At Last, a Decent MFC Book!

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August 1996

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The Magazine for Windows Programmers

Software Tools

A More Accurate Timing Tool A Palette Spy Tool

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Compiler Benchmark: Inlining Building Win32 DLLs the Right Way

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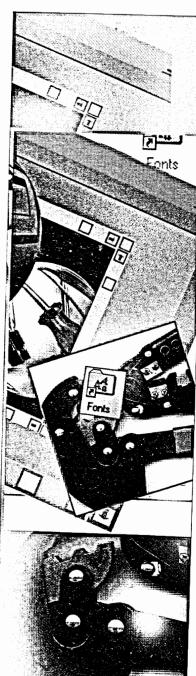
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Windows DEVELOPER'S JOURNAL

The Magazine for Windows Programmers



Cover image by Twyla Watson Bogaard.

<u>Features</u>

A Palette Spy Utility

Using an identity palette is essential for fast graphics, but how can you be sure you got it right? This tool uses some undocumented techniques to give you the information you need.

Chris Branch

A More Accurate Timing Tool

The only way to squeeze those extra cycles out of the CPU is to make changes and measure the results. Abrash's "Zen timer" has often been used for that purpose, but how accurate is it? Here's a look at some problems this kind of timer has and how to improve it.

Mike Dawdy

Compiler Benchmark: C++ Inlining27

How much overhead do you pay for using C++ instead of just C? We start looking for some answers to that question by benchmarking how efficiently five 32-bit Windows compilers can handle a simple inline function.

Ron Burk

Richter's Advanced Windows shows you how to build general-purpose Win32 DLLs, right? Wrong — you end up with DLLs that can only be conveniently called by applications compiled with Visual C++. Here's the right way to write code and build your programming tool.

Ron Burk

Columns

Tech Tips

Gorkhmaz E. Mikailov shows how to create a combobox or other control in an MFC toolbar. Trevor Harmon provides an MFC class for DIB sections. Simon Fan revisits the spawn and wait problem.

Leor Zolman

Understanding NT: Debugging Services55

Services don't have to be started by the Service Control Manager, so how can your debugger get control? How can you protect yourself against a service that locks up your system at boot time? What debuggers are available for debugging services? The the Visual C++ debugger.

Paula Tomlinson

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August 1996 Volume 7, Number 8

Books in Brief
Paula Tomlinson reviews the System Architecture series of books by MindShare. Also, The Revolutionary Guide to MFC 4 Programming with Visual C++, by Mike Blaszczak; Teach Yourself Delphi 2 in 21 Days, by Dan Osier, Steve Grobman, and Steve Batson (reviewed by George Tylutki).
Ron Burk
Bug++ of the Month

If you use the delete operator, the compiler has to generate code to call the destructor for that object. But what if the compiler doesn't yet know whether or not you defined a destructor? Isn't it a bug if it doesn't warn you that it may be generating incorrect code? Yes and no, as this month's non-bug shows.

Mark Nelson

SDK Annotations Annotation #128 — GetDialogBaseUnits Annotation #132 — EM_POSFROMCHAR69

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Next Month Thread Scheduling in Win95 and NT

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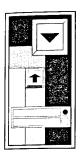
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August 1996



Books in Brief

First Impressions of Recent Titles

Ron Burk

ISA System Architecture, 3rd Ed. Tom Shanley and Don Anderson 517 pages MindShare, Inc. and Addison-Wesley, 1995 \$34.95 ISBN 0-201-40996-8

80486 System Architecture, 3rd Ed. Tom Shanley 188 pages MindShare, Inc. and Addison-Wesley, 1995 \$19.95 ISBN 0-201-40994-1

PCI System Architecture, 3rd Ed.
Tom Shanley and Don Anderson
557 pages
MindShare, Inc. and Addison-Wesley, 1995
\$34.95
ISBN 0-201-40993-3

EISA System Architecture, 2nd Ed. Tom Shanley and Don Anderson 207 pages MindShare, Inc. and Addison-Wesley, 1995 \$24.95 ISBN 0-201-40995-X

Pentium Processor System Architecture, 2nd Ed. Tom Shanley and Don Anderson 433 pages MindShare, Inc. and Addison-Wesley, 1995 \$29.95 ISBN 0-201-40992-5



PCMCIA System Architecture, 2nd Ed. Don Anderson 440 pages MindShare, Inc. and Addison-Wesley, 1995 \$29.95 ISBN 0-201-40991-7

PowerPC System Architecture
Tom Shanley
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\$34.95
ISBN 0-201-40990-9

Plug and Play System Architecture
Tom Shanley
327 pages
MindShare, Inc. and Addison-Wesley, 1995
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\$29.95
ISBN 0-201-40997-6

Protected Mode Software Architecture Tom Shanley 310 pages MindShare, Inc. and Addison-Wesley, 1996 \$29.95 ISBN 0-201-40996-8

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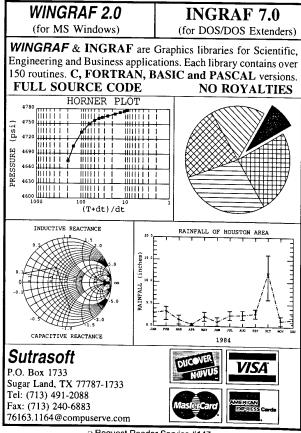
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[Editor's note: this review was provided by Paula Tomlinson.] I first discovered the System Architecture series a couple years ago at the bookstand that Computer Literacy always runs during the Software Development conferences. At that time, these books were published directly by MindShare and had very generic and nondescript black-and-white covers, so I almost overlooked them. I spotted the ISA and EISA books first. After leafing through them that night, I ran back to the bookstand the following day to buy any other books in the series, not dissuaded in the least by the prospect of hauling them back home with me. CardBus System Architecture is just the latest in this PC Architecture Series that currently totals 10 books. Addison-Wesley is now publishing these books with MindShare, so the more colorful cover art and wider distribution should ensure that you will be able to find them at any bookstore with a reasonable stock of computer titles.

I admit that there are so few good hardware books available that I tend to get enthusiastic about even mediocre attempts. But this series of books is truly an important part of my library. The series is generally based around processor architectures and bus architectures (with a few miscellaneous topics such as Plug-and-Play). I find that most books that call themselves processor architecture books are really references for the assembly language instruction set of that particular processor. While those books fill a need, they don't give readers an understanding of the overall hard-

ware design and are not adequate references for device driver writers. This is especially true of bus architectures; for example, it is extremely difficult to find good technical information about the PCI or PCMCIA buses. When I do manage to find an occasional hardware reference on the bookshelf, I almost hesitate to pick it up for fear of seeing the inevitable \$89+ price tag. As a welcome relief, the MindShare series titles range from \$19.95 to \$34.95. At this price, I don't feel bad spending the money on a book I might use only as an occasional reference. Ironically, though, my office copy of EISA System Architecture currently holds the title of "most likely to be borrowed by a coworker."

The format of these books is quite different than that of the average computer book. Each book is based on a seminar taught by the author and that heritage is evident in the book's structure — it flows more like modules than chapters. Like most hardware books, they get right to the point; there are none of the self-indulgent authorial digressions that you see in some software development books. But, unlike most hardware books, these are actually readable. Most hardware references read like encyclopedias — even the publishers don't expect anyone to actually read the



□ Request Reader Service #147 □ Page 62 — Windows Developer's Journal

SDK Annotation #130

TYPE: MFC

TOPIC: CCheckListBox::Create KEYWORD: CCheckListBox::Create

The documentation mentions that the dwStyle parameter could be any of the specified listbox styles. However, the dwStyle parameter should NOT be LBS_MULTICOLUMN or LBS_USETABSTOPS. Morever, you need to specify LBS_OWNERDRAWFIXED and LBS_HASSTRINGS. You can specify LBS_OWNERDRAWVARIABLE instead of LBS_OWNERDRAWVARIABLE instead of LBS_OWNERDRAWFIXED, but then you need to override CCheckListBox::DrawItem, otherwise the debug version will ASSERT.

Submitted by Sudhir Menon.

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