

Microsoft News Release

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Microsoft Launches Visual C++

*New Integrated Windows-hosted Development System Speeds Development
of C++ Applications for Windows*

SANTA CLARA, Calif. — Feb. 23, 1993 — Microsoft Corporation today launched a new Microsoft® Visual C++™ development system for the Microsoft Windows™ operating system, a tightly integrated visual development system that streamlines the development of C++ applications for Windows. Scheduled for shipment on March 1, Visual C++ comes in both standard and professional editions. The standard edition replaces the Microsoft QuickC® development system for Windows, and the professional edition succeeds Microsoft C/C++ version 7.0.

Microsoft Visual C++ is a highly integrated tool set that is completely Windows hosted and optimized to boost programmer productivity throughout the entire development cycle. It is the first C++ product designed to help make the process of learning and adopting the C++ programming language much easier for programmers using Windows, while providing all the resources and power required by the most advanced C++ programmers. "Microsoft Visual C++ is the shortest path to developing professional C++ applications for the Windows operating system," said Jim McCarthy, director of marketing and user education for the development tools group at Microsoft. "With this product, Microsoft makes C++ programming accessible to more programmers than ever before — and demonstrates Microsoft's commitment to providing programmers with next-generation tools that accelerate the development of advanced Windows-based applications."

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Visual C++ features the popular wizard technology found in several of Microsoft's other products, including the Microsoft Access™ database management system and Microsoft Excel. Two unique programming wizards — AppWizard and ClassWizard — act like programmers' assistants by giving developers a jump start in creating a Windows-based application. AppWizard automates the first steps of using an application framework, making it easy to get started developing an application. Using a visually oriented application like the Microsoft Visual Basic™ programming system, the new AppStudio in Visual C++ lets programmers graphically create an application's user interface, while the ClassWizard connects these user interface elements to C++ code.

Another key feature introduced by Visual C++ is version 2.0 of the Microsoft Foundation Class library, an application framework for creating Windows-based applications. Building on — and fully compatible with — Microsoft Foundation Class 1.0, version 2.0 provides a robust set of high-level, reusable objects that provide a rich set of pre-built functionality, such as print preview. Microsoft Foundation Class 2.0 provides this abundant functionality without adding speed or size overhead to the final code.

“In addition to great programming tools, we are committed to providing the best developer support possible,” said McCarthy. “This includes outstanding supporting products and support networks, as well as a comprehensive ISV program that encourages the development of third-party components and tools that provide added value to the Visual C++ toolset.”

The Visual C++ Development System

Visual C++ provides a completely new set of visual, Windows-hosted tools for editing, resource building, resource to class mapping, browsing and debugging. The tight integration of these tools lets programmers navigate quickly through the entire development cycle as well as perform tasks such as editing, building or debugging code concurrently.

The Visual C++ development system includes the following new features:

- Visual WorkBench
- AppStudio
- AppWizard
- ClassWizard
- Microsoft Foundation Class Library version 2.0

Visual WorkBench

Visual WorkBench is the new Windows-hosted development environment. Using Visual WorkBench, programmers can edit, build, debug and browse C or C++ code from a single integrated Windows-based environment. Its toolbar provides one-click access to frequently used operations. Visual WorkBench offers seamless access to AppWizard for skeleton application creation, AppStudio for creation and management of application resources and ClassWizard for connecting resources to code. Visual C++ uniquely offers an integrated Windows-hosted debugger. For example, this integration enables developers to set breakpoints in the editor while debugging.

AppStudio

AppStudio uses a completely graphical approach to user interface design, resource editing and Visual Basic control manipulation. AppStudio is a full-featured resource editor that lets programmers create and edit all the standard Windows-based resources, including menus, icons, bitmaps, dialogs, string tables, accelerators and binary data. Programmers can use AppStudio to install the Visual Basic custom controls within the AppStudio environment, which enables programmers to leverage pre-built functionality provided by more than one hundred custom controls available from third-party developers or Microsoft.

Programmers can edit multiple resources concurrently. AppStudio supports a wide range of drag-and-drop operations between resources that are being edited. Property sheets let

programmers enter exact values for an object's properties, such as button style, so that properties for all user interface elements can be set very quickly.

AppWizard

AppWizard automates the first steps in using the application framework, creating a full set of skeleton application source code files. With only a few clicks of the mouse, it creates a working skeleton application that contains a wide range of Windows-based functionality.

AppWizard is an indispensable tool for getting started with the new Microsoft Foundation Class 2.0 features such as toolbars, context-sensitive help, OLE support, printing and print preview.

AppWizard creates all the project files necessary to build the application immediately.

ClassWizard

ClassWizard is the first tool of its kind and helps developers with many of the administrative details of C++ programming in the Windows environment while enabling them to have full control over every line of their source code. ClassWizard automates the process of connecting user interface controls, such as dialog buttons, to the application code that handles them.

Microsoft Foundation Class Library 2.0

Microsoft Foundation Class Library 2.0 builds on, and is completely compatible with, the previous version that is generally recognized as the leading C++ API for Windows. Version 2.0 contains an extensive set of classes that encapsulate most of the basic functionality of Windows while providing higher-level classes to simplify programming. These classes, coupled with the internal mechanisms that implement the classes, are called an application framework.

The Microsoft Foundation Classes greatly simplify and speed development by offering programmers a standard architecture and set of high-level objects. By using these objects, programmers can quickly create professional applications for Windows that contain pre-built

application behavior, saving a considerable amount of development time. For example, print preview alone consists of several thousand lines of code.

Major new classes and capabilities added to Microsoft Foundation Class 2.0 include printing and print preview, documents and views, toolbar and status bar classes, form and edit views, support for Visual Basic custom controls, scrolling and split-pane windows, OLE classes, dialog data exchange and validation (DDX/DDV) and context-sensitive help.

Microsoft Foundation Class 2.0 source code is designed to be compiler independent, so that Microsoft Foundation Class 2.0 applications can be compiled using other C++ compilers. In addition, applications written with Microsoft Foundation Classes are easily ported to the Windows NT™ operating system.

Still the Smallest and Fastest Executables

Visual C++ uses Microsoft fourth generation C/C++ compiler technology to achieve the smallest and fastest executable code. New optimization features in Visual C++ include 386 code optimization and Smart Linking to further reduce the size of executables. Programmers can now merely click on a menu item to obtain the best possible speed or size optimization.

Professional and Standard Editions

Two versions of Microsoft Visual C++ for Windows are available: Microsoft Visual C++ Standard Edition and Microsoft Visual C++ Professional Edition.

Recommended for experienced programmers of Windows and C/C++, Microsoft Visual C++, Professional Edition contains all the resources and tools C and C++ programmers need to create full-featured Windows- and MS-DOS® operating system-based applications. The Professional Edition includes the Visual WorkBench, AppStudio, AppWizard, ClassWizard, Windows-based applications development, optimizing C and C++ compilers, MS-DOS-based application targeting, CodeView® for MS-DOS and Windows, Source Profiler for Windows and MS-DOS, Microsoft Foundation Class 2.0 and the essential components of the Windows 3.1 SDK. In addition, Visual C++ is backwardly compatible with applications developed in Microsoft

C/C++ version 7.0. Because the Professional Edition includes the optimizing compiler, it is the appropriate choice for applications where speed or size optimizations are crucial.

The Standard Edition is ideal for part-time programmers or those who are either new to C++, or those creating smaller applications and tools for the Windows operating system. It is an ideal upgrade to C++ programming for users of Microsoft QuickC development system for Windows.

Product Pricing, Availability and Visual Tools Suite

Both the Standard and Professional Editions of the Microsoft Visual C++ development system version 1.0 for Windows are scheduled to be available March 1. The suggested retail price for the Standard Edition is \$199 and \$499 for the Professional Edition. Users of Microsoft C/C++ version 7.0 can upgrade to the Professional Edition for \$139 and programmers using other compilers can upgrade for \$199. Users who acquired a license for QuickC for Windows can upgrade to the Standard Edition for \$79 and users of other compilers can upgrade for \$99. The Professional Edition comes on either CD-ROM or 3.5-inch disks, while the Standard Edition only comes on 3.5-inch disks.

For only \$399, Microsoft is also offering an entire suite of Visual Tools that include the Standard Editions of both Visual Basic 2.0 (\$199 value) and Visual C++ (\$199 value), as well as the new Visual Control Pack (\$149 value). The controls contained in the Visual Control Pack are identical to those in the Professional Edition of Visual Basic. This suite of development tools is an excellent value for those wanting to explore the power of Windows-based visual programming.

Products and Services Supporting Visual C++

Microsoft offers a wide range of product support services for Visual C++, including Microsoft forums on CompuServe®, download services, Microsoft FastTips (FAX or phone recording) a dedicated support number and several fee-based support services. For product support numbers and more information, call Microsoft developer services at (800) 227-4679, extension 11700.

System Requirements

System requirements for Microsoft Visual C++ for Windows include MS-DOS 5 or higher, Microsoft Windows 3.1, an 80386 or higher processor, 4MB of available RAM (8MB recommended), 30MB available hard disk storage (to install the full configuration of the Professional Edition 50MB is required) and a VGA (or higher resolution) adapter and monitor.

Founded in 1975, Microsoft (NASDAQ "MSFT") is the worldwide leader in software for personal computers. The company offers a wide range of products and services for business and personal use, each designed with the mission of making it easier and more enjoyable for people to take advantage of the full power of personal computing every day.

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