

# HP DECwindows Motif for OpenVMS

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## Release Notes

January 2005

This manual describes corrections, known problems, and restrictions that pertain to the DECwindows Motif Version 1.5 software.

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<b>Software Versions:</b>	DECwindows Motif for OpenVMS I64 Version 1.5 DECwindows Motif for OpenVMS Alpha Version 1.5

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# Preface

These release notes describe corrections, known problems, and restrictions that pertain to the HP DECwindows Motif for OpenVMS Version 1.5 (DECwindows Motif) software on the OpenVMS I64 and OpenVMS Alpha platforms.

The notes in this manual are cumulative from DECwindows Motif for OpenVMS Version 1.0 and indicate any undocumented items that still pertain to the software. A label within each note specifies when the correction or problem was introduced.

## Intended Audience

This manual is intended for users, system managers, and programmers who work with DECwindows Motif.

## Document Structure

This manual is structured as follows:

- Chapter 1 provides an overview of the current release.
- Chapter 2 contains general user release notes for all users.
- Chapter 3 contains release notes intended for system managers.
- Chapter 4 contains release notes intended for application and system programmers.
- Chapter 5 describes changes and corrections to the DECwindows Motif documentation set.
- Appendix A contains excerpted material from the *OSF/Motif Release 1.2 Notes*.
- Appendix B describes the OSF/Motif sample programs included with DECwindows Motif.

## Related Documents

For additional information about OpenVMS or DECwindows Motif products and services, visit the following web site:

<http://www.hp.com/go/openvms>

## Reader's Comments

HP welcomes your comments on this manual. Please send comments to either of the following addresses:

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## How To Order Additional Documentation

For information about how to order additional documentation, visit the following World Wide Web address:

<http://www.hp.com/go/openvms/doc/order>

## Conventions

The following product names may appear in this manual:

- HP OpenVMS Industry Standard 64 for Integrity servers
- OpenVMS I64
- I64

All three names—the longer form and the two abbreviated forms—refer to the version of the OpenVMS operating system that runs on the Intel Itanium architecture.

All uses of DECwindows and DECwindows Motif refer to the HP DECwindows Motif for OpenVMS software; and all uses of X server and the X display server refer to the DECwindows X11 Display Server. Additionally, all uses of DECwindows XUI (X User Interface) refer to the DECwindows product prior to DECwindows Motif Version 1.0.

The following typographic conventions may be used in this manual:

**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.)  
In the HTML version of this document, this convention appears as brackets, rather than a box.

...	Horizontal ellipsis points in examples indicate one of the following possibilities: <ul style="list-style-type: none"> <li>• Additional optional arguments in a statement have been omitted.</li> <li>• The preceding item or items can be repeated one or more times.</li> <li>• Additional parameters, values, or other information can be entered.</li> </ul>
.	Vertical ellipsis points indicate 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 choices in parentheses if you choose more than one.
[ ]	In command format descriptions, brackets indicate optional elements. You can choose one, none, or all of the options. (Brackets are not optional, however, in the syntax of a directory name in an OpenVMS file specification or in the syntax of a substring specification in an assignment statement.)
[   ]	In command format descriptions, vertical bars separating items inside brackets indicate that you choose one, none, or more than one of the options.
{ }	In command format descriptions, braces indicate required elements; you must choose one of the options listed.
<b>text style</b>	This text style represents the introduction of a new term or the name of an argument, an attribute, or a reason. In the HTML version of this document, this convention appears as <i>italic text</i> .
<i>italic text</i>	Italic text emphasizes important information and indicates complete titles of manuals and variables. Variables include information that varies in system messages (Internal error <i>number</i> ), in command lines ( <i>/PRODUCER=name</i> ), and in command parameters in text (where <i>dd</i> 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 radices—binary, octal, or hexadecimal—are explicitly indicated.



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# Introduction

This chapter summarizes the corrections, restrictions, and known problems identified during or associated with the DECwindows Motif Version 1.5 software. Table 1–1 lists all the notes added or revised during this release and cross-references the sections in which they are described.

For a detailed description of the features and enhancements introduced with this release, see the *HP DECwindows Motif for OpenVMS New Features* manual.

**Table 1–1 Directory of Notes for DECwindows Motif Version 1.5**

Title	Section
<b>General DECwindows Motif Environment Notes</b>	
Web Browser Support	Section 2.2.1
Scaled Bitonal Images Now Display Correctly (Alpha Only)	Section 2.2.2
Applications That Issue Lengthy Server Requests Now Respond Correctly (Alpha Only)	Section 2.2.3
Applications Running Over the LOCAL Transport No Longer Cause System Lag	Section 2.2.4
Applications That Use GKS May Fail Unexpectedly	Section 2.2.5
<b>New Desktop Environment Notes</b>	
Default Width of the Calculator Increased	Section 2.3.1
File Manager No Longer Hangs During Large Copy or Move Operations	Section 2.3.2
File Manager Cancels Restore Operations Properly (Alpha Only)	Section 2.3.3
<b>Application Notes</b>	
Clock: Clock Updates Correctly after the System Time is Reset (Alpha Only)	Section 2.4.3.1
DECterm: Graphics Applications Using ReGIS No Longer Cause DECterm to Crash (Alpha Only)	Section 2.4.4.1
DECterm: DECterm Windows Positioned Correctly (Alpha Only)	Section 2.4.4.2
DECterm: Use CREATE/TERMINAL/DETACH to Display Broadcast Messages	Section 2.4.4.3
DECterm: Using CREATE/TERMINAL with IPv6 Support Enabled	Section 2.4.4.4

(continued on next page)

**Table 1–1 (Cont.) Directory of Notes for DECwindows Motif Version 1.5**

<b>Title</b>	<b>Section</b>
<b>Tool and Utility Notes</b>	
fsinfo: Font Server Information Utility Fails After Invoking	Section 2.5.2.1
<b>Installation and Upgrade Notes</b>	
DECwindows Motif Version Support and Compatibility	Section 3.1.1
Limited Support for Third-Party TCP/IP Products (Alpha Only)	Section 3.1.2
DECW\$STARTUP Requires SHARED Privilege	Section 3.1.3
<b>Security and Authorization Notes</b>	
GENPWD Flag Now Handled Properly (Alpha Only)	Section 3.3.1
Setting the hostList Resource Manually	Section 3.3.3
<b>Desktop Management Notes</b>	
Trusted Unpause Operations Allowed (Alpha Only)	Section 3.4.1
ACME Login Features Not Supported (I64 Only)	Section 3.4.2
<b>Font and Keymap Management Notes</b>	
Queries on TrueType Font Properties No Longer Reset the Display Server (Alpha Only)	Section 3.5.1
<b>X Display Server Management Notes</b>	
Adjusting Pixel Depth on Systems with ATI RADEON Graphics Cards	Section 3.7.1
Performance Degradation May Occur on XINERAMA Multihead Systems	Section 3.7.2
<b>General Programming Notes</b>	
Motif Toolkit and X Window System Support and Compatibility	Section 4.1.1
Run-Time and Programming Environment Support	Section 4.1.2
Multithreaded Applications with Upcalls Enabled No Longer Cause Address Corruption (Alpha Only)	Section 4.1.3
DECwindows Display Server Blocks Write Operations When All Transport Buffers are in Use	Section 4.1.4
Functions Calling getaddrinfo and getnameinfo are not Threadsafe Over TCP/IP Connections	Section 4.1.5
Running Translated Images on OpenVMS Systems (Alpha Only)	Section 4.1.12
<b>Application Programming Notes</b>	
DEClinks: DEClinks Shareable Libraries Not Available (I64 only)	Section 4.2.2.1

(continued on next page)



Table 1–1 (Cont.) Directory of Notes for DECwindows Motif Version 1.5

Title	Section
<b>OSF/Motif Toolkit (Xm) Notes</b>	
OSF/Motif Release 1.1.3 Programming Support and XUI	Section 4.3.3
Memory Leaks in Cascade and Toggle Buttons Corrected (Alpha Only)	Section 4.3.4
Memory Leaks in Bulletin Boards Corrected (Alpha Only)	Section 4.3.5
UID Files for Example Programs	Section 4.3.8
<b>X Window System Toolkit (Xt) Notes</b>	
XtGetValues Function and Null Argument Values	Section 4.5.1
<b>X Window System Library (Xlib) Notes</b>	
XPutImage Now Displays Wide Graphic Images Correctly	Section 4.6.1
Xlib Routines Now Use Recursive Locks	Section 4.6.2
Memory Leaks in XOpenDisplay and XCloseDisplay Corrected (Alpha Only)	Section 4.6.3
XOpenDisplay Calls No Longer Leave a Pending Wake (Alpha Only)	Section 4.6.4
State of Event Flag Number 63 Changed Only After Reserved (Alpha Only)	Section 4.6.5
Xpoll.h Header File and ConnectionNumber Macro Restriction	Section 4.6.6



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## General User Release Notes

This chapter contains information about DECwindows Motif for general users.

### 2.1 OpenVMS Display Device and Layered Product Interfaces

This section contains release notes that pertain to the OpenVMS display device (SET DISPLAY) and DECwindows Motif layered product interfaces.

#### 2.1.1 OpenVMS Display Device (SET DISPLAY)

This section contains notes pertaining to OpenVMS display devices created and managed using the SET DISPLAY and SHOW DISPLAY commands. For more information on these commands, see the *HP OpenVMS DCL Dictionary: N-Z* or online help.

##### 2.1.1.1 SET DISPLAY/REVOKE Error Message is Misleading

*V1.3*

The error message for revoking a cookie that has timed out is misleading. The error message indicates there is a %SYSTEM-F-BADPARAM, bad parameter value. This does not indicate the nature of the error.

##### 2.1.1.2 I/O Error Displayed When Using SET DISPLAY/REVOKE

*V1.3*

Using the SET DISPLAY/REVOKE command to revoke a generated, trusted, cookie can sometimes result in an I/O error similar to the following:

```
XIO: fatal IO error 65535 (connection aborted) on X server ":0.0"
      after 10 requests (8 known processed) with 0 events remaining.
```

This error results from the cookie being used by the SET DISPLAY/REVOKE command to connect to the server. Revoking the cookie breaks the connection to the display server.

Although the error appears fatal, the revoke operation actually completes successfully.

##### 2.1.1.3 Display Devices Not Deleted Upon Exit

*V1.2-6*

When creating user-mode display devices with the DCL SET DISPLAY command, note that any unused devices may not be deleted when you log out of DECwindows Motif. Display devices created with SET DISPLAY are seen as permanent devices until used by an X client application and are not destroyed upon exit.

To avoid this problem, create supervisor-mode display devices.

## General User Release Notes

### 2.1 OpenVMS Display Device and Layered Product Interfaces

#### 2.1.2 DECTPU

This section contains release notes related to the DECwindows Motif interface to DECTPU.

##### 2.1.2.1 Small Display Monitors and DECTPU

*V1.0*

When running DECTPU for DECwindows Motif on small display monitors, the main window can be less than fully visible.

To correct this condition, follow these steps:

1. Add the following resources to the DECTPU section of your X resource file:

```
Tpu.Tpu$MainWindow.X:           0
Tpu.Tpu$MainWindow.Y:           0
Tpu.Tpu$MainWindow.Rows:        21
Tpu*condensedFont:              on
Tpu*fontSetSelection:            1
```

2. Copy the resource file from SYS\$LIBRARY:EVE.DAT and add the previous lines.

3. Use the logical name TPU\$DEFAULTS to point at the new resource file.

The following example references the X resource file EVE\_SMALL\_WINDOW.DAT, which defines the appropriate TPU window properties. The DECwindows Motif user interface to DECTPU is then invoked to edit the file LOGIN.COM.

```
$ DEFINE TPU$DEFAULTS SYS$LOGIN:EVE_SMALL_WINDOW.DAT
$ EDIT/TPU/INTER=DECWINDOWS LOGIN.COM
```

## 2.2 General DECwindows Motif Environment

This section contains release notes that pertain to the general DECwindows Motif user environment. This includes corrections, restrictions, and known problems that are common to both the New Desktop and the Traditional DECwindows Desktop environments.

### 2.2.1 Web Browser Support

*V1.5*

The HP Secure Web Browser (SWB) is the officially supported web browser for the HP OpenVMS Alpha and HP OpenVMS I64 operating systems. SWB is a licensed part of these operating systems and is based on the Mozilla Web Browser, which is designed for standards compliance, performance, and portability.

The OpenVMS Alpha version of the browser is available from the following location:

<http://h71000.www7.hp.com/openvms/products/ips/cswb/cswb.html>

This page contains installation and running instructions, as well as information about hardware and software prerequisites, system parameters, account quotas, and problem reporting.

## General User Release Notes

### 2.2 General DECwindows Motif Environment

The OpenVMS I64 version of the browser is a part of one or more of the OpenVMS I64 Operating Environments (OEs) and is included on the OE distribution media. See the *HP OpenVMS I64 Software Product Description* (SPD) for more information on the specific OE bundles available with this release of OpenVMS.

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#### Note

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There may be instances where running Java applications from the SWB will cause the system to freeze briefly. This is due to the way the DECwindows X display server currently handles non-blocking write operations to a requesting client application. See Section 4.1.4 for more information on this restriction.

---

### 2.2.2 Scaled Bitonal Images Now Display Correctly (Alpha Only)

*V1.5*

Previously, on systems running DECwindows Motif for OpenVMS Alpha Version 1.3 or higher, scaled bitonal images were displayed incorrectly. The top-right corner of the image would overlay the top-left quarter of the image.

This problem has been corrected in DECwindows Motif for OpenVMS Version 1.5.

### 2.2.3 Applications That Issue Lengthy Server Requests Now Respond Correctly (Alpha Only)

*V1.5*

DECwindows Motif client applications that issue multiple requests requiring lengthy replies from the server no longer become unresponsive. Examples of such operations include requests for the entire contents of a screen or requests to list fonts that require access to font servers.

This problem has been corrected with DECwindows Motif for OpenVMS Version 1.5.

### 2.2.4 Applications Running Over the LOCAL Transport No Longer Cause System Lag

*V1.5*

Client applications using the LOCAL transport on systems running DECwindows Motif for OpenVMS Alpha Version 1.3 or higher no longer enter a compute-bound state when they should normally be in a wait state.

This problem has been corrected with DECwindows Motif for OpenVMS Version 1.5. However, there remains a small risk of the problem occurring with client applications that use multiple kernel threads, regardless of whether multithreading support has been enabled.

### 2.2.5 Applications That Use GKS May Fail Unexpectedly

*V1.3*

In some instances, applications that use the HP Graphics Kernel System for OpenVMS (GKS) may fail when run from DECwindows Motif. The problem is caused by a contention at the AST level between read and reply events. In this situation, the application process hangs, and the error message "unexpected asynchronous reply" is displayed.

## General User Release Notes

### 2.2 General DECwindows Motif Environment

#### 2.2.6 Request-Intensive Applications May Pause Before Closing

*V1.3*

There may be a slight delay when a request-intensive application running over a LOCAL network connection is forced to close via the Window Manager. For example, an attempt to close the DECW\$EXAMPLES:ICO application from a LOCAL display results in a slight pause before the application window closes.

This is a result of resource contention between the Window Manager (DTWM) and server processes. To prevent this problem from occurring, decrease the priority of the server process using the DECW\$SERVER\_PRIORITY parameter, as described in *HP DECwindows Motif for OpenVMS Management Guide*.

#### 2.2.7 Support Discontinued for Display PostScript

*V1.2-6*

Starting August 1, 1998, support was discontinued for Adobe Display PostScript software resulting from Adobe Systems Incorporated discontinuing its former ongoing support for Display PostScript.

This action has had a varying degree of impact on the behavior of those DECwindows Motif applications that used the Adobe Display PostScript software. For example, starting with DECwindows Motif for OpenVMS Version 1.2-6, Bookreader can no longer display graphics in PostScript format.

For information about the effects of this action on specific DECwindows applications, see the following release notes:

- Bookreader, Section 2.4.1.1
- CDA, Section 2.4.2.2
- DECwindows mail, Section 2.4.6.1

To learn about the possible impact to user-written and third-party applications designed for the DECwindows Motif environment, see Section 4.1.9.

#### 2.2.8 Limited Support for Tear-Off Menus

*V1.2-3*

The following applications do not support tear-off menus:

- CDA Viewer
- Notepad
- Print Screen

#### 2.2.9 Implications of the Message, “System Menu Bar: Pseudo Mouse Not Available”

*V1.2-3*

“System Menu Bar: Pseudo Mouse not available” is an informational message that is included in the user’s SYS\$LOGIN:DECW\$SM.LOG file when you run a session. It is not an error message. The X display server provides pseudomouse mode automatically, which allows you to use arrow keys to move the mouse cursor.

### **2.2.10 Printing from Applications Linked Against OSF/Motif Release 1.1.3**

*V1.2*

Applications that are linked against OSF/Motif Release 1.1.3 may end abruptly when you attempt to print on systems that do not have print queues. Any layered products that linked against the OSF/Motif Release 1.1.3 libraries and use the standard DECwindows print dialog (“print widget”) are also affected.

As a possible solution, either avoid displaying the DECwindows print dialog, or define a print queue on your system. The print queue does not have to be connected to a printer to accept print jobs. Assign a name to the print queue that indicates the print queue is not connected to a printer, for example, NULL\_PRINTER.

## **2.3 New Desktop Environment**

This section contains release notes that pertain to the New Desktop environment.

### **2.3.1 Default Width of the Calculator Increased**

*V1.5*

The default width of the New Desktop calculator (DtCalc) has been increased. It is now wide enough to accommodate and display all digits in a value when the fixed-length display format is selected.

### **2.3.2 File Manager No Longer Hangs During Large Copy or Move Operations**

*V1.5*

The File Manager (dtFile) no longer hangs in the RWMBX state when copying or moving a large number of files (30 to 50 depending on the name length) in a single operation.

However, note that moving a large collection of files in a single operation can still result in slower performance as compared to moving smaller sets of files.

### **2.3.3 File Manager Cancels Restore Operations Properly (Alpha Only)**

*V1.5*

When attempting to put back a file from the Trash Can that has the same name as an existing file, File Manager displays a dialog box that prompts you whether to continue or cancel the restore operation. Choosing Cancel no longer causes the File Manager to crash.

### **2.3.4 Style Manager Displays Incorrect Security Options on Multihead Systems**

*V1.3*

When using the Style Manager to access the Security Options dialog box from a screen other than screen 0, the settings shown in the dialog box may be incorrect.

To prevent this from occurring, always display the Security Options dialog box from screen 0. Use the Set Default Screen tool to select the screen on which the Style Manager displays.

Note that this problem only occurs on multiheaded systems configured without XINERAMA.

## General User Release Notes

### 2.3 New Desktop Environment

#### 2.3.5 Screen Saver and Screen Lock Set by Default

*V1.2-6*

Note that at initial DECwindows Motif startup, Screen Saver (with a 10-minute timeout) and Screen Lock (with a 30-minute timeout) are enabled by default.

You can modify these defaults by accessing the Style Manager and changing (and subsequently saving) the Screen Saver settings.

#### 2.3.6 Session Manager Logging Problem

*V1.2-5*

In some cases, the New Desktop Session Manager (DtSession) continues to log errors to its log file until all free disk space is filled. These errors could occur, for example, if DECW\$DISPLAY is set to an incorrect value or if CDE\$SYSTEM\_DEFAULTS:[BIN]DTSCREEN.EXE is not properly installed.

If on the New Desktop, DtSession is unable to start the Screen Saver (DTSCREEN), it logs an error to the log file *device:[user.DT]ERRORLOG*. DtSession logs this error at a user-settable interval controlled by the Style Manager's "Time Per Background" parameter.

To workaroud this problem, increase the "Time Per Background" parameter to the maximum (120 minutes), or exit the New Desktop when you are done with it, rather than locking the screen.

#### 2.3.7 File Manager Problems with Extended File Specifications

*V1.2-5*

The following are known problems or restrictions related to the File Manager and its handling of extended file specifications:

- The "File/New Folder" menu item can handle the creation of a folder when the path length exceeds 255 characters, but the folder cannot be displayed (it is hidden). These files can be viewed at the DCL level.
- The "File/Find/File" menu item cannot find a file with file name that exceeds 235 characters if the full file name has been entered in the dialog's form field. To avoid the problem, use wildcards to conduct the search.

#### 2.3.8 DECwrite Icon Does Not Open DECwrite Program

*V1.2-5*

Although the DECwrite icon exists on the New Desktop, clicking on the icon will have no effect.

#### 2.3.9 Delay When Exiting a Session with Open TPU Windows

*V1.2-4*

Users will experience a one-minute delay for each DECwindows Text Processing utility (DECTPU) window displayed when exiting the session or when saving a home session.

The DECwindows interface for DECTPU (EVE editor) requires notification if its state needs to be saved, but it does not respond to that notification sent by Session Manager. The Session Manager waits one minute for a response before continuing, resulting in the delay.



### 2.3.10 Viewing TIF Files with dximageview

V1.2-4

When using dximageview to view TIF-formatted files from the CDE\$SYSTEM\_DEFAULTS:[APPCONFIG.HELP.C.GRAPHICS] directory, the following warning messages similar to the following are displayed:

```
TIFFOpen: Warning, unknown field with tag 34209 (0x85a1) ignored.  
TIFFOpen: XResolution: Rational with zero denominator (num = 200).  
.  
.  
.
```

Note this error only occurs with the TIF files in CDE\$SYSTEM\_DEFAULTS:[APPCONFIG.HELP.C.GRAPHICS]; it is only a warning. The file is still displayed correctly by the image viewer.

### 2.3.11 Text Editor Restrictions

V1.2-4

The Text Editor application, which is part of the New Desktop, is described in Chapter 10 of the *Common Desktop Environment: User's Guide*. Currently, it has the following issues and restrictions:

- The reference page for Text Editor describes a client/server implementation of the Text Editor. This release of the Text Editor supports the -“standAlone” option only and is not built as a client/server application.
- The spell-checking function described in the section “To Correct Misspelled Words” is not implemented in this version of the Text Editor.
- The Text Widget upon which the New Desktop Text Editor is based does not set the size of a tab to exactly the width of eight (8) characters; it is usually slightly larger. When displaying text with a combination of spaces and tabs, text may not appear vertically aligned.

### 2.3.12 Some File Names are Displayed in UNIX Format

V1.2-4

In the Application Manager Find dialog box and in error messages reported by the Help Viewer, file names are displayed in UNIX format rather than in standard OpenVMS format. For example, SYS\$SYSROOT:[SYSMGR]LOGIN.COM appears as /sys\$sysroot/sysmgr/login.com.

### 2.3.13 Front Panel Clock is an Icon Only

V1.2-4

The New Desktop Front Panel Clock is an animated icon that displays the current system time using an analog display. The icon has no other function and does not support single-click or double-click operations.

### 2.3.14 ToolTalk Actions Not Supported

V1.2-4

Creation of ToolTalk Action definitions in the Action Definition files (\*.dt) as described in the *Common Desktop Environment: Advanced User's and System Administrator's Guide* is not supported. Although some ToolTalk actions exist in the Action Definition files installed with this product, modification of these actions is not supported and could cause some New Desktop functions to fail.

## General User Release Notes

### 2.3 New Desktop Environment

#### 2.3.15 Session Manager Save and Restore Limitations

*V1.2-4*

The Session Manager supplied with the New Desktop supports the WM\_SAVE\_YOURSELF protocol for Bookreader, DECTerm, and Calendar.

Applications that have been written to take advantage of this protocol can:

- Save their state when the user exits a session.
- Restore a state when the user starts a new session.

The New Desktop applications support save and restore, but many existing DECwindows Motif applications have not been modified to support the WM\_SAVE\_YOURSELF protocol.

The impact of this difference between existing and new applications can be seen during a logout/login sequence as follows:

- Applications supporting save/restore create a main window if they were running when the user logged out.
- Applications that do not support save/restore do not automatically restart.

An example of an existing DECwindows Motif application that supports save/restore is DECwindows Mail.

---

#### Note

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This Session Manager application should not be confused with the X Session Management protocol that is part of the DECwindows X11 Display Server.

---

#### 2.3.16 File Manager Search List Limitations

*V1.2-4*

The File Manager application has the following limitations with search lists in the New Desktop environment.

- If you specify a folder (directory) name, which is strictly a logical name, and the logical name translates to a search list, only the first directory encountered in the search list is displayed.
- When displaying a directory whose name includes a search-listed device, all directories in the search path are displayed. If more than one directory with the same name exists in the search path, an icon appears for each instance of that directory. If more than one file with the same name exists in the search path, the behavior depends on whether the Show Top Version Only filter option has been selected. If selected, only one icon of the file with the highest version is displayed. If not selected, all versions from all locations are displayed. However, if more than one of the files has the same version number, any action to any of the files with that version applies to the first occurrence of the file in the search path.

For example, suppose the files SYS\$SPECIFIC:[SYSMGR]TOOLS.DIR;1 and SYS\$COMMON:[SYSMGR]TOOLS.DIR;1 both exist in a system. If a user switches to the directory SYS\$SYSROOT:[SYSMGR], two icons represent the file TOOLS.DIR. Operations performed on either of the two icons work

identically. New files are created in the first directory in the search path. In addition, some actions for these icons may not work properly.

To work around this problem, specify explicit directory names when a conflict occurs, for example, SYSSSPECIFIC:[SYSMGR] or SYSSCOMMON:[SYSMGR].

### **2.3.17 Login and Pause Screen Text Field Restrictions**

*V1.2-4*

The following sections provide information about the Login Screen and Pause Screen text fields.

#### **2.3.17.1 Control Characters Not Recognized When Entering Username**

The New Desktop does not support entering control characters in the login Username text field. If entered, these characters are discarded. This differs from the DECwindows login Username text field which supports such key sequences as:

- Ctrl/U, Ctrl/J, or F13 (deletes to beginning of the line)
- Ctrl/H or F11 (positions to the beginning of the line)
- Ctrl/E (positions at the end of the line)

The New Desktop does support Ctrl/U, which when typed while entering a password at login or when unpausing the screen, erases any characters entered up to that point.

#### **2.3.17.2 Use Return Key to Move Between Login Text Fields**

Because the Username text field and Password text field are different dialog boxes in the New Desktop, press the Return key to move the cursor from the Username text field to the Password text field. The Tab key does not move the cursor to the next text field; rather, this action highlights the OK button.

#### **2.3.17.3 First Character Discarded When Entering Pause Screen Password**

If the workstation is paused and the Password dialog box is not displayed, the first character typed is ignored. This differs from the DECwindows pause screen, which always accepts any characters typed.

When using the New Desktop, use a nontyping key, such as Shift, or move the mouse to redisplay the Pause dialog box before entering your password. If you are unsure of what you have already typed, you can use Ctrl/U to erase the Password text field.

#### **2.3.17.4 Text on the Welcome Screen is Not Displayed**

If the 100-dpi fonts are not included in the X server's font path, the welcome text is not displayed on the blue welcome screen that appears immediately after logging in. This may also occur if you are displaying your session on a remote X server.

### **2.3.18 Font Selection Limitations**

*V1.2-4*

On the New Desktop, Style Manager contains a control that displays a dialog box used to select font size. Selecting a new font size affects only New Desktop applications and does not affect existing DECwindows Motif applications.

## General User Release Notes

### 2.3 New Desktop Environment

#### 2.3.19 Default Workspace Limitations

*V1.2-4*

The New Desktop provides a default backdrop for the four default workspaces. You can change or even select Nobackdrop using the Backdrop control located in Style Manager.

When no backdrop is selected, you cannot drag icons and place them on the backdrop of the desktop. If you drag an icon and release it, it snaps back to File Manager or Application Manager.

Icons that were dropped on the background before Nobackdrop was selected remain and function correctly.

## 2.4 Applications

The following sections contain notes related to specific DECwindows Motif applications.

### 2.4.1 Bookreader

This section contains release notes pertaining to the Bookreader application.

#### 2.4.1.1 Support for Display PostScript Removed

*V1.2-6*

With the removal of the support for Display PostScript from DECwindows Motif, Bookreader no longer supports the display of PostScript artwork in online manuals. When Bookreader detects PostScript artwork, it displays a full-size figure window with a large X overlaid with an error message box containing the following message:

```
Unable to display PostScript(R) graphic.  
This feature is no longer available.
```

There is no workaround.

### 2.4.2 CDA

This section contains release notes that pertain to the Compound Document Architecture (CDA) Run-Time Services and CDA Viewer components of DECwindows Motif.

#### 2.4.2.1 Viewing Large, Color DDIF Files using eXcursion Version 7.1

*V1.3*

If you are unable to display large, color DDIF files while running the CDA Viewer from an eXcursion X Server session, HP recommends that you do one of the following:

- Display the DDIF file from a CDA Viewer session that uses either the local or DECnet transport outside of eXcursion.
- Upgrade the HP PATHWORKS 32 software to Version 7.2 or later. See the OpenVMS web site (<http://www.hp.com/go/openvms>) for information on obtaining a copy of this software.

#### 2.4.2.2 Support for Display PostScript Removed

*V1.2-6*

With the removal of the support for Display PostScript from DECwindows Motif, CDA no longer supports the display of PostScript source. The PostScript option has been removed from the CDA Viewer. If you attempt to view a PostScript file from the character cell interface CDA viewer, the viewer displays the following message:

```
%CDA-E-UNSUPFMT, unsupported document format.
```

There is no workaround.

#### 2.4.3 Clock

This section contains release notes pertaining to the Clock application.

##### 2.4.3.1 Clock Updates Correctly after the System Time is Reset (Alpha Only)

*V1.5*

The Clock application now updates correctly when the system time is set back to an earlier date and/or time. Previously in this circumstance, the analog, digital, and date displays would post updates only when the mouse was moved over the Clock window.

#### 2.4.4 DECterm

This section contains release notes pertaining to the DECterm application.

##### 2.4.4.1 Graphics Applications Using ReGIS No Longer Cause DECterm to Crash (Alpha Only)

*V1.5*

Previously, on systems running DECwindows Motif Version 1.3 or higher, client graphics applications that used ReGIS (graphics instruction set for video terminals) crashed the DECterm controller due to thread stack overflow.

This problem has been corrected with DECwindows Motif for OpenVMS Version 1.5.

##### 2.4.4.2 DECterm Windows Positioned Correctly (Alpha Only)

*V1.5*

DECterm windows are now displayed in the location specified by the DECW\$TERMINAL.x and DECW\$TERMINAL.y resources and WM\_NORMAL\_HINTS is now being set correctly.

Resetting the resources Mwm\*clientAutoPlace (Traditional DECwindows Desktop) or Dtwm\*clientAutoPlace (New Desktop) to FALSE is no longer necessary for proper placement of the window.

##### 2.4.4.3 Use CREATE/TERMINAL/DETACH to Display Broadcast Messages

*V1.5*

By default, DECterm windows are created as subprocesses. Regardless of their process settings, these subprocesses cannot receive broadcast messages, since OpenVMS does not recognize them as connected to a terminal device.

To enable the display of broadcast messages in a DECterm window, manually create the DECterm window as a detached process using the DCL command CREATE/TERMINAL/DETACH.

## General User Release Notes

### 2.4 Applications

#### 2.4.4.4 Using CREATE/TERMINAL with IPv6 Support Enabled

*V1.5*

The CREATE/TERMINAL command may fail if the DECW\$IPV6\_SUPPORT logical name has been defined as TCP\_IS\_IPV6 in the process (or job) table but not in the system (or group) table. The failure occurs when the specified display uses the TCPIP transport and the node name is an IPv6-formatted address (or is only accessible via an IPv6-enabled transport).

In these cases, the terminal controller detached process does not see the value of the DECW\$IPV6\_SUPPORT logical name, and therefore, assigns the default TCPIP transport value of INET.

If a conflict occurs, change the value of the network transport for the display device to INET or INET6, and repeat the CREATE/TERMINAL command. For a complete list of the available transport values, see the *HP DECwindows Motif for OpenVMS Management Guide*.

#### 2.4.4.5 Use ignoreVisibility Resource When Displaying DECterm Windows with eXcursion or on XINERAMA Multihead Systems

*V1.3-1*

A new resource, ignoreVisibility, has been added to prevent scrolling problems that occur when displaying a DECterm window using eXcursion or on a XINERAMA multihead system. To prevent these problems from occurring, insert the following line into the DECterm options file:

```
*.ignoreVisibility: True
```

To save and activate the setting, choose Save Options, and then close and restart all DECterm windows.

#### 2.4.4.6 Invoking DECterm May Fail while Kerberos is Enabled

*V1.3*

When using Kerberos authentication, the DECterm controller may fail to start. The workaround for this problem is to change SYLOGIN.COM so that Kerberos is initialized (@SYSS\$MANAGER:KRB\$SYMBOLS.COM) within the MODE\_OTHER section of SYLOGIN.COM.

#### 2.4.4.7 Euro Currency Symbol May Not Display Correctly When Using eXcursion

*V1.3*

Due to differences in how the euro symbol is supported between eXcursion and DECwindows Motif, the symbol may not display correctly on DECterm windows invoked via eXcursion. DECterm substitutes Latin-9 fonts with equivalent Latin-1 fonts, causing problems with the display of the symbol.

To prevent font substitution from occurring, modify the eXcursion font alias files, as described in the eXcursion release notes. The release notes describe how to edit the alias files, and describe additional restrictions related to support of the euro currency symbol.

#### 2.4.4.8 Text Does Not Display Properly on XINERAMA Multihead Systems using Powerstorm 4d20 Graphics Cards (Alpha Only)

*V1.3*

In a multihead configuration that uses the XINERAMA extension and Powerstorm 4d20 graphics cards, DECterm windows may not display text properly. However, keyboard input is still processed.

To correct this issue, refresh the text in the affected DECterm windows by running the xrefresh utility from each window, as follows:

```
$ RUN DECW$UTILS:XREFRESH
```

#### 2.4.4.9 Shrinking Window Problem

*V1.2-5*

If the XUI window manager is in use, “Auto Resize Terminal” is on, and you used the mouse to resize the DECterm window, the DECterm window shrinks. To workaround this problem, add the following line to the DECterm resource file DECW\$TERMINAL\_DEFAULT.DAT:

```
DECW$TERMINAL.main.terminal.useWMHints: false
```

If you make this change, be aware that the window manager will report the size of the DECterm window in pixels rather than character cells. Also, if you maximize a DECterm window, it might not properly restore to its previous size. However, it will no longer shrink.

#### 2.4.4.10 DECterm Resource File Name

*V1.2-4*

The locale of the display is now used to create the file name of the DECterm resource file. For example, if the locale is set to “ja\_JP”, then the default resource file name becomes DECW\$TERMINAL\_DEFAULT\_JA\_JP.DAT.

However, DECterm continues to use the old resource file name until the user selects Save Options at least once in the particular locale. The default resource file name for DECterm continues to be DECW\$TERMINAL\_DEFAULT.DAT if the locale meets any of the following conditions:

- Is “C”
- Starts with “en\_US”
- Contains “8859-1”

#### 2.4.4.11 Maximum Number of DECterm Windows

*V1.2-4*

A DECterm controller can create a maximum of 23 DECterm windows. This occurs because DECterm needs an event flag for each terminal window in use. There are 23 event flags that DECterm can use. (Event flag 0 and event flags 24–32 are not available for DECterm to use.)

If you need more than 23 DECterm windows, then you must create a new controller. To create a new controller, enter the following command:

```
$ MCR DECW$TERMINAL
```

## General User Release Notes

### 2.4 Applications

Note that the window from which this command is executed cannot be used for anything else because this command does not return until the last DECterm window is closed. After starting the controller with this method, the user can create another 23 DECterm windows with the DCL command CREATE/TERMINAL.

#### 2.4.4.12 Resizing the Terminal

*V1.2-3*

If you maximize the DECterm window when you enable the Auto Resize Terminal window option, the window is expanded to its nearest cell boundary; the window does not necessarily occupy the entire screen. The Restore options continue to function appropriately.

#### 2.4.4.13 Reporting the DECterm Window Size

*V1.2-3*

When you enable the Show Feedback option in the Workspace Options dialog box of the Window Manager, and you resize a DECterm window, the size of the window is reported in characters instead of pixels.

#### 2.4.4.14 Changing the Auto Repeat Setting

*V1.2-3*

You cannot change the Auto Repeat setting in the DECterm Keyboard Options dialog box. Instead, change the setting in the Keyboard dialog box in the Session Manager (Traditional DECwindows Desktop) or Style Manager (New Desktop).

#### 2.4.4.15 Timeout for Displaying the Copyright Notice

*V1.2-3*

If keyboard or mouse activity does not take place for 10 seconds after the copyright notice is displayed on the terminal, the notice disappears from the DECterm screen.

#### 2.4.4.16 Selecting Fonts

*V1.2*

Not all fonts work properly with DECterm. DECterm emulates a character-cell terminal, and, therefore, expects the fonts to be monospaced, fixed-width fonts (such as, CharCell), where each glyph possesses the same pixel width and the ascenders and descenders do not extend beyond the bounding box. Proportional fonts can be specified, but they produce unpredictable results.

Furthermore, DECterm fonts are supplied in families of 26 related fonts, including variations for bold, double-width, double-width/double-height, normal, and condensed characters. Also, DECterm fonts include special characters, such as the Line Drawing and the DIGITAL Technical character sets. A DECterm font family is identified by the font naming convention.

Use of fonts that do not have all the related font family variations, fonts that do not have the needed special characters, or font families that do not adhere to the DECterm font family naming conventions, may not result in an optimal display or otherwise perform as expected.

If DECterm cannot find a selected font, or if DECterm encounters a font not present in the selected font family, a warning message is displayed indicating that the font cannot be found. DECterm then proceeds to use the fallback replacement for the specified font.



#### 2.4.4.17 Supported DECterm Logical Names

*V1.1*

Table 2–1 describes the logical names that are supported by DECterm. If you do not define these logical names in your LOGIN.COM file, the terminal controller uses the default values.

**Table 2–1 Logical Names Supported by DECterm**

Logical Name	Description
DECTERM_DIAG	Enables diagnostic messages.
DECTERM_SHOW_PARSING	Shows characters as they are parsed.
DECW\$DECTERM_OUTPUT	Name of diagnostic output file; default is SYSSOUTPUT.
DECW\$DECTERM_REGIS_CURSOR	Specifies which cursor to use for ReGIS.
DECW\$TERMINAL_NODENAME	Node name used by controller if it cannot find another name.
DECW\$DECTERM_CTRL_SSRWAIT	Sets the SSRWAIT flag for the controller to 1.
DECW\$DECTERM_CTRL_PSWAPM	Sets the PSWAPM flag for the controller to 1.
DECW\$DECTERM_CTRL_WSEXTENT	Sets the WSEXTENT quota for the controller.
DECW\$DECTERM_CTRL_WSQUOTA	Sets the WSQUOTA quota for the controller.
DECW\$DECTERM_DISABLE_QUOTA_CHECKING	Turns off quota checking.
DECW\$DECTERM_MEM_DIAG	Shows controller quota calculations.

#### 2.4.4.18 Printing to an Attached Printer

*V1.1*

Printing to a port device requires you to have read and write privileges on that port. You cannot print by allocating the device, since the controller requires access to the device. Instead, set the device to WORLD:RW.

For example, to use the printer port TTA3:, enter the following command from a privileged account or include the command in the system startup file:

```
$ SET PROTECTION=WORLD:RW TTA3:/DEVICE
```

#### 2.4.4.19 Improving Hold Screen Response Time

*V1.1*

If the hold screen key response time is too slow, add the following lines to your DECW\$TERMINAL\_DEFAULT.DAT file:

```
DECW$TERMINAL.main.terminal.syncFrequency: 1  
DECW$TERMINAL.main.terminal.batchScrollCount: 1
```

Using these resources can affect the performance of the DECterm window. The actual impact on performance varies from site to site. You can trade off scrolling speed to hold-screen response time. A faster hold-screen response results in a slower scrolling speed. The default values for these resources are 10 and 0, respectively.

## General User Release Notes

### 2.4 Applications

#### 2.4.4.20 DECterm Graphics

##### *V1.1*

The following information is specific to DECterm graphics:

- In some cases, a private colormap is created in DECterm. This private colormap is created when ReGIS or sixel graphics are displayed in the window and a sufficient number of colors from the default colormap cannot be allocated. The result is that when the DECterm window has input focus, the colormap changes for the entire workstation. The default colormap is four colors on a four-plane or monochrome system and 16 colors on color systems with more than four planes.

To restore a DECterm window to the default colormap, select Clear Display from the Commands menu to clear the window. Then select Reset Terminal from the Commands menu to reset the terminal.

- Only graphics, not text, are written to the graphics backing store. When part of a window has to be redrawn in DECterm, the graphics portion of the window is drawn first, then the text is overlaid. As a result, the redrawn window might not look the same as the original picture.
- ReGIS addresses the entire window, not just 24 rows and 80 columns, so the aspect ratio between text and graphics might not always be the same as on the VT330 or VT340 terminal.
- The following ReGIS features are not implemented:

- Command Display mode
- Scrolling
- Output cursors

#### 2.4.4.21 DECterm Resource Usage

##### *V1.1*

You cannot create more terminal windows than your system resources and quotas allow. If you have insufficient resources, a dialog box is displayed with a message indicating that no additional DECterm windows can be created.

To reduce the memory requirement of each DECterm window and create additional terminal windows, decrease the number of Record Lines Off Top in the Display dialog box and decrease the number of columns for each DECterm window.

Once the resource limit is reached, log out of all DECterm windows that are running on the host system before you increase the number of terminal windows.

#### 2.4.4.22 Diagnostic Crash File and Messages

##### *V1.1*

DECterm produces a diagnostic file when a status code of fatal is returned. The DECTERM\_ERROR.LOG file is produced in the login directory when the DECterm application exits abnormally. If you have a problem with the DECterm application, submit a copy of this log file to your HP service representative. However, under certain circumstances, a log file is generated even when no problem is encountered. Therefore, the appearance of a log file as an isolated event should not be cause for a problem report.

You can enable additional levels of diagnostic messages by defining either a logical name or a symbol named `DECTERM_DIAG`. When defined, enhanced diagnostics are displayed by the DECterm images. Use this mode only for diagnosing problems; it causes Session Manager message windows to be generated for each new DECterm created from the Session Manager.

DECterm diagnostics can be captured in a file by defining the logical name `DECW$DECTERM_OUTPUT` to point to a file.

#### 2.4.4.23 Using the Debugger

*V1.0*

To redirect the output from the debugger to a DECterm window, enter the following command:

```
$ CREATE/TERMINAL/NOPROCESS/DEFINE=xxx
```

This command creates a DECterm without an associated process but with a logical name of `xxx` that points to the terminal. This procedure enables you to direct output to a DECterm window other than the window where the application is currently running. To redirect the output, enter the following commands:

```
$ DEFINE /USER DBG$INPUT xxx:  
$ DEFINE /USER DBG$OUTPUT xxx:  
$ RUN /DEBUG application.EXE
```

#### 2.4.4.24 Virtual Terminal Support

*V1.0*

To create a process that uses a virtual terminal, enter the following command:

```
$ CREATE/TERMINAL/NOPROCESS
```

Then establish focus to the newly created DECterm, press Return, and log in. Note that the `/DEFINE` qualifier is not required.

#### 2.4.4.25 VT330 and VT340 Terminal Emulation Restrictions

*V1.0*

Although DECterm incorporates some of the features of the VT330- and VT340-series video terminals, such as ReGIS and Sixel graphics; it does not provide complete VT330 and VT340 terminal emulation.

The following restrictions apply to DECterm:

- User-loadable characters (DRCS), local mode, and control representation mode (CRM) are not implemented.
- The checkerboard character (character 97 in the DIGITAL Special Graphic character set) is used as an error character in place of the reverse question mark.
- DECterm uses replace mode as the default for Sixel drawing on servers with eight planes or less. On servers with more than eight planes, DECterm uses overlay mode; replace mode is not functional on those servers.

## General User Release Notes

### 2.4 Applications

#### 2.4.4.26 Using CREATE/TERMINAL/DETACHED/PROCESS

*V1.0*

The `/PROCESS=procnam` qualifier does not work when used in conjunction with the `/DETACHED` qualifier, unless there is already a process running on the system where its process name is equal to the user name.

To work around this problem, use the following command procedure:

```
$! CREATE_TERM_PROC.COM
$!
$! Invoke as SPAWN/NOWAIT @CREATE_TERM_PROC procname
$!
$ SET NOON
$!
$! Set Process name to username
$!
$ X = F$CONTEXT("PROCESS", PID, "PRCNAM", "'F$PROCESS()'", "EQL")
$ NAME = F$EDIT(F$GETJPI(X, "USERNAME"), "COLLAPSE")
$ SET PROCESS/NAME="'NAME'"
$ CREATE/TERMINAL/DETACHED/PROCESS="'P1'"
$!
$! Allow new process to RUN LOGINOUT before exiting subprocess
$ WAIT 00:00:10
```

If the `/PROCESS=procnam` qualifier specifies a process name that is already in use, the DECterm is created but creation of the process inside the DECterm fails. In this case, the DCL command `CREATE/TERMINAL` returns the following error message:

```
%SYSTEM-F-DUPLNAM, duplicate name
```

#### 2.4.4.27 ReGIS Locator Report

*V1.0*

When DECterm sends a ReGIS locator report in response to the `R(P(I))` command, or in multiple input mode and the locator position is outside the addressable area, DECterm sends a locator report with the coordinates omitted. For example, press the A key to generate the report:

```
A[]<CR>, where <CR> is a carriage return (ASCII code 13).
```

### 2.4.5 DECwindows CD Player

This section contains release notes pertaining to the DECwindows CD Player application.

#### 2.4.5.1 Required Privileges

*V1.1*

The DECwindows CD Player (`DECW$CDPLAYER`) application in the `DECW$EXAMPLES` directory requires `PHY_IO` and `DIAGNOSE` privileges to operate the compact-disc player hardware. Either your process or the image must have these privileges.

## 2.4.6 DECwindows Mail

This section contains release notes pertaining to the DECwindows Mail application.

### 2.4.6.1 Support Removed for Display PostScript

*V1.2-6*

With the removal of the support for Display PostScript from DECwindows Motif, DECwindows Mail no longer supports the display of messages that are exclusively PostScript code. In previous versions, DECwindows Mail sensed the presence of a mail message containing PostScript and used Display PostScript to display the message.

Currently, when DECwindows Mail detects a messages that is exclusively PostScript code, it displays the following error message:

[This PostScript® message cannot currently be displayed.]

As a workaround, use the Extract option in the File menu, (deselect the “Include Header Information” button in the Extract dialog box), and print the extracted file.

### 2.4.6.2 Pasting Messages from the Directory Window

*V1.2-4*

In DECwindows Mail, if the user selects one or more messages in the directory window using MB1 and then clicks on MB2 in another window (such as a DECterm window), the entire contents of the selected messages is pasted into the other window. The selected messages are highlighted in the directory window, however the text of the selected and pasted message is not highlighted in the Read window.

### 2.4.6.3 Responses to Keyboard Actions

*V1.2-3*

Enhancements in the DECwindows Mail application to comply more closely with OSF/Motif style conventions cause some changes with application responses to keyboard actions.

Note the following changes:

- If you use the Tab key to advance through text entry boxes in the Create/Send window, the current field is no longer highlighted. To select a field, use one of the standard Motif actions, such as double or triple clicking MB1, or use the Shift+Alt → key sequence.
- In several dialog boxes, press either the Select key or the space bar to activate a pushbutton through the keyboard. Note that the Return key and the Enter key are bound to other widgets in the dialog box. Alternatively, you can continue to click MB1 to activate a pushbutton.

## General User Release Notes

### 2.4 Applications

#### 2.4.6.4 Using the Color Customizer with DECwindows Mail

*V1.2*

If you use the color customizer sample program provided in the directory DECW\$EXAMPLES to control DECwindows Mail colors, the DECwindows Mail color customization dialog boxes used to modify those colors may not reflect the correct current color values. This is normal behavior; use the color customizer instead of the DECwindows Mail color customization dialog boxes to change these values. Alternatively, exit from the color customizer and restart DECwindows Mail.

#### 2.4.7 Notepad

This section contains release notes pertaining to the Notepad application.

##### 2.4.7.1 Notepad Is Linked with the OSF/Motif Release 1.1.3 Toolkit

*V1.2-3*

The Notepad application is linked with the OSF/Motif Release 1.1.3 Toolkit; it has not been modified to link with the updated OSF/Motif Release 1.2.3 Toolkit. As a result, the following restrictions apply:

- OSF/Motif Release 1.2 drag-and-drop functionality is not supported. As a workaround, use the standard clipboard operations (Cut, Copy, and Paste) to transfer text into Notepad.
- OSF/Motif Release 1.2 tear-off menus are not supported.

#### 2.4.8 Paint

This section contains release notes pertaining to the Paint application.

##### 2.4.8.1 Private Colormaps

*V1.1*

If your workstation does not have sufficient colormap entries to view or edit a color image, Paint creates a private colormap. When this happens, the Paint image retains its colors, but the colors on the rest of the workstation are modified. To restore the colors to their original values, give another window input focus by clicking on it.

##### 2.4.8.2 Slow Performance of Some Paint Operations

*V1.0*

On GPX systems, Paint might appear slow even when performing basic operations such as drawing a brush stroke. This is because the pixmap is being swapped into the pixmap memory in order to paint the object. If Paint performance is slow, click on the Pencil tool and draw a point in the image area. This should improve performance following the initial Pencil click.

When editing images (especially color images), you can resize the image area using the Picture Size... entry from the Options menu. Resize to the least possible image area to significantly reduce the amount of required pixmap memory.

## 2.4.9 Session Manager

This section contains release notes pertaining to the Session Manager application.

### 2.4.9.1 Specifying Authorized User Node Names That Contain Reserved Characters

*V1.2*

When specifying a list of users who can access the X server in the Authorized Users dialog box, place the node name within quotation marks if the name contains any of the following:

- Reserved characters: space, tab, comma (,) or double quotation mark (")
- Double colon (::)
- A colon (:) as the final character in the node name

Session Manager automatically adds quotation marks to the node name if they are needed, unless the node name begins with a double quotation mark. If the node name begins with a double quotation mark, Session Manager assumes that the user has already quoted the node name and does not change it.

Within a quoted string, a double quotation mark should be replaced by two double quotation marks (""). For example, the quoted string "DEC:.zko."my node" should be changed to the following:

```
("DEC:.zko."my node"").
```

### 2.4.9.2 Using the Color Customizer with Session Manager

*V1.2*

If you are using the color customizer example program provided in the directory DECW\$EXAMPLES to control Session Manager colors, the Session Manager color customization dialog boxes used to modify those colors may not reflect the correct current color values. This is normal behavior; use the color customizer instead of the Session Manager color customization dialog boxes to change these values. Alternatively, exit the color customizer and restart your session.

### 2.4.9.3 Detached Processes Created by Default May Prevent Other Applications from Opening

*V1.1*

Applications created by FileView and Session Manager are detached processes.

The implication is that during application startup, SYSSMANAGER:SYLOGIN.COM and SYSSLOGIN:LOGIN.COM command procedures are executed. Any command executed by these command procedures which reads from SYSSINPUT reads data intended to be used by FileView or Session Manager for the application startup. This prevents the application from starting. Examples of such commands are INQUIRE, READ/PROMPT, and SET TERMINAL/INQUIRE.

### 2.4.9.4 Change in Input Focus When Using a Private Logo

*V1.0*

If you are logging into DECwindows Motif and using a private logo command file, input focus might revert unexpectedly to the Username field when the private logo starts up.

## General User Release Notes

### 2.4 Applications

#### 2.4.9.5 Stopping a Session Manager Process

*V1.0*

Stopping the Session Manager process abruptly can have the following serious consequences for nonprivileged workstation users:

- Nonprivileged users will not be able to start a new Session Manager or create a new login box.
- If the session is paused, the Pause cover window is deleted and unauthorized users will be able to gain access windows on that workstation.
- The workstation could become unusable if the Session Manager process is terminated by the job controller (for example, when the user's access hours, which might be from 8 a.m. to 5 p.m., are exceeded). In this case, a possible solution would be to restart DECwindows in a batch job that runs during off-hours.

To avoid these problems, use the STOP/NOEXIT command to stop the process. Otherwise, stop the Session Manager process, and restart DECwindows from the SYSTEM account (or an account with system manager privileges):

```
$ @SYS$MANAGER:DECW$STARTUP RESTART
```

#### 2.4.10 Window Manager

This section contains release notes pertaining to the DECwindows Motif Window Manager.

##### 2.4.10.1 Help Text Does Not Display on All Screens in a Multihead System

*V1.3*

On the Traditional DECwindows Desktop, invoking help (by right-clicking) on a screen other than screen 0, displays an empty Bookreader window.

If you want to display help on a multihead configuration using the right-click method, initiate the request from screen 0.

##### 2.4.10.2 Alt + Space Key Does Not Post the Window Menu

*V1.2-4*

With most Motif implementations, the Alt+space key combination prompts the Window Manager to display the Window menu. However, DECwindows Motif maps the Alt+space key binding to the Compose Character function. This provides a method for character composition on keyboards which do not supply a specific Compose Character key.

To change the Alt+space key binding so that it displays the Window menu, follow the procedure appropriate to your desktop environment.

##### **For New Desktop systems:**

1. Copy CDESSYSTEM\_DEFAULTS:[CONFIG.lang]SYS.DTWMRC to DISKS:[LOGIN.DT]DTWMRC.DAT.
2. In the Keys DtKeyBindings section, uncomment the following line:  

```
Alt<Key>space icon|window f.post_wmenu
```
3. Restart the Workspace Manager.



**For Traditional DECwindows Desktop systems:**

1. Copy DECW\$SYSTEM\_DEFAULTS:DECW\$MWM\_RC.DAT to DECW\$USER\_DEFAULTS:DECW\$MWM\_RC.DAT.

2. In the Keys DtKeyBindings section, uncomment the line:

```
Alt<Key>space icon|window f.post_wmenu
```

3. Restart the Window Manager.

**2.4.10.3 Using the Color Customizer with DECwindows Motif Window Manager**

*V1.2*

If you are using the color customizer provided in the DECW\$EXAMPLES directory to control Motif Window Manager colors, the Motif Window Manager customization dialog boxes used to modify those colors may not reflect the correct current color values. This is normal behavior; use the color customizer instead of the Motif Window Manager color customization dialog boxes to change these values. Alternatively, exit the color customizer and then restart Motif Window Manager. See *HP DECwindows Motif for OpenVMS New Features* for more information about the color customizer.

**2.4.10.4 Changing Function Key Bindings Using the Window Manager Configuration File**

*V1.0*

The configuration file DECW\$MWM\_RC.DAT defines how the Window Manager uses the function keys. Most of the accelerators use the form Alt key (or Compose Character key) and function key, for example Alt+F7.

If any application needs to use these keys, you must either comment them out by placing an exclamation point (!) at the beginning of the line, or create new keyboard bindings. Then change Mwm\*keyBindings:DefaultKeyBindings in the MWM resource file to point to the new bindings.

With the Motif binding, you can no longer use the Alt+spacebar or the Compose Character+spacebar to bring up the Window menu because it interferes with Compose Character sequences in DECterm. Use Shift+F11 to bring up the Window menu.

To reenale Alt+space, select the appropriate option in the Workspace Options dialog box and apply the current settings. You can also remove the comment for the default button bindings for Alt+space in the DECW\$MWM\_RC.DAT file.

**2.4.10.5 Restarting the Window Manager**

*V1.0*

The file SYSSMANAGER:DECW\$MWM.COM contains settings that specify how the Window Manager is restarted. By default, it is always restarted on all the screens that are available. However, if you are not starting the Window Manager from the Session Manager, then the Window Manager might not have been initially started on all the available screens. You can modify this file to change the way the Window Manager is restarted for your system.

## General User Release Notes

### 2.4 Applications

#### 2.4.10.6 Customizing Color-Related Resources for Monochrome Monitors

*V1.0*

The Motif Window Manager does not support full customization of color-related resources for monochrome monitors in the Options dialog box. In order to change the colors, you might need to modify the pixmap resources by directly editing the DECW\$MWM\_BW.DAT resource file. For example, to change the color of the active window's title background, you must change the `Mwm*activeBackgroundPixmap` resource. Some values include `25_foreground`, `50_foreground`, `75_foreground`, and `unspecified pixmap`.

In addition, by default, the title text is created with a white background. To use the same color as the rest of the title, set the `Mwm*cleanText` resource to `FALSE`.

#### 2.4.10.7 Customizing Colors on Multihead Systems

*V1.0*

If you have a multihead system with different monitor types (color, monochrome, or gray-scale), you can customize the colors only by using the Options dialog box on the monitors that match the type of your main monitor (screen 0). To customize the other monitors, you must either log in to a system with that monitor type or directly edit the resource files.

#### 2.4.10.8 Moving the Icon Box Off Screen

*V1.0*

If you move the icon box to the edge of the screen and then resize it using the keyboard, you can move it off the screen. To retrieve the icon box, press `Alt+Tab` until you reach that window and then press `Shift+Escape (F11)` to bring up the Window menu for that window. You can then move the window back onto the screen.

#### 2.4.10.9 Multiline Icon Title Not Centered

*V1.0*

The Window Manager does not center all the lines of a multiline icon title.

## 2.5 Tools and Utilities

This section contains notes related to X Window System utilities that have been ported to DECwindows Motif.

### 2.5.1 X Authority Utility (xauth)

This section contains release notes pertaining to the X Authority utility (xauth).

#### 2.5.1.1 File Locking Not Supported with Logical Names

*V1.3*

The X Authority utility (xauth) does not support file locking when files are specified using a logical name. Since xauth does not translate OpenVMS logicals, it creates the lock files in the current default directory versus the directory specified by the logical.

For example, the following xauth command creates the lock files in the current default directory not in the USER directory specified by the logical `XAUTH_FILE`:

```
$ DEFINE XAUTH_FILE DISK:[USER]FILE.DECW$XAUTH
$ XAUTH -f XAUTH_FILE
```

In order to use logical names with xauth, translate each logical before invoking xauth, for example:

```
$ XAUTH_FILE = F$TRNLNM ("XAUTH_FILE")  
$ XAUTH -f 'XAUTH_FILE'
```

Note that this restriction only pertains to using logical names with xauth and does not apply when using logical names with the SET DISPLAY/XAUTHORITY\_FILE command.

### 2.5.1.2 Specifying File Names without File Types Can Result in Failure

*V1.3*

The X Authority utility (xauth) cannot differentiate between files and directories of the same name if the file does not yet exist and the type is not specified. For example, the following xauth command creates a set of lock files but does not create the X authority file:

```
$ CREATE/DIRECTORY [.TEST]  
$ XAUTH -f TEST
```

In this case, xauth fails without reporting an error.

To prevent this problem from occurring, always specify a file type when entering an X authority file specification.

## 2.5.2 Font Server Information Utility (fsinfo)

This section contains release notes pertaining to the Font Server Information utility (fsinfo).

### 2.5.2.1 Font Server Information Utility Fails After Invoking

*V1.3*

In some cases, the Font Server Information utility (fsinfo) terminates with an access violation after it is first invoked. If this situation occurs, rerun fsinfo. Subsequent fsinfo sessions should be successful.

## 2.5.3 Print Screen

This section contains release notes pertaining to the Print Screen utility.

### 2.5.3.1 Print Screen Truncates PostScript Output

*V1.2-3*

When using the Print Screen application to produce PostScript output on some printers, part of the output may be lost. Usually, the upper and left portion is missing when printing in landscape mode and the lower and left portion is missing when printing in portrait mode. This problem is caused by differences between PostScript printers.

To correct this problem, DECwindows Motif for OpenVMS Version 1.2-5 added support for four resources that can be specified in DECW\$PRINTSCREEN.DAT:

```
PrintScreen.plxtranslate  
PrintScreen.plytranslate  
PrintScreen.plxscale  
PrintScreen.plyscale
```

## General User Release Notes

### 2.5 Tools and Utilities

These resources control the size and position of the PostScript image on the page. The `plxtranslate` and `plytranslate` resources control the x and y offsets of the image in inches from the origin. The `plxscale` and `pyscale` resources are an x and y scale factor to allow the entire image to be displayed on the page after the origin is moved.

---

## System Management Release Notes

This chapter describes changes, corrections, restrictions, and known problems that pertain to managing a DECwindows Motif system.

### 3.1 Installation and Upgrade Information

This section contains release notes related to the DECwindows Motif installation and upgrade procedures.

#### 3.1.1 DECwindows Motif Version Support and Compatibility

*V1.5*

The following table lists which versions of DECwindows Motif are supported on various platforms and versions of the HP OpenVMS operating system. Support is defined to mean all features and functionality are available, except for Display PostScript, which has been withdrawn from all DECwindows X display servers since OpenVMS Version 7.3.

**Table 3–1 Supported Versions of DECwindows Motif**

DECwindows Motif Version	OpenVMS Version
Version 1.5	OpenVMS I64 Version 8.2 OpenVMS Alpha Version 8.2
Version 1.3–1	OpenVMS Alpha Version 7.3–2
Version 1.3	OpenVMS Alpha Version 7.3–1
Version 1.2–6	OpenVMS Alpha Versions 7.3, 7.3–1, 6.2 OpenVMS VAX Versions 7.3, 6.2
Version 1.2–5	OpenVMS Alpha Versions 7.3, 7.3–1, 6.2 OpenVMS VAX Versions 7.3, 6.2

Note that since the DECwindows Motif Version 1.3 and higher releases are based upon specific OpenVMS server and device driver images, only install these releases of DECwindows Motif on the operating system versions listed above.

Mixed version clusters are supported as long as each system in the cluster is running one of the supported combinations of DECwindows Motif and OpenVMS listed in Table 3–1. Each version of OpenVMS must also support cluster configurations. See the Software Product Description (SPD) associated with each version of OpenVMS to determine whether mixed-version cluster support is available.

## System Management Release Notes

### 3.1 Installation and Upgrade Information

#### 3.1.2 Limited Support for Third-Party TCP/IP Products (Alpha Only)

*V1.5*

Significant changes were made to the DECwindows Motif TCP/IP transport interface in support of newer socket interfaces (getaddrinfo and getnameinfo) and their address formats. As a result, some third-party TCP/IP products may not be compatible with the updated interface. Specifically, older versions of MultiNet (prior to Version 5.1) and TCPware (prior to Version 5.7) from Process Software do not support the capabilities available with the updated DECwindows transport and prevent successful server connections.

Contact the TCP/IP product vendor to check for availability of software patches or releases that support these newer interfaces.

#### 3.1.3 DECW\$STARTUP Requires SHARED Privilege

*V1.5*

The DECW\$STARTUP.COM command file now requires the SHARED privilege in addition to those system privileges required previously. This enables a user whose account does not have all system privileges enabled to run the DECW\$STARTUP RESTART command successfully from the serial console.

Note that to prevent any difficulties with system startup, HP recommends that you start or restart DECwindows Motif from the SYSTEM account.

#### 3.1.4 Using Shareable Linkages to Install Images

*V1.2-4*

Using shareable linkages to install images on DECwindows Motif systems can offer the following advantages:

- Enhanced startup performance by decreasing image-activation time
- Conserved memory usage by decreasing the total of memory pages used by the image

*V1.3*

By default, the following images are installed using shareable linkages:

DECW\$XLIBSHR.EXE (X Library)  
DECW\$XTLIBSHRR5.EXE (X Toolkit Intrinsics)  
DECW\$XMLIBSHR12.EXE (Motif Toolkit)  
DECW\$MRMLIBSHR12.EXE (Motif Resource Manager)  
DECW\$DXMLIBSHR12.EXE (DECwindows Extensions to the Motif Toolkit)  
CDE\$UNIX\_ROUTINES.EXE (UNIX emulation routines)  
DECW\$TRANSPORT\_COMMON.EXE (Transport)  
DECW\$XPORT\_SERVICES.EXE (Transport)  
DECW\$LCNLIBSHR.EXE (Logical Connection Number)  
DECW\$SETSHODISSHR.EXE (OpenVMS Display Device)

## System Management Release Notes

### 3.1 Installation and Upgrade Information

DECW\$XAUSHR.EXE  
DECW\$ICELIB.EXE (ICE)  
DECW\$ICELIB\_PTHREAD.EXE (ICE)  
DECW\$SMshr.EXE (X Session Manager Protocol)

These images are installed using the /SHARE=ADDRESS\_DATA and /RESIDENT options. Note that if you accept the default values, these images are installed as memory resident and cannot be replaced during a restart. As a result, the following message is displayed when you restart DECwindows Motif:

```
Shared linkage sections are in use on this system and no images will be
reinstalled. If you are restarting DECwindows to reinstall images then you
must reboot the system.
```

To replace new images installed with this option, reboot the system. Note that you can disable shared-linkage sections by defining the logical name DECW\$IGNORE\_SHARE\_ADDRESS in the SYSTARTUP\_VMS.COM command procedure.

#### 3.1.5 DECW\$COMPARE\_VERSIONS Command File Limitation

*V1.2-4*

The DECW\$COMPARE\_VERSIONS command file compares version identifications using two-digit years. Therefore, it will not compare version identifiers correctly for images generated in the year 2000 and later with version identifiers for images generated before the year 2000.

#### 3.1.6 Restarting DECwindows Motif from the Operator Console (OPA0:)

*V1.0*

Starting or restarting DECwindows Motif by running DECW\$STARTUP.COM from a serial console attached to OPA0: can change the characteristics of the terminal. For example, starting DECwindows Motif in this manner can change the current device type setting and prevent the subsequent use of an editor.

To prevent this from occurring, set the terminal characteristics permanently before invoking the DECW\$STARTUP.COM procedure, as follows:

```
$ SET TERMINAL/INQUIRE/PERMANENT
$ @SYS$MANAGER:DECW$STARTUP RESTART
```

## 3.2 System Tuning and Performance

This section describes important issues and considerations related to the tuning of DECwindows Motif.

### 3.2.1 Changes in Recommended UAF and System Parameter Values

*V1.5*

With this release of DECwindows Motif, many of the recommended minimum values for user authorization file (UAF) and system parameters on the OpenVMS Alpha platform have been significantly increased. In addition, a separate set of system parameter values has been generated for the OpenVMS I64 platform.

To optimize the performance of the DECwindows display server and client applications, scan the current UAF and system parameter values on systems running DECwindows Motif for OpenVMS Version 1.5 and make sure that they meet the suggested minimum values listed in Appendix A of the *HP DECwindows Motif for OpenVMS Management Guide*.

## System Management Release Notes

### 3.3 Security and Authorization

### 3.3 Security and Authorization

This section describes important issues and considerations related to system security.

#### 3.3.1 GENPWD Flag Now Handled Properly (Alpha Only)

*V1.5*

When a system manager sets the GENPWD flag on a user account, that user is restricted to using a generated password versus setting their own. Once the user's generated password expires, they must choose a new password from the generated list.

Previously when this flag was set on a user account, the following problems occurred:

- On the Traditional DECwindows Desktop, the system would hang if the user entered a password other than one included on the generated password list. To recover from the hang, the system manager had to terminate the existing DECW\$LOGINOUT image and restart DECwindows.
- On the New Desktop, users were not restricted to choosing a generated password.

These problems have been fixed with DECwindows Motif for OpenVMS Version 1.5.

#### 3.3.2 BadAuthorizationProtocol Error Displayed When Generating Authorization Keys with Kerberos Enabled

*V1.3-1*

The SECURITY extension to the X display server does not support on-demand generation of authorization keys for the Kerberos authentication protocol. Non-support of key generation is consistent with the standard implementation of the server extension, as published by X.Org.

Consequently, the following DCL commands produce a BadAuthorizationProtocol error or unwanted results when used to generate an authorization key on an X server that has Kerberos enabled:

- SET DISPLAY/GENERATE=(PROTOCOL=MIT-KERBEROS-5)
- XAUTH GENERATE

This is expected behavior; do not use these commands to generate authorization keys for X servers that use the Kerberos protocol. See the *HP DECwindows Motif for OpenVMS New Features* manual to learn when and how to manually create X authority file entries for Kerberos-enabled servers.

#### 3.3.3 Setting the hostList Resource Manually

*V1.3*

On New Desktop systems, access to DECwindows Motif can be granted to a predefined set of users by specifying values to the `*hostList` and `*numHosts` resources in either the `SYS.RESOURCES` or `DT.RESOURCES` file. The `*hostList` resource specifies the users (by host name or address) who are allowed access, and the `*numHosts` resource specifies the total number of users in the list.



Typically, these resources are modified automatically when you implement or make changes to user-based security via the Session Manager. However, if you maintain the user-based access lists by modifying `*hostList` manually, be sure to also set `*numHost` to the appropriate value.

For additional information on defining global and system level resources, see the *Getting Started With the New Desktop* manual. For further information on enabling access control, see the *HP DECwindows Motif for OpenVMS Management Guide* manual.

### 3.3.4 Unknown Code Error Displayed When Enabling Kerberos

V1.3

If the Kerberos logical (KRBSROOT) has not been set properly, the following error is displayed when you attempt to enable Kerberos from either the DECwindows Motif desktop or the DCL command line using KINIT:

```
"Unknown code 6 while initializing krb5"
```

To correct this problem, reconfigure the Kerberos for OpenVMS Security Client software as described in the *Kerberos for OpenVMS Installation Guide and Release Notes* available from the OpenVMS web site (<http://www.hp.com/go/openvms>).

### 3.3.5 Bad Atom Error Displayed When Running Applications Over an Untrusted Connection

V1.3

Any DECwindows Motif application that attempts to run over an untrusted connection without a security policy defined will either not start or will exit after starting. An untrusted connection is created when access is granted to an X server using a cookie generated by SET DISPLAY/GENERATE or XAUTH GENERATE.

In most cases where this problem occurs, the following error message is displayed:

```
X Error of failed request  
BadAtom (invalid Atom parameter)
```

To reduce the likelihood of application errors over untrusted connections, start the server with the default security policy file by setting the symbol DECW\$SECURITY\_POLICY to DECW\$EXAMPLES:DECW\$SECURITY\_POLICY.TXT.

Note however, that the following applications do not run cleanly over an untrusted connection, even with the security policy file in place:

- Bookreader
- CDA Viewer
- DECterm
- DTPAD
- OpenVMS Debugger
- Paint
- Print Screen
- Style Manager

## System Management Release Notes

### 3.3 Security and Authorization

#### 3.3.6 Applications Running Over an Untrusted Connection May Not Work with XINERAMA and SEC\_XAG Extensions

*V1.3*

Applications connected to the X server using an untrusted, generated cookie may not work when the XC-APPGROUP, SECURITY, and XINERAMA server extensions are both loaded. The problem is caused by the order in which these extensions are initialized when the server is started.

To avoid the problem, always define DECW\$SERVER\_EXTENSIONS in DECW\$PRIVATE\_SERVER\_SETUP.COM so that if both XINERAMA and SEC\_XAG (combined SECURITY and XC-APPGROUP image) are loaded, XINERAMA is listed before SEC\_XAG.

For example, define:

```
$ decw$server_extensions == "XINERAMA,SEC_XAG"
```

instead of:

```
$ decw$server_extensions == "SEC_XAG,XINERAMA"
```

#### 3.3.7 Kerberos and TCP/IP Do Not Recognize a Node Name of 0

*V1.3*

When using Kerberos with TCP/IP, providing a node name of 0 (to indicate the local host) does not work correctly. The problem occurs only if Kerberos is initialized from the server X authority file. For example:

```
$ SET DISPLAY/TRANSPORT=TCPIP/NODE=0  
$ RUN DECW$EXAMPLES:ICO
```

```
Xlib: krb5_sname_to_principal failed: Hostname cannot be canonicalized  
Cannot open display  
: non-translatable vms error code: 0x182B2  
%rms-e-rnf, record not found
```

Instead, provide the TCP/IP address of the local host explicitly:

```
$ SET DISPLAY/TRANSPORT=TCPIP/NODE=11.22.33.44
```

#### 3.3.8 Do Not Use DECwindows Motif Login When Initializing Kerberos Setup from the Server X Authority File

*V1.3*

When initializing the Kerberos setup using the server X authority file, the DECwindows Motif login cannot be used. The reason for this is that DECwindows login is a privileged image and the Kerberos runtime image is not an installed image. Moreover, the clients run by login manipulate the Kerberos setup. Therefore, session management is not supported in this configuration.

To prevent the DECwindows login box from coming up, define DECW\$MAINAPP in SYSS\$MANAGER:DECW\$PRIVATE\_APPS\_SETUP.COM as follows:

```
$ DECW$MAINAPP == " "
```

### 3.3.9 Help on Kerberos Login Box is Incorrect

V1.3

The online help for Revoke Ticket is incorrect. See the *HP DECwindows Motif for OpenVMS New Features* manual for the correct description.

### 3.3.10 Do Not Insert Generated Cookies into the Default X Authority File

V1.3

Inserting generated cookies in the default X authority file may interfere with the current session cookie. If you want to propagate a generated cookie value, HP recommends using the /XAUTH qualifier as follows to insert the generated cookie in an alternate X authority file:

```
$ SET DISPLAY/GENERATE=NOTIMEOUT/XAUTH=disk$:[dir]myauthority.decw$xauth
```

If you insert a generated cookie into the default X authority file during the current DECwindows Motif session, end the session to restore normal system operation.

If you insert a generated cookie into the default X authority file outside of a DECwindows Motif session, delete the X authority file prior to logging into DECwindows.

## 3.4 Desktop Management

This section describes important issues and considerations related to managing desktops and their applications.

### 3.4.1 Trusted Unpause Operations Allowed (Alpha Only)

V1.5

The trusted unpause functionality described in the *HP DECwindows Motif for OpenVMS Alpha New Features* manual did not function on systems running DECwindows Motif for OpenVMS Alpha Version 1.3–1. This has been corrected with DECwindows Motif for OpenVMS Version 1.5. Note that this correction applies to OpenVMS Alpha systems only; the problem remains on OpenVMS I64 systems due to the lack of support for the Authentication and Credentials Management Extensions (ACME) subsystem in the OpenVMS I64 environment.

### 3.4.2 ACME Login Features Not Supported (I64 Only)

V1.5

The ACME subsystem available with OpenVMS Alpha is not yet available in the OpenVMS I64 environment. As a result, some features of DECwindows Motif that rely on this mechanism (such as trusted unpause) are not available on OpenVMS I64 systems. For more information about the ACME subsystem, see the *HP OpenVMS Guide to System Security*.

## System Management Release Notes

### 3.4 Desktop Management

#### 3.4.3 Color Problem in DECwindows Login Screen

*V1.2*

A problem may occur on systems that have a customized DECW\$LOGIN.DAT file. The Start Session dialog box is the color blue instead of tan. If this condition exists, look for a customized DECW\$LOGIN.DAT file in the directory SYS\$COMMON:[DECW\$DEFAULTS.USER] and move it to SYS\$MANAGER. A DECW\$LOGIN.DAT file in SYS\$COMMON:[DECW\$DEFAULTS.USER] prevents the \*background: resource from being defined; thus, it will default to the color blue.

HP provides a copy of the DECW\$LOGIN.DAT file in the SYS\$COMMON:[DECW\$DEFAULTS.SYSTEM] directory. Any customized versions of this file should reside only in SYS\$MANAGER.

### 3.5 Font and Keymap Management

The following sections contain release notes pertaining to font and keymap support.

#### 3.5.1 Queries on TrueType Font Properties No Longer Reset the Display Server (Alpha Only)

*V1.5*

Previously, queries on TrueType font properties by desktop applications or the xlsfonts utility (using the -l option) caused the display server to partially reset and appear to hang. This problem has been fixed with DECwindows Motif for OpenVMS Version 1.5.

#### 3.5.2 Euro Currency Symbol Restrictions

*V1.3*

The following limitations exist with DECwindows Motif and its support for the euro currency symbol:

- When the euro symbol is pasted or sent to another X window application on a different platform (such as UNIX) using Compound Text format, the character may not be recognized as the euro symbol on the other platform.
- The euro currency symbol is not included as part of the scalable font sets available with DECwindows Motif. Applications using scalable fonts cannot display the euro symbol.
- Although you can use EDT to type the euro character into a file, the symbol may not display correctly on the screen. For example, typing `Compose o x` displays the A4 character code.

#### 3.5.3 Adjusting Resource Settings for Keymaps that Implement the Mode\_switch Modifier

*V1.3*

When using a traditional DECwindows Motif keymap that implements the Mode\_switch modifier, make sure that you first adjust the default Window Manager resource settings to enable window grabbing. Otherwise, you may be prevented from using the mouse to grab the handles of open windows on the desktop.

For example, the AUSTRIAN\_GERMAN\_LK401AG\_TW keymap implements the compose key as a one-shot lockdown modifier. The first time a user presses the compose key with this keymap loaded, the `Mode_switch` modifier is activated, which prevents the user from grabbing the handles of any application windows currently open on the desktop.

To prevent this from occurring, redefine the default Window Manager resources as follows; then exit and restart your DECwindows Motif session:

- **For New Desktop systems:**

Edit the file `CDE$USER_DEFAULTS:[APP-DEFAULTS.C]DTWM.DAT`, and set the value of `Dtwm*ignoreModKeys` and `Dtwm*ignoreAllModKeys` to `TRUE`. If this file and directory do not already exist, create the directory and copy the `DTWM.DAT` file from `CDE$SYSTEM_COMMON:[APP-DEFAULTS.C]` to the directory.

- **For Traditional DECwindows Desktop systems:**

Edit the file `DECW$SYSCOMMON:[DECW$DEFAULTS.USER]DECW$MWM.DAT`, and set the value of `Mwm*ignoreModKeys` and `Mwm*ignoreAllModKeys` to `TRUE`. If this file does not already exist, copy the `DECW$MWM.DAT` file from `DECW$SYSTEM_DEFAULTS` to the directory.

## 3.6 Proxy Server Management

The following sections contain release notes pertaining to the management of the Low-Bandwidth X (LBX) proxy server and related proxy applications.

### 3.6.1 Proxy Servers Do Not Support Use of XC-QUERY-SECURITY-1 Protocol

*V1.3-1*

The Low-Bandwidth X (LBX) proxy server (and other third-party proxy servers) do not support use of XC-QUERY-SECURITY-1 authentication protocol. This authentication protocol, which is enabled by the SECURITY server extension, is typically used by firewall servers to verify the security configuration of the display server to which they are connecting. Normally, firewall servers connect directly to a display server and do not use a proxy server as an intermediary.

If a client application uses a third-party proxy server to connect to an X display server using the XC-QUERY-SECURITY-1 protocol, the application may loop, block, or crash. The LBX proxy server has been modified to detect whether the protocol is in use, and in this situation, produces the following error message:

```
Multi-pass authentication not supported by LBX
```

When using a proxy server to process connections to one or more X display servers, verify that the SECURITY extension is not enabled on the X servers. Do this by scanning the `DECW$PRIVATE_SERVER_SETUP.COM` file on each server system and checking that the parameter `DECW$SERVER_EXTENSIONS` does not contain a value of `SEC_XAG`.

## System Management Release Notes

### 3.6 Proxy Server Management

#### 3.6.2 Proxy Manager Process Does Not Restart Automatically

*V1.3*

The following problems can occur with the proxy manager when DECwindows Motif is configured to restart the proxy manager process automatically and the DECwindows Motif session is restarted manually:

- If the proxy manager was running, a new process is not invoked when DECwindows Motif is restarted.
- If the proxy manager was not running, a new process is started; however, the owner of the process is the user who enters the startup command and not the SYSTEM account.

Note that these problems do not occur when DECwindows Motif is restarted as part of an ordered system shutdown (reboot).

To manually restart the proxy manager, enter the following command for the active proxy manager process before restarting DECwindows Motif:

```
$ STOP DECW$PROXY
```

Note that this command not only stops the active proxy manager process, but also terminates all proxy server connections managed by the process.

To ensure that the owner of the proxy manager process is the SYSTEM account, always log in as SYSTEM when restarting DECwindows Motif.

#### 3.6.3 Proxy Manager Configuration File Restriction

*V1.3*

The proxy manager does not support specifying more than one managed or unmanaged entry for the same proxy service in the configuration file. If there are multiple entries, only the first one will be processed.

## 3.7 X Display Server Management

The following sections contain release notes pertaining to the management of the DECwindows X11 Display Server.

#### 3.7.1 Adjusting Pixel Depth on Systems with ATI RADEON Graphics Cards

*V1.5*

The default settings for the ATI RADEON graphics card are 24 bits per pixel (pixel depth) and TrueColor (visual class). These settings can cause DECwindows Motif graphics applications or utilities that assume specific pixel depth or visual type values to fail. For example, DECW\$PAINT relies on a pixel depth of 8 bits in PseudoColor mode.

If display issues occur on a system with an ATI RADEON card, HP suggests that you adjust the default settings using the DECW\$SERVER\_PIXEL\_DEPTH or DECW\$SERVER\_DEFAULT\_VISUAL\_CLASS system logical, as described in the *HP OpenVMS Release Notes*.

### 3.7.2 Performance Degradation May Occur on XINERAMA Multihead Systems

#### *V1.3*

In some cases, multihead systems configured to use the XINERAMA extension perform slower than single-head or traditional multihead systems (without XINERAMA enabled). Slowed system performance typically occurs on multihead systems with three or more graphics cards that are also running multiple request-intensive applications simultaneously.

This is expected behavior; the following design issues inherent to the XINERAMA implementation from X.Org contribute to the slowdown in system performance:

- **Added layer of processing when rendering drawable items**  
Instead of using the typical Proc\* functions to render drawable items onscreen (such as windows), XINERAMA uses its own set of functions—inserting an additional layer of processing before the rendering functions are called. For each screen in the configuration, the XINERAMA functions supply the appropriate screen-specific resource values to the rendering functions. This extra layer of processing results in more compute time spent comparing drawable regions, determining the applicable screen, modifying the resources for each screen, and completing the additional calls.
- **More complex event handling for secondary screens**  
Typically, events are destined for a single screen. On a multihead system, XINERAMA distributes events from the dispatch layer to the individual screens for display. Each time an event originates from a secondary screen (other than screen 0), a reverse lookup is required to locate the appropriate screen resource. XINERAMA then maps the event back to the virtual screen 0, and eventually, to the client.
- **Unavailability of graphics optimizations**  
Each graphics card maintains a separate framebuffer that can be manipulated to optimize display performance. In single-head and traditional multihead configurations, the display optimization can be controlled with such mechanisms as Direct Rendering Infrastructure (DRI) and on-card hardware acceleration.

With XINERAMA, however, these separate framebuffers are merged to form a single work surface. This merged framebuffer can prevent or impede graphics optimizations, as each card only maintains a segment of the entire framebuffer.

If you have configured a XINERAMA-based multihead system and are experiencing a notable decrease in system performance, HP recommends that you do one or more of the following to improve response time:

- Decrease number of heads in the configuration.
- Limit the number of complex, request-intensive applications running concurrently.
- Use the X server system as a display node only, keeping all clients on different nodes.

If you continue to experience a significant lag in system response, HP recommends that you disable the XINERAMA extension, and configure a traditional multihead system as described in the manual *HP DECwindows Motif for OpenVMS Management Guide*.

## System Management Release Notes

### 3.7 X Display Server Management

#### 3.7.3 Using XINERAMA on New Desktop Systems

*V1.3-1*

The following restriction exists when using the New Desktop on a multiheaded system based on XINERAMA.

Some DECwindows Motif dialog boxes are designed to display at the center of the screen. If there are an even number of screens in any one direction, the dialog boxes are displayed at the junction of two screens, making them difficult to view. Some dialog boxes can be repositioned on screen; however, the following cannot since they are displayed while the Window Manager is not running:

- Login dialog box
- Login help dialog box
- Login Set Password dialog box
- Kerberos Login dialog box
- Logout Confirmation dialog box
- Workspace Restart Confirmation dialog box
- Move/Size coordinates displayed by the Workspace Manager

You can manually reposition the New Desktop login dialog box by setting the following resources in the XRESOURCES.DAT file located in CDE\$SYSTEM\_DEFAULTS:[CONFIG.C]:

```
Dtlogin*matte.x: 50
Dtlogin*matte.y: 100
```

---

#### Note

---

The XRESOURCES.DAT file in CDE\$SYSTEM\_DEFAULTS is replaced each time you install DECwindows Motif. HP recommends that you store modified copies of this file in CDE\$USER\_DEFAULTS:[CONFIG.C] to save any customized settings.

---

Once you have redefined the Dtlogin\*matte resources, restart the login process. The login dialog box will be displayed at the specified (x, y) coordinates. If either position is omitted, or is set to zero, the screen will be centered on that axis.

Note that the vertical position of the screen may be slightly above center if the console window is in use.

#### 3.7.4 Some Combinations of Server Extensions Not Supported

*V1.3*

Currently, the following combinations of X server extensions are not supported:

- XINERAMA and D2DX
- DBE and MULTIBUFFERING

Note that these extensions may be enabled concurrently on the same DECwindows Motif system. However, due to resource or function conflicts, concurrent use of these extensions on the same system is not supported.



### **3.7.5 Extraneous Characters Displayed When Running XMAG in a Vertical Multihead Configuration Using XINERAMA**

*V1.3*

When using XMAG to display an image on a multihead system using XINERAMA, a one-pixel line of extraneous characters might appear between the screens when the screens are configured vertically. This problem does not occur when the screens are configured horizontally.

### **3.7.6 Incorrect Placement of Cascade Menus in Multihead Configurations Using XINERAMA**

*V1.3*

In some cases, DECwindows Motif cascade menus may not appear on the correct screen in a multihead configuration using XINERAMA. The menu is displayed in the correct position on the wrong screen. Currently, there is no workaround.

### **3.7.7 XINERAMA Supported in 2D Mode Only**

*V1.3*

Using the XINERAMA extension to the X server with 3D applications, such as OpenGL, is not supported. This extension should be used in a 2D environment only.



---

## Programming Release Notes

This chapter contains release notes related to programming in the DECwindows Motif environment.

### 4.1 General Programming

This section contains release notes pertaining to the general DECwindows Motif programming environment.

#### 4.1.1 Motif Toolkit and X Window System Support and Compatibility

*V1.5*

The following table lists the versions of the OSF/Motif Toolkit and X Window System upon which each release of DECwindows Motif is based.

DECwindows Motif	OSF/Motif Toolkit	X Window System
Versions 1.3, 1.3-1, and 1.5	CDE Motif 1.0 (OSF/Motif Release 1.2.5)	Version 11 Release 6.6 (X11R6.6)
Versions 1.2-4, 1.2-5, and 1.2-6	CDE Motif 1.0 (OSF/Motif Release 1.2.5)	Version 11 Release 5 (X11R5)
Version 1.2-3	OSF/Motif 1.2.3 (with extensions for the Common Desktop Environment (CDE))	X11R5
Version 1.2	OSF/Motif 1.2.2	X11R5
Version 1.1	OSF/Motif 1.1.3	Version 11 Release 4 (X11R4)
Version 1.0	OSF/Motif 1.1.1	X11R4

DECwindows Motif for OpenVMS Version 1.1 applications will continue to run without modification with current version of DECwindows Motif. Only those applications that have been built against the OSF/Motif Release 1.2.2 or greater Toolkit can take advantage of Version 1.2 features, such as drag-and-drop functionality and tear-off menus.

#### 4.1.2 Run-Time and Programming Environment Support

*V1.5*

The following run-time and programming environments are provided with the DECwindows Motif for OpenVMS Version 1.5 software:

- Run-time support is provided for the CDE Motif 1.0 Toolkit (OSF/Motif Release 1.2.5), OSF/Motif Release 1.1.3 Toolkit, and the XUI Toolkits.
- Development support is provided for the CDE Motif 1.0 Toolkit only.
- Language support is provided for C++ as well as for updated Motif language bindings for Pascal, Fortran, and C.

## Programming Release Notes

### 4.1 General Programming

- Language bindings for Ada are available for the OpenVMS Alpha and OpenVMS VAX platforms only as part of the Ada Version 3.5A for OpenVMS layered product. Note, however, that these bindings do not include enhancements added subsequent DECwindows Motif for OpenVMS Version 1.2–6.

Although development support is expressly provided for the CDE Motif 1.0 Toolkit, you can choose during installation to save the OSF/Motif Release 1.1.3 programming environment that existed on your system prior to the DECwindows Motif for OpenVMS Version 1.2–4 product.

If you install the software using the POLYCENTER Software Installation utility, and if programming support for the OSF/Motif Release 1.1.3 Toolkit is present, you can choose to save the header files and UIL compiler used to develop OSF/Motif Release 1.1.3 applications. If selected, the installation procedure creates a subdirectory called [.DECW\$113], and the previous programming files are moved into the new subdirectory.

See the *HP DECwindows Motif for OpenVMS Installation Guide* for additional information about saving the Release 1.1.3 programming environment. For additional information about Release 1.1.3 programming support on the OpenVMS Alpha and OpenVMS I64 platforms, see Section 4.3.3.

#### 4.1.3 Multithreaded Applications with Upcalls Enabled No Longer Cause Address Corruption (Alpha Only)

*V1.5*

Previously, on systems running DECwindows Motif for OpenVMS Alpha Version 1.3 or higher, compiling and running multithreaded DECwindows Motif applications with upcalls enabled could corrupt random addresses in the user-mode stack. This problem has been corrected with DECwindows Motif for OpenVMS Version 1.5.

#### 4.1.4 DECwindows Display Server Blocks Write Operations When All Transport Buffers are in Use

*V1.5*

The DECwindows X display server blocks write operations to the DECwindows Motif client when all transport buffers are in use. If the client fails to read and free a buffer within the 30-second timeout period, the server closes the connection. During this timeout period, the server may hang and not process any other requests or events.

Prior to DECwindows Motif Version 1.3, the client software would transfer events from the transport buffers to internal memory using a user-mode AST. Therefore, a client would only fail to read a buffer if suspended or if user-mode ASTs were disabled for a prolonged period.

Since Version 1.3, the DECwindows Motif client does not read from the transport buffer until a client function is called that either processes events or requires a reply. If a client is not actively processing events for a particular display connection, the server may hang and close the connection when events do arrive. Programs that use Xt to create an application context and then process events using XtAppMainLoop will not experience this problem.

#### 4.1.5 Functions Calling `getaddrinfo` and `getnameinfo` are not Threadsafe Over TCP/IP Connections

*V1.5*

HP TCP/IP Services for OpenVMS does not currently provide threadsafe implementations of the `getaddrinfo` and `getnameinfo` functions. Therefore, the DECwindows implementation of XOpenDisplay, IceOpenConnection, and images built upon these functions are also not threadsafe when opening connections over the TCPIP transport. This applies equally to TCPIP transport connections that follow either the IPv4 or IPv6 name format.

#### 4.1.6 Increasing the Limit of Top-Level Widgets Allowed by the UIL Compiler

*V1.3-1*

The UIL compiler has a maximum number of top-level widgets that it can write to the UID file. A top-level widget is one that is named and not referenced within the UIL compilation. By default, the maximum number of widgets is set to 1000. If this limit is exceeded, the following error message is displayed by the UIL compiler:

```
$ UIL test.uil
%UIL-F-SUBMIT_SPR, internal error - submit defect report
```

To change this limit and prevent this error from occurring, use the logical `DECW$MRM$MAX_MODULE_WIDGET`. Make sure that you define the logical prior to running the UIL compiler, as follows:

```
$ DEFINE DECW$MRM$MAX_MODULE_WIDGET 2000
$ UIL test.uil
```

---

**Note**

---

The error message noted above can also result from other compilation problems. If you have already used the `DECW$MRM$MAX_MODULE_WIDGET` logical to increase the maximum number of top-level widgets, and the error continues to be displayed during compilation, examine the UIL file for other build issues and dependencies.

---

#### 4.1.7 Increased Stack Requirements

*V1.3*

The addition of significant new functionality in the client libraries may increase the stack space used by DECwindows Motif at run time. Client applications that call DECwindows Motif functions from threads other than the main thread may experience a stack overflow.

If an overflow occurs, rebuild the application using a larger stack size for created threads.

Note that this problem does not occur with single-threaded applications or those multithreaded applications that make all their calls to DECwindows Motif from the main application thread.

## Programming Release Notes

### 4.1 General Programming

#### 4.1.8 Privileges Required for ICE, Proxy Manager, and LBX Server Processes

*V1.3*

The Inter-Client Exchange (ICE), proxy manager, and Low-Bandwidth X (LBX) proxy server each provide functions that can establish separate server processes. These server processes may require certain system resources to gain access to one or more transport interfaces and to manage client connections.

The following table shows the minimum privileges required, according to network transport, to gain access to the appropriate resources:

Transport	Privilege
TCPIP	NETMBX
DECNET	TMPMBX, NETMBX, and SYSNAM
LOCAL	PRMMBX and SYSGBL

#### 4.1.9 Support for Display PostScript Removed

*V1.2-6*

Starting August 1, 1998, support was discontinued for the Display PostScript software licensed by Adobe Systems Incorporated. This action resulted from Adobe ending their former ongoing support of Display PostScript.

Due to this decision, HP is contractually obligated to remove all Display PostScript capability from the DECwindows Motif software. This includes all related translated-image support and any functionality described in the following programming reference manuals:

- *VMS DECwindows Display PostScript System Programming Supplement*
- *Display PostScript System: Perspective for Software Developers*
- *Display PostScript System: Client Library Reference Manual*
- *Display PostScript System: Color Extensions*
- *Display PostScript System: pswrap Reference Manual*
- *PostScript Document Structuring Conventions Specification Version 2.1*

There is no workaround. See the following sections for more information on the potential impact to applications in the DECwindows Motif environment.

##### 4.1.9.1 Impact on DECwindows Motif Applications

Removing Display PostScript from DECwindows Motif impacts any application that relies on its capabilities to present and display graphics and documents in PostScript format.

Unfortunately, this includes not only those applications developed by HP, such as the CDA Viewer, but also any third-party, user-written, or translated VAX applications that depend on one or more of the following files and libraries. These items are no longer a part the product kit and are removed from your system when upgrading from a previous version of DECwindows Motif client software.

- PSWRAP command (DCL)
- Display PostScript (XDPS) libraries

[SYSLIB]XDPS\$DPSBINDINGSSHR.EXE  
[SYSLIB]XDPS\$DPSCLIENTSHR.EXE

[SYSLIB]XDPS\$DPSLIBSHR.EXE

- Display PostScript header files and sample programs
- Translated-Image Support (TIS) files

[SYSLIB]XDPS\$DPSBINDINGSSHR\_TV\_SUPPORT.EXE  
[SYSLIB]XDPS\$DPSCLIENTSHR\_TV\_SUPPORT.EXE  
[SYSLIB]XDPS\$DPSLIBSHR\_TV\_SUPPORT.EXE  
[SYSLIB]CDA\$ACCESS\_TV\_SUPPORT.EXE  
[SYSLIB]DDIF\$VIEWSHR\_TV\_SUPPORT.EXE  
[SYSLIB]DECW\$BKRSRSHR\_TV\_SUPPORT.EXE  
[SYSLIB]DECW\$MAILSHR\_TV\_SUPPORT.EXE

The actual effect of removing Display PostScript depends on the extent to which it was implemented in the application. Applications that call the PSWRAP command may fail only at the point where the command is invoked. However, applications that link against one or more of the XDPS libraries or TIS images will fail to function entirely due to unresolved links at run time.

As a result, you may need to modify those portions of DECwindows Motif applications that rely on these files to run successfully in the current DECwindows Motif environment.

#### 4.1.9.2 Impact on Java Applications

The Java Development Kit (JDK) for OpenVMS Version 1.2.2-1 contains two shareable images (JAVASFONT\_MANAGER\_SHR.EXE and JAVASFONT\_MANAGER\_G\_SHR.EXE) that link against the Display PostScript (XDPS) libraries. As a result, all Java applications built with this kit that use Display PostScript capabilities will fail in the current DECwindows Motif environment.

Note that this restriction only applies to the Version 1.2.2-1 kit. The Java machine for the 1.1\* series, as well as all releases of the JDK subsequent to Version 1.2.2-1, are not dependent on the Adobe Display PostScript software or its libraries.

#### 4.1.10 Problems Using the DECW\$INCLUDE:INTRINSIC.H File

*V1.2-5*

The DECwindows header file, DECW\$INCLUDE:INTRINSIC.H, redefines the `globalref` macro to be `extern` when using the DEC C compiler, even when the `/STANDARD=VAXC` compiler switch is specified. This could have a wide impact on user applications.

This redefinition in INTRINSIC.H is required because DECwindows needs to ensure that references to data located in the DECwindows shared images by user-written applications use the same `extern` model that was used when the DECwindows shared images were compiled.

To workaroud this problem, rather than having your application use `globalref` and `globaldef` for its own variables, use the following preprocessor directive:

```
#pragma extern_model strict_refdef
```

This workaroud has the advantage of being strictly ANSI compliant. This `pragma` directive is described in the *DEC C User's Guide for OpenVMS Systems* manual.

## Programming Release Notes

### 4.1 General Programming

#### 4.1.11 DECW\$WML.EXE Looks in Current Directory For DECW\$WML\_TOKENS.DAT

*1.2-4*

The program SYSS\$SYSTEM:DECW\$WML.EXE can be used to customize the parsing of UIL files. It reads a list of tokens from the file DECW\$WML\_TOKENS.DAT. In previous versions of DECwindows Motif, this tokens file was always read from SYSS\$LIBRARY. However, starting with DECwindows Motif for OpenVMS Version 1.2-4, DECW\$WML.EXE first looks for this file in the current directory before looking for it in SYSS\$LIBRARY. This allows a customized tokens file to be used.

#### 4.1.12 Running Translated Images on OpenVMS Systems (Alpha Only)

*V1.2-3*

The OpenVMS operating system provides translated image support (TIS) that addresses the following issues when migrating from the OpenVMS VAX to OpenVMS Alpha operating system platform:

- Lack of full-language programming support
- Unavailability of source code for recompilation
- Difficulty recompiling code that depended on VAX architecture features

The translated-image environment supports the VAX programming language features that were introduced with the VMS Version 5.5-2 release. The TIS environment also provides support for those images that are restricted to using the VMS Version 5.5-2 system services and run-time library entry points.

DECwindows Motif offers translated-image support as part of the installation procedure. The DECwindows Motif TIS environment includes support for running translated DECwindows Motif for OpenVMS VAX images on an OpenVMS Alpha system, provided the images were built against the OSF/Motif Release 1.1.3 libraries. It does not include support for running translated images that were built against a later version of the OSF/Motif Release libraries (1.2 or greater).

If you want to run an application that was built against a later version of the OSF/Motif libraries (available with DECwindows Motif for OpenVMS Versions 1.2 and later), you must compile and link the application natively on an OpenVMS Alpha or OpenVMS I64 system.

If you cannot build your VAX application on an OpenVMS Alpha system, you can translate it using the OpenVMS Migration Software for VAX to Alpha (OMSVA) product, provided that your application was built against the OSF/Motif Release 1.1.3 programming environment.

Most VAX images built against the OSF/Motif Release 1.1.3 programming environment can be copied to an OpenVMS Alpha system, translated, and run successfully. Note, however, that the OSF/Motif Release 1.1.3 shareable images that are used with translated images are different from and incompatible with the shareable images used for native images. As a result, the following image restrictions apply:

- Do not use both native and translated images that use DECwindows Motif software in a process. Either port or translate all the images that use DECwindows Motif software and all images that call each other.



- Translated images that dynamically activate a DECwindows Motif image using LIB\$FIND\_IMAGE\_SYMBOL from a translated image are not supported.

For information on enabling the DECwindows Motif TIS environment, see the *HP DECwindows Motif for OpenVMS Installation Guide*. For more information on OSF/Motif application programming support, see Section 4.3.

#### 4.1.13 UIL Compilation Problems with Looped Object References

##### *V1.2*

The UIL compiler can omit information about some objects from the UID file when there is a self-contained hierarchy of objects and each named object is only referenced internally (by another object in the hierarchy). Minimally, one of the references in the hierarchy must be something other than a child relationship.

To determine which objects contain omissions, use the /LIST and /MACHINE\_CODE qualifiers during compilation. The resulting list file indicates the objects that are missing information.

To prevent this from occurring, add a name to one of the unnamed objects in the hierarchy.

#### 4.1.14 Compiling Applications Written in Fortran

##### *V1.1*

Some of the include files used for writing DECwindows Motif applications in Fortran, such as the DECW\$MOTIF.FOR file, contain structure definitions that cause memory layout changes, depending on the compiler switches used.

You can do one of the following:

- Use the CDEC\$ OPTIONS in the source code so that your Fortran programs work correctly with the DECwindows Motif run-time libraries:

- Before you include files in your program, add the following statement:

```
CDEC$ OPTIONS /ALIGN=RECORDS=NATURAL
```

- Following the INCLUDE statement, add the following statement:

```
CDEC$ END OPTIONS
```

For example:

```
CDEC$ OPTIONS /ALIGN=RECORDS=NATURAL  
INCLUDE "DECW$MOTIF.FOR"  
CDEC$ END OPTIONS
```

- Use the Fortran compiler switch, /ALIGN=RECORDS=NATURAL, when you compile your programs.

#### 4.1.15 Compiling Applications Written in C

##### *V1.0*

With DEC C, header files do not need to be extracted from the text library if you define the DECC\$TEXT\_LIBRARY logical name as follows:

```
$ DEFINE DECC$TEXT_LIBRARY SYS$LIBRARY:DECC$RTLDEF.TLB
```

## Programming Release Notes

### 4.2 Application Programming

## 4.2 Application Programming

This section contains release notes pertaining to developing applications for the DECwindows Motif environment.

### 4.2.1 CDA Viewer Programming

This section contains programming information about the CDA application and run-time services.

#### 4.2.1.1 Corrected Image Ident for SYS\$LIBRARY:DDIF\$VIEWSHR.EXE (Alpha Only)

*V1.3*

The SYS\$LIBRARY:DDIF\$VIEWSHR.EXE image supplied with DECwindows Motif for OpenVMS Alpha Version 1.2–6 included the wrong image ident. Programs linked against the Version 1.2–6 image could not load and would report SHRIDMISMATCH error. This has been corrected, and the image ident restored to its original value.

Applications linked against the image supplied with Version 1.2–6 of DECwindows Motif will need to be relinked against the corrected image. Note that this only impacts images linked against the V1.1.3 compatibility version of DDIF (such as, DECwindows interface to Notes for OpenVMS) and not images using the current DDIF\$VIEWSHR12 image.

#### 4.2.1.2 Message for Style Guide Fallback

*V1.2*

The following message is displayed when a local style guide cannot be found:

STYGDEFBK, Fallback to nonlocale-specific style guide: *file-spec*

**Level:** Informational

**Explanation:** Since the locale-specific style guide cannot be found, the nonlocale-specific version of the style guide is used.

#### 4.2.1.3 Using Logical Names with CONVERT Commands

*V1.2*

During a document conversion, if a logical name is used to specify the directory of the primary document and the document file extension is omitted, external references that contain relative file specifications cause the conversion to fail.

This failure occurs because the back-end converter examines the converter processing options, although the front-end converter opens the input file. Because the converter software cannot predict what default file extension the front-end converter might apply, it uses the OpenVMS file services to resolve the logical name and to find the actual file specification so that the directory can be parsed and extended with a relative specification.

The conversion fails only when the external reference uses a format such as the following:

```
sys$login:mydoc
```

In this case, the reference will not be resolved. The reference is resolved in all other cases. For example:

```
sys$login:mydoc.doc  
disk$: [smith]mydoc  
disk$: [smith]mydoc.doc
```

## 4.2.2 DEClinks Programming

This section contains programming information about the DEClinks application and run-time services.

### 4.2.2.1 DEClinks Shareable Libraries Not Available (I64 only)

*V1.5*

The DEClinks shareable libraries (LWK\$DXMSHR\*.EXE) have not been ported to the OpenVMS I64 environment and are not available with DECwindows Motif for OpenVMS Version 1.5 or later on the OpenVMS I64 platform.

These shareable libraries were retained in the OpenVMS Alpha environment to prevent regression in other applications. The libraries may be available in a future release if they are deemed functionally necessary in the OpenVMS I64 environment.

## 4.2.3 DECterm Programming

This section contains programming information about the DECterm application and run-time services.

### 4.2.3.1 DECCRA Sequence

*V1.2*

DECterm supports the DECCRA (Copy Rectangular Area) sequence in a limited way. The entire page needs to be copied at once, and either the source or the destination page must be the current page (for example, you cannot copy from one off-screen page to another).

### 4.2.3.2 DECLFKC Sequence

*V1.2*

Since DECterm does not have a user interface to redefine the F5 (Break) key, the DECLFKC (Local Function Key Control) sequence redefines the F5 key when "0" (all keys) is used to select which key is to be modified.

## 4.3 OSF/Motif Toolkit (Xm)

This section describes restrictions and corrections related to the OSF/Motif Toolkit (Xm).

### 4.3.1 OSF/Motif Release 1.2.2 and X11 Release 5 and Greater Shareable Libraries

*V1.2*

Because the OSF/Motif Release 1.2.2 Toolkit and the OSF/Motif Release 1.1.3 Toolkit are not binary compatible, applications must link with one toolkit or the other. Applications based on OSF/Motif Release 1.2.2 can only link against OSF/Motif 1.2.2-based and X11 R5-based shareable libraries. Applications based on OSF/Motif Release 1.1.3 can only link against OSF/Motif 1.1.3-based and X11 R4-based shareable libraries.

To provide both OSF/Motif Release 1.2.2-based and OSF/Motif Release 1.1.3-based shareable libraries, the Release 1.1.3-based libraries have the same file names as in DECwindows Motif Version 1.1, and the Release 1.2.2-based libraries contain a suffix of either "R5" or "12".

## Programming Release Notes

### 4.3 OSF/Motif Toolkit (Xm)

Shareable libraries that work with either the OSF/Motif Release 1.1.3 Toolkit or the OSF/Motif Release 1.2.2 Toolkit do not have a suffix. These libraries are as follows:

*V1.2-6*

- CDA\$ACCESS.EXE
- DECW\$D2DXLIBSHR.EXE
- DECW\$XEXTLIBSHR.EXE
- DECW\$XLIBSHR.EXE
- XIE\$SHRLIB.EXE

Shareable libraries that are linked with Release 5 and greater of the Xt Toolkit have a suffix of “R5”. Libraries based on the XUI Toolkit have no R5 equivalent libraries and should not be included in a linker options file based on X11R5, X11R6.6, or OSF/Motif Release 1.2.2. Table 4-1 lists these file names.

---

**Note**

---

The DECW\$XLIBSHR.EXE file is the X11R5 version, not the X11R4 version of Xlib.

---

**Table 4-1 Names of Shareable Libraries Based on X11R5 or Greater**

Names of Files Based on R4	Names of Files Based on R5 or Greater
DECW\$DWTLIBSHR.EXE	(None)
DECW\$DWTSHR.EXE	(None)
DECW\$XMULIBSHR.EXE	DECW\$XMULIBSHRR5.EXE
DECW\$XTRAPLIBSHR.EXE	DECW\$XTRAPLIBSHRR5.EXE
DECW\$XTSHR.EXE	DECW\$XTLIBSHRR5.EXE

Releases 5 and greater do not provide an equivalent file for DECW\$DWTLIBSHR.EXE or DECW\$DWTSHR.EXE. Applications that are built for Releases 5 and beyond cannot link against these files.

Shareable libraries that are linked with OSF/Motif Release 1.2.2 have a suffix of “12”. They should be linked only with libraries compatible with X11R5 or X11R6.6, and OSF/Motif Release 1.2.2. Table 4-2 lists these file names.

**Table 4-2 Names of Shareable Libraries Based on OSF/Motif Release 1.2.2**

Names of Files Based on Release 1.1.3	Names of Files Based on Release 1.2.2
DDIF\$VIEWSHR.EXE	DDIF\$VIEWSHR12.EXE
DECW\$BKRSRSHR.EXE	DECW\$BKRSRSHR12.EXE
DECW\$DXMLIBSHR.EXE	DECW\$DXMLIBSHR12.EXE
DECW\$MAILSHR.EXE	DECW\$MAILSHR12.EXE

(continued on next page)

**Table 4–2 (Cont.) Names of Shareable Libraries Based on OSF/Motif Release 1.2.2**

Names of Files Based on Release 1.1.3	Names of Files Based on Release 1.2.2
(None)	DECW\$MRMLIBSHR12.EXE
DECW\$PRINTWGTSHR.EXE	(None)
DECW\$TERMINALSHR.EXE	DECW\$TERMINALSHR12.EXE
DECW\$XMLIBSHR.EXE	DECW\$XMLIBSHR12.EXE
DGIT\$LIBSHR.EXE	DGIT\$LIBSHR12.EXE
IMG\$SHRLIB.EXE	IMG\$SHRLIB12.EXE
LWK\$DXMSHR.EXE	LWK\$DXMSHR12.EXE
XNL\$SHR.EXE	XNL\$SHR12.EXE

There is no DECW\$PRINTWGTSHR12.EXE file; the Print Widget is part of the DECW\$DXMLIBSHR12.EXE file.

The DECW\$MRMLIBSHR12.EXE file is a new image that includes Motif Resource Manager (Mrm) routines that were formerly part of the DECW\$XMLIBSHR.EXE file. Any program based on OSF/Motif Release 1.2.2 that calls Mrm routines to access .UID files should link with this library.

For example, a typical linker options file for a program based on OSF/Motif Release 1.1.3 might be as follows:

```
SYS$SHARE:DECW$XLIBSHR/SHARE
SYS$SHARE:DECW$XTSHR/SHARE
SYS$SHARE:DECW$DWTLIBSHR/SHARE
SYS$SHARE:DECW$XMLIBSHR/SHARE
SYS$SHARE:DECW$DXMLIBSHR/SHARE
```

To link this program with OSF/Motif Release 1.2.2, the linker options file should be changed to:

```
SYS$SHARE:DECW$XLIBSHR/SHARE
SYS$SHARE:DECW$XTLIBSHR5/SHARE
SYS$SHARE:DECW$XMLIBSHR12/SHARE
SYS$SHARE:DECW$MRMLIBSHR12/SHARE
SYS$SHARE:DECW$DXMLIBSHR12/SHARE
```

These changes eliminate the reference to the XUI Toolkit (DECW\$DWTLIBSHR.EXE) and links with the Motif Resource Manager (DECW\$MRMLIBSHR12.EXE).

### 4.3.2 OSF/Motif Release 1.2.2 Callable UIL Compiler

#### *V1.2-6*

The OSF/Motif Release 1.2.2 Toolkit contains a callable User Interface Language (UIL) compiler. You can link against this image by including the following in your link options:

```
SYS$SHARE:DECW$UILSHR/SHARE
```

For information about the callable interface, see the *OSF/Motif Programmer's Guide* published by Prentice Hall.

## Programming Release Notes

### 4.3 OSF/Motif Toolkit (Xm)

#### 4.3.3 OSF/Motif Release 1.1.3 Programming Support and XUI

The following sections describe issues related to building OSF/Motif Release 1.1.3 applications in the OpenVMS Alpha and OpenVMS I64 environments.

##### 4.3.3.1 Building Release 1.1.3 Applications in the OpenVMS Alpha Environment (Alpha Only) *V1.2*

The X Window and OSF/Motif libraries that are shipped with DECwindows Motif Versions 1.2 and later are incompatible with those shipped with previous versions. Run-time compatibility has been preserved but backwards programming compatibility has not. As a result, support for programming in the XUI or Motif Release 1.1.3 environment that was provided in previous versions of DECwindows Motif is not available in DECwindows Motif Versions 1.2 or later.

If you have legacy applications built against Motif Release 1.1.3, you can choose to preserve the Release 1.1.3 programming environment during DECwindows Motif installation. The installation procedure gives you the option of saving the programming files that already exist on your system. If you choose to save these files, they are moved to subdirectories where you can access them for programming. Specifically, the installation creates a subdirectory called [.DECW\$113] in each of the directories listed in Table 4–3 and moves the previous files into the new subdirectory.

For more information about saving the programming files, see the *HP DECwindows Motif for OpenVMS Installation Guide*.

**Table 4–3 Directories for Previous XUI or Motif Programming Environment**

Directory	Contents	New Location
DECW\$INCLUDE	C header files	SYSSYSROOT:[DECW\$INCLUDE.DECW\$113]
SYSSYSTEM	UIL compiler	SYSSYSROOT:[SYSEXE.DECW\$113]
SYSLIBRARY	Non-C language bindings	SYSSYSROOT:[SYSLIB.DECW\$113]

To program with these files, include the new [.DECW\$113] subdirectories in the search path for each of the logical names. For example, perform the following:

- Change the definition of DECW\$INCLUDE as follows:

```
$ SHOW LOGICAL DECW$INCLUDE
  "DECW$INCLUDE" = "SYSSYSROOT:[DECW$INCLUDE]" (DECW$LOGICAL_NAMES)
  = "SYSSYSROOT:[DECW$INCLUDE.EXTENSIONS]"

$ DEFINE/EXECUTIVE/TABLE=DECW$LOGICAL_NAMES DECW$INCLUDE -
  SYSSYSROOT:[DECW$INCLUDE.DECW$113], -
  SYSSYSROOT:[DECW$INCLUDE], -
  SYSSYSROOT:[DECW$INCLUDE.EXTENSIONS]
```

Place the new [.DECW\$113] subdirectory first in the search list, since many of the files that have been updated for this release have the same name as the files that were moved to the [.DECW\$113] subdirectory. Thus, the files in [.DECW\$113] are used for software development.

If DECW\$INCLUDE is redefined in the SYSSMANAGER:DECW\$PRIVATE\_APPS\_SETUP.COM command procedure, then modify the previous instructions accordingly.

To use the UIL compiler for XUI or OSF/Motif Release 1.1.3, perform the following steps:

1. Create a file called `SYSSYSROOT:[SYSEXE.DECW$113]DECW$UILCOMPILER.CLD` that contains the following text:

```
define type trace_keywords
  keyword tokens
  keyword symbols

define type warning_keywords
  keyword nowarnings
  keyword noinformationals

define type version_keywords
  keyword V1, syntax=xui_uil
  keyword V2, syntax=xui_uil, default
  keyword MOTIF11, syntax=motif_uil

define syntax xui_uil
  image decw$uilcompiler

define syntax motif_uil
  image decw$uilmotif

define verb uil
  image decw$uilcompiler
  parameter p1, label=source_file,
    prompt="File", value(required,noconcatenate,type=$infile)
  qualifier trace, label=trace_qual,
    value(list,noconcatenate,type=trace_keywords), nonnegatable
  qualifier warnings, label=warnings_qual,
    value(list,noconcatenate,type=warning_keywords)
  qualifier list, label=listing_file,
    batch, value(type=$outfile)
  qualifier machine, label=machine_qual,
  qualifier output, label=resource_file,
    default, value(type=$outfile)
  qualifier version, label=version_qual, default,
    value(type=version_keywords),
    nonnegatable
  qualifier XUI, default, nonnegatable, syntax=xui_uil
  qualifier MOTIF, nonnegatable, syntax=motif_uil

  qualifier widget_meta_description, label=widget_qual,
    value(required,noconcatenate,type=$infile)

  disallow XUI and MOTIF
```

2. Set the DCL command table to use the XUI UIL compiler as follows:

```
$ SET COMMAND SYSSYSROOT:[SYSEXE.DECW$113]DECW$UILCOMPILER.CLD
```

---

**Note**

---

If you want to revert back to the previous UIL command definition, execute the following command:

```
$ SET COMMAND SYS$LIBRARY:DECW$UILCOMPILER.CLD
```

---

## Programming Release Notes

### 4.3 OSF/Motif Toolkit (Xm)

#### 4.3.3.2 Building Release 1.1.3 Applications in the OpenVMS I64 Environment (I64 Only)

*V1.5*

Note that although DECwindows Motif for OpenVMS Version 1.5 includes an updated set of OSF/Motif Release 1.1.3 shareable libraries, it does not include a Release 1.1.3-based UIL compiler or set of related C header files on the OpenVMS I64 platform (as consistent with recent releases of DECwindows Motif for OpenVMS Alpha).

To perform a native build of one or more applications based on the Release 1.1.3 images in the OpenVMS I64 environment:

1. Compile your application source files using the C header files (.H) from a previous, saved version of the OSF/Motif Release 1.1.3 environment on an OpenVMS Alpha system.
2. Link against the ported shareable images. Note that the ported image names do not have a suffix such as "R5" or "12". For example, for Release 1.1.3-based builds, you should link against DECW\$XTSHR and DECW\$XMLIBSHR rather than DECW\$XTLIBSHRR5 and DECW\$XMLIBSHR12.
3. Do one of the following:
  - If you do not need to make UIL changes, run your application(s) with UID files copied from an OpenVMS Alpha system to the OpenVMS I64 run-time environment.
  - If changes are necessary, use the UIL compiler from a previous, saved version of the OSF/Motif Release 1.1.3 programming environment on an OpenVMS Alpha system, and copy the resulting UID files to the OpenVMS I64 run-time environment.

#### 4.3.3.3 Additional Motif Release 1.1.3 Compilation and Run-time Restrictions

*V1.2-3*

You will encounter problems if you save the previous (Release 1.1.3) programming environment and attempt to run an OSF/Motif Release 1.1.3 (Xlib Release 4) application created on a system running DECwindows Motif Version 1.2 or later from an executable on a Motif Release 1.1.3 target system. That is, if you build an application on a system running DECwindows Motif Version 1.2 or later, the image is linked with Xlib Release 5, by default. If you attempt to run that executable on a system where OSF/Motif Release 1.1.3 is installed, the result is an ident mismatch fatal error.

In addition, the OSF/Motif Release 1.1.3 and Release 1.2.2 UIL compilers produce different output; they have different structures and are therefore not compatible. Use the appropriate UIL compiler to produce the correct UID file.

To prevent these issues from occurring, do the following:

1. Rename the Release 1.1.3 executable compiler, DECW\$UILMOTIF.EXE, to DECW\$UILMOTIF113.EXE and keep the file in the SYSSCOMMON directory. By doing this, the name of the Release 1.2.2 compiler, DECW\$UILMOTIF.EXE, does not conflict with the previous compiler.
2. Copy the DECW\$XLIBSHR.EXE file (Xlib Release 4) to the SYSSCOMMON:[SYSEXEC.DECW\$113] directory.



The Xlib Release 5 or greater versions of Xlib have the same name; however, a logical name is defined to use the Release 4 version when the programs are linked. The changes in minor ident of DECW\$XLIBSHR.EXE between DECwindows Motif Version 1.2 and later versions of DECwindows caused a loss of backward compatibility with native Release 1.1.3 systems.

3. If you save the previous programming environment during installation, create the following two files and copy them to the SYSS\$COMMON:[SYSEXE.DECW\$113] directory:
  - DECW\$UILCOMPILER113.CLD  
This file enables UIL/OSF Motif and UIL/XUI to function for either XUI or OSF/Motif Release 1.1.3 if you select DECW\$UILMOTIF113.EXE for OSF/Motif Release 1.1.3 or DECW\$UILCOMPILER.EXE for XUI.
  - DECW\$DEFINE113\_LOGICALS.COM  
This file points to the saved header files, which in turn point to the Xlib Release 4 version of the DECW\$XLIBSHR.EXE file.
4. An application must be run on the same version (or higher) of the operating system as the version where it is linked. For example, an application that is linked on a OpenVMS Version 7.3-2 system must be run on an OpenVMS 7.3-2 (or higher) system.

#### 4.3.4 Memory Leaks in Cascade and Toggle Buttons Corrected (Alpha Only)

*V1.5*

Previously, when creating and subsequently destroying cascade or toggle buttons (or their gadgets) on systems running DECwindows Motif for OpenVMS Version 1.2-4 and higher, unused graphics context objects were left behind. These objects resulted in memory leaks in both the client and server that persisted until the client was terminated.

The problem occurred when widgets associated one graphics context with normal state and another with the armed state. Under normal use, most widgets share the same colors, and therefore, share a pair of graphics contexts. The memory leaks were only significant if many such widgets with differing background colors or selected text were created and destroyed.

This problem has been corrected in DECwindows Motif for OpenVMS Version 1.5.

#### 4.3.5 Memory Leaks in Bulletin Boards Corrected (Alpha Only)

*V1.5*

Previously on systems running DECwindows Motif for OpenVMS Version 1.2-4 or later, when a BulletinBoard widget was created and the default font list was used for the XmNbuttonFontList, XmNlabelFontList, or XmNtextFontList resources, the reference count to the font list entry was cached incorrectly. This prevented the memory used for the font list from being freed when the font list was no longer required.

This problem only occurred when the bulletin board was created as a descendant of another bulletin board or vendor shell widget whose own default font lists were later changed.

This problem has been corrected in DECwindows Motif for OpenVMS Version 1.5.

## Programming Release Notes

### 4.3 OSF/Motif Toolkit (Xm)

#### 4.3.6 Compile-Time Incompatibilities in Motif Header Files

*V1.2-3*

Several macro definitions are removed from the Motif header files in the OSF/Motif programming support. The changes affect the following header files:

- DECW\$INCLUDE:XMP.H

The following definitions are removed:

- #define XmLONGBITS sizeof(Cardinal)\*8
- #define XmHALFLONGBITS (XmLONGBITS/2)

These macros are replaced in the same header file with the following macro:

- XmOFFSETBITS

Update the code to call the XmOFFSETBITS macro.

- DECW\$INCLUDE:TEXT.P.H

The following definitions are removed:

- #define MAXINT 2147483647  
/\* Biggest number that can fit in long \*/
- #define NODELTA MAXINT

The definition of MAXINT is operating-system dependent. Include this definition in applications in one of the following ways:

- Include the appropriate system-header file
- Define the constant

#### 4.3.7 Use of `_Xm` Routines

*V1.2*

The OSF/Motif Toolkit libraries contain many undocumented routines, which are prefixed with `_Xm`. These routines are intended to be used only by the standard Motif widgets. OSF reserves the right to modify the API or functionality of these routines, or to delete them altogether in future releases.

---

#### Caution

---

HP supplies access to the `_Xm` routines by copying them into the shareable image transfer vector for the OSF/Motif Release 1.2.2 Toolkit. HP does not document or support these routines or guarantee their continued existence in future releases. Application developers who use these routines do so at their own risk.

---

#### 4.3.8 UID Files for Example Programs

*V1.2*

The UID files used by the Motif example programs must be located in either the current directory, DECW\$SYSTEM\_DEFAULTS, or your DECW\$USER\_DEFAULTS directory. DECwindows Motif does not support accessing remote UID files using the DECNET (DECnet or DECnet-Plus) transport. As a result, the default directories do not support a node name specification. Entering a node

name in the UID directory specification fails to start the application and results in an error similar to the following:

```
X Toolkit Warning: I18NOpenFile: Could not open file decburger.uid - MrmNOT_FOUND  
can't open hierarchy
```

The UID files can be copied from the DECW\$EXAMPLES directory. To access a remote UID file, either copy the file to a local node on the cluster, or use Distributed File System (DFS) to mount the disk that contains the file on the cluster.

### 4.3.9 Motif Text Widget Translations

*V1.0*

To implement virtual bindings, it is necessary for HP to modify the default XmText and XmTextField translation manager syntax. Specifically, the following syntax line is removed:

```
Shift ~Ctrl ~Meta ~Alt <Key>osfDelete: cut-clipboard()
```

If you use virtual bindings in which the osfCut virtual keysym is not bound, no key sequence is bound to the cut-clipboard action by default. To work around this limitation, override the XmText and XmTextField translations in your DECW\$XDEFAULTS.DAT file.

### 4.3.10 Restrictions on Mixing Motif and XUI Widgets

*V1.0*

Mixing Motif and XUI widgets is restricted. The problem results from the fact that both XUI and Motif have their own Vendor Shell widget class. If an application is linked against XUI and not Motif, the XUI Vendor Shell widget class is used in order to maintain compatibility with DECwindows XUI. If an application is linked against Motif, the Motif Vendor Shell widget class is used. Motif widgets require the Motif Vendor Shell; XUI widgets are compatible with the Motif Vendor Shell. The problem occurs when an XUI-only application dynamically activates (using LIB\$FIND\_IMAGE\_SYMBOL) a shareable image that uses Motif. The toolkit makes the decision to use the XUI Vendor Shell when the toolkit is initialized and the Motif widgets in the dynamically activated shareable image do not work.

The workaround is to add the application image name to the DECW\$USE\_XM\_VENDOR\_SHELL logical name. This logical name contains a comma-separated list of image names for which the toolkit is to use the Motif Vendor Shell. The value of DECW\$USE\_XM\_VENDOR\_SHELL logical name defaults to NOTES\$MAIN. To add additional image names to this logical name, enter the following:

```
$ DEFINE DECW$USE_XM_VENDOR_SHELL "NOTES$MAIN, -  
_ $ yourimage1,yourimage2,..."
```

Note that DECW\$USE\_XM\_VENDOR\_SHELL does not affect applications that use Motif since they are already using the Motif Vendor Shell.

## Programming Release Notes

### 4.4 DECwindows Extensions to Motif (DXm)

#### 4.4 DECwindows Extensions to Motif (DXm)

This section contains information about the DECwindows extensions to the Motif Toolkit.

##### 4.4.1 DXmFormSpaceButtonsEqually Restriction

*V1.1*

The convenience routine `DXmFormSpaceButtonsEqually` sizes and spaces all widgets or gadgets equally if they have a subclass of `XmLabel` or `XmLabelGadget`. The results are undefined if a widget or gadget is not a subclass of `XmLabel` or `XmLabelGadget`.

##### 4.4.2 SVN Widget Does Not Support Horizontal Live Scrolling

*V1.0*

Horizontal live scrolling is not supported in the SVN widget.

#### 4.5 X Window System Toolkit (Xt)

This section contains release notes pertaining to the X Window System Toolkit (Xt).

##### 4.5.1 XtGetValues Function and Null Argument Values

*V1.3*

The `XtGetValues` and `XtVaGetValues` functions provide argument values through an argument array. The specification of Xt states that value members of argument structures must point to an appropriately sized object. However, the implementation of Xt has allowed the passing of null value members, provided the argument value does not exceed 32 bits in length. In this case, Xt writes the argument value directly to the argument value member.

Systems running DECwindows Motif Version 1.3 or later still support this usage but generate an Xt warning message similar to the following if a null value member is detected (where *function\_name* is either `XtGetValues` or `XtVaGetValues`):

```
X Toolkit Warning: NULL ArgVal in function_name
```

If this message is displayed when compiling or running an application, modify the application, and eliminate the use of null member values.

##### 4.5.2 Composite Class Extension Record Run-Time Warning

*V1.3*

With X11R6.6, the boolean option `allows_change_managed_set` was added to the `CompositeClassExtensionRec` data structure. As a result of this change, applications built with a previous version of `CompositeClassExtensionRec` may display a warning message at run time similar to the following:

```
X Toolkit Warning: widget class Calc has invalid CompositeClassExtension record.
```

To prevent this message from displaying, rebuild the application with the latest version of the `CompositeP.h` file. Check that the value of the new option is as you desire. If the memory is initialized to zero, then it will have the same behavior as before. If uninitialized the behavior could be unpredictable.

### 4.5.3 XtOpenDisplay Routine and Case Sensitivity

*V1.2-6*

In some cases the application name in XtOpenDisplay comes from `argv[0]`, which represents the name of the application on the command line.

This could be an issue in environments where case sensitivity must be preserved (such as when referencing ODS-5 system with case preservation enabled or when passing a user-defined argv list).

## 4.6 X Window System Library (Xlib)

This section contains information about the X Window System library (Xlib).

### 4.6.1 XPutImage Now Displays Wide Graphic Images Correctly

*V1.5*

An erroneous stop condition within XPutImage has been corrected. Applications that call this recursive Xlib procedure can now process and paint wide graphic images successfully without noticeable clipping or stack overflow conditions.

### 4.6.2 Xlib Routines Now Use Recursive Locks

*V1.5*

Display locks implemented in multithreaded Xlib applications are now implemented as recursive locks. When threading is enabled, any calls to XCheckIfEvent, XIfEvent, or XPeekIfEvent are enclosed in an XLockDisplay/XUnlockDisplay pair. This prevents deadlocks from occurring within a single thread when predicate functions are called by these events.

For example, without recursive locks, deadlocks can occur in threaded Motif applications and threaded Java applications that use the awt library.

### 4.6.3 Memory Leaks in XOpenDisplay and XCloseDisplay Corrected (Alpha Only)

*V1.5*

Small memory leaks that occurred when opening and closing display connections have been fixed. As a result, client applications that open and close many connections will not need as many virtual pages and can function with a reduced page file count and channel count quotas.

### 4.6.4 XOpenDisplay Calls No Longer Leave a Pending Wake (Alpha Only)

*V1.5*

The initial call of XOpenDisplay no longer leaves a pending wake status on the process, which caused the next LIB\$WAIT or SYS\$WAKE call to end immediately.

### 4.6.5 State of Event Flag Number 63 Changed Only After Reserved (Alpha Only)

*V1.5*

DECwindows Motif no longer changes the state of event flag number (EFN) 63 without first having reserved it. This problem previously occurred when opening a display, writing data (if the transport queue to the server was full), and reading data from the server on systems running DECwindows Motif for OpenVMS Alpha Version 1.3 or higher.

## Programming Release Notes

### 4.6 X Window System Library (Xlib)

#### 4.6.6 Xpoll.h Header File and ConnectionNumber Macro Restriction

*V1.5*

The current version of the Xpoll.h header file implements an interface to DECW\$LCN\_SELECT. This interface is incompatible with the C Run-Time Library (CRT) definition of the select function. Specifically, DECW\$LCN\_SELECT does not implement support for the display ConnectionNumber macro when threads are not initialized.

If your application uses Xpoll.h and the ConnectionNumber macro, HP recommends that you replace this macro with the following to prevent conflicts from occurring:

```
#include <X11/Xlib.h>
#define DECW$LCNConnectionNumber(dpy) ((_XDisplayPriv)dpy->fd)
```

#### 4.6.7 Changed Record Format for Connection Failure Error Message

*V1.3-1*

When a connection request is rejected, the X display server generates an informational message, which Xlib outputs to **stderr**. Previously, the format of the message output was one character per record. The format of the output has been changed to pass the entire message as a single record.

This change is only noticeable in error message files that are record oriented. For example, the changed format is visible in message files generated by the HP Digital Test Manager (DTM).

#### 4.6.8 Retired and Changed Entry Points

*V1.3*

The following unsupported Xlib entry points have been removed from the DECW\$XLIBSHR image:

```
XCMSCIELAB_VALIDSPEC
XCMSCIELUV_VALIDSPEC
XCMSCIEUVY_VALIDSPEC
XCMSCIEXXY_VALIDSPEC
XCMSCIEXYZ_VALIDSPEC
XCMSLRGB_RGBI_PARSESTRING
XCMSLRGB_RGB_PARSESTRING
XCMSTEKHVC_VALIDSPEC
```

Any application using these functions will need to be modified.

#### 4.6.9 Meaning of XConnectionNumber and ConnectionNumber Changed

*V1.3*

The meaning of the XConnectionNumber function and ConnectionNumber macro has changed on systems running DECwindows Motif Version 1.3 or higher.

For previous versions of DECwindows Motif, both the function and macro returned an event flag number (EFN). The event flag was set when input arrived, with calls typically implemented as follows:

```
sys$clref (ConnectionNumber (dpy));
while (XPending (dpy) != 0) XNextEvent (dpy);
sys$waitfr (ConnectionNumber (dpy));
```

## Programming Release Notes 4.6 X Window System Library (Xlib)

For DECwindows Motif Version 1.3, a change has been made so that these items behave differently when support for multithreading has been enabled by a call to `XInitThreads`. With multithreading enabled, these items now return a logical connection number (LCN).

The LCN is in the read set state whenever there is input available from the server. It is in the write set state unless all output buffers are in use. The except state is reserved for use by HP.

To use an LCN instead of an EFN, replace the above implementation with the following:

```
int readState;
while (XPending (dpy) != 0) XNextEvent (dpy);
decw$lc_n_select_one (ConnectionNumber (dpy), &readState);
```

Note that you must make the select call after the event queue has been cleared, since the LCN state reflects input from the server and does not include any events that might have been queued while handling replies.

You can force the `ConnectionNumber` macro to get the LCN value (which is always available) by including `XLIB.H` with the `DECW_CONNECTIONNUMBER_IS_LCN` macro set to true (1), for example:

```
#define DECW_CONNECTIONNUMBER_IS_LCN 1
#include <X11/Xlib.h>
.
.
.
```

This is useful when using this macro in a shared image or object library where the application must function the same whether or not threads have been initialized.

For more information on the LCN interface, see the *HP DECwindows Motif for OpenVMS New Features* manual.

### 4.6.10 Locale Support in OpenVMS Systems

*V1.2-4*

The locale support provided on systems running DECwindows Motif for OpenVMS Version 1.2-4 or higher is compatible with the locale support in the DEC C Run-Time Library. If you write internationalized applications using these functions in the locale environment, do the following:

- For Xlib applications, include `<X11/Xlocale.h>`. If you include `<stdlib.h>`, you must do so before `<X11/Xlocale.h>`.
- For Motif applications, `<X11/Xlocale.h>` is automatically included.
- Turn on the following compilation flags:

```
/define=(X_LOCALE,X_WCHAR,_WCHAR_T_,XLIB_XPG4_FUNCS)
```

### 4.6.11 XSelectAsyncEvent and XSelectAsyncInput Routines

*V1.1*

The `XSelectAsyncEvent` and `XSelectAsyncInput` routines allocate memory for the storage of AST delivery information. This memory is freed in the following ways:

- If you close a display (`XCLOSEDISPLAY`), all the AST delivery information associated with all windows on that display is freed.

## Programming Release Notes

### 4.6 X Window System Library (Xlib)

- If you destroy a window (XDestroyWindow), the AST delivery information for that window is freed.

The AST delivery information for subwindows is not freed by XDestroyWindow.

If you want to turn off AST notification for all event types within a given window and also free the AST delivery information, the client application can call XSelectAsyncEvent or XSelectAsyncInput passing the **event\_mask** argument equal to minus one (all bits set) and the **ast\_routine** argument equal to zero.

---

#### Note

---

On systems running DECwindows Motif Version 1.3 or higher, XSelectAsyncInput and XSelectAsyncEvents are not supported if multithreading has been enabled by a call to XInitThreads. The equivalent functionality can be obtained by using threaded Xlib functions. See *HP DECwindows Motif for OpenVMS New Features* for more information about using these functions in a multithreaded environment.

---

#### 4.6.12 Command Procedure Builds .PEN Files

*V1.0*

To allow Pascal programs to inherit environment files for Xlib and Motif, execute the command procedure SYSS\$LIBRARY:DECW\$PEN\_BUILD.COM. This command procedure generates the DECW\$XLIBDEF.PEN and DECW\$MOTIF.PEN files. The .PEN files compile into Pascal programs faster than the provided .PAS files.

#### 4.6.13 Parameter/Protocol Datasize Mismatches

*V1.0*

Several Xlib routines accept longword parameters that are not sent in their entirety in the X Protocol message to the server. In each case, the Xlib routine sends out only the least significant 16 bits of the parameter value. This is a constraint of the field size within the X Protocol message.

Table 4–4 lists routine names and the longword arguments that are sent only as 16-bit values.

**Table 4–4 Routine Names and Arguments Sent as 16-Bit Values**

Routine Name	Routine Arguments
XAllocColorCells/ALLOC_COLOR_CELLS	nplanes,npixels
XDrawArc/DRAW_ARC	x,y,width,height, angle1,angle2
XDrawLine/DRAW_LINE	x1,x2,x3,x4
XDrawPoint/DRAW_POINT	x,y
XDrawRectangle/DRAW_RECTANGLE	x,y,width,height
XDrawString/DRAW_STRING	x,y
XDrawString16/DRAW_STRING16	x,y

(continued on next page)



Table 4–4 (Cont.) Routine Names and Arguments Sent as 16-Bit Values

Routine Name	Routine Arguments
XDrawText/DRAW_TEXT	x,y
XDrawText16/DRAW_TEXT16	x,y
XFillArc/FILL_ARC	x,y,width, height,angle1,angle2
XFillRectangle/FILL_RECTANGLE	x,y,width,height

## 4.7 X Window System Extensions and Protocols

This section contains release notes pertaining to the X Window System extensions implemented for DECwindows Motif.

### 4.7.1 Using XCopyArea with XINERAMA

*V1.3–1*

Note that graphic expose events are now generated for XCopyArea requests. All programs that call the XCopyArea function must have graphics expose enabled at all times on the graphics context resource (gc) used in the request.

### 4.7.2 XINERAMA Does Not Correctly Report VisibilityNotify

*V1.3–1*

When applications display on a XINERAMA multihead system, the VisibilityNotify event does not properly report the state of the window. When a window is displayed and VisibilityNotify is selected, the state of the window is reported as Unobscured when in fact it may be Unobscured or PartiallyObscured. To prevent this from occurring, change the applications so that they treat VisibilityNotify events as PartiallyObscured.

Once the window has been displayed, no more visibility events are reported. For example, when a window that has VisibilityNotify selected is covered by another window, an event indicating that it is FullyObscured should be reported. This event is not sent.

### 4.7.3 EVI Extension and Colormap Conflicts

*V1.3*

The DECwindows X11 Display Server does not return colormap conflict information when the Extended Visual Information (EVI) extension is used to request information about available visuals. In all cases, the data returned indicates that no colormap conflicts exist.

### 4.7.4 Dead Mouse Support

*V1.3*

Dead Mouse capabilities previously available with the AccessX extension have been incorporated into the subset of features available with the X Keyboard extension (XKB). These capabilities are now collectively referred to as Mouse Keys.

Note that since the Dead Mouse functions were also made part of the X server in a previous version of DECwindows Motif, they remain available even when the XKB extension is not enabled.

## Programming Release Notes

### 4.7 X Window System Extensions and Protocols

#### 4.7.5 AccessX Extension No Longer Supported

*V1.3*

Support for the AccessX keyboard extension has been removed. All functions provided by this extension (such as sticky keys) are available with the X Keyboard extension (XKB). See the *HP DECwindows Motif for OpenVMS New Features* for more information on this extension.

#### 4.7.6 Group Validation Not Performed by Security and Application Group Extensions

*V1.3*

The validation of groups is not being performed by the Security (SECURITY) and Application Group (XC-APPGROUP) extensions. Although a group ID can be passed to XSecurityGenerateAuthorization, it is not being checked. Authorization is provided regardless of the group ID.

#### 4.7.7 Do Not Remove Watch Procedures from Open ICE Connections

*V1.3*

Avoid removing ICE watch procedures while an ICE connection remains open. If a watch procedure allocates memory to an open connection, and the procedure is removed, the memory cannot be freed since the proper callback is not made to the watch procedure.

#### 4.7.8 BAD\_LOCAL\_NODE Error When Using ICE

*V1.3*

The original transport implemented by DECwindows Motif ignored the node specification when using LOCAL as the network transport. With the ICE protocol, the node name must always either be a value of 0 or a string consisting of the system name. Since ICE uses the LOCAL transport, the BAD\_LOCAL\_NODE warning message is displayed when ICE attempts to verify the node specification.

#### 4.7.9 SmsGenerateClientId Does Not Generate an ID

*V1.3*

The XSMP request SmsGenerateClientId fails to generate a client ID on any system that does not have an assigned DECnet or TCP/IP address.

#### 4.7.10 Specifying Extension Include Files

*V1.2*

To ensure that programs that contain extension include files compile properly, add the logical name DECW\$INCLUDE to the C include directory search list.

To add the logical name, enter the following command:

```
$ DEFINE DECC$USER_INCLUDE DECW$INCLUDE
```

## 4.8 X Window System Internationalization Library (Xnl)

This section contains information about the Xnl library.

### 4.8.1 xnl\_parsedatetime

*V1.2-5*

xnl\_parsedatetime (and its VAX binding, XNL\$PARSE\_DATE\_TIME) accepts two-digit or four-digit years in the input argument **XmString s** (which is the date-time string to be parsed). Valid years in the two-digit format are in the range 70 to 99, which mean the years from 1970 to 1999. Values from 00 to 69 are invalid. Year 2000 and later must be specified in the four-digit format.

### 4.8.2 xnl\_langinfo

*V1.2-5*

xnl\_langinfo (and its VAX binding, XNL\$LANGINFO) returns a string for date-time formatting when D\_FMT or D\_T\_FMT is specified in the **item** argument. In the locales listed below, this function returns a formatting string containing %y. This formatting string should be used carefully after the year 2000, as %y indicates the two-digit year format.

- es\_ES Spanish
- fr\_BE French Belgium
- fr\_CA French Canada
- iw\_IL Hebrew
- no\_NO Norwegian

## 4.9 Transport Programming

This section contains information about the Transport interface.

### 4.9.1 User-Written Transports Not Supported

*V1.3*

With DECwindows Motif Version 1.3, significant changes were made to the DECwindows Motif transport library to accommodate multithreading and the communication needs of the Inter-Client Exchange (ICE) protocol, Low-Bandwidth X (LBX) proxy server, and Input Method servers. In particular, support for an alternate method of assigning numbers to server connections was added, as described in *HP DECwindows Motif for OpenVMS New Features*. Support for the logical connection number (LCN) interface is the only transport-related feature that will be published for external use.

The DECnet, TCP/IP, LAT, and local network transport interfaces have been updated, remain available, function as expected in the DECwindows Motif Version 1.3 or higher environment, and are compatible with the previous version of the client libraries. However, any custom, user-written transports built against previous versions of DECwindows Motif, will not function as expected and are expressly not supported on systems running DECwindows Motif Version 1.3 or higher. This includes transports built and linked against the following files:

```
SYSS$LIBRARY:DECW$XPORTCOM.H  
SYSS$LIBRARY:DECW$XPORTCOM.MAR  
SYSS$LIBRARY:DECW$XPORTCOM.R32
```

## Programming Release Notes

### 4.9 Transport Programming

SYSS\$LIBRARY:DECW\$XPORDEF.H  
SYSS\$LIBRARY:DECW\$XPORDEF.MAR  
SYSS\$LIBRARY:DECW\$XPORDEF.R32

These files have been removed from the kit and are no longer available. The *VMS DECwindows Transport Manual* will be archived and the new libraries will not be documented or made available publicly.

If you have implemented a custom transport and want to migrate that transport to the DECwindows Motif Version 1.3 or higher environment, contact your HP customer representative to develop a migration strategy.

---

## Documentation Release Notes

This chapter briefly describes corrections to the DECwindows Motif documentation. For a complete listing of additions and changes to the DECwindows Motif documentation set, see the *HP DECwindows Motif for OpenVMS Documentation Overview*.

### 5.1 Getting Started With the New Desktop

This section contains documentation corrections to the *Getting Started With the New Desktop* manual.

#### 5.1.1 Corrected File Specification

*V1.2-5*

A file specification for a command procedure in *Getting Started With the New Desktop* (part number AA-QUW1A-TE) is incorrect. The file specification appears in Section 3.4.9, paragraph 5, as follows:

“Optional DECwindows applications, such as DECwindows Notes, may not provide any information and therefore are not restarted. For such cases, there is a command procedure called `disk$:[user.DT]SESSIONETC.COM` that you can use to start any applications that cannot be restarted automatically. This procedure is analogous to the `DECWSLOGIN.COM` procedure in the traditional DECwindows environment.”

The correct file specification is:

```
disk$:[user.DT.SESIONS]SESSIONETC.COM
```

### 5.2 Using DECwindows Motif for OpenVMS

This section contains documentation corrections to the *Using DECwindows Motif for OpenVMS* manual.

#### 5.2.1 Corrections to the Example for Changing a Logo

*V1.2*

The example “Changing Your Logo” in the *Using DECwindows Motif for OpenVMS* is incorrect. To correct the problem, change the following code example in step one:

```
$ COPY SYS$COMMON: [SYSMGR] DECW$PRIVATE_APPS_SETUP.TEMPLATE -
_$ SYS$SPECIFIC: [SYSMANAGER] DECW$PRIVATE_APPS_SETUP.COM/LOG
```

The code example should read as follows:

```
$ COPY SYS$COMMON: [SYSMGR] DECW$PRIVATE_APPS_SETUP.TEMPLATE -
_$ SYS$SPECIFIC: [SYSMGR] DECW$PRIVATE_APPS_SETUP.COM/LOG
```

### 5.3 *DECwindows Motif for OpenVMS Applications Guide*

This section contains documentation corrections and enhancements to the *DECwindows Motif for OpenVMS Applications Guide* manual.

#### 5.3.1 Clarifications to the Finish Printing Option

*V1.2-3*

In *DECwindows Motif for OpenVMS Applications Guide*, the section called “Printing Information” in the chapter on DECterm provides information about the Print menu. To further clarify the information in the *Finish Printing* section, note the following:

Selecting the Finish Printing option on the Print menu closes the print job and toggles Auto Print mode back to Normal Print mode.

#### 5.3.2 Correction to Adding Target Screen Options to Application Menu Items Example

*V1.2*

The example “Adding Target Screen Options to Application Menu Items” in *DECwindows Motif for OpenVMS Applications Guide* is incorrect. To correct the problem, remove the first occurrence of the following line:

```
$ select_qualifiers:
```

### 5.4 *DECwindows Motif for OpenVMS Guide to Non-C Bindings*

This section contains documentation enhancements and corrections to the *DECwindows Motif for OpenVMS Guide to Non-C Bindings* manual.

#### 5.4.1 Access to GET\_CHAR\_STRUCT Function Correction

*V1.2-3*

The access related to the char\_struct argument for the XLIB GET\_CHAR\_STRUCT function is incorrectly documented in the *DECwindows Motif for OpenVMS Guide to Non-C Bindings*. The correct access is *write*.

### 5.5 *DECwindows Motif Guide to Application Programming*

This section contains documentation corrections to the *DECwindows Motif Guide to Application Programming* manual.

#### 5.5.1 Location of UIL Source Code for the OpenVMS DECburger Sample Application

*V1.2-3*

In the *DECwindows Motif Guide to Application Programming* manual, the introduction to the section in Chapter 4 called “Creating the Help Widget with UIL” does not clearly state that the complete UIL source code for the OpenVMS DECburger application is included in DECW\$EXAMPLES on OpenVMS systems.

## 5.5.2 Corrections to the Help Widget Documentation

*V1.2-3*

In the *DECwindows Motif Guide to Application Programming* manual, the following corrections should be noted:

- The title of Example 4-7, “Help Widget Implementation—C Language Module”, DECBURGER.C should be added to the title as follows:  
“Help Widget Implementation—C Language Module (DECburger.C)”
- The title of Example 4-8 should read as follows:  
“Help Widget Implementation—Callbacks (DECburger.C continued)”
- The title of Section 4.10, “Using the Toolkit Help Widget Creation Routine,” does not accurately reflect the contents of this section. The title should read, “Using UIL to Create the Help Widget”.
- The introductory paragraph to Example 4-9 in the section called “Using the Toolkit Help Widget Creation Routine” is incomplete. The information should state the following:
- “The code in Example 4-9 is included in DECBurger.C but is commented and will not be compiled when the example program is built.”

The implementation in this example is not complete; it requires some sections from Examples 4-7 and 4-8.

## 5.6 DECwindows Extensions to Motif

This section contains documentation corrections to the *DECwindows Extensions to Motif* manual.

### 5.6.1 Corrected List of DXmNlayoutDirection Resource Constants

*V1.2-3*

In the *DECwindows Extensions to Motif*, the section on the DXmNlayoutDirection Resource in Chapter 2 lists the following constants:

- DXmLAYOUT\_LEFT\_DOWN
- DXmLAYOUT\_LEFT\_UP
- DXmLAYOUT\_RIGHT\_DOWN
- DXmLAYOUT\_RIGHT\_UP

Note that the following constants are not currently available for the DXmNlayoutDirection resource:

- DXmLAYOUT\_LEFT\_UP
- DXmLAYOUT\_RIGHT\_UP

Also note that the introduction to Table 2-1 is incorrect. Table 2-1 describes the effect of the constants DXmLAYOUT\_LEFT\_DOWN and DXmLAYOUT\_RIGHT\_DOWN on the functions.

*V1.2*

In Section 2.2 of the *DECwindows Extensions to Motif* manual, the description of DXmChildren indicates that the routine can be used to learn the length of widget\_list.

**Documentation Release Notes**  
**5.6 *DECwindows Extensions to Motif***

The documentation is incorrect. The sentence should read, "You can use the DXmNumChildren routine to learn the length of the widget list returned by DXmChildren."



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## OSF/Motif Release 1.2 Release Notes

The release notes in this document are based on Chapter 3 of the OSF/Motif Release Notes for Release 1.2 and include a few other notes relevant to programmers developing Motif applications. Most of the notes describe changes made for Release 1.2. The first two notes discuss performance improvements and information about backward compatibility.

These release notes support the Motif software currently provided with the HP DECwindows Motif for OpenVMS product.

### A.1 Performance Improvements

The Open Software Foundation (OSF) set as its goal for OSF/Motif Release 1.2 to improve performance where possible and, at a minimum, to not allow it to degrade below the performance of OSF/Motif Release 1.1.

Performance testing was done in three areas:

- Aspects obvious to end users
- Data space usage
- Memory leakage

The performance of user-perceptible events such as posting and unposting dialog boxes and pop-up menus are comparable or better than the performance for OSF/Motif Release 1.1.4. A significant improvement was made for scrolling inside a Scrolled Text region that contains a large amount of text.

Data space usage has improved throughout the OSF/Motif Toolkit, particularly for the Text widget. In some cases, data space usage has been reduced by as much as 40%. Also, the memory used for the text in a Text widget is now correctly reduced when that text is replaced by a smaller amount of text.

Memory leakage has been reduced to a minimum for multiple creates and destroys of all Toolkit widgets. Although the Motif tests showed small memory leaks, the OSF believes that this amount of memory is required as part of the startup overhead and is not a true memory leak.

The OSF did find some memory leaks that they plan to fix in a future release. Three widgets—File Selection Box, Command, and Drawn Button - leak approximately 500 bytes of memory per instance.

### A.2 Backward Compatibility

The OSF tested OSF/Motif Release 1.2 for both link-time compatibility as well as visual and behavioral compatibility.

## OSF/Motif Release 1.2 Release Notes

### A.2 Backward Compatibility

#### A.2.1 Visual and Behavioral Compatibility

The OSF ran automated tests that compared current visuals with those recorded using OSF/Motif Release 1.1.4 libraries. Once all differences between the Release 1.2 and Release 1.1.4 versions were accounted for, the visuals were rerecorded using Release 1.2 visuals. These new recorded visuals were used in all subsequent tests.

The OSF believes that Motif Release 1.2 is visually and behaviorally compatible with Release 1.1.4. However, they have made extensive improvements to the Traversal and Geometry Management algorithms that result in some differences between those versions. These differences reflect efforts to fix defects in the earlier release.

For example, one such modification involves the new policy in which an initial size set for a manager widget in an application is now honored by the Toolkit. In OSF/Motif Release 1.1, applications set the initial size for a manager widget, but did not, in fact, use that size. In Release 1.2, Motif now uses that size setting and the initial layout is changed accordingly.

### A.3 Changes and New Features for OSF/Motif Release 1.2

This section summarizes changes and new features that the OSF has made to OSF/Motif Release 1.2. Detailed information about these modifications is contained in the Motif reference pages and the Motif Release 1.2 revisions of following books:

- *OSF/Motif Style Guide*
- *OSF/Motif Programmer's Guide*

The following sections discuss the OSF/Motif Release 1.2 enhancements.

#### A.3.1 General Toolkit Changes

This section discusses the changes made to the overall OSF/Motif Release 1.2 Toolkit.

##### A.3.1.1 Include File Changes

The following header files that were in OSF/Motif Release 1.1 are obsolete in Release 1.2:

```
ExtObject.h
Traversal.h
VaSimple.h
VendorE.h
VendorEP.h
```

A new public header file, `XmAll.h`, has been added to OSF/Motif Release 1.2. This header file includes all the documented header files.

#### A.3.2 Change in XT Translations

As a result of fixing a problem in the XT translation code (Patch 25 for X11 R5), the translations in Xt are now handled strictly and no longer accept any possible match as they did before. This change has caused a change in the behavior of the QATS and Motif VTS test suites, which now make incorrect assumptions for certain keyboards, such as those that have the arrow keys defined in the keypad. Other Motif applications might be affected as well.

## OSF/Motif Release 1.2 Release Notes

### A.3 Changes and New Features for OSF/Motif Release 1.2

You can avoid this problem by creating a file to redefine the bindings for the keys in question and then passing that file to the `xmodmap` utility.

The following example changes the bindings for the keypad keys that match the arrow keys so that only the arrow keys are produced, not the keypad numbers. The new definitions allow the application to use modifiers with the arrow keys.

```
!  
! Always force:  
! KP_2 = Down  
! KP_8 = Up  
! KP_4 = Left  
! KP_6 = Right  
keycode 120 = Down  
keycode 76 = Up  
keycode 98 = Left  
keycode 100 = Right
```

#### A.3.3 ANSI C Compliance

All references to `caddr_t` have been changed to `XtPointer`. This change affects all callback routines and any other routines that reference `caddr_t`. The OSF made this change so that OSF/Motif Release 1.2 would be compliant with the ANSI C specification.

#### A.3.4 Display and Screen Specific Data

Motif now has an `XmDisplay` object that supports per-display data and resources. An `XmScreen` object has been added that supports per-screen data and resources.

#### A.3.5 Drag and Drop

OSF/Motif Release 1.2 supports the drag and drop metaphor for data interchange. The drag-and-drop specification has been fully implemented. See the Release 1.2 version of the OSF/Motif Programmer's Guide for information on the drag and drop interface.

---

#### Note

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If you want to use `Btn2` to have pop-up menus pop up, drag and drop will not function properly. You need to disable drag and drop in such instances.

---

#### A.3.6 Tear-Off Menus

With tear-off menus, the user can retain menus on the display area for subsequent selections. Each tearable menupane is a tear-off button. When the mouse drag button is pressed on the tear-off button, the pane tears off and can be dragged and then placed by releasing the mouse drag button. The window manager surrounds the tear-off menupane with a menu button and a title. Shifting focus to a torn-off menu's windowpane follows the standard window manager policy.

Tear-off behavior is enabled by setting the `XmNtearOffModel` resource to `XmTEAR_OFF_ENABLED`. (The default is `XmTEAR_OFF_DISABLED`).

Note that there is no resource converter preregistered by `XmNtearOffModel`. To allow the tear-off function to be enabled through the resource database, an application must register its own resource converter for the `XmNtearOffModel` resource using the `XmRepTypeInstallTearOffModelConverter` function.

## OSF/Motif Release 1.2 Release Notes

### A.3 Changes and New Features for OSF/Motif Release 1.2

The converter is not automatically installed because many applications use map or cascading callbacks to dynamically set the sensitivity of items within their menus. However, if a tear-off menu is mapped, the sensitivity of its menu items must be changed immediately to reflect changes in other application states. Existing applications are unlikely to change menu item sensitivity in this manner. Thus, allowing their menus to be torn off could result in operations being enabled at unexpected times. If a user activates one of these menu items, the application can crash or the persistent data can be corrupted.

#### A.3.7 Insensitive Visuals

Motif provides visual indications to show whether a component can respond to input from users. Labels and buttons have had this behavior in previous Motif releases. In OSF/Motif Release 1.2, this behavior has been extended to the following widgets:

```
XmArrowButton
XmList
XmScrollBar
XmText
XmTextField
```

#### A.3.8 Other Visual Changes

OSF/Motif Release 1.2 has made other visual changes as follows:

- Several pixels have changed in the three-dimensional beveled look.
- Minor changes have been made to the color generation routines. In particular, the new `XmScreen` object contains resources that allow for tailoring the generation of default colors. Some of the default values for thresholds have been adjusted to produce more contrast on color monitors.
- Motif now adds a location cursor to surround all items in a List whenever a List widget has the focus and the current keyboard item is not visible.
- There are minor layout differences because of fixes in geometry management.

#### A.3.9 Titles for Frames

In OSF/Motif Release 1.2, you can specify a Title widget in a Frame widget. The release has added the following new constraint resources for specifying the position and alignment of the title in the Frame:

```
XmNchildHorizontalAlignment
XmNchildHorizontalSpacing
XmNchildType
XmNchildVerticalAlignment
```

#### A.3.10 Audible Warning

The `VendorShell` has a new resource, `XmNaudibleWarning`, that can specify whether an audible cue should accompany a warning message. Text widgets determine the value for this resource from the value of `XmNaudibleWarning`.

### **A.3.11 Color Enhancements**

The following three resources have been added to the `XmScreen` widget so that users can specify the default background color and thresholds for shadow calculation:

```
XmNlightThreshold  
XmNdarkThreshold  
XmNforegroundThreshold
```

Motif has added the `XmChangeColor` function that changes the background and other colors for a specified widget.

### **A.3.12 Baseline Alignment**

Motif has added two functions for baseline alignment. The `XmWidgetGetBaselines` function determines the position of the widget's text baseline. The `XmWidgetGetDisplayRect` function determines the size and position of the bounding box for the widget's character string.

### **A.3.13 Expanded Traversal Set**

In OSF/Motif Release 1.2, you can use more widgets to support traversal using the keyboard. For example, inside a tab group, users can now use the arrow keys to traverse to all control descendants that are not contained within a nested tab group and that are eligible to receive focus, even if the controls are not direct children of the tab group.

### **A.3.14 Two-Dimensional Menu Traversal**

With OSF/Motif Release 1.2, the left, right, up, and down traversal arrows now navigate within a menupane. The up and down arrow keys wrap between columns. The right and left arrow keys post the previous or next menupane when they are pressed in the rightmost and leftmost column of the menupane, respectively.

### **A.3.15 Input Focus**

OSF/Motif Release 1.2 has added the `XmNinitialFocus` resource to the `Manager` class. This resource specifies the first widget to receive input focus. This resource can only specify a widget; it is ignored for all pop-up menus, menubars, option menus, and pull-down menus.

### **A.3.16 Traversal Access Functions**

OSF/Motif Release 1.2 has added the following new functions to support better interaction with keyboard traversal:

```
XmGetFocusWidget  
XmGetTabGroup  
XmGetVisibility  
XmIsTraversable  
XmIsVisible
```

The `XmTrackingLocate` function has been modified to do the following:

- Field all events, not just a button press.
- Return on any keystroke or button press.
- Be called for nonsensitive widgets.

## OSF/Motif Release 1.2 Release Notes

### A.3 Changes and New Features for OSF/Motif Release 1.2

In addition, the `XmTrackingEvent` function has been added. This function is similar to `XmTrackingLocate`, except that it returns a pointer to the X event.

#### A.3.17 Virtual Keys

OSF/Motif Release 1.2 has added the `XmTranslateKey` function that allows applications to override the default `XtKeyProc` to handle Motif virtual keys.

Motif defines two new virtual keysyms:

```
osfPageLeft
osfPageRight
```

You must have the X11 Release 5 `XKeysymDB` installed in `/usr/lib/X11` to use these new virtual keys. Otherwise you get a warning message on application startup. Specify the following information in the `XKeysymDB` file:

```
osfPageLeft      :1004FF40
osfPageUp        :1004FF41
osfPageDown      :1004FF42
osfPageRight     :1004FF43
```

To comply with the OSF/Motif Style Guide, the default binding for `osfMenu` has been changed from `<key>F4` to `Shift<key>F10`.

In X11 Release 5, the HP keysyms in the `XKeysymDB` file have the prefix `hp`. This prefix is not reflected in the HP bindings file in the `/bindings` directory. If you are using an X11 Release 5 `XKeysymDB` file, you might see warning messages at application startup. To eliminate these warning messages, add the `hp` prefix as follows to the appropriate lines in the file:

```
osfDelete :          <key>hpDeleteChar
osfInsert :          <key>hpInsertChar
osfPrimaryPaste :    <key>hpInsertLine
osfQuickPaste :      <key>hpDeleteLine
```

OSF/Motif Release 1.2 has a new client, `xmbind`, that sets up the virtual bindings for use by Motif applications. Since virtual binding is automatically set up at Motif Window Manager (MWM) startup, you only need to use `xmbind` if MWM is not used or if you need to change the virtual bindings without restarting MWM.

Virtual bindings can now be specified by individual vendors. If there is no `.motifbind` file in the home directory, you can use the `xmbind.alias` file to provide a mapping from the server vendor name to the bindings file. You can set up user vendor bindings as well as system-wide vendor bindings.

#### A.3.18 Resource Management

OSF/Motif Release 1.2 has the following new functions for managing representation types:

```
XmRepTypeRegister
XmRepTypeAddReverse
XmRepTypeValidValue
XmRepTypeGetRegistered
XmRepTypeGetId
XmRepTypeGetNameList
XmRepTypeGetRecord
```

## OSF/Motif Release 1.2 Release Notes

### A.3 Changes and New Features for OSF/Motif Release 1.2

These functions are useful for developers who want to define new resource converters that use an enumerated set of values.

#### A.3.19 Changes for CUA and Windows Compliance

In OSF/Motif Release 1.2, pressing the Return key or using the key bound to `osfActivate` (usually the Enter key on the numeric keypad) no longer activates a button that is outside a menu. For example, pressing such a key no longer pops up an `OptionMenu` or activates a `ToggleButton` in a dialog box.

If your application has a default button associated with an `XmBulletinBoard`, pressing Return (except in a multiline `XmText`), `Ctrl/Return`, or the key bound to `osfActivate` while the focus is in the `XmBulletinBoard` now activates the default button.

## A.4 Changes and Enhancements to Specific Widgets

This section summarizes the changes to specific widgets that were made in OSF/Motif Release 1.2.

### A.4.1 XmClipboard

OSF made several corrections to the `XmClipboard` function parameters. These changes are binary compatible with earlier releases of Motif. However, in some instances, you might see warning messages when you recompile your applications. The modifications involved changing `(char *)` to `XtPointer`, `int` to `long`, and `(int *)` to `(long *)`. The related functions affected by these modifications are:

- `XmClipboardCopy`
- `XmClipboardCopyByName`
- `XmClipboardInquireCount`
- `XmClipboardInquireFormat`
- `XmClipboardRegisterFormat`
- `XmClipboardRetrieve`
- `XmClipboardStartCopy`
- `XmClipboardWithdrawFormat`

### A.4.2 XmCommand

In OSF/Motif Release 1.2, a correction was made to `XmCommandGetChild` so that it now accepts `XmDIALOG_WORK_AREA` as a value for the child argument.

### A.4.3 XmList

To enhance its capabilities for managing lists, OSF/Motif Release 1.2 includes the following new functions:

- `XmListAddItemsUnselected`
- `XmListDeletePositions`
- `XmListGetKbdItemPos`
- `XmListIsPosSelected`
- `XmListPosToBounds`
- `XmListReplaceItemsUnselected`

## OSF/Motif Release 1.2 Release Notes

### A.4 Changes and Enhancements to Specific Widgets

- `XmListReplaceItemsPosUnselected`
- `XmListReplacePositions`
- `XmListSetKbdItemPos`
- `XmListUpdateSelectedList`
- `XmListYToPos`

The `XmList` widget includes a new translation:

- `<Copy>`  
Copies the selection to the clipboard.

`XmList` includes a new action:

- `ListScrollCursorVertically()`  
Scrolls the cursor vertically based on an input percentage or a `y` position.

---

#### Note

---

This action was mistakenly named `ListScrollCursorVisible` in OSF/Motif Release 1.2. The name will be corrected in a later release of Motif.

---

The `XmNvisibleItemCount` resource has been modified so that the default value is dynamic, and is based on the item count and the height.

In OSF/Motif Release 1.2, if the `selectedItems` and `selectedItemCount` resources for a list are set in a resource file, the location cursor appears over the last item in the `selectedItems` list, not the first selected item.

#### A.4.4 `XmMessageBox`

In OSF/Motif Release 1.2, `MessageBox` supports the addition of one `MenuBar`, one work area, and multiple `PushButton` children.

A new dialog type, `XmDIALOG_TEMPLATE`, creates a `MessageBox` that contains only a `Separator`. The application provides additional children.

`XmCreateTemplateDialog` creates an `XmDIALOG_TEMPLATE` `XmMessageBox` inside a `DialogShell`.

#### A.4.5 `XmRowColumn` and Menus

OSF/Motif Release 1.2 adds a new resource, `XmNentryVerticalAlignment`, that specifies the vertical alignment style.

Another resource, `XmNunpostBehavior` has been added to the `XmScreen` object. This resource can be set to enable external button events to be replayed after a menu is unposted.

#### A.4.6 `XmScrollBar`

In OSF/Motif Release 1.2, `XmScrollBar` includes a new translation:

- `<Cancel>`  
Cancels the current slider drag.



## OSF/Motif Release 1.2 Release Notes

### A.4 Changes and Enhancements to Specific Widgets

#### A.4.7 XmScrolledWindow

OSF/Motif Release 1.2 adds the function, `XmScrollVisible`, that scrolls an automatic scrolled window to make a partially or completely obscured widget visible.

Another resource, `XmNtraverseObscuredCallback`, has been added that specifies a list of callbacks that are called when a traversal event is requested to a nonvisible widget. A new callback structure, `XmTraverseObscuredCallbackStruct`, has been added to support this callback.

#### A.4.8 XmSelectionBox, XmFileSelectionBox

In OSF/Motif Release 1.2, the `XmSelectionBox` and `XmFileSelectionBox` widgets support the addition of `MenuBar` and `PushButton` children, as well as a work area child.

A new resource, `XmNchildPlacement`, controls the location of the work area child.

The value, `XmDIALOG_TEMPLATE`, has been added to the `XmNdialogType` resource.

By default, `XmSelectionBoxDialog` and its subclasses use `XmTextField` instead of `XmText`. You can revert to the earlier behavior by defining `USE_TEXT_IN_DIALOGS` when your application builds `XmSelectionBox` or any of its subclasses.

#### A.4.9 XmText

OSF/Motif Release 1.2 has added two functions to `XmText` for making update changes to the widget: `XmTextDisableRedisplay` and `XmTextEnableRedisplay`.

Two other functions facilitate string manipulation: `XmTextFindString` and `XmTextGetSubstring`.

In Release 1.2, the destination cursor now follows the insert cursor and is no longer independently drawn.

`XmText` includes three new translations:

- `<Backspace>`  
Deletes any non-null primary selection.
- `<Delete>`  
Deletes any non-null primary selection.
- `<LeaveWindow>`  
Continues a selection action by scrolling after a time delay.

`XmText` includes two new actions:

- `scroll-cursor-vertically()`  
Scrolls the cursor vertically based on a y position.
- `toggle-overstrike()`  
Switches between insert and overstrike modes.

---

#### Note

---

There is a potential problem in both `XmText` and `XmTextField` with rendering strings in fonts or font sets that contain characters whose ascenders can rise above the font ascent. If the text containing these

## OSF/Motif Release 1.2 Release Notes

### A.4 Changes and Enhancements to Specific Widgets

characters is highlighted, any overlapping descenders in the previous line may be overwritten by the ascenders in the succeeding line.

---

#### A.4.10 XmTextField

OSF/Motif Release 1.2, the `XmTextField` widget has a new resource, `XmNfocusCallback`, that specifies the callbacks to be called when the widget accepts input focus.

Another new function, `XmTextFieldGetSubstring`, gets a substring by length from a widget.

In Release 1.2, the destination cursor now follows the insert cursor and is no longer independently drawn.

`XmTextField` includes two new translations:

- `<Backspace>`  
Deletes any non-null primary selection.
- `<Delete>`  
Deletes any non-null primary selection.

#### A.4.11 XmToggleButton, XmToggleButtonGadget

In OSF/Motif Release 1.2, setting `XmNfillOnSelect` to be true when `XmNindicatorOn` is false now causes the background of a set `XmToggleButton` to be filled with `XmNselectColor`.

The default value for `XmNfillOnSelect` is dynamic so that it matches the state of `XmNindicatorOn`.

## A.5 Motif Window Manager Enhancements

This section highlights the enhancements to the Motif Window Manager (MWM).

### A.5.1 Changes to MWM

OSF/Motif Release 1.2 incorporates the following enhancements to MWM:

- An internationalized `.mwmrc` file
- Internationalized dialog messages
- A built-in default root menu
- Support for the `<Return>` continuation character (`\`) in the `.mwmrc` file
- Search capability with `XBMLANGPATH` for bitmap files
- Support for pop-down and replay event behavior in `mwm` menus
- Documentation of the widget names used by `mwm`
- Support for scrolled window traversal to scrolled-off children in the icon box
- Support for treating the `<Alt>` and `<Meta>` key modifiers as two distinct modifiers
- Support for the `SHAPE` nonrectangular window extension

### **A.5.2 New and Enhanced MWM Resources**

The OSF/Motif Release 1.2 window manager includes the following new or enhanced resources:

- `feedbackGeometry`  
Sets the position of the move/resize feedback window. The default position is the center of the screen.
- `frameBorderWidth`  
Now bases its default value on the size and resolution of the screen.
- `iconPlacement`  
Now takes the addition value, `tight`, which specifies automatic icon placement with no gaps between icons.
- `maximumClientSize`  
Can now take the values `vertical` and `horizontal`.
- `moveOpaque`  
Controls whether an image of the window or just an outline of the window is moved.
- `resizeBorderWidth`  
Now bases its default value on the size and resolution of the screen.
- `usePPosition`  
Uses the values of `on`, `off`, or `nonzero` to control whether program-specified positions are used.

### **A.5.3 New and Enhanced MWM Functions**

OSF/Motif Release 1.2 has the following new and enhanced MWM functions:

- `f.lower`  
Includes a `within` argument to move the window within the application stacking order, but retains the parent window below the children rule. The function also includes a `freeFamily` argument to move the window absolutely without regard to its local family stack. Both modifiers move the window within the local family stack, but do not move the family stack.
- `f.minimize`  
Can now be used from an icon in an icon box.
- `f.raise`  
Includes a `within` argument to move the window within the application stacking order, but retains the parent window below the children rule. The function also includes a `freeFamily` argument to move the window absolutely without regard to its local family stack. Both modifiers move the window within the local family stack, but do not move the family stack.
- `f.raise_lower`  
Includes a `within` argument to move the window within the application stacking order, but retains the parent window below the children rule. The function also includes a `freeFamily` argument to move the window absolutely without regard to its local family stack. Both modifiers move the window within the local family stack, but do not move the family stack.

## OSF/Motif Release 1.2 Release Notes

### A.5 Motif Window Manager Enhancements

- `f.restore`  
Restores a window to its previous state. Double clicking on a root icon is bound to this function rather than to `f.normalize`.
- `f.restore_and_raise`  
Restores a window to its previous state and raises it to the top of the window stack. Double clicking on an icon in an icon box is bound to this function rather than to `f.normalize`.
- `f.screen`  
Traverses to the screen specified by `arg`. Legal values for `arg` are: `next`, `prev`, `last`, or a specific screen number.

#### A.5.4 New MWM Action

OSF/Motif Release 1.2 has one new MWM action:

- `<Alt> <Esc>`  
This key combination behaves similarly to `f.next_key`, except that the window is always raised, regardless of the value of `focusAutoRaise`.

## A.6 Changes to the User Interface Language

OSF/Motif Release 1.2 has the following changes in the User Interface Language (UIL):

- There is a new command flag, `-s`, that enables the use of `setlocale` and the creation of localized Compound Strings.

---

#### Note

---

There is a serious problem in parsing double quoted strings with the `-s` flag. If you need to use this flag for parsing double quoted strings, you must obtain a patch from the OSF.

---

- New UIL syntax now supports font sets and font tables.
- New UIL syntax now supports wide character strings.
- Support has been added for using widget references as callback tags.
- New UIL syntax specifies the resources of automatically created children.
- Syntax changes to the Widget Meta-Language (WML) allow for the definition of automatically created children of composite widgets.
- UIL can now use the `-wmd` file flag to read binary databases (WML files) that contain WML information.
- `Mrm` includes two new functions:
  - `MrmOpenHierarchyPerDisplay`  
This function is the same as the old `MrmOpenHierarchy` function, except that in the new function, the `display` is passed as an explicit argument. This function replaces `MrmOpenHierarchy`.
  - `MrmFetchBitmapLiteral`  
This function fetches a bitmap literal with a depth of 1.

## **A.7 OSF/Motif List of Known Problems**

Included in the DECwindows Motif software is an OSF file that contains the OSF/Motif known problems. During the installation this file is copied from the kit to SYSSHELP:DECW\$MOTIF\_OSF\_BUGLIST\_V12.TXT.



---

## OSF/Motif Example Programs

This appendix describes the example programs from the Open Software Foundation (OSF) Motif that are included in the DECwindows Motif software.

### B.1 Cut and Paste Example Program

*V1.2*

This example demonstrates the use of the Motif Clipboard. You can cut and paste application-defined data formats using the XmClipboard API.

Run two cut/paste clients and transfer graph values using the pull-down and pop-up menus.

### B.2 DNDDemo Example Program

*V1.2*

This example illustrates a typical use of the drag-and-drop feature.

When the example starts, it does not have any valid drop sites. It starts with different color rectangles that act as drag sources for dragging the colors around. Create the drop sites as follows:

- Move the pointer into the drawing area (with white background).
- Press MB1 and drag. You see the “rubber-banding” effect.
- Release MB1 after dragging a desired distance.

A black rectangle appears. You can create as many rectangles as you like.

The rectangles inside the drawing area that you created act as valid drop sites for colors. You can test this by initiating the drag from the yellow color rectangle and dragging over to one of the rectangles inside the drawing area and releasing MB2.

To initiate a drag, move the pointer over to the drag source, press BTransfer (which is MB2 by default), and start to drag. Notice that the cursor changes to a painter’s palette in the same color as the color rectangle from which the drag is initiated.

While you are dragging, notice the following:

- When dragging over the root window, the drag icon consists of only the painter’s palette.
- When dragging over parts of the drawing area where there are no rectangles, the drag icon changes to include a “DO NOT ENTER!” sign on top of the painter’s palette.

## OSF/Motif Example Programs

### B.2 DNDDemo Example Program

- When dragging over any of the rectangles inside the drawing area, the “DO NOT ENTER!” sign is replaced with a painter’s brush.

To perform a drop, release MB2. If you release MB2 with the pointer over any part of the drawing area outside of the rectangles, or anywhere on the root window, the drag icon snaps back to the point of drag initiation and disappears. This is an indication that the drop you attempted failed. If you release MB2 with the pointer over any of the rectangles inside the drawing area, the drag icon disappears into the background; this indicates that the drop was a success. The rectangle on which the drop was attempted, becomes filled in with the color that was dragged.

The rectangles inside the drawing area act as drag sources. Initiate the drag with the pointer on any rectangle, and the cursor changes to a rectangle (either of the same size or a smaller size depending on the X cursor size constraints). Drag the rectangle from one place and drop it onto a new place inside the drawing area. The rectangle is physically moved to the new position.

If you want to copy the rectangle to a new position, use the appropriate modifier key while dragging, or at the time you attempt the drop (Ctrl is the modifier key for copy in the current implementation). When you drag a rectangle with no modifier key pressed or with the Shift key pressed, the solid rectangle from where the drag was initiated is replaced by a hollow rectangle with dotted-line borders. It continues this way for the duration of the drag or until you press the Ctrl key, which changes the operation to Copy. At that time it regains its original solid form.

---

#### Note

---

During dragging you can cancel the drag by pressing the Cancel key (F11). Also, you can press the Help key to get information about whether the drop will succeed and possible drop operations.

---

## B.3 Dogs Example Program

### *V1.1*

This example uses the dog and square widgets. It shows how to incorporate new widgets into the UIL source by using the user-defined function.

The dogs example program allows you to change the DogNwagTime and SquareNmakeSquare resources dynamically.

If you have a system with sound generation features, you might want to change the bark callback to something other than XBell().

### B.3.1 Dog Widget

#### *V1.1*

The dog widget (DogWidget) demonstrates how to subclassify a primitive widget that remains binary compatible with future versions of Motif. It uses XmResolvePartOffsets() and associated macros and implements all the recommendations in the XmResolvePartOffsets manpage.

The dog widget is a subclass of XmPrimitive. It can bark and wag its tail. If you want more advanced tricks, you must subclassify it, or replace up.bm, down.bm, and bark.bm with more advanced bitmaps.



The dog widget has the following resources:

- DogNwagTime: Time in milliseconds between each wag
- DogNbarkTime: Time in milliseconds the bark graphic is displayed
- DogNbarkCallback: Callback called by the bark action

The dog widget has the following translations:

- osfActivate/Return/Space/MB1 = Bark
- W/MB2 = Wag tail
- S/Shift-MB2 = Stop wagging tail
- osfHelp = Help

### B.3.2 Square Widget

#### *V1.1*

The square widget (SquareWidget) demonstrates how to subclassify a constraint widget that remains binary compatible with future versions of Motif. It uses `XmResolveAllPartOffsets()` and associated macros and implements all the recommendations in the `XmResolveAllPartOffsets` manpage.

The square Widget is a subclass of `XmBulletinBoard`. It forces its children to be square using a constraint resource.

The square widget has the resource `SquareNmajorDimension`. This resource determines which dimension is used for the new size of the child. Values are `SquareWIDTH` or `SquareHEIGHT`.

The square widget has the constraint resource `SquareNmakeSquare`. This resource determines whether the child is forced to be square or set to its preferred shape.

## B.4 Helloint Example Program

#### *V1.2*

This example is a simple UIL/Xm program with a label and a push button.

With this version, you can choose a Kanji, Hebrew, French, or English interface at run time.

The program uses the file `LOCALSTRINGS.UID` for all language-specific interfaces. To change languages, copy one of the `LOCALSTRINGS_*.UID` files to `DECW$USER_DEFAULTS:LOCALSTRINGS.UID`. Then, use the logical name `LANG` or the `xnlLanguage` resource to set the locale. Set the `LOCALSTRINGS` suffix and the locale name to one of the following:

Locale	Interface Type
Japan	Kanji
Hebrew	Hebrew
French	French
English	Standard English

## OSF/Motif Example Programs

### B.4 Helloint Example Program

To define the `xnlLanguage` resource, add the following line to your `DECW$XDEFAULTS.DAT` file:

```
*xnlLanguage:locale
```

The following fonts are needed for the `helloint` example program:

Locale	Font Name
French	-adobe-helvetica-medium-r-normal-12-120-75-75-p-67-iso8859-1
English	-adobe-times-medium-r-normal-14-100-100-100-p-74-iso8859-1
Hebrew	-Misc-Fixed-Medium-R-Normal-13-120-75-75-C-80-ISO8859-8
Japan	-*-.JISX0208.1983-1
	-*-.JISX0201.1976-0

If you do not have these fonts installed on your system, either change the UIL files to reference other fonts or install the `*.DECW$BDF` fonts provided in the `DECW$EXAMPLES` directory. See *HP DECwindows Motif for OpenVMS Management Guide* for instructions on how to install new fonts.

### B.5 Hellomotif Example Program

#### VI.2

This example is a simple UIL/Xm program with a label and a push button.

### B.6 Motifanim Example Program

#### VI.1

The `motifanim` program demonstrates the following OSF/Motif features:

- Declaration of icon/bitmaps using UIL for portability across visuals
- Exchange of value between UIL and C using `Mrm`
- Use of the Motif form widget
- Background procedure running while the client process is waiting for input (Xt intrinsics feature)

This example lets you animate a set of pixmaps in an X window. The pixmaps are not fixed by `motifanim` but are read at startup from existing UID files.

The syntax of all the `animation.uid` files can add a new set of pixmaps to be animated using `motifanim`. Some tree examples of animation data files include:

```
dog.uid  
plane.uid
```

The default animation is `dog`. To run the example with the other animations, use the following commands:

```
$ SET DEFAULT DECW$EXAMPLES  
$ motifanim := "$DECW$EXAMPLES:motifanim"  
$ motifanim -anim plane
```

The files `motiflogo.uid`, `motifanim.uid`, and `motifanim.c` are the core components of the program.

## B.7 Motifgif and Pict Viewing Programs

*V1.2*

The following .gif files are provided:

- TOUCAN.GIF, which is a picture of a tropical bird.
- CHALLENGER.GIF, which is a picture of the space shuttle Challenger.

*V1.1*

The motifgif and pict programs work together to display a .gif formatted picture. The motifgif program displays a .gif file within Motif constructs. The motifgif program looks for .gif files in the current directory.

The motifgif program has three significant components:

- motifgif  
The source and executable code in this directory is a Motif program driving the display of a .gif picture.
- pict  
The program called by motifgif that displays a bitmap of a .gif picture file. This program used to be xgif but has since been converted to Motif.

The following problems exist with motifgif:

- Resizing a picture does not work.
- The -d option is not used when calling pict, so remote displays must set the DISPLAY environment variable.

## B.8 Motifshell Example Program

*V1.2*

The motifshell program is an example of an environment created using Motif. The purpose of the example is to show how Motif may be used as a standalone environment for dispatching other programs and utilities.

The motifshell program is written in C code. There are no UIL references.

---

**Note**

---

Displaying a file listing or process status takes some time. These operations are accomplished by spawning a DCL command, capturing the output in a file, and then reading the file.

The default font is proportionally spaced. Some listings are more readable if a fixed space font is used, such as Courier. Use the Font option to select a different font.

---

## B.9 Periodic Example Program

*V1.2*

The periodic example is a demonstration of the displayable widgets in Motif. The program displays Motif widgets in a periodic chart format.

## OSF/Motif Example Programs

### B.10 Textedit Example Program

## B.10 Textedit Example Program

*V1.2*

The textedit program is a primitive text editor based on the Motif XmText widget that makes use of its XmNsource resource to allow multiple views of the same underlying text.

Table B-1 describes the View menu options.

**Table B-1 View Menu Options**

Option	Description
Split Pane	Adds a new independently scrollable view of the text.
Remove Pane	Removes a designated pane.
One Pane	Removes all panes except the designated pane.

The designated pane is determined in the following way:

- If using an explicit focus policy, it is the last view which had focus.
- If using a pointer focus policy, it is the last view with which the user interacted.

The designated pane is also the one whose clipboard contents are pasted when Paste is selected from the Edit Menu.

The textedit sources are separated into independent layers. Textedit contains the source files listed in Table B-2.

**Table B-2 Textedit Source Files**

File Name	Description
tfile.c	The code to read, write, and remove files. Hides any operating system or filesystem dependencies.
app.c	Uses tfile.c to provide all the code to manipulate files and their related buffers. This is toolkit-dependent.
tk.c	Isolates dependencies on the Xm Toolkit. The first half of the file provides utility routines and a toolkit-independent (but application-specific) interface that can be used by the toolkit-independent dialog layer of the application. The second half of the file defines all the callback routines. Many of these update state internal to this layer; others perform additional actions. Those actions unambiguously correspond to toolkit-specific action routines defined in the first half of the file. Otherwise, an upcall is made to the toolkit-independent dialog layer to decide what to do.
dlg.c	Uses tk.c to manage dialog with the user. The code is toolkit-independent.
textedit.c	Initializes the application and instantiates widget hierarchies. The code hides the use of UIL and Mrm from the rest of the application.

---

**Note**

---

Moving and removing files is not currently implemented.

---

## B.10.1 Additional Translations

### V1.2

Users familiar with emacs may want to add the following translations to their DECW\$XDEFAULTS.DAT files:

```
*XmText.translations:      Mod1<Btn3Down>: scroll-cursor-vertically()\n\
  Mod1<Btn3Motion>: scroll-cursor-vertically()\n\
  Ctrl<key>a: beginning-of-line()\n\
  Ctrl<key>b: backward-character()\n\
  Ctrl<key>d: delete-next-character()\n\
  Ctrl<key>e: end-of-line()\n\
  Ctrl<key>f: forward-character()\n\
  Ctrl<key>g: beep()\n\
  Ctrl<key>h: delete-previous-character()\n\
  Ctrl<key>i: cut-primary()\n\
  Ctrl<key>j: newline-and-indent()\n\
  Ctrl<key>k: set-anchor() end-of-line() key-select() cut-clipboard()\n\
  Ctrl<key>l: redraw-display()\n\
  Ctrl<key>m: newline()\n\
  Ctrl<key>n: next-line()\n\
  Ctrl<key>o: newline-and-backup()\n\
  Ctrl<key>p: previous-line()\n\
  Ctrl<key>v: next-page()\n\
  Ctrl<key>w: cut-clipboard()\n\
  Ctrl<key>y: paste-clipboard()\n\
  Ctrl<key>z: scroll-one-line-up()\n\
  Mod1<key>b: backward-word()\n\
  Mod1<key>d: delete-next-word()\n\
  Mod1<key>f: forward-word()\n\
  Mod1<key>h: delete-previous-word()\n\
  Mod1<key>i: copy-primary()\n\
  Mod1<key>k: delete-to-end-of-line()\n\
  Mod1<key>v: previous-page()\n\
  Mod1<key>w: copy-clipboard()\n\
  Mod1<key>z: scroll-one-line-down()\n\
  Mod1 Shift<key>greater: end-of-file()\n\
  Mod1<key>less: beginning-of-file()\n\
  Mod1<key>]: forward-paragraph()\n\
  Mod1<key>[: backward-paragraph()
```

## B.11 View Example Program

### V1.2

The view program is similar to the DCL command TYPE/PAGE using Motif with internationalization support. It allows you to view files in several languages.

The command file DECW\$EXAMPLES:FILEVIEW.COM is provided, which allows you to select a language. Valid languages are French, English, and German. To select a language, perform the following commands:

```
$ SET DEFAULT DECW$USER DEFAULTS
$ @DECW$EXAMPLES:FILEVIEW language
```

This command file copies the .UID and .DAT files to the current directory. It sets the appropriate locale and executes the file viewing example program.

When the application is started, a primary top-level shell is created. From the primary top-level shell, you can create secondary shells.

Each top-level shell is a parent of a Main Window, the work area of which is a PanedWindow.

## OSF/Motif Example Programs

### B.11 View Example Program

The menu bar has the following entries:

- File—opening and closing files, creating new shells, and exiting
- View—controlling the panes in the pane window

#### File Menu

The file menu contains the following options:

- Open New File  
A file selection box is mapped to choose the file. If OpenFile is successful, the current file is closed, all existing panes are destroyed, and the new file is displayed.
- Open New Shell  
Creates a secondary shell similar to the primary shell. Files can be viewed in each shell independently.
- Close  
This entry only exists on the secondary windows. It destroys the top-level shell and closes the file.
- Exit  
This entry only exists on the primary shell; it closes the file and the shell.

#### View Menu

The view menu contains the following options:

- New Pane  
Creates a new pane in the paned window.
- Delete Pane  
Deletes the current pane.
- Search  
Causes a dialog box to pop up for searching text in the file. The OK callback of the dialog box searches the string. If the string is found, it is displayed in the current pane. If the string is not found, then the dialog box pops up.

Opening a second file in a window causes the application to end abruptly. The View options do not work correctly.

## B.12 Xmpiano Example Program

### *V1.2*

The xmpiano program shows how to write a Motif Interface to Dumb Instruments (MIDI) application. Both a staff, for writing music, and keyboard are provided.

At the bottom of the window is a set of notes that may be used on the staff. Selecting one of these note buttons changes the active note accordingly. The selected note is also displayed as the new mouse cursor.

Though the note selection is limited, it is possible to play sharps as well as naturals. The program interface has not been written to play flats. The staff automatically resizes larger as notes are added past the right side of the staff. To see these notes, scroll the score window as needed.

## OSF/Motif Example Programs B.12 Xmpiano Example Program

To use this application, press the right mouse button on a staff that is visible. The following menu items are displayed:

- **Add Voice**  
Connects another display to a new staff. After selecting this command, you are prompted for the display to connect. Any music written in the new staff plays to this display. Note that pressing the right mouse button on the new staff shows the name of the display in the menu title. In addition, the menu commands in the menu bar relate to the staff that is being displayed.
- **Remove Voice**  
Removes the staff as well as the connection to the corresponding display. There is no undo for this command—all music written in this staff is deleted.
- **Clear Voice**  
Erases all notes on the staff. This does not affect the display connection.
- **Play Voice**  
Plays the voice of the staff in which the right mouse was pressed. If the voice is the same as the local host, the keys on the keyboard that correspond to the notes appear as though they are being pressed as the notes are played. It is possible to make the keyboard play along with all voices at the same time; however, the code must be compiled with the `-DCHORDS` option. Note that this can slow down the application significantly on many servers.
- **Play All**  
Plays all voices at the same time on each of the specified displays.
- **Save Voice**  
Saves the corresponding voice to a file. A `FileSelectionDialog` is displayed to prompt for the name of the file in which to save the voice. The display connection information is not saved.
- **Load Voice**  
Loads (appends) a previously saved voice to the corresponding staff.
- **Quit**  
Exits the example program.

This version does not allow editing of notes. To edit, clear the staff and start again, or read the data from a saved file.

To set the color of the notes, change the foreground color of the application. To do this, use the `-fg` option on the command line. For example:

```
$ xmpiano := $DECW$EXAMPLES:xmpiano  
$ xmpiano -fg blue
```

## B.13 Xmtravel Example Program

*V1.2*

The `xmtravel` example is a front end to a travel agent client and flight database. The program is designed to illustrate various user-interface design concepts as well as be compliant with the OSF/Motif Style Guide.

The program is just an example, many of the functions are either not implemented or use predefined settings.

## B.14 Additional Sample Programs

V1.2

Table B–3 lists sample programs showing various Motif Toolkit functionality.

**Table B–3 Motif Sample Programs**

File Name	Description
xmdialogs.c	dialog sampler
xmfonts.c	font browser
xmeditor.c	text editor
xmlist.c	list example
xmprotocol.c	window manager protocols example
xmter.c	shape & animation example
xmform.c	form attachment example
xmforc.c	form attachment + rowcolumn example
xmmap.c	drawingarea + scrolledwindow example
xmgetres.c	resource fetching example
xmapdef.c	app defined scrolled window example

The following notes apply to these sample programs:

1. The `xmfonts` program defaults to displaying the fonts whose name length are less than 10 characters. On some systems, the font path contains only long XLFD font names. It may be necessary either to set the resource `XMFONTS*maxLen` to a larger number (80), or to specify a `numColumns` resource of 1.
2. If you run the program `xmter` with a window manager other than Motif Window Manager, that window manager has to remove all the window decorations (for example, borders). The program `xmter` directs Motif Window Manager to remove the window decorations.
3. The `xmform` program displays a string made of Motif widgets embedded in a Form. Use the following commands:

```
$ xmform ::= $DECW$EXAMPLES:xmform  
$ xmform string
```

The variable *string* is optional. If *string* is supplied, the available letters for *string* are F,I,M,O,T. The string of letters that you use must be in uppercase and enclosed in quotation marks. If *string* is omitted, `xmform` returns "MOTIF".

4. The `xmgetres` program is an example of how to use `XmGetSecondaryResourceData`. Use the following commands to invoke `xmgetres`:

```
$ xmgetres ::= $DECW$EXAMPLES:xmgetres  
$ xmgetres WidgetClass
```

The variable *WidgetClass* is optional. If *WidgetClass* is omitted, it defaults to a class named "Widget". You can also use the class "All", which displays the resources for all the Xt and the Motif widgets. See the *OSF/Motif Programmer's Reference* manual for a list of available widget classes.



## B.15 Resource Files for Example Programs

### *V1.2*

Many of the example programs have associated resource files for defining various display attributes. To use these files, either copy them from the directory DECW\$EXAMPLES to your DECW\$USER\_DEFAULTS directory, or add their contents to your DECW\$XDEFAULTS.DAT file.

The list of example programs and the resource files associated with them is as follows:

<b>Example Program</b>	<b>Resource File</b>
DECW\$CDPLAYER.EXE	DECW\$CDPLAYER.DAT
FILEVIEW.EXE	FILEVIEW.DAT
PERIODIC.EXE	PERIODIC.DAT
MOTIFANM.EXE	MOTIFANIM.DAT
XMAPDEF.EXE	XMDEMOS.DAT
XMDIALOGS.EXE	XMDEMOS.DAT
XMEDITOR.EXE	XMDEMOS.DAT
XMFONTS.EXE	XMDEMOS.DAT
XMFORC.EXE	XMDEMOS.DAT
XMFORM.EXE	XMDEMOS.DAT
XMGETRES.EXE	XMDEMOS.DAT
XMLIST.EXE	XMDEMOS.DAT
XMMAP.EXE	XMDEMOS.DAT
XMPROTOCOL.EXE	XMDEMOS.DAT
XMTER.EXE	XMDEMOS.DAT
XMTRAVEL.EXE	XMTRAVEL.DAT

If a resource file is not found, the example programs run, but some of the display attributes may be incorrect.



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