About This Book

Among personal computers, the Macintosh computer is foremost in the areas of desktop publishing, page layout, high-end graphical word processing, and international text presentation. The Macintosh computer's capabilities in these areas is due in large part to its unique and powerful support for text handling. *Inside Macintosh: Text* describes how you can use that support to put superior text capabilities into your software.

This book documents the parts of Macintosh system software that allow you to generate and manipulate text, including text in multiple languages. It includes introductory material on the Macintosh approach to text handling, as well as a complete technical reference to each of the text-handling managers in the system software.

What to Read

Whatever your text needs are, you should first read the chapter "Introduction to Text on the Macintosh." It describes Macintosh text concepts, outlines the kinds of text features addressed by the system software, and describes the organization and workings of script systems—collections of resources that give the Macintosh its multiple-language text capabilities.

If your text-handling needs are minor, the only other chapter you may need to read is "TextEdit," which describes a simple, multiple-language text-processing service provided by Macintosh system software. TextEdit is used by the system software to present text and accept user input in dialog boxes and alerts, and its capabilities are available for your application to use as well.

If you are planning a text-handling application with capabilities beyond those of TextEdit, read the remaining chapters of this book in any order. "QuickDraw Text" describes how to lay out and draw text to the screen or printer. "Font Manager" describes how to access Macintosh fonts and specify text characteristics. "Text Utilities" describes a collection of text-handling routines that allow you to specify, sort, format, search, and otherwise manipulate text strings. "Script Manager" describes how to access and manipulate script systems.

If you want your application to work efficiently with Japanese, Korean, or Chinese text input, or if you are designing an input method for those languages, read the chapter "Text Services Manager." It describes how to make your application work with multiple input methods in multiple languages, and how to create an input method that provides

multiple-language input for any application. If you are creating an input method, read also the chapter "Dictionary Manager" to find out how to create and use input dictionaries that are portable across input methods and applications.

If you are planning to add specific language capabilities to an application, or need to modify the system software's text-handling for a given language, read the chapter "Script Manager" and the appendixes "Built-in Script Support," "International Resources," and "Keyboard Resources." They describe the organization of script systems on the Macintosh, and show you how to modify parts of a script system in order to obtain the exact text-handling characteristics you need.

If you are designing a font or a font editor, read the parts of the chapter "Font Manager" that describe the data structures and tables that make up Macintosh fonts. In addition, you will need information contained in the *TrueType Font Format Specification*, available from APDA.

If you are already familiar with Macintosh system software and with previous versions of *Inside Macintosh*, you may notice that in this book the organization of some managers and the names of some routines have changed. You can refer to the appendix "Renamed and Relocated Text Routines" for information on how the new organization and terminology relate to previous presentations.

Format of a Typical Chapter

Most chapters in this book follow a standard structure. For example, the chapter "TextEdit" contains these sections:

- "About TextEdit." This section provides an overview of the features provided by TextEdit.

- "Using TextEdit." This section describes the tasks you can accomplish using TextEdit. It describes how to use the most common routines, gives related user interface information, provides code samples, and supplies additional information.

- "TextEdit Reference." This section provides a complete reference to TextEdit by describing the constants, data structures, and routines that it uses. Each routine description also follows a standard format, which gives the routine declaration and description of every parameter of the routine. Some routine descriptions also give additional descriptive information, such as assembly-language information or result codes.

- "Summary of TextEdit." This section provides the Pascal interface and the C interface to TextEdit, defining the constants, data structures, routines, and result codes associated with TextEdit. It also includes relevant assembly-language interface information.

Some chapters contain additional main sections that provide more detailed discussions of certain topics. For example, in the chapter "Font Manager," the sections "About Fonts" and "About Font Resources" describe the capabilities and structure of the fonts that the Font Manager supports.

Conventions Used in This Book

Inside Macintosh uses various conventions to present information. Words that require special treatment appear in specific fonts or font styles. Certain information, such as parameter blocks, use special formats so that you can scan them quickly.

Special Fonts

All code listings, reserved words, and the names of actual data structures, constants, fields, parameters, and routines are shown in Courier (`this is Courier`).

Words that appear in **boldface** are key terms or concepts and are defined in the Glossary.

Types of Notes

There are several types of notes used in this book.

Note
A note like this contains information that is interesting but possibly not essential to an understanding of the main text. (An example appears on page 1-5.) ◆

IMPORTANT
A note like this contains information that is essential for an understanding of the main text. (An example appears on page 2-64.) ▲

▲ **WARNING**
Warnings like this indicate potential severe problems that you should be aware of as you design your application. Failure to heed these warnings could result in system crashes and loss of data. (An example appears on page 4-17.) ▲

Development Environment

The system software routines described in this book are available using Pascal, C, or assembly-language interfaces. How you access these routines depends on the development environment you are using. This book shows system software routines in their Pascal interface, C interface, or assembly language using the Macintosh Programmer's Workshop (MPW).

Code listings in this book are shown in MPW Pascal or MPW C or MPW Assembler. They suggest methods of using various routines and illustrate techniques for accomplishing particular tasks. Most code listings have been compiled and tested, although in some cases only fragments of the full listings are shown. However, Apple Computer does not intend that you use exactly these code samples in your application.

Developer Products and Support

APDA is Apple's worldwide source for over 300 development tools, technical resources, training products, and information for anyone interested in developing applications on Apple platforms. Customers receive the quarterly *APDA Tools Catalog* featuring all current versions of Apple development tools and the most popular third-party development tools. Ordering is easy; there are no membership fees, and application forms are not required for most of our products. APDA offers convenient payment and shipping options including site licensing.

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If you provide commercial products and services, call 408-974-4897 for information on the developer support programs available from Apple.

For information on obtaining Macintosh Technical Notes, and for other technical information, contact

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