VMS DECwindows Motif Installation Guide

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Preface

Intended Audience

This document is intended for anyone who plans to install the VMS DECwindows Motif software.

Document Structure

This document contains five chapters of information on VMS DECwindows Motif installation procedures and three appendixes.

This document provides the following information:

- Chapter 1—Preparing a VMS system for the installation
- Chapter 2—Installing the software
- Chapter 3—Customizing the software
- Chapter 4—Starting VMS DECwindows Motif
- Chapter 5—Managing VMS DECwindows Motif
- Appendix A—Provides a sample VMS DECwindows Motif installation
- Appendix B—Provides a sample Installation Verification Procedure
- Appendix C—Provides a list of VMS DECwindows Motif components

Associated Documents

The following documents are useful when installing VMS DECwindows Motif:

- The upgrade and installation supplement for your VAX computer
- *Guide to Setting Up a VMS System*
- *VMS V5.4 Upgrade and Installation Manual*
- *VMS Authorize Utility Manual*
- *VMS System Generation Utility Manual*

- *VMS System Messages and Recovery Procedures*
- *VMS License Management Utility Manual*
- *Overview of VMS DECwindows Motif Programming Documentation*
- *VMS DECwindows Motif User's Guide*

The *VMS DECwindows Motif Release Notes*, contained on the media, may also be useful during the installation.

Conventions

The following conventions are used in this manual:

Ctrl+x	A sequence such as Ctrl+x (or Ctrl/x) indicates that you must hold down the key labeled Ctrl while you press another key or a pointing device button.
Return	In examples, a key name is shown enclosed in a box to indicate that you press a key on the keyboard.
blue-green ink	Blue-green ink indicates information that you must enter from the keyboard or a screen object that you must choose to click on.
. . .	In examples, a horizontal ellipsis indicates one of the following possibilities: • Additional optional arguments in a statement have been omitted. • The preceding item or items can be repeated one or more times. • Additional parameters, values, or other information can be entered.
. . .	A vertical ellipsis indicates the omission of items from a code example or command format; the items are omitted because they are not important to the topic being discussed.
( )	In format descriptions, parentheses indicate that, if you choose more than one option, you must enclose the choices in parentheses.

[ ]	In format descriptions, brackets indicate that whatever is enclosed within the brackets is optional; you can select none, one, or all of the choices. (Brackets are not, however, optional in the syntax of a directory name in a file specification or in the syntax of a substring specification in an assignment statement.)
boldface text	Boldface text represents the introduction of a new term or the name of an argument, a field, a resource, or a reason. Boldface text is also used to show user input in online versions of the book.
italic text	Italic text represents information that can vary in system messages (for example, Internal error *number*).
UPPERCASE TEXT	Uppercase letters indicate that you must enter a command (for example, enter OPEN/READ), or they indicate the name of a routine, the name of a file, the name of a file protection code, or the abbreviation for a system privilege.
-	Hyphens in coding examples indicate that additional arguments to the request are provided on the line that follows.
numbers	Unless otherwise noted, all numbers in the text are assumed to be decimal. Nondecimal radixes—binary, octal, or hexadecimal—are explicitly indicated.

1

Preparing to Install VMS DECwindows Motif Software

This chapter discusses the preparations and requirements necessary to install VMS DECwindows Motif software.

Your bill of materials (BOM) and indented bills report (BIL) specify the number and contents of your kit. Be sure to verify the contents of your kit with this information. If your kit is damaged, or if you find that parts are missing, contact your Digital representative.

Note

Digital strongly recommends that you read the *VMS DECwindows Motif Release Notes* before completing the installation. For information on accessing the release notes during the installation, see step 4 in Section 2.1.1.

1.1 Supported Hardware

The VMS DECwindows Motif software can be installed on any supported VAX computer. However, workstation device support for the VMS DECwindows Motif environment is limited to the following VAX computers:

VAXstation II
VAXstation II/RC
VAXstation II/GPX
VAXstation 2000
VAXstation 2000/GPX
VAXstation 3100/SPX
VAXstation 3200
VAXstation 35xx

1.2 Prerequisite Software

VMS Version 5.4 (or a later version of VMS) provides the base system support for VMS DECwindows Motif. Your system must be running VMS Version 5.4 or a later version of VMS before you attempt to install VMS DECwindows Motif or the installation will fail. See the *VMS Version 5.4 Upgrade and Installation Manual* for instructions on how to install VMS Version 5.4.

1.3 License Registration

The License Management Facility (LMF) is used to register software product licenses in the LICENSE database. A software Product Authorization Key (PAK) for VMS DECwindows Motif is required to run DECwindows applications. The product name on the PAK must be DW–MOTIF. The DW–DEV–KIT–OSF–V PAK for the *DECwindows Developer Kit on VMS for OSF/MOTIF* product does not work with VMS DECwindows Motif.

Note

The VMS DECwindows Motif PAK must be registered and loaded before starting the VMS DECwindows Motif software installation or the installation will fail.

If you plan to use VMS DECwindows Motif on more than one node in a VAXcluster, you must load a license on each of the other nodes after you complete this installation.

For complete information on using the License Management Facility, see the *VMS License Management Utility Manual*.

1.4 Privileges Needed for Installation

To install VMS DECwindows Motif, you must be logged in to an account that has SETPRV or at least the following privileges:

- CMKRNL
- WORLD
- SYSPRV

Digital recommends that you use the SYSTEM account for layered product installations. The SYSTEM account has the necessary privileges to perform product installations. Note that VMSINSTAL turns off the BYPASS privilege at the start of the installation and turns it back on when the installation completes.

1.5 Product and Device Names

During the installation, you need to tell the system which product is being installed and which drive contains the distribution media. You refer to a product with its facility name and version. You refer to a drive with its device name. Product and device names have the following format:

facvvu represents the facility name and version number of the product being installed.

ddcu is the device name of the *source drive* that holds the distribution media.

For the VMS DECwindows Motif installation, the *facvvu* is DECW$MOTIF010. For additional information about the device names of devices on your system, see the installation supplement for your VAX computer.

1.6 Disk Space Considerations

Approximately 90,000 blocks of free disk space on the system disk would be required to install all of the VMS DECwindows Motif components. However, because you need not install all of the VMS DECwindows Motif components, your actual disk space requirement may be less.

To determine the number of free blocks on the system disk, enter the following command:

```
$  SHOW DEVICE SYS$SYSDEVICE
```

The following list describes the approximate number of blocks needed for each portion of the software:

- Base kit: 32,000 blocks
- Workstation device support: 21,000 blocks

  (This number includes both the 75 dots-per-inch (2600 blocks) and 100 dots-per-inch (3600 blocks) fonts. You can install one or both font sets.)
- Programming environment: 37,000 blocks

  (This number includes all programming language support. The actual number of blocks required may be fewer depending on the language support that you select.)

The installation procedure checks for free disk space on the system disk. If sufficient space is not found, the installation procedure provides options:

- You can install fewer optional files.

- You can restart the installation and specify an alternate working device (AWD) for the temporary working directory. See Section 1.6.1 for information on how to use an alternate working device.
- You can abort the installation and then create more free disk space on the system disk.

To create free disk space, choose one of the following options:

- Delete or purge all unwanted files from the system disk.
- Copy the following files to another media type and delete them from the system disk:
  - All files with file types of .JNL, .MAP, and .LOG
  - All files in SYS$EXAMPLES and SYS$TEST
- Remove VMS operating system files that you do not need by using VMSTAILOR.
- Remove existing VMS DECwindows files that you do not need by using DECW$TAILOR.

See the *VMS Version 5.4 Upgrade and Installation Manual* for information on using VMSTAILOR and DECW$TAILOR to remove files.

1.6.1 Setting up an Alternate Working Device

The AWD option lets you specify an alternate working device as the location for the temporary working directory. This allows you to perform the installation with fewer free blocks on the system disk than are otherwise required. Approximately 90,000 blocks of free disk space on the alternate working device are required to install all of the VMS DECwindows Motif components.

To set up a temporary working directory (using an alternate working device) use the following format to invoke VMSINSTAL and specify the AWD option:

```
$ @SYS$UPDATE:VMSINSTAL facvvu ddcu OPTIONS N,AWD=ddcu:[dir]
```

where:

facvvu represents the product name and version number,

the first *ddcu* is the device name of the *source drive* that holds the distribution media,

the second *ddcu* is the device name of the *alternate working device*,

the *dir* is the name of the directory on the alternate working device in which the product subdirectory is created.

For the VMS DECwindows Motif installation, the *facvvu* is DECW$MOTIF010.

For example, if you are installing VMS DECwindows Motif from a TK50 cartridge and you want to create the working directory [INSTALL.DECW$MOTIF010] on the alternate device DUA2, enter the following command:

```
$ @SYS$UPDATE:VMSINSTAL DECW$MOTIF010 MUA0: OPTIONS N,AWD=DUA2:[INSTALL]
```

Specifying a directory is optional, but the following guidelines apply:

- If you specify a directory, VMSINSTAL creates a working subdirectory for the product.
- If you do not specify a directory, VMSINSTAL creates the working directory on the specified device with a directory specification of [000000.facvvu]. Again, *facvvu* represents the facility name and version number of the product.
- If you specify a nonexistent directory, VMSINSTAL does not create one. The directory that you specify must already exist.

If you lack sufficient free disk space for installation and have no alternate working device, the installation procedure exits.

1.6.1.1 Using the Distributed File Service

A temporary working directory can be specified on a disk which utilizes the Distributed File Service (DFS).

However, if you use a DFS-mounted disk as your alternate working device, the installation procedure erroneously reports that there are -1 free blocks on the alternate working device. This happens because it is impossible for the DFS client (the installation procedure, in this case) to determine the blocks of free disk space on the DFS-mounted disk.

Before using a DFS-mounted disk, you should determine its free disk space. Do this by logging in to the system on which the disk is locally mounted and entering the command SHOW DEVICE. There must be approximately 90,000 blocks of free disk space on the DFS-mounted disk to complete the VMS DECwindows Motif installation.

1.7 Installation Procedure Requirements

The following sections discuss requirements for installing VMS DECwindows Motif.

The installation takes approximately 1.5 to 3.5 hours, depending on the distribution medium, your system configuration, and which components you select.

For example, installing the complete VMS DECwindows Motif kit on a standalone VAXstation 3500 system from TK50 media takes approximately 2 hours.

To run VMS DECwindows Motif, Digital requires a minimum system configuration of 8 megabytes of memory.

Note

When VMS DECwindows Motif components are installed on a VAXcluster, only one installation per system root is required. No system-specific files are installed.

1.7.1 VMSINSTAL Requirements

The VMSINSTAL command procedure is the primary tool used by Digital to install VMS updates and layered software products. You use the VMSINSTAL command procedure to install VMS DECwindows Motif. Chapter 2 contains detailed instructions on installing VMS DECwindows Motif on your system.

When you invoke VMSINSTAL, it checks to see:

- If you have set your default device and directory to SYS$UPDATE
- If you are logged in to a privileged account
- If you have the minimum system account quotas and limits required
- If you have the minimum system parameter values required
- If any other users are logged in to the system
- If DECnet is running

Prepare to install the VMS DECwindows Motif software by following these steps:

1. Log in to a privileged account, such as the system manager's (SYSTEM) account. While it is preferable to perform the installation using the operator console or other hardcopy terminal, it is possible to perform the

installation from a DECterm window. If you use a DECterm window, make sure that no other VMS DECwindows functions are invoked while the installation is running. Do not switch input focus to other windows during the installation.

2. Install VMS DECwindows Motif (see Chapter 2) before adding workstations to a VAXcluster with the CLUSTER_CONFIG command file. Installing VMS DECwindows Motif beforehand allows you to select VMS DECwindows Motif for each workstation in the VAXcluster.

1.7.1.1 System Account Quotas and Limits

Use the VMS Authorize Utility to make sure that the SYSTEM account has sufficient quotas and limits.

1. Enter the following commands:

```
$  SET DEFAULT SYS$SYSTEM
$  RUN AUTHORIZE
UAF>  SHOW SYSTEM
```

2. Compare the SYSTEM account's limits and quotas to the following minimum required values:

Limit or quota	Value
Open file quota (FILLM)	20
Buffered I/O limit (BIOLM)	18
Direct I/O limit (DIOLM)	18
AST limit (ASTLM)	24
Enqueue quota (ENQLM)	30
Buffered byte quota count (BYTLM)	18000

3. Adjust the limits and quotas so that they are equal to or greater than the required values. You can change each value by entering a command in the following format:

```
UAF>  MODIFY SYSTEM/limit=new_value
```

For example:

```
UAF>  MODIFY SYSTEM/DIOLM=18
```

4. When the adjustments are made, exit the Authorize Utility by entering the following command:

   ```
   UAF> EXIT
   ```

   For more information on modifying quotas, see the *VMS Authorize Utility Manual*.

If you adjusted any of the SYSTEM account's values, log out and log in again so that the new values take effect.

1.7.1.2 System Parameters

VMS DECwindows Motif requires certain system parameter values. The VMSINSTAL procedure checks for the minimum values. In addition, the VMS DECwindows Motif startup procedure checks for correct values. Depending on the kinds of programs and applications running on your system, you might need higher values for some settings.

Use the VMS System Generation Utility to make sure that the system parameter values are correct.

1. Enter the following commands:

   ```
   $ RUN SYS$SYSTEM:SYSGEN
   SYSGEN> SHOW/ALL
   ```

2. Compare your system's parameter values to the minimum values shown in Table 1–1. Adjust the values on your system so that they are equal to or greater than the minimum values.

   Many of the system generation parameters can affect other parameters or the performance of a system. The recommended method of modifying system parameters is to modify the SYS$SYSTEM:MODPARAMS.DAT file and then invoke AUTOGEN.

   For more information on modifying system parameter values using AUTOGEN, see the *Guide to Setting Up a VMS System*.

Table 1–1 lists the minimum system parameter values required for VMS DECwindows Motif.

Table 1–1 Minimum System Parameter Values Required

Parameter	Minimum Value	Unit
CHANNELCNT	255	channels

(continued on next page)

Table 1–1 (Cont.) Minimum System Parameter Values Required

Parameter	Minimum Value	Unit
GBLPAGES	n + 30000[1]	pages
GBLPAGFIL	6024	pages
GBLSECTIONS	n + 400[1]	sections
MAXBUF	2048	bytes
PQL_DPGFLQUOTA	5000	pages
PQL_DWSEXTENT	500	pages
PQL_MASTLM	100	AST
PQL_MBIOLM	40	I/O
PQL_MBYTLM	32768	bytes
PQL_MDIOLM	40	I/O
PQL_MFILLM	8	files
PQL_MPRCLM	8	processes
SWPOUTPGCNT	500	pages
SPTREQ	2500	pages
VIRTUALPAGECNT	20000	pages

[1]The value *n* represents your system's current setting. The values listed for global pages and global sections must be added to *n* since the increased values are required for the installation. They do not represent the total number you need to run your system and other software.

1.7.1.3 Notify Other Users

Make sure that you are the only user logged in by doing the following:

a. Notify current users that they must log out by entering the following command:

```
$ REPLY/ALL/BELL/SHUTDOWN "Log out for DECwindows installation please..."
```

b. Enter the following command to prevent nonprivileged users from logging in to the system:

```
$ SET LOGINS/INTERACTIVE=0
```

1.7.1.4 Shut Down DECnet

You are not required to shut the network down, but you can if you wish to do so. To check whether your system includes DECnet–VAX software, enter the following command:

```
$  SHOW NETWORK
```

Proceed to Section 1.7.1.5 if your system displays the following message:

```
% SHOW-I-NONET, network unavailable
```

If your system includes DECnet–VAX software, and you want to shut it down, enter the following commands:

```
$  RUN SYS$SYSTEM:NCP
NCP>  SET EXECUTOR STATE OFF
NCP>  EXIT
```

Although not required, Digital recommends that you back up your system disk as discussed in Section 1.7.1.5.

1.7.1.5 Backing Up Your System Disk

At the beginning of the installation, VMSINSTAL asks if you have backed up your system disk. Digital recommends that you back up your system disk before installing any software.

Use the backup procedures established at your site. For details on performing a system disk backup, see the upgrade and installation supplement for your VAX computer.

1.7.2 Font Installation Consideration

During the VMS DECwindows Motif installation, you can choose to install workstation device support. Font files, which are needed for server text display and application support, are provided in the workstation device support.

As part of its function, the font file installation procedure deletes font files, font directory files, and font alias files from the following system directories:

[SYSFONT.DECW.75DPI]
[SYSFONT.DECW.100DPI]
[SYSFONT.DECW.COMMON]
[SYSFONT.DECW.CURSOR16]
[SYSFONT.DECW.CURSOR32]
[SYSFONT.XDPS.FONT_MAP]*.DAT;*

All font files in those system directories, including any that were installed by a previous version of VMS DECwindows and any that were installed by a user, are deleted by the installation procedure. The installation procedure deletes font files from the system font directories only.

If you want to retain a font file currently contained in any of those directories, you must move the font file to one of the following user font directories *before starting the installation*:

```
SYS$COMMON:[SYSFONT.DECW.USER_75DPI]
SYS$COMMON:[SYSFONT.DECW.USER_100DPI]
SYS$COMMON:[SYSFONT.DECW.USER_COMMON]
SYS$COMMON:[SYSFONT.DECW.USER_CURSOR16]
SYS$COMMON:[SYSFONT.DECW.USER_CURSOR32]
```

All user and layered-product fonts should be placed in the user font directories.

1.7.3 Checking AUTOGEN Feedback Data

The AUTOGEN command procedure included in the VMS operating system establishes initial values for all the configuration-dependent system parameters so that they match your particular configuration. After the VMS DECwindows Motif installation is finished, AUTOGEN may run, depending on the type of system you are using. If AUTOGEN finds valid feedback data on your system, it tries to use the AUTOGEN feedback mechanism. Feedback data is produced by the SAVPARAMS phase of AUTOGEN and is stored in SYS$SYSTEM:AGEN$FEEDBACK.DAT.

However, *before* you start the VMS DECwindows Motif installation, you should ensure that AUTOGEN will use valid feedback data.

Valid feedback data is defined as follows:

- The system was up for at least 24 hours when the feedback data was gathered.
- The feedback data is not over 30 days old.

Note

If your feedback data is NOT valid, AUTOGEN runs WITHOUT feedback (all previous feedback-generated parameters will be replaced by the AUTOGEN NOFEEDBACK calculations.)

You should follow these steps before starting the installation to ensure that the feedback data is valid:

1. Check the validity of your current feedback data by entering the following command:

```
$ @SYS$UPDATE:AUTOGEN GETDATA TESTFILES
```

This command is for test purposes and does not result in the modification of SYSGEN parameters or changes to the page and swap files. System page, swap, and dump file sizes generated by AUTOGEN are displayed and are also placed in the PARAMS.DAT file. If your current feedback is valid, AUTOGEN uses it during the installation.

AUTOGEN issues several warnings if your current feedback data is invalid. If your current feedback data is invalid, go to step 2.

2. If your current feedback in invalid, you can generate new feedback data (assuming your system was up for at least 24 hours). Enter the following command:

```
$ @SYS$UPDATE:AUTOGEN SAVPARAMS TESTFILES
```

This command is for test purposes and does not result in the modification of SYSGEN parameters or changes to the page and swap files. System page, swap, and dump file sizes generated by AUTOGEN are displayed. Feedback information is recorded in AGEN$FEEDBACK.DAT. Again, AUTOGEN warns you if the feedback data just produced is invalid.

3. If your current feedback data is valid, AUTOGEN uses your current feedback-generated parameters during the installation. Your current feedback-generated parameters are not lost during the installation.

For more information about using AUTOGEN, see the *Guide to Setting Up a VMS System.*

2

Installing VMS DECwindows Motif Software

This chapter explains how to install VMS DECwindows Motif using the VMSINSTAL procedure. Section 2.1 contains a step-by-step description of the installation procedure.

The VMS DECwindows Motif installation takes approximately 1.5 to 3.5 hours, depending on the distribution medium and the processor type. The VMSINSTAL procedure installs VMS DECwindows Motif on your system disk.

Note

A Product Authorization Key for VMS DECwindows Motif must be registered and loaded before starting the VMS DECwindows Motif installation. See Section 1.3 for more information on license registration.

If you do not have a satisfactory backup copy of your system disk, do not attempt to install the VMS DECwindows Motif software. You should back up the system disk (as described in the VMS upgrade and installation supplement for your VAX computer) before you install the VMS DECwindows Motif software.

Before beginning the installation procedure, you should review Chapter 1 for more information on installation preparations and requirements.

2.1 The Installation Procedure

The VMS DECwindows Motif installation procedure consists of a series of questions, which require user responses, and informational messages. You can enter a question mark (?) for help at any time during the installation. See Appendix A for a sample installation.

To abort the installation procedure at any time, press Ctrl+Y. When you press Ctrl+Y, the installation procedure deletes all files it has created up to that point and exits. You can then start the installation again.

2.1.1 Starting the Installation

Perform the following steps to run the VMSINSTAL command procedure and to install the VMS DECwindows Motif software:

1. Locate the VMS DECwindows Motif distribution media.
2. If your system is not already running, start up the system and log in to a privileged account such as the system manager (SYSTEM) account.
3. Put the distribution medium in the source drive. If your VMS DECwindows Motif distribution kit contains more than one piece of media, put the first one in the drive. During the installation procedure, you will be prompted to load the next piece of media. The paper labels on the media indicate the order in which you use them.
4. Start the VMSINSTAL procedure. You must specify a product name on the command line. The product name for the VMS DECwindows Motif software is DECW$MOTIF010.

   Specify OPTIONS N on the command line to access the release notes contained in your kit. The *VMS DECwindows Motif Release Notes* can be displayed or printed before the installation begins, as described in step 9. Enter the following command:

   ```
   $ @SYS$UPDATE:VMSINSTAL DECW$MOTIF010 ddcu: OPTIONS N
   ```

   where *ddcu* is the device name of the *source drive* that holds the distribution media. See Section 1.5 for more information about the format of product and device names. Also refer to the VMS upgrade and installation supplement for your VAX computer.

   For example, if you are installing VMS DECwindows Motif from a magnetic tape cartridge in drive MUA0:, enter the following command to invoke the VMSINSTAL command procedure:

   ```
   $ @SYS$UPDATE:VMSINSTAL DECW$MOTIF010 MUA0: OPTIONS N
   ```

If you are installing VMS DECwindows Motif using the alternate working device (AWD) option described in Chapter 1, invoke the VMSINSTAL command procedure as follows:

```
$  @SYS$UPDATE:VMSINSTAL DECW$MOTIF010 ddcu: OPTIONS N,AWD=ddcu:[INSTALL]
```

The first variable *ddcu* is the device name of the *source drive* that holds the distribution media. The second variable *ddcu* is the device name of the *alternate working device* which is the target device.

For example, if you are installing VMS DECwindows Motif from a magnetic tape cartridge in drive MUA0: using an alternate working device DUA2: and directory [INSTALL], enter the following command:

```
$  @SYS$UPDATE:VMSINSTAL DECW$MOTIF010 MUA0: OPTIONS N,AWD=DUA2:[INSTALL]
```

If the VMSINSTAL command fails, check to see if any of the following conditions occurred:

- You entered the product name incorrectly. VMSINSTAL displays the following message:

  ```
  %VMSINSTAL-E-NOPRODS, None of the specified products were found
  ```

- You specified an incorrect name for the source drive. VMSINSTAL displays an ''invalid device'' error message and prompts you until you enter the name of a source device that exists on the system. Remember to enter a colon (:) after the device name.
- You specified an AWD directory that does not exist. Create the directory and restart the VMSINSTAL procedure.

5. The VMSINSTAL procedure displays messages similar to the following:

   ```
          VAX/VMS Software Product Installation Procedure V5.4

   It is 1-Sep-1991 at 08:02
   Enter a question mark (?) at any time for help.
   ```

6. The procedure asks the following question:

   ```
   * Are you satisfied with the backup of your system disk [YES]?
   ```

   If you made a backup copy of your system disk, press the Return key and go to step 7.

   If you did not make a backup copy of the system disk, do the following:

   a. Enter NO and press the Return key. The VMSINSTAL procedure exits and returns to DCL level.

   b. Back up the system disk as described in the VMS upgrade and installation supplement for your VAX computer.

c. After you have made a backup copy of the system disk, start the installation procedure again from step 4.

7. VMSINSTAL instructs you to mount the first volume of the set. Load the medium and enter YES, as follows:

```
(Please mount the first volume of the set on MUA0:.
* Are you ready?) (YES)
%MOUNT-I-MOUNTED, DWM010 mounted on _MUA0:
```

8. When the installation begins, VMSINSTAL displays informational text similar to the following:

```
The following products will be processed:

  DECW$MOTIF V1.0

        Beginning installation of DECW$MOTIF V1.0 at 08:10


%VMSINSTAL-I-RESTORE, Restoring product save set  A...
```

9. If you specified OPTIONS N in step 4, VMSINSTAL now prompts you to select a release notes option:

```
Release notes included with this kit are always copied to SYS$HELP.

    Additional Release Notes Options:

 1.  Display release notes
 2.  Print release notes
 3.  Both 1 and 2
 4.  None of the above

* Select option [2]:
```

- Select option 1 to display the release notes on the terminal.
- Select option 2 to print the release notes.
- Select option 3 to display and print the release notes.
- Select option 4 if you do not want to display or print the release notes.

Enter the number of the option you want. Option 2 is the default. If you select option 2 or 3, you are prompted for the name of the print queue. If you do not specify a print queue, the release notes are queued to SYS$PRINT by default.

Note

Digital recommends that you read the release notes before completing the installation.

After you select a release notes option, the VMSINSTAL procedure displays the following message:

```
* Do you want to continue the installation [NO]?
```

If you want to continue with the installation, enter YES. If you want to abort the installation, press the Return key.

Regardless of the release notes option selected, the VMSINSTAL procedure copies the release notes to the SYS$HELP directory. See Section 2.3 for more information on accessing the release notes once they have been copied to the SYS$HELP directory.

```
%VMSINSTAL-I-RELMOVED, Product's release notes have been moved to SYS$HELP.

       *** Installing VMS DECwindows Motif software ***

You can install the VMS DECwindows Motif kit completely or in selected
portions.  A complete installation requires as much as 90,000 blocks.
If you choose to perform a partial installation, you can tailor the device
support that you want provided for VMS DECwindows Motif workstations and
the programming support that you want provided for VMS DECwindows Motif
application development.  Whether you perform a complete or partial
installation, this kit provides support for running VMS DECwindows Motif
applications on VMS compute servers.
```

10. You can install the entire VMS DECwindows Motif software kit, or you can install parts of the kit. The VMS DECwindows base kit is always installed. The following parts of the kit are optional:

    - VMS DECwindows workstation device support
    - PEX, which is the PHIGS Extension to X
    - VMS DECwindows Motif programming environment

    The procedure asks you if you want to install the entire kit:

    ```
    * Do you want to install the entire kit [Y]?
    ```

Note

If you install the entire kit, the installation procedure deletes all previously installed font files from the system directories listed in Section 1.7.2. If you want to retain an existing font file, you must move

it to a directory other than the system directories listed in Section 1.7.2 *before proceeding with the installation.* Press Ctrl+Y if you want to abort the installation now.

See Section 1.7.2 for more information on retaining existing font files.

If you want the entire kit installed, press the Return key and proceed to step 16. If you do not want to install the entire kit, enter NO.

11. The procedure asks you if you want to install workstation device support by prompting you with the following message:

```
If you are not installing this kit on a workstation, or on a VAXcluster
that includes workstations, you can save up to 17,000 blocks by omitting
the device support required to make workstation graphics hardware
available to VMS DECwindows Motif.

* Do you want to install VMS DECwindows workstation device support [Y]?
```

To install workstation device support, press the Return key. If you enter NO, the messages in steps 12 and 13 do not appear and the VMSINSTAL procedure continues with the programming environment messages in step 14.

12. If you selected workstation device support, you must specify the type of video fonts you want installed (75 dpi or 100 dpi). The procedure prompts you with the following message:

```
This installation procedure provides video fonts for specific monitor
resolutions. Fonts are supplied for the following monitor resolutions:

     75 dots per inch
    100 dots per inch

All VMS DECwindows Motif applications run with 75 dots per inch (dpi)
fonts.  Some applications take advantage of 100 dpi fonts. If you
select 100 dpi fonts, 75 dpi fonts are automatically provided. Both
font resolutions are provided to allow your system to run those VMS
DECwindows Motif applications that require 100 dpi fonts and those that
require 75 dpi fonts.

For instructions on how to configure your system with both 75 and 100 dpi
fonts, see the installation guide or examine the template command
procedure SYS$MANAGER:DECW$PRIVATE_SERVER_SETUP.TEMPLATE.  By default,
systems start up using 75 dpi fonts.

Note that this procedure deletes previously installed fonts before
installing new ones.  If you choose to reinstall this kit at a later
date, be sure to install all required fonts.
```

```
* Do you want both sets of video fonts installed [Y]?
```

Note

The installation procedure deletes all previously installed font files from the system directories listed in Section 1.7.2. If you want to retain an existing font file, you must move it to a directory other than the system directories listed in Section 1.7.2 *before proceeding with the installation.* Press Ctrl+Y if you want to abort the installation now.

See Section 1.7.2 for more information on retaining existing font files.

Press the Return key if you want both the 75-dpi and 100-dpi fonts installed. If you enter NO, you are prompted to select the font you want installed. (If you select 100-dpi fonts, 75-dpi fonts are also automatically installed.)

13. Optionally, you can install support for the PHIGS Extension to X (PEX). PEX is the 3D extension of X that allows 3D graphics functionality within an X window for users of PHIGS or PEX protocol-producing clients. The procedure asks you if you want to install PEX by prompting you with the following message:

    ```
    If you are not installing this kit on a workstation, or on a VAXcluster
    that includes workstations, you can save up to 4000 blocks by omitting
    PEX (PHIGS Extensions to X) support for PHIGS.

    * Do you want to install VMS DECwindows Motif PEX support for PHIGS [Y]?
    ```

    Press the Return key if you want PEX support installed. Enter NO if you do not want PEX support installed.

14. The installation procedure asks you if you want to install programming support by prompting you with the following message:

    ```
    This installation procedure provides support files for developing VMS
    DECwindows Motif applications in several programming languages.  These
    files are needed only to develop applications and are not required to run
    VMS DECwindows Motif applications.  Support for each programming language
    requires approximately 3,400 blocks.

    * Do you want to install VMS DECwindows Motif programming support [Y]?
    ```

    If you do not want to install programming support, enter NO and proceed to step 16. Press the Return key to install programming support.

```
Support files are supplied for the following VAX programming languages:

        Ada, BASIC, BLISS, C, FORTRAN, MACRO, Pascal, PL/1

In addition, support files are supplied for programming in the C language
using conventions and standards developed at the Massachusetts Institute
of Technology.

Note that this procedure deletes previously installed programming
language support files before installing new ones.  If you choose to
reinstall this kit at a later date, be sure to install all required
programming language support files.
```

The eight programming languages listed (Ada, BASIC, BLISS, C, FORTRAN, MACRO, Pascal, and PL/1) are all supported for Xlib and the XUI toolkit. However, only four of the programming languages (Ada, C, FORTRAN, and Pascal) are supported for the VMS DECwindows Motif toolkit.

15. The procedure asks you if you want to install all of the programming support files by prompting you with the following message:

    ```
    * Do you want to install all programming language support files [Y]?
    ```

    Press the Return key if you want all the languages installed. If you do not want all of the languages installed, enter NO. Each language is then displayed. Enter YES for each language you want installed.

16. The kit parts that you have chosen are now displayed, allowing you to verify that these selections are correct. A message similar to the following is displayed:

    ```
    You have selected the following portions of the kit:
      o VMS DECwindows Motif Compute Server Support
      o VMS DECwindows Workstation Device Support
        75 dots per inch video fonts
      o VMS DECwindows Motif Programming Support
        MIT C language programming conventions
    * Are these selections correct [Y]?
    ```

    Press the Return key if the selections are correct. If you want to change your selections, enter NO. You are prompted by the previous questions again, starting at step 10. Once you have repeated the selection procedure and are satisfied with your selections, answer YES.

17. The installation procedure checks to see if your system disk has enough free blocks.

    a. If the blocks are available, the installation continues at step 18.

    b. If you do not have sufficient system disk space to install the portions you have chosen, the installation displays a message similar to the following:

```
Your system disk has only 25364 free blocks, and
you have selected to install approximately 76050 blocks.

  *  *  *  NOTE  *  *  *

Although the installation procedure estimates you do not have enough disk
space to complete the installation, it may be possible to continue
successfully if you are installing VMS DECwindows Motif on a system which
already has VMS DECwindows installed.

* Do you want to reselect which VMS DECwindows Motif options to install [Y]?
```

    If you press the Return key, you can reselect the VMS DECwindows Motif options starting at step 10. If you enter NO, the procedure asks you if you want to continue the installation:

```
* Do you want to continue the installation anyway [Y]?
```

    If you press the Return key, the installation continues. If you enter NO, the installation exits. You can then free up blocks on the system disk. See Section 1.6 for information on creating more free blocks on the system disk.

    After you create more free blocks on the system disk, start the VMS DECwindows Motif installation again at step 4.

    c. If you still do not have sufficient free blocks on the system disk to install the portions you have chosen and you did not specify an alternate working device (AWD), the installation displays a message similar to the following:

```
Your system disk has only 25364 free blocks, and
you have selected to install approximately 76050 blocks.

You should either reselect which VMS DECwindows Motif options to install, or
restart this installation using the AWD=dev:[dir] option.

   *  *  *  NOTE  *  *  *

Although the installation procedure estimates you do not have enough disk
space to complete the installation, it may be possible to continue
successfully if you are installing VMS DECwindows Motif on a system which
already has VMS DECwindows installed.
```

```
* Do you want to reselect which VMS DECwindows Motif options to install [Y]?
```

If you press the Return key, you can reselect the VMS DECwindows Motif options starting at step 10. If you enter NO, the procedure asks you if you want to continue the installation:

```
* Do you want to continue the installation anyway [Y]?
```

If you press the Return key, the installation continues. If you enter NO, the installation exits. Start the installation again (step 4) and specify the AWD on the VMSINSTAL command line. See Section 1.6.1 for information on using the AWD directory.

d. If you specify an AWD that does not have sufficient disk space to install the portions you have chosen, the installation displays a message similar to the following:

```
Your specified alternate working directory device has only 68977
free blocks, and this installation will require approximately 76050 blocks.

You should either reselect which VMS DECwindows Motif options to install, or
restart this installation using an alternate working directory device with
more free blocks.

   *  *  *  NOTE  *  *  *

Although the installation procedure estimates you do not have enough disk
space to complete the installation, it may be possible to continue
successfully if you are installing VMS DECwindows Motif on a system which
already has VMS DECwindows installed.

* Do you want to reselect which VMS DECwindows Motif options to install [Y]?
```

If you press the Return key, you can reselect the VMS DECwindows Motif options starting at step 10. If you enter NO, the procedure asks you if you want to continue the installation:

```
* Do you want to continue the installation anyway [Y]?
```

If you press the Return key, the installation continues. If you enter NO, the installation exits. Restart the installation once you have set up an AWD with sufficient disk space. See Section 1.6.1 for more information on using an AWD.

18. The installation procedure continues and displays license information similar to the following:

```
A registered and loaded Product Authorization Key for DW-MOTIF is
required to run any applications with VMS DECwindows Motif.
If you answer NO to the next question, the installation of
VMS DECwindows Motif will be aborted.

  Product: DW-MOTIF
  Producer: DEC
  Version: 1.0
  Release Date: 1-JUL-1991

* Does this product have an authorization key registered and loaded ?
```

Enter YES to continue with the installation if your authorization key is registered and loaded. If you enter NO, the following message is displayed and the installation is aborted:

```
Installation of VMS DECwindows Motif cannot continue because you do
not have a registered and loaded authorization key.
```

See Section 1.3 for more information on license registration. After you have registered and loaded your authorization key, restart the VMS DECwindows Motif installation, beginning at step 4.

19. The installation procedure informs you that you should perform a system reboot to ensure successful installation of VMS DECwindows Motif. A system reboot is required for all workstations and all nonworkstation cluster boot nodes. The installation procedure informs you if a system reboot is needed for your system.

```
 To complete the installation of this product, you should reboot
 the system.  If it is not convenient to reboot at this time, then
 enter NO to the following question.

 If you enter NO, the installation procedure will continue.

* Will you allow a system shutdown after this product is installed [YES]?
```

If you enter NO to the shutdown question, the VMSINSTAL procedure displays the following message:

```
   * * * NOTE * * *

Successful installation of this product may require a reboot.  You will
be informed at the end of this installation, based upon your system type
and its system parameter values, whether or not a reboot is required.
```

If you answered YES to the shutdown question, the VMSINSTAL procedure displays the following questions about the shutdown:

```
* How many minutes for system shutdown [0]?
* Do you want to do an automatic system reboot [YES]?
* Do you want to purge files replaced by this installation [YES]?
```

Purging files deletes multiple copies of files and increases space on the system disk. If you want to purge files replaced by the installation, press the Return key. If you do not want to purge these files, enter NO. The VMSINSTAL procedure displays the following message:

```
No further questions will be asked.
```

If your media kit contained more than one piece of media, the installation procedure prompts you to load the next piece of media when it is finished with the first piece of media.

20. VMSINSTAL lists the directories that are created and the save sets that are restored. Messages similar to the following are displayed:

```
%VMSINSTAL-I_RESTORE, Restoring product saveset C...
%VMSINSTAL-I-SYSDIR, This product creates system disk directory
VMI$ROOT:[SYSFONT.DECW.COMMON].
```

21. VMSINSTAL moves files to their target directories. The following text is displayed:

```
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
```

If you have previously installed any layered products on your system that provide X server font files, you will see informational messages similar to the following:

```
Creating sys$common:[sysfont.decw.user_75dpi]DECW$FONT_DIRECTORY.DAT
30 fonts loaded
Creating sys$common:[sysfont.decw.user_100dpi]DECW$FONT_DIRECTORY.DAT
```

The installation procedure informs you that a spurious error message will be displayed and that you can safely ignore it:

```
  You may safely ignore the following NCP error message(s).

%NCP-W-UNRCMP, unrecognized component , object
```

You are then notified that the Installation Verification Procedure (IVP) should be run after the installation has completed and after you have started VMS DECwindows Motif. See Section 4.2 for more information on running the IVP.

```
The Installation Verification Procedure (IVP) should be run after the
installation has completed and DECwindows has been restarted.  The IVP
can be found in SYS$TEST:DECW$IVP.COM.
```

22. The installation procedure may run AUTOGEN, depending on the type of system you are using. The types of systems are as follows:

    - A nonworkstation system

      If you are installing VMS DECwindows Motif on a nonworkstation system (that is, a VMS host system), the following message is displayed:

      ```
      This system is not a workstation.
      It will not be necessary to run AUTOGEN.
      ```

    - A workstation system running VMS DECwindows Motif with correct SYSGEN parameters.

      If you are installing VMS DECwindows Motif on a workstation system and your SYSGEN parameters are correct, the following message is displayed:

      ```
      Your SYSGEN parameters are correctly set.
      It will not be necessary to run AUTOGEN.
      ```

    - A workstation system running VMS DECwindows Motif with incorrect SYSGEN parameters.

      If you are installing VMS DECwindows Motif on a workstation system and your SYSGEN parameters need to be reset, the following message is displayed:

      ```
      The VMS AUTOGEN procedure will now be automatically run
      so that your system parameters will be set, and your
      system will be properly configured. After that, your
      system will be automatically shut down.

      When the shut down is complete, press the RESTART button
      to reboot the system.

      After the system has been rebooted and initialized,
      successful installation of the workstation software will
      be indicated by the appearance of the Start Session window.
      ```

23. When the installation is completed, the following text is displayed:

    ```
    Installation of DECW$MOTIF V1.0 completed at 10:17

    VMSINSTAL procedure done at 10:17
    ```

    These messages indicate that the installation procedure completed successfully.

24. Your system automatically shuts down if AUTOGEN has been run. If that happens, reboot your system.

Note

If you upgrade your system with a newer version of VMS at a later time, you may need to reinstall the VMS DECwindows Motif software.

25. Customize VMS DECwindows Motif as described in Chapter 3.

2.2 Error Recovery

Errors can occur during the installation if any of the following conditions exist:

- The VMS operating system version is incorrect.
- Quotas necessary for successful installation are insufficient.
- System parameter values for successful installation are insufficient.
- The VMS help library is currently in use.
- The product license has not been registered and loaded.

For descriptions of the error messages generated by these conditions, refer to the documents listed in the *Associated Documents* section in the Preface. These documents may help you diagnose errors and decide which corrective actions to take.

2.3 Accessing the Release Notes

During the installation, the VMSINSTAL procedure copies the VMS DECwindows Motif release notes to the file SYS$HELP:DECW$MOTIF010.RELEASE_NOTES. Once you have returned to DCL level, you can print this file on a line printer or display it at a terminal.

3

Customizing VMS DECwindows Motif Software

This chapter describes the tasks that you must perform to customize VMS DECwindows Motif software. These tasks should be performed before starting VMS DECwindows Motif. Depending on your configuration, VMS DECwindows Motif customization tasks include the following:

- Customizing the server startup as described in Section 3.1
- Setting up VMS/ULTRIX Connection software as a VMS DECwindows transport as described in Section 3.1
- Setting up customer-written transports as VMS DECwindows transports as described in Section 3.2
- Using the example transport as described in Section 3.3
- Defining print formats as described in Section 3.4
- Compiling the optional Ada software as described in Section 3.5

3.1 Customizing the Server Startup

The VMS DECwindows server manages the graphics devices on your workstation, such as the display, the keyboard, and the mouse. The VMS DECwindows server needs to be started on workstation systems only.

If you are not planning on starting the VMS DECwindows server, proceed to Section 3.4.

The startup command procedures automatically determine most of the configuration parameters for the VMS DECwindows server. However, there are three items that the command procedures cannot determine; as a result, the following default actions are taken:

- The startup procedures execute as if you have a single 75-dpi monitor.

- If you have a VAXstation II/GPX, a VAXstation 2000/GPX, a VAXstation 3xxx/GPX, or a VAXstation 3100/SPX, the startup procedures execute as if you have a color monitor.
- The startup procedures execute as if you have a North American keyboard layout (such as for an LK201-AA or -LA or an LK401-AA or -LA keyboard).

If the defaults are not appropriate for your configuration, override them by modifying the server startup file as follows:

1. Make a copy of the file SYS$MANAGER:DECW$PRIVATE_SERVER_SETUP.TEMPLATE and rename it SYS$MANAGER:DECW$PRIVATE_SERVER_SETUP.COM. This server startup file shows how to customize individual workstations by adding a section of DCL commands for each workstation.

   You can add setup options in either of two sections in the server startup file. Setup options added to the ''Cluster Common or Standalone Workstation Setup'' section affect all nodes in a cluster. Setup options added to the ''Cluster Member Workstation-Specific Setup'' section affect only individual nodes. If you add a workstation-specific option, you must also update the variable *node_list*.

2. If your screen supports 100 dpi, add the following line:

   ```
   $ DECW$SERVER_DENSITY == "100"
   ```

   Add this line to the section for each workstation that has a 100-dpi monitor, or add it to the common section for all workstations (if all the workstations have 100-dpi monitors).

3. Add the following line to the section for monochrome GPX workstations:

   ```
   $ DECW$COLOR == "FALSE"
   ```

   No modification is necessary for grayscale (intensity) screens.

4. Add the following line to the section for workstations with keyboards that are not North American LK201 models:

   ```
   $ DECW$DEFAULT_KEYMAP == "xxxxx"
   ```

   - In the previous line, you must replace ''xxxxx'' with the correct VMS DECwindows keymap name. You can determine the correct name from the model number of your LK201 or LK401 keyboard. Turn the keyboard upside down, and look for a label that specifies the model number. The model number should be in a format similar to LK201-xx or LK401-xx. The model number may also be listed as LK201 or LK401. In this case, the ''xx'' that you need is in another part of the label where there is a number that looks similar to the following:

nn-nnnnn-xx.

- Use the xx part of this number to choose a keymap name from Table 3–1. Choose the keymap ending in _DP for the data processing keyboard layout, or the keymap ending in _TW for the typewriter layout.

  Table 3–1 is arranged based on the dialect that each keyboard is designed for.

Table 3–1 VMS DECwindows Keymap

Dialect	Model	VMS DECwindows Keymap
Austrian/German	LK201-(AG,LG,BG,MG)	AUSTRIAN_GERMAN_LK201LG_DP
		AUSTRIAN_GERMAN_LK201LG_TW
	LK201-(NG,PG)	AUSTRIAN_GERMAN_LK201NG_DP
		AUSTRIAN_GERMAN_LK201NG_TW
	LK401-(AG)	AUSTRIAN_GERMAN_LK401AG_TW
Belgian/French	LK201-(AP,LP,BP,MP)	BELGIAN_FRENCH_LK201LP_DP
		BELGIAN_FRENCH_LK201LP_TW
Belgian/French	LK401-(AP)	BELGIAN_FRENCH_LK401AP_DP
		BELGIAN_FRENCH_LK401AP_TW
British	LK201-(AE,LE,BE,ME)	BRITISH_LK201LE_DP
		BRITISH_LK201LE_TW
British	LK401-(AA,PA)	BRITISH_LK401AA_DP
		BRITISH_LK401AA_TW
Canadian/French	LK201-(AC,LC,BC,MC)	CANADIAN_FRENCH_LK201LC_DP
		CANADIAN_FRENCH_LK201LC_TW
Canadian/French	LK401-(AC,LC,BC,MC)	CANADIAN_FRENCH_LK401AC_DP
		CANADIAN_FRENCH_LK401AC_TW
Danish	LK201-(AD,LD,BD,MD)	DANISH_LK201LD_DP
		DANISH_LK201LD_TW
	LK201-(ED,RD,FD)	DANISH_LK201RD_DP
		DANISH_LK201RD_TW
Danish	LK401-(AD,LD,BD,MD)	DANISH_LK401AD_DP

(continued on next page)

Table 3–1 (Cont.) VMS DECwindows Keymap

Dialect	Model	VMS DECwindows Keymap
		DANISH_LK401AD_TW
Dutch	LK201-(AH,LH,BH,MH)	DUTCH_LK201LH_DP
		DUTCH_LK201LH_TW
	LK201-(NH,PH)	DUTCH_LK201NH
	LK401-(NH,PH)	DUTCH_LK401AH
Finnish	LK201-(AF,LF,BF,MF)	FINNISH_LK201LF_DP
		FINNISH_LK201LF_TW
	LK201-(NX,PX)	FINNISH_LK201NX_DP
		FINNISH_LK201NX_TW
Finnish	LK401-(AF,LF,BF,MF)	FINNISH_LK401AF_DP
		FINNISH_LK401AF_TW
Flemish	LK201-(AB,LB,BB,MB)	FLEMISH_LK201LB_DP
		FLEMISH_LK201LB_TW
Flemish	LK401-(AB,LB,BB,MB)	FLEMISH_LK401AB_DP
		FLEMISH_LK401AB_TW
Icelandic	LK201-(AU,LU,BU,MU)	ICELANDIC_LK201LU_DP
		ICELANDIC_LK201LU_TW
Italian	LK201-(AI,LI,BI,MI)	ITALIAN_LK201LI_DP
		ITALIAN_LK201LI_TW
Italian	LK401-(AI,LI,BI,MI)	ITALIAN_LK401AI_DP
		ITALIAN_LK401AI_TW
North American	LK201-(AA,LA,BA,MA)	NORTH_AMERICAN_LK201LA
North American	LK401-(AA,LA,BA,MA)	NORTH_AMERICAN_LK401AA
Norwegian	LK201-(AN,LN,BN,MN)	NORWEGIAN_LK201LN_DP
		NORWEGIAN_LK201LN_TW
	LK201-(EN,RN,FN)	NORWEGIAN_LK201RN_DP
		NORWEGIAN_LK201RN_TW
Norwegian	LK401-(AN,LN,BN,MN)	NORWEGIAN_LK401AN_DP
		NORWEGIAN_LK401AN_TW

(continued on next page)

Table 3–1 (Cont.) VMS DECwindows Keymap

Dialect	Model	VMS DECwindows Keymap
Portuguese	LK201-(AV,LV,BV,MV)	PORTUGUESE_LK201LV
Portuguese	LK401-(AV,LV,BV,MV)	PORTUGUESE_LK401AV
Spanish	LK201-(AS,LS,BS,MS)	SPANISH_LK201LS_DP
		SPANISH_LK201LS_TW
Spanish	LK401-(AS,LS,BS,MS)	SPANISH_LK401AS_DP
		SPANISH_LK401AS_TW
Swedish	LK201-(AM,LM,BM,MM)	SWEDISH_LK201LM_DP
		SWEDISH_LK201LM_TW
	LK201-(NM,PM)	SWEDISH_LK201NM_DP
		SWEDISH_LK201NM_TW
Swedish	LK401-(AM,LM,BM,MM)	SWEDISH_LK401AM_DP
		SWEDISH_LK401AM_TW
Swiss/French	LK201-(AK,LK,BK,MK)	SWISS_FRENCH_LK201LK_DP
		SWISS_FRENCH_LK201LK_TW
Swiss/French	LK401-(AK,LK,BK,MK)	SWISS_FRENCH_LK401AK_DP
		SWISS_FRENCH_LK401AK_TW
Swiss/German	LK201-(AL,LL,BL,ML)	SWISS_GERMAN_LK201LL_DP
		SWISS_GERMAN_LK201LL_TW
Swiss/German	LK401-(AL,LL,BL,ML)	SWISS_GERMAN_LK401AL_DP
		SWISS_GERMAN_LK401AL_TW
Combined US/UK	LK201-(EE,RE,PE)	UK_LK201RE
		US_LK201RE
Combined US/UK	LK401-(EE,RE,PE)	UK_LK401AA
		US_LK401AA

- After you choose a keymap name, modify the server startup file if necessary. For example, to change the keyboard layout to a Dutch typewriter layout, add the following line to the server startup file:

```
$ DECW$DEFAULT_KEYBOARD_MAP == "DUTCH_LK201LH_TW"
```

Add a line similar to this for each workstation that does not have a North American LK201 keyboard layout, or add the line to the common section for all workstations (if all the workstations use the same keyboard layout).

5. VMS DECwindows Motif contains built-in support for the TCP/IP transport. This support depends on the VMS/ULTRIX Connection software (UCX), a Digital layered product. Before you can use the VMS DECwindows Motif TCP/IP transport interface, you must install UCX. For more information about TCP/IP concepts, see the appropriate VMS/ULTRIX Connection documentation. It is not necessary to install a UCX PAK in order to use UCX with VMS DECwindows.

Note

Other vendors' implementations of TCP/IP transports use different call interfaces. For this reason, the built-in VMS DECwindows Motif support for TCP/IP is compatible only with UCX. You must obtain a VMS DECwindows transport interface from the third-party vendor in order to use that vendor's TCP/IP transport with VMS DECwindows.

You can conserve memory and process slots by configuring UCX software for the minimum VMS DECwindows requirements to support the X protocol. VMS DECwindows only requires that INET_ACP be running. VMS DECwindows does not require that the NFS server, the FTPD server, or the remote terminal servers be running. For information on how to configure the UCX software, see the appropriate VMS/ULTRIX Connection documentation.

To add support for the Transmission Control Protocol/Internet Protocol (TCP/IP) transport using the VMS/ULTRIX Connection software (UCX), include the following line in the SYS$MANAGER:SYSTARTUP_V5.COM file:

```
$ @SYS$STARTUP:UCX$STARTUP
```

UCX should be started after DECnet has been started.

Then add the following line to the file SYS$MANAGER:DECW$PRIVATE_SERVER_SETUP.COM:

```
$ DECW$SERVER_TRANSPORTS == "DECNET,LOCAL,TCPIP"
```

Add this line to the section for each workstation that will use TCP/IP, or add it to the common section for all workstations if all workstations will use TCP/IP.

To include support for other transports, add the last part of the transport image name to the list of transports. For example, suppose you want to add support for a customer-written transport that has the following image name:

```
SYS$SHARE:DECW_TRANSPORT_MYNET
```

You would add the following line to the server startup file:

```
$ DECW$SERVER_TRANSPORTS == "DECNET,LOCAL,MYNET"
```

For more information on using customer-written transports, see Section 3.2.

6. A new server option is available that relaxes the protocol enforcement for the event masks passed to the following X library calls:

   XChangeWindowAttributes (when specifying the CWDontPropagate value mask)
   XGrabPointer
   XGrabButton

   The default value for this option is ON, but this may change in a future release of VMS DECwindows. To disable this option, define the global symbol DECW$SERVER_BUG_COMPATIBILITY to be FALSE in the file SYS$MANAGER:DECW$PRIVATE_SERVER_SETUP.COM as follows:

   ```
   $ DECW$SERVER_BUG_COMPATIBILITY == "FALSE"
   ```

   This option should be disabled unless your application requires this compatibility to run, in which case you should either recode (remove undefined bits from these event masks) or contact your software supplier.

7. Restart VMS DECwindows on the workstations for which you customized the server startup by using the following command:

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

8. Customize security by following the steps described in the *VMS DECwindows Motif User's Guide*.

3.2 Using Customer-Written Transports with VMS DECwindows

VMS DECwindows supports DECnet, local, and TCP/IP transports. However, you can use other transports with VMS DECwindows by writing a VMS DECwindows transport interface layer.

For information on writing a transport interface, see the *VMS DECwindows Transport Manual*.

The transport interface image's filename must have the following format where *name* is the unique transport name:

DECW$TRANSPORT_name (for transports supplied by Digital)

DECW_TRANSPORT_name (for customer-written transports)

Install the image as a protected image in the SYS$SHARE directory (as defined by an executive mode logical name) by adding the following line to SYS$MANAGER:SYSTARTUP_V5.COM:

```
$ INSTALL CREATE SYS$SHARE:DECW_TRANSPORT_name/OPEN/SHARED/HEADER_RES/PROTECTED
```

You can also include this command in a startup file that SYSTARTUP_V5.COM calls.

To use this transport with the VMS DECwindows server, customize the server startup as described in Section 3.1.

3.3 Using the Example Transport

VMS DECwindows Motif supplies an example transport interface based upon the UCX software. It is similar to the VMS DECwindows TCP/IP transport interface. You cannot run the example transport interface simultaneously with the TCP/IP transport interface.

If you have installed UCX software, you can install and use the example transport by doing the following:

1. Copy the example transport to the SYS$SHARE directory as follows:

   ```
   $ COPY DECW$EXAMPLES:DECW$TRANSPORT_EXAMPLE.EXE SYS$SHARE:/PROT=W:RE
   ```

2. Add the following line to SYS$MANAGER:SYSTARTUP_V5.COM and execute the command on all nodes in the cluster:

```
$ INSTALL CREATE SYS$SHARE:DECW$TRANSPORT_EXAMPLE/OPEN/SHARED/HEADER_RES/PROTECTED
```

3. Customize the private server startup as described in Section 3.1 for TCP/IP, except use the transport name EXAMPLE. For example, you could add the following line:

   ```
   $ DECW$SERVER_TRANSPORTS == "DECNET,LOCAL,EXAMPLE"
   ```

4. Restart VMS DECwindows with the following command:

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

5. Customize security as described in the *VMS DECwindows Motif User's Guide* for TCP/IP, but use the transport name EXAMPLE instead of TCPIP.

6. Create a DECterm window on the workstation and enter the following command:

```
$ SET DISPLAY /CREATE /NODE="your_node" /TRANSPORT=EXAMPLE
```

   Substitute the Internet node name of your workstation for *your_node*.

7. Run any VMS DECwindows Motif application from the DECterm window. It now uses the example transport to display graphics on your workstation screen. For example, enter the following command to run the clock:

```
$ RUN SYS$SYSTEM:DECW$CLOCK
```

3.4 Defining Print Formats

Many applications use the Print dialog box to queue files or screens to a printer. By default, all printing devices on the system are displayed in the Printer list box. However, print queues can be associated with print formats through the definition of logical names. The logical name is defined to be a comma-separated or space-separated list of print queues with the first queue being the default choice.

For example, if DECW$PRINTER_FORMAT_ANSI2 is defined as ''MY_ PRINTER, CLUSTER_LN03, ANOTHER_LN03'', then when you select ''ANSI2'' from the print format list box, only MY_PRINTER, CLUSTER_LN03, and ANOTHER_LN03 are shown in the Printer list box, with MY_PRINTER being the default choice.

Table 3–2 lists the logical names and the print formats associated with each:

Table 3–2 Print Dialog Box Logical Names

Logical name	Print format
DECW$PRINTER_FORMAT_DEFAULT	Default
DECW$PRINTER_FORMAT_TEXT	Text
DECW$PRINTER_FORMAT_LINE	Line printer
DECW$PRINTER_FORMAT_TERM	Terminal
DECW$PRINTER_FORMAT_ANSI2	ANSI2
DECW$PRINTER_FORMAT_ANSI	ANSI
DECW$PRINTER_FORMAT_PS	Postscript(R)

(continued on next page)

Table 3–2 (Cont.) Print Dialog Box Logical Names

Logical name	Print format
DECW$PRINTER_FORMAT_REGIS	ReGIS
DECW$PRINTER_FORMAT_TEK	Tektronix
DECW$PRINTER_FORMAT_DDIF	DDIF

The logical names can be defined by system managers in system-wide logical name tables and can be overridden by users.

If you have any of the logical names listed in Table 3–2 defined in your environment, they comprise the list of printer queue names to be presented when the corresponding print format is selected. This method is much faster than making the Print dialog box derive the names of all the queues on the system (see the following example), most of which do not apply to the print format under consideration.

```
$ Define DECW$PRINTER_FORMAT_TEXT   "CLUSTER_LN03,CLUSTER_PRINT, -
_$ ANSI_ARTWRK,ANSI_PROTON"
$ Define DECW$PRINTER_FORMAT_LINE   "CLUSTER_PRINT"
$ Define DECW$PRINTER_FORMAT_ANSI2  "CLUSTER_LN03,ANSI_ARTWRK,ANSI_PROTON"
$ Define DECW$PRINTER_FORMAT_ANSI   "CLUSTER_LN03,ANSI_ARTWRK,ANSI_PROTON"
$ Define DECW$PRINTER_FORMAT_PS     "PS_ARTWRK,PS_PROTON"
$ Define DECW$PRINTER_FORMAT_REGIS  "SYS$NULL"
```

3.5 Compiling Ada Source Files

VMS DECwindows Motif provides programming interface definitions for the Ada language. If you have not installed Ada programming software on your system, proceed to Chapter 4.

When you select Ada support at the time of the VMS DECwindows Motif kit installation, four Ada package source files are placed in the SYS$LIBRARY directory of your system. These files are:

- CDA$CDA_.ADA—Package CDA—Compound Document Architecture
- DDIF$DDIF_.ADA—Package DDIF—Digital Document Interchange Format
- DDIF$DTIF_.ADA—Package DTIF—Digital Table Interchange Format
- DECW$DWT_.ADA—Package DWT—VMS DECwindows Motif Toolkit
- DECW$MOTIF_.ADA—Package MOTIF—VMS DECwindows Motif Toolkit
- DECW$X_.ADA—Package X—Xlib

These package source files can be individually compiled into your Ada program libraries or compiled into the system-wide Ada predefined library.

The command file SYS$UPDATE:DECW$COMPILE_ADA_UNITS.COM is provided to make the packages available system-wide. This command procedure compiles all four packages into the predefined Ada library, and if the VAX Source Code Analyzer (SCA) product is installed, loads SCA analysis data for the packages into the SCA library for the predefined library. The command procedure should be run as a batch job. You should have a minimum of 2000 pages available in the working set, but 3000 pages are preferable. A page file quota of at least 30000 pages is suggested.

Once the units are compiled into the predefined Ada library, you must execute the following Ada program library manager command to make the units visible:

```
$  ACS ENTER UNIT ADA$PREDEFINED CDA,DDIF,DTIF,DWT,MOTIF,X
```

You need to do this only once. This step is also performed automatically for all Ada program libraries created after the VMS DECwindows Motif units are compiled into the predefined library.

Future installations of VMS DECwindows Motif might replace Ada packages. If so, the new packages must be compiled as shown in this section. If you have already entered the units into your own library, you must then execute the following command to make your library current:

```
$  ACS REENTER *
```

Future installations of VAX Ada might replace the Ada predefined library and remove the VMS DECwindows Motif units. If this occurs, execute the DECW$COMPILE_ADA_UNITS.COM command procedure again.

4

Starting VMS DECwindows Motif

This chapter discusses the tasks that need to be performed after the VMS DECwindows Motif installation is complete. You should customize the VMS DECwindows Motif software as described in Chapter 3 *before* proceeding with this chapter.

Perform the following tasks after installing the VMS DECwindows Motif software:

- Start VMS DECwindows Motif
- Run the Installation Verification Procedure (IVP)
- Choose an alternative console

4.1 Starting the VMS DECwindows Motif Software

Note

You must reboot all workstations and all nonworkstation cluster boot nodes before starting VMS DECwindows Motif. All other nodes in the VAXcluster and all satellite systems must be rebooted before the installation is considered complete.

Follow these steps to start VMS DECwindows Motif:

1. If your system was not automatically shut down at the end of the installation procedure, perform an orderly system shutdown by entering the following command:

   ```
   $ @SYS$SYSTEM:SHUTDOWN
   ```

2. Once your system has been shut down, halt the system.

3. You must specifically set the SYSGEN parameter WINDOW_SYSTEM to 1 the first time that you start VMS DECwindows Motif on a workstation. Enter the following commands at the workstation console prompt (>>>) to set the WINDOW_SYSTEM parameter:

```
>>> B/1

   .
   .
   .

SYSBOOT>  SET WINDOW_SYSTEM 1
SYSBOOT>  CONTINUE
```

Note

If you are booting as a member of a Local Area VAXcluster (LAVc), the SYSGEN cluster parameter NISCS_CONV_BOOT must be set to 1 to allow a conversational boot. See the *VMS System Generation Utility Manual* for information about setting SYSGEN parameters.

If your system does not have valid VAX–VMS or DW–MOTIF licenses installed, appropriate messages are displayed on your console terminal and VMS DECwindows Motif is not automatically started. If this happens, log in to the console terminal, install the valid licenses, and reboot the system. See the *VMS License Management Utility Manual* for more information on installing licenses.

After the system is rebooted and the startup is complete, the Start Session window should appear.

The VMS DECwindows Motif software is now installed and is running on your system. You should now run the Installation Verification Procedure as described in Section 4.2 to verify that the installation of VMS DECwindows Motif was complete and accurate.

4.2 Running the Installation Verification Procedure

The Installation Verification Procedure (IVP), located in SYS$TEST:DECW$IVP.COM, should be run after you have installed and started VMS DECwindows Motif. This procedure contains four tests which verify that the software installation was complete and accurate.

First, the IVP attempts to run two display-oriented tests. When the IVP is invoked, it determines the type of machine you are using. If you are using a workstation, you are asked where the display-oriented tests should be displayed. Your current workstation is the default. If you are using a nonworkstation, the procedure prompts you for a display name. Press Ctrl+Z at the prompt if you do not want to run the display-oriented tests. These tests are run only if the images exist on the system. If the images are not found, a message is displayed informing you that the tests will be skipped.

Next, the IVP runs two nondisplay-oriented tests. The first of these tests invokes the Motif UIL compiler. If you did not install programming support, the IVP informs you that this test will not be run because the Motif UIL image does not exist. If the first test runs, you are notified of its completion status.

The last test converts a text file to DDIF format and then converts it back to text, comparing the original text file with the result. If the files match, the test is successful. You are notified of its completion status.

To run the IVP, enter the following command:

```
$ @SYS$TEST:DECW$IVP
```

See Appendix B for a sample of the Installation Verification Procedure.

4.3 Choosing an Alternative Console

The VMS DECwindows Motif software allows you to boot all configurations from the main console. You can then toggle between displaying or not displaying the operator window by pressing Ctrl+F2. The main console is always a workstation screen.

For an alternative console, you can use a terminal connected to the workstation by means of a terminal port.

If you boot from the main console, the alternative console is connected when you invoke the VMS DECwindows Motif startup command procedure.

5
Managing VMS DECwindows Motif

This chapter contains information on enhancing VMS DECwindows Motif performance. It also describes how to remove VMS DECwindows Motif files from the system disk by using DECW$MOTIF_TAILOR.

5.1 Tuning Your System

After you install VMS DECwindows Motif, you may want to tune your system to enhance performance or lower the use of some system resources. Information about tuning your system is included in the *VMS System Manager's Manual*.

5.2 Using DECW$MOTIF_TAILOR

Use DECW$MOTIF_TAILOR to remove some or all VMS DECwindows Motif files from the system disk. For example, if you are not planning on using the VMS DECwindows Motif programming support, you can remove those files. Later, if you decide you want VMS DECwindows Motif programming support, you can add the files to the system disk by reinstalling VMS DECwindows Motif.

DECW$MOTIF_TAILOR has two phases:

1. The first phase lists each class of VMS DECwindows Motif files and asks you if you want to delete the class from the system disk.
2. The second phase deletes the files you indicated from the system disk.

Table 5–1 lists the classes and subclasses of VMS DECwindows Motif files that you can delete using DECW$MOTIF_TAILOR. For a list of VMS DECwindows Motif files and their functions, see Appendix C.

Table 5–1 Classes of VMS Files That Can Be Removed with DECW$MOTIF_TAILOR

VMS DECwindows Motif Applications Files
No subclasses in this tailor class
VMS DECwindows Motif Device Support Files[1]
PEX for PHIGS support files
75 Dots Per Inch Video Font Files
No subclasses in this tailor class
100 Dots Per Inch Video Font Files
No subclasses in this tailor class
VMS DECwindows Motif Programming Support Files
Ada files BASIC files BLISS files VAXC (MIT binding) files VAXC (VAX binding) files FORTRAN files Macro files Pascal files PL/1 files
Example Files
No subclasses in this tailor class

[1]If you tailor device support files OFF, the system reboots

The classes and subclasses of VMS DECwindows Motif files are described in the following items:

- Applications files: VMS DECwindows Motif provides a variety of applications including the following:
  - Bookreader
  - Calculator

- Calendar
- Cardfiler
- Clock
- DDIF Document Viewer
- DECterm
- EVE Text Editor
- FileView
- Mail
- Notepad Text Editor
- Paint Graphics Editor
- Session Manager
- Window Manager

If you are installing VMS DECwindows Motif on a VAXstation, you need these files. You may also want these files on a nonworkstation VAX computer, because you can run VMS DECwindows Motif applications on a nonworkstation VAX computer and display them on a workstation.

- Device support files: If you are installing VMS DECwindows Motif on a VAXstation or in a cluster that includes VAXstations, you need these files. Otherwise you do not need them.
- 100 dots-per-inch (100-dpi) video font files: If you have a workstation monitor capable of displaying 100 dpi (for example, a VR150, VR160, or VR295), selecting 100-dpi fonts gives you a more readable display when you run VMS DECwindows Motif applications. If your workstation monitor cannot display 100-dpi fonts (for example, a VR260 or VR290), you can save disk space by tailoring off this option. For more information on the capabilities of your particular monitor, see the owner's guide for your monitor.
- Programming support files: The VMS DECwindows Motif programming support files are needed only to develop applications and are not required to run VMS DECwindows Motif applications. Support files are provided for the following VAX programming languages: Ada, BASIC, BLISS, C, FORTRAN, MACRO, Pascal, and PL/1. In addition, support files are provided for programming in the C language using conventions and standards developed at the Massachusetts Institute of Technology.

5.2.1 Removing VMS DECwindows Motif Files from the System Disk

To remove VMS DECwindows Motif files from the system disk, do the following:

1. Log in to the SYSTEM account.
2. Enter the following command:

   ```
   $  RUN SYS$UPDATE:DECW$MOTIF_TAILOR
   ```

   After a brief overview, the DECW$MOTIF_TAILOR program lists each group, or *class*, of files and its size in blocks. Files are grouped according to their function. For example, all the files required for VMS DECwindows device support are in one class. A file class is made up of many small subclasses. You can eliminate an entire class of files, or you can eliminate one or more of its subclasses. For example:

   ```
   CLASS - DECwindows device support files
            Size of entire class (with subclasses): 13959
            Size of common files required for any subclass: 10498
            Do you wish to select the entire class (default = NO)?
      .
      .
      .
   ```

3. Decide which file classes or subclasses are not needed to support your system. DECW$MOTIF_TAILOR displays step-by-step instructions. Follow these instructions to specify which of the classes or subclasses you want to remove.
4. DECW$MOTIF_TAILOR deletes the files you selected and displays the names of those files. If you deleted device support files, the system automatically shuts down and reboots after the files have been tailored off.

Caution

To cancel DECW$MOTIF_TAILOR during the first phase, press Ctrl+C, Ctrl+Y, or Ctrl+Z. If you cancel DECW$MOTIF_TAILOR during the last phase, you may end up with a partially tailored disk. For a description of both phases, see Section 5.2.

Example 5–1 illustrates how to use DECW$MOTIF_TAILOR to remove the application files, device support files, font files, programming support files, and example files from a system disk.

Example 5–1 Sample DECW$MOTIF_TAILOR Session

```
$  RUN SYS$UPDATE:DECW$MOTIF_TAILOR
   .
   .
   .

TAILOR-OFF
----------
 You will now be prompted with a list of the classes and subclasses of
 DECwindows files that are optional. The size of each class and subclass is
 included in the list. This will help you decide whether or not you want to
 remove a class or subclass from your system.

 Under some classes there is a set of common files that is required in order
 for any subclasses to work. These files will only be deleted if you remove
 the ENTIRE class. If you choose to keep any subclass, this set of files is
 not deleted.

 NOTE: The files associated with selected classes and subclasses will
       be removed from your system.

Total size of the system disk is 891072 blocks.
Total space used on the system disk is 832161 blocks.
Total space left on the system disk is 58911 blocks.


CLASS - DECwindows applications files
          Size of entire class (with subclasses): 18999
          Size of common files required for any subclass: 17282
   Do you wish to select the entire class (default = NO)?  Return
   Do you wish to select any of its subclasses (default = NO)?  YES
      Select the subclasses that you wish to delete:
             SUBCLASS - DECwindows computer-based instruction files (1717 blocks
) [NO]:  YES

CLASS - DECwindows device support files
          Size of entire class (with subclasses): 13959
          Size of common files required for any subclass: 10498
   Do you wish to select the entire class (default = NO)?  Return
      Do you wish to select any of its subclasses (default = NO)?  YES
      Select the subclasses that you wish to delete:
             SUBCLASS - PEX for PHIGS support files (3461 blocks) [NO]:  YES

CLASS - 75 dots per inch video font files
          Size of entire class (with subclasses): 2510
          No subclasses in this tailor class.
          Do you wish to select the entire class (default = NO)?  YES

CLASS - 100 dots per inch video font files
          Size of entire class (with subclasses): 3578
          No subclasses in this tailor class.
          Do you wish to select the entire class (default = NO)?  YES
```

(continued on next page)

Example 5–1 (Cont.) Sample DECW$MOTIF_TAILOR Session

```
CLASS - DECwindows programming support files
          Size of entire class (with subclasses): 33972
          Size of common files required for any subclass: 2303
   Do you wish to select the entire class (default = NO)? Return
      Do you wish to select any of its subclasses (default = NO)? YES
      Select the subclasses that you wish to delete:
             SUBCLASS - Ada files (4769 blocks) [NO]: YES
         SUBCLASS - BASIC files (2755 blocks) [NO]: YES
         SUBCLASS - BLISS files (2128 blocks) [NO]: YES
         SUBCLASS - VAX C (MIT binding) files (3580 blocks) [NO]: YES
         SUBCLASS - VAX C (VAX binding) files (3007 blocks) [NO]: YES
         SUBCLASS - FORTRAN files (3028 blocks) [NO]: YES
         SUBCLASS - Macro files (3695 blocks) [NO]: YES
         SUBCLASS - Pascal files (6094 blocks) [NO]: YES
         SUBCLASS - PL/1 files (2613 blocks) [NO]: YES

CLASS - Example files
          Size of entire class (with subclasses): 3377
          No subclasses in this tailor class.
          Do you wish to select the entire class (default = NO)? YES
Files have been selected
Do you wish to remove all of the options selected? YES
Removing files, please wait...
%VMSTLR-I-DELFILE, deleting file: SYS$SYSROOT:[SYSCBI.DECW$CBI]DECW00010.CBI;*
%VMSTLR-I-DELFILE, deleting file: SYS$SYSROOT:[SYSCBI.DECW$CBI]DECW00020.CBI;*

   .
   .
   .
```

5.2.2 Adding VMS DECwindows Motif Files to the System Disk

To add VMS DECwindows Motif files that you previously chose not to install or that you removed, do the following:

1. Follow the installation procedure as described in Section 2.1.1.
2. When the installation procedure (in step 10) asks you if you want to install the entire kit, enter NO. The procedure displays optional parts of the kit and asks you if you want to install each part. Enter YES for each part that you want to install.
3. As noted in step 16 of the installation procedure, all kit parts that you chose are displayed and you are asked to verify that the selections are correct.
4. Once you have verified the selections, the installation procedure continues.

5.3 Determining and Reporting Problems

If you encounter a problem while using VMS DECwindows Motif, review the Software Product Description (SPD) and Warranty Addendum for an explanation of the warranty. If you encounter a problem during the warranty period, report the problem as indicated below or follow alternate instructions provided by Digital for reporting problems.

- Call Digital if your software contract or warranty agreement includes telephone support.
- If you discover a problem with the documentation, fill out and submit a Reader's Comments form, located in the back of each manual.

A

VMS DECwindows Motif Sample Installation

Example A–1 contains a sample registration of a DW–MOTIF Product Authorization Key and a sample installation of VMS DECwindows Motif.

The sample installation assumes that DECnet has been shut down, that no users are logged on to the system, and that OPTIONS N is specified to display the release notes options.

Example A–1 Sample Installation

```
$ @SYS$UPDATE:VMSLICENSE

    VMS License Management Utility Options:

        1. Register a Product Authorization Key
        2. Amend an existing Product Authorization Key
        3. Cancel an existing Product Authorization Key
        4. List Product Authorization Keys
        5. Modify an existing Product Authorization Key

        9. Exit this procedure

    Type '?' at any prompt for a description of the information
    requested.

Enter one of the above choices [1] RETURN
Do you have your Product Authorization Key? [YES] RETURN

   The REGISTER option allows you add a new license to a license
   database.  A Product Authorization Key (PAK) provides the product
   name and information you need to register the license.  You must
   enter all the information provided by your PAK exactly as specified.
```

(continued on next page)

Example A–1 (Cont.) Sample Installation

```
PAK ID:
                      Issuer [DEC] RETURN
         Authorization Number [] LAB030419

PRODUCT ID:
                 Product Name [] DW-MOTIF

                     Producer [DEC] RETURN

NUMBER OF UNITS:
              Number of Units [] 400

KEY LEVEL:
                       Version []

PRODUCT RELEASE DATE:         [] 1-Jul-1991

KEY TERMINATION DATE:
         Key Termination Date [] RETURN

RATING:
      Availability Table Code [] f
          Activity Table Code [] RETURN

MISCELLANEOUS:
                  Key Options [] RETURN
                Product Token [] RETURN
                  Hardware-Id [] RETURN
                     Checksum [] 2-fbic-odnh-enwj-lled

      License Database File:  SYS$COMMON:[SYSEXE]LMF$LICENSE.LDB
                     Issuer:  DEC
              Authorization:  LAB030419
                  Producer:  DEC
               Product Name:  DW-MOTIF
                      Units:  400
                       Date:  1-JUL-1991
                    Version:
            Termination Date:
                Availability:  F
                    Activity:
                     Options:
                       Token:
                 Hardware ID:
                     Checksum:  2-FBIC-ODNH-ENWJ-LLED

Is this information correct? [YES] RETURN

Registering DW-MOTIF license in SYS$COMMON:[SYSEXE]LMF$LICENSE.LDB...

Do you want to LOAD this license on this system? [YES] RETURN
```

(continued on next page)

Example A–1 (Cont.) Sample Installation

```
%LICENSE-I-LOADED, DEC DW-MOTIF was successfully loaded with 400 units

    VMS License Management Utility Options:

        1. Register a Product Authorization Key
        2. Amend an existing Product Authorization Key
        3. Cancel an existing Product Authorization Key
        4. List Product Authorization Keys
        5. Modify an existing Product Authorization Key

        9. Exit this procedure

    Type '?' at any prompt for a description of the information
    requested.

Enter one of the above choices [1] 9

$
.
.
.

$  @SYS$UPDATE:VMSINSTAL DECW$MOTIF010 MUA0: OPTIONS N

 VAX/VMS Software Product Installation Procedure V5.4

It is 1-Sep-1991 at 09:02.

Enter a question mark (?) at any time for help.

* Are you satisfied with the backup of your system disk [YES]?  YES

Please mount the first volume of the set on MUA0:.

* Are you ready?  Y

%MOUNT-I-MOUNTED, DWM010 mounted on _MUA0:

The following products will be processed:

  DECW$MOTIF V1.0

 Beginning installation of DECW$MOTIF V1.0 at 09:02

%VMSINSTAL-I-RESTORE, Restoring product save set A ...

    Release notes included with this kit are always copied to SYS$HELP.

    Additional Release Notes Options:
```

(continued on next page)

Example A–1 (Cont.) Sample Installation

```
 1.  Display release notes
 2.  Print release notes
 3.  Both 1 and 2
 4.  None of the above

* Select option [2]:  4

* Do you want to continue the installation [NO]?  YES

%VMSINSTAL-I-RELMOVED, Product's release notes have been moved to SYS$HELP.


   *** Installing VMS DECwindows Motif software ***

You can install the VMS DECwindows Motif kit completely or in selected
portions. A complete installation requires as much as 90,000 blocks.  If
you choose to perform a partial installation, you can tailor the device
support that you want provided for VMS DECwindows Motif workstations and
the programming support that you want provided for VMS DECwindows Motif
application development.  Whether you perform a complete or partial
installation, this kit provides support for running VMS DECwindows Motif
applications on VMS compute servers.

* Do you want to install the entire kit [Y]?  NO


If you are not installing this kit on a workstation, or on a VAXcluster
that includes workstations, you can save up to 17,000 blocks by omitting
the device support required to make workstation graphics hardware
available to VMS DECwindows Motif.

* Do you want to install VMS DECwindows Motif device support [Y]?  YES


This installation procedure provides video fonts for specific monitor
resolutions.  Fonts are supplied for the following monitor resolutions:

  75 dots per inch
 100 dots per inch

All VMS DECwindows Motif applications run with 75 dots per inch (dpi) fonts.
Some applications take advantage of 100 dpi fonts.  If you select 100 dpi
fonts, 75 dpi fonts are automatically provided.  Both font resolutions are
provided to allow your system to run those VMS DECwindows Motif applications
that require 100 dpi fonts and those that require 75 dpi fonts.

For instructions on how to configure your system with both 75 and 100 dpi
fonts, see the installation guide or examine the template command procedure
SYS$MANAGER:DECW$PRIVATE_SERVER_SETUP.TEMPLATE.  By default, systems start
up using 75 dpi fonts.
```

(continued on next page)

Example A–1 (Cont.) Sample Installation

```
Note that this procedure deletes previously installed fonts before installing
new ones.  If you choose to reinstall this kit at a later date, be sure to
install all required fonts.

* Do you want both sets of video fonts installed [Y]?  NO

* Do you want 75 dpi video fonts installed [Y]?  RETURN

* Do you want 100 dpi video fonts installed [Y]?  NO

If you are not installing this kit on a workstation, or on a VAXcluster
that includes workstations, you can save up to 4000 blocks by omitting
PEX (PHIGS Extension to X) support for PHIGS.

* Do you want to install VMS DECwindows Motif PEX support for PHIGS [Y]?  NO

This installation procedure provides support files for developing
VMS DECwindows Motif applications in several programming languages.  These files
are needed only to develop applications and are not required to run
VMS DECwindows Motif applications. Support for each programming language
requires approximately 3,400 blocks.

* Do you want to install VMS DECwindows Motif programming support [Y]?  RETURN

Support files are supplied for the following VAX programming languages:

        Ada, BASIC, BLISS, C, FORTRAN, MACRO, Pascal, PL/1

In addition, support files are supplied for programming in the C language
using conventions and standards developed at the Massachusetts Institute
of Technology.

Note that this procedure deletes previously installed programming
language support files before installing new ones.  If you choose to
reinstall this kit at a later date, be sure to install all required
programming language support files.


* Do you want to install all programming language support files [Y]?  NO

Do you want support files provided for each of the following programming
languages?  Type Yes or No for each language.

*     VAX Ada [N]?  RETURN
*     VAX BASIC [N]?  RETURN
*     VAX BLISS [N]?  RETURN
*     VAX C [N]?  YES
*     VAX FORTRAN [N]?  RETURN
*     VAX MACRO [N]?  RETURN
*     VAX Pascal [N]?  RETURN
*     VAX PL/1 [N]?  RETURN
*     MIT-compatible C [N]?  YES
```

(continued on next page)

Example A–1 (Cont.) Sample Installation

```
You have selected the following portions of the kit:

        o  VMS DECwindows Motif compute server support

        o  VMS DECwindows Motif device support

               75 dots per inch video fonts

        o  VMS DECwindows Motif programming support requiring approximately
           13146 blocks

               VAX C
               MIT C language programming conventions

* Are these selections correct [Y]?  YES

A registered and loaded Product Authorization Key for DW-MOTIF is required
to run any applications with VMS DECwindows Motif.  If you answer NO to
the next question, the installation of VMS DECwindows Motif will be aborted.

        Product:      DW-MOTIF
        Producer:     DEC
        Version:      1.0
        Release Date: 1-JUL-1991

* Does this product have an authorization key registered and loaded?  YES


No further questions will be asked.
 .
 .
 .
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...
 .
 .
 .
 Installation of DECW$MOTIF V1.0 completed at 10:57

 VMSINSTAL procedure done at 10:57
```

B

Sample Installation Verification Procedure

Example B–1 contains a sample of the Installation Verification Procedure (IVP). See Chapter 4 for information about running the IVP.

Example B–1 Sample IVP

```
$  @SYS$TEST:DECW$IVP

          VMS DECwindows Motif Installation Verification Procedure (IVP)

    This IVP is intended to test some of the functionality of VMS DECwindows
    Motif, and provide a quick method of verifying the installation.

    This machine is not a workstation.  Please provide the nodename of a
    workstation on which to display the IVP tests.  You must be sure that this
    account and node have security access to the display node, or the IVP will
    fail.

    To skip the display-oriented tests, press Ctrl/Z at the following prompt.

_Display:  NODE33::0.0

%DECW-I-IVP, The IVP will display on NODE33
%DECW-I-IVP, Running DECW$EXAMPLES:ICO.EXE for up to a minute.
%DECW-I-IVP, Press Ctrl/Y to interrupt test.
%DCL-S-SPAWNED, process DECW$IVP_ICO spawned
%DECW-I-IVP, Running SYS$SYSTEM:DECW$CLOCK for up to a minute.
%DECW-I-IVP, Press Ctrl/Y to interrupt test.
%DCL-S-SPAWNED, process DECW$IVP_CLOCK spawned
%DECW-W-IVP, Could not find any .UIL source files in DECW$EXAMPLES.  Skipping UI
L compiler test...
%DECW-I-IVP, Beginning CONVERT/DOCUMENT IVP...
%DECW-S-IVP, CONVERT/DOCUMENT IVP passed.
%DECW-S-IVP, The IVP has completed.
$
```

C

VMS DECwindows Motif Software Components

Table C–1 contains the name of each VMS DECwindows Motif software component, the directory where the component can be found, a brief description of what the component does, and one of the following three component classifications:

- ALL—The component is part of all installations.
- PROG—The component is part of the programming environment.
- WS—The component is part of the workstation device support.

Table C–1 VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
CDA$LIBRARY:	CL_DAY.DOC_STYLE	Calendar day style file	ALL
	DEFSTYLE.DDIF	DDIF document style guide	ALL
DECW$EXAMPLES:	ALLOBJS.H	Demo source	PROG
	BITMAP.C	Demo source	PROG
	BITMAP.EXE	Demo image	PROG
	CLOCK.DDIF	Paint example	ALL
	DECBURGER.C	UIL DRM Demo source	PROG
	DECBURGER.COM	UIL DRM Demo file	PROG

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECBURGER.EXE	UIL DRM Demo image	PROG
	DECBURGER.HLP	UIL DRM Demo source	PROG
	DECBURGER_HELP.DECW$BOOK	UIL DRM Demo source	PROG
	DECBURGER_HELP.DECW$BOOKSHELF	UIL DRM Demo source	PROG
	DECBURGER.UID	UIL DRM Demo file	PROG
	DECBURGER.UIL	UIL DRM Demo file	PROG
	DECW$CDPLAYER.C	Demo image	PROG
	DECW$CDPLAYER.EXE	Demo image	PROG
	DECW$DXM_PORT.COM	Demo image	PROG
	DECW$DXM_PORT_CALL.EXE	Demo image	PROG
	DECW$DXM_PORT_CLASS.EXE	Demo image	PROG
	DECW$DXM_PORT_DATA.EXE	Demo image	PROG
	DECW$DXM_PORT_DRM.EXE	Demo image	PROG
	DECW$DXM_PORT_HILEVELS.EXE	Demo image	PROG
	DECW$DXM_PORT_INCLUDES.EXE	Demo image	PROG
	DECW$DXM_PORT_LOLEVELS.EXE	Demo image	PROG
	DECW$DXM_PORT_RESOURCES.EXE	Demo image	PROG
	DECW$DXM_PORT_UIL.EXE	Demo image	PROG
	DECW$FONT_ALIAS_CHARTER.DAT	Demo font alias file	PROG
	DECW$FONT_ALIAS_CHARTER_100DPI.DAT	Demo font alias file	PROG
	DECW$FONT_ALIAS_FILENAMES.DAT	Demo font alias file	PROG

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$FONT_ALIAS_KANJI.DAT	Demo font alias file	PROG
	DECW$FONT_ALIAS_LUCIDA.DAT	Demo font alias file	PROG
	DECW$FONT_ALIAS_LUCIDA_100DPI.DAT	Demo font alias file	PROG
	DECW$TRANSPORT_EXAMPLE.EXE	Demo image	PROG
	DEMO_BUILD.COM	Procedure to compile demo sources	PROG
	DIALOG.C	Demo source	PROG
	ENCODEFONT.PS		
	FONTS.ALIAS	Font alias file for non-DEC servers	ALL
	HELLOMOTIF.ADA	XUI Toolkit demo source	PROG
	HELLOMOTIF.FOR	XUI Toolkit demo source	PROG
	HELLOMOTIF.PAS	XUI Toolkit demo source	PROG
	HELLOMOTIF.UIL	XUI Toolkit demo source	PROG
	ICO.C	Demo source	PROG
	ICO.EXE	Demo image	PROG
	ICON.XBM	Demo image	PROG
	MOTIFBURGER.ADA	Demo source	PROG
	MOTIFBURGER.FOR	Demo source	PROG
	MOTIFBURGER_DEFS.FOR	Demo source	PROG
	MOTIFBURGER.UIL	Demo source	PROG
	OBJCUBE.H	Demo source	PROG
	OBJICO.H	Demo source	PROG

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	OBJTETRA.H	Demo source	PROG
	PERIODIC.C	Demo source	PROG
	PERIODIC.EXE	Demo image	PROG
	PERIODIC.UID	Demo source	PROG
	PERIODIC.UIL	Demo source	PROG
	POLYINFO.H	Demo source	PROG
	STRINGS.MAR	Low-level DECwindows utility routine	PROG
	SVNMSAMPLE.C	Demo source	PROG
	SVNMSAMPLE.EXE	Demo image	PROG
	SVNMSAMPLESOURCE.C	Demo source	PROG
	UILWMDCREATE.C	Demo source	PROG
	UILWMDCREATE.COM	Demo image	PROG
	XLIBINTRO.ADA	Xlib demo source	PROG
	XLIBINTRO.C	Xlib demo source	PROG
	XLIBINTRO.EXE	Xlib demo image	PROG
	XLIBINTRO.FOR	Xlib demo source	PROG
	XPORTEXAMPLEDEF.R32	Demo source	PROG
	XPORT_EXAMPLE.B32	Demo source	PROG
	XPORT_EXAMPLE_XFER.MAR	Demo source	PROG
DECW$FONT:	*.DECW$FONT	Font files	WS
	DECW$FONT_ALIAS.DAT	Font alias file	WS
	DECW$FONT_ALIAS_100DPI.DAT	Font alias file	WS
	DECW$FONT_ALIAS_COMMON.DAT	Font alias file	WS
	DECW$FONT_DIRECTORY.DAT	Font directory file	WS
	DECW$FONT_DIRECTORY_100DPI.DAT	Font directory file	WS
	DECW$FONT_DIRECTORY_COMMON.DAT	Font directory file	WS

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$FONT_DIRECTORY_CURSOR16.DAT	Font directory file	WS
	DECW$FONT_DIRECTORY_CURSOR32.DAT	Font directory file	WS
	*.XDPS$OUTLINE	Display PostScript font outlines	WS
	See either the VAX or MIT C version of the *VMS DECwindows Guide to Xlib (Release 4) Programming* for a complete list of DECwindows fonts.	DECwindows fonts	WS
DECW$INCLUDE:	ARROWB.H	C language include file	PROG
	ARROWBG.H	C language include file	PROG
	ARROWBGP.H	C language include file	PROG
	ARROWBP.H	C language include file	PROG
	ATOMMGR.H	C language include file	PROG
	BASECLASSI.H	C language include file	PROG
	BITMAPS.H	C language include file	PROG
	BULLETINB.H	C language include file	PROG
	BULLETINBP.H	C language include file	PROG
	CACHEP.H	C language include file	PROG
	CASCADEB.H	C language include file	PROG

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	CASCADEBG.H	C language include file	PROG
	CASCADEBGP.H	C language include file	PROG
	CASCADEBP.H	C language include file	PROG
	COMMAND.H	C language include file	PROG
	COMMANDP.H	C language include file	PROG
	COMPOBJ.H	C language include file	PROG
	COMPOBJP.H	C language include file	PROG
	COMPOSITE.H	C language include file	PROG
	COMPOSITEP.H	C language include file	PROG
	CONSTRAINP.H	C language include file	PROG
	CONSTRAINT.H	C language include file	PROG
	CONVERT.H	C language include file	PROG
	CORE.H	C language include file	PROG
	COREP.H	C language include file	PROG
	CSTEXTP.H	C language include file	PROG
	CURSORFONT.H	C language include file	PROG
	CUTPASTE.H	C language include file	PROG

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	CUTPASTEP.H	C language include file	PROG
	D2DX.H	C language include file	PROG
	D2DXSTR.H	C language include file	PROG
	DECSPECIFIC.H	C language include file	PROG
	DECW$GBLSTRINGS.H	C language include file	PROG
	DECWDWTAPPLPROG.H	C language include file	PROG
	DECWDWTAPPLPROG.UIL	C language include file	PROG
	DECWDWTWIDGETPROG.H	C language include file	PROG
	DECWI18N.H	C language include file	PROG
	DECWMHINTS.H	C language include file	PROG
	DIALOGS.H	C language include file	PROG
	DIALOGSP.H	C language include file	PROG
	DRAWINGA.H	C language include file	PROG
	DRAWINGAP.H	C language include file	PROG
	DRAWNB.H	C language include file	PROG
	DRAWNBP.H	C language include file	PROG
	DRMDECLS.H	C language include file	PROG

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DRMPUBLIC.H	C language include file	PROG
	DWTAPPL.H	C language include file	PROG
	DWTAPPL.UIL	UIL language include file	PROG
	DWTSTRING.H	C language include file	PROG
	DWTWIDGET.H	C language include file	PROG
	DWTXLATARG.UIL	C language include file	PROG
	DWTXLATTEXT.UIL	C language include file	PROG
	DXMCOLOR.H	C language include file	PROG
	DXMCOLORP.H	C language include file	PROG
	DXMCSTEXT.H	C language include file	PROG
	DXMCSTEXTP.H	C language include file	PROG
	DXMHELPB.H	C language include file	PROG
	DXMHELPBP.H	C language include file	PROG
	DXMHELPSP.H	C language include file	PROG
	DXMPRINT.H	C language include file	PROG
	DXMPRINTP.H	C language include file	PROG
	DXMSVN.H	C language include file	PROG

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DXMSVNP.H	C language include file	PROG
	DXMXLATARG.UIL	C language include file	PROG
	DXMXLATTEXT.UIL	C language include file	PROG
	EVENT.H	C language include file	PROG
	EXTOBJECT.H	C language include file	PROG
	EXTOBJECTP.H	C language include file	PROG
	FILESB.H	C language include file	PROG
	FILESBP.H	C language include file	PROG
	FORM.H	C language include file	PROG
	FORMP.H	C language include file	PROG
	FRAME.H	C language include file	PROG
	FRAMEP.H	C language include file	PROG
	GETSECRES.H	C language include file	PROG
	IDB.H	C language include file	PROG
	INTRINSIC.H	C language include file	PROG
	INTRINSICP.H	C language include file	PROG
	KEYSYM.H	C language include file	PROG

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	KEYSYMDEF.H	C language include file	PROG
	LABEL.H	C language include file	PROG
	LABELG.H	C language include file	PROG
	LABELGP.H	C language include file	PROG
	LABELP.H	C language include file	PROG
	LIST.H	C language include file	PROG
	LISTP.H	C language include file	PROG
	MAINW.H	C language include file	PROG
	MAINWP.H	C language include file	PROG
	MENUSHELL.H	C language include file	PROG
	MENUSHELLP.H	C language include file	PROG
	MESSAGEB.H	C language include file	PROG
	MESSAGEBP.H	C language include file	PROG
	MRM.H	C language include file	PROG
	MRMAPPL.H	C language include file	PROG
	MRMDECLS.H	C language include file	PROG
	MRMPUBLIC.H	C language include file	PROG

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	MRMWIDGET.H	C language include file	PROG
	MWMUTIL.H	C language include file	PROG
	OBJECT.H	C language include file	PROG
	OBJECTP.H	C language include file	PROG
	PANEDW.H	C language include file	PROG
	PANEDWP.H	C language include file	PROG
	PROTOCOLS.H	C language include file	PROG
	PROTOCOLSP.H	C language include file	PROG
	PUSHB.H	C language include file	PROG
	PUSHBG.H	C language include file	PROG
	PUSHBGP.H	C language include file	PROG
	PUSHBP.H	C language include file	PROG
	QUARKS.H	C language include file	PROG
	RECTOBJ.H	C language include file	PROG
	RECTOBJP.H	C language include file	PROG
	ROWCOLUMN.H	C language include file	PROG
	ROWCOLUMNP.H	C language include file	PROG

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	SASHP.H	C language include file	PROG
	SCALE.H	C language include file	PROG
	SCALEP.H	C language include file	PROG
	SCROLLBAR.H	C language include file	PROG
	SCROLLBARP.H	C language include file	PROG
	SCROLLEDW.H	C language include file	PROG
	SCROLLEDWP.H	C language include file	PROG
	SELECTIOB.H	C language include file	PROG
	SELECTIOBP.H	C language include file	PROG
	SELECTION.H	C language include file	PROG
	SEPARATOG.H	C language include file	PROG
	SEPARATOGP.H	C language include file	PROG
	SEPARATOR.H	C language include file	PROG
	SEPARATORP.H	C language include file	PROG
	SHELL.H	C language include file	PROG
	SHELLP.H	C language include file	PROG
	STRINGDEFS.H	C language include file	PROG

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	STRINGSRCP.H	C language include file	PROG
	TEXT.H	C language include file	PROG
	TEXTF.H	C language include file	PROG
	TEXTFP.H	C language include file	PROG
	TEXTINP.H	C language include file	PROG
	TEXTOUTP.H	C language include file	PROG
	TEXTP.H	C language include file	PROG
	TEXTSRCP.H	C language include file	PROG
	TOGGLEB.H	C language include file	PROG
	TOGGLEBG.H	C language include file	PROG
	TOGGLEBGP.H	C language include file	PROG
	TOGGLEBP.H	C language include file	PROG
	TRANSLATE.H	C language include file	PROG
	TRAVERSAL.H	C language include file	PROG
	UILDBDEF.H	Demo image	PROG
	UILLEXPARS.H	C language include file	PROG
	VASIMPLE.H	C language include file	PROG

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	VENDOR.H	C language include file	PROG
	VENDORE.H	C language include file	PROG
	VENDOREP.H	C language include file	PROG
	VENDORP.H	C language include file	PROG
	VIRTKEYS.H	C language include file	PROG
	VIRTKEYSP.H	C language include file	PROG
	WINDOWOBJ.H	C language include file	PROG
	WINDOWOBJP.H	C language include file	PROG
	X.H	C language include file	PROG
	XATOM.H	C language include file	PROG
	XLIB.H	C language include file	PROG
	XM.H	C language include file	PROG
	XMAPPL.UIL	C language include file	PROG
	XMD.H	C language include file	PROG
	XMP.H	C language include file	PROG
	XOS.H	C language include file	PROG
	XPROTO.H	C language include file	PROG

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	XPROTOSTR.H	C language include file	PROG
	XRESOURCE.H	C language include file	PROG
	XTOS.H	C language include file	PROG
	XUTIL.H	C language include file	PROG
SYS$LIBRARY:	CDA$ACCESS.EXE	The CDA Toolkit and CDA converter Toolkit run-time-library shareable image	ALL
	CDA$CDA_.ADA	CDA Ada binding	PROG
	CDA$DEF.*[1]	CDA language bindings	PROG
	CDA$DTIF_TO_DDIF.EXE	CDA DTIF to DDIF converter image	ALL
	CDA$MSG.*[1]	CDA message symbols	PROG
	CDA$PTP.H	CDA C langugage include file	PROG
	CDA$TYP.H	CDA C langugage include file	PROG
	CDA$WRITE_ANALYSIS.EXE	CDA image	ALL
	DDIF$DDIF_.ADA	DDIF Ada binding	PROG
	DDIF$DEF.*[1]	DDIF language bindings	PROG
	DDIF$READ_TEXT.EXE	Text front end shareable image	ALL

[1]Indicates that BASIC, BLISS, FORTRAN, C, Macro, Pascal, and PL/I languages are supported.

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DDIF$VIEWSHR.EXE	DDIF viewer shareable image	ALL
	DDIF$WRITE_PS.EXE	Text image	ALL
	DDIF$WRITE_TEXT.EXE	Text back end shareable image	ALL
	DECW$AILSHR.EXE	Shareable image	ALL
	DECW$CALENDAR_PROLOG.PS	PostScript initialization file	ALL
	DECW$CURSOR.H	Cursor include file	PROG
	DECW$D2DXLIBSHR.EXE	CDA image	ALL
	DECW$DRIVER.MLB	Driver macro library	WS
	DECW$DWT_.ADA	XUI Toolkit Ada binding	PROG
	DECW$DWTDEF.*[1]	XUI Toolkit Widget include file	PROG
	DECW$DWTDEF.UIL	XUI Toolkit UIL definitions	PROG
	DECW$DWTENTRY.*[1]	XUI Toolkit Widget include files	PROG
	DECW$DWTLIBSHR.EXE	XUI Toolkit thin-layer shareable image	ALL
	DECW$DWTMSG.*[1]	XUI Toolkit include files	PROG
	DECW$DWTSHR.EXE	XUI Toolkit shareable image	ALL
	DECW$DWTSTRUCT.*[1]	XUI Toolkit Widget include files	PROG

[1]Indicates that BASIC, BLISS, FORTRAN, C, Macro, Pascal, and PL/I languages are supported.

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$DWTWIDGETDEF.*[1]	XUI Toolkit Widget include files	PROG
	DECW$DWTWIDGETSTRUCT.*[1]	XUI Toolkit Widget include files	PROG
	DECW$DXMLIBSHR.EXE	Digital Extended Motif Toolkit thin-layer shareable image	ALL
	DECW$FONTCOMPILER.CLD	Font compile command language definition file	WS
	DECW$LOGINOUT.EXE	DECwindows extension to VMS LOGINOUT image	ALL
	DECW$MAILSHR.EXE	DECwindows Mail shareable image	ALL
	DECW$MOTIF.FOR	MOTIF toolkit include file	PROG
	DECW$MOTIF.PAS	MOTIF toolkit include file	PROG
	DECW$MOTIF_.ADA	MOTIF toolkit include file	PROG
	DECW$PRINTWGTSHR.EXE	Print widget shareable image	ALL
	DECW$SERVER_DDX_GA.EXE	Server shareable image for color device support	WS
	DECW$SERVER_DDX_GB.EXE	Server shareable image for VS35xx device support	WS

[1]Indicates that BASIC, BLISS, FORTRAN, C, Macro, Pascal, and PL/I languages are supported.

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$SERVER_DDX_GC.EXE	Server shareable image for monochrome frame buffer device support	WS
	DECW$SERVER_DDX_GE.EXE	Server shareable image for SPX device support	WS
	DECW$SERVER_DDX_GF.EXE	Server shareable image for LCG device support	WS
	DECW$SERVER_DIX.EXE	Server shareable image for device independent support	WS
	DECW$SVEXT_ADOBE_DPS_EXTENSION.EXE	Display PostScript server extension shareable image file	WS
	DECW$SVEXT_D2DX_EXTENSIONS.EXE	D2DX server extension shareable image file	WS
	DECW$SVEXT_DEC_XTRAP.EXE	Xtrap server extension shareable image file	WS
	DECW$SVEXT_MULTI_BUFFERING.EXE	Multi-buffering server extension shareable image file	WS
	DECW$SVEXT_X3D_PEX.EXE	PEX server extension shareable image file	WS

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$SVEXT_X3D_PEX_GB.EXE	PEX server extension on VS35xx shareable image file	WS
	DECW$SVEXT_X3D_PEX_GB_UCODE.EXE	Microcode image file for PEX server extension on VS35xx	WS
	DECW$SVEXT_X3D_PEX_GE.EXE	PEX server extension on SPX shareable image file	WS
	DECW$SVEXT_XIE.EXE	X imaging server extension shareable image file	WS
	DECW$TERMINALSHR.EXE	DECterm terminal emulator shareable image	ALL
	DECW$TRANSPORT_COMMON.EXE	Transport common routines shareable image	ALL
	DECW$TRANSPORT_DECNET.EXE	DECnet transport interface shareable image	ALL
	DECW$TRANSPORT_LOCAL.EXE	Local (shared memory) transport interface image	ALL
	DECW$TRANSPORT_TCPIP.EXE	TCP/IP (UCX) transport interface image	ALL
	DECW$UIL.ENV	LSE template for UIL compilier	PROG

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$UILCOMPILER.CLD	UIL compiler command language definition file	PROG
	DECW$WML_TOKENS.DAT	Widget meta-language tokens data	PROG
	DECW$XKEYSYMDB.DAT	Key symbols data	WS
	DECW$XLIBDEF.*[1]	Xlib language bindings	PROG
	DECW$XLIBMSG.*[1]	Xlib message symbols	PROG
	DECW$XLIBSHR.EXE	Xlib shareable image	ALL
	DECW$XMLIBSHR.EXE	Motif toolkit thin-layer shareable image	ALL
	DECW$XTSHR.EXE	Xtoolkit (Intrinsics) shareable image	ALL
	DECW$X_.ADA	Xlib Ada bindings	PROG
	DECW$XPORTCOM.*[2]	Transport programmer files	PROG
	DECW$XPORTDEF.*[2]	Transport programmer files	PROG
	DECW$XPORTMAC.R32	Transport programmer file	PROG
	DECW$XPORTMSG.R32	Transport programmer file	PROG

[1]Indicates that BASIC, BLISS, FORTRAN, C, Macro, Pascal, and PL/I languages are supported.

[2]Indicates that only BLISS, Macro, and C languages are supported.

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DGIT$LIBSHR.EXE	Digital extended toolkit shareable image	ALL
	DTIF$DEF.*[1]	DTIF programmer files	PROG
	DTIF$DTIF_.ADA	DTIF Ada language support file	PROG
	DVR$CC_DEF.H	DDIF viewer C language support file	PROG
	DVR$CC_PTP.H	DDIF viewer C language support file	PROG
	DVR$DECW_DEF.H	DDIF viewer C language support file	PROG
	DVR$DECW_PTP.H	DDIF viewer C language support file	PROG
	DVR$MSG.H	DDIF viewer C language support file	PROG
	IMG$SHRLIB.EXE	DECimage Application Services (DAS) library shareable image	ALL
	LWK$DXMSHR.EXE	Linkworks shareable image	ALL
	VUE$MASTERSHR.EXE	Fileview shareable image	ALL

[1]Indicates that BASIC, BLISS, FORTRAN, C, Macro, Pascal, and PL/I languages are supported.

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	XDPS$DPSBINDINGSSHR.EXE	Display PostScript client library VAX binding shareable image	ALL
	XDPS$DPSCLIENTSHR.EXE	Display PostScript client library C binding shareable image	ALL
	XDPS$DPSLIBSHR.EXE	Display PostScript Xlib extension shareable image	ALL
	XDPS$DPSOPS.*[3]	X Display PostScript language support files	PROG
	XDPS$DPSXCLIENT.*[3]	X Display PostScript language support files	PROG
	XDPS$MASTERDPSVM.DAT	X Display PostScript data file used by server	WS
	XDPS$PSOPS.*[3]	X Display PostScript language support files	PROG
	XDPS$XDPS.*[3]	X Display PostScript language support files	PROG
	XDPS$XDPSLIB.*[3]	X Display PostScript language support files	PROG

[3]Indicates that BASIC, BLISS, FORTRAN, C, and Macro languages are supported.

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	XIE$SHRLIB.EXE	X Imaging Extension library shareable image	ALL
	XNL$DEF.*[4]	Extended Native Language support files	PROG
	XNL$MSG.*[4]	Extended Native Language support files	PROG
	XNL$SHR.EXE	Language switching shareable image	ALL
SYS$MANAGER:	AGENPARAMS.EXE	Installation file	ALL
	DECW$CHECK_PARAMS.COM	Check AUTOGEN parameters	ALL
	DECW$DEVICE.COM	Device detection and configuration	ALL
	DECW$DEVICE_GE.COM	SPX device configuration	WS
	DECW$DEVICE_GG.COM	SPX device configuration	WS
	DECW$DEVICE_GF.COM	LCG device configuration	WS
	DECW$LOGICALS.COM	Logical name table initialization and start	ALL
	DECW$MWM.COM	Starts the Motif window manager	ALL
	DECW$PRIVATE_APPS_SETUP.TEMPLATE	Applications customization template	ALL
	DECW$PRIVATE_SERVER_SETUP.TEMPLATE	Server customization template	WS

[4]Indicates that Ada, BASIC, BLISS, FORTRAN, C, Macro, Pascal, and PL/I languages are supported.

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$RGB.COM	Definitions of DECwindows color names	WS
	DECW$STARTAPPS.COM	Applications and user environment startup	ALL
	DECW$STARTI18N.COM	DECwindows layered product support file	WS
	DECW$STARTLIBS.COM	Programming environment startup	ALL
	DECW$STARTSERVER.COM	Server initialization and startup	WS
	DECW$STARTSM.COM	Starts the session manager	ALL
	DECW$STARTUP.COM	Starts the DECwindows environment	ALL
	DECW$SYLOGIN.TEMPLATE	System login file template	ALL
	DECW$VMSPARAMS.COM	Installation file	ALL
SYS$MESSAGE:	CDA$ACCESSMSG.EXE	CDA message image	ALL
	DDIF$VIEWMSG.EXE	Viewer message file	ALL
	DECW$DWTERRDB.DAT	XUI and Motif Toolkit message data file	ALL
	DECW$DWTMSG.EXE	XUI and Motif Toolkit message image file	ALL

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$TERMINALMSG.EXE	DECterm terminal emulator message file	ALL
	DECW$TRANSPORTMSG.EXE	Transport message image	ALL
	DECW$XLIBERRDB.DAT	Xlib message data file	ALL
	DECW$XLIBMSG.EXE	Xlib message image file	ALL
SYS$SYSTEM:	CDA$CONVERT.EXE	DDIF converter image	ALL
	DDIF$VIEW.EXE	DDIF viewer image	ALL
	DECW$BOOKREADER.EXE	Bookreader image	ALL
	DECW$CALC.EXE	Calculator image	ALL
	DECW$CALENDAR.EXE	Calendar image	ALL
	DECW$CARDFILER.EXE	Cardfiler image	ALL
	DECW$CBI.EXE	Computer based instruction image	ALL
	DECW$CLOCK.EXE	Clock image	ALL
	DECW$ENDSESSION.EXE	Session manager image	ALL
	DECW$FONTCOMPILER.EXE	Font compiler image	WS
	DECW$LWK_MANAGER.EXE	LinkWorks manager image	ALL
	DECW$LWK_SETUP.EXE	LinkWorks setup image	ALL
	DECW$MAIL.EXE	DECwindows Mail image	ALL
	DECW$MESSAGEPANEL.EXE	Message panel image	ALL

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$MKFONTDIR.EXE	Make font directory image	WS
	DECW$MWM.EXE	Motif Window Manager image	ALL
	DECW$NOTEPAD.EXE	Notepad image	ALL
	DECW$PAINT.EXE	Paint image	ALL
	DECW$PAUSESESSION.EXE	Pause session image	ALL
	DECW$PRINTSCREEN.EXE	Print Screen image	ALL
	DECW$PUZZLE.EXE	Puzzle image	ALL
	DECW$SERVER_MAIN.EXE	Server device independent support image	WS
	DECW$SESSION.EXE	Session manager image	ALL
	DECW$SETSHODIS.EXE	SET/SHOW DISPLAY command image	ALL
	DECW$STARTLOGIN.EXE	Image to start the DECwindows Start Login box	ALL
	DECW$TERMINAL.EXE	DECterm terminal emulator controller image	ALL
	DECW$TERMINAL_CREATE.EXE	DECterm terminal emulator creation image	ALL
	DECW$UILCOMPILER.EXE	UIL compiler image	PROG
	DECW$UILMOTIF.EXE	Motif UIL compiler image file	PROG
	DECW$WAITFORSM.EXE	Session manager support image	ALL

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$WINMGR.EXE	XUI window manager image	ALL
	DECW$WML.EXE	Widget meta-language image	PROG
	DECW$WSCUST.EXE	Session manager customization image	ALL
	DECW$WSINIT.EXE	Session manager initialization image	ALL
	VUE$MASTER.EXE	FileView image	ALL
	XDPS$PSWRAP.EXE	PSWrap utility image	PROG
SYS$LOADABLE_IMAGES:	GAADRIVER.EXE	VAXstation II /GPX device driver	WS
	GABDRIVER.EXE	VAXstation 2000 /GPX device driver	WS
	GBBDRIVER.EXE	VS35xx device driver	WS
	GCADRIVER.EXE	VAXstation II monochrome frame buffer device driver	WS
	GCBDRIVER.EXE	VAXstation 2000 monochrome frame buffer device driver	WS
	GEBDRIVER.EXE	SPX device driver	WS
	GFBDRIVER.EXE	LCG device driver	WS
	IKDRIVER.EXE	Keyboard decoder driver	WS
	IMDRIVER.EXE	Mouse decoder driver	WS

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	INDRIVER.EXE	Common input function driver	WS
	WSDRIVER.EXE	SET/SHOW DISPLAY driver	ALL
DECW$BOOK:	BOOKREADER.DECW$BOOK	Online user's guide for the Bookreader	ALL
	LIBRARY.DECW$BOOKSHELF	Bookreader bookshelf	ALL
DECW$KEYMAP:	*.DECW$KEYMAP	DECwindows Keymap files (see Table 3–1)	WS
SYS$HELP:	DDIF$VIEW.HLB	View help file	ALL
	DECW$BOOKREADER.HLB	Bookreader help file	ALL
	DECW$CALC.HLB	Calculator help file	ALL
	DECW$CALENDAR.HLB	Calendar help file	ALL
	DECW$CARDFILER.HLB	Cardfiler help file	ALL
	DECW$CLOCK.HLB	Clock help file	ALL
	DECW$DXMCOLOR_HELP.HLB	Color mixer help file	ALL
	DECW$DXMHELP_HELP.HLB	HELP help file	ALL
	DECW$DXMPRINTWGT_HELP.HLB	PRINT help file	ALL
	DECW$HELPHELP.HLB	HELP help file	ALL
	DECW$LWK_MANAGER.HLB	LinkWorks help file	ALL
	DECW$MAIL.HLB	Mail help file	ALL
	DECW$MESSAGEPANEL.HLB	Message panel help file	ALL

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$MOTIF010.RELEASE_NOTES	Release Notes	ALL
	DECW$MWM.HLB	Window Manager help file	ALL
	DECW$NOTEPAD.HLB	Notepad help file	ALL
	DECW$PAINT.HLB	Paint help file	ALL
	DECW$PRINTSCREEN.HLB	Print Screen help file	ALL
	DECW$PRINTWGT.HLB	Print help file	ALL
	DECW$PUZZLE.HLB	Puzzle help file	ALL
	DECW$SESSIONMANAGER.HLB	Session Manager help file	ALL
	DECW$TERMINAL.HLB	DECterm terminal emulator help file	ALL
	DECW$VUE.HLB	FileView help file	ALL
	DECW$WSCUST.HLB	Workstation customization help file	ALL
	EXAMPLES.DIR	Examples directory	ALL
	LWK$DXMHELP.HLB	Help file	ALL
SYS$UPDATE:	DECW$COMPARE_VERSIONS.COM	DECwindows layered product support file	ALL
	DECW$COMPILE_ADA_UNITS.COM	Ada build file	PROG
	DECW$GET_IMAGE_VERSION.COM	DECwindows layered product support file	ALL
	DECW$MKFONTDIR.COM	DECwindows layered product support file	ALL
	DECW$MOTIF_TAILOR.EXE	Tailor utility image	ALL

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$VERSIONS.COM	DECwindows layered product support file	ALL
VUE$LIBRARY:	VUE$*.COM	FileView verb command files	ALL
DECW$SYSTEM_DEFAULTS:	DDIF$CSW.UID	DDIF user interface data file	ALL
	DDIF$VIEW.UID	CDA viewer user interface data file	ALL
	DDIF$VIEWWGT.UID	CDA viewer user interface data file	ALL
	DECW$BOOKREADER.DAT	Bookreader resource file	ALL
	DECW$BOOKREADER.UID	Bookreader user interface data file	ALL
	DECW$CALC.DAT	Calculator resource file	ALL
	DECW$CALC.UID	Calculator user interface data file	ALL
	DECW$CALENDAR.DAT	Calendar resource file	ALL
	DECW$CALENDAR.UID	Calendar user interface data file	ALL
	DECW$CARDFILER.DAT	Cardfiler resource file	ALL
	DECW$CARDFILER.UID	Cardfiler user interface data file	ALL
	DECW$CBI.UID	Computer based instruction user interface data file	ALL
	DECW$CLOCK.DAT	Clock resource file	ALL

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$CLOCK.UID	Clock user interface data file	ALL
	DECW$DXMPRINTWGT_UI.UID	Print widget user interface data file	ALL
	DECW$ENDSESSION.DAT	Session manager resource file	ALL
	DECW$ENDSESSION.UID	Session manager user interface data file	ALL
	DECW$LOGIN.DAT	Login resource file	ALL
	DECW$LOGIN.UID	Login user interface data file	ALL
	DECW$LWK_MGR_ENV.UID	LinkWorks manager interface data file	ALL
	DECW$LWK_MGR_LB.UID	LinkWorks manager interface data file	ALL
	DECW$LWK_MGR_MISC.UID	LinkWorks manager interface data file	ALL
	DECW$MAIL.DAT	DECwindows Mail resource file	ALL
	DECW$MAIL_MAIN.UID	DECwindows Mail user interface data file	ALL
	DECW$MAIL_MISC.UID	DECwindows Mail user interface data file	ALL

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$MAIL_READ.UID	DECwindows Mail user interface data file	ALL
	DECW$MAIL_SEND.UID	DECwindows Mail user interface data file	ALL
	DECW$MESSAGEPANEL.DAT	Message panel user interface resource file	ALL
	DECW$MESSAGEPANEL.UID	Message panel user interface data file	ALL
	DECW$MWM.DAT	Motif window manager resource file	ALL
	DECW$MWM.UID	Motif window manager user interface data file	ALL
	DECW$MWM_BW.DAT	Motif window manager resource file	ALL
	DECW$MWM_COLOR.DAT	Motif window manager resource file	ALL
	DECW$MWM_GRAY.DAT	Motif window manager resource file	ALL
	DECW$MWM_RC.DAT	Motif window manager configuration file	ALL
	DECW$NOTEPAD.DAT	Notepad resource file	ALL
	DECW$NOTEPAD.UID	Notepad user interface data file	ALL

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$PAINT.DAT	DECwindows Paint resource file	ALL
	DECW$PAINT.UID	DECwindows Paint user interface data file	ALL
	DECW$PAUSESESSION.DAT	Session Manager resource file	ALL
	DECW$PAUSESESSION.UID	Session Manager user interface data file	ALL
	DECW$PRINTSCREEN.UID	Print Screen user interface data file	ALL
	DECW$PRINTWGT_UI.UID	Print user interface data file	ALL
	DECW$PUZZLE.DAT	Puzzle resource file	ALL
	DECW$PUZZLE.UID	Puzzle user interface data file	ALL
	DECW$SMB_BACKGROUND.DAT	Session Manager resource file	ALL
	DECW$SMB_BACKGROUND_BW.DAT	Session Manager resource file	ALL
	DECW$SMB_BACKGROUND_COLOR.DAT	Session Manager resource file	ALL
	DECW$SMB_BACKGROUND_GRAY.DAT	Session Manager resource file	ALL
	DECW$SMB_KEYBOARD.DAT	Session Manager resource file	ALL
	DECW$SMB_LANGUAGE.DAT	Session Manager resource file	ALL
	DECW$SMB_POINTER.DAT	Session Manager resource file	ALL

(continued on next page)

Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$SMB_POINTER_BW.DAT	Session Manager resource file	ALL
	DECW$SMB_POINTER_COLOR.DAT	Session Manager resource file	ALL
	DECW$SMB_POINTER_GRAY.DAT	Session Manager resource file	ALL
	DECW$SMB_SECURITY.DAT	Session Manager resource file	ALL
	DECW$SMB_WINDOW.DAT	Session Manager resource file	ALL
	DECW$SMB_WINDOW_BW.DAT	Session Manager resource file	ALL
	DECW$SMB_WINDOW_COLOR.DAT	Session Manager resource file	ALL
	DECW$SMB_WINDOW_GRAY.DAT	Session Manager resource file	ALL
	DECW$TERMINAL.DAT	DECterm terminal emulator file	ALL
	DECW$TERMINAL.UID	DECterm terminal emulator file	ALL
	DECW$UIL_DXM_MOTIF.WMD	UIL support file	PROG
	DECW$UIL_DXM_MOTIF.WML	UIL support file	PROG
	DECW$UIL_OSF_MOTIF_1_1.WMD	UIL support file	PROG
	DECW$UIL_OSF_MOTIF_1_1.WML	UIL support file	PROG
	DECW$WINMGR.DAT	XUI window manager resource file	ALL
	DECW$WINMGR.UID	Window manager user interface data file	ALL

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECW$WSCUST.UID	Workstation customization user interface data file	ALL
	DECW$WSINIT.UID	Workstation initialization user interface data file	ALL
	LWK$DXM.UID	Linkworks user interface data file	ALL
	LWK_REG_BOOKREADER.UID	Linkworks user interface data file	ALL
	LWK_REG_DWCALENDAR.UID	Linkworks user interface data file	ALL
	LWK_REG_DWCF.UID	Linkworks user interface data file	ALL
	LWK_REG_DWMDRAWER.UID	Linkworks user interface data file	ALL
	LWK_REG_DWMFOLDER.UID	Linkworks user interface data file	ALL
	LWK_REG_DWMMESSAGE.UID	Linkworks user interface data file	ALL
	VUE$MASTER.UID	FileView user interface data file	ALL
	VUE$SYSTEM_PROFILE.VUE$DAT	FileView profile file	ALL
	XNL*.UID	Language switching user interface data file	ALL
DECW$CBI_ SUPPORT:	DECW*.CBI	Computer based instruction support files	ALL
	DECW*.DAT	Computer based instruction support file	ALL

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DECWCBI.DATA	Computer based instruction support file	ALL
XDPS$EXAMPLES:	ACTIONPRCS.H	DPS demo support file	PROG
	ACTIONS.C	DPS demo source file	PROG
	ACTIONS.H	DPS demo support file	PROG
	BIGICON.BIT	DPS demo support file	PROG
	BUILD_PSDRAW.COM	DPS demo build file	PROG
	BUTTON.C	DPS demo source file	PROG
	BUTTON.H	DPS demo support file	PROG
	BUTTONP.H	DPS demo support file	PROG
	COLOR.C	DPS demo source file	PROG
	COLOR.H	DPS demo support file	PROG
	COORDS.C	DPS demo source file	PROG
	COORDS.H	DPS demo support file	PROG
	COORDSP.H	DPS demo support file	PROG
	DRAWING.C	DPS demo source file	PROG
	DRAWING.H	DPS demo support file	PROG

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DRAWINGP.H	DPS demo support file	PROG
	KNOBS.C	DPS demo source file	PROG
	KNOBS.H	DPS demo support file	PROG
	KNOBSP.H	DPS demo support file	PROG
	MENUS.C	DPS demo source file	PROG
	MENUS.H	DPS demo support file	PROG
	MODE.C	DPS demo source file	PROG
	MODE.H	DPS demo support file	PROG
	MODEP.H	DPS demo support file	PROG
	M_PI.H	DPS demo support file	PROG
	OPS.C	DPS demo source file	PROG
	PANE.C	DPS demo source file	PROG
	PANE.H	DPS demo support file	PROG
	PANEP.H	DPS demo support file	PROG
	PIXMGR.C	DPS demo source file	PROG
	PIXMGR.H	DPS demo support file	PROG
	POPUP.C	DPS demo source file	PROG

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	POPUP.H	DPS demo support file	PROG
	PROP.C	DPS demo source file	PROG
	PROP.H	DPS demo support file	PROG
	PROPP.H	DPS demo support file	PROG
	PSDRAW.C	DPS demo source file	PROG
	PSDRAW.COM	DPS demo build command file	PROG
	PSDRAW.DAT	DPS demo support file	PROG
	PSDRAW.EXE	DPS demo program image	PROG
	PSDRAW.H	DPS demo support file	PROG
	PSDRAW_README.PS	DPS demo documentation file	PROG
	PSDRAWCOMPLIB.DAT	DPS demo support file	PROG
	PSDRAWKINDS.DAT	DPS demo support file	PROG
	PSWINDOW.C	DPS demo source file	PROG
	PSWINDOW.H	DPS demo support file	PROG
	PSWINDOWP.H	DPS demo support file	PROG
	PSWINDW.C	DPS demo source file	PROG

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	PSWINDW.H	DPS demo support file	PROG
	PSWINDW.PSW	DPS demo support file	PROG
	RECT.C	DPS demo source file	PROG
	RECT.H	DPS demo support file	PROG
	RECTP.H	DPS demo support file	PROG
	ROUND.C	DPS demo source file	PROG
	SCRN.C	DPS demo source file	PROG
	SCRN.H	DPS demo support file	PROG
	SCRNP.H	DPS demo support file	PROG
	SCROLLW.C	DPS demo source file	PROG
	SCROLLW.H	DPS demo support file	PROG
	SCROLLWP.H	DPS demo support file	PROG
	SMALLICON.BIT	DPS demo support file	PROG
	STRING.H	DPS demo support file	PROG
	UTIL.C	DPS demo source file	PROG
	UTIL.H	DPS demo support file	PROG
	VALUE.C	DPS demo source file	PROG

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	VALUE.H	DPS demo support file	PROG
	VALUEP.H	DPS demo support file	PROG
	WIDGET.C	DPS demo source file	PROG
	WIDGET.H	DPS demo support file	PROG
	WIDGETINFO.C	DPS demo source file	PROG
	WIDGETINFO.H	DPS demo support file	PROG
	WRAPS.C	DPS demo source file	PROG
	WRAPS.PSW	DPS demo support file	PROG
	XMAPRGBTOPIXEL.C	DPS demo source file	PROG
	WRAPS.H	DPS demo support file	PROG
XDPS$INCLUDE:	DPSCLIENT.H	Display Postscript C language include file	PROG
	DPSCUSTOMOPS.H	Display Postscript C language include file	PROG
	DPSEXCEPT.H	Display Postscript C language include file	PROG
	DPSFRIENDS.H	Display Postscript C language include file	PROG
	DPSOPS.H	Display Postscript C language include file	PROG

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Table C–1 (Cont.) VMS DECwindows Motif Software Components

Directory	File	Purpose	Component Class
	DPSXCLIENT.H	Display Postscript C language include file	PROG
	PSCUSTOMOPS.H	Display Postscript C language include file	PROG
	PSOPS.H	Display Postscript C language include file	PROG
	XDPLIB.H	Display Postscript C language include file	PROG
	XDPS.H	Display Postscript C language include file	PROG

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