Moving to Motif and CDE

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This chapter discusses the different types of Motif available to Solaris CDE developers, and provides the paths through this manual for the different tasks you may want to perform in relation to them.

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Which Motif?

The Motif toolkits shipped with various versions of the Solaris environment provided a migration to the CDE 1.0 Motif toolkit. The list below provides a brief description of these toolkits. See Chapter 3, "CDE and Solaris Motif Toolkits," for more detailed information.

- CDE 1.0 Motif, which is the Solaris 2.5 Motif toolkit, adds functionality to the Motif 1.2.3 toolkit while maintaining backward binary compatibility. It consists of the Motif 1.2.3 widget library with bug fixes and enhancements to existing functionality.

  Motif 1.2.3 is a patch of Motif 1.2. APIs for Motif 1.2 and Motif 1.2.3 are the same. The Motif 1.2.3 libraries in the Solaris and CDE environments are described in Chapter 2, "Motif Environment."

Note – When running CDE Motif in the Solaris CDE environment, you gain access to additional widgets (such as a menu button widget and a terminal emulator widget and library). See Chapter 3, "CDE and Solaris Motif Toolkits," for more details.

- The Solaris 2.4 Motif toolkit is an early release of the CDE Motif toolkit. It has the same major functionality as CDE Motif but includes fewer bug fixes to Motif 1.2.3.
- The Solaris 2.3 Motif toolkit is IXI 1.2.2 Motif (an extension of Motif 1.2.2).

Caution – If you install CDE on a Solaris 2.4 system, the Motif toolkit is upgraded to the latest version of CDE Motif. If you want your application to run on the OpenWindows 3.4 (non-CDE) desktop, make sure to build your application on Solaris 2.4, not CDE.

Summary of Motif Toolkits

This section summarizes the differences between the Motif toolkits supported by the Solaris environment.

Table 1-1 Solaris and CDE Motif Toolkits

Motif Toolkit	Contents	Location	Develop for This Desktop
Solaris 2.3	IXI Motif, an extension of Motif 1.2.2	`/opt/SUNWmotif`	OpenWindows
Solaris 2.4	Early release of CDE 1.0 Motif	`/usr/dt`	OpenWindows
Solaris 2.5	CDE 1.0 Motif	`/usr/dt`	OpenWindows
CDE 1.0	Motif 1.2.3, with bug fixes and enhancements	`/usr/dt`	CDE (developer has access to CDE `DtSpinBox`, `DtComboBox`, `DtMenuButton`, `DtEditor`, `DtTerm` widgets)

Moving to Motif

The main programming or porting tasks you probably want to perform in relation to Motif are:

- Running existing Motif applications on the OpenWindows 3.5 desktop
- Developing CDE Motif applications for the OpenWindows 3.5 desktop

Running Existing Motif Applications on the OpenWindows Desktop

Any standard Motif 1.2 or Solaris Motif application will run on the OpenWindows 3.5 desktop. Also, any Motif application that is dynamically linked to Motif libraries besides the Solaris 2.4 or CDE Motif libraries can run on the OpenWindows 3.5 desktop if you package with the application the Motif libraries you used for application development.

Developing CDE Motif Applications for the OpenWindows Desktop

If you are familiar with Motif and want to develop a CDE Motif application for the OpenWindows 3.5 desktop, read:

- Chapter 2, "Motif Environment,"
- Appendix A, "CDE Motif Packaging,"
- Appendix C, "Solaris 2.5 Motif Window Manager"

You might also want to read Chapter 3, "CDE and Solaris Motif Toolkits," which compares the Motif toolkits that the Solaris environment supports.

If you are an OPEN LOOK developer and want to develop a CDE Motif application for the OpenWindows 3.5 desktop, you should read the chapters and appendixes just mentioned in this section. In addition, read:

- Chapter 5, "Toolkit Transition Issues," for a comparison of the OPEN LOOK and Motif graphical user interface (GUI) and widgets.
- Chapter 6, "Porting Issues and Ideas," particularly those parts pertaining to GUI transitions.
- "Motif 1.2.3 Documentation" on page 77 and "Motif Programming" on page 79 for lists of books that will familiarize you with Motif programming.

Moving to Solaris CDE

You do not need to port your OPEN LOOK or Motif application to the Solaris CDE environment for it to run on the Solaris CDE desktop. However, if you decide to port, refer to the CDE documentation and read the chapters mentioned below. See "CDE Documentation" on page 76 for a list of the available CDE documentation.

The main programming or porting tasks you probably want to perform in relation to Solaris CDE are:

- Running existing OLIT, XView, or Motif applications on the Solaris CDE desktop
- Porting OpenWindows applications to the Solaris CDE desktop
- Porting Motif applications to the Solaris CDE desktop
- Developing CDE Motif applications for the Solaris CDE desktop

Running Existing Applications on the Solaris CDE Desktop

Existing OLIT, XView, or Motif applications will run on the Solaris CDE desktop. Note that any Motif application that is dynamically linked to Motif libraries besides those in Solaris 2.4 or CDE Motif can run on the CDE desktop if you package with the application the Motif libraries you used for application development.

If you want your application to appear integrated with the Solaris CDE desktop but do not want to modify your application code, you can perform basic integration. This first level of Solaris CDE integration is described in "Basic Integration" on page 46.

Porting OpenWindows Applications to the Solaris CDE Desktop

Existing OpenWindows applications can run unmodified on the Solaris CDE desktop. If you want to move your applications to the Solaris CDE environment and to begin using its broader set of standard services, read this book to help you understand the differences between the OPEN LOOK and Motif toolkits, and the OpenWindows and Solaris CDE desktops.

Porting Motif Applications to the Solaris CDE Desktop

If your application is Motif 1.2 or Motif 1.2.3 style guide-compliant, you are well on your way to it being CDE style guide-compliant. CDE Motif is based on the Motif 1.2.3 toolkit and the CDE style guide is based on the Motif 1.2 style guide. Still, you may have to make some GUI changes to port your application to CDE Motif.

To help port your Motif application to the Solaris CDE desktop, read:

- Chapter 3, "CDE and Solaris Motif Toolkits," to find out about the enhancements in CDE Motif and the CDE widgets available to you
- Chapter 4, "Development Environment Transition Issues," which compares and contrasts the OpenWindows and Solaris CDE development environments

Refer to the checklist in the *CDE Style Guide and Certification Checklist* to see how the CDE style guidelines are similar to and differ from those for Motif 1.2.

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Developing CDE Motif Applications for the Solaris CDE Desktop

If you are familiar with Motif and want to develop a CDE Motif application for the Solaris CDE desktop, refer to the CDE documentation.

If you are an OPEN LOOK developer and want to develop a CDE Motif application for the Solaris CDE desktop, read this book and refer to the CDE documentation.

In either case, see Appendix D, "Recommended Reading," for a list of the CDE documentation as well as other books to help you with Motif programming.