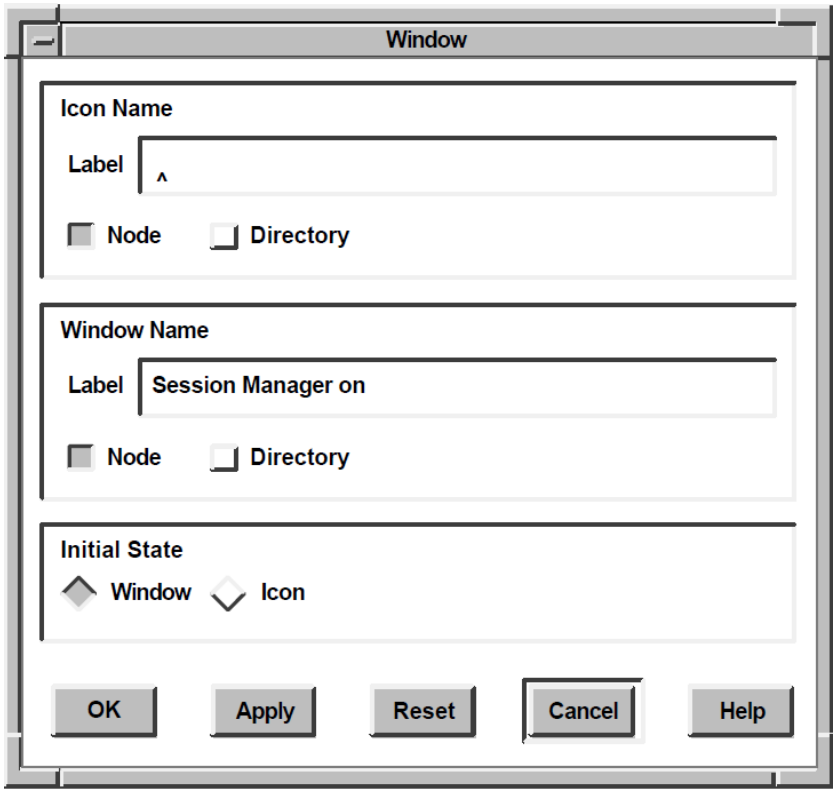
The preset mouse button arrangement—MB1 on the left and MB3 on the right—is natural for a right-handed user. You can switch the mouse button arrangement by clicking on the Left Handed radio button. The right mouse button becomes MB1 and the left mouse button becomes MB3. MB2 stays the same.

Pointer Shape

By default, the pointer is a left arrow. To change the pointer shape, scroll through the list of shapes and select the one you want.

7.6. Changing Your Session Manager Window Settings

You can change Session Manager's icon name and window name as well as its startup state. To change your Session Manager window, choose Window... from Session Manager's Options menu. Session Manager displays a Window dialog box.



From the Window dialog box, you can change the following settings.

Icon Name

To change Session Manager's icon label,type the new label name in the Icon Name entry box. By default, Session Manager's icon label includes the name of your node. To append a directory specification to the icon name, click on the Directory button.

Window Name

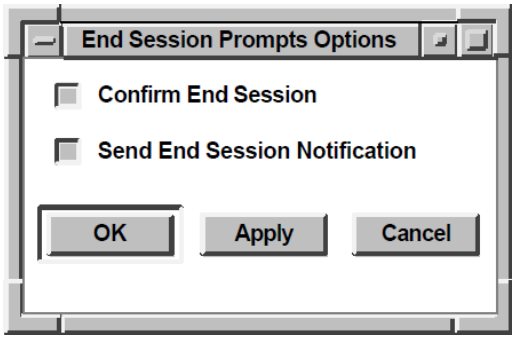
To change Session Manager's window label,type the new window name in the Window Name entry box. By default, Session Manager's window label includes the name of your node. To append a directory specification to the window name, click on the Directory button.

Initial State

Session Manager is displayed as a window at the start of each session. Click on the Icon button in the Initial State entry box to specify that Session Manager be stored as an icon at the start of every session.

7.7. Changing Your End Session Prompts

When you end your session,Session Manager executes several procedures. To alter this sequence, choose End Session Prompts... from Session Manager's Options menu. Session Manager displays the End Session Prompts Options dialog box.



From the End Session Prompt Options dialog box, you can change the following settings.

Confirm End Session

When you end a session, Session Manager asks you for confirmation. This setting is indicated by the shaded radio button. To disable the confirmation message, click on the Confirm Quit Session button. You do not receive a confirmation message when you end your session.

Send End Session Notification

When you end a session, Session Manager notifies every current DECwindows application. Some applications respond to this message and save important data. This setting is indicated by the shaded radio button. To prevent Session Manager from sending an end session message, click on the Send End Session Notification radio button.

7.8. Writing Your Own Pause Screen Messages

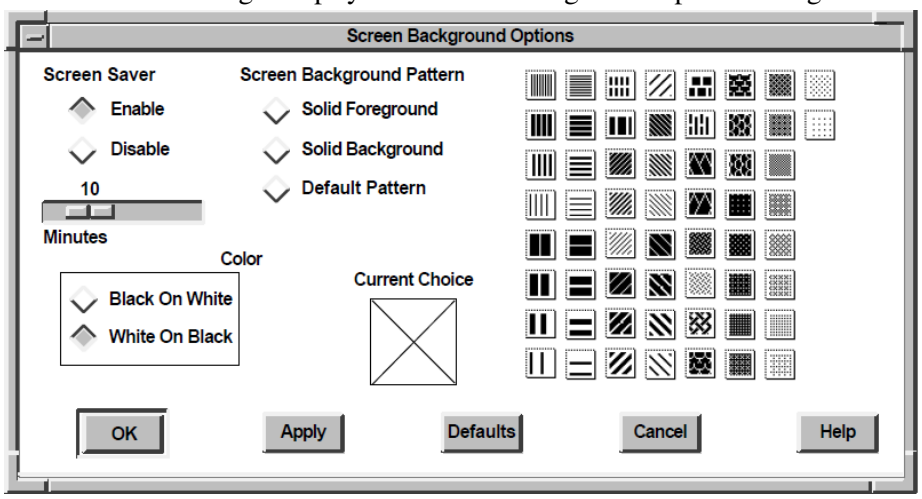
When you put your session on hold and lock your workstation, the Session Manager clears your screen and displays the Pause Session dialog box. You are prompted as follows: “Type your password to resume the session.” To change this message,choose Pause Screen... from Session Manager's Options menu. Session Manager displays the Pause Screen Options dialog box.

Type your new Pause Screen text in the text-entry box in this dialog box. Click on OK or Apply.

To see your new message, choose Pause from Session Manager's Session Menu.

7.9. Changing Your Screen Background Settings

To change your screen background, choose Screen Background... from Session Manager's Options menu. Session Manager displays the Screen Background Options dialog box.



From the Screen Background Options dialog box, you can change any of the following settings.

Screen Saver

Screen Saver extends the life of your monitor by shutting off its display after a specified time. By default, the monitor shuts off its display after 10minutes of keyboard or mouse inactivity. To vary the amount of time that Screen Saver waits before shutting down the display, drag the arrow in the slider right or left,or move the pointer to a specific location on the slider and click MB1. Click on the Disable button to keep the display on indefinitely. Click on Apply or OK to see your change.

Screen Background Pattern

To change the default background pattern, click on a pattern in the dialog box. The selected pattern is displayed in the pattern viewer. Click on OK or Apply to see your selection in effect.

To create a solid background or foreground, click on the Solid Foreground or Solid Background button. To display the default pattern, click on the Default Pattern button.

Solid Foreground

The screen pattern, when set to anything other than the default pattern,consists of a screen foreground (the filled area in the pattern) and a screen background (the pattern's outline). The selected pattern is displayed in the pattern viewer.

To change the default screen color on a monochrome system, click on the White On Black radio button to reverse the fill and outline colors.

To change the default screen color on intensity and color systems,click on the Solid Foreground button. The Session Manager displays a color-mixing dialog box. For more information about mixing colors, see Chapter 4.

To see your new setting, click on Apply or OK.

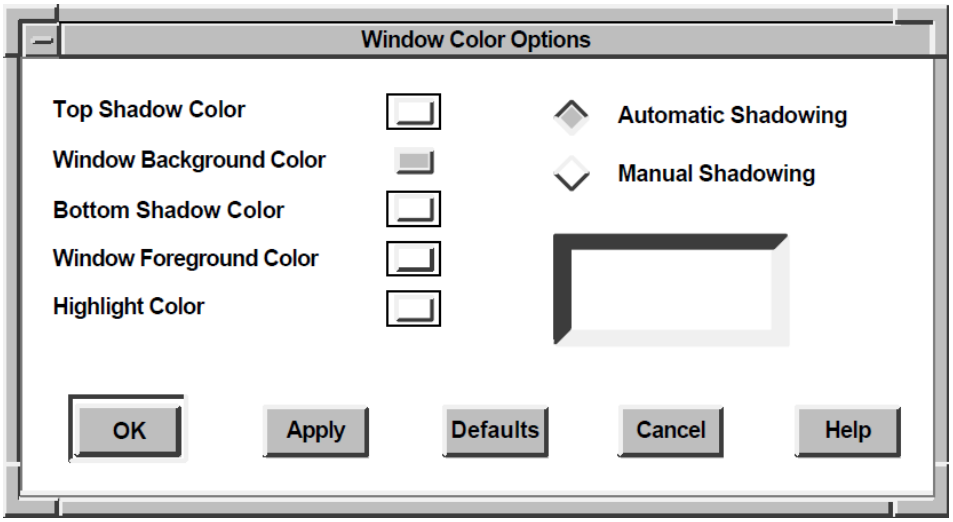
Solid Background

This setting applies to intensity and color systems only. To change the default screen background color, click on the Solid Background button. Session Manager displays a color-mixing dialog box. For more information about mixing colors, see Chapter 4.

7.10. Changing Your Window Color Settings

Whether you have a monochrome, intensity, or color system, you can change the look of your DECwindows display. For example, you can alter the background and foreground patterns and the window and screen colors. If you have a color system, you can choose from a wide palette of colors to design a visually pleasing display.

To change your Window color settings, choose Window Colors... from Session Manager's Options menu. Session Manager displays the Window Color Options dialog box.



Note

Window color changes do not take effect immediately. They apply to applications started after you save your changes.

From the Window Color Options dialog box, you can change any of the following settings. For more information about mixing colors, see Chapter 4.

Top Shadow Color

Window top and bottom shadow colors have to be well matched to present the three-dimensional look of DECwindows Motif. DECwindows helps you to do this by automatically determining top and bottom shadow colors when you change the window color.

To choose your own top shadow colors:

1. Click on the Manual Shadowing radio button to disable Automatic Shadowing.

2. Click on the Top Shadow Color button.

Session Manager displays a color-mixing dialog box.

Window Background Color

To change the default window background color,click on the Window Background Color button. Session Manager displays a color-mixing dialog box.

If you save your changes by clicking on Apply or OK in the Window Colors Options dialog box, your new setting takes effect when you start your next session or start applications.

Bottom Shadow Color

Window top and bottom shadow colors have to be well matched to present the three-dimensional look of DECwindows Motif. DECwindows helps you to do this by automatically determining top and bottom shadow colors when you change the window color.

To choose your own bottom shadow colors:

1. Click on the Manual Shadowing radio button to disable Automatic Shadowing.
2. Click on the Bottom Shadow Color button.

   Session Manager displays a color-mixing dialog box.

Window Foreground Color

Changing the Window Foreground Color setting in a window that contains text also changes the color of that text. If the window contains graphics, the color of the graphics changes.

To change the default window foreground color,click on the Window Foreground Color button. Session Manager displays a color-mixing dialog box.

If you save your changes by clicking on Apply or OK in the Window Colors Options dialog box, your new setting takes effect when you start your next session or start applications.

Highlight Color

To change the default color of the location cursor used in keyboard traversal,click on the Highlight Color button. Session Manager displays a color-mixing dialog box.

If you save your changes by clicking on Apply or OK in the Window Colors Options dialog box, your new setting takes effect when you start your next session or start applications.

Note that you can also change the pattern used for highlighting. This is especially useful on monochrome and 4-plane color systems.

7.11. Changing Your Security Settings

DECwindows software allows you to run applications from another computer for display on your workstation monitor. By default, your workstation monitor can display only those applications that are running on your workstation. This prevents users on other systems in the network from displaying

applications on your workstation monitor and from capturing and displaying your keystrokes (including your password) on another monitor.

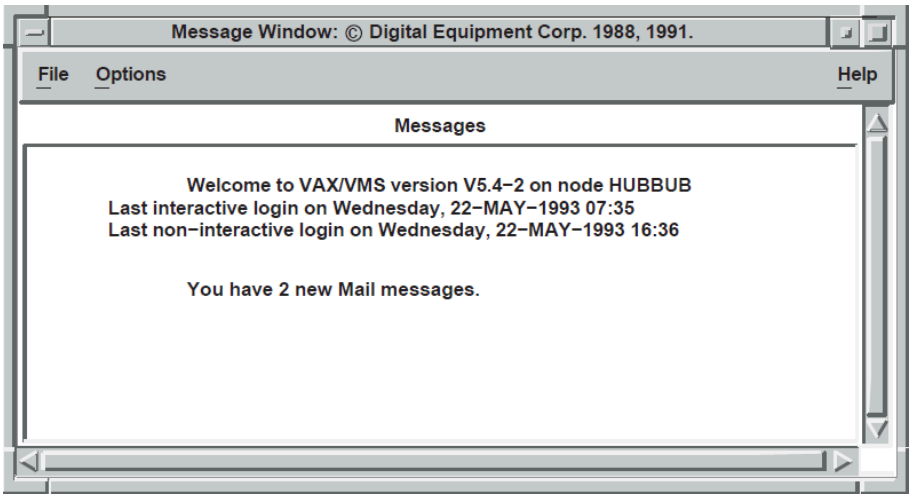
From Session Manager's Security Options dialog box, you can authorize yourself or others to use your monitor to display applications that are running on other systems. See Chapter 12 for information about supplying this authorization.

7.12. Changing Message Window Settings

To change the settings in your Message Window:

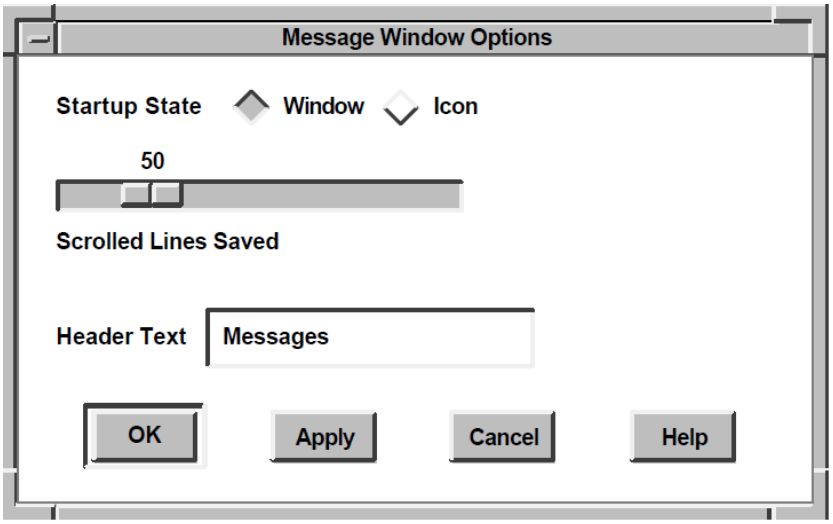
1. Choose Message Window from Session Manager's Applications menu.

   Session Manager displays the Message Window.



2. Choose Message Window... from the Message Window's Options menu.

   The Message Window Options dialog box is displayed.



From the Message Window Options dialog box, you can change the following settings.

Startup State

Click on the Icon radio button to specify that the Message Window be displayed as an icon when you start it.

Scrolled Lines Saved

By default, you can scroll through the last 50 lines of text in Session Manager's message area to view messages you may have missed. The Scrolled Lines Saved slider lets you vary the number of lines that Session Manager saves.

Header Text

Session Manager message area is labeled Messages. To change this heading,type a new heading in this text-entry box.

Chapter 8. Customizing Menus and Menu Bars

You can change Session Manager's and FileView's menus and menu bars by deciding what to include on a menu bar,adding menu items to menus, and defining your own menu items. For example, if you write your own application, you can add it to Session Manager's Applications menu and invoke it just as you would any other DECwindows application.

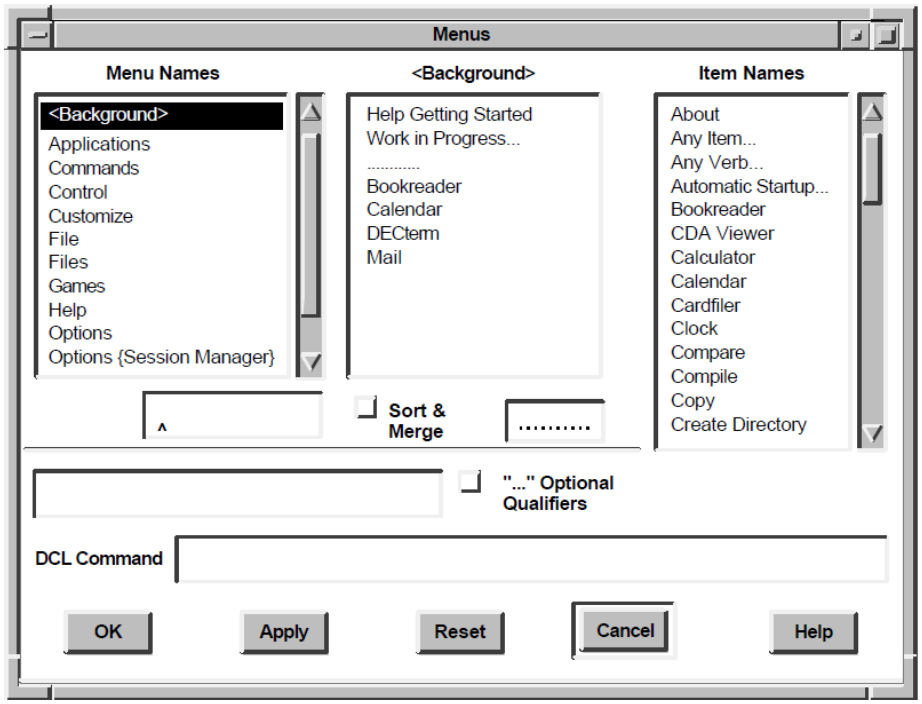
This chapter describes how to add a menu item to a pull-down menu,remove a menu item from a pull-down menu,define your own menu item definitions,modify menu bars, and change Session Manager's menu bar so that it looks and behaves like FileView.

8.1. Customizing Menus

You can customize Session Manager's and FileView's menus by changing the **menu items** they contain.

By displaying the Menus dialog box, you can see how a pull-down menu is created and what happens when you choose a menu item from a Session Manager or FileView menu. Once you understand the components of menus, you can modify them and the menu items they contain.

To display the Menus dialog box, choose Menus... from Session Manager's or FileView's Options menu. The following dialog box is displayed.



The Menus dialog box contains the following components.

- The **Menu Names** list box displays currently defined menu names.
- The menu name entry box is located below the Menu Names list box. Use it when you define your own menu names.
- The items-in-menu list box displays the menu items on the currently selected menu in the Menu Names list box. The name of the menu you select is displayed above this list box.

- The **Item Names** list box displays available menu items that you can add to Session Manager and FileView menus.
- The **Item Name** entry box displays the item name that you select in the Item Names list box. You can use this entry box to define your own menu items, as described in “ Section 8.1.2.”
- The **DCL Command** entry box displays the DCL command or command file associated with the menu item that is currently selected in the Item Names list box.

8.1.1. Looking at the Contents of a Menu

In the Menus dialog box, look at the menus that are already defined.

1. In the Menu Names list box, select the menu name whose contents you want to display.

   The items-in-menu list box displays the menu items in the selected menu. For example, if you select Applications from the Menu Names list box, the menu name (Applications) appears above this list box. This list box displays all of the menu items on the Applications menu.

2. Select each menu name in turn to display the corresponding pull-down menu in the items-in-menu list box.

8.1.2. Adding an Item to a Menu

To add a menu item to a pull-down menu:

1. In the Menu Names list box, select the menu name to which you want to add an item.

   The items-in-menu list box displays the menu items on the menu you selected. The name of the menu you selected is displayed above the list box.

2. In the Item Names list box, select the item that you want to add to the menu.
3. Click on the arrow button that appears. The item is added to the menu you selected.
4. Use the up and down arrows that appear in order to change the location of the item on the menu.
5. Click on OK or Apply to see your changes.

   Or click on Reset or Cancel to retain the original settings.

Note

Enabling the Sort & Merge setting ensures that the private customization file that you create when you customize FileView is merged with any other system or public customization files that FileView reads. If you disable the Sort & Merge setting,FileView cannot merge your new definition with the public and system definitions for that menu. A menu also becomes unsorted if you rearrange its contents.

For more information about how FileView uses private, public, and system customization files, see Chapter 14.

8.1.3. Removing an Item from a Menu

To remove a menu item from a pull-down menu:

1. In the Menu Names list box, select the menu name that contains the menu item you want to remove.
2. In the items-in-menu list box, select the menu item you want to remove.
3. Click on the Trashcan button that appears.

   The menu item is deleted from the list.
4. Click on Apply or OK to save your change.

   Or click on Reset or Cancel to retain the original settings.

Note

When you remove a built-in menu item from a pull-down menu, you create a copy of that menu in your private customization file. Any subsequent changes made to the public customization file (for example, adding a new menu item to a pull-down menu) are not reflected in your private Session Manager or FileView. For more information about how Session Manager and FileView use private, public, and system customization files, see Chapter 14.

8.1.4. Looking at a Menu Item Definition

Each item on a Session Manager or FileView menu has a corresponding DCL command definition or command file that executes when you choose that item. You can replace a menu item's current command definition with a new command definition that executes a different series of commands. For example, when you choose the Type menu item from FileView's Commands menu, the command file VUE $LIBRARY:VUE$TYPE runs. By designing a new command file and associating it with the Type menu item, you can run a different series of commands when you choose Type from FileView's Commands menu.

To see the name of the DCL command file that is associated with a particular menu item,select that menu item in the Item Names list box in the Menus dialog box. The associated command file is displayed in the DCL Command entry box.

8.1.5. Changing a Menu Item Definition

To change the DCL command or command file that executes when you choose a menu item from a menu:

1. In the Item Names list box, select the menu item that you want to change.
2. Delete the name of the current command in the DCL Command entry box.
3. Type the name of the new command or command file.

   If you want to make changes to a built-in (predefined) FileView command file, you can use the command file for that menu item as a template.

   To modify a command file that executes a built-in FileView command, copy the command file from the VUE$LIBRARY directory and edit it. You can recognize the contents of the command files by their file names. For example,the FileView command file that executes the Type command is named VUE$TYPE.

   Give your command file a name that identifies the task it performs and a file type of COM—for example, EDIT.COM. Do not delete the command files in the VUE$LIBRARY directory that

execute FileView's built-in menu items. Also, do not give your command file the same name as an existing FileView command file.

If you delete your new menu item definition, FileView uses the original command file to execute the built-in menu item.

To see a sample command file, see Chapter 15.

8.1.6. Adding a User-Defined Menu Item

To define a menu item and add it to a pull-down menu:

1. Click on the text-entry box above the DCL Command entry box.
2. Type the name of the new menu item exactly as you want it to appear.

   For example, type SHOW USERS.
3. In the DCL Command entry box, type the DCL command you want to associate with your new menu item.

   For example, type the command SHOW USERS. To associate your menu item with a command file, type

   ```
   $ @command_file_name.COM
   ```
4. Click on the up arrow button that appears below the Item Names list box.
5. If you want to add your new menu item to a menu, see “ Section 8.1.2.”

8.1.7. Deleting a User-Defined Menu Item

To delete a menu item name that you defined:

1. In the Item Names list box, select the menu item that you want to delete.
2. Click on the Trashcan button that appears.

8.1.8. Defining a New Menu Name

You can create new menu names to which you can then add menu items. To create a menu name:

1. Click on the text-entry box below the Menu Names list box.
2. Type, exactly as you want it to appear on the menu, the name of the menu you want to add.(Note that any text you enter within { } is not displayed in the menu bar.)

   For example, type PERSONAL.
3. Click on the up arrow button that appears below the Menu Names list box.
4. If you want to add menu items to this new menu, see “ Section 8.1.2.”
5. Click on Apply or OK to see your change.

   Or click on Reset or Cancel to retain the original settings.

8.1.9. Deleting a User-Defined Menu Name

To delete a menu name that you defined:

1. In the Menu Names list box, select the menu name that you want to delete.

   A Trashcan button appears below the Menu Names list box.

2. Click on the Trashcan button.

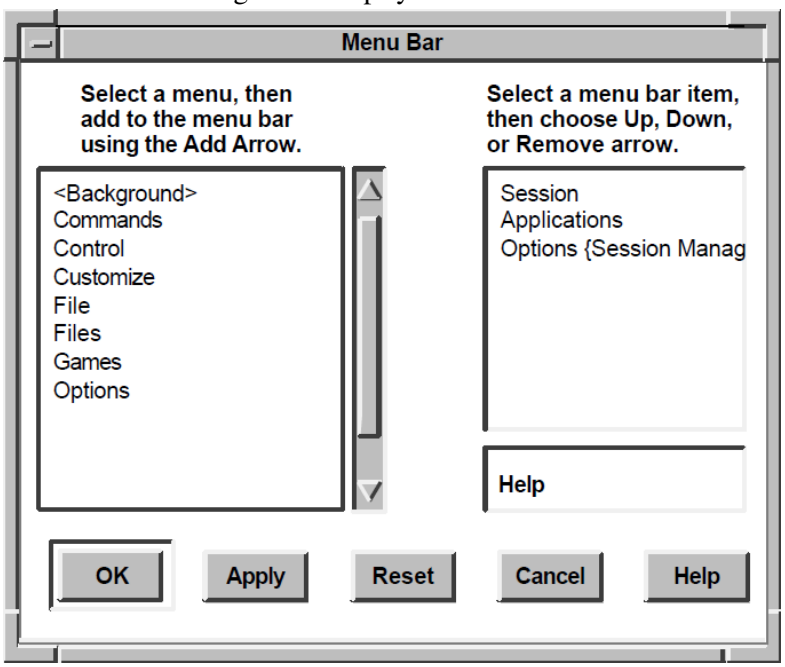
8.2. Customizing Menu Bars

Once you create a new menu, you must add it to a menu bar. You can also remove menus that you do not need.

To add a menu name to a menu bar:

1. Choose Menu Bar... from Session Manager's or FileView's Options menu.

   The Menu Bar dialog box is displayed.



   Existing menu names appear in the right-hand list box. New menu names appear in the left-hand list box.

2. In the left-hand list box, select the menu name you want to add to a menu bar.

3. Click on the arrow button that appears in order to move the menu name to the right-hand list box.

4. Click on Apply or OK to see your change.

To remove a menu name from a menu bar.

1. Choose Menu Bar... from Session Manager's or FileView's Options menu.

   The Menu Bar dialog box is displayed.

2. In the right-hand list box, select the menu name that you want to remove from the menu bar.
3. Click on the arrow button that appears.
4. Click on OK or Apply to see your change.

Note

Any changes you make to a menu bar affect only the current Session Manager or FileView window. If you want different menu bars for different tasks—for example, one for system management tasks and another for text-processing tasks—you can create multiple menu bars and save them as views, as described in Chapter 9.

8.3. Combining Session Manager and FileView

By adding the Session Manager as FileView menu item to Session Manager's Options menu, you can combine Session Manager's and FileView's features into one window.

To make Session Manager menu bar look and behave like a FileView window:

1. Choose Menus... from Session Manager's menu.

   Session Manager displays the Menus options dialog box.

2. In the Menu Names list box, select the Options {Session Manager}menu name.

   The items-in-menu list box displays Session Manager's Options menu.

3. In the Item Names list box, select the Session Manager as FileView item.
4. Click on the left arrow button that appears.

   Session Manager as FileView is displayed on Session Manager's Options menu.

5. Click on OK or Apply to see your changes.

   Or click on Reset or Cancel to retain the original settings.

6. Choose Session Manager as FileView from Session Manager's Options menu.

   Your Session Manager menu bar is now displayed as a FileView window.

7. To reset your Session Manager to its original form,choose Session Manager from the Views menu.

Tip

You can also make Session Manager's menu bar look and behave like a FileView window by adding the Show/Hide Work Area menu item to one of Session Manager's menus.

Chapter 9. Customizing FileView

In addition to customizing FileView's menus and menu bar,you can change other FileView features. For example,you can change the look of your file list,build your own pop-up menus, and create a customized FileView window.

This chapter describes how to use FileView's Options menu to customize FileView.

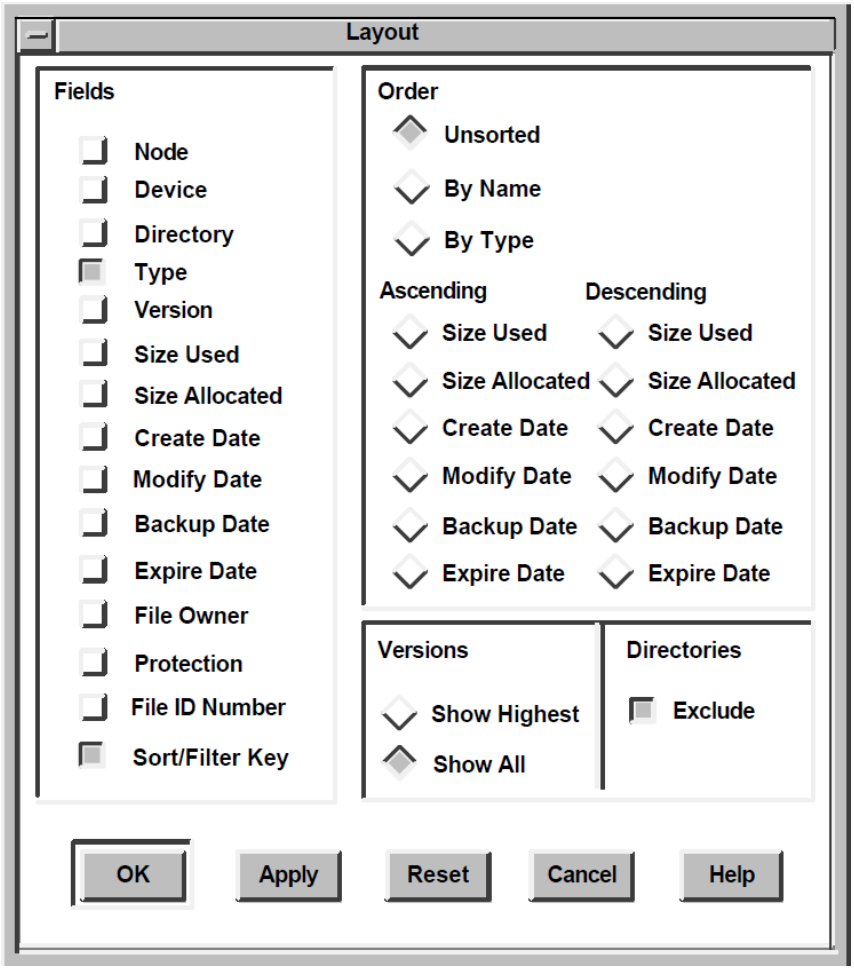
9.1. Changing the Look of Your File List

When you first start DECwindows,your file list in the FileView window contains the following information about every file in your current directory:

- The file name
- The file type

You can change the way the files in your current and subsequent file lists are listed. For example, you might want to list each file by its size or by the date it was created or to change the order in which the files are listed.

To change the way files are listed, choose Layout... from FileView's Options menu. FileView displays a dialog box:



The settings in the Layout dialog box are divided into groups. Some settings are preset and are already in effect. When you choose a setting from the Layout dialog box, it affects every subsequent file list until you change the setting again.

9.1.1. Changing the Fields in Your File List

By using the check buttons in the Fields column, you can display the following information about each file in your file list.

Field	Information Displayed
Node	DECnet node name of the file
Device	Device on which the file is stored
Directory	Directory in which the file is stored
Type	File type of the file
Version	Version number of the file
Size Used	Size, in blocks, used in the file
Size Allocated	Size, in blocks, allocated to the file
Create Date	Date and time the file was created
Modify Date	Date and time the file was last modified
Backup Date	Date and time the file was last backed up
Expire Date	Date the file expires
File Owner	Owner, in numeric or text format, of the file
Protection	Protection settings for the file
File ID Number	Unique file identification for the file
Sort/Filter Key	Displays the sort key field

9.1.2. Displaying File Version Numbers

In the Layout dialog box, the Show Highest Version option is enabled by default. This setting is indicated by the shaded radio button,and only the highest version of each file in your current directory is displayed. Every version number of a file is not shown.

To display all versions of the files in your current directory, click on the Show All Versions radio button.

9.1.3. Changing the File Order in Your File List

By default, the files in your file list are listed in the order in which they appear in the directory structure. This order is alphabetical unless your file list includes files from more than one directory. To list files alphabetically, even if multiple directories are shown,click on the By Name radio button under the Order column. To list files alphabetically by file type,click on the By Type radio button. You can choose only one radio button at a time from the Order column.

To list your files in ascending (low to high) order and descending (high to low) order,click on one of the following options represented by the Ascending or Descending groups of radio buttons.

Option	Sorts files in file list by
Size Used	Blocks used

Option	Sorts files in file list by
Size Allocated	Blocks allocated to the file
Create Date	Date and time each file was created
Modify Date	Date and time each file was most recently changed
Backup Date	Date and time each file was most recently backed up
Expire Date	Expiration date

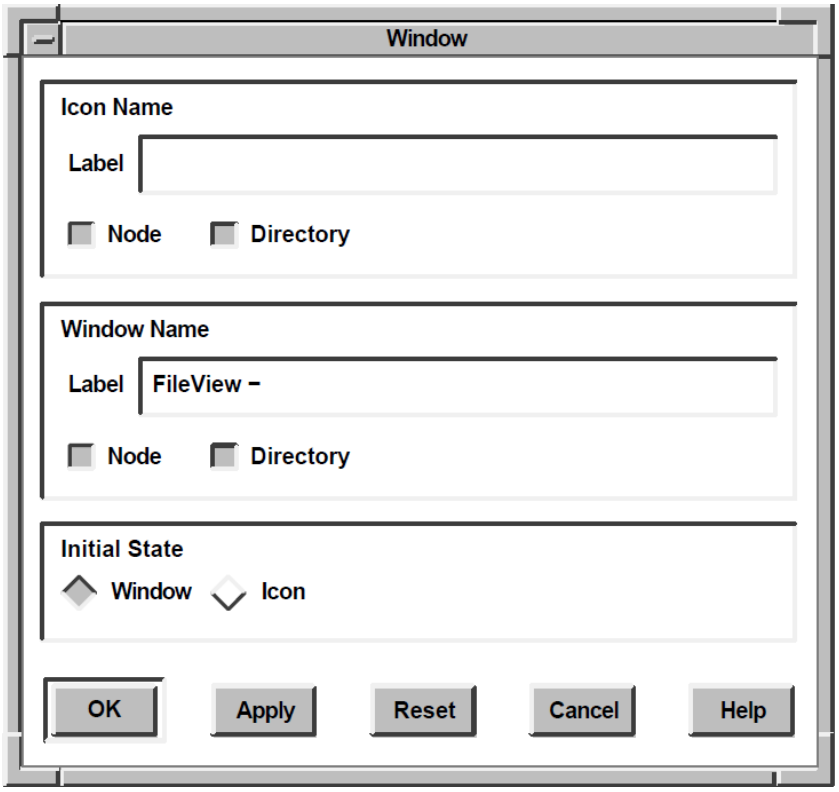
9.1.4. Saving Your File List Changes

Once you finish working with the Layout dialog box, you need to save your changes.

Choose	To
OK	Save new settings and dismiss the dialog box.
Apply	Save new settings without dismissing the dialog box.
Reset	Redisplay the current settings if you changed settings without applying them.
Cancel	Dismiss the dialog box without changing any settings.

9.2. Changing Your FileView Window Settings

You can change FileView's icon name and window name as well as its startup state. To change your FileView window settings, choose Window... from FileView's Options menu. FileView displays the Window dialog box.



From the Window dialog box,you can change the following settings.

Icon Name

To change FileView's icon label,type the new label name in the Icon Name entry box.

Window Name

To change FileView's window label,type the new window name in the Window Name entry box.

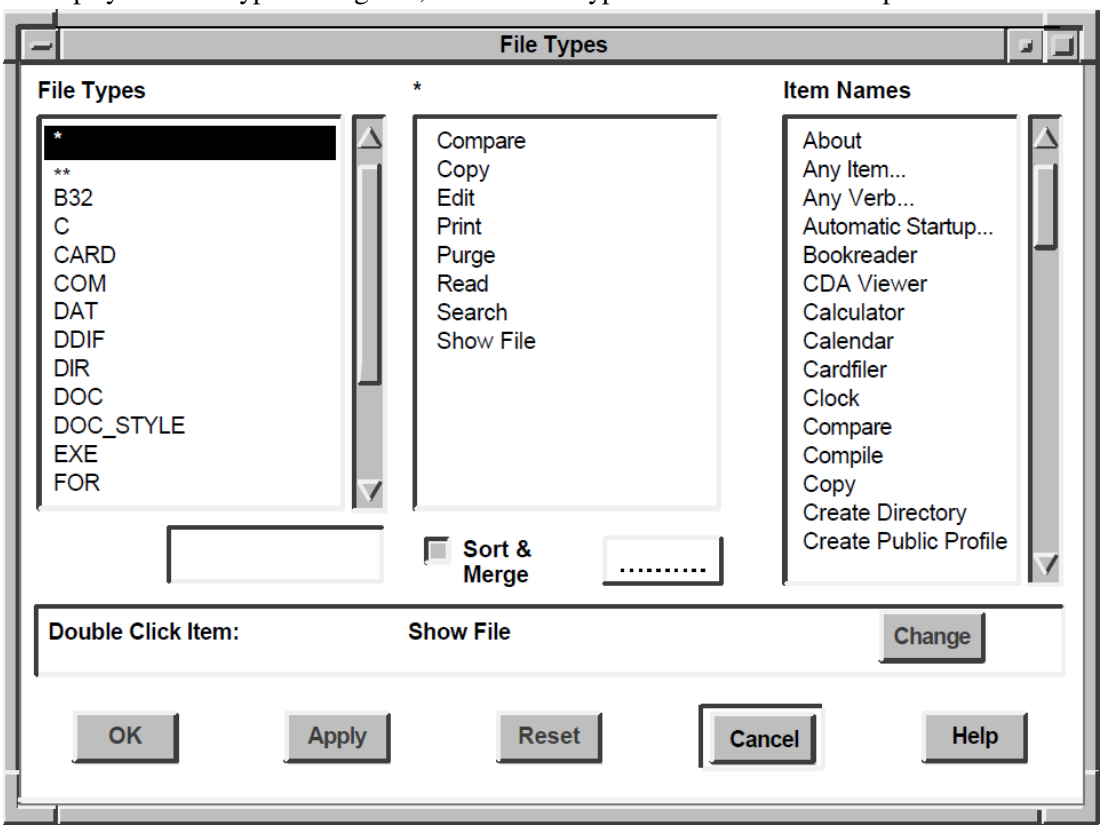
Initial State

When you start FileView, it is displayed as a window. If you want it to appear as an icon when you start it,click on the Icon button in the Initial State entry box.

9.3. Building Pop-Up Menus and Defining Double-Click Commands

As described in Chapter 6, FileView provides pop-up menus and double-click command definitions to make it easier for you to work with files. Using the File Types dialog box, you can modify the pop-up menus and double-click command definitions associated with each file type.

To display the File Types dialog box, choose File Types... from FileView's Options menu.



The File Types dialog box contains the following components.

- The **File Types** list box displays the file types for which double-click menu items and pop-up menus are currently defined.

- The **pop-up menu** (labeled with an asterisk [*])list box displays the currently defined menu items on the pop-up menu of the selected file type. The name of the pop-up menu is displayed above this list box (in place of the asterisk).
- The **Item Names** list box displays the menu items currently defined in FileView.
- The **Double-Click Item** entry box displays the menu item that executes when you double click on a file of the selected type.

9.3.1. Looking at Pop-Up Menu Definitions

When you press and hold MB3 on any file name, FileView displays the pop-up menu defined for that file type.

Look at what FileView's pop-up menus already contain.

1. Select the * file type in the File Types list box. The asterisk refers to all file types not specifically listed in the File Types list box—for example,ANL and SDML files. If you press MB3 while pointing to a file in your file list for which no pop-up menu is defined, the pop-up menu defined for * is used.

   FileView displays the corresponding pop-up menu in the pop-up menu list box.

2. Select the ** file type in the File Types list box. The double asterisk does not refer to a specific file type. If you click MB3at the bottom of the file list,FileView displays the ** pop-up menu.
3. In turn, select each file type in the File Types list box.

   As you select a file type, its corresponding pop-up menu is displayed in the pop-up menu list box.

9.3.2. Adding a Menu Item to a Pop-Up Menu

To add a menu item to a FileView pop-up menu:

1. In the File Types list box, select the file type whose corresponding pop-up menu you want to change.
2. In the Item Names list box, select the menu item you want to add to the pop-up menu.
3. Click on the arrow button that appears between the pop-up menu and Item Names list boxes.

   The menu item is added to the pop-up menu list box. New menu items are added alphabetically if the Sort & Merge button is shaded. The menu items you add always appear in boldface to identify what you have customized.

4. To move the menu item within the list, click on the up or down arrow button that appears between the pop-up menu and Item Names list boxes.

   To delete the menu item, click on the Trashcan button.

5. Click on Apply or OK to see your change.

   Or click on Reset or Cancel to retain the original settings.

Note

Enabling the Sort & Merge setting ensures that the private customization file created when you customize FileView is merged with any other system or public customization files that FileView reads.

If you disable the Sort & Merge setting,FileView cannot merge your new definition with the public and system definitions for that menu. This means that you would not see any changes (for example, a new pull-down menu) made to a public customization file. A menu also becomes unsorted if you rearrange its contents by using the up or down arrows.

For more information about how FileView uses private, public, and system customization files, see Chapter 14.

9.3.3. Removing a Menu Item from a Pop-Up Menu

To remove a menu item from a FileView pop-up menu:

1. In the File Types list box, select the file type whose corresponding pop-up menu you want to change.
2. In the pop-up menu list box, select the menu item you want to remove.
3. Click on the Trashcan button next to the pop-up menu list box.

   The menu item is removed from the list.
4. Click on OK or Apply to see your change.

   Or click on Reset or Cancel to retain the original settings.

Note that when you remove a built-in menu item from a pop-up menu, you create a copy of that menu in your private customization file. Any subsequent changes made to the public customization file are not reflected in your private FileView. See Chapter 14 for more information about how FileView uses private, public, and system customization files.

9.3.4. Looking at Double-Click Menu Item Definitions

As described in Chapter 6, FileView executes a predefined command when you double click on a specific file type. In the File Types dialog box, you can change the double-click menu item defined for a file type and execute a different command.

Look at the double-click menu item currently defined for each file type.

1. Select the * file type in the File Types list box. (The asterisk refers to all file types not specifically listed in the File Types list box—for example,ANL and SDML files. If you double click on a file type in your file list for which no double-click menu item is defined, the double-click menu item defined for * is used.)

   The corresponding double-click menu item is displayed in the Double Click Item entry box.
2. Select each file type in turn to see its corresponding double-click menu item.

   As you select a file type, its corresponding double-click menu item is displayed.

9.3.5. Changing a Double-Click Menu Item Definition

To change the double-click menu item defined for a file type:

1. In the File Types list box, select the file type whose corresponding double-click menu item you want to change.
2. In the Item Names list box, select the menu item that you want FileView to execute when you double click on a file.

3. Click on the Change button.

   The double-click menu item definition is changed. The file types whose double-click definitions you have changed always appear in boldface to identify what you have customized.

4. Click on Apply or OK to see your change.

   Or click on Reset or Cancel to restore the original settings.

9.3.6. Adding a File Type

To add a file type to the File Types list box:

1. Type the file type (for example, COM) that you want to add in the text-entry box below the File Types list box.

2. Click on the up arrow button that appears.

   The file type is added to the list. The file types you add always appear in boldface to identify what you have customized.

3. Add menu items to the new file type's pop-up menu as described in “ Section 9.3.2.”Or define a double-click menu item for the new file type as described in “ Section 9.3.5.”

4. Click on OK or Apply to see your change.

   Or click on Reset or Cancel to retain the original settings.

9.3.7. Removing a File Type

To remove a file type that you added to the File Types list box but no longer need:

1. Select the file type in the File Types list box.

2. Click on the Trashcan button.

   The file type is deleted from the list.

3. Click on OK or Apply to see your change.

   Or click on Reset or Cancel to retain the original settings.

9.3.8. Saving Your File Types Changes

Once you finish working with the File Types dialog box, you need to save your changes.

Click on	**To**
OK	Save new settings and dismiss the dialog box.
Apply	Save new settings without dismissing the dialog box.
Reset	Redisplay the current settings if you changed settings without applying them.
Cancel	Dismiss the dialog box without changing any settings. If you made any changes without applying

Click on	To
	them, clicking on the Cancel button cancels those changes.

9.4. Working with Views

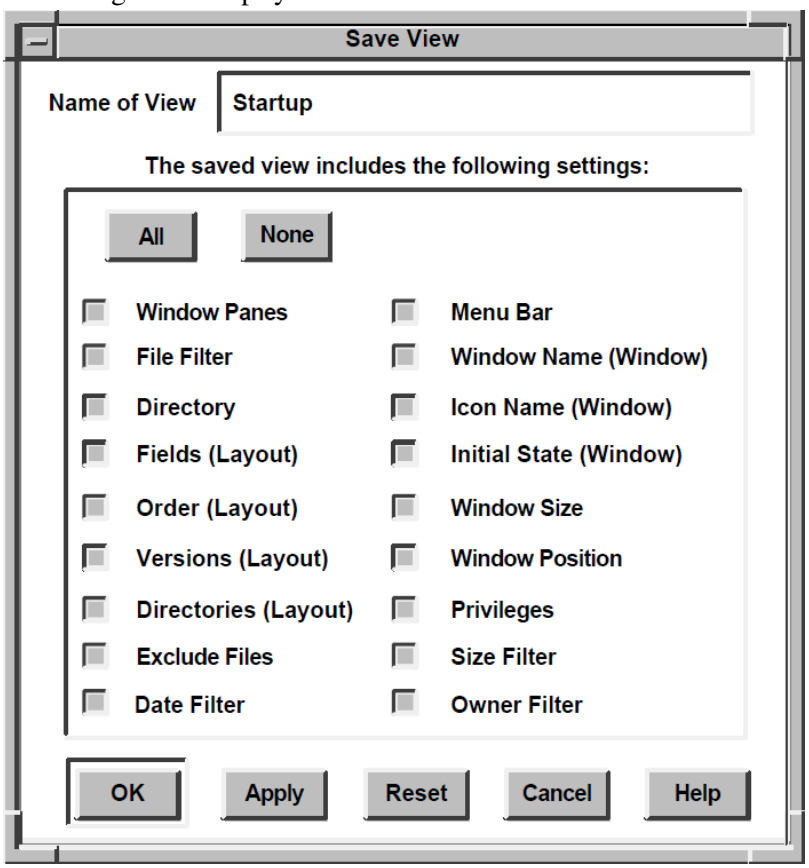
FileView provides two ways to work with your customized FileView settings. You can use options dialog boxes to make changes and save them, as described in the previous sections of this chapter. You can also create FileView windows with different sets of customized settings that you can name and switch between. These customized FileView windows are called **views**.

The following sections describe how to design and save your own views and how to use predefined views.

9.4.1. Designing a View

As described in Chapter 6,the FileView window contains several components.

To design a view, you choose different combinations of FileView's components from the Save View dialog box. To display the Save View dialog box,choose Save View... from FileView's Options menu. The dialog box is displayed.



By default, all of the following FileView components are saved in the new view.

Component Setting	Information Preserved
Window Panes	Areas displayed in a FileView window. For example, you can use the Show/Hide Work Area

Component Setting	Information Preserved
	menu item to display or not display FileView's work area.
File Filter	Text you specify in the File Filter entry box in the FileView window.
Directory	Name of the directory that you specify in the Directory entry box.
Fields	Field settings—such as Create Date and Size Used—that you specify in the Layout dialog box(Options menu).
Order	Order settings—such as Unsorted or By Name—that you specify in the Layout dialog box(Options menu).
Versions	Version number settings—either Show All or Show Highest—that you specify in the Layout dialog box (Options menu).
Directories	Directories that you specify in the subdirectory list.
Date Filter	Date-filter that settings you specify in the Filter by Date dialog box (Options menu).
Exclude Files	Text that you specify in the Exclude entry box in the FileView window.
Menu Bar	Any menu names that you added to the menu bar (Options menu). This setting allows you to have different menu bars for different tasks.(See Chapter 8 for more information about adding menu names to the menu bar.)
Window Name	Name of the FileView window that you specify in the Window dialog box (Options menu).
Icon Name	Name of the FileView icon that you specify in the Window dialog box (Options menu).
Initial State	Initial state of FileView window—icon or window—that you specify in the Window dialog box (Options menu).
Window Size	Size of the FileView window on your screen.
Window Position	Location of the FileView window on your screen.
Privileges	Process privileges that you specify in the Privileges dialog box (Session menu in Session Manager).
Size Filter	Size-filter settings that you specify in the Filter by Size dialog box (Options menu).
Owner Filter	Owner-filter settings that you specify in the Filter by Owner dialog box (Options menu).

If you enable all the component settings,your saved view is a snapshot of the current FileView window. For example, you might want to save a view of a subdirectory you frequently access. When you restore the view, the current FileView display changes to reflect the components of the view you saved. Because you saved every component, the FileView window changes to display a view of that subdirectory. By

using a saved view in this way, you establish a shortcut for ascending and descending the directory structure.

When you enable only some component settings and save the current FileView display, only those components you specified are saved. When you restore that saved view, only those components you saved are changed; those components that were not saved are obtained from the current FileView display. For example, you might always want your FileView window to appear in the upper left-hand corner of your screen. By moving the FileView window to the upper left-hand corner, enabling only the window position setting in the Save View dialog box and saving it as a view called “Corner FileView,” you save only one component from the current FileView. You can continue to work with and change your FileView display. When you restore the Corner FileView saved view, no information in your current FileView display changes, but the FileView window moves to the upper left-hand corner of your screen.

9.4.2. Saving a View

To save a view:

1. Customize the FileView window the way you want it saved.
2. Choose Save View... from FileView's Options menu.

   FileView displays the Save View dialog box.
3. Type the name of the view you want to save in the Name of View entry box.

   Give it a name meaningful to you—for example, “Sales Project” or “C file sizes.”
4. Click on the components you don't want to save in the view.(All the components are saved by default.)
5. Click on OK or Apply.

   The view is saved.

9.4.3. Looking at Built-In Views

Several commonly used views have already been saved for you. To see the list of the built-in views that DECwindows provides, click on FileView's Views menu. As you save additional views, FileView adds them to this list.

9.4.4. Saving Your Startup View

You can save the view you want to see whenever you start FileView. For example, you might want to display your SCHEDULES subdirectory when you start FileView. To save a startup view, customize the FileView window the wayyou want it saved. Choose Save Startup from FileView's Options menu. The next time you start FileView,your customized FileView is displayed.

9.4.5. Replacing a Saved View

You can replace a saved view by saving another view with the same name. To supersede a saved view:

1. Choose Save View... from the Options menu.

FileView displays the Save View dialog box.

2. In the Name of View entry box, type the name of the view you want to supersede.

   Give the new view exactly the same name as the view you want to supersede,preserving the same upper-case and lower-case letters.

3. Choose the components you want saved.

4. Click on OK.

   The new view replaces the previous one.

9.4.6. Restoring a Saved View

When you restore a saved view, those components not saved are obtained from the current view. By saving only some components of a view, such as the fields and order, you can quickly change the look of your current FileView display.

To restore a saved view in the current FileView window, choose the saved view you want from FileView's Views menu.

To restore a saved view in a new FileView window:

1. Press and hold Shift.

2. Choose the view you want to restore from FileView's Views menu.

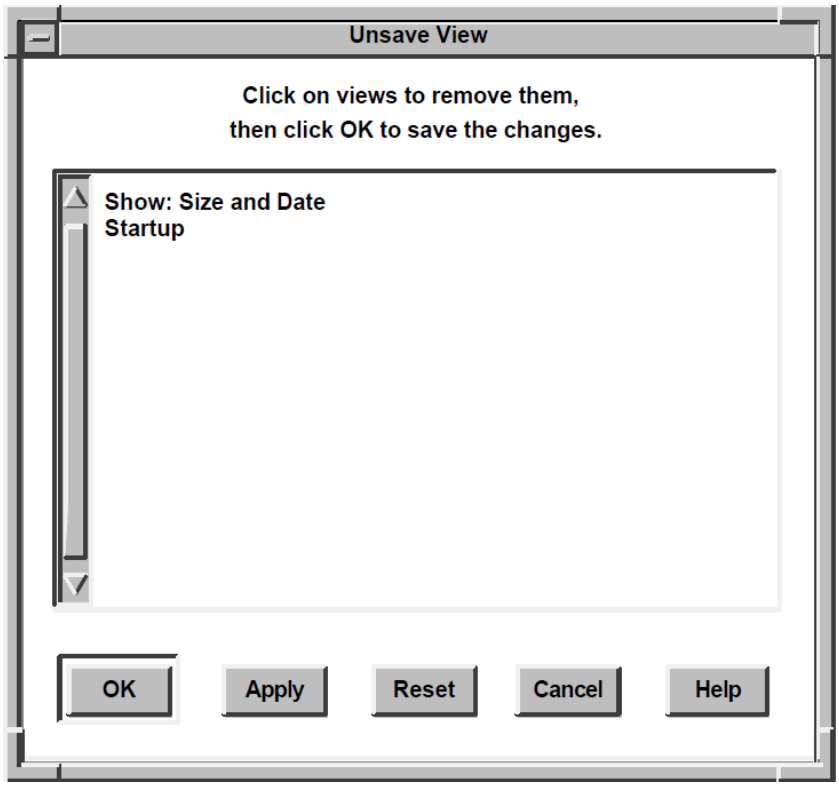
   The saved view is restored in a new FileView window.

9.4.7. Deleting a Saved View

To delete a view you no longer need:

1. Choose Unsave View... from FileView's Options menu.

   FileView displays the Unsave View dialog box.



2. Point to the view you want to delete and double click MB1.
3. Click on OK.

   The view is deleted. If you deleted a view that you had created to supersede a built-in view, the original view is restored.

Tip

If you want to work with views from Session Manager, add the Views menu to Session Manager's menu bar. For more information about adding a menu to a menu bar, see Chapter 8.

9.5. Using FileView as a Menu Bar

If you want to conceal FileView's work area that displays files and display only FileView's menu bar,choose Show/Hide Work Area from FileView's Options menu. FileView is displayed as a menu bar.

To display FileView's work area again, choose Show/Hide Work Area from FileView's Options menu.

Chapter 10. Customizing the Window Manager

By using the Window Manager's customization options,you can change the way your windows look and behave. The Window Manager provides a customization submenu that contains menu items for customizing the following window features: workspace, borders, border colors, icons, icon colors, and matte.

This chapter describes how to use the Workspace Options submenu to change your Window Manager features. It also includes information about advanced Window Manager customization options.

Tip

Although the procedures in this chapter describe how to use the Window Manager's Options submenu from the Workspace menu, you can access the same Options submenu from every application's Window menu.

To display the Window Manager's Options submenu, from the Window menu:

1. Choose Workspace from an application's Window Menu.

   The Window Manager displays the Workspace submenu.

2. Choose the Options submenu from the Workspace submenu.

10.1. Applying Your Changes

Every Window Manager Customize dialog box contains push buttons that you can use to record your settings, to cancel the dialog box, or to restore default settings.

Click on	To
OK	Save new settings and dismiss the dialog box.
Reset	Redisplay the settings in the dialog box since the last time you applied the settings.
Default	Reinstate the system default settings.
Cancel	Dismiss the dialog box without changing any settings.

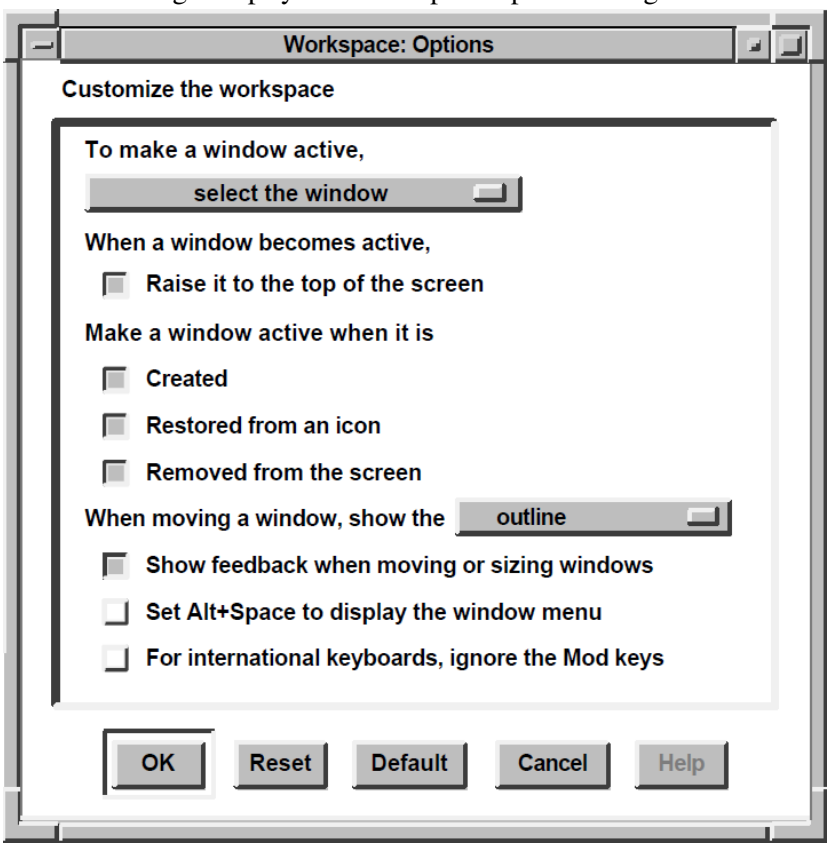
To see your changes, choose Apply Current settings from the Options submenu. This restarts the Window Manager.

Another way to restart the Window Manager is to choose Restart... from the Workspace menu. This is useful for customizing Window Manager information that is not provided through the Options dialog boxes. For more information about making Window Manager changes that are not available through options dialog boxes, see “ Section 10.9.”

10.2. Customizing Your Workspace

You can change the way to make a window active,when a window automatically becomes active, and other Workspace features by changing your Workspace settings.

To change your Workspace settings, choose Workspace... from the Workspace Options submenu. The Window Manager displays the Workspace Options dialog box.



Click on the settings in the dialog box to customize the features you want to change.

Note

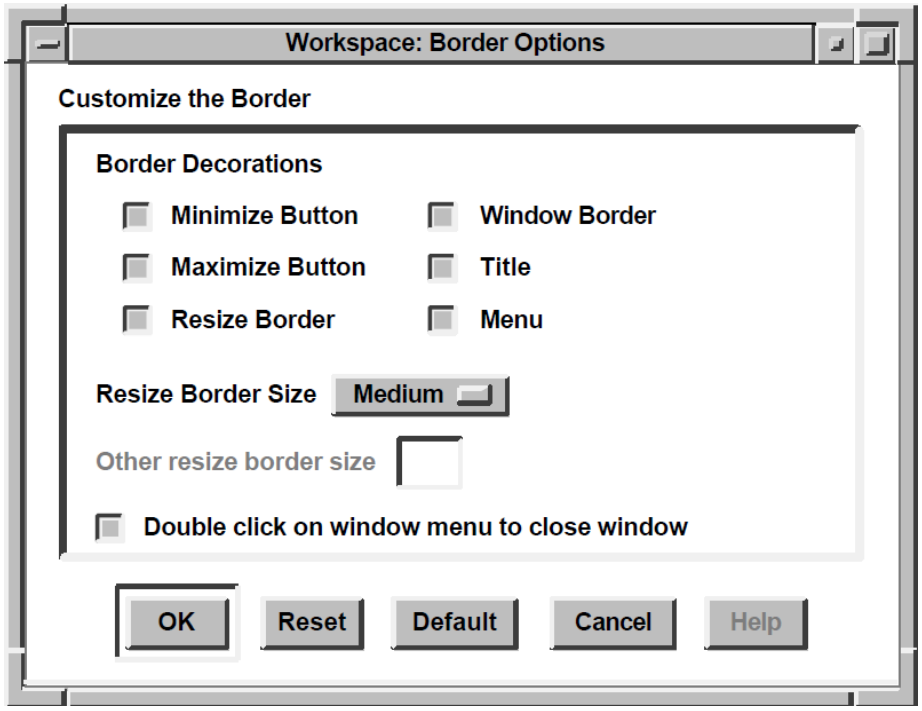
Change the Moving a Window setting from outline to entire window on higher-performance workstations only.

To improve performance when moving and sizing windows,disable the Show feedback setting.

If you enable the Alt+Space setting, you can use compose sequences only on keyboards that have both Alt and Compose keys.

10.3. Customizing Your Window Borders

To change your window borders, choose Border... from the Workspace Options submenu. The Window Manager displays the Border Options dialog box.



From the Customize Border dialog box, you can change the following settings.

Border decorations

Click on a border decoration to add or remove it from all your window frames.

Resize border size

The resize border is the border around the window that you drag to resize a window. To change the size of the border,choose one of the default sizes from the Options menu, or choose the Other menu item to enter your own border size.

Other resize border size

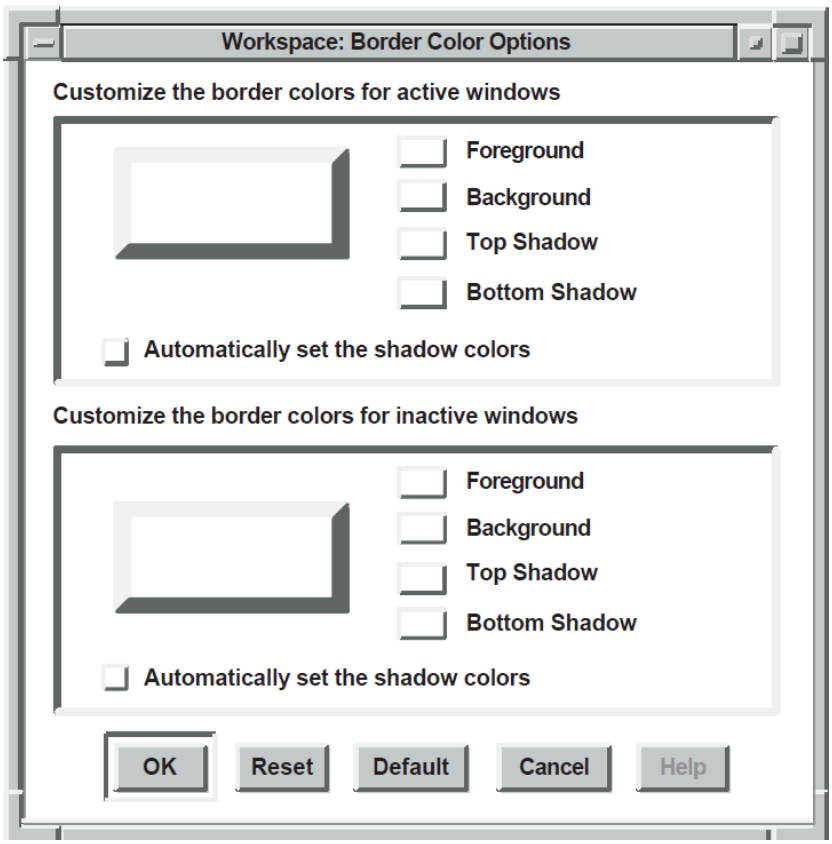
If you choose the Other menu item from the Resize Border Size options menu,the Other Resize Border Size entry box receives input focus. Enter a value in this box to define your own border size.

Double click on window menu to close window

Click on this setting to enable or disable the close menu item when you double click on the window menu.

10.4. Customizing Your Window Border Colors

To change your window border colors, choose Border Colors... from the Workspace Options submenu. The Window Manager displays the Border Color Options dialog box.



From the Border Color Options dialog box, you can change the following settings for active or inactive windows. You should create distinct active and inactive background colors so that it is easy to see which window is active.

Foreground

To change the Window Border Foreground color(that is, the color of the title), click on the Foreground button. DECwindows displays the Color Mixing dialog box, which lets you choose the border foreground color you want.

Background

To change the Window Border Background Color(that is, the color behind the title), click on the Background button. DECwindows displays the Color Mixing dialog box, which lets you choose the border background color you want.

Top Shadow

Window border top and bottom shadow colors (that is, colors on the top and left sides of the border)have to be well matched to present the three-dimensional look of DECwindows Motif. DECwindows helps by automatically determining top and bottom shadow border colors when you change the background color. This setting is indicated by the shaded Automatic shadow check button.

To choose your own top shadow color:

1. Click on the Automatic shadow check button.

   This action disables the setting.

2. Click on the Top Shadow button.

   DECwindows displays the Color Mixing dialog box, which lets you select the top shadow color you want. You should use the HLS model in the Color Mixing dialog box to choose a top shadow color that is lighter and less saturated than the background color.

Bottom Shadow

Window border top and bottom shadow colors (that is, colors on the bottom and right sides of the border) have to be well matched to present the three-dimensional look of DECwindows Motif. DECwindows helps by automatically determining top and bottom shadow colors when you change the background color. This setting is indicated by the shaded Automatic shadow check button.

To select your own bottom shadow colors:

1. Click on the Automatic shadow check button.

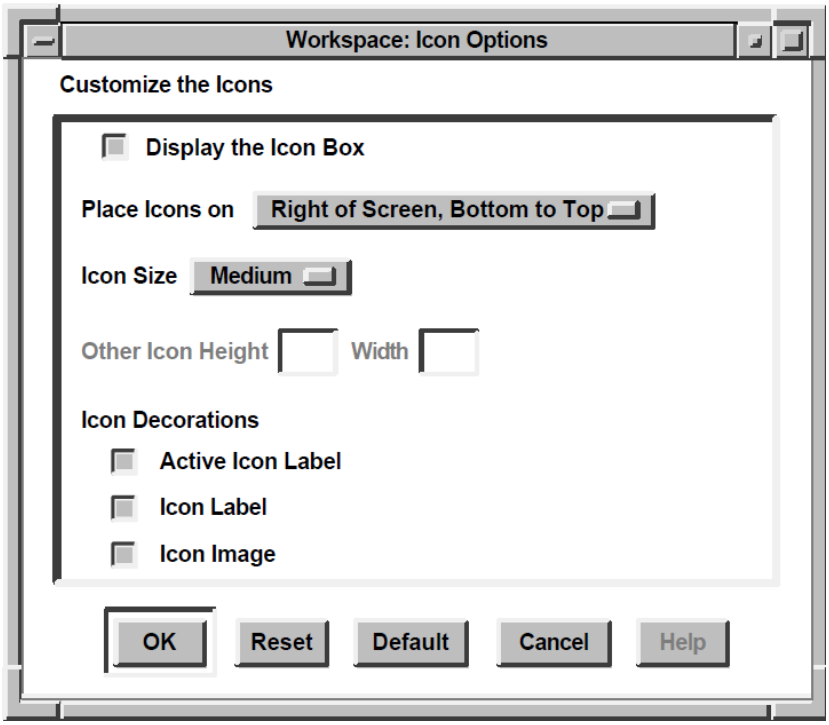
   This action disables the setting.

2. Click on the Bottom Shadow button.

   DECwindows displays the Color Mixing dialog box, which lets you select the Bottom Shadow color you want. You should use the HLS model in the color mixing dialog box to choose a bottom shadow color that is darker and more saturated than the background color.

10.5. Customizing Icons

To customize the appearance and placement of your icons on the Workspace, choose Icons... from the Workspace Options submenu. The Window Manager displays the Icon Options dialog box.



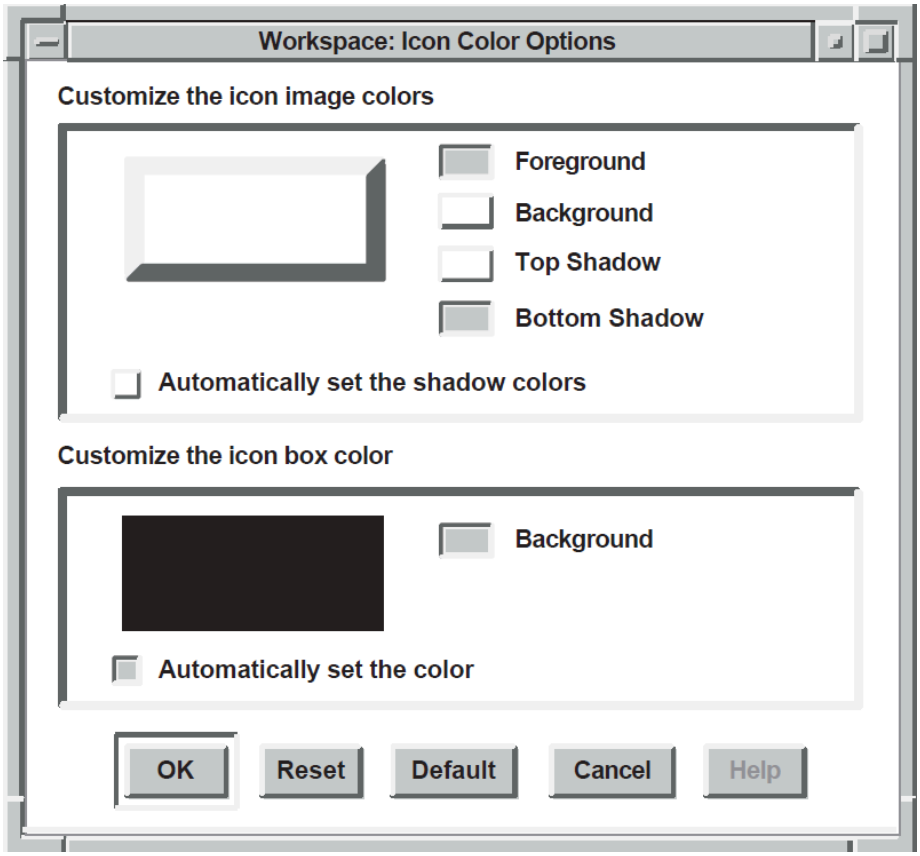
From the Icon Options dialog box, you can change the following settings:

- Display an icon box
- Icon placement

- Icon size
- Icon decorations

10.6. Customizing Icon Colors

To change your icon colors, choose Icon Colors... from the Workspace Options submenu. The Window Manager displays the Icon Color Options dialog box.



From the Icon Color Options dialog box, you can change the following icon image and icon box color settings.

Icon Image Colors	Icon Box Color
Foreground	
Background	Background
Top Shadow	
Bottom Shadow	

Foreground

To change the icon foreground color, click on the Foreground button. DECwindows displays the Color Mixing dialog box, which lets you select the icon foreground color you want.

Background

To change the icon background color, click on the Background button. DECwindows displays the Color Mixing dialog box, which lets you select the icon background color you want.

Top Shadow

Icon top and bottom shadow colors have to be well matched to present the three-dimensional look of DECwindows Motif. DECwindows helps by automatically determining top and bottom shadow border colors when you change the icon background color. This setting is indicated by the shaded Automatic shadow check button.

To choose your own icon top shadow color:

1. Click on the Automatic shadow check button.

   This action disables the setting.

2. Click on the Top Shadow button.

   DECwindows displays the Color Mixing dialog box, which lets you select the top shadow color you want. You should use the HLS model in the Color Mixing dialog box to choose a top shadow color that is lighter and less saturated than the background color.

Bottom Shadow

Icon top and bottom shadow colors have to be well matched to present the three-dimensional look of DECwindows Motif. DECwindows helps by automatically determining top and bottom shadow colors when you change the icon background color. This setting is indicated by the shaded Automatic shadow check button.

To select your own icon bottom shadow color:

1. Click on the Automatic shadow check button.

   This action disables the setting.

2. Click on the Bottom shadow button.

   DECwindows displays the Color Mixing dialog box, which lets you select the bottom shadow color you want. You should use the HLS model in the Color Mixing dialog box to choose a bottom shadow color that is darker and more saturated than the background color.

Icon Box Colors

To change the icon box background color:

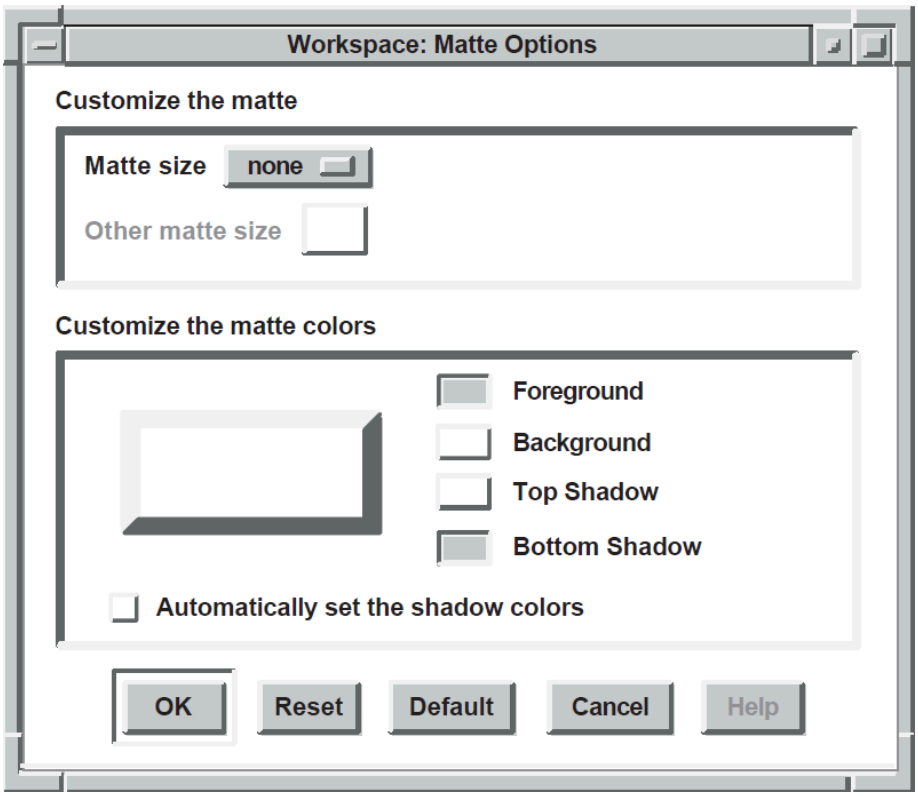
1. Click on the Automatic color button.

   This action disables the setting.

2. Click on the Background button. DECwindows displays the Color Mixing dialog box, which lets you select the icon background color you want.

10.7. Customizing the Matte

To change your matte features, choose Matte... from the Workspace Options submenu. The Window Manager displays the Matte Options dialog box.



From the Matte Options dialog box,you can change your matte size and color settings.

10.8. Running the XUI Window Manager

To use the XUI Window Manager instead of the Motif Window Manager:

1. Choose Automatic Startup... from Session Manager's Options menu.

   Session Manager displays the Automatic Startup dialog box.

2. Select XUI Window Manager from the left-hand list box.

   The XUI Window Manager item is displayed in the right-hand list box.

3. Click on the up arrow button to move the XUI Window Manager item to the top of your Automatic Startup list.

4. Select Window Manager from the right-hand list box.

5. Click on the left arrow button to remove the Motif Window Manager from your Automatic Startup list.

6. Click on OK.

7. Choose Save Session Manager from Session Manager's Options menu.

8. Choose End Session from Session Manager's Session menu and end your session.

9. When you start a new session, DECwindows will use the XUI Window manager.

For more information about adding and removing items from your automatic startup list, see Chapter 7.

10.9. Advanced Customization

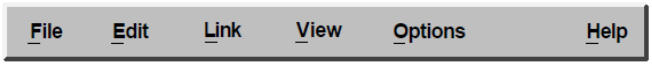
In addition to the menu items available from the Customize submenu, you can change the appearance and behavior of windows by specifying values for elements known as **resources**in resource configuration files. The Window Manager gets information from these files each time you start a session, an application,or the Window Manager.

For information about modifying resource files, see Chapter 17.

Part III. Advanced User Techniques

Chapter 11. Using Hyperapplications

Hyperapplication features enable you to make links between information that is stored and accessed by DECwindows applications. A **hyperapplication** is an application that, in addition to its regular features (for example, reading online books), allows you to link information and to follow links. You can tell that an application is a hyperapplication if it has the Link menu in its menu bar,as illustrated in the following figure.



This chapter presents a simple example to introduce some basic hyperapplication concepts and techniques. It discusses linkable objects (the pieces of information that you can link). It then discusses the features available from the Link menu, but not in the order in which they appear on the menu. Rather, they are presented in an order that makes it easy for you to learn and use hyperapplication features, which include

- Creating links (Start Link, Complete Link...)
- Following links (Visit, Go To, Go Back)
- Adjusting the highlighting (Turn Highlight On/Off, Highlight...)
- Showing and deleting links (Show Links...)
- Other features (Show History..., Step Forward)

The chapter concludes with a section on advanced LinkWorks concepts.

Note

The LinkWorks Setup application or the LinkWorks Manager application must have been started before you can use any hyperapplication features. By default, LinkWorks Setup is automatically started by Session Manager when you begin a session.

LinkWorks Manager allows you to perform certain advanced LinkWorks functions that are not covered in this chapter.

11.1. A Simple Example

Assume that you use DECwindows Mail to send and receive electronic messages and that you use DECwindows Calendar to keep track of your appointments.

You receive a Mail message notifying you of a meeting two weeks from now. The message contains a detailed agenda and background information about the featured speaker. You make an entry for the meeting in a Calendar time slot. To identify the timeslot, you simply type in “Project review meeting”rather than trying to paraphrase the agenda and speaker information or to cut and paste the complete message from the Mail window to the timeslot window. However, because you want to remember later why this meeting is important, you also take the following steps.

1. With the Mail message selected, pull down the Link menu in Mail and choose Start Link.
2. With the timeslot selected, pull down the Link menu in Calendar and choose Complete Link.

Later, when you view the entries for the day of the meeting or when you receive the Calendar alarm — and you ask yourself, “Why did I want to go to that meeting?” — you notice that the timeslot entry contains a special indicator (a light bulb icon) that tells you an information link exists. To see the link:

1. With the timeslot selected, pull down the Link menu in Calendar.

2. Choose one of the following:

   - Visit — Displays the information to which this timeslot is linked but keeps Calendar on the screen.

   - Go To — Shrinks Calendar to an icon and displays the information to which the timeslot is linked.

   In either case, the appropriate application (in this case, Mail) is automatically invoked and the linked information is displayed. You do not need to remember that the linked information was a Mail message, who sent the message, when the message was sent, or the like.

11.2. Linkable Objects

Linkable objects are pieces of information in hyperapplications that you can link together.

Information from any hyperapplication can be linked to information from the same hyperapplication or from any other hyperapplication. For example, a Calendar timeslot for a seminar could be linked to a Bookreader topic for a chapter that covers material to be discussed at the seminar. You can also link the Bookreader topic to a related topic in the same manual or in a different manual.

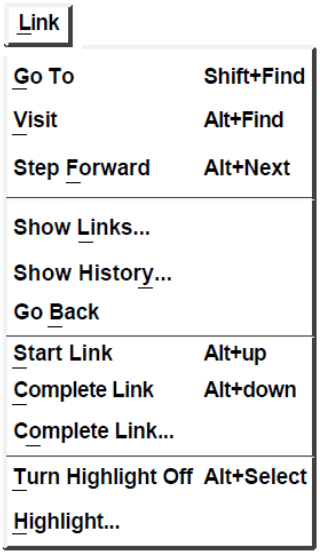
The linking possibilities are rich, and you can make themas complex as you want: for example, links between a Calendar timeslot and Bookreader topics and Cardfiler cards, with the topics and cards being linked to still other pieces of information. You can allow others to see and follow your links, and you can see and follow links made by others. We'll see later how you can progress from the simple uses of hyperapplication features to more complex and powerful uses.

On the basis of the importance and granularity of objects,each hyperapplication determines which of its objects are linkable objects. For example, a Cardfiler card is a linkable object, but a part of a word within a card is not.

To use the features described in the chapter, you should be familiar with one or more hyperapplications and should know how to select objects using those applications. (As a general rule, clicking on an object selects it; however, the method of selection can vary depending on the application and the object. For example, some objects are selected by clicking and dragging.)

11.3. The Link Menu

The presence of the Link menu (see the following figure) indicates that an application is a hyperapplication. You use the Link menu to take advantage of the hyperapplication features described in this chapter.



11.4. Creating Links

Each link involves two hyperapplication objects. One of these objects becomes the **source** for the link,and the other becomes the **target**.

Do not become confused by these terms, because for any given link it does not matter which object is the source and which is the target — unless you choose to make it matter. You can selectively enable and disable highlighting(discussed later) for sources and targets, and some displays of link information use these two terms. However, when you select an object and retrieve the information to which it is linked, it does not matter whether the object you select was designated as a source or a target: the linked information is still retrieved.

For each pair of objects to be linked, the object selected for Start Link is made the source, and the object selected for Complete Link... is made the target. You might want to make the object you were initially viewing the source and the other object the target. For example, you might make the source a Calendar timeslot about a seminar and the target a Bookreader table-of-contents entry about the seminar's subject. However, the choice of source and target designations for each link is up to you.

To create a link:

1. Select an object.

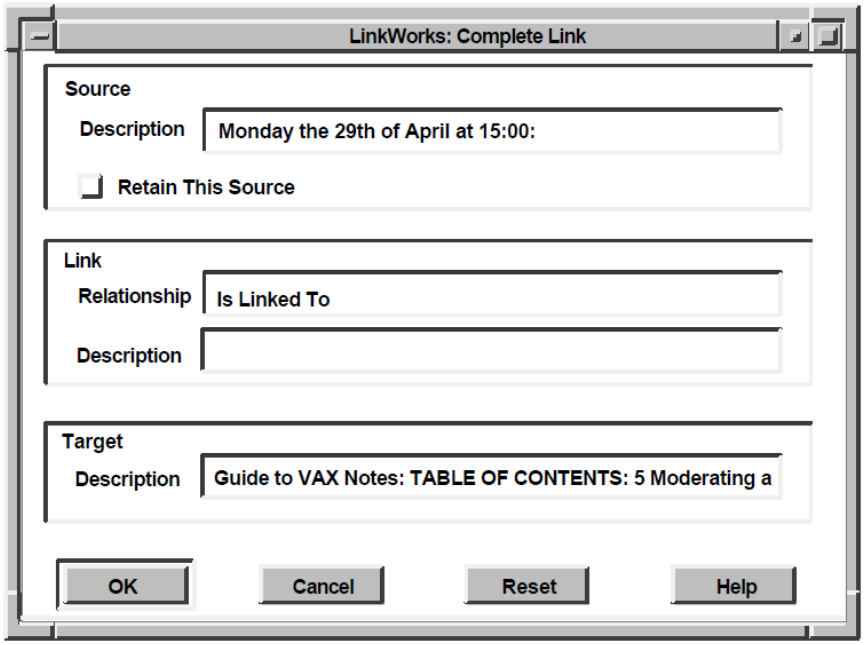
2. Use the Link menu of the hyperapplication for that object to choose Start Link. The selected object becomes the source when you complete the link.

3. Select the second object.

4. Use the Link menu of the hyperapplication for that object to choose either the Complete Link item or the Complete Link... item. In either case, the selected object becomes the target in the link.

   - The Complete Link item uses LinkWorks default values to create the link.

   - The Complete Link... item displays the following dialog box.



You can edit the descriptions of the source, the target, and their relationship, and you can enter a word or phrase to describe the relationship. You can enter any text you like in these entry boxes.

The Retain This Source button enables you to create multiple links to the same object conveniently. By default (button set off), the source is no longer considered pending (for use in the next link) after the link is created; to create another link you would have to select two objects, one for the Start Link and one for the Complete Link... operation. However, if you want to make another link using the same source, set the Retain This Source button on; then select the target object for the next link and choose the Complete Link... item.

11.5. Following Links

When you have selected one end of a link (the source or the target),you can follow the link to see the information at the other end. However, you must first be able to see which objects are linked and which are not. Objects that are linked are highlighted, unless you disable highlighting (as explained in “ Section 11.6”).

The method of highlighting varies depending on the application.

When you select an object and want to see what it is linked to, you can choose one of these options:

- Visit

  Visit invokes the appropriate hyperapplication and displays the linked information, but it keeps your current hyperapplication window open and keeps input focus in this window. This menu item is useful if you want to continue working with the current hyperapplication after you finish viewing the linked information.

- Go To

  Go To minimizes (shrinks to an icon) your current hyperapplication window and then invokes the appropriate hyperapplication and displays the linked information. This menu item is useful if you want to shift your work to the invoked hyperapplication or if you want to reduce clutter on the screen.

To visit or go to the information to which a linkable object is linked:

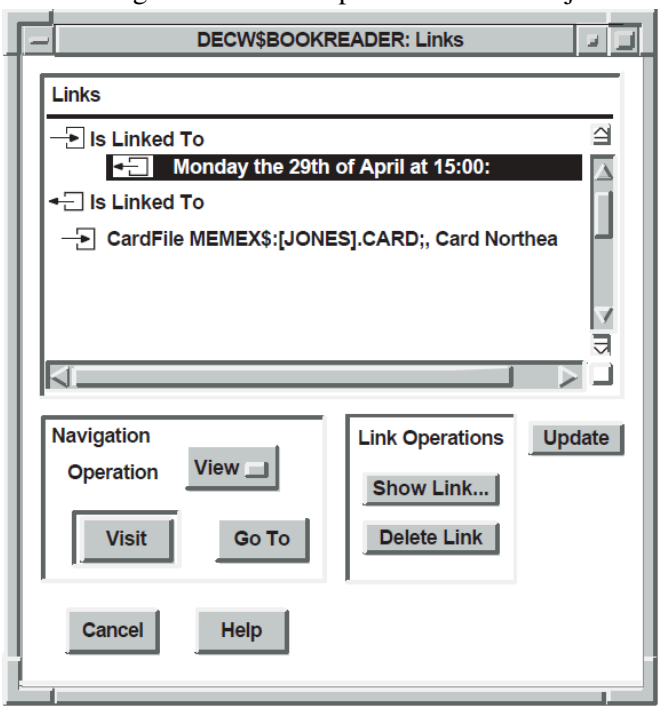
1. Select a highlighted object.

   If you cannot tell which objects are linked and which are not,enable highlighting (see “Adjusting the Highlighting”).

2. Choose the Go To or Visit menu item from the Link menu.

   If the selected object is involved (as source or target) in only one link, then the Visit or Go To operation is performed immediately.

   If the selected object is involved in multiple links,the Links dialog box appears, presenting you with a list of links from which you can make a selection. The following figure illustrates the Links dialog box showing a Bookreader topic linked to two objects: a Calendar timeslot and a Cardfiler card.



   The direction of the arrows indicates whether the object is a source (right arrow) or a target (left arrow). In the preceding figure, a chapter in the *Guide to VAX Notes*is the target in a link to a Calendar entry for a seminar on advanced Notes topics at Northeastern University, and the chapter is the source in a link to a card with directions for driving to the university.

To follow a link, perform these operations using the Links dialog box:

1. Select one of the links. The first link in the list is selected by default.

2. Choose an operation. The operation that is visible in the Operation options menu is selected by default.

3. Click on Go To or Visit to follow the selected link to the destination object and to perform the specified operation.

   Click on Update to update the display of link information. This choice is useful if you have made or modified any links after displaying the dialog box.

Click on Show Link... to display a dialog box with information about the link. You can edit this information, as explained in “ Section 11.7.”

Click on Delete to delete the selected link. This action does not delete the object; rather, it simply makes the object no longer the source or target of the link. See “ Section 11.7”for more information about deleting links.

Click on Cancel to dismiss the dialog box without following any link.

Note

Double clicking on a link is the same as choosing the default menu item (Visit) with the default destination operation on that link. You can use this shortcut if you want to accept the defaults.

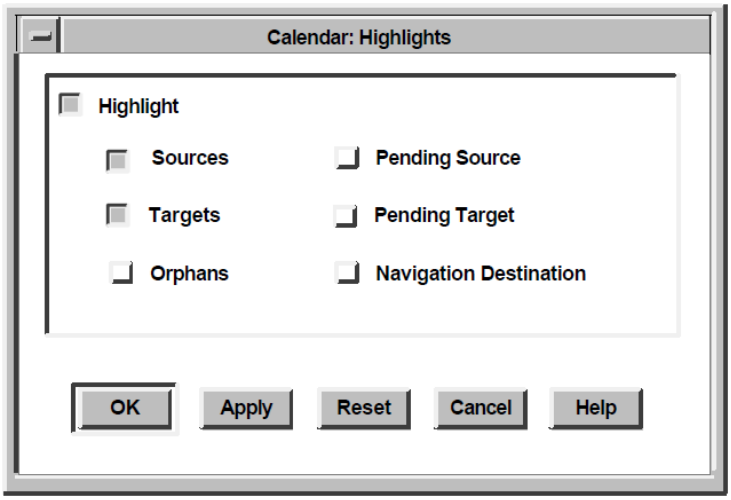
To reverse the effect of the most recent Visit or Go To operation, use the Go Back menu item. Go Back is useful if you “change your mind” after performing a Visit or Go To operation and want to return to where you were. The Go Back operation does not delete or otherwise affect any actual links.

11.6. Adjusting the Highlighting

For each hyperapplication, you can enable or disable the highlighting of linked objects; that is, the fact that these objects are linked can be made visible or not visible, depending on whether or not you want to use the features described in this chapter. You can also control which kinds of linked objects are highlighted when highlighting is enabled.

Use the Turn Highlight On/Off menu item to enable and disable highlighting. The wording of this item depends on the current state: if highlighting is enabled(the initial default), this item says Turn Highlight Off; if highlighting is disabled, this choice says Turn Highlight On. Disabling highlighting does not disable the use of hyperapplication features. However, it makes their use impractical because you are unable to see which objects have links.

The Highlight... menu item allows you to specify the kinds of objects to be highlighted. This item displays the Highlighting dialog box.



Because this dialog box refers to important concepts, you should understand them before you try to set the buttons.

- Source or target

One end of a link between two objects. You can make either end of a link the source and the other end the target,depending on your personal preferences or on conventions.

The object selected for the Start Link item becomes the source. The object selected for the Complete Link item or the Complete Link... item becomes the target.

- Orphan

  Either(1) an object that was linked to another object but is not linked to that object anymore, or (2) an object that has been selected as a source and a Start Link operation has been performed, but the link has not yet been completed.

  For example, assume that a Cardfiler card is the source of a link and a Calendar timeslot is the target. You select the timeslot and delete the link(using the dialog box generated by the Show Links... menu item).The timeslot and the card are now orphans.

  If an object is involved in multiple links, it can be an orphan in some links and a source or target in others. Using the example in the preceding paragraph, if the Calendar timeslot is the source and a Bookreader topic is the target in a separate link, deleting the timeslot's link to the card does not affect its link to the book topic. In this case, the timeslot is both a source (in relation to the topic)and an orphan (in relation to the card).

- Pending source or target

  The source or target that is used when you create a link. (See “ Section 11.4” earlier in this chapter for a further explanation.)

  Only one source and one target can be pending at any one time.

- Navigation destination

  The destination of the most recent Go To or Visit operation. The navigation destination can be a source or target object, because you can follow links in either direction (source to target or target to source).

By default, highlighting is enabled for sources and targets. You can enable or disable all highlighting, and you can specify which kinds of objects are highlighted when highlighting is enabled. Perform the following actions in the Highlighting dialog box (illustrated previously in this section).

1. Click on the Highlight check button to enable or disable highlighting. If you enable highlighting, you can also specify one or more kinds of objects to highlight. If you disable highlighting,no linked objects are highlighted, and you cannot specify the kinds of objects to highlight (these choices are dimmed).

   The Turn Highlight On/Off menu item performs the same function as toggling the Highlight button.

2. Click on the button for each kind of object (Sources, Targets, and so on), depending on whether you want those linked objects to be highlighted.

   Note that some kinds of objects include other kinds: for example, Sources includes Pending Source. Thus, if you want to see all sources,you need only to set Sources on. However, if you want to see only the pending source, you must set only Pending Source on (and not Sources or any other kind of object).

3. Click on OK to apply your selections and dismiss the dialog box.

Click on Apply to apply your selections and keep the dialog box on your screen.

Click on Reset to restore the button settings to their state at the last Apply or OK. This “deletes” your recent settings and keeps the dialog box on your screen.

Click on Cancel to restore the button settings to their state at the last Apply or OK and dismiss the dialog box.

11.7. Showing and Deleting Links

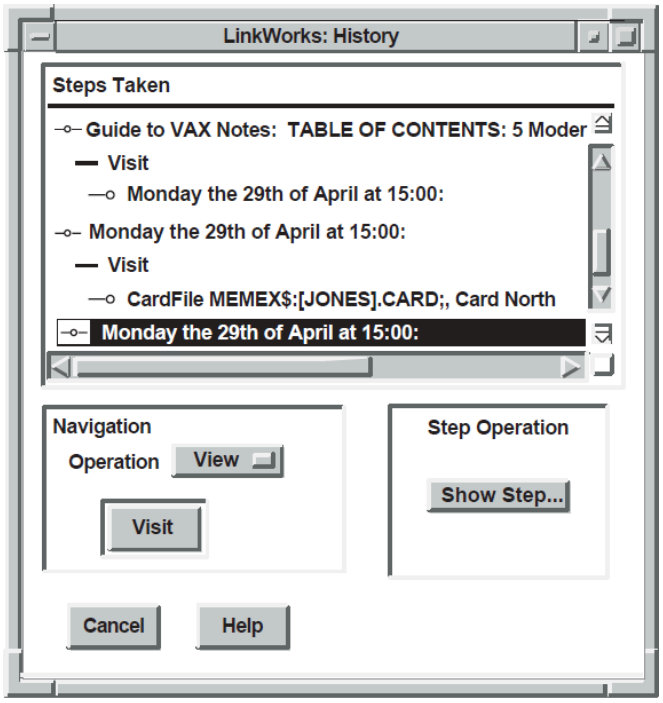
You can see the characteristics of a link and can delete a link by using the Show Links... menu item. This menu item displays the Links dialog box, which is illustrated in “ Section 11.5.”

If you click on the Show Link... button, a dialog box appears with detailed information about the selected link. This dialog box contains the same information as shown in the Complete Link... dialog box, illustrated earlier in “ Section 11.4”,except that the Retain This Source button does not appear. You can edit the Relationship and Description entry boxes.

To delete a link, click on the Delete button in the Links dialog box. As soon as you delete a link, the object becomes an orphan; to make it no longer an orphan, delete the link by selecting the object to which it is linked and then using the Delete button in the Show Links... dialog box in the appropriate hyperapplication.

11.8. Using Other Hyperapplication Features

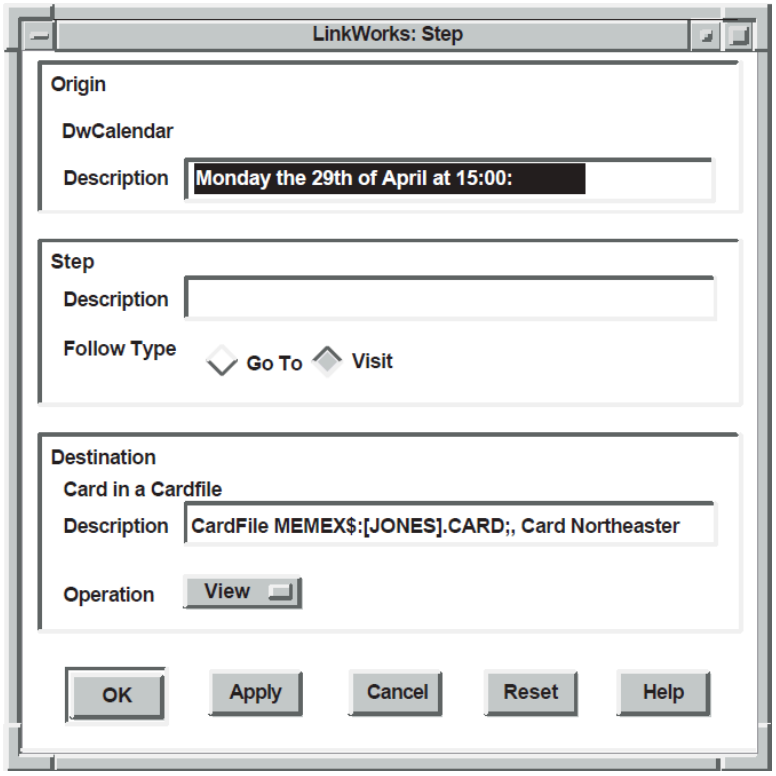
Whenever you perform a Visit or Go To operation, the LinkWorks history is updated to reflect your operations. To see the history of your navigation operations, choose the Show History... menu item, which displays the following dialog box.



You can use this dialog box to visit objects that are listed and to modify history information.

- To visit an object in the history list, select it and click on Visit.

- To modify history information, select an object to be modified and click on the Show Step... button to display the Step dialog box:



  You can edit any of the Description entries, and you can change the Follow Type and Operation settings. The ability to modify history information becomes important when you want to create or modify a path. (See “ Section 11.9”for more information on paths.)

The Go Back menu item, described earlier in “ Section 11.5,”removes the last step from the history and performs a Go To operation to the previous step. Thus, Go Back lets you step backward through the history list while deleting steps.

The Step Forward menu item moves to the next step in the currently active path and performs the step. Thus, Step Forward lets you step forward through the current active path.

11.9. Advanced LinkWorks Concepts

Information about links that you make and follow is stored in a hyperinformation **linkbase**. By default, you have a linkbase named LWK_PERSONAL in your login default directory. However, you can cause LinkWorks to use another linkbase as your default personal linkbase by defining the logical name LWK_PERSONAL to point to that linkbase file. Although you probably will not need to create additional linkbases, you can create them by using the LinkWorks Manager application.

Each linkbase contains a number of hyperinformation objects. These objects let you organize your links as they become more numerous and complex. The same principle is included in many software applications. For example, in Mail you begin with one folder (MAIL) in one drawer (your primary mail file). As you receive more and more messages, you organize them into folders. If the number of folders grows sufficiently, you might decide to create new drawers, each with several folders.

The hyperinformation linkbase can contain the following objects.

- **Linknets**

Any time you make a link, information about that link (such as identification of its source and target) is recorded in a linknet. Initially you have only one linknet, called Personal Links, but you can create additional linknets.

By analogy, Mail allows you to store messages in folders, and LinkWorks allows you to store link information in linknets.

You can control two operations that LinkWorks performs with linknets: recording and activating.

- Recording determines the linknet in which links are stored. You can record into only one linknet at a time. If you disable all recording,no link information is stored in the linkbase.
- Activating controls which links you can follow and, if highlighting is enabled, which links are visible. If highlighting is enabled, links for all active linknets are highlighted. You can activate or deactivate linknets, depending on which links you want to be able to follow.

- **Linknet lists**

  A linknet list can contain linknets and linknet lists. A common use of a linknet list is to organize related linknets so that you can activate and deactivate all the linknets in the list with a single operation. A linknet or linknet list can be a member of several linknet lists.

  As a partial analogy, Mail drawers contain folders, and you can create additional drawers, as well as folders within those drawers. Linknet lists can contain linknets, and you can create multiple linknet lists, each of which can contain several linknets. However, linknet lists differ from Mail drawers in that a linknet list can contain other linknet lists(drawers cannot contain drawers) and in that a linknet can be in several linknet lists (a folder cannot be in multiple drawers).

- **Paths**

  A path is a historical record of links that have been followed. You can create a path, and then you and others can follow the path without having to re-create the links. Paths can make certain tasks convenient, and they have great potential as teaching tools (when, for example, a teacher or manager provides a path through information for others to follow).

- **Path lists**

  A path list is a collection of paths. You might create path lists if the paths you want to keep track of become very numerous or complex.

Chapter 12. Running Applications Across the Network

DECwindows expands your computing opportunities by letting you run applications across a network. Distributing applications in this way means that they can run on another computer and be displayed on your workstation. Although the application runs on another system, it looks the same as any other application running on your workstation. So, you can take advantage of larger computers that may be better suited to a specific computing task. You can run applications on an ULTRIX system as well as on other vendors' systems for display on your OpenVMS workstation if the systems share a common transport mechanism.

By default, however, your workstation monitor can display only those applications that are running on your workstation under your user name. This prevents unauthorized users on other systems in the network from displaying applications on your workstation monitor or from capturing and displaying your keystrokes (including your password) on another monitor.

You can run an application on a remote system for display on your workstation by completing three easy steps:

1. Authorize the remote system and user on your workstation to display output from applications that run on the remote system.

2. Log in to the remote system and direct the display to your workstation with the DCL command SET DISPLAY for an OpenVMS system or the equivalent command on other operating systems.

3. Enter the command line that runs the application.

The sections that follow describe these steps in more detail.

12.1. Enabling Network Access to Your Workstation Display

Initially, you are authorized to run applications only from your workstation, where your current session is running. This means that you cannot log in to another system and run applications for display on your workstation unless you authorize that node and user name to do so.

From Session Manager, you can give users access to your workstation display by specifying their node names and user names. By default, you give access to users on systems that are connected by DECnet software. DECnet is one transport by which nodes in a network communicate. (The transport passes information between the application and the display.) You can also give access to users on systems running other transports, such as TCP/IP.

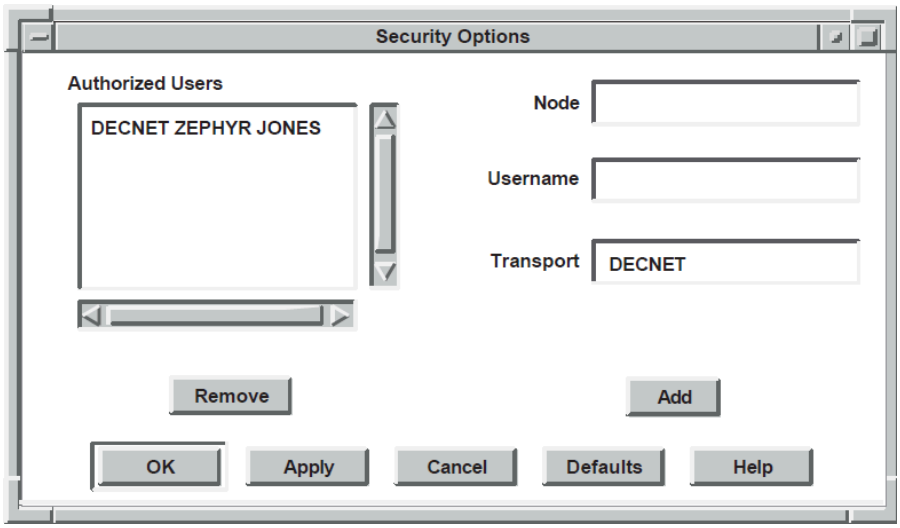
The user name, node name, and transport information you provide act as filters to screen out all except a selected class of users. For example, you can give access to your workstation to user JOE on node BLINKN, which is a node on a system that is running DECnet software. By giving access only to JOE on node BLINKN, you deny access to another user JOE on node NOD.

12.1.1. Authorizing Workstation Access in a DECnet Network

To authorize yourself or others to display applications on your OpenVMS workstation in a DECnet network:

1. Choose Security... from Session Manager's Options menu.

   Session Manager displays the Security dialog box.



2. In the Node entry box, type the node name of the user you want to authorize.

   The node name cannot be a cluster alias (a name that represents multiple nodes configured in a VMScluster); it must identify an actual node. To authorize your own node, you must enter a zero (0).

3. In the Username entry box, type the user name of the user you want to authorize.

   Note

   If you are running an application on an ULTRIX system, you should authorize the user a second time, but this time type the user identification number (UID) of the user you want to authorize. This is necessary because some applications identify the user with the user name, and some with the UID. (The UID is a small number—less than 3200.)

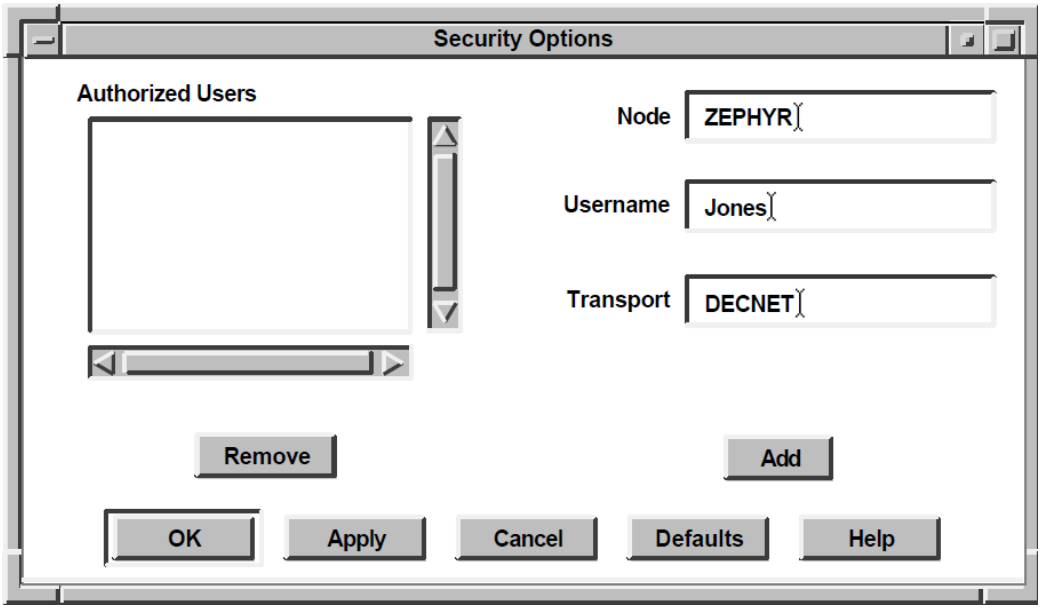
   The transport information is already supplied. The default transport, DECnet,allows connections from one node to another.

4. Click on Add.

   The user name (or UID), node name, and transport are added to the list of authorized users.

5. Click on OK or Apply.

The following example shows how to add your name to the list of authorized users of your display, thereby ensuring that you can display DECwindows applications on your workstation from system ZEPHYR.



Note

Be aware that each node, both source and destination, must be defined in each other's network node database. For example, to display applications on node HUBBUB from ZEPHYR, HUBBUB must be entered in ZEPHYR's network node database,and ZEPHYR must be defined in HUBBUB's network node database.

You can use an asterisk (*) wildcard in the Username or Node entry box to authorize entire classes of users. For example, to authorize all users who are logged in to node HUBBUB to display on your workstation, type an asterisk (*) in the Username entry box and HUBBUB in the Node entry box. Then click on Add. Session Manager adds that text to the list of authorized users.

Tip

It's a good idea to give access to only those users who you know require it. Giving access to an indeterminate number of users is not recommended because this practice can compromise the security of your system.

12.1.2. Authorizing Workstation Access in an Internet (TCP/IP) Network

If your system is part of an Internet (TCP/IP) network, you can run applications across the network by using TCP/IP as a DECwindows transport. (Most vendors supply TCP/IP as an X Window System Transport.)

To run applications on a remote system for local display, you'll need both a transport interface (such as the TCP/IP transport interface included in DECwindows) and transport software(such as DEC TCP/IP Services for OpenVMS)to connect the applications with the workstation display. If you have another vendor's transport software, make sure you have a compatible transport interface. If you're not sure whether you have both software components, see your system manager.

Note

Different vendors' implementations of TCP/IP transports use different call interfaces. Because of this, the TCP/IP transport interface included in DECwindows is compatible only with the DEC TCP/IP Services for OpenVMS software.

To authorize yourself or others to display applications on your OpenVMS workstation in an Internet network:

1. Choose Security... from Session Manager's Options menu.

   Session Manager displays the Security dialog box, as illustrated in the preceding section.

2. In the Node entry box, type the node name of the user you want to authorize.

3. In the Username entry box, type an asterisk (*).

   You cannot authorize individual users in a TCP/IP network because TCP/IP does not provide remote user information,only node information. The asterisk indicates that every user on the node you specify can display application output on your workstation.

4. Delete the text in the Transport entry box and type TCPIP.(Be sure to type TCPIP, not TCP/IP.)

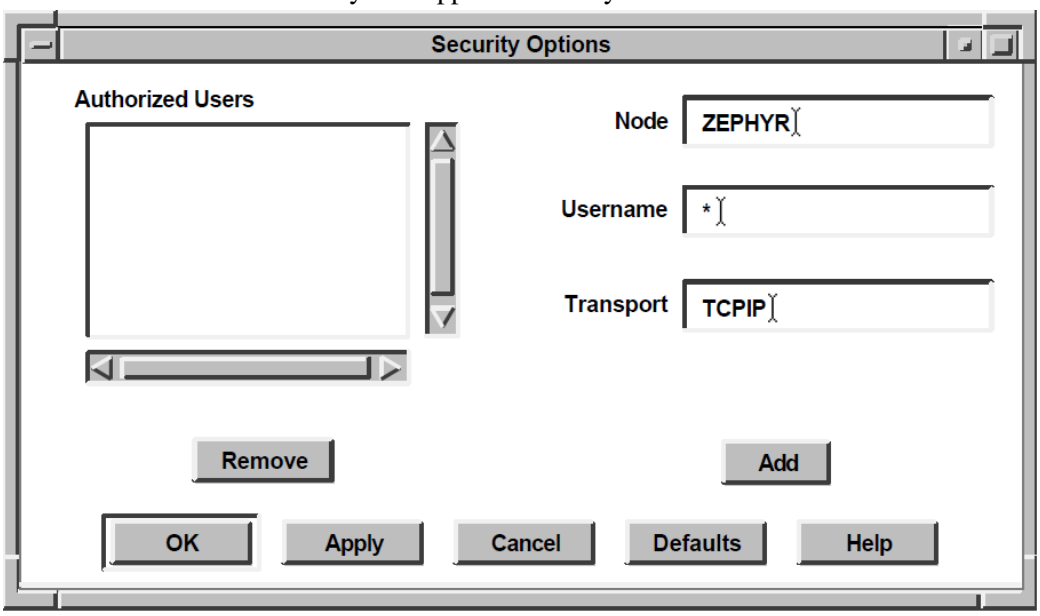
   If you're using another vendor's transport, type the name of that transport in this entry box.

5. Click on Add.

   The asterisk, node name, and transport name are added to the list of authorized users. The node name is displayed in upper-case letters,but it matches any lowercase letters in the node name.

6. Click on OK or Apply.

The following example shows how to make sure that users on system ZEPHYR can display DECwindows or X Window System applications on your workstation.



12.1.3. Disabling Workstation Access

To remove an entry from the list of currently authorized users:

1. In the Authorized Users list box, select the item (for example, transport name, node name, or user name) you want to remove.
2. Click on Remove.

   The entry is removed from the list of authorized users.
3. Click on OK or Apply.

12.2. Displaying Remote Applications on Your Workstation Monitor

Once you are authorized to display applications on your workstation from another system, you can log in to other systems and direct the display to your workstation by using the DCL command SET DISPLAY or the equivalent command on other operating systems. Although DECwindows or other X Window System implementations must be available on these systems, they need not be workstations.

The SET DISPLAY/CREATE command affects only those applications running in the window from which you issue the command. This means that,although you might be running one application on your workstation and displaying it on another workstation, you can continue to run applications on your workstation for display in other windows on your monitor.

12.2.1. Enabling a Remote Display

From DECterm or a FileView DCL Command window, log in to the remote system using the DCL command SET HOST, and enter the following command:

```
$ SET DISPLAY/CREATE/NODE=display_node
```

In this command, *display_node* is the workstation on which you want to display the application. You specify the /CREATE qualifier the first time you want to run an application and direct the display. If you subsequently direct the display to another system, omit this qualifier.

Enter the DCL command SHOW DISPLAY to make sure the display now points to your workstation. For example, if you logged in to remote system ZEPHYR from your system HUBBUB and directed your display back to HUBBUB, you see this information:

```
Device:       WSA2:
Node:         HUBBUB
Transport:    DECNET
Server:       0
Screen:       0
```

Device is your workstation device and might vary each time you use SET DISPLAY and SHOW DISPLAY. *Node* is the network system to which the display is now pointing. *Transport*refers to the transport (DECNET, LOCAL, or TCPIP) that passes information between the application and the display. *Server* and *Screen* are usually 0.

You can now run your application on ZEPHYR for display on HUBBUB if you are authorized to do so. See “ Section 12.3” for more information.

When you finish running the application, you can either disable the remote display or direct the display to a third system, as described in the next two sections.

12.2.2. Disabling a Remote Display

Specifying the /DELETE qualifier with the SET DISPLAY command disables further connections to the remote display. For example, to disable the remote display from ZEPHYR to HUBBUB, enter the following command on ZEPHYR.

```
$ SET DISPLAY/DELETE
```

Any applications you run on ZEPHYR are no longer displayed on HUBBUB.

12.2.3. Directing a Remote Display to a Third System

You can direct the display to a third system by entering the SET DISPLAY command and the name of the node to which you want to direct the display. For example, to direct a remote display to a third system named ROMA, enter the following command:

```
$ SET DISPLAY/CREATE/NODE=ROMA
```

Enter the command SHOW DISPLAY to see that the display now points to ROMA.

To direct the display to an ULTRIX workstation when the node name contains lower-case characters, you must surround the display node name with quotation marks. For example, to display on ULTRIX node pluto, enter the following command:

```
$ SET DISPLAY/CREATE/TRANSPORT=TCPIP/NODE="pluto"
```

Quotation marks are optional for a node name that contains all upper-case characters.

12.2.4. Directing a Remote Display to Your Own System

If you access your own system using the SET HOST command, you need to direct your display before you can run applications on your system. If your system is HUBBUB, you can define your display using the following command:

```
$ SET DISPLAY/CREATE/TRANSPORT=LOCAL/NODE=0
```

Using the /TRANSPORT=LOCAL qualifier increases the performance of applications running and displaying on your system. Zero (0) is the standard shorthand notation for representing your system.

By default, your own node is authorized to display on your system using either the LOCAL or the DECNET transport, but not TCPIP. To authorize your own node using TCPIP, you must enter a zero (0) for the node name.

12.3. Running Applications from a DCL Command Line

Once you have directed your display to your workstation, you can run FileView and the DECwindows applications from another system by typing the following command lines at the DCL prompt ($).

To run this application	Enter this command
Bookreader	RUN SYS$SYSTEM:DECW$BOOKREADER
Calculator	RUN SYS$SYSTEM:DECW$CALC

To run this application	Enter this command
Calendar	RUN SYS$SYSTEM:DECW$CALENDAR
Cardfiler	RUN SYS$SYSTEM:DECW$CARDFILER
Clock	RUN SYS$SYSTEM:DECW$CLOCK
CDA Viewer	VIEW/INTERFACE=DECWINDOWS *filename*
DECsound	RUN SYS$SYSTEM:DECSOUND
DECterm	CREATE/TERMINAL=DECTERM
EVE	EDIT/TPU/DISPLAY=DECWINDOWS
FileView	RUN SYS$SYSTEM:VUE$MASTER
Mail	RUN SYS$SYSTEM:DECW$MAIL
Message Panel	RUN SYS$SYSTEM:DECW$MESSAGEPANEL
Notepad	RUN SYS$SYSTEM:DECW$NOTEPAD
Print Screen	RUN SYS$SYSTEM:DECW$PRINTSCREEN
Paint	RUN SYS$SYSTEM:DECW$PAINT
Puzzle	RUN SYS$SYSTEM:DECW$PUZZLE

You can also use these command lines to run the desktop applications from DECterm or from FileView's DCL Command window on your workstation. To run multiple applications simultaneously from a single DECterm or FileView DCL Command window, add SPAWN/NOWAIT/INPUT=NL: to the beginning of each command line.

Chapter 13. Changing the Startup Environment

When you enter a correct user name and password in the Start Session dialog box, DECwindows runs several command and executable files. If you manage your own system or if you have system privileges,you can customize this startup sequence.

This chapter describes the DECwindows startup sequence and explains how to customize it.

13.1. The Startup Sequence

By default, when you start a session, the following events occur.

1. The DECwindows DECW$LOGINOUT.EXE image modifies the security list, allowing the current user to run clients to the server.
2. The DECW$LOGINOUT.EXE image starts a process running DECW$WAITFORSM.EXE that holds a connection to the server during the startup process.
3. The DECW$LOGINOUT.EXE image exits and DCL takes control.
4. DCL takes commands from Session Manager's DCL command file. By default, this file is called SYS$MANAGER:DECW$STARTSM.COM.
5. The SYLOGIN.COM file executes.
6. The user's LOGIN.COM file executes. A user can redefine the DECW$USER_DEFAULTS file at this time.
7. The workstation initialization procedure executes. By default, this file is called SYS$SYSTEM:DECW$WSINIT.EXE.
8. If the user is logging in to VMS DECwindows Motif for the first time, DECwindows scans the user's DECwindows XUI resource files and creates new ones for Motif.
9. The DECW$SYLOGIN.COM file executes.
10. The DECW$LOGIN.COM file executes.
11. DCL runs the Session Manager image. By default, this file is called SYS$SYSTEM:DECW$SESSION.EXE.

13.2. Customizing the System Startup Environment

To customize the system startup environment,rename the SYS$MANAGER:DECW$PRIVATE_APPS_SETUP.TEMPLATE file to SYS$MANAGER:DECW$PRIVATE_APPS_SETUP.COM. You can modify SYS$MANAGER:DECW$PRIVATE_APPS_SETUP.COM to customize the following client environment areas:

- Directory used by Bookreader to find online books

- Directory for FileView command files
- Directory for Keymap files
- Directory for DECwindows example programs
- Directory for XDPS example programs
- Directory for Session Manager menu bar command files
- Program that runs when DECwindows startup is complete
- Login logo
- Parameters to the SET DISPLAY command
- Command procedure that runs after user authorization is complete
- DECwindows SYLOGIN command procedure
- Command that initializes the workstation with the correct user resource values
- Command that runs a session
- Command that resets a session
- Log file for DECwindows login
- Use of multiple connections during login
- Log file for Session Manager can be turned off

The remaining sections in this chapter contain examples for customizing the DECwindows client environment.

13.3. Changing Your Logo

When you start a DECwindows session,the default login screen featuring the DIGITAL logo and the Start Session screen is displayed. For an example of the login screen, see Chapter 2.

You must use the Start Session screen for logging in to DECwindows, but you can substitute your own logo for the DIGITAL logo by running an application that displays your logo.

To do this, you need to define a global symbol in the DECW$PRIVATE_APPS_SETUP.COM file and create a DCL command procedure that contains the commands to display your logo. For example, to display your own logo on the login screen:

- Create a command procedure (like SYS$MANAGER:MYLOGO.COM).
- Define the global symbol DECW$LOGINLOGO in SYS$MANAGER:DECW $PRIVATE_APPS_SETUP.COM, with its value set to the name of your command file. Note that this command procedure is run by the system account.

For example:

1. If the SYS$MANAGER directory does not contain the setup command procedure,copy the template file to the setup command procedure:

   ```
   $ COPY SYS$MANAGER:DECW$PRIVATE_APPS_SETUP.TEMPLATE -
   ```

```
_$ SYS$MANAGER:DECW$PRIVATE_APPS_SETUP.COM/LOG
```

2. Edit the setup command procedure and define the symbol DECW$LOGINLOGO to point to the command procedure that displays your custom logo.

   Add the following line:

   ```
   $ DECW$LOGINLOGO == "SYS$MANAGER:MYLOGO.COM"
   ```

3. Create the command procedure that displays your logo. This needs to be the file name and directory specified in step 2. Note that the command procedure will run as a detached process under the SYSTEM account. Be careful not to give users access to the system through your custom logo. For example, you should not run such applications as FileView or DECterm as a custom logo.

   For example, the file SYS$MANAGER:MYLOGO.COM could contain this command to display the icosahedron that is shipped as an example program:

   ```
   $ RUN DECW$EXAMPLES:ICO
   ```

4. Restart DECwindows by running SYS$MANAGER:DECW$STARTUP.COM with the RESTART parameter, or reboot your workstation. Ending the session does not display the logo unless you execute the DECW$STARTUP command procedure that starts DECwindows.

   To return to the DIGITAL logo, you need to remove the definition of DECW$LOGINLOGO from your DECW$PRIVATE_APPS_SETUP.COM file and reboot your workstation.

   If you don't want to reboot your workstation,enter the following commands:

   ```
   $ DEASSIGN/SYSTEM/EXEC DECW$LOGIN_BACKGROUND
   $ @SYS$MANAGER:DECW$STARTUP RESTART
   ```

13.4. Creating Dedicated Accounts

If you are a system manager, you can set up user accounts to run only certain applications. For example, you might want users to use only the Bookreader application.

This section describes the following three methods for setting up dedicated DECwindows accounts:

- Modifying the Session Manager command procedure
- Modifying the Session Manager executable file
- Modifying the Session Manager profile file

13.4.1. Modifying the Session Manager Command Procedure

You can define the global symbol DECW$SESSIONCOM in the SYS$MANAGER:DECW $PRIVATE_APPS_SETUP.COM file so that when a user logs in, LOGINOUT runs a command procedure other than DECW$STARTSM.COM. This action bypasses Session Manager altogether.

In the following example,DECW$SESSIONCOM is a logical name that determines the command procedure that starts Session Manager. The default command procedure is SYS$MANAGER: DECW $STARTSM.COM. You can run a private command procedure instead of this file by defining the global symbol DECW$SESSIONCOM in SYS$MANAGER:DECW$PRIVATE_APPS_SETUP.COM. If this

symbol is defined, SYS$MANAGER:DECW$STARTAPPS.COM defines the DECW$SESSIONCOM logical name in the system logical name table.

Because DECW$SESSIONCOM is defined in the system logical name table, it affects Session Manager startup for every user. Your private command file must check the user name under which it is running and run the normal DECW$STARTSM.COM procedure for non-dedicated accounts.

Note that with this method, startup command procedures that normally start from DECW $STARTSM.COM are not run. These include SYLOGIN.COM, LOGIN.COM,DECW $SYLOGIN.COM, and DECW$LOGIN.COM.

To modify the session manager command procedure:

1. Create the command procedure.

```
$ CREATE SYS$MANAGER:PRIVATE_SESSIONCOM.COM
$!
$! Check to see if this is the dedicated DECwindows account.
$! If it isn't, run the normal procedure to start the
$! Session Manager.
$!
$ username = F$USER()
$ IF F$LOCATE("BOOK_READER", username) .NE. F$LENGTH-
  (username) THEN GOTO dedicated
$!
$! Normal, nondedicated DECwindows login
$!
$ @SYS$MANAGER:DECW$STARTSM
$ EXIT
$!
$! Dedicated DECwindows login.
  Run Bookreader and then exit.
$!
$ dedicated:
$!
$ RUN SYS$SYSTEM:DECW$WSINIT
$ display = F$TRNLNM("decw$display")
$ RUN/DETACHED/OUTPUT='display' SYS$SYSTEM:DECW$MWM
$ RUN SYS$SYSTEM:DECW$BOOKREADER
$ endsession := $DECW$ENDSESSION
$ endsession -noprompt
$ STOP/ID=0
^Z
```

   The DECW$WSINIT program reads in resource files and changes the input cursor from the watch cursor to the arrow cursor. DECW$MWM is the Motif window manager. Its SYS$OUTPUT needs to be set to the translation of DECW$DISPLAY so that DECW$DISPLAY is defined correctly in the detached process. DECW$ENDSESSION resets the server and displays a Start Session dialog login box. The -noprompt qualifier prevents DECW$ENDSESSION from asking the user to confirm whether to end the session. (If the user cancels the End Session operation, the workstation will be unusable, because Bookreader will exit and the login box will not be displayed.) STOP/ID=0 logs out the process without writing an error message to SYS$OUTPUT.

2. Define the DECW$SESSIONCOM symbol in DECW$PRIVATE_APPS_SETUP.COM.

   If SYS$MANAGER:DECW$PRIVATE_APPS_SETUP.COM does not already exist,create it as follows from the template file:

```
$ COPY SYS$MANAGER:DECW$PRIVATE_APPS_SETUP.TEMPLATE -
_$ SYS$COMMON:[SYSMGR]DECW$PRIVATE_APPS_SETUP.COM
```

Then edit this command procedure as follows to define DECW$SESSIONCOM.

```
$ DECW$SESSIONCOM :== SYS$MANAGER:PRIVATE_SESSIONCOM.COM
```

3. Restart DECwindows by entering the following command.

```
$ @SYS$MANAGER:DECW$STARTUP RESTART
```

This step is necessary in order for the changes to DECW$PRIVATE_APPS_SETUP.COM to take effect.

4. Log in to the dedicated account on a DECwindows system.

After entering the user name and password of the dedicated account,Bookreader starts and Session Manager is not displayed. When the user exits from Bookreader, the PRIVATE_SESSIONCOM.COM procedure performs an end session operation and then logs out. The End Session command displays the Start Session screen.

13.4.2. Modifying the Session Manager Executable File

You can define DECW$SESSIONMAIN in the SYS$MANAGER:DECW $PRIVATE_APPS_SETUP.COM file so that DECW$STARTSM.COM runs the specified command file instead of DECW$SESSION.EXE. Session Manager reads resource files and executes login command files but does not display Session Manager's menu bar. With this method, you must also ensure that the End Session command does not prompt for confirmation.

When DECW$STARTSM.COM starts (that is, if DECW$SESSIONCOM has its default value), it starts Session Manager by executing the DCL command that is stored in the logical name DECW $SESSIONMAIN. To define this logical name, edit SYS$MANAGER:PRIVATE_APPS_SETUP.COM so that it defines the global symbol DECW$SESSIONMAIN as the DCL command to execute.

This method is similar to the one described in the preceding section,except that with this method, DECW$STARTSM.COM executes the SYLOGIN.COM, LOGIN.COM, DECW$SYLOGIN.COM, and DECW$LOGIN.COM command procedures. Also, DECW$STARTSM.COM executes DECW $WSINIT.COM, so the private command procedure does not need to do so.

By default, DECW$STARTSM.COM executes STOP/ID=0 after the DECW$SESSIONMAIN command has exited. In this case, however, you must end the session by running DECW$ENDSESSION.EXE, and you must make sure that End Session does not prompt for confirmation.(If the user cancels an end session operation,the workstation will be unusable).The private command procedure in the following example explicitly runs DECW$ENDSESSION with the -noprompt switch.

To modify Session Manager's executable file:

1. Create the command procedure.

```
$ CREATE SYS$MANAGER:PRIVATE_SESSIONMAIN.COM
$!
$! Check to see whether this is the dedicated DECwindows account.
$! If it isn't, run the normal procedure to start the
$! Session Manager.
```

```
$!
$ username = F$USER()
$ IF F$LOCATE("BOOK_READER", USERNAME) .NE. F$LENGTH(USERNAME) -THEN
 GOTO dedicated
$!
$! Normal, nondedicated DECwindows login
$!
$ RUN SYS$SYSTEM:DECW$SESSION
$ EXIT
$!
$! Dedicated DECwindows login.  Run Bookreader and then exit.
$!
$ dedicated:
$!
$ display = F$TRNLNM("decw$display")
$ RUN/DETACHED/OUTPUT='display' SYS$SYSTEM:DECW$MWM
$ RUN SYS$SYSTEM:DECW$BOOKREADER
$ endsession := $DECW$ENDSESSION
$ endsession -noprompt
$ STOP/ID=0
^Z
```

DECW$MWM is the Motif Window Manager. Its SYS$OUTPUT needs to beset to the translation of DECW$DISPLAY so that DECW$DISPLAY is defined correctly in the detached process. DECW $ENDSESSION resets the server and displays a new Start Session screen. The -noprompt qualifier prevents DECW$ENDSESSION from displaying the End Session prompt. (If the user cancels the End Session prompt, the workstation will be unusable because Bookreader will exit and the Start Session screen will not be displayed.)STOP/ID=0 logs out the process without writing a message to SYS$OUTPUT.

2. Define the DECW$SESSIONMAIN symbol in DECW$PRIVATE_APPS_SETUP.COM.

   If SYS$MANAGER:DECW$PRIVATE_APPS_SETUP.COM doesn't already exist,create it as follows from the template file.

   ```
   $ COPY SYS$MANAGER:DECW$PRIVATE_APPS_SETUP.TEMPLATE -
   _$ SYS$COMMON:[SYSMGR]DECW$PRIVATE_APPS_SETUP.COM
   ```

   Then edit this command procedure to define DECW$SESSIONMAIN. Note that the symbol must be defined as a DCL command (unlike DECW$SESSIONCOM, which is defined as the name of a command procedure).

   ```
   $ DECW$SESSIONMAIN :== @SYS$MANAGER:PRIVATE_SESSIONMAIN.COM
   ```

3. Restart DECwindows by entering the following command:

   ```
   $ @SYS$MANAGER:DECW$STARTUP RESTART
   ```

   This step is necessary in order for the changes to DECW$PRIVATE_APPS_SETUP.COM to take effect.

4. Log in to the dedicated account on a DECwindows system.

   After entering the user name and password of the dedicated account,Bookreader starts and Session Manager's menu bar is displayed. When the user exits Bookreader, the PRIVATE_SESSIONMAIN.COM procedure performs an End Session operation and then logs out. The End Session command displays a DECwindows Start Session screen.

13.4.3. Modifying the Session Manager Profile File

This method starts Session Manager normally, but the system manager customizes its menus to remove any applications that are not started automatically. By removing certain applications,a system manager can limit user access to applications.

With this method, Session Manager's menu bar is displayed,and the user can interact with whatever dialog boxes the system manager does not disable.

To modify the Session Manager profile file:

1. Log in to the dedicated account on a DECwindows system.

   When you enter the user name and password of the dedicated account,Session Manager starts.

2. Add the applications to the automatic startup list that you want to be displayed when a user logs in.

   Choose Automatic Startup... from Session Manager's Options menu. Session Manager displays the Automatic Startup dialog box.

   Use this dialog box to remove any undesired applications, such as FileView, from the automatic startup list.(For more information about using the Automatic Startup dialog box, see Chapter 7.) Do not remove Window Manager from the automatic startup list.

   Add Bookreader (for this example) to the list and click on OK.

3. Remove Applications from Session Manager's menu bar.

   Choose Menu Bar... from Session Manager's Options menu. Session Manager displays the Menu Bar dialog box.

   Use this dialog box to remove the applications you don't want to be displayed.(For more information about using the Menus dialog box, see Chapter 8.)

   Click on OK to save your changes and to dismiss the dialog box.

4. Remove any menu items that you don't want to be displayed on the Options menu.

   Choose Menus... from Session Manager's Options menu, and remove the following menu items from Session Manager's Options menu:

   Automatic Startup...
   Menus...
   Menu Bar...

   You should also remove any other menu items that you don't want users to have access to in the dedicated account, such as Security.

   After removing the items, click on OK to dismiss the dialog box and to save your menu settings.

5. Choose End Session from Session Manager's Session menu.

   Session Manager logs you out of the dedicated account and displays the DECwindows login box.

6. Log back in to the dedicated account.

To test your changes, log in to the dedicated account from the DECwindows login box. Bookreader and Session Manager should start up by default, and you should not be able to start any other application. To log out, choose End Session from the Session menu.

If you decide to make the account non dedicated again, or if you want to make changes in a dialog box that you have removed from the system menu bar, you must delete or rename the file VUE $PROFILE.VUE$DAT in the dedicated account's SYS$LOGIN directory.

Chapter 14. Sharing Customization Files

As described in Part II, you can customize Session Manager and FileView and save views you use frequently. When you customize Session Manager and FileView, you create a **private customization file** that your system reads every time you start an application.

You can share your custom file with other users. For example, you might want to share a custom pull-down menu with co-workers. When several users share a **public customization file**, they have access to a common custom file that can include custom menu items or pull-down menus.

This chapter describes how to create and manage private, public, and system customization files.

14.1. Using Shared Customization Files

When you start Session Manager or FileView, these applications read and merge the contents of the customization files to create your environment. First, they read the system customization file. The system customization file shipped with DECwindows contains definitions that produce the menu bar, menu items, and saved views you saw when you first started Session Manager or FileView. Next, Session Manager and FileView read the public customization files, if any exist. The public customization file contains any definitions that you share with other users (for example, a shared pull-down menu). Finally, they read your private customization file, which contains your personal definitions.

When Session Manager and FileView try to find the system customization file, they look first in the location defined by the logical name VUE$SYSTEM_PROFILE. If no translation is found, they use the file specification DECW$SYSTEM_DEFAULTS:VUE$SYSTEM_PROFILE.VUE$DAT to locate the system customization file. (The system customization file is placed in the DECW$SYSTEM_DEFAULTS directory when you install DECwindows.)

When Session Manager and FileView try to locate the public customization file, they look first in the location defined by the logical name VUE$PUBLIC_PROFILE. You can equate this logical name with a file specification to point to directories containing public customization files. (VUE$PUBLIC_PROFILE can be a search list that points to a list of directories containing customization files that you share with other users.) If no translation is found, Session Manager and FileView read all the files that match the file specification VUE$LIBRARY:*.VUE$DAT. As the files are read, their specifications are added to a list in memory. This ensures that no two files with the same name are loaded.

Finally, Session Manager and FileView find your private customization file by using the logical name VUE$PROFILE. You can equate this logical name with a file specification to point to your private customization file. If no translation is found, Session Manager and FileView use the file specification DECW$USER_DEFAULTS:VUE$PROFILE.VUE$DAT. This normally translates to your SYS$LOGIN directory, but you can redefine it to translate to any other directory.

When you rearrange the order of menu items on a menu in a public customization file or remove a built-in menu item from it, you create a copy of that menu in your private customization file. Because Session Manager and FileView read your private customization file last, any subsequent changes made to the public customization file will not be reflected in your private customization file. For example, if new menu items are added to a menu in the public customization file, you will not see those additions. Your private customization file will override the public file. Adding more menu items to a sorted menu does not make a private copy of the public menu definition.

14.2. Creating Shared Customization Files

You can use the Create Public Profile File command to create a file that contains customized Session Manager or FileView components.

To build a public customization file that you can share with other users:

1. Add the Create Public Profile File command to a menu.

   By default,the Create Public Profile File menu item does not appear on any of the Session Manager or FileView menus. For more information about adding menu items to pull-down menus, see Chapter 8.

2. Choose Create Public Profile File from the menu.

   When you choose Create Public Profile File, you are prompted for a name for the profile file. By default, the file extension is VUE$DAT. The profile file that is created is placed in the directory pointed to by the logical VUE$LIBRARY_WRITE. By default, VUE$LIBRARY_WRITE points to SYS$COMMON:[VUE$LIBRARY.USER].

   This default allows Session Manager or FileView to merge your profile file automatically with the system and user profile files. When Session Manager and FileView start, they read all files with the extension VUE$DAT from the directory pointed to by the logical VUE$PUBLIC_PROFILE. By default, the logical name VUE$PUBLIC_PROFILE points to the same directories as VUE $LIBRARY_WRITE.

3. After you fill in the profile file name, a new FileView is created. This FileView uses only the system definitions and does not have any of your private definitions.

4. Add any items you want to appear in the public profile file.

   For more information about defining menu items or adding items to menus, see Chapter 8. For more information about working with file types and views, see Chapter 9.

   Note

   Any changes you make are saved in the new profile, so do not move the FileView or Session Manager window or save settings in any built-in dialog boxes that you do not intend to be part of the user environment. These settings will be saved in the public profile you are creating.

   If you are adding items to existing pull-down or pop-up menus, using the Sort & Merge setting automatically merges your changes. For more information about using the Sort & Merge setting, see Chapter 8.

5. When you finish making changes,exit the new FileView. The new profile file is ready for you to use the next time you use Session Manager or FileView.

Chapter 15. Using Task Messages

When you define your own menu items and add them to Session Manager's or FileView's menus,your menu items can invoke simple DCL commands(for example, SHOW USERS) or command files that execute any number of commands. However, if you want to make your menu items work more like built-in menu items, you can include task messages into your command files. **Task messages** are special symbols that you use the same way you use DCL commands. For example, you can use task messages to create a menu item that displays a corresponding dialog box.

This chapter describes Session Manager and FileView task messages and explains how to use them. It also includes a sample command file that shows how task messages work.

15.1. Using Task Messages in Command Files

Some built-in menu items invoke command files to execute a series of commands. Each command file uses task messages to pass information between Session Manager or FileView and the VMS subprocesses that process tasks. This information includes files currently selected in the file list and the status of the current task. Task messages also instruct Session Manager and FileView to display a corresponding dialog box or error message.

Task messages consist of text strings that are sent on I/O channels called VUE$INPUT and VUE $OUTPUT. Subprocesses write messages to VUE$OUTPUT, which Session Manager or FileView reads. For some message types, Session Manager or FileView responds by writing messages to VUE$INPUT, which the subprocess reads. For each task message,Session Manager or FileView defines a DCL symbol that command files can use to send the message. When DCL encounters this symbol in a command file, it writes the message flag and any parameters you specify to VUE$OUTPUT. The VUE$INPUT and VUE$OUTPUT channels are already opened in the subprocess when your command file is invoked. You don't need to open or close them.

You do not need to open SYS$INPUT and SYS$OUTPUT channels in your command files. Specifically, your command files can prompt you by including the DCL command INQUIRE, if necessary, or can run programs that perform terminal I/O. When Session Manager and FileView detect that text has been written to SYS$OUTPUT, they respond by assigning and displaying a Task Output box that behaves like a terminal.

Note the following guidelines when using task messages in your command files.

- The maximum length of any task message is 255 characters.
- If the task message includes a single parameter with no spaces, such as a symbol name or a number, do not enclose it in quotation marks (" ").If the parameter is a text string, such as message text, enclose the string in quotation marks. For task messages that include two parameters, enclose both in one set of quotation marks; do not enclose each parameter individually in quotation marks. VUE $INQUIRE, which includes two parameters that might contain spaces, is an exception to this rule. In this case, enclose each parameter individually in quotation marks, and enclose them together within quotation marks.

15.2. Task Messages

VUE$EXIT_COMMAND_LOOP

The VUE$EXIT_COMMAND_LOOP message notifies Session Manager or FileView that the command procedure is about to exit the normal DCL command loop by executing the DCL command

STOP. If a command procedure executes the DCL command STOP without first sending a VUE $EXIT_COMMAND_LOOP message, the subprocess is not properly reused. The combination of VUE $EXIT_COMMAND_LOOP and STOP is used only to obtain a Task Output window in which you can interact directly with the DCL command line.

DCL format: VUE$EXIT_COMMAND_LOOP

VUE$GET_ALL_SELECTIONS

The VUE$GET_ALL_SELECTIONS message requests that Session Manager or FileView return the names of all selected files in the current view as a list whose components are separated by commas. Follow VUE$GET_ALL_SELECTIONS with VUE$READ to allow the subprocess to receive the returned file name list.

DCL format: VUE$GET_ALL_SELECTIONS

VUE$GET_NEXT_SELECTION

The VUE$GET_NEXT_SELECTION message requests that Session Manager or FileView return the name of the next selected file in the current view. VUE$GET_NEXT_SELECTION can be used iteratively to get the name of each file that was selected when the task began. After the last file name is returned, Session Manager or FileView returns an empty string. Follow VUE $GET_NEXT_SELECTION with VUE$READ to allow the subprocess to receive the returned file name.

DCL format: VUE$GET_NEXT_SELECTION

VUE$GET_QUALIFIERS

The VUE$GET_QUALIFIERS message requests that Session Manager or FileView return a SET DISPLAY command with the parameters for the current item to the subprocess. If a user selects Detached,the subprocess terminates, and Session Manager or FileView re-executes the command file in a new detached process.

DCL format: VUE$GET_QUALIFIERS

VUE$GET_SELECTION_COUNT

The VUE$GET_SELECTION_COUNT message requests that Session Manager or FileView return the number ofselected files in the current view. Follow VUE$GET_SELECTION_COUNT with VUE $READ to allow the subprocess to receive the returned count.

DCL format: VUE$GET_SELECTION_COUNT

VUE$GET_SYMBOL

The VUE$GET_SYMBOL message requests that Session Manager or FileView return the value of the specified symbol previously set by VUE$SET_SYMBOL. Follow VUE$GET_SYMBOL with VUE $READ to allow the subprocess to receive the returned value.

You can also use VUE$GET_SYMBOL to query the special DCL symbol VUE $SHOW_HIDDEN_DIALOGS. Many built-in commands allow you to hide the associated dialog box

by highlighting the Hide this Dialog check button in the command's dialog box. You can then force the box to appear by choosing the command while pressing and holding the Shift key. If you began the task while pressing and holding the Shift key, VUE$GET_SYMBOL returns TRUE for the value of VUE $SHOW_HIDDEN_DIALOGS. This allows your command files to provide a similar ellipsis feature that you can override when you choose the command from a menu while pressing the Shift key.

DCL format: VUE$GET_SYMBOL *symbol*

Example: VUE$GET_SYMBOL MY_LIBRARY

VUE$HIGHLIGHT_UPDATE

The VUE$HIGHLIGHT_UPDATE message requests that Session Manager or FileView highlight the Apply button in the Session Manager or FileView window by changing its label from Apply to Update. (The Update button is used to remind you that there might have been a change to the files in the current file list.) When you click on the Update button, the label returns to Apply.

DCL format: VUE$HIGHLIGHT_UPDATE

VUE$INQUIRE

The VUE$INQUIRE message requests that Session Manager or FileView display a dialog box prompting you for input text. The message includes the prompt to be used, as well as the initial value to be placed in the text-entry box. When you click on the OK button in the dialog box, the text is returned to the subprocess in VUE$INPUT. If you click on the Cancel button in the dialog box, a null string is returned. Follow VUE$INQUIRE with VUE$READ to allow the subprocess to receive the returned text string.

Because the prompt parameter might contain spaces, be sure to enclose both the prompt parameter and the initial text string in quotation marks.

DCL format: VUE$INQUIRE *prompt initial-text*

Example: VUE$INQUIRE " " "Showfile: " " " " ’ ’current_default ’ " " "

VUE$INQUIRE_SYMBOL

The VUE$INQUIRE_SYMBOL message requests that Session Manager or FileView display a dialog box prompting you for input text. The message includes the prompt to be used and a symbol name. The symbol is translated by Session Manager or FileView, and the current value is used as the initial value in the text-entry box. When you click on the OK button in the dialog box, the symbol is redefined using the text you entered,and the text is returned to the subprocess in VUE$INPUT. If you click on the Cancel button in the dialog box, a null string is returned and the task exits. Follow VUE$INQUIRE_SYMBOL with VUE$READ to allow the subprocess to receive the returned text string.

DCL format: VUE$INQUIRE_SYMBOL *symbol prompt*

Example: VUE$INQUIRE_SYMBOL “MY_LIBRARY Library:”

VUE$POPDOWN

The VUE$POPDOWN message instructs Session Manager or FileView to pop down the Task Output box forthis task, if it is displayed.

DCL format: VUE$POPDOWN

VUE$POPUP

The VUE$POPUP message instructs Session Manager or FileView to display the Task Output box for this task, if it is not already displayed. The Task Output box does not take input focus when it appears. Note that the Task Output box pops up automatically when output is written to SYS$OUTPUT. You can use this task message to force the box to appear sooner.

DCL format: VUE$POPUP

VUE$POPUP_CONFIRM

The VUE$POPUP_CONFIRM message requests that Session Manager or FileView pop up a confirmation box containing the specified text. The box contains two command buttons labeled Yes and No, which allow you to respond appropriately. Session Manager or FileView then returns either “YES” or “NO” in VUE$INPUT. Follow VUE$POPUP_CONFIRM with VUE$READ to allow the subprocess to receive the returned text string. You may separate the text on multiple lines by including the line-feed (ASCII 10)character.

DCL format: VUE$POPUP_CONFIRM *message*

Example: VUE$POPUP_CONFIRM “File was not found. Continue?”

VUE$POPUP_FOCUS

The VUE$POPUP_FOCUS message instructs Session Manager or FileView to pop up the Task Output box for this task, if it is not already displayed. The Task Output box takes input focus when it appears. Though the Task Output box pops up automatically when output is written to SYS$OUTPUT, it does not normally take input focus.

Note that this task message is incompatible with the Interclient Communications Conventions manual (ICCCM)and should not be used with an ICCCM window manager such as the Motif Window Manager.

DCL format: VUE$POPUP_FOCUS

VUE$POPUP_HELP

The VUE$POPUP_HELP message requests that Session Manager or FileView pop up a Help dialog box displaying help text from the specified library on the specified topic. If Session Manager or FileView cannot open the file or if the topic is not found, an error message dialog box is displayed.

DCL format: VUE$POPUP_HELP *library topic*

Example: VUE$POPUP_HELP “SYS$HELP:DECW$SESSION.HLB Overview”

VUE$POPUP_MESSAGE

The VUE$POPUP_MESSAGE message requests that Session Manager or FileView pop up a message box containing the specified text. The box also contains an Acknowledge button,which allows you to dismiss the box. You can separate the text on multiple lines by including the line-feed (ASCII 10) character.

DCL format: VUE$POPUP_MESSAGE *message*

Example: VUE$POPUP_MESSAGE “Library build is complete.”

VUE$POPUP_QUALIFIERS

The VUE$POPUP_QUALIFIERS message requests that Session Manager or FileView pop up a dialog box containing text-entry boxes to change the display and an option box to change how applications run. The current settings for the command are shown in the dialog box.

When you click on OK or Apply, a SET DISPLAY command with the selected parameters is returned to the subprocess. If a user selects Detached, the subprocess terminates,and Session Manager or FileView re-executes the command file in a new detached process. If a user selects Detached and then clicks on Apply,the string DETACHED_APPLY is returned instead of the SET DISPLAY command.

DCL format: VUE$POPUP_QUALIFIERS

VUE$POPUP_PROGRESS_BOX

The VUE$POPUP_PROGRESS_BOX message requests that Session Manager or FileView pop up the Work in Progress dialog box, if it is not already displayed. This box allows an optional time value, representing a number of seconds, to be specified. If this task message is included, the box is displayed only for the specified number of seconds and then is automatically dismissed, unless some other entry prevents it. Also, the task status is shown as “Starting” in the Work in Progress dialog box if the timer is included.

You can use this task message to provide feedback that a task is starting before the task produces any visible results. If a time value is not included,the Work in Progress dialog box is automatically dismissed when the current task is completed, unless another entry prevents it.

DCL format: VUE$POPUP_PROGRESS_BOX *optional-time*

Example: VUE$POPUP_PROGRESS_BOX 10

VUE$READ

VUE$READ is the mechanism for receiving a value that Session Manager or FileView returns as a result of a previous message you sent. It reads the next record from VUE$INPUT into a symbol you specify.

For example, VUE$READ is used to read the file name returned after a VUE $GET_NEXT_SELECTION message is sent.

DCL format: VUE$READ *symbol*

Example: VUE$READ NEXT_SELECTION

VUE$RESET_SELECTIONS

VUE$RESET_SELECTIONS instructs Session Manager or FileView to reset its internal pointers to the selected file list. Normally, a task command file iterates through the list of selected files by repeatedly calling VUE$GET_NEXT_SELECTION.VUE$RESET_SELECTIONS allows the task to iterate through the list again.

DCL format: VUE$RESET_SELECTIONS

VUE$SET_DONE_LABEL

The VUE$SET_DONE_LABEL message requests that Session Manager or FileView change the label for this task to the specified text when the task is complete. This message has no effect until the task completes.

DCL format: VUE$SET_DONE_LABEL *label*

Example: VUE$SET_DONE_LABEL “Library build complete”

VUE$SET_ERROR_STATUS

The VUE$SET_ERROR_STATUS message requests that Session Manager or FileView set the “Error”flag in the Work in Progress dialog box entry for the current task.

DCL format: VUE$SET_ERROR_STATUS

VUE$SET_OUTPUT_TITLE

VUE$SET_OUTPUT_TITLE allows the task to specify a new title for its Task Output box. By default, Session Manager or FileView uses as the title the menu item name that invoked the task.

DCL format: VUE$SET_OUTPUT_TITLE

VUE$SET_SYMBOL

The VUE$SET_SYMBOL message requests that Session Manager or FileView store a value for the specified symbol in order to reuse it later. This mechanism allows Session Manager or FileView tasks, which are run as subprocesses, to share the same value for a symbol or to preserve a symbol across invocations of the same menu item. Defining a DCL symbol in your command file does not have the same effect, because it might be run in a different subprocess the next time the command file is invoked.

DCL format: VUE$SET_SYMBOL *symbol-value*

Example: VUE$SET_SYMBOL “MY_LIBRARY WORK:[JONES.LIBRARY]”

VUE$SET_TASK_LABEL

The VUE$SET_TASK_LABEL message requests that Session Manager or FileView change the label for this task in the Work in Progress dialog box and in the Task Output box, if one exists.

DCL format: VUE$SET_TASK_LABEL *label*

Example: VUE$SET_TASK_LABEL "Copying ’ ’current_file ’ "

VUE$SUPPRESS_FILE_LABEL

VUE$SUPPRESS_FILE_LABEL allows a task to specify that the file labels be omitted from its Task Output box, even if the task has requested information about the file list.

DCL format: VUE$SUPPRESS_FILE_LABEL

VUE$SUPPRESS_OUTPUT_POPUP

The VUE$SUPPRESS_OUTPUT_POPUP message requests that Session Manager or FileView not automatically display a Task Output box when the task produces terminal output. You can use this task message for graphical applications that are expected to produce output only in case of errors.

DCL format: VUE$SUPPRESS_OUTPUT_POPUP

VUE$UPDATE_FILEVIEW

The VUE$UPDATE_FILEVIEW message requests that Session Manager or FileView automatically update the Session Manager or FileView window, as though you had clicked on the Apply button. Use this task message with caution because it might disrupt any interaction in progress, such as extending a file selection.

DCL format: VUE$UPDATE_FILEVIEW

15.3. Creating a Command File

The following sample command file illustrates how to include task messages in a FileView command file. You can define a menu item Create Library, add it to the FileView Files menu, and associate it with this command file to create a library in which you can store frequently used modules of code or text.

```
$!+
$! This FileView command file will prompt the user for a library name,
$! create the library, and insert all currently selected files
$! into it.
$!
$! If an error occurs, go to the handler, which displays Error status.
$!
$ on warning then goto error_occurred
$!
$! First, get the number of selected files. If none, pop up a
$! message box, then exit.
$!
$ vue$get_selection_count
$ vue$read element_count
$ if element_count .ne. 0 then goto get_library_name
$ vue$popup_message "You must select files first!"
$ exit
$!
$! Get the library name. Use a symbol so that this name can be
$! remembered across invocations of this menu item. If the library
$! already exists, prompt for confirmation that it should be used.
$!
$get_library_name:
$ vue$inquire_symbol "my_library_name  Library name:"
$ vue$read my_library_name
$ vue$popup_progress_box
$ if "'f$search(my_library_name)'" .eqs. "" then goto create_library
$ vue$popup_confirm "Library already exists. Create new version?"
$ vue$read response
$ if "'response'" .eqs. "NO" then goto file_loop
$!
$! Create a new library. Set the task label indicating action, and
```

```
$! highlight the Apply button showing a new file has been created.
$!
$create_library:
$ vue$set_task_label "Creating library ''my_library_name'"
$ library/create 'my_library_name
$ vue$highlight_update
$!
$! Get the list of selected files, and insert each into the library.
$!
$file_loop:
$ vue$get_next_selection
$ vue$read insert_file
$ if "'''insert_file'" .eqs. "" then goto task_exit
$ vue$set_task_label "Inserting ''f$parse(insert_file,,,"NAME")'"
$ library 'my_library_name 'insert_file
$ goto file_loop
$!
$error_occurred:
$ vue$set_error_status
$!
$! Exit from the command procedure
$!
$task_exit:
$ exit
```

15.4. Adding Target Screen Options to Application Menu Items

To add Target Screen options to a user-defined menu item, modify the command procedure that invokes the application as shown in the following example. Your application must be invoked from a command file to use the qualifier dialog box feature.

This command procedure is from VUE$LIBRARY:VUE$BOOKREADER.

```
    $ vue$get_symbol vue$show_hidden_dialogs ❶
    $ vue$read show_hidden_dialogs    $    $ if show_hidden_dialogs then
 goto select_qualifiers ❷
    $
    $ select_qualifiers: ❸
    $   vue$get_qualifiers
    $   goto do_bookreader
    $ select_qualifiers:
    $ vue$popup_qualifiers ❹
    $
    $ do_bookreader:
    $ vue$read vue$common ❺
    $
    $ if "'''vue$command'".eqs. "DETACHED_APPLY" then goto -
    $ select_qualifiers
         $    'vue$command ❻
    $ bookreader:=sys$system:decw$bookreader.exe
    $ vue$get_next_selection ❼
    $ vue$read selection
    $ bookreader 'selection
    $ vue$check_verb_loop ❽
    $ vue$read loop
```

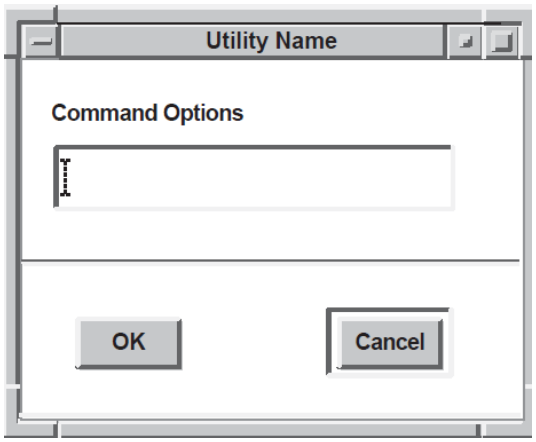
```
$ if "'''loop'" .eqs. "TRUE" then goto select_qualifiers
```

❶ The symbol VUE$SHOW_HIDDEN_DIALOGS is true if the ellipsis after an item is selected; otherwise it is false.
❷ If the user chose the ellipsis, the dialog box is displayed.
❸ The user did not choose the ellipsis; retrieve any saved values and execute the command.
❹ Display the dialog box and wait for the user to click on OK or Apply.
❺ Have the command returned to FileView.
❻ Execute the SET DISPLAY command.
❼ If a file is selected, get it from FileView and pass it to Bookreader.
❽ If the user clicked on Apply, then VUE$CHECK_VERB_LOOP is true. In this case, the command procedure wants to return control to the dialog box. If the user chooses the Detached setting and then clicks on Apply, control is returned to the dialog box.

Chapter 16. Using MIT Utilities

If you have used the X Window System on other vendors' platforms,you might be familiar with several utilities distributed from the Massachusetts Institute of Technology (MIT). With DECwindows,you can access these utilities from FileView's Utilities menu.

To invoke an MIT utility from FileView's Utilities menu, choose the utility you want to use. If you want to enter optional parameters, choose the ellipsis (...) next to the utility. FileView displays a Command Options dialog box.



If you invoke a utility that requires certain parameters or additional information,FileView displays a task output dialog box that contains help text. To use the utility, choose the ellipsis next to the utility and provide the missing parameters in the command options dialog box.

This chapter briefly describes the MIT utilities and includes tables of utility options.

16.1. Bitmap Utility

The Bitmap Utility creates and edits rectangular images that are made up of 1s and 0s. Bitmaps are used to define clipping regions, cursor shapes,icon shapes, and tile and stipple patterns.

Bitmap displays a grid in which each square represents a single bit in the picture being edited. Squares can be set, cleared, or inverted with the mouse buttons, and a menu of higher-level operations is provided to the side of the grid. Actual-size versions of the bitmap, as it would appear normally and inverted, are displayed below the menu.

If the bitmap is used to define a cursor, one of the squares in the images can be designated as the hotspot, which determines where the cursor is pointing. For cursors with sharp tips, such as arrows and fingers, it is usually at the end of the tip. For symmetric cursors, such as crosses and bullseyes, it is usually at the center.

Bitmaps are stored as small C code fragments that are suitable for including in applications. They provide an array of bits and symbolic constants that give width, height, and hotspot, which can be used to create cursors, icons, and tiles. See the *X Window System Toolkit* for more information.

The format for bitmap is

```
bitmap [-options ...]
filename [
width x
height]
```

Table 16.1. Bitmap Options

Option	Description
-help	Creates a brief description of allowable options and parameters to be printed.
-display	Specifies the X server to use.
-geometry	Specifies the placement and size of the bitmap window on the screen.
-nodashed	Indicates that the grid lines in the work area should not be drawn with dashed lines. Dashed lines can be slower on some servers.
-name *variable_name*	Specifies the variable name to use for writing out the bitmap file. The default is to use the base name of the file name command line argument.
-bw *number*	Specifies the border width of the main window in pixels.
-fn *font*	Specifies the font used for text in the buttons.
-fg *color*	Specifies the foreground color.
-bg *color*	Specifies the background color.
-hl *color*	Specifies the highlight color.
-bd *color*	Specifies the border color.
-ms *color*	Specifies the mouse color.

The default WIDTHxSIZE is 16x16.

16.1.1. Changing Grid Squares

To set, clear, or invert grid squares, click on the following:

- MB1—used to set one or more squares. The corresponding bit or bits in the bitmap are turned on (set to 1) and the square is filled.
- MB2—used to invert one or more squares. The corresponding bit or bits in the bitmap are flipped, so 1s become 0s and 0s become 1s.
- MB3—used to clear one or more squares. The corresponding bit or bits in the bitmap are turned off (set to 0) and the square is emptied.

You can change multiple squares simultaneously by holding the button down and dragging the cursor across the squares.

The bmtoa and atobm filters convert bitmap files to and from ASCII strings. They are most commonly used to print out bitmaps and generate versions to include in text files.

16.2. Convert ASCII to Bitmap Utility

The format for the Convert ASCII to Bitmap (atobm) Utility is

```
 atobm [-options ...] [
filename]
```

Table 16.2. ASCII to Bitmap Options

Option	Description
-chars *cc*	Specifies the pair of characters to use when converting string bitmaps into arrays of numbers. The first character represents a 0 bit, and the second character represents a 1 bit. The default is to use dashes for 0s and the number sign (#) for 1s.
-name *variable*	Specifies the variable name to be used when writing out the bitmap file. The default is to use the base name of the file name command line argument or leave it blank if the standard input is read.
-xhot *number*	Specifies the x coordinate of the hotspot. Only positive values are allowed. By default, no hotspot information is included.
-yhot *number*	Specifies the y coordinate of the hotspot. Only positive values are allowed. By default, no hotspot information is included.

16.3. Convert Bitmap to ASCII Utility

The format for the Convert Bitmap to ASCII (bmtoa) Utility is

```
bmtoa [-options ...] [
filename]
```

Table 16.3. Bitmap to ASCII Option

Option	Description
-chars *cc*	Specifies the pair of characters to use in the string version of the bitmap. The first character is used for 0 bits, and the second character is used for 1 bits. The default is to use dashes for 0s and the number sign (#)for 1s.

16.4. Display Information Utility

The Display Information (xdpyinfo)Utility displays characteristics about an X server. It is used to examine the capabilities of the server, the predefined values of parameters used to communicate between clients and servers, and the different types of screens and visuals available. The format is

```
 xdpyinfo [-display
display]
```

16.5. Event Monitoring Utility

The Event Monitoring Utility (xev)Utility creates a window and writes output for each event that is generated. These events include pointer motion, and they enter and leave on the window.

The format is

```
xev [-options ...]
```

Table 16.4. Event Monitoring Options

Option	Description
-displayname	Specifies the X server to contact.
-geometry *geom*	Specifies the size and location of the window.
-bw *pixels*	Specifies the border width in pixels.
-bs {NotUseful, WhenMapped,Always}	Specifies the backingstore attribute.
-s	Sets save-unders attribute.

16.6. List Atoms Utility

The List Atoms (xlsatoms) Utility lists the interned atoms. By default, all atoms starting from 1 (the lowest atom value defined in the protocol) are listed until the unknown atom is found. If an explicit range is given, xlsatoms tries all atoms in the range, regardless of whether they are undefined.

The format is

```
xlsatoms [-options...]
```

Table 16.5. List Atoms Options

Option	Description
-display *display*	Specifies the X server to which to connect.
-format *string*	Specifies the print-style format to use to list each atom `<value,name>` pair that is printed in that order. xlsatoms supplies a new line at the end of each line. The default is %ldt%s.
-range [*low*]-[*high*]	Specifies the range of atom values to check. If low is not given,a value of 1 is assumed. If high is not given, xlsatoms stops at the first undefined atom at or above low.
-name *string*	Specifies the name of the single atom to list. If the atom does not exist, a message is printed.

16.7. List Fonts Utility

The List Fonts (xlsfonts) Utility lists the fonts that match the given pattern. The wildcard character (*) can be used to match any sequence of characters. The question mark (?) can be used to match any single character. If no pattern id is given, the wildcard character is assumed.

The format is

```
 xlsfonts [-options] [-fn
pattern]
```

Table 16.6. List Fonts Options

Option	Description
-l[l[l]]	Indicates that medium, long, and very long listings should be generated for each font.

Option	Description
-m	Specifies that long listings should also print min and max bounds.
-C	Specifies that listings should use multiple columns. This is the same as -n0.
-1	Forces a single column. This is the same as -n1.
-u	Keeps output unsorted.
-w *width*	Specifies the maximum width in characters that should be used to determine the number of columns to print. The default is 79.
-n *columns*	Specifies the number of columns in which to display the output. By default, xlsfonts attempts to fit as many columns of font names as possible into the number of characters based on the number of characters that is specified by -w width.
-display *display*	Specifies the X server to contact.

16.8. List Windows Utility

The List Windows (xlswins) Utility lists the window tree. By default, the root window is used as the starting point, although a specific window can be specified with the -id option. If a window is not specified on the command line, the root window is used.

The format is

```
 xlswins [-options ...] [
window_id] ...
```

Table 16.7. List Windows Options

Option	Description
-display *display*	Specifies the X server to contact.
-format {hex, decimal, octal}	Specifies the radix used to the print window id. The default is hex.
-indent *number*	Specifies the number of spaces to indent per level in the window tree. The default is 2.
-l	Specifies that a long listing should be generated for each window. This includes a number indicating the depth, the geometry relative to the parent, and the location relative to the root window.
-resources	Prints a listing of widget resources.

16.9. Magnify Portion of Screen Utility

The Magnify Portion of Screen(xmag) Utility allows you to magnify the screen. If the explicit region is not specified, a square centered around the pointer is displayed, indicating the area to be enlarged. Once a region is selected, a window pops up showing an enlargement of the region, in which each pixel in the source image is represented by a small square of the same color. Clicking MB1 in the enlarged window

pops up a small window that displays the position, number, and RGB value of the pixel under the pointer for as long as MB1 is depressed. Pressing the space bar or any other pointer button removes the enlarged image, and another region can be selected. Pressing q, Q, or Ctrl/C in the enlarged window exits the program.

The format is

```
xmag [-options ...]
```

Table 16.8. Magnify Portion of Screen Options

Option	Description
-display *display*	Specifies the X server to use for both reading the screen and displaying the enlarged version of the image.
-geometry *geom*	Specifies the size and location of the enlargement window. By default,the size is computed from the size of the source region and the desired magnification. Only one -source and -mag option can be specified if the window size is given with this option.
-source *geom*	Specifies the size and location of the source region on the screen. By default, a 64x64 square centered about the pointer is provided for the user to select an area of the screen. The size of the source is used with the desired magnification to compute the default enlargement window size. Only one-geometry and -mag option can be specified if a source size is given with this option.
-mag *magfactor*	Specifies the integral amount by which the source region is enlarged. The default magnification is 5. This is used with the size of the source to compute the default enlargement window size. Only one -geometry and -source option can be specified if a magnification factor is given with this option.
-bw *pixels*	Specifies the border width in pixels of the border surrounding the enlargement window.
-bd *color*	Specifies the border color.
-bg *color pixel_value*	Specifies the name of the color to be used as the background of an enlargement window. If the name begins with a percent size(%), it is interpreted as an absolute pixel value. This is useful when displaying large areas, because pixels that are the same color as the background do not need to be painted in the enlargement. The default is BlackPixel.
-fn *font_name*	Specifies the name of the font used for examining enlarged pixels when MB1 is pressed in the enlargement window.
-z	Grabs the server during dynamics and the call to XGetImage. This is useful for ensuring that clients

Option	Description
	do not change their state as the result of entering or leaving them with the pointer.

Options may be abbreviated to the shortest unambiguous prefix.

16.10. Modify Keymap Utility

The Modify Keymap (xmodmap) Utility edits and display the keyboard modifier map and keymap table, which are used by client applications to convert events and keycodes into keysyms. This utility is usually run at session startup to customize the keyboard.

This is a global change that affects all applications connected to the server.

The format is

```
 xmodmap [-options ...] [
filename]
```

The file name specifies a file that contains xmodmap expressions to be executed.

Table 16.9. Modify Keymap Options

Option	Description
-display *display*	Specifies the host and server to use.
-verbose	Indicates that xmodmap should print logging information as it parses the input.
-quiet	Turns off the verbose logging. This is the default.
-n	Indicates that xmodmap should not change the mappings but should display what it would do.
-e *expression*	Specifies an expression to be executed. Any number of expressions can be specified from the command line.
-pm	Prints the current modifier map to SYS$OUTPUT.
-pk	Prints the current keymap table to SYS$OUTPUT.
-pp	Prints the current pointer map to SYS$OUTPUT.
-grammar	Indicates that a help message that describes the expression grammar used in the files and with -e expressions should be printed out to SYS $OUTPUT.
-	Specifies that SYS$INPUT should be used as the input file.

16.11. Display Properties Utility

The Display Properties (xprop) Utility displays window and font properties in an X server. You select one window or font by using the command line arguments or (in the case of a window)by clicking on the desired window. A list of properties with formatting information is then given.

The format is

```
 xprop [-help] [-grammar] [-id
id] [-root][-name
name] [-frame] [-font
font][-display
display] [-len
n] [-notype][-fs
file] [-remove
property_name][-spy] [-f
atom
format [
dformat]]... [
format [
dformat]
atom]...
```

Table 16.10. Display Properties Options

Option	Description
-help	Prints out a summary of command line options.
-grammar	Prints out the full grammar for command line options.
-display *display*	Specifies the X server to contact.
-id *id*	Selects the window id on the command line instead of using the pointer to select the target window. This is useful in debugging X applications where the target window is not mapped to the screen or where the use of the pointer might interfere with the application.
-name *name*	Specifies that the window named *name* is the target window on the command line instead of using the pointer to select the target window.
-font *font*	Specifies that the properties of the font *font* should be displayed.
-remove *property_name*	Specifies the name of a property to be removed from the indicated window.
-root	Specifies that X's root window is the target window. This option is useful when the root window is completely obscured.
-len *n*	Displays or reads at most *n* bytes of any property.
-notype	Specifies not to display the type field for each property.
-fs *filename*	Specifies where to look for property formats.
-frame	Specifies that when selecting a window by hand (that is; if **-name**, **-root**, or **-id** is not given), look at the window manager frame instead of the client window.
-f *property_name format* [*dformat*]	Specifies that the format for name should be *format* and that the dformat for name should be *dformat*. If dformat is missing,=$0+ n is assumed.

Option	Description
-spy	Examines window properties forever, looking for property change events.

For each of these properties, the value on the selected window or font is printed using the supplied formatting information, if it exists. If no formatting information is supplied, internal defaults are used. If a property is not defined on the selected window or font, "not defined" is printed as the value for that property. If no property list is given, all the properties possessed by the selected window or font are printed.

A window can be selected in one of four ways.

- If the desired window is the root window, the -root argument can be used.
- If the desired window is not the root window, it can be selected in either of two ways on the command line: by id number or (if the window possesses a name) by name. The -id argument selects a window by id number in either decimal or hex (must start with 0x), whereas the -name argument selects a window by name.
- If none of -font, -id, -name, and -root are specified, a crosshairs cursor is displayed and you can choose any visible window by clicking any mouse button in the desired window. If you want to display properties of a font as opposed to a window, you must use the -font argument.

Other than these four arguments and the -help and -grammar arguments, all the other command line arguments are used to specify both the format of the properties to be displayed and how to display them. The -len **n** argument specifies that at most *n* bytes of any given property will be read and displayed. This argument is useful when displaying the cut buffer on the root window, which could be several pages long if displayed in full.

Usually each property name is displayed by printing the property name then its type (if it has one) in parentheses, followed by its value. The **-notype** argument specifies that property types should not be displayed. The **-fs** argument specifies a file containing a list of formats for properties; the **-f** argument specifies the format for one property.

The formatting information for a property consists of two parts,a format and a dformat. The format specifies the formatting of the property, and the dformat specifies how the property should be displayed.

16.11.1. Constructing Formats and Deformats

The defaults contain the formats and dformats required to display all the standard properties. You should have to specify formats and dformats only if you have a new property or if you want to change the standard display format. It is recommended that new users not specify formats and dformats.

A format consists of one of 0, 8, 16, or 32 followed by a sequence of one or more format characters. The 0, 8, 16, or 32 specifies how many bitsper field there are in the property. Zero means to use the field size information associated with the property itself. The zero is needed onlyfor such unique cases as type INTEGER, which can be one of three different types depending on the size of the fields of the property.

A value of 8 means that the property is a sequence of bytes, and a value of 16 means that the property is a sequence of words. The difference between the two is that when it is read by a machine of the opposite byte from the machine that originally wrote the property, the sequence of words is byte swapped, whereas the sequence of bytes is not. For more information on how properties are formatted and stored, consult the *Xlib* manual.

Once the size of the fields has been specified, you must specify the type of each field (such as an integer, a string, or an atom). This is done using one format character per field. If there are more fields in the property than format characters supplied,the last character is repeated as many times as necessary for the extra fields. The format characters and their meanings are as follows:

- a—The field holds an atom number. A field of this type should be of size 32.
- b—The field is a Boolean value. A 0 means FALSE, and anything else means TRUE.
- c—The field is an unsigned number, a cardinal number.
- i—The field is a signed integer.
- m—The field is a set of bit flags, 1 meaning On.
- s—This field and the following ones up to either a 0 or the end of the property represent a sequence of bytes. This format character is usable only with a field size of 8 and is most often used to represent a string.
- x—The field is a hex number (such as 'c' but displayed in hex). It is most useful for displaying window ids.

16.12. Modify Resource Database Utility

The Modify Resource (xrdb) Utility gets or sets the contents of the RESOURCE_MANAGER property on the root window of screen 0.

The X Toolkit uses the RESOURCE_MANAGER property to get user preferences about color and about fonts for applications. For compatibility, if no RESOURCE_MANAGER property is defined,the resource manager looks for a file called DECW$XDEFAULTS.DAT in DECW$USER.DEFAULTS.

The file name, or SYS$INPUT if an input file is not given, is optionally passed through the C preprocessor with the following symbols, defined on the basis of the capabilities of the server being used.

- BITS_PER_RGB= *num*—number of significant bits in an RGB color specification. This is the log base 2 of the number of distinct shades of each primary that the hardware can generate. It is not usually related to PLANES.
- CLASS= *visual_class*—one of StaticGray, GrayScale, StaticColor, PseudoColor, TrueColor, and DirectColor. This is the visual class of the root window of the default screen.
- COLOR—defined only if CLASS is StaticColor, PseudoColor, TrueColor, or DirectColor.
- HEIGHT= *num*—the height of the default screen in pixels.
- SERVERHOST= *host_name*—the host name portion of the display to which you are connected.
- HOST= *host_name*—the same as SERVERHOST.
- CLIENTHOST= *host_name*—the name of the host on which xrdb is running.
- PLANES= *num*—the number of bit planes (the depth) of the root window of the default screen.
- RELEASE= *num*—the vendor release number for the server. The interpretation of this number varies depending on VENDOR.
- REVISION= *num*—the X protocol minor version supported by this server (currently 0).

- VERSION= *num*—the X protocol major version supported by this server (should always be 11).
- VENDOR= *vendor*—a string specifying the vendor of the server.
- WIDTH= *num*—the width of the default screen in pixels.
- X_RESOLUTION= *num*—the x resolution of the default screen in pixels per meter.
- Y_RESOLUTION= *num*—the y resolution of the default screen in pixels per meter.

Lines that begin with an exclamation mark (!) are ignored and can be used as comments.

The format is

```
 xrdb [-options ...] [
filename]
```

Table 16.11. Modify Resource Database Options

Option	Description
-help	Causes a brief description of the allowable options and parameters to be printed.
-display *display*	Specifies the X server to use.
-n	Indicates that changes to the property (when used with -load) or to the resource file (when used with -edit) should be shown on the standard output but should not be performed.
-symbols	Indicates that the symbols that are defined for the preprocessor should be printed onto the standard output. It can be used in conjunction with -query, but not with the options that change the RESOURCE_MANAGER property.
-query	Indicates that the current contents of the RESOURCE_MANAGER property should be printed onto the standard output. Because preprocessor commands in the input resource file are part of the input file, not part of the property, they do not appear in the output from this option. The -edit option can be used to merge the contents of the property back into the input resource file without damaging preprocessor commands.
-load	Indicates that the input should be loaded as the new value of the RESOURCE_MANAGER property, replacing whatever was there (that is, the old contents are removed). This is the default action.
-merge	Indicates that the input should be merged with, instead of replacing, the current contents of the RESOURCE_MANAGER property. Because xrdb can read SYS$INPUT, this option can be used to the change the contents of the RESOURCE_MANAGER property directly from a terminal or from a shell script. This option

Option	Description
	performs a lexicographic sorted merge of the two inputs to ensure backwards compatibility.
-edit *filename*	Indicates that the contents of the RESOURCE_MANAGER property should be edited into the given file, replacing any values already listed there. This allows you to put changes that you have made to your defaults back into your resource file, preserving any comments or preprocessor lines.
-backup *string*	Specifies the backup suffix for -edit [.bak].
-remove	Removes the RESOURCE_MANAGER from its window.
-retain	Indicates that server reset should be avoided if xrdb is the first client.
-quiet	Indicates that warnings about duplicate entries should not be displayed.

16.13. Refresh Utility

The Refresh (xrefresh) Utility causes all or part of your screen to be repainted. Xrefresh maps a window on top of the desired area of the screen and then immediately unmaps it, causing refresh events to be sent to all applications. By default, a window without a background is used to provide faster repainting. Various options can be used to indicate that a solid background of any color,or the root window background, should be used instead.

The format is

```
xrefresh [-options] [
geometry] [
display]
```

Table 16.12. Refresh Options

Option	Description
-display *display*	Specifies the server and screen to refresh.
-geometry *W*x *H*+*X*+*Y*	Specifies the portion of the screen to be repainted.
-black	Indicates to use a black background. This can be disorienting, because everything goes black for a moment.
-white	Indicates to use a white background. The screen appears to flash and then repaint.
-solid *color*	Indicates to use a solid background of the specified color—for example,green.
-root	Indicates to use the root background.
-none	Indicates to repaint all of the windows. This is the default.

The default is xrefresh -none.

16.14. Set Options Utility

The Set Options (xset) Utility customizes various user preference options of the display. These values are global to the X server and affect other applications.

The format is

```
 xset [-display
display] [-b] [b
on/off] [b
volume pitch duration] [[-]bc] [-c] [c
on/off] [c
 volume] [[-+]fp[-+=]
path[,
path[,...]]] [fp
default] [fp
rehash] [[-]led
integer] [led
on/off] [m[ouse] [acceleration [threshold]]] [m[ouse] default] [p pixel
 color][[-]r] [r
on/off] [s [length
period]] [s
blank/noblank] [s
expose/noexpose][s
on/off] [s
default] [q]
```

Table 16.13. Set Options Options

Option	Description
-display	Specifies the server to use.
b	Controls the bell volume, pitch, and duration. This option accepts up to three numerical parameters, a preceding dash (-), or an on/off flag. If no parameters are given or the on flag is used, the system defaults are used. If the dash or the off flag is used, the bell is turned off. If only one numeric parameter is given, the bell volume is set to that value, as a percentage of its maximum. The second numeric parameter specifies the bell pitch, in hertz, and the third numeric parameter specifies the duration in milliseconds. The X server sets the characteristics of the bell as closely as possible to your specifications.
c	Controls the key click. This option can take an option value, a preceding dash (-), or an on/off flag. If no parameter or the on flag is given, the system defaults are used. If the dash or the off flag is used, the keyclick is disabled. If a value from 0 to 100 is given, it is used to indicate volume as a percentage of the maximum. The X server sets the volume to the nearest value that the hardware can support.

Option	Description
fp= *path*[, *path...*]	Sets the font path to the directories specified in the path argument. The directories are interpreted by the server, not by the client, and are server-dependent.
fp *default*	Causes the font path to be reset to the server's default.
fp *rehash*	Causes the server to reread the font databases in the current font path. This is generally used only when adding new fonts to a font directory.
-fp *path*[, *path...*]	Removes elements to the current font path. It must be followed by a comma-separated list of directories.
fp- *path*[, *path...*]	Removes elements to the current font path. It must be followed by a comma-separated list of directories.
+fp *path*[, *path...*]	Prepends elements to the current font path. It must be followed by a comma-separated list of directories.
fp+ *path*[, *path...*]	Appends elements to the current font path. It must be followed by a comma-separated list of directories.
led	Controls the keyboard LEDs. This option controls the turning on or off of the LEDs. It accepts an optional integer, a preceding dash (-), or an on/off flag. If no parameters or the on flag is given, all LEDs are turned on. If a preceding dash or the off flag is given, all LEDs are turned off. If a value between 1 and 32 is given, that LED is turned on or off, depending on the existence of a preceding dash. A common LED that can be controlled is the Caps Lock LED. Xset LED 3 turns LED number 3 on, whereas xset -LED 3 turns it off. The specific LED values can refer to different LEDs on different hardware.
m	Controls the mouse parameters. The parameters for the mouse are acceleration and threshold. The mouse, or whatever pointer is used, travels “acceleration” times as fast when it travels more than “threshold” pixels in a short time. The mouse can then be used for precise alignment when it is moved slowly, yet it can be set to travel across the screen rapidly when desired. One or both parameters for this option can be omitted, but if only one is given, it is interpreted as the acceleration. If no parameters are given or if the flag default is used, the system defaults are used.
p	Controls the pixel color values. The parameters are the color map entry number, in decimals, and

Option	Description
	a color specification. The root background colors may be changed on the same servers by altering the entries for BlackPixel and WhitePixel. These do not have to be set to 0 or 1. A server can also choose to allocate those colors privately, but an error is generated. The map entry must not be a read-only color, or an error is generated.
r	Controls the autorepeat. If a preceding dash is given or the off flag is used, autorepeat is disabled. If no parameters are given or the on flag is used, autorepeat is enabled.
s	Lets you set the screen saver parameters. This option accepts up to two numeric parameters, a blank/noblank flag, an expose/noexpose flag, anon/off flag, or the default flag. If no parameters are given or the default flag is used, the system is set to the default screen saver characteristics. The on/off flags turn the screen saver functions on or off. The blank flag sets the preference to blank the video (if the hardware can do so) instead of displaying a background pattern, whereas noblank sets the preference to display a pattern instead of a blank video. The expose flag sets the preference to allow window exposures, whereas the noexpose flag sets the preference to disable screen saver unless the server can regenerate the screens without causing exposure events. The length parameter for the screen saver function determines how long the server must be inactive for screen saving to activate. The period parameter determines how soon you must change the background pattern to avoid burn in. The arguments are specified in seconds. If only one numeric parameter is given,it is used for the length.
q	Gives you information on the current settings.

16.15. Set Root Window Options Utility

The Set Root Window Options (xsetroot)Utility allows you to tailor the appearance of the background root window on a workstation display running X. If no options are specified or if-def is specified, the window is reset to the default state. The -def option can be specified with other options, and only the nonspecified characteristics are reset to the default state.

Only one of the background color or tiling options (-solid, -gray, -grey, -bitmap, and -mod) can be specified at a time.

The format is

```
 xsetroot [-help] [-def] [-display
display][-cursor
```

```
cursor_file mask_file] [-cursor_name
cursor_name] [-bitmap
filename] [-mod
x
y] [-gray] [-grey] [-fg
color][-bg
color] [-rv] [-solid
color] [-name
string]
```

Table 16.14. Set Root Window Options

Option	Description
-help	Prints a usage message and exit.
-def	Resets unspecified attributes to the default values. Restores the background to the familiar gray mesh and the cursor to the hollow x shape.
-cursor *cursor_file mask_file*	Lets you change the pointer cursor to whatever you want when the pointer cursor is outside of any window. Cursor and mask files are bitmaps and can be created with the bitmap program. You may want the mask file to be all black until you become familiar with the way masks work.
-cursor_name *cursor_name*	Lets you change the pointer cursor to one of the standard cursors from the cursor font. See the *X Window System*for more information.
-bitmap *filename*	Indicates to use the bitmap specified in the file to set the window pattern. You can make your own bitmap files using the bitmap program. The entire background is made up of repeated tiles of the bitmap.
-mod *x y*	Indicates to use a plaid-like grid pattern on your screen. X and Y are integers ranging from 1 to 16.
-gray	Makes the entire background gray.
-grey	Makes the entire background grey.
-fg *color*	Indicates to use *color* as the foreground color. Foreground and background colors are meaningful only in combination with -cursor, -bitmap, or -mod.
-bg *color*	Indicates to use *color* as the background color.
-rv	Exchanges the foreground and background colors. Normally the foreground color is black and the background color is white.
-solid *color*	Sets the background of the root window to the specified color. This option is useful only on color servers.
-name *string*	Sets the name of the root window to *string*.
-display *display*	Specifies the server to connect to.

16.16. Window Dump Utility

The Window Dump (xwd) Utility allows you to store window images in a specially formatted dump file. This file can then be read by other X utilities for redisplay, printing, editing, formatting, archiving, and image processing. The target window is selected by clicking MB1 in the desired window. The keyboard bell rings once at the beginning of the dump and twice when the dump is completed.

The format is

```
 xwd [-display host:dpy] [-debug]
[-help][{-root|-id id|-font font|-name
name}]
[-nobdrs] [-out file] [-xy] [-add value] [-frame]
```

Table 16.15. Window Dump Options

Option	Description
-display *display*	Specifies the server to connect to.
-help	Prints out the usage command syntax summary.
-nobdrs	Specifies that the window dump should not include the pixels that compose the window border. This is useful when you want to include the window contents in a document illustration.
-out *file*	Specifies the output file on the command line. The default is to output to SYS$OUTPUT.
-xy	Selects XY format dumping instead of the default Z format. It applies to color displays only.
-add *value*	Specifies a signed value to be added to every pixel.
-frame	Indicates that you should include the window manager frame when manually selecting a window.

16.17. Display Window Information Utility

The Display Window Information (xwininfo) Utility displays information about a window on an X server. The information displayed depends on which options are selected. If no options are chosen, -stats is assumed.

You have the option of selecting the target window with the mouse (by clicking any mouse button in the desired window) or by specifying the window ID on the command line with the -id option. You can also use the -name option to specify by name which window is desired. There is also a special -root option for quickly obtaining information about the root window.

The format is

```
 xwininfo [-options...]
```

Table 16.16. Display Window Options

Option	Description
-help	Prints the command syntax summary.
-display *display*	Specifies the X server to contact to.

Option	Description
-root	Indicates to use the root window.
-id *window_id*	Indicates to use the window with the specified id.
-name *window_name*	Indicates to use the window with the specified name.
-int	Prints the window id in decimal. The default is hexadecimal.
-tree	Displays the root, parent, and children windows' ids and names for the selected window.
-stats	Displays various attributes pertaining to the location and appearance of the selected window. Information displayed includes the location of the window, its width and height, its depth, border width, class, colormap ID if any, map state, backing-store hint, and location of the corners.
-bits	Displays various attributes pertaining to the selected window's raw bits and how the selected window is to be stored. Displayed information includes the selected window's bit gravity, window gravity, backing-store hint, backing-planes value, backing pixel, and whether or not the window has save-under set.
-events	Displays the selected window's event masks. Both the event mask of events wanted by some client and the event mask of events not to propagate are displayed.
-size	Displays the selected window's sizing hints. Displayed information includes, for both the normal-size hints and the zoom-size hints, the user-supplied location, if any; the program-supplied location, if any; the user-supplied size, if any; the program-supplied size, if any; the minimum size, if any; the maximum size, if any; the resize increments, if any; and the minimum and maximum aspect ratios, if any.
-wm	Displays the selected window's window manager hints. Information displayed may include whether or not the application accepts input, what the window's icon window number and name are, where the window's icon should go, and what the window's initial state should be.
-shape	Prints out the shape extents.
-frame	Causes the window manager frames not to be ignored when manually selecting windows.
-english	Causes all individual height, width, and x and y positions to be displayed in inches (and feet, yards, and miles if necessary), as well as in number of

Option	Description
	pixels. The -metric and -english options can both be enabled at the same time.
-metric	Causes all individual height, width, and x and y positions to be displayed in millimeters, as well as in number of pixels, based on what the server thinks the resolution is. Geometry specifications that are in +x+y form are not changed.
-all	Prints -tree, -stats, -bits, -events, -size, -wm, and -shape information.

16.18. Window Undump Utility

The Window Undump (xwud) Utility displays an image saved in a specially formatted dump file produced by xwd.

The format is

```
 xwud [-in file] [-noclick] [-geometry geom]
[-display display] [-new] [-std map_type] [-raw]
[-vis vis_type] [-help] [-rv] [-plane number]
[-fg color] [-bg color]
```

Table 16.17. Window Undump Options

Option	Description
-bg *color*	If a bitmap image (or a single plane of an image) is displayed, this option can be used to specify the color to display for the 0 bits in the image.
-display *display*	Specifies the server to connect to.
-fg *color*	If a bitmap image (or a single plane of an image) is displayed, this option can be used to specify the color to display for the 1 bits in the image.
-geometry *geom*	Specifies the size and position of the window. Typically, you should specify the position and let the size default to the actual size of the image.
-help	Prints out a short description of the allowable options.
-in *file*	Specifies the input file on the command line. If no input file is given, the standard input is assumed.
-new	Forces the creation of a new colormap for displaying the image. Matching the image characteristics to those of the display can get the image on the screen faster, but at the cost of using a new colormap (which on most displays causes other windows to become Technicolor).
-noclick	Unless this option is specified,clicking any mouse button in the window terminates the application. Termination can always be achieved by typing q, Q, or Ctrl+C.

Option	Description
-plane *number*	Selects a single bit plane of the image to display. Planes are numbered, zero being the least significant bit.
-raw	Forces the image to be displayed with whatever color values currently exist on the screen. This option is most useful when undumping an image back onto the same screen that the image originally came from while the original windows are still on the screen. It results in getting the image on the screen faster.
-rv	If a bitmap image (or a single plane of an image) is displayed,this option forces the foreground and background colors to be swapped. Swapping may be needed when you are displaying a bitmap image that has the color sense of pixel values 0 and 1 reversed from what they are on your display.
-std *map_type*	Displays the image using the specified standard colormap. The property name is obtained by converting the type to upper case, prepending RGB_, and appending _MAP. Typical types are best, default, and gray.
-vis *vis_type* or *vis_id*	Specifies a particular visual or visual class. The default is to pick the best one. A particular class can be specified: StaticGray, GrayScale, StaticColor, PseudoColor, DirectColor, or TrueColor. Match can be specified to use the same class as the source image. Alternatively, an exact visual ID (specific to the server) can be specified, either as a hexadecimal number (prefixed with 0x) or as a decimal number. The default can be specified to use the same class as the colormap of the root window. Case is not significant in any of these strings.

Chapter 17. Changing DECwindows X Window System Resources

Most DECwindows applications provide dialog boxes that contain options for customizing your DECwindows environment and saving your settings. For example, using Session Manager's Options menu, you can look at many predefined settings and then choose and save new settings.

However, not all applications provide dialog boxes for changing and saving settings. For example, some applications let you change and save the size or location of the application's main window, and others do not. To change and save settings that are not available from dialog boxes, you can specify resources in an application-specific resource file or in a DECW$XDEFAULTS.DAT file (also known as .Xdefaults on many UNIX implementations of the X11 system) file.

Note

Use extreme caution when modifying resources:

- Options dialog boxes cannot be used to change settings that are specified in the DECW $XDEFAULTS.DAT file.
- In future DECwindows releases, application dialog boxes might contain the options you have added to your .Xdefaults file. You will have to modify your DECW$XDEFAULTS.DAT file to reflect these changes.
- Error handling for resources is not available in this version of DECwindows. Syntax errors in resource files might cause DECwindows to fail without providing error messages.

To use resources to change application settings,create a file (DECW$XDEFAULTS.DAT)in the directory specified by the logical name DECW$USER_DEFAULTS. In this file, specify the resources for the application settings you want to change. Any changes you make to the DECW$XDEFAULTS.DAT file do not take effect until you restart your DECwindows session,and they affect all applications on the X11 Display Server. Adding many resources to your DECW$XDEFAULTS.DAT file can slow down application startup time.

Most applications have a system application resource file in the directory pointed to by the logical name DECW$SYSTEM_DEFAULTS. You can also create a user application-specific resource file in the directory pointed to by the logical name DECW$USER_DEFAULTS. Any changes you make to an application-specific resource file affect only the specific application and take effect when you restart an application. Adding resources to an application-specific resource file does not slow down application startup time. If possible,you should specify resources in an application-specific resource file.

Each resource specification in any resource file follows explicit syntax rules. Be as specific as possible when you specify resources.

This chapter contains resource information for the following DECwindows applications: Bookreader, Calculator,Calendar, Cardfiler, CDA Viewer,Clock, DECterm,FileView and Session Manager, LinkWorks Manager,Mail, and the Motif Window Manager. The following table shows the application-specific resource file name for the following applications.

Application	Application-specific resource file name
Bookreader	DECW$BOOKREADER.DAT

Application	Application-specific resource file name
Calculator	DECW$CALC.DAT
Calendar	DECW$CALENDAR.DAT
Cardfiler	DECW$CARDFILER.DAT
Clock	DECW$CLOCK.DAT
Mail	DECW$MAIL.DAT
Motif Window Manager	DECW$MWM.DAT

For more information about using resources to change DECwindows settings, see the *OSF/Motif Programmer's Guide*.For more information about the X11 Resource Manager and the syntax for specifying resources, see the *X Window System (The Complete Reference to Xlib, X Protocol, ICCCM, XLFD)*.

Bookreader

Bookreader

Class Names

`BookreaderNavigation` [Specifies resources for the Navigation window (that is, the window that displays the table of contents and the index).]**`BookreaderLibrary`** [Specifies resources for the library window (that is, the window that displays libraries, bookshelves, and book titles).]**`BookreaderTopic`** [Specifies resources for the Topic window (that is, the window that displays topic information).]

Description

(Additional Information) For this version of DECwindows,Bookreader does not use options dialog boxes to save resources. You can specify them in your resource files.

Examples

```
!*****************************************************************
! Note! in all cases, .mm_width and .mm_height are specified in
! millimeters.
! also, .x_offset and .y_offset specifies the relative placement of
! subsequent instances of the same type of window.
!*****************************************************************
!
!-------------------------------------------------------------
! Library window resources
!-------------------------------------------------------------
!BookreaderLibrary.x: 3BookreaderLibrary.y: 25BookreaderLibrary.mm_width:
 98BookreaderLibrary.mm_height: 100
!
! start iconified.
!BookreaderLibrary.initialState: 3
!
! specifies which if any shelves should be opened at application startup
! valid values are: none, first, all
!BookreaderLibrary.shelf_to_open_on_startup: first
!
```

```
!-------------------------------------------------------------
! Navigation window resources
!-------------------------------------------------------------
!
BookreaderNavigation.x: 3
BookreaderNavigation.y: 80
BookreaderNavigation.mm_width: 101
BookreaderNavigation.mm_height: 145
BookreaderNavigation.x_offset: 0
BookreaderNavigation.y_offset: 35
!
!-------------------------------------------------------------
! Topic window resources
!-------------------------------------------------------------
!
BookreaderTopic.x: 408
BookreaderTopic.y: 75
BookreaderTopic.mm_width: 159
BookreaderTopic.mm_height: 178
BookreaderTopic.x_offset: 35
BookreaderTopic.y_offset: 35
!
! max_default_topic dimensions specify the largest size that Bookreader
! will use for a topic window, by default
!
BookreaderTopic.max_default_topic_width: 765
BookreaderTopic.max_default_topic_height: 645
!
! .show_hot_spots specifies whether Bookreader has hot-spot highlighting
! turned on by default. this resources corresponds to the 'show hot spots'
! option in the view menu of the topic window.
!
! similarly, .show_extensions specifies extension highlighting
!
! valid values are: true, false
!
BookreaderTopic.show_hot_spots: false
BookreaderTopic.show_extensions: true
```

Calculator

Calculator

Class Name

`Calc` []

Description

(Additional Information)Calculator automatically saves *x, y, width, height,* and *initial window state*.Do not specify these resources in your resource file.

Examples

See the examples in DECW$SYSTEM_DEFAULTS:DECW$CALC.DAT.

Calendar

Calendar

Class Name

`DECW$CALENDAR` []

Description

(Additional Information)Calendar stores *height, width, x* and *y,* and *initial window state* in the Calendar data file. These are saved when you save other customizations. Calendar ignores these resources if they are specified in resource files.

A number of calendar-specific color resources are mentioned in DECW$SYSTEM_DEFAULTS:DECW $CALENDAR.DAT.

Examples

See the examples in DECW$SYSTEM_DEFAULTS:DECW$CALENDAR.DAT.

Cardfiler

Cardfiler

Class Names

`Cardfiler` [The index window of the cardfiler.]**`CardfilerCard`** [The card window of cardfiler.]

Description

(Additional Information)Cardfiler automatically saves *x, y, width, height,* and *initial window state*.Do not specify these resources in your resource file.

Example

See the examples in DECW$SYSTEM_DEFAULTS:DECW$CARDFILER.DAT.

CDA Viewer

CDA Viewer

Class Name

`Viewer` []

Description

(Additional Information)For this version of DECwindows,CDA Viewer does not use options dialog boxes to save resources. You can specify them in your resource files.

Clock

Clock

Class Name

`Clock` []

Description

(Additional Information)Clock automatically saves *x, y, width, height,* and *initial window state*.Do not specify these resources in your resource file.

Examples

See the examples in DECW$SYSTEM_DEFAULTS:DECW$CLOCK.DAT.

DECterm

DECterm

Class Name

`DECW$TERMINAL.Main.DECTERM`

Resource Names

[bigFontSetName]

Specifies the font used for the "big" font set. The default is -*-Terminal-*-*-*–18-*-*-*-*-*-*-*.

[columns]

Specifies the width of the logical display in columns. The default is 80.

[condensedFont]

Specifies that the condensed font should be used. The default is to display the normal font (Off).

[fontSetSelection]

Specifies which font is used. Specify 1 for little and 0 for big. The default is 1.

[littleFontSetName]

Specifies the font used for the "little" font set. The default is -*-Terminal-*-*-*–14-*-*-*-*-*-*-*.

[rows]

Specifies the height of the logical display in rows. The default is 24.

[syncFrequency]

Specifies the number of lines scrolled before DECterm synchronizes with the display server. This number limits the rate of scrolling. The higher the number, the faster DECterm scrolls. The default is 10.

Examples

See the examples in DECW$SYSTEM_DEFAULTS:DECW$TERMINAL.DAT.

FileView and Session Manager

FileView and Session Manager

Class Name

`VUE$MASTER` []

Description

(Additional Information)

FileView and Session Manager save options settings and window positions in a private profile file. You can use options dialog boxes to change menu names and menu contents.

FileView and Session Manager do not ship an application Xdefaults file.

LinkWorks Manager

LinkWorks Manager

Class Name

`DECW$LWK_MANAGER` []

Description

(Additional Information) LinkWorks Manager has a primary main window (the Environment window)and secondary windows (LinkBase windows). LinkWorks Manager automatically saves *x, y, width, height,* and *initial window state*for the Environment window. Do not specify these resources in your resource file.

Mail

Mail

Class Names

`Mail` [Anything to do with the main window]**`MailSend`** [Anything to do with the send window]**`MailRead`** [Anything to do with the read window]

Description

(Additional Information)Mail saves *x, y, width, height, foreground, background,* and *initial window state* automatically or through options dialog boxes. Do not specify these resources in your resource file.

Examples

```
! These are the font specifictions for the SVN interface in Mail
! Level 0 will be the drawer name fonts; level 1 the folders; and
! level 2 the messages.
!
Mail*svnArea*DXmfontListDefault:       -*-Menu-Medium-R-Normal--*-120-*-*-
P-*-IS
O8859-1
Mail*svnArea*DXmfontListLevel0:        -*-Menu-Medium-R-Normal--*-120-*-*-
P-*-IS
O8859-1
Mail*svnArea*DXmfontListLevel1:        -*-Menu-Medium-R-Normal--*-120-*-*-
P-*-IS
O8859-1
Mail*svnArea*DXmfontListLevel2:        -Adobe-Courier-Medium-R-Normal--
*-120-*-*
-M-*-ISO8859-1

! Pane main window fonts
! This is the messages font
!
Mail*messageArea*DXmfontListLevel0:     -Adobe-Courier-Medium-R-Normal--
*-120-*-
*-M-*-ISO8859-1
!
! This is the folder/drawer name font
!
Mail*Item.fontList:                     -*-Menu-Medium-R-Normal--*-120-*-*-
P-*-I
SO8859-1
!
! Read window fonts
!
MailRead*readWindow*envelopeText.fontList:              -Adobe-Courier-
Medium-R-
Normal--*-120-*-*-M-*-ISO8859-1
MailRead*readWindow*messageText.fontList:               -Adobe-Courier-
Medium-R-
Normal--*-120-*-*-M-*-ISO8859-1
!
! Send window fonts
!
! This is the font for any text area you can enter (subject, to etc)
!
MailSend*sendWindow*workArea*XmText.fontList:   -Adobe-Courier-Medium-R-
Normal--
*-120-*-*-M-*-ISO8859-1
!
! This is the font for any remaining areas in the send window like labels.
!
```

```
MailSend*sendWindow*workArea.fontList:          -Adobe-Courier-Medium-R-
Normal--
*-120-*-*-M-*-ISO8859-1
P
```

Motif Window Manager

Motif Window Manager

Description

Only the most common resources are customizable through the Window Manager's Options menus. However, you can perform advanced customization of many Window Manager features by directly editing resources in the Motif Window Manager (MWM)resources files or application resource files.

For example, to change the font for the title from medium menu to a larger font:

1. Place the resource

   ```
   Mwm*fontList: -*-Helvetica-Bold-R-Normal-*-180-*-*-P-*-ISO8859-1
   ```

   in your MWM resource file.

2. Save the file.

   All the titles, icon names, and MWM menus and dialog boxes will have a larger font.

3. From the Workspace menu, choose Restart.

Most of the resources are located in the system MWM resource file and have comments to help you review them.

The system default resources are located in DECW$SYSTEM_DEFAULTS for OpenVMS and in /usr/lib/X11/app-defaults for other systems. For OpenVMS, the MWM resource file is called DECW$MWM.DAT. On other systems, this file is ~/Mwm. For color-specific resources on monochrome or gray-scale systems,this file is DECW$MWM_BW.DAT or DECW$MWM_GRAY.DAT on OpenVMS and is ~/Mwm_bw and ~/Mwm_gray on other systems.

Do not modify this file directly unless you want to change the default resources for everyone on the system. Instead, you should copy the file to your local directory and modify it. For OpenVMS, the user location for this file is DECW$USER_DEFAULTS,which is usually your login directory. For other systems, the files are placed in your home directory. Note that the location of these files can vary depending on language settings and other logical names or environment variables.

Customizing MWM Resources for an Application

You can change many MWM resources for a specific application using Mwm*className*resource, where className is the class specified by an application. For example, to set the border color of all DECterm windows:

1. For OpenVMS systems, add to your MWM resource file

   ```
   Mwm*DECW$TERMINAL*background: Slate Blue
   ```

   For other systems, add

   ```
   Mwm*DXterm*background: Slate Blue
   ```

2. Restart MWM.

   All DECterm borders will be slate blue when they are inactive and will be easier to distinguish from other windows.

You can change the icon image for one specific application using

```
Mwm*className*iconImage
```

For example, to set the icon image for DECterm,

1. Create an image, decterm.xbm, using DECpaint.

2. Place the file in the DECW$USER_DEFAULTS for OpenVMS or/usr/include/X11/bitmaps for other systems.

   You can modify the default location using the Mwm*bitmapDirectoryresource.

3. For OpenVMS systems, add to your MWM resource file

   ```
   Mwm*DECW$TERMINAL*iconImage: DECTERM.XBM
   ```

   For other systems, add

   ```
   Mwm*DXterm*iconImage: decterm.xbm
   ```

4. Restart MWM.

   The icon for all DECterm windows will contain the icon image that you created.

You can also modify MWM-related resources by editing the application resource file. Many of these resources are called **shell resources**. For example, to remove the title bar of the clock using the clientDecorations resource:

1. Add the following to the clock resource file:

   ```
   *clientDecorations: 1
   ```

2. Start the clock.

   Note that in this case, you could achieve the same result by adding

   ```
   Mwm*Clock*clientDecorations: border
   ```

   to the MWM resource file. See Motif toolkit include file, MwmUtil.h, for the resource values.

Here are more resources of interest. To control the border decorations or MWM functions, modify the clientDecorations resource or the clientFunctions resource. To specify the location of an icon when an icon box is not used, modify the iconX and iconY resources. Note that this works only when iconAutoPlace is off.

To start the clock as an icon, add

```
*initialState: 3
```

to the clock resource file.

Customizing MWM Menus

You can modify any of the MWM menus (such as the window menu) and change the menu names or accelerators or add other items.

Here is the default window menu:

```
! Default Window Menu
! Menu associated with window border
Menu DefaultWindowMenu
{
    "Restore"   _R  Alt F5   f.normalize
    "Move"      _M  Alt F7   f.move
    "Size"      _S  Alt F8   f.resize
    "Minimize"  _n  Alt F9   f.minimize
    "Maximize"  _x  Alt F10  f.maximize
    "Lower"     _L  Alt F3   f.lower
    no-label                 f.separator
    "Workspace" _W           f.menu WorkspaceMenu
    "Close"     _C  Alt F4   f.kill
    "Help"      _H           f.menu MwmHelpMenu
}
```

For example, you can add a menu item to start a DECterm window from the window menu by placing this in your window menu:

```
"Start DECterm" _D Alt F17
  f.exec "run/detached sys$system:decw$terminal"
```

The menu has the form

```
Menu MenuName
{
    "Menu Item"    [_mnemonic]   [accelerator]   f.function [argument]
    ...
}
```

In addition to text, the menu item can be a bitmap file. Specify@bitmapfile as the entry. The mnemonic should be contained in the menu item. The accelerator should be of the form Modifier `Keyname`. The mnemonic and accelerator are optional. For your convenience, the MWM functions are listed at the top of the resource configuration file.

```
f.beep,
f.circle_down [icon|transient|window], f.circle_up [icon|transient|window],
f.exec "Command",
f.dec_customize DialogBox, f.dec_help Topic,
f.focus_color, f.focus_key, f.kill, f.lower,
f.maximize, f.menu MenuName, f.minimize, f.move,
f.next_cmap, f.next_key [icon|transient|window], f.pass_key,
```

```
f.prev_cmap, f.prev_key [icon|transient|window],
f.nop, f.normalize, f.normalize_and_raise,
f.pack_icons, f.post_smenu, f.quit_mwm,
f.raise, f.refresh_win
f.refresh, f.resize,
f.restart, f.restore,
f.send_msg id, f.separator, f.set_behavior, f.title Title,
```

MWM Keyboard and Mouse Accelerators

You can modify the keys and mouse buttons assigned to MWM functions. Here is an example from the list of default button accelerators to display the Workspace menu from the screen (or root) by pressing MB1 on the screen, to minimize a window from the title by double clicking MB1 on the title, and to minimize an icon from the icon box by shift double clicking MB1 on an icon.

```
Buttons DefaultButtonBindings
{
    <Btn1Down>            root                f.menu RootMenu
    <Btn1Click2>          title               f.minimize
    Shift <Btn1Click2>    icon                f.minimize
}
```

Here is an example from the default key accelerators that includes displaying the Window menu from a window or icon,pressing Shift and Escape, and moving focus to the next and previous window by pressing Alt and Tab or Alt and Shift Tab.

```
Keys DefaultKeyBindings
{
    Shift<Key>Escape      window|icon         f.post_wmenu
    Alt<Key>Tab           root|icon|window    f.next_key
    Alt Shift<Key>Tab     root|icon|window    f.prev_key
}
```

The mouse button bindings are of the form

```
Buttons BindingName
{
    Modifier<Button>      Context             Function [Argument]
}
```

The keyboard bindings are of the form

```
Keys BindingName
{
    Modifier<Key>KeyName  Context             Function [Argument]
}
```

The Context can be root (the screen), icon, title, window, or frame. For example, to start DECterm from MWM using Alt+F18 or Alt+MB3 on OpenVMS systems, add

```
Alt<Key><Btn3Click> root|window|frame|icon
 f.exec "run/detached sys$system:decw$terminal"
```

To start DECterm from MWM using Alt+F18 or Alt+MB3 on other systems, add

```
Alt<Key><Btn3Click> root|window|frame|icon
```

```
 f.exec "/usr/bin/dxterm &"
```

For the default button bindings on OpenVMS, add

```
Alt<Key>F18 root|window|frame|icon
 f.exec "run/detached sys$system:decw$terminal"
```

For the default button bindings on other systems, add

```
Alt<Key>F18 root|window|frame|icon
 f.exec "/usr/bin/dxterm &"
```

You can modify the window menu for a particular application by adding the menu description to the configuration file and then adding a resource of the form

```
Mwm*clientclass*windowMenu: windowName
```

Modifying the MWM Resource Configuration File

MWM retrieves the contents of the window and workspace menus and the bindings from the configuration file. The default resource configuration file is DECW$SYSTEM_DEFAULTS:DECW $MWM_RC.DAT on OpenVMS and is /usr/lib/X11/app-defaults/system.mwmrc on other systems.

To modify MWM menus or accelerators:

1. Copy the file to DECW$USER_DEFAULTS:DECW$MWM_RC.DAT for OpenVMS or to ~/.mwmrc for other systems.
2. Change a menu or binding.
3. From the Workspace menu, choose Restart.

Note that unlike the MWM resource file, the contents are not merged with the system resources but are replaced. Thus the entire resource configuration file must be copied.

Also, in the MWM resource file, you can override the default location of the configuration file using the configFile resource. For example, for OpenVMS systems, add

```
*configFile: MYDEFAULTS:MWM_CONFIG_FILE.TXT
```

For other systems, add

```
*configFile: ~/mydefaults/MwmConfigFile
```

Part IV. Appendixes

Appendix A. Understanding DECwindows Architecture

You don't need to understand its architecture or inner workings, to use DECwindows successfully. But if you're the kind of person who often takes things apart to see how they work, then this appendix is for you. It defines the DECwindows Motif OpenVMS environment and describes the layers of software and standards that make DECwindows one of the most open systems available today.

A.1. DECwindows OpenVMS Environment

DECwindows Motif for OpenVMS is based on MIT's specification for the X Window System, Version 11, Release 4 and OSF/Motif V1.1.3.OSF/Motif is widely acknowledged as the industry standard.

DECwindows Motif for OpenVMS provides support for both OSF/Motif,an open standard that is the default user interface, and the X User Interface in a single run-time and development environment. Because both the Motif and XUI interfaces are based on MIT's X Window System, applications written to either toolkit continue to run regardless of which environment a user selects.

MIT, Digital, and other groups have used earlier versions of the X Window System since 1984. The first available release of Version 11 (V11R1)was available on September 15, 1987.For more information about the history of the X Window System, see *X Window System (The Complete Reference to Xlib, X Protocol, ICCCM, XLFD)*. The groups that developed the X Window System created a windowing system that met their needs by designing an architecture that allows the execution and display of applications to be independent. Specific components of the architecture control the display of applications. Different components determine how applications run.

DECwindows incorporates and extends the X Window System to provide a windowing environment with the following features:

- Graphics-oriented interaction with the OpenVMS operating system.
- Consistent user interfaces.

  DECwindows user interfaces consist of graphic objects that look and function the same, regardless of the application you are using.
- A library of desktop applications.
- Availability of a wide range of third-party applications.

  Because DECwindows incorporates the industry standard X Window System, an extensive selection of third-party applications is available for OpenVMS DECwindows systems.
- Powerful libraries of routines that simplify the development of graphics-oriented applications.

  These routines perform functions such as drawing and window management. Applications using these routines run on all supported hardware without modifications. For example, an application designed for the VAXstation 3200 looks and functions the same on a DEC 3000 AXP series workstation.
- Libraries for creating and accessing documents containing text, graphics,and scanned images.

- Network transparent application interface.

  The DECwindows architecture lets you run an application on a remote node while displaying and inputting data on a local workstation. The network functions that make this possible are transparent; the application appears to run locally.

  Network transparency allows workstations to access the power and resources of other systems on the network.

- Compatibility with ULTRIX.

  Because OpenVMS and ULTRIX DECwindows use the same set of programming libraries,you can easily write applications that are portable between OpenVMS and ULTRIX or other systems.

- Extensible architecture.

  The DECwindows architecture has been designed to accommodate new technology,such as three-dimensional graphics, as it becomes available.

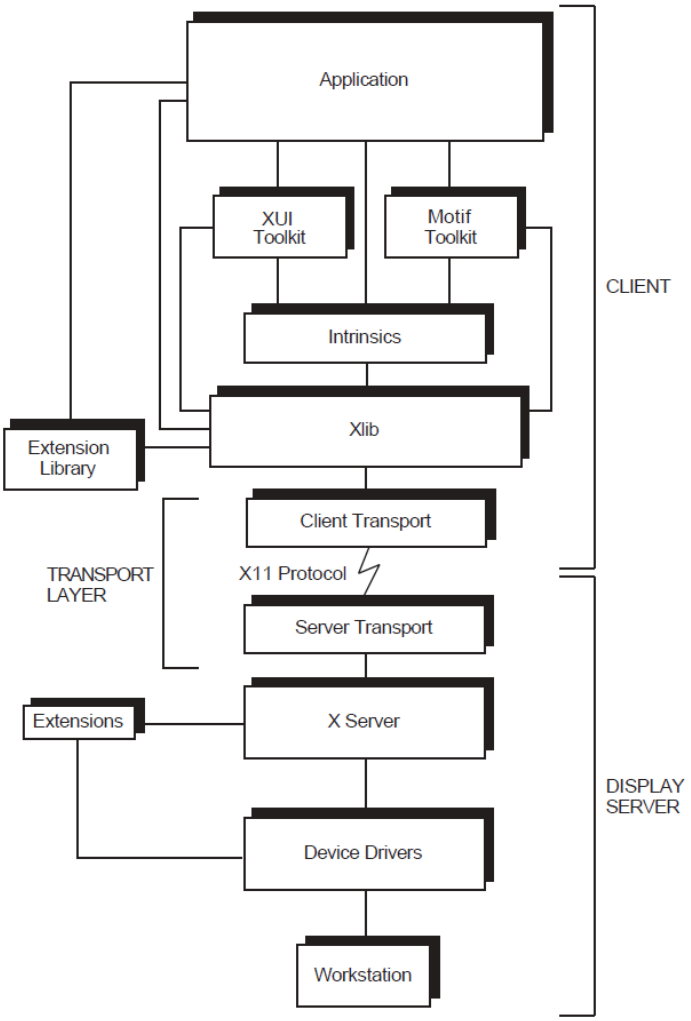
A.2. DECwindows Architecture

The DECwindows architecture is an extension of the X Window System architecture. Components of the architecture include the following:

- Applications
- OSF/Motif Toolkit
- X User Interface (XUI) Toolkit
- X Window System Intrinsics (XT)
- Xlib Programming Library
- Network transport
- X11 Display Server
- Device drivers

In addition to these basic components, DECwindows includes the Compound Document Architecture (CDA) Toolkit. The CDA Toolkit allows applications to create and access documents containing text, graphics, and scanned images. Figure A.1 illustrates the relationships among the components of the DECwindows architecture. The sections that follow explain the components.

Figure A.1. DECwindows Architecture



A.2.1. Applications

To perform windowing and graphics functions or to get input from the mouse and keyboard, applications call routines from the Motif Toolkit,the XUI Toolkit, the Intrinsics, or the XLIB programming libraries. Applications can call library routines from any language using the OpenVMS calling conventions or from the C language using the MIT C calling conventions.

A.2.2. Motif Toolkit

The OSF/Motif Toolkit provides support for developing applications using the Motif user interface style. It uses the MIT Xtoolkit and contains three components:

- OSF/Motif widgets and gadgets for implementing common user interface objects such as scroll bars, menus, and push buttons.
- Utility routines that provide applications with functions for performing common tasks such as cuttting and pasting text.
- Resource manager routines for loading user interface definition files and creating widgets and gadgets based on the contents of the definition files.

A.2.3. XUI Toolkit

The XUI Toolkit consists of high-level library routines that allow applications to create and manage a user interface. Using XUI Toolkit routines,applications can create, modify, and control interface objects such as menus,scroll bars, and buttons. The XUI Toolkit includes Digital's implementation of the X Window System's X Toolkit. XUI Toolkit routines call Xlib routines to perform fundamental input and output functions.

DECwindows Motif continues to provide the XUI Toolkit. The XUI Toolkit is based on the MIT R4 Xtoolkit intrinsics. This toolkit implements the XUI user interface style used by previous versions of OpenVMS DECwindows. New applications should be written to OSF/Motif, however, because Motif is the open standard user interface adopted by a wide variety of vendors.

A.2.4. X Window System Intrinsics

DECwindows provides a library that contains both the MIT Release 3 (R3) and the MIT Release 4 (R4) X Window System Intrinsics (Xtoolkit). The Xtoolkit provides low-level routines allowing the creation of user interface objects called widgets. The R3 intrinsics are included in the library to provide binary compatibility for images created by using previous versions of DECwindows.

A.2.5. Xlib Programming Library

The Xlib programming library is Digital's implementation of the X Window System's graphics programming library. Xlib provides low-level routines for creating windows, managing windows, and performing graphic functions.

Xlib routines handle application requests by generating and sending X11protocol requests through the network to another component of the architecture called the **display server**; the display server runs locally on the displaying workstation. The X11 protocol defines the common language through which an application and workstation communicate.

Xlib processes requests from applications in an asynchronous manner. Xlib processes some application requests (for example, queries about the characteristics of text) within the library; it sends other requests(for example, requests to display graphics) to the display server.

When a user enters data by means of the keyboard or mouse, Xlib passes data back to the application.

A.2.6. Transport Layers

The network transport mechanism uses the network to handle communication, in the form of X11protocol packets, between Xlib and the display server.

The implementation of DECnet and the X11 protocol allows the application and the user interface to be physically separated across the network. In other words, you can run an application on a remote node while displaying the window locally on a workstation. The window accepts input and displays output for the application. The application appears to run on the workstation.

DECwindows also provides an optimized, shared-memory transport mechanism. When an application runs on the same sworkstation that displays the interface, the optimized transport reduces the time required to transfer a protocol packet to or from the display server.

A.2.7. X11 Display Server

The X11 Display Server is the component of the architecture that allows application interfaces to interact with all supported systems in the same way. Residing on the displaying system, the display server receives

protocol requests from the transport layers and performs the functions required to fulfill the request for a specific device. In essence, the display server converts the data that represent the request into a command that can be executed by the appropriate device drivers.

When the user of an application enters data, the display server receives input from the device drivers and passes protocol packets back through the transport layers to Xlib and XUI Toolkit routines.

The display server supports asynchronous input from the user to the application and asynchronous output from the application to a display.

A.2.7.1. Display Server Components

The server consists of two distinct components. The first component, the kernel, performs a variety of functions related to the management of requests. These functions include the following:

- Initializing the display server
- Scheduling requests
- Interpreting and dispatching protocol requests

The kernel also performs device-independent graphic and windowing functions.

The second component of the display server performs all device-dependent functions related to the request. These functions include device-dependent drawing and windowing functions, graphics attribute management, and the execution of drawing requests.

A.2.8. Device Drivers

Device drivers process requests from the display server to the display and pass data from the input devices to the server. The device driver architecture consists of the following components:

- Port input drivers
- Class input drivers
- Common driver
- Output driver
- The **port input drivers** service hardware interrupts from input devices. With the exception of the keyboard and mouse, each device has its own port input driver; the keyboard and mouse share a port driver. The port input drivers pass byte-stream input to the class input drivers.
- The **class input drivers** decode the byte streams provided by the port input drivers and translate the data to a format the display server can interpret.
- The **common driver** is the interface between the display server and drivers. It passes input to the display server from the class input drivers, and it passes output requests from the display server to the output driver.
- After receiving directions from the common driver, the **output driver** sends device-specific output to the workstation.

A.2.9. Extending the Architecture

One of the most important features of the DECwindows architecture is its extensibility. The programming libraries,X11 protocol, and display server can be extended to support new hardware or to implement new features.

For example, extending DECwindows to support three-dimensional applications requires

- Developing a new library of routines to create and manage three-dimensional images
- Adding protocol requests that correspond to the new routines
- Extending the display server so that it can interpret and execute the requests

The DECwindows architecture is also designed to support optional libraries that layer on top of Xlib and the toolkits, such as the GKS programming library. These libraries do not require extensions to the protocol or display server.

A.2.10. Architecture Summary

The following example provides an overview of the DECwindows architecture:

A customer runs a DECwindows application on a DEC 3000 AXP series workstation. Using the mouse, the customer selects a menu option to create a window. Input from the mouse passes from the device drivers to the display server and then to Xlib, the toolkits, and the application. The application then calls toolkit routines to perform high-level windowing functions. Toolkit routines call low-level Xlib and Xtoolkit routines to perform specific windowing and graphic functions. Xlib converts the calls to protocol requests that DECnet sends to the display server. The server performs the translations required to create the window on the DEC 3000 AXP series workstation. Finally, the device drivers send the translated request to the workstation display, creating the window.

Appendix B. Differences Between the XUI and Motif Interfaces

If you have been using DECwindows since 1988, you might be looking at your screen and wondering what happened to some familiar screen objects. This appendix illustrates and summarizes the major differences between the XUI and Motif interfaces.

B.1. Comparing Window Components

Figure B.1 shows an example of a DECterm window with XUI and Motif window components. Table B.1 summarizes the differences between XUI and Motif windows.

Figure B.1. XUI and Motif Windows

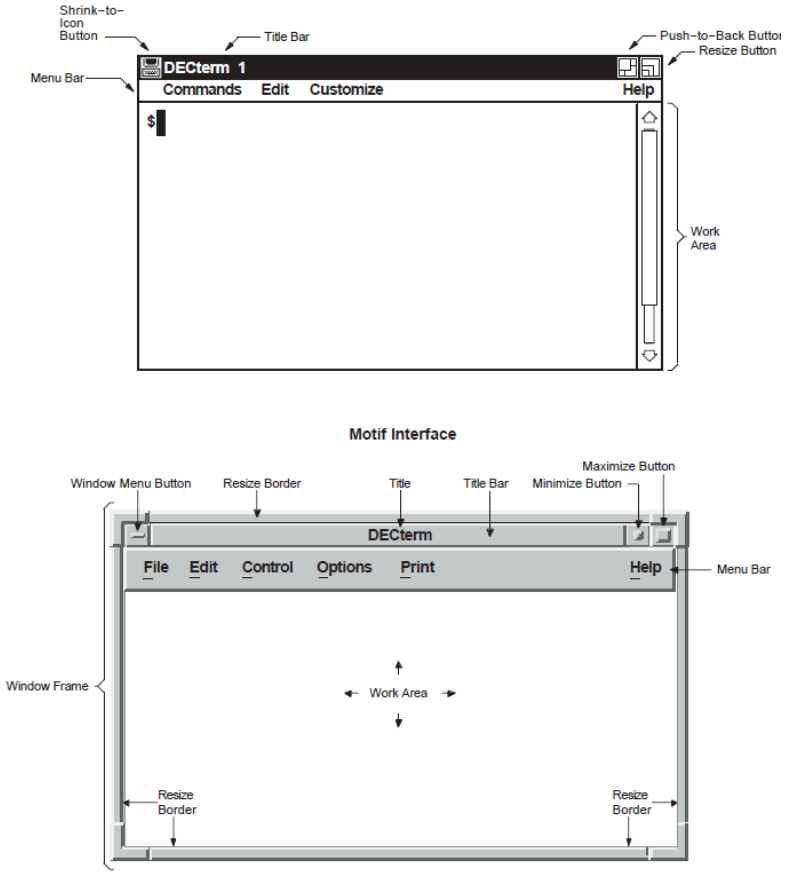


Table B.1. XUI and Motif Windows Equivalents

XUI	Motif
Shrink-to-icon button	Minimize button
Push-to-back button	Window menu button (From Window menu, choose Lower)
Title bar	Title bar
Resize button	Window menu button or resize borders
Menu bar	Menu bar

XUI	Motif
Work area	Work area

B.2. Comparing Interface Objects

Figure B.2shows an example of a DECburger window with XUI and Motif interface objects. Table B.2 summarizes the differences between XUI and Motif objects.

Figure B.2. XUI and Motif Objects

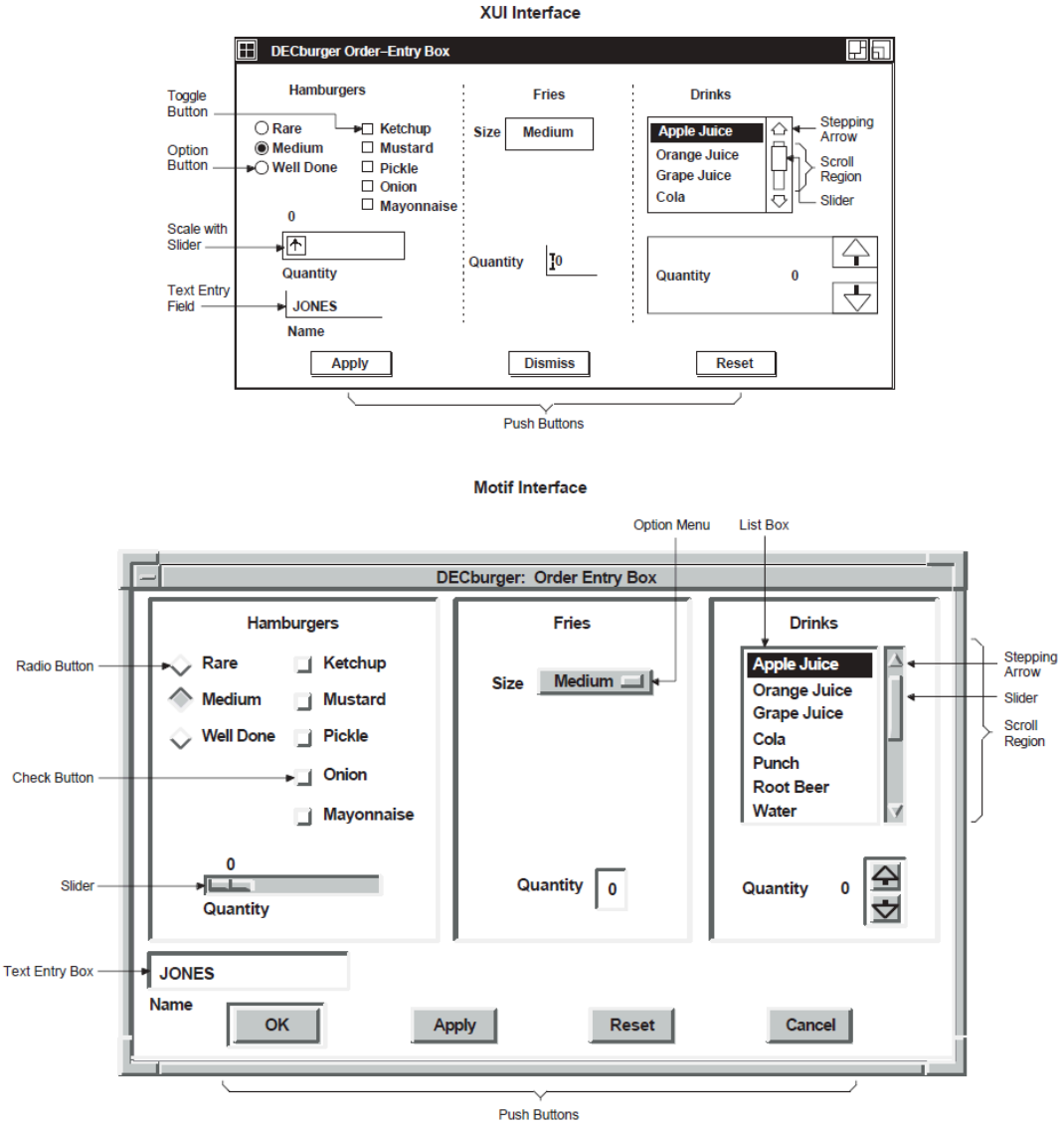


Table B.2. XUI and Motif Object Equivalents

XUI	Motif
Toggle button	Check button
Option button	Radio button
Scale with slider	Slider
Text entry field	Text entry box

XUI	Motif
Push buttons	Push buttons
List box	List box

Appendix C. Using DECwindows with a Keyboard

This appendix contains tables and procedures that describe how to use a keyboard to work with menus, windows, and dialog boxes.

Note

If there is no Alt key on your keyboard, use the Compose key instead.

C.1. Traversing Menu Bars and Pull-Down Menus

Table C.1 describes how to traverse the menu bar and pull-down menus.

Table C.1. Traversing the Menu Bar and Pull-Down Menus

To	Press	Example or Explanation
Move to first menu in menu bar	F10	
Pull down a menu from the menu bar	Alt+ *mnemonic*	Pulls down the menu from the menu bar that is associated with that mnemonic.
Move to next menu item in a pull-down menu	↑ or ↓	Moves the location cursor up or down; it cycles (wraps) at the top and bottom.
Move to another pull-down menu in the menu bar	← or →	Moves the location cursor left or right;it cycles (wraps) at each end
Activate menu item	Return, Ctrl+Return, or Enter	Activates the highlighted menu item.
Remove menu from screen and move cursor to button used to pull down the menu	F11 (ESC)	When a menu is pulled down.
Move location cursor from menu bar to where it was before you started using the menu bar	F11 (ESC)	Works only with an explicit focus policy. With an implicit focus policy, the location cursor moves from the menu bar to wherever the pointer is located.
Dismiss all menus	F10	If you are using an explicit focus policy, the cursor goes to where it was before you started using the menus. With an implicit focus policy, the focus moves to wherever the pointer is situated.

Table C.2 describes how to traverse pop-up menus.

Table C.2. Traversing Pop-Up Menus

To	Press	Example or Explanation
Display the pop-up menu	F4	When the location cursor is on a control that has a pop-up menu associated with it.
Move to next menu item in a pop-up menu	↑ or ↓	A menu item should be highlighted as you move up or down the menu.
Display a submenu from a pop-up menu item	→	Moves you to a submenu if there is one (in left-to-right environments).
Activate menu item	Return, Ctrl+Return, or Enter	Activates the highlighted menu item.
Remove menu from screen	F11 (ESC)	With explicit focus, makes a pop-up menu disappear and moves the location cursor to the control from which the menu popped up. With implicit (pointer) focus, the focus returns to wherever the pointer is situated on the screen.
Dismiss the menu	F4	When you are using an explicit focus policy, the cursor goes back to where it was before the menu popped up. In implicit focus, the focus returns to wherever the pointer is located.

Table C.3 describes how to traverse submenus.

Table C.3. Traversing Submenus

To	Press	Example or Explanation
Display a submenu	• Arrow key in the direction the menu goes • Ctrl+Arrow key • Return • Ctrl+Return • Enter	Pressing any of the keys listed makes the menu appear.
Activate a menu item in a submenu	Return, Ctrl+Return, or Enter	
Move to another menu item in a submenu	↑ or ↓	These keys move up and down within the submenu; they cycle at the top or bottom.
Move to the pull-down menu item from which the submenu came	←	Makes the submenu menu disappear and highlights the

To	Press	Example or Explanation
		menu item from which the submenu menu came.
Select the default entry in a submenu menu	Alt+ *mnemonic* of the submenu item	The mnemonic you press is the one associated with the parent menu.

Table C.4 describes how to move to a previous menu.

Table C.4. Moving to a Previous Menu

To	Press	Example or Explanation
Move the location cursor from any submenu item to the parent menu	• ← • Ctrl+ ← • Ctrl+ ↑	See Figure C.1.
Move the location cursor from a menu item to the default menu item in the menu just to the left of the current cursor location	• ← • Ctrl+ ← • Ctrl+ ↑	See Figure C.1.

Figure C.1. Moving to a Previous Menu

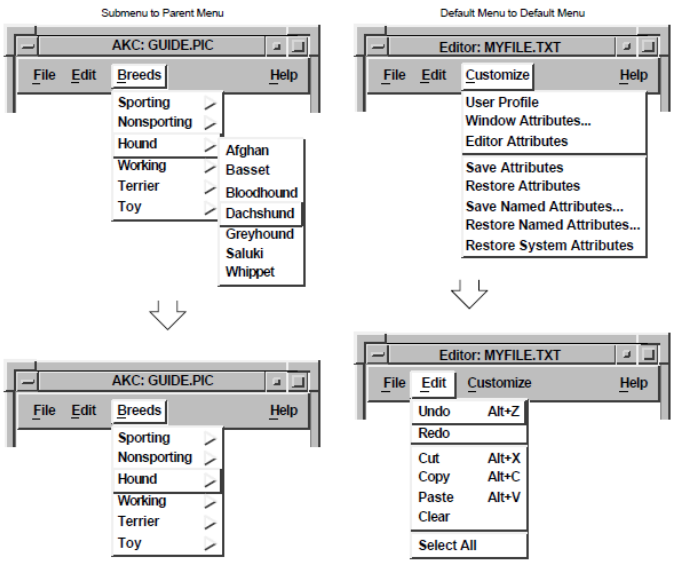
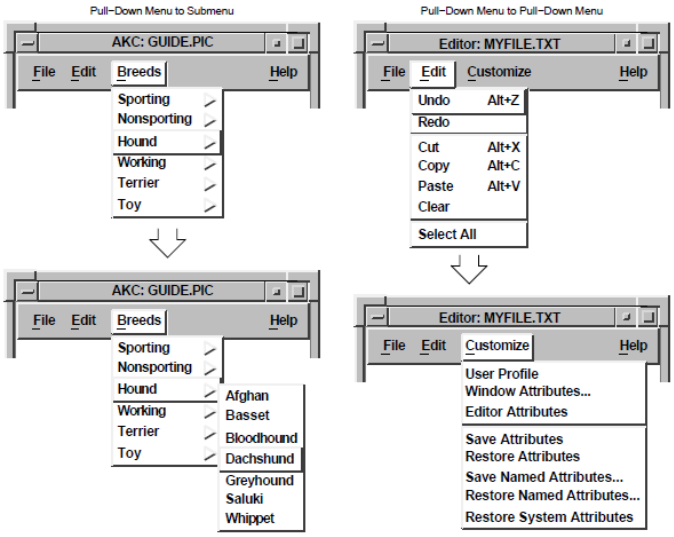


Table C.5 describes how to move to the next menu.

Table C.5. Moving to the Next Menu

To	Press	Example or Explanation
Move the location cursor from a menu item in a pull-down menu tothe default menu item in the associated submenu	• → • Ctrl+ → • Ctrl+ ↓	See Figure C.2.
Move the location cursor from a menu item in a pull-down menu tothe default menu item in the pull-down menu just to the right of the current location cursor	• → • Ctrl+ → • Ctrl+ ↓	See Figure C.2.

Figure C.2. Moving to the Next Menu



C.2. Traversing Windows

The following sections describe how to use your keyboard to move between and within windows.

C.2.1. Moving Between Windows

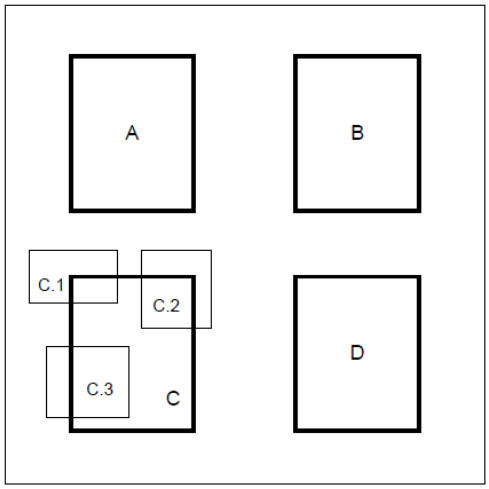
To move between groups of windows:

- Press Alt+Tab or Alt+F11 to move from one group of windows to another.

  You can also use Alt+Tab or Alt+F11 to move from one minimized window to another when the minimized windows are not in an icon box. When a minimized window has input focus, its window menu appears, and the first menu item (Restore) is highlighted. (To move from one minimized window to another in an icon box, use the arrow keys.)

- Press Alt+F6 to move within a group of windows.

  For example, in the following figure, if window C.1 had input focus and you wanted to change focus to window C.2, you would press Alt+F6. Pressing Alt+F6 would cycle through all of the secondary windows (C.1, C.2, and C.3) and primary window C. The input focus would move backwards through the windows in the order in which they last had focus.



- Press Alt+Shift+F11 or Alt+Shift+Tab to move to the previous group of windows.
- Press F4 to pop up the window menu of a minimized window when that window is in an icon box.
- Press the arrow keys to move between minimized windows that are in an icon box.
- Press Alt+F5 or Return to restore a minimized icon box.

C.2.2. Moving Within Windows

To move within windows:

- Press F10 to focus on the menu bar.
- Press Alt+space bar or Shift+F11 (on some keyboardsF11 is marked ESC) to pull down the window menu.
- Press Tab to move from one tab group to another.
- Use the accelerators for menu items in the window menu.

The following table summarizes the keyboard accelerators that are available from the Window menu.

To	Press
Move a window	Alt+F7
Size a window	Alt+F8
Minimize a window	Alt+F9
Restore a minimized window	Alt+F5
Maximize a window	Alt+F10
Lower a window to the bottom of the window stack	Alt+F3
Close (not minimize) a window	Alt+F4

To move a window around the screen:

1. Press Alt+F7, or
   - Press Alt+space bar or Shift+F11 to pull down the window menu.
   - Press ↓ until the Move menu item is highlighted.
   - Press Return or Ctrl+Return to activate the menu item.
2. Press the arrow keys to move the window in the direction you want it to go. You can also press Ctrl +arrow keys to move the window several pixels at a time.
3. Press Return or Ctrl+Return to finish the operation.

To size a window:

1. Press Alt+F8, or
   - Press Alt+space bar or Shift+F11 to pull down the window menu.
   - Press ↓ until the Size menu item is highlighted.
   - Press Return or Ctrl+Return to activate the menu item.
2. Press one arrow key to indicate which side of the window to size. For example, press ↑ for the top of the window, ← for the left side, and so on. You can also press two arrow keys, one after the other, to indicate which corner to size. For example, press ↑ and then ← to indicate the upper left corner, and so on.
3. Once you have indicated which side or corner of the window to size, press the arrow keys to size the window in the direction that you want the window to be sized. You can also press Ctrl+arrow keys to size the window several pixels at a time.
4. Press Return or Ctrl+Return to finish the operation.

C.3. Traversing Dialog Boxes

Table C.6 describes how to work with dialog boxes.

Table C.6. Working with Dialog Boxes

To	Press
Move forward from tab group to tab group (field to field)	Tab or Ctrl+Tab
Move backward from tab group to tab group	Shift+Tab or Ctrl+Shift+Tab
Move from item to item within a tab group (field)	Arrow keys

To	Press
Activate a selection in a group of radio boxes, check boxes, or list boxes, or to pop up an options menu	Select, space bar, or Ctrl+space bar
Activate an item in a group of push buttons	Enter, Select, space bar, Return, Ctrl+space bar, or Ctrl+Return
Activate an item in an Options menu or the default action of the dialog box	Return, Ctrl+Return, or Enter
Cancel a dialog box or an Options menu	F11 (ESC)

Table C.7 describes how to move within dialog boxes.

Table C.7. Moving Within Dialog Boxes

To	Press	Example or Explanation
Move cursor from button to button	Arrow keys	Sets of check buttons, push buttons, or radio buttons a reconsidered one tab group (a single button is not a tab group).Use the arrow keys to move the location cursor from one item to another.
		For example, if the buttons are arranged vertically,you can press ↑ or ← to go up, and you can press ↓ or → to move down. If the buttons are arranged horizontally, press ← or ↑ to move left, and press → or ↓ to move right.
		In some cases, buttons are not arranged in a primarily vertical or horizontal manner. Rather, they might be arranged in a box format, as the following numbers show: 1 2 3 4
		Pressing the arrows keys moves through the buttons in the following manner (starting at 1):

To	Press	Example or Explanation
		• → moves: 2, 3, 4, 1, 2, 3, 4, 1, . . . • ↓ moves: 3, 2, 4, 1, 3, 2, 4, 1, . . . • ← moves: 4, 3, 2, 1, 4, 3, 2, 1, . . . • ↑ moves: 4, 2, 3, 1, 4, 2, 3, 1, . . .
Insert one space in an entry box	Space bar	Pressing Ctrl+space bar does nothing.
Move to another options menu item or another list box item	↑ or ↓	
Move left or right one character	← or →	Use these arrow keys in list boxes to display more text—for example, to display the end of a long file name.
Move up one screen (page)	Prev Screen	
Move down one screen (page)	Next Screen	
Move left one screen	Ctrl+Prev Screen	
Move right one screen	Ctrl+Next Screen	
Go to the top of the list or file	Ctrl+Alt+ ←	
Go to the bottom of the list or file	Ctrl+Alt+ →	
Display leftmost character (go to the beginning of aline)	Alt+ ←	
Display rightmost character (go to the end of aline)	Alt+ →	
Cancel	F11 (ESC)	Pressing F11 (ESC) cancels any action in the entire dialog box and makes the dialog box disappear.

Table C.8 describes how to activate items in a tab group.

Table C.8. Activating Items in a Tab Group

To	Press	Example or Explanation
Activate check or radio buttons	Select, space bar or Ctrl+space bar	Radio buttons can be either toggled or set.
Activate an options menu	Select, space bar or Ctrl+space bar	You do not need to keep the key pressed to keep the menu visible. Press the key once and the menu remains.
Activate an options menu item	Return, Ctrl+Return, or Enter	Once you have chosen a menu item, the Options menu disappears.
Activate push buttons	Select, space bar, Ctrl+space bar, Return, Ctrl+Return, or Enter	Return or Ctrl+Return activates the default push button. If you have more than one tab group of push buttons, Return and Ctrl +Return activate only the default buttons and do not activate any buttons in the other tab group.

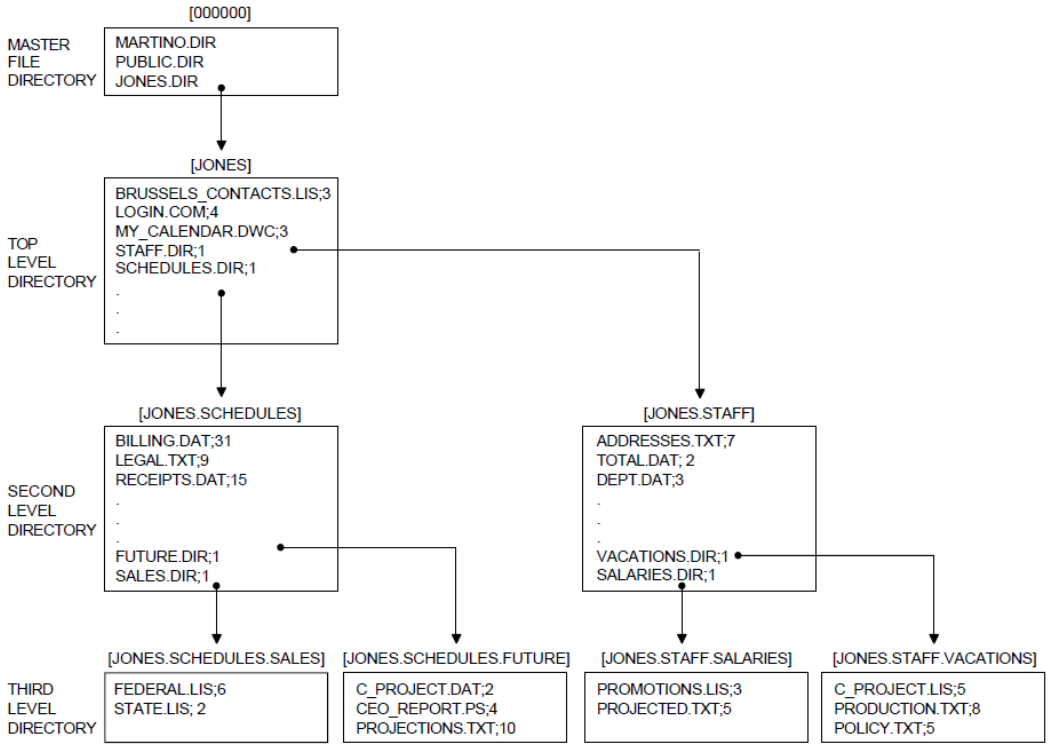
Appendix D. Understanding Files, Directories, and Devices

Although DECwindows is an interface to the OpenVMS operating system, you do not need to know much about the OpenVMS directory structure to use DECwindows. For example, you can be a successful DECwindows user and never leave your own directory. This appendix is designed for new users of OpenVMS as well as for those who need are fresher about files and directories and their place in the OpenVMS directory structure.

D.1. Understanding the OpenVMS Directory Structure

In the OpenVMS operating system, information is stored hierarchically. At the top of this hierarchy is the **master file directory**. Your **userfile directory** and those belonging to other users on your system are listed in this master file directory. Your user file directory—generally called *username*.DIR—is a file that points to your top-level directory. This top-level directory contains the files and subdirectories that you have created or that have been created for you. You perform most of your daily online tasks from your top-level directory.

Your directory structure resembles a family tree. Your top-level directory branches off to files and to **subdirectories**, which branch still further. Subdirectories let you organize files into meaningful groups. By ascending and descending the directory structure, you can list the contents of your directory and subdirectories and work with the files they contain.



The top-level directory, subdirectories, and files that make up your directory structure are stored on a physical device called a **disk**. The access path to a **file** is through the **node** and device,through a top-level directory, through any subdirectories, and then to the file. If your computer system is part of a network, you can access other directory structures on other nodes.

D.2. About Files

A file can be a document, a program written in a language such as C or Pascal,or a list of street addresses. Among other things, you can view, edit, print,compile, and delete these files. In DECwindows, you use FileView to perform tasks with files.

Every file has a **file name** or **file type** to identify it. When you create a file, give it a file name that is meaningful to you. A file name can contain up to 39 characters chosen from the letters A through Z(upper case or lower case), the numbers 0 through 9, an underscore (_), a hyphen (-), and a dollar sign ($).

A file type identifies the nature of a file. For example, a file that contains text might have the file type TXT. A program that you can run—or **execute**—often has the file type EXE.

A file also has a version number. You can have many versions of a file. When you modify that file, the system saves the original file and produces a modified output file. This output file has the same name and type as the original, but the version number is increased by 1. Unless you specify aversion number, FileView uses the highest existing version number of that file when it executes a command.

You express this file information in the following format:

```
filename.type;version
```

D.3. About Directories and Devices

Files are stored in directories. The file name, type, and version of the files in a directory are recorded in a special kind of file called a directory file. When you list the contents of a directory, the system reads the directory file to obtain the names of the files in that directory.

A directory file has the following format:

```
directory.DIR;1
```

Because you cannot edit a directory file, all directory files have a version number of 1.

When you started your first DECwindows session, you were placed in your top-level directory. Your top-level directory, which contains all your files and subdirectories, is stored on a **device**. Your system manager probably gave your device a name you can easily remember, such as WORK or DISK$.
The device, directory, and file information together comprise a **filespecification**. You use this file specification to identify the path to a file. If you want to access a file located on your device, you can omit the device name from the file specification. If you want to access a file son another node, you must include the node name in the file specification. (You specify a node only if your computer system is part of a network.)

The following file specification tells a user that the file RABBIT.TXT is located in the directory [MCGREGOR] on the device $USERS. The colon and brackets are required elements in the file specification.

```
$USERS:[MCGREGOR]RABBIT.TXT
```

A subdirectory name always appears after the directory name and is separated from it by a period. You can append up to seven subdirectory names—each separated from the other by a period—after the directory name. The following file specification tells a user that the file RABBIT.TXT is located in the subdirectory [MCGREGOR.GARDEN] on the device $USERS.

```
$USERS:[MCGREGOR.GARDEN]RABBIT.TXT
```

The following file specification tells a user that the file COTTONTAIL.TXT is located in the directory [PETER] on device $PUBLIC on node FLOPSY.

```
FLOPSY::$PUBLIC:[PETER]COTTONTAIL.TXT
```

D.4. Using Wildcards in File Specifications

FileView provides commands that let you work with files. The asterisk (*) and percent sign (%) wildcards allow you to apply commands to multiple files rather than to one file at a time. When you use wildcards in a file specification, the command applies to all files whose fields match those of the file specification you enter. (Fields are the individual elements, such as the file name and file type, of a file specification.)

If you choose a command that accepts wildcards, the asterisk (*)and percent sign (%) wildcards can be used in the directory name,file name, and file type fields of a file specification. See Chapter 6 for more information about using wildcards in FileView commands.

D.4.1. Using the Asterisk (*) Wildcard

You can use the asterisk wildcard to represent all or part of a directory name,file name, and file type. You can also use an asterisk to match the entire version number, but not a part of it.

The following example shows how to use an asterisk to replace fields of a file specification. By choosing FileView's Type command and entering the following file specification in Type's dialog box, you cause all versions and all file types of all files that begin with the word STAFF in the directory [JONES] to be displayed. This includes STAFF_VACATIONS.TXT, STAFF.DIS;1, and STAFF.DIS;2.

```
Files: STAFF*.*;*
```

When you select the file you want the command to act on, you give FileView an **input file specification**. For commands that produce output, such as the Copy command,you must also provide the name of the **output file specification** created as a result of the command. Use the asterisk in the file name, file type, and version number fields in the output file specification when you want the output file specification to match the corresponding fields in the input file specification.

In the following example, choosing FileView's Copy command and entering the following file specification in Copy's dialog box copy the latest version of all TXT files in [JONES] to new files in [JONES] with the same name but with a file type of SAV.

```
From: *.TXT
To: $USERS:[JONES]*.SAV
```

D.4.2. Using the Percent Sign (%) Wildcard

The percent sign wildcard can be used as a substitute for any single character in the directory, file name, and file type fields. You cannot, however, use the percent sign wildcard in the version number field.

In the following example, choosing FileView's Type command and entering the file specification in Type's dialog box as shown display the latest versions of all TXT files whose names begin with DISTRICT.

```
Files: DISTRICT%.TXT
```

The files DISTRICT1.TXT, DISTRICT2.TXT, and DISTRICT3.TXT are displayed. The file DISTRICT33.TXT is not be displayed because it has more than one character after DISTRICT; nor is DISTRICT.TXT. The percent sign replaces only one character position, but there must be a character to replace.

D.5. Using Wildcards in Directory Specifications

You can also use two other wildcards, the ellipsis (...)and hyphen (-), to refer to another directory or subdirectory in a directory structure. The ellipsis wildcard allows you to search down the directory hierarchy. The hyphen wildcard permits you to move up the directory structure one level at a time. See Chapter 6 for more information about using the ellipsis and hyphen wildcards.

D.6. About Logical Names

A **logical name** usually represents a complete or partial file specification, a device name, or another logical name. You can give frequently used files, directories, and devices meaningful logical names that are easier to remember and to type than the full file specifications. For example, you can define WORK as a logical name for your device DUA0 or define STAFF as a logical name for the file specification $USERS:[JONES.STAFF].

Logical names also let you keep your programs and command procedures independent of physical file specifications. For example, if a command procedure uses the logical name ACCOUNTS, you can equate ACCOUNTS to any file on any disk before executing the command procedure.

Logical names can be defined by you or by the system. Logical names and their definitions are kept in tables called **logical-name tables**. OpenVMS provides the following logical-name tables:

- The job table, which contains logical names available to all your processes and subprocesses.
- Your group table, which contains logical names available to all users with the same user identification code (UIC) group number. Your UIC code identifies the name of the group to which you belong and your unique name within the group.
- The system table, which contains logical names available to all users of the system.

You can also create your own logical-name table that is private to your processor that others can share.

When you enter a logical name as part of a command line, the system translates the logical name. It does this by searching the job, group, system, and any other logical-name tables specified by the logical name LNM$FILE_DEV. (LNM$FILE_DEV is a special system logical name defined in the LNM $SYSTEM_DIRECTORY table. It specifies the search order that FileView and all other OpenVMS components use to translate logical names.)

You can specify that a logical name be defined as **concealed**. You can conceal logical names that refer to devices or directories.

When you assign a logical name to a device, concealing the logical name allows you to write programs and command procedures and to perform other operations without being concerned about which physical device actually holds the disk or tape.

When you assign a logical name to a directory or subdirectory, concealing the logical name can make the directory or subdirectory appear as the master file directory for the current device. This directory or

subdirectory to which you assign a concealed logical name is called the **root directory**. You can then use this root directory as the base from which to access directories beneath it. For example, the top-level directory [JONES] on device DUA0contains the subdirectory [JONES.STAFF]. If you assign the logical name ME toDUA0:[JONES], you can then refer to the subdirectory [JONES.STAFF] by typing ME:[STAFF].

Appendix E. System Messages

This appendix describes messages that might appear when you are starting a session, working with Session Manager, or running applications on remote systems.

Many of the messages appear in dialog boxes with an OK button. Click on the OK button to make the dialog box and the message disappear before you proceed.

For each message, the text of the message appears in *italics*and is followed by an explanation of why the message occurred and, where applicable, what you should do to correct the problem.

An item in a message that appears in single quotation marks (for example, ’filename ’) represents an item that varies indifferent occurrences of the message.

DECwindows applications run as one or more OpenVMS processes or subprocesses. Some system messages report insufficient process quotas. Process quotas determine the number or size of system resources that you and your processes are authorized to use. This information is stored in your entry in the User Authorization File (UAF). Some DECwindows messages described in this appendix report operations that cannot go to completion because a process quota has been exceeded. For example, your subprocess quota (PRCLM)determines the maximum number of applications you can run simultaneously. For information about increasing your process quotas, consult with your system manager.

Client is not authorized to access server

Context

Running an application on a remote system

You are trying to run an application on a system on which you are not an authorized user.

Remedy

Authorize yourself to run applications on the other system by following the procedure outlined in Chapter 12. Be sure that the node name you provide in Session Manager's Security options dialog box represents areal node and not a cluster alias. Also note that each node—source and destination—must be defined in the other's network node database. For example, to display applications on node HUBBUB from ZEPHYR, HUBBUB must be entered in ZEPHYR's network node database, and ZEPHYR must be defined in HUBBUB's network node database.

Decw-e-cnxabort, connection aborted

Context

Running an application on a remote system

While you tried to run a program from DCL, the server on the other end of the line aborted, or the network link was broken.

Remedy

Wait for the connection to be reestablished before you try to run the program again.

Error opening system defaults file. Using factory defaults.

Context

Using Session Manager

There were problems reading both local and system default resource files. There should always be a set of system resource files in the directory pointed to by the logical name DECW$SYSTEM_DEFAULTS. If these files have been deleted or damaged, Session Manager uses its own defaults.

Remedy

Examine the system resource files and determine why Session Manager cannot access them.

Error writing resource file

Context

Using Session Manager

Note that this message is followed by the resource file name.

Session Manager could not save the Customize settings.

Remedy

Use the DCL command DIRECTORY/FULL to check the version limits on files in your SYS$LOGIN directory and ensure that there are no problems accessing this directory. This error might also be related to disk quotas set up by your system manager.

Problem report

Context

Starting a session

Note that an OpenVMS error message is displayed below this DECwindows message.

Your attempt to log in was unsuccessful for the reason stated in the OpenVMS error message. The OpenVMS error messages that are most likely to occur with this message are as follows:

- Licensing—Logging in through Session Manager counts as one licensed login. If you have logged in to your workstation through the DCL command SETHOST, you might have exceeded the limit of logged-in users as specified by your OpenVMS license. To log in through Session Manager, log out of one of your other terminal sessions so that the limit of the OpenVMS license is not exceeded.
- User authorization failure—The user name or password you entered does not match an authorized user for this system. You might have made a typing mistake. Try entering your user name and password again. If you are not logged in, see your system manager.