Win32 Multithreaded Programming

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Synopsis

Many Windows developers still write code as if their application is a single entity that, while it is running, has complete control of all system resources. This legacy from the days of DOS means that developers frequently fail to take advantage of Win32’s support of multiple threads of execution to improve their application’s performance or to enhance its functionality. For instance, a main thread can handle interactions with the user, while a background "worker" thread can handle repainting the application window or performing some background calculations. But multithreaded programming means more than adding threads; it also requires that the code be thread-safe.Win32 Multithread Programming explains the concepts of multithreaded programs, thus providing the developer with the knowledge necessary to skillfully construct efficient and complex applications. From basic thread synchronization using mutexes and semaphores, to advanced topics like creating reusable thread pools or implementing a deferred processing queue, the book uses real-world applications and carefully constructed examples to illustrate the principles of multithreaded programming. Some of the topics include: How the Windows operating systems handle threads Multithreading primitives in the Win32 API Techniques for generating thread-safe dynamic link libraries Advanced techniques for thread synchronization Basic scenarios for synchronizing threads Common designs for building multithreaded user interfaces The CD-ROM accompanying the book features Mcl, the authors’ C++ class library for multithreaded programming, which both wraps multithreaded API functions and easily supports more complex multithreaded scenarios. For programmers using MFC, an additional library, Mcl4Mfc, is included for MFC compatibility. Win32 Multithread Programming is an essential resource for any developer interested in learning about Win32 multithreaded programming in order to create high-performance, effective applications. --This text refers to an out of print or unavailable edition of this title.

Book Information

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Customer Reviews

Here’s what I liked about the book:(1) It provides simple explanation of central concepts and issues around multithreaded programming. This knowledge is platform independent.(2) Provides clear explanation of Win32 specific API and Kernel Objects, knowledge that is necessary to do Multithreaded Programming on most Microsoft Platforms.(3) Builds a simple C++ based OO Wrapper class Library for Multithreaded programming that elegantly conceals Win32 APIs idiosyncrasies.(4) Also builds additional higher Level OO Abstractions (like Monitors) that Win32 does not need to support directly but Programmers need often.(5) Great illustrations of Multithreading problems, solutions and Patterns through the trailing part of the book.(6) Code and Diagrams abound. What’s there not to like?

One of the best book on programming I have ever read. The book expands your brain to think in parallel. The included class libraries (C++) are excellent building blocks and I use them all the time in my own projects. The debugging and exception advice is spot on. Although the book never mentions WinSock-2 anywhere, it gives you a full understanding of kernel event objects necessary to implement event-based socket code. Should you feel the need to as I did. Beginners to C++, should learn C++ first before buying this book.

I was a little hesitant to buy this book because it was printed way back but let me know tell you I am glad I got it. The multithreading programming issues and concern are exactly the same as when it was invented so why would the age of this book matter? This book uses C++ but not STL. I like this because it shows you how to write your classes rather than just use them. It illustrates this with the class library it provides with which itself is a great resource. This book teaches you how you live in multithreading world, how you design multithreaded applications.

This is one of the best books I’ve ever read. Before reading this book, I didn’t have experience of multithreaded programming in Windows NT. The class libraries inside give me a good paradigm on how to write safe multithreading codes, and help me to finish the software development at my job as soon as possible. I honestly appreciate that the authors made their efforts to write this excellent
This area of MS OS programming has become antiquated over the years with the arrival of MS Messaging and recently by WCF designs. This makes it hard to find a good reference for upgrading legacy code or connecting an older service to a C# Interop stack. I would like to say that this reference is as good as anything written lately and covers the material thoroughly. It covers the usual parts of thread creation and usage. It also covers synchronization, exceptions and thread pooling. Structured exception handling is also covered and a range of well designed code snippits are also included. As a bonus, a threading library Md, the author’s design, is covered. This library is included on the included CD (shipping and handling may have cracked this item). I was in need of a quick reference for a customer and this book completely filled the bill so I’m giving it five stars. Material this old (16 years) is not available on bookshelves or the internet any longer.

This is the first O'Reilly book I’ve ever read that I cannot wholeheartedly recommend. The introduction to the book states the it is aimed at the novice. However, the examples in the book contain several novice mistakes. The book also glosses over a few point that an experienced MT programmer would understand, but would be baffling to a novice. I also found a few Win32 mistakes such as their handling of redirection of standard in, out, and error. If you know MT and Win32, it’s probably a good book. If you don’t keep looking.

The first five chapters are above average. I considered the wrapper class a distraction from the main topic and would have preferred more examples. This book is definately not for the novice and would be better for the experienced MT programmer whose looking for a quick refresher. If you are looking for a beginner’s MT book keep looking as this one is not for you.

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