



Overview

MacApp® Version 2.0B9—the beta release of Apple's second-generation object-oriented Macintosh® application framework—is ideal for programmers who wish to develop robust, user-friendly professional applications.

MacApp helps you work more productively. Your application can “inherit” the behavior of a standard Macintosh application directly from MacApp code and you can then override the parts you wish to customize. With MacApp and less than a page of your own code, you can have a

complete Macintosh application that creates windows, interprets mouse clicks, handles desk accessories, prints files, and supports every other standard feature a Macintosh application is likely to have.

The applications you create with MacApp can run on any Macintosh Plus, Macintosh SE, or Macintosh II computer. If the code you add follows Apple's compatibility guidelines, your applications will run under both the Macintosh and the A/UX® operating systems (and will provide MultiFinder™ compatibility under the Macintosh operating system).

MacApp has been used by companies such as Activision, Farallon, and Odesta to develop commercial applications for networking and communications, accounting, report generation, geographical data display, CAD, optical character recognition, knowledge engineering, and geology. The productivity and maintainability of MacApp application development have proven valuable to custom in-house software developers such as Peat Marwick Main & Co.

Features

Benefits

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| ▶ Standard Macintosh user interface | ▶ Manages menus.
▶ Supports “undo” commands.
▶ Provides extensive support for exception handling.
▶ Allows multipage printing.
▶ Supports desk accessories.
▶ Supports scrolling, zooming, and opening and closing of windows. |
| ▶ Strict adherence to Apple compatibility guidelines | ▶ Simplifies the task of creating applications that will be compatible with future hardware and system software. |
| ▶ MultiFinder support | ▶ Allows your MacApp applications to run in the background. |
| ▶ Improved “view” architecture | ▶ Offers a simple, powerful view class hierarchy.
▶ Uses view resources that can be created and edited with the new ViewEdit tool.
▶ Includes optional 32-bit view coordinates to let you work with large views. |
| ▶ New TGridView view class | ▶ Supports one-dimensional lists and two-dimensional grids of views (for use in applications such as spreadsheets). |
| ▶ Support tools | ▶ ViewEdit, the new WYSIWYG graphical window and dialog-box design tool, speeds design of your views.
▶ An integrated object-oriented debugger speeds debugging.
▶ A new Object Inspector lets you examine objects.
▶ An improved build tool makes building your program easier and faster. |
| ▶ Six sample programs | ▶ Can be used as learning aids or as the foundation for actual programs.
▶ Includes complete source code. |

Product Details

The MacApp object-oriented framework includes a class library, support tools, and sample MacApp programs. Manuals for beginners as well as experts are available separately.

MacApp provides a general structure that implements the standard Macintosh interface, including scrollable, resizable windows and multipage printing. MacApp fosters development of robust, professional-quality applications by providing you with extensive memory management support, exception-handling mechanisms, support for "undo" commands, and a large body of ready-to-use, high-quality code that can be inherited by your application.

MacApp code works with all current Macintosh hardware and system software, including MultiFinder and A/UX. The MacApp code adheres strictly to Apple's compatibility guidelines, so it greatly simplifies the task of ensuring that an application will be compatible with future hardware and system software products from Apple.

MacApp is already multi-lingual, and will become even more so in future releases. Applications using MacApp must be written at least partially in Object Pascal; this object-oriented code can call routines written in any MPW™ (Macintosh Programmer's Workshop) language, including standard Pascal, assembly language, and C. The next release of MacApp will allow programmers to use C++ in place of Object Pascal.

Note that MacApp is a framework for *applications* only. MacApp is not the appropriate tool for building other sorts of programs. It cannot be used to create device drivers, desk accessories, or HyperCard® XCMDs, for example.

The Class Library

MacApp 2.0 has 72 classes that together handle standard user-interface features of Macintosh applications in a manner that adheres strictly to Apple's user-interface guidelines. Features handled by MacApp include multiple documents, pull-down menus, desk accessory support, printing, and window manipulations such as scrolling, moving, resizing, and zooming. A framework is provided to make it easier for the programmer to support other standard user-interface features, such as undo, cut, copy, and paste. MacApp also contains an extensive error-handling system that presents detailed error messages to an application's user.

Support Tools

► *ViewEdit*. This MacApp utility program allows you to use a WYSIWYG editing environment to create windows and dialog boxes. ViewEdit allows you to draw, resize, and move your views using the standard Macintosh interface. It even creates and rearranges your view hierarchies as you go.

► *MABuild*. MABuild is an MPW tool that controls the building of an application from its source files. This latest version is faster, smarter, and more flexible than in previous releases. For example, it has many more defaults, so relatively simple applications (including most of the sample programs included with MacApp) no longer require an MPW "make" file.

► *MacApp debugger*. The MacApp debugger provides all the usual debugging features, such as breakpoints, stack crawl, trace, and single step. The MacApp Version 2.0 debugger provides faster tracing, built-in commands for controlling MPW performance-monitoring tools, and new context-sensitive on-line help. Now you can also

switch into MultiFinder to examine source code while your application is stopped in the debugger.

► *Object Inspector*. Debug versions of MacApp 2.0 applications allow you to open one or more Object Inspector windows. An Inspector window can display the current values of the fields of any object. Since you can have multiple Inspector windows open, you can inspect several objects at one time. The Object Inspector can display the contents of Macintosh Toolbox data structures as well as MacApp objects.

Sample Programs

Six sample programs are included with MacApp. These are complete Macintosh applications that demonstrate many features, including windows that users can move, resize, scroll, and zoom; multiple documents; the Clipboard; cut, copy, and paste; disk-based documents; font changes; multiple views; undo commands; modal and modeless dialog boxes; and printing. Many developers have used these samples as starting points for applications, modifying and expanding a sample until it evolves into a new application.

The six sample programs are as follows:

► *Nothing* has only 70 lines of code, yet it can open multiple windows, show the Clipboard, do manual and automatic scrolling, print, and support desk accessories.

► *Calc* demonstrates the use of the TGridView class in a simple spreadsheet application.

► *DemoText* demonstrates the use of styled text.

► *DemoDialogs* shows a variety of dialog boxes.

► *DrawShapes* is a simple drawing application.

► *Cards* is a note-card application that demonstrates the use of disk-based data.



MacApp

Product Details cont.

Training and Support

Apple offers a one-week course titled "MacApp and Object-Oriented Programming."

For details, please contact:

Apple Developer
University Registrar
20525 Mariani Avenue
M/S 51M
Cupertino, CA 95014
(408) 974-6215

AppleLink®: DEVUNIV
The independent MacApp Developer's Association offers

a number of useful products and a monthly newsletter. You can contact the group at:

MacApp Developer's Association
P.O. Box 23
Everett, WA 98206
(206) 252-6946
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Licensing

To ship applications built using MacApp, you must obtain a license from Apple; an

application form is included with the product. After paying a nominal annual license fee, you may ship any quantity of any number of MacApp applications for use on the Macintosh.

For further information, please contact:

Apple Computer
Software Licensing
20525 Mariani Avenue
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Cupertino, CA 95014

System Requirements

To develop MacApp applications, you will need the following:

- ▶ An Apple® Macintosh Plus, Macintosh SE, or Macintosh II computer with at least 2 megabytes of RAM and 128K of ROM
- ▶ A hard disk

- ▶ Macintosh Programmer's Workshop Version 3.0
- ▶ Macintosh Programmer's Workshop Pascal Version 3.0
- ▶ Macintosh Programmer's Workshop Assembler Version 3.0

Ordering Information

MacApp and related products are available from the Apple Programmers and Developers Association (APDA™) at the address listed below.

▶ **MacApp Version 2.0B9.** Six disks containing MacApp library source code, sample programs, and support tools. APDA Order No. M7022/A

▶ *Introduction to MacApp 2.0 and Object-Oriented Programming.* Describes the concepts behind object-oriented programming and MacApp, and

contains an overview of the structure of MacApp and instructions for using the MacApp tools. APDA Order No. M0300LL/A

▶ *MacApp 2.0 Tutorial.* Provides step-by-step instructions for installing MacApp and creating a functional sample program; source code for that program is included on an accompanying disk. APDA Order No. M0303LL/A

▶ *MacApp 2.0 Cookbook.* A collection of "recipes" for performing typical functions such as opening windows and creating documents. APDA Order No. M0299LL/A

▶ *MacApp 2.0B9 Source Listings.* Contains printed, cross-referenced listings of the MacApp v.2.0B9 source code, and listings of MacApp sample programs. APDA Order No. M6021/A

Auxiliary Products

The following products are also available from ADPA:

▶ *Object-Oriented Programming for the Macintosh*, by Kurt J. Schmucker. Published by Hayden Book Company, and available in many bookstores.

▶ MacApp Browser. A desk accessory created by the MacApp Developer's Association that allows you to browse through the source code in the MacApp class hierarchy, as well as any source code that you create.

▶ A selection of four disks (sold separately) from the MacApp Developer's Association. Contains complete sample applications, source code fragments, and MPW tools and shell scripts.

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June 1989. Product specifications are subject to change without notice. Printed in U.S.A.
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