

Software Product Description

PRODUCT NAME: HP DECwindows Motif for OpenVMS V1.6

SPD 81.70.05

This Software Product Description describes the following two products:

- HP DECwindows Motif for OpenVMS Alpha, Version
 1.6
- HP DECwindows Motif for OpenVMS Integrity Servers (I64) Version 1.6

The Description section describes features common to both products. Any differences in product features are explicitly indicated.

DESCRIPTION

The HP DECwindows Motif for OpenVMS (DECwindows Motif) desktop environment provides a Motifbased graphical user interface to the OpenVMS operating system. The Motif graphical user interface is widely acknowledged as an industry standard. This interface allows users to interact with OpenVMS using a point-and-click technique. DECwindows Motif includes a set of integrated desktop applications that demonstrate the ease of use of this user interface and provides OpenVMS users with a base set of desktop tools.

DECwindows Motif supports the client/server distribution inherent in the X Window System. This client/server model allows X Window System clients to run on one node and display output to another node, using a transport to communicate between the nodes. The DECwindows X11 display server for OpenVMS Alpha and I64 is a direct port of the X Window System Version 11, Release 6.6 (X11R6) display server, plus some optional extensions. The X11 display server is provided as part of the OpenVMS installation procedure. There are two graphical user interfaces, also referred to as desktops, from which DECwindows applications can be executed. The graphical user interface that was provided in previous versions of DECwindows Motif is still available and is referred to as the traditional DECwindows desktop. The other user interface, known as the New Desktop environment, is derived from CDE (Common Desktop Environment). CDE is based on Motif and X11, and is recognized as the next-generation desktop. A major subset of CDE has been provided for OpenVMS Alpha and I64 in the form of the New Desktop.

New Features

HP DECwindows Motif for OpenVMS Version 1.6 contains the following key features:

- Support for ACME subsystem on both OpenVMS Alpha and OpenVMS I64
- Support for choosing the location of dialogs in a Xinerama configuration
- Workspace Customization
- The I18N library now supports GB18030
- Timer based custom greeting message
- Bug fixes

DECwindows Desktop Environments

The two available desktop environments provide similar functionality but have a different look and feel. The installation procedure gives users the choice of installing one or both desktops and asks which desktop should be started by default. If both desktops are installed, a privileged user can switch desktops by editing a system setup file and restarting DECwindows.

HP DECwindows Motif for OpenVMS V1.6

Choosing the New Desktop does not prevent you from running DECwindows Motif applications. You can run any DECwindows application from the New Desktop using a DECterm window. Furthermore, all DECwindows applications can be configured to run within the New Desktop environment.

Online help is available for both the old and new desk-tops.

Both desktops share the following four components. Although they may be referred to differently on the individual desktop, they perform the same functions.

Basic Components

Session Manager/Style Manager

The Session Manager on the traditional desktop provides the top-level user interface to a DECwindows workstation. From this component, users can start applications and perform security management. On the New Desktop, however, the Style Manager is used to customize each session. Operations affecting the screen color, keyboard options, menus, and other options are all initiated from the Style Manager.

Window Manager

The Window Manager lets users control the size and placement of windows. Although the Motif Window Manager is provided as the default window manager, users can choose instead to work with the DECwindows XUI Window Manager. The window manager can be chosen by an individual user or by a system manager for an entire system.

FileView/File Manager

FileView (traditional desktop) and File Manager (New Desktop) are both graphical interfaces to the OpenVMS file system. Both interfaces allow users to navigate the file system and to perform operations on files.

The icon-based File Manager, combined with the dragand-drop feature, enables you to manage files quickly and conveniently. Either component allows you to filter files by options such as file types, size or date.

DECterm

DECterm is a VT320 terminal emulator that provides workstation users with a traditional character-cell interface for existing OpenVMS features and applications. It supports ReGIS and sixel but is not fully VT340 compatible. Programs written for VT52-, VT100-, VT220-, or VT320-class terminals and using OpenVMS terminal driver features operate without modification in this workstation window. DECterm also provides workstationoriented features, such as mouse-based cursor positioning, variable screen sizes, and cutting and pasting

of text between DECterm and other DECwindows Motif applications. **Desktop Productivity Applications**

HP DECwindows Motif for OpenVMS Alpha and I64 provides a set of integrated desktop applications that employ a common look and feel to help users easily master their computing environment.

The following desktop applications are available with HP DECwindows Motif for OpenVMS Version 1.6:

- Bookreader A tool for viewing the contents of books that are distributed and stored on line.
- Calculator A basic scientific calculator.
- Calendar A personal time management system.
- Cardfiler A desktop card index or flip file, similar to an online address or phone book.
- Clock An analog and/or digital clock with an alarm.
- CDA Viewer A tool for reading documents containing text, graphics, and image data on DECwindows workstations.
- Computer-based instruction An online tutorial for novice Motif users; users can learn how to use the mouse and perform other simple operations with Motif.
- Mail A DECwindows user interface to the OpenVMS Mail facility.
- Message window A window that displays system messages, such as new mail notification or system manager messages.
- Notepad A simple text editor.
- Paint A simple bitmap graphics editor.
- Print Screen A tool for capturing images on the screen. Images can be printed directly or saved to a file.
- Puzzle A game of numbered puzzle tiles.
- DECsound An easy-to-use application that lets you play recorded messages, record audio messages, mail recorded messages, and include recorded audio messages in documents. DECsound is available for use on TURBOchannel systems only.

The New Desktop

The New Desktop provides several features not available on the traditional desktop that enable users to be more productive in this environment.

- Front Panel The Front Panel provides fast access to applications. A user can select a customized workspace or launch any application that is represented by an icon with a single click.
- Workspaces A workspace is a virtual screen. Workspaces allow a user to organize their work and applications needed to perform that work together. When a workspace is selected, only those applications started within that workspace are displayed.
- Save and restore sessions Automatic save and restore of open applications. When you log out of the New Desktop, the state of your session is saved. The next time you log in, every application that supports automatic save and restore that was open when you logged out will be open again.

Although the New Desktop is based on CDE, it is not a complete implementation of that interface. The following CDE components are included in the New Desktop:

- Applications
 - dtlogin: Login Manager
 - dthello: Screen between Login Manager and Window Manager
 - dtscreen: Screen saver displays
 - dtpad: Editor
 - dtclock: Clock
 - dtsession: Session Manager
 - dtstyle: Style Manager
 - dtwm: Window Manager, Control Panel
 - dtfile: File Manager, Application Manager
 - dtcalc: Calculator
 - dticon: Icon Editor
 - dtcreate: Action database entry creation tool
 - dthelpview: Help Viewer
 - dtgreet: Login Greeting
 - Keyboard Selection dialog box
 - Input Methods Selection dialog box
 - Save/restore support for DECwindows applications
 - dthelpgen: utility for creating a help volume for display from the Front Panel Help Viewer
 - dthelptag: compiles HelpTag source files into a run-time help file

- dximageview
- Libraries
 - dthelp: Help utility functions
 - dtsvc: Assorted utility routines
 - dtwidget: CDE custom widgets

The following CDE components are replaced by existing DECwindows Motif applications:

- dtmail Replaced by DECwindows Mail
- · dtcm Replaced by DECwindows Calendar
- dtterm Replaced by DECwindows DECterm
- Print Manager Replaced by DECwindows Print widget

The following CDE components are not included in the New Desktop:

- Application Builder
- ToolTalk Inter-Client Communications Manual (ICCM) transfer mechanisms are implemented to emulate certain ToolTalk functions internally, but ToolTalk messaging services APIs are not available to develop against.
- Windowing Korn shell
- Multipurpose Internet Mail Extensions (MIME) support

Security and Authorization

In addition to user-based security, DECwindows Motif supports both MIT-MAGIC-COOKIE-1 (Magic Cookie) and MIT-KERBEROS-5 (Kerberos) token-based authentication. Security options can be set or changed from either the Style Manager (New Desktop) or Session Manager application.

Inter-Client Exchange (ICE) and Session Management Protocols

The ICE protocol enables direct client-to-client communication without using the X server.

The X Session Management Protocol (XSMP) provides a standard way for users to save client sessions. Each session is controlled by a network service known as the session manager. The session manager issues commands that direct client applications to save their state information for use during subsequent sessions. This protocol is built on top of ICE, which manages the client connections to the session manager server.

Proxy Manager Services

Proxy Managers allow for the management of proxy servers on behalf of clients.

Low-Bandwidth X Proxy Services

DECwindows Motif supports the use of the Low-Bandwidth X (LBX) extension and related proxy services. LBX was developed for those configurations where the display server is separated from the client by a slow speed line, such as a 56K dial-in modem or a wide-area network (WAN). When the X protocol was developed, the primary use of the protocol was over local area networks (LANs). Therefore, the X protocol was not optimized for low-speed connections. LBX addresses this shortcoming of the X protocol by using a compression and caching scheme designed to minimize the amount of data flow between the client and server. Proxy Managers allow for the management of proxy servers on behalf of clients.

The components of an LBX implementation for DECwindows Motif are:

- LBX-Enabled X Server
- Proxy Server The proxy server accepts a connection request from a client program and acts as an intermediary between the client and the X server. Communication between the proxy server and the client uses the standard X protocol. Communication between the proxy server and the X server uses an LBX-enhanced X protocol.
- Proxy Manager The proxy manager relieves clients from managing proxy servers. Instead of sending a request directly to a proxy server, the client sends a request to the proxy manager indicating the requested X server. The proxy manager is responsible for either using an existing proxy server or starting a new proxy server. Once the manager finds a proxy server, it returns the proxy server's address to the client. The proxy manager is optional.

Support for X Window Utility Programs

Several utility programs, bitmaps, and the Miscellaneous Utilities Library from the X11 Release 4 thru 6 distribution are included in this release of the DECwindows Motif layered product. The sources and images for a subset of these utilities are also included.

Local Language Support

DECwindows Motif is available in several local languages. Please contact your local HP office for the latest information about availability of options and supported multilingual configurations. For more details on the language variants, refer to the specific languagevariant SPDs. Refer also to the Ordering Information and Software Licensing sections of this SPD.

Additional Fonts

New fonts available with X11R6.6 have been added, including Bitstream Charter, Adobe Utopia, and two Speedo fonts that include the Euro currency symbol. In addition, the following AgfaMonotype TrueType fonts have been added: Albany, Cumberland, Thorndale, Screen Sans and Screen Serif. Also included is licensed support for the iType font rasterizer from Agfa Monotype Corporation. Support for the Euro character is available in DECwindows and is provided as part of the OpenVMS installation procedure.

Programming Support

The DECwindows Motif environment includes an extensive set of programming libraries and tools for use by application developers. The libraries are provided in the form of shareable images. While Motif Release 1.2.5 (CDE Motif 1.0) programming support is provided, Motif Release 1.1.3, Release 1.2.2, Release 1.2.3, and XUI programming support is not.

Three categories of libraries are provided:

- Standard X Window System libraries, such as Xlib and the Intrinsics (X Toolkit)
- Motif 1.2.5 Toolkit support for developing applications using the Motif user interface style
- HP value-added libraries that give users additional capabilities:
 - DECwindows Extensions to Motif (DXm)
 - CDA support
 - Porting tools for changing applications from the XUI interface to the Motif user interface

Components from each of these areas can be used in any combination to address the needs of applications. These components can also use the tools from a variety of programming languages.

Multithreading Support

The X Window library (Xlib), X Toolkit Intrinsics (Xt), and X Window extension libraries are thread safe.

Motif language bindings are provided for the following programming languages:

- HP Fortran for OpenVMS Alpha and I64
- HP Pascal for OpenVMS Alpha and I64

• HP C for OpenVMS Alpha and I64

In addition, C header files supplied by The Open Group have been modified to work with HP C++. Pascal and Fortran bindings are included in the DECwindows Motif kit; Motif "strongly typed" language bindings for Ada are available in the HP Ada for OpenVMS Alpha layered product. (Ada language bindings were not updated for HP DECwindows Motif Version 1.3-1, V1.5 or V1.6)

For additional programming support, the

DECW\$EXAMPLES directory includes the following programming examples:

- Motif widget set examples
- X11R4 and X11R5 programming examples (Xlib examples)
- HP supplied examples

The following sections describe the programming support libraries.

Standard X Window System Libraries

The X Window System compatible X programming library (Xlib) provided by DECwindows Motif supplies basic resource management (windows, color maps, input devices) and bitmap graphics services. It defines a mapping of the X network protocol to a procedure library.

The X Window System Intrinsics library support contains the X.Org Release 6 (R6) Intrinsics (X Toolkit). The X Toolkit provides low-level routines that allow the creation of user interface objects called widgets.

Motif User Interface Programming Support

The Motif style concepts are implemented by the Motif Toolkit. DECwindows Motif contains both the Motif and XUI Toolkits. Although programming support is not available for previous releases, application run-time support is provided for Motif Release 1.2.5 (CDE Motif 1.0) and Motif Release 1.2.3, Release 1.2.2, and Release 1.1.3 Toolkits, as well as for the XUI Toolkit.

The Motif toolkit is based on the X Toolkit Intrinsics and contains three components:

- Motif widgets and gadgets for implementing common user interface objects, such as scroll bars, menus, and push buttons
- Utility routines that provide applications with functions for performing common tasks, such as cutting and pasting
- Resource manager routines for loading user interface definition files and creating widgets and gadgets based on the contents of the definition files

Existing Motif Release 1.2.3 applications on Alpha and I64 do not need to be recompiled or relinked to run in the CDE environment. In addition, it is possible to achieve basic integration of existing applications into CDE without making changes to the application source code.

DECwindows Extensions to Motif

The DECwindows Motif product adds value to the standard Motif Toolkit by including a library that contains a set of HP developed widgets and run-time routines not available from The Open Group. The following widgets provide a common DECwindows interface for some commonly used DECwindows functions:

- A Color Mix widget that enables users to select and mix colors using a variety of color models.
- A Compound String Text widget that provides support for international character sets as well as left-to-right character sets.
- A Help widget that allows applications to display appropriate Help text in a consistent manner. This widget is provided for backward compatibility with DECwindows Motif for OpenVMS Version 1.0 and has been superseded by the DECwindows Motif help system.
- A Print widget that allows applications to print files in a consistent manner.
- A Structured Visual Navigation (SVN) widget used by applications to display hierarchical information.

The run-time routines include three DECwindows Motif help system calls that enable users to display online help files using Bookreader.

CDA Programming Support

The CDA Toolkit provides access routines that applications can use to create, read, and write files containing compound text, graphics, and imaging data. These files provide a vehicle for recording this information on disk, a medium for interchange of this data between applications, and an intermediate form from which highresolution printable graphics data can be generated.

XUI to Motif Porting Tools

HP provides tools to aid programmers in porting applications to Motif. These tools replace occurrences of XUI names in the input source file with the correct Motif names.

DECwindows X11 Display Server for OpenVMS

X Window System standards supported as part of DECwindows Motif include the X11 network protocol, a base set of workstation fonts, the C language binding for the Xlib progammng library, and the C language binding for the X Toolkit libary.

Support of the X11 network protocol in the client library and display server components provides the OpenVMS operating system with the ability to interoperate with other X11-compliant systems in a distributed fashion.

The DECwindows Motif Version 1.6 product provides four transport interfaces: local shared memory, DECnet, and TCP/IP (using the HP TCP/IP Services for Open-VMS product or third-party products such as MultiNet), and Lat Transport. User-written transport subsystems and transport interfaces are not supported.

X Extensions for OpenVMS

The following table lists all the extensions supported on OpenVMS Alpha and I64.

Table 1Supported X Extensions

Title	Abbreviation
Application Group	XC-APPGROUP
Big Requests	BIG-REQUESTS
Colormap Utilization Policy	TOG-CUP
D2DX	D2DX
DEC XTrap	DEC-XTRAP
Extended Visual Information ¹	EVI
Low-Bandwidth X	LBX
MIT Miscellaneous	MIT-SUNDRY-NONSTANDARD
MIT Screen Saver	MIT-SCREEN-SAVER
MIT Shared Memory	MIT-SHM
Multi-Buffering	MBE
Non-Rectangular Window Shape	SHAPE
XC-MISC	XC-MISC
X Double Buffer	DBE
X Image Extension ²	XIE
XINERAMA ¹	XINERAMA
X Keyboard	ХКВ
X Print ³	XPRINT
X Synchronization	SYNC
X Test	XTEST
Security	SECURITY

¹Formerly known as PANORAMIX

²Support for V3.0 only

³Client only

Note that the X Keyboard (XKB) extension replaces the AccessX extension. The XKB extension provides full

AccessX support. The AccessX extension was provided in previous releases of DECwindows Motif.

Translated Image Environment (Alpha Only)

HP DECwindows Motif for OpenVMS Alpha provides an array of services to allow the operation of programs that have undergone binary translation from DECwindows Motif Version 1.1 or XUI VAX images. These programs can perform virtually all user-mode functions on HP DECwindows Motif for OpenVMS Alpha systems. However, HP DECwindows Motif for OpenVMS Alpha shareable images that are used with translated images are different from and incompatible with the shareable images used for native images. Native and translated images that use HP DECwindows Motif for OpenVMS Alpha software cannot be used together in a process.

Without requiring special source code, the Translated Image Environment (TIE) automatically resolves differences between the VAX and Alpha architectures, including floating-point registers, condition codes, exception handling, asynchronous system traps, and so on.

The Translated Image Environment included with HP DECwindows Motif for OpenVMS Alpha is sufficient to run images that have been translated elsewhere.

There is no translated image support on OpenVMS I64.

Documentation for HP DECwindows Motif for Open-VMS

Updated documentation for this release of DECwindows Motif is delivered within the product release notes. The release notes are included with the current manuals on the Online Documentation Library CD-ROM and are also included in the DECwindows Motif directory on the Product Library media. Current printed manuals are unchanged and appropriate for use with this product update.

Layered Products Online Documentation Libraries offer product documentation for display or web download from the following website:

http://www1.aclabs.com/ODLIndex.asp

Release Notes may be displayed or downloaded from the SPL Master Index (follow master index links to the individual product directory):

http://www.hp.com/software/SPL

CDE Documentation

The Common Desktop Environment (CDE) manuals are provided in support of the New Desktop. These manuals are included in the DECwindows Motif CD-ROM kit in an online format and can be read using a browser. They are not part of the DECwindows Motif hardcopy documentation set.

HP DECwindows Motif for OpenVMS V1.6

Please note that not all the information in the CDE documentation and reference pages applies to the New Desktop. For a description of the New Desktop, see the *Getting Started With the New Desktop* manual.

HARDWARE REQUIREMENTS

DECwindows Motif runs on any of the supported processors but requires either a workstation, a Microsoft Windows based PC, a Macintosh, or an X terminal for display. These display devices must be running an X Window System, Version 11, Release 6 (R6) compliant display server.

Supported Processors

DECwindows Motif supports all the processors listed in the *OpenVMS Operating System for* Software Product Description (SPD 82.35.xx).

OpenVMS I64 supports all Integrity Servers.

Disk Space Requirements for OpenVMS Alpha (Block Cluster Size = 1)

Disk space required for 210,000 blocks DECwindows Motif use (permanent)

To support full OpenVMS Alpha and full DECwindows Motif for OpenVMS Alpha, a system disk with at least 550 MB is recommended. However, a subset of the DECwindows Motif environment can be installed. Installation of DECwindows Motif for OpenVMS Alpha, Version 1.6 gives the user the option to install any or all of the following components:

- Run-time support (base kit) 66,000 blocks. This section provides support for running DECwindows Motif for OpenVMS Alpha applications on Alpha compute servers and is a required part of the installation.
- New Desktop 50,000 blocks. This is an optional component that allows use of the New Desktop environment. It includes applications and application programming interfaces (APIs).
- DECwindows desktop 21,000 blocks. The DECwindows desktop is the user interface that was included in previous versions of DECwindows Motif and includes the DECwindows Session Manager, FileView, and the Motif Window Manager.
- Programming support 70,000 blocks. This number includes support for the C, Pascal, and Fortran programming languages and for the New Desktop. If only a subset of languages is installed, the amount of disk space required will be less.

- Programming examples 80,000 blocks. This number includes example audio files, the DECwindows desktop, and the New Desktop. If only a subset of example files is installed, the amount of disk space required will be less.
- Translated Image Environment 40,000 blocks.

Disk Space Requirements For OpenVMS I64 (Block Cluster Size = 1)

Disk space required for	270,000 blocks
DECwindows Motif use	
(permanent)	

To support full OpenVMS I64 and full DECwindows Motif for OpenVMS I64, a system disk with at least 707 MB is recommended. However, a subset of the DECwindows Motif environment can be installed. Installation of DECwindows Motif for OpenVMS I64, Version 1.6 gives the user the option to install any or all of the following components:

- Run-time support (base kit) 120,000 blocks. This section provides support for running DECwindows Motif for OpenVMS I64 applications on I64 compute servers and is a required part of the installation.
- New Desktop 70,000 blocks. This is an optional component that allows use of the New Desktop environment. It includes applications and application programming interfaces (APIs).
- DECwindows desktop 15,000 blocks. The DECwindows desktop is the user interface that was included in previous versions of DECwindows Motif and includes the DECwindows Session Manager, FileView, and the Motif Window Manager.
- Programming support 15,000 blocks. This number includes support for the C, Pascal, and Fortran programming languages and for the New Desktop. If only a subset of languages is installed, the amount of disk space required will be less.
- Programming examples 16,000 blocks. This number includes example audio files, the DECwindows desktop, and the New Desktop. If only a subset of example files is installed, the amount of disk space required will be less.

Memory Requirements

OpenVMS Version 8.2 is supported by the minimal memory requirements of the specific Integrity Server platform.

The performance and memory usage of OpenVMS systems running DECwindows Motif for OpenVMS Alpha and I64 depend on system configuration and window and applications usage.

Support for Multiple-Screen Configuration

A multiple-screen configuration consists of a single workstation that supports multiple graphics options. A graphics option consists of a graphics controller and a monitor. Please note that in a multiple-screen configuration, all the graphics cards must be of the same model. For additional information on workstations that support multiple-screens, please contact your local HP office or refer to the product information available at:

http://www.hp.com

Miscellaneous Supported Peripherals

VSXXX-AB	Tablet (replaces mouse)
VSXXX-JA	Audio headset
VSXXX-AA	Mouse
VSXXX-FA	Mouse

CLUSTER ENVIRONMENT

This product is fully supported when installed on any valid and licensed OpenVMS Alpha V8.3 and OpenVMS 8.3 for I64 system running in a cluster configuration.

Note: VMScluster configurations are fully described in the *OpenVMS Cluster Software* Software Product Description (SPD 29.78.xx) and include CI, Ethernet, and mixed-interconnect configurations.

SOFTWARE REQUIREMENTS

DECwindows Motif for OpenVMS Alpha Version 1.6 requires OpenVMS Alpha Version V8.3 Operating System. DECwindows Version 1.6 for OpenVMS I64 requires OpenVMS I64 Operating System V8.3.

OPTIONAL SOFTWARE

- HP PATHWORKS 32 (SPD 56.33.xx)
- HP TCP/IP Services for OpenVMS (SPD 46.46.xx)
- HP DECnet-Plus for OpenVMS Alpha (SPD 25.03.xx)
- HP DECnet for OpenVMS (Phase IV) (SPD 48.48.xx)
- HP Kerberos Client for OpenVMS Alpha

GROWTH CONSIDERATIONS

The minimum hardware and software requirements for any future version of this product may be different from the requirements for the current version.

DISTRIBUTION MEDIA

The DECwindows Motif Version 1.6 on OpenVMS Alpha software is available through the OpenVMS Software Product Library (Consolidated Software Distribution) on CD-ROM.

DECwindows for OpenVMS I64 is available as part of an Operating Environment (Foundation Operating Environment, Enterprise Operating Environment, Mission Critical Environment).

ORDERING INFORMATION

When purchasing DECwindows Motif both a license and media must be ordered. The license deliverable provides the LMF PAK required to run the DECwindows Motif software. The VMS Operating System or Operating Environment (license and media) is a prerequisite to running DECwindows.

Software Licenses:

DECwindows Motif for OpenVMS Alpha

Personal Use: QL-XA1A*-2B Unlimited Use: QL-MV4A*-AA Binaries and online programmer documentation (CD-ROM): QA-03XAA-H8

DECwindows Motif for OpenVMS I64: Software Media: Foundation Operating Media, BA322AA

An example of a new order for DECwindows Motif on I64:

Binaries: Operating Environment Media - BA322AA

For more information on the Operating Environments, please see the HP Operating Environments for Open-VMS I64 SPD: 82.34.**

DECwindows Motif Language Variants

Software Licenses:

Personal Use: (Alpha) QL-XDD**-2B Unlimited Use: (Alpha): QL-08U**-**

Software Media:

QA-XDD*A-H8 (Consolidated Software Distribution)

* Denotes variant fields. For additional information on available licenses, services, and media, refer to the appropriate price book.

SOFTWARE PRODUCT SERVICES

A variety of service options are available from HP. For more information, contact your local HP account representative or distributor.Information is also available on www.hp.com/hps/software.

SOFTWARE LICENSING

A software license is required in order to use HP DECwindows Motif software. For the Alpha platform, HP DECwindows Motif is offered with Concurrent Use, Personal Use and Traditional 'capacity' licenses. For I64, it is offered under the Operating Environment License. Version update licenses are not available for the I64 platform. Rights to use future revisions of HP DECwindows are available only through a Support Agreement or through a new license purchase. For more information about Open-VMS license terms and policies, contact your local HP sales office, or reference the Software Licensing site at: <http://licensing.hp.com/swl/view.slm?page=index>

Media and online documentation kits are not provided with Factory Installed Software (FIS) systems.

Licensing of Language Variants

The language variants of DECwindows are available as options to the DECwindows Motif Alpha product. Language variants are supported only when the version number of the language variant matches the version number of DECwindows Motif for OpenVMS.

Some restrictions apply on language combinations. Refer to the relevant language variant SPD for details on supported language combinations in each country.

DECwindows Motif for OpenVMS language variants are generally supported only in countries where the language is an official language. However, for some countries this may vary. Consult the relevant language variant SPD or your local sales office to check for the availability of additional language support in your country or location.

License Management Facility Support

DECwindows Motif for OpenVMS uses the Open-VMS License Management Facility. License units for DECwindows Motif for OpenVMS Alpha are allocated on an Unlimited System Use and Personal Use basis. Each Personal Use license allows one identified individual to use the layered product. For DECwindows Motif on OpenVMS I64, the license is offered through the Operating Environment Package.

For more information about the License Management Facility, refer to the *OpenVMS Operating System for Alpha and 164* Software Product Description (SPD 82.35.xx) or the OpenVMS Alpha operating system documentation.

SOFTWARE WARRANTY

This software product is provided by HP with a 90-day conformance warranty in accordance with the HP warranty terms applicable to the license purchase.

TRADEMARK INFORMATION

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