

About This Book

This book, *Inside Macintosh: Overview*, provides a general introduction to programming for Macintosh computers and to the *Inside Macintosh* library of reference books. Unless you are already an experienced developer of software for Macintosh computers, you should read this book for a general overview of the Macintosh system software and of the programming techniques that you should use when developing your application.

This book is written for both professional developers and “hobbyists.” It assumes only that you understand fundamental programming concepts and that you have had experience using a high-level programming language such as Pascal or C. It is helpful, but not necessary, to have some experience programming for a graphic user interface (like the Macintosh desktop metaphor). At the very least, you should already have extensive experience *using* one or more applications on a Macintosh computer. Before you start programming, you need to understand what the basic elements of the Macintosh desktop metaphor are (windows, menus, scroll bars, and so forth) and how the user expects those elements to operate.

This book leads by example. From the very first page, the fundamental programming techniques are illustrated by source code that you can compile into actual, working routines and applications. Gradually, you will learn how to implement the major features of a Macintosh application, including

- responding to user actions and other events
- creating and managing windows and dialog boxes
- handling menu selections
- storing application data in resources
- managing your application’s memory efficiently
- sharing processing time and available memory with other open applications
- checking available system software features
- handling errors or unexpected occurrences safely

This book also provides guidelines on how to maximize your application’s compatibility with the entire family of Macintosh computers and minimize the amount of work required to localize your application (that is, to adapt it for use in other geographic locations). Compatibility and localizability are features that you should always plan in advance. In general, your best guide to writing software that follows these guidelines is to use the techniques illustrated throughout the *Inside Macintosh* series of books.

About *Inside Macintosh*

The *Inside Macintosh* library of books is a complete technical reference to the system software provided for Macintosh computers by Apple Computer, Inc. You'll need some or all of the *Inside Macintosh* books—in addition to the documentation for your specific software development environment—to write applications and other software components that run in the Macintosh Operating System.

Books in the *Inside Macintosh* series are designed primarily as reference books and not as step-by-step tutorials. (The main exception to that rule is this book, *Inside Macintosh: Overview*, which is a general introduction to programming on Macintosh computers and to the other *Inside Macintosh* books.) Nonetheless, there is sufficient “how-to” material in each book that you should be able to successfully implement the features of some particular part of the Macintosh system software by reading the appropriate chapters in *Inside Macintosh*. Moreover, some of these books contain special introductory chapters that explain general concepts and provide implementation details for specific parts of the system software. For example, the chapter “Introduction to File Management” in the book *Inside Macintosh: Files* provides a complete explanation of how to implement the typical File menu commands.

If you are new to programming for the Macintosh system software, you should begin by reading this book, *Inside Macintosh: Overview*. Once you understand the material presented here, you can then usefully turn to other *Inside Macintosh* books. In all likelihood, you'll next want to look at two books covering the Macintosh Toolbox:

- *Inside Macintosh: Macintosh Toolbox Essentials*
- *Inside Macintosh: More Macintosh Toolbox*

If your application is concerned with either text or graphics, you need to look at one or both of:

- *Inside Macintosh: Imaging*
- *Inside Macintosh: Text*

You'll also need to learn more about the main parts of the Macintosh Operating System. You can get most of the information you need from these three books:

- *Inside Macintosh: Memory*
- *Inside Macintosh: Files*
- *Inside Macintosh: Processes*

See the Afterword, beginning on page 183, for a more detailed description of the contents of these and other books in the *Inside Macintosh* series.

The New *Inside Macintosh*

The original *Inside Macintosh* library of books appeared in six volumes from 1985 to 1991. Those volumes each focused on a particular version of the system software, sometimes prompted by the release of new hardware configurations. Often, the later volumes of the original *Inside Macintosh* described only new system software components or changes to existing system software components.

The new *Inside Macintosh* books are intended to replace the original *Inside Macintosh* books and to provide a more complete and more useful reference to the Macintosh system software. The most obvious improvement in the new books is that they are organized principally by topic. For example, the book *Inside Macintosh: Files* contains virtually all the available information related to files, including complete descriptions of the File Manager, the Standard File Package, the Alias Manager, and the Disk Initialization Manager. Similarly, the book *Inside Macintosh: Text* contains all information about handling text. This topic-oriented organization of books makes it easier for you to find the information you need. It also makes it easier for Apple to add books to the *Inside Macintosh* suite as new technologies emerge in the years ahead.

At the same time that the entire suite of books was reorganized, the chapters in the new *Inside Macintosh* books were completely rewritten. Information that may have been previously scattered across multiple volumes of the original *Inside Macintosh* is now combined into easily accessible chapters. Information that is no longer relevant or useful has been removed. Most importantly, the new *Inside Macintosh* provides far more explanatory material and source code samples than the original. Where appropriate, material from the Macintosh Technical Notes has been incorporated into the new *Inside Macintosh*. Finally, each chapter has been extensively reviewed by Apple engineers, testing personnel, and Developer Technical Support staff.

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, appears in special formats so that you can scan it 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 *Inside Macintosh*.

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 8.) ♦

IMPORTANT

A note like this contains information that is essential for an understanding of the main text. (An example appears on page 5.) ▲

▲ **WARNING**

Warnings like this indicate potential problems that you should be aware of as you design your application. Failure to heed these warnings could result in system crashes or loss of data. (There are no warnings in this book.) ▲

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 using the Macintosh Programmer's Workshop (MPW).

All code listings in this book are shown in Pascal. They show methods of using various routines and illustrate techniques for accomplishing particular tasks. All code listings have been compiled and, in most cases, tested. However, Apple Computer does not intend that you use these code samples in your application.

This book occasionally uses *GreetMe* and *Venn Diagrammer* as the names of sample applications for illustrative purposes; these are not actual products of Apple Computer, Inc.

For More Information

APDA is Apple's worldwide source for over three hundred 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.

To order products or to request a complimentary copy of the *APDA Tools Catalog*, contact

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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 of registering signatures, file types, Apple events, and other technical information, contact

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Apple Computer, Inc.

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IMPORTANT

See the section "Using Developer Services" beginning on page 189 in the Afterword for more information about Apple developer programs and services. ▲

