Windows NT Device Driver Development
Synopsis

For courses in Windows NT Programming. Windows NT Device Driver Development is the definitive and comprehensive technical reference for students studying software engineering, systems programming, and any engineer who needs to understand Windows NT systems internals. Includes vital information about the internal design and architecture of the Windows NT operating system and critical information on the implementation of standard Windows NT kernel mode drivers. Students will get information on the workings of Windows NT I/O Manager, including how I/O requests are described and passed among drivers, and detailed technical information on interrupt management and synchronization issues.

Book Information

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Customer Reviews

I'm a Windows 95 device driver engineer making my way into the NT world. After much frustration trying to learn the NT device driver architecture in any quick manner on my own, I decided it was time to buy a book. The authors' explanations of the NT architecture are amazingly clear. Gradually each chapter builds on the previous unfolding the mysteries of NT. After each portion of information is presented to you, a real world example is shown, making confusion virtually impossible for the reader. I literally found myself asking a question then turning the page to see the answer presented to me as if on a platter. With precious time saving tips sprinkled throughout the book and a very clear layout, I highly recommend this to any beginner NT device driver author. I believe experts will
find optimizations and tips very helpful as well as a great reference guide to keep by their side.

Before this book, I have written several NT drivers based on DDK samples and another book from Art Baker. Although I could make my drivers work, there are many mysteries to me. It is a little frustrating experience, coz NT driver is much different from those old VxDs in Win95. This book is surprisingly clear. Chapter after Chapter, It is such a joy for me to get answers to some questions which perplexed me for a long time. :) Strongly recommended! David

Windows NT Device Driver Development (W3D) does an incredible job at explaining what is going on. Chapter by chapter (there are 24 chapters) a story unfolds explaining what events lead device drivers in Windows NT to run part of their code. Much detail covers what environment device drivers will find their code running in and how they should deliver things when handing over the next player. I found the core chapters of this book to be the most interesting. For the first time I was reading about NT, and getting a good feel for the flow of control. While much detail is being presented, care was taken to keep the discussion moving. Cleverly topics that could distract the readers the train of thought are postponed a page or two and then given full attention. Source code is mostly discussed after the principles have been covered, and the code is all well commented, but also clear enough to be read without comments. This book is an absolute must for anyone doing NT kernel programming or having a detailed interest in it. It is focussed on NT only and perhaps it is a pity that this wonderful discussion does not draw analogies with other operating systems, which often share similar principles. The clarity of the discussion is marvelous and enticing. Through the eyes of the masters, Windows NT appears to be a very interesting system.

This book is VERY well written and VERY readable. I needed other sources to get an actual driver written (see Chris Cant’s book) but only because this book gives a much more complete picture and I needed something more specific. That’s my point...if you want a good, solid understanding of the system and an excellent reference, get this book. It’s not often one finds technical-minded people with such writing skill.

I began developing NT drivers during the NT 3.1 beta days and saw an immediate need for a book like this. I have been begging people to write this book for over 3 years. In those days the only place to get help was on Compuserve and guess who always responded to questions and provided valuable information for people delving into this new operating system. (The two authors) I am
thrilled that the two best NT kernel developers I know found time and dedicated themselves to the
task of writing this great book. This book is probably more important than any other technical
programming book written to date. The reason is drivers can crash the computer and poorly written
drivers do it on a regular basis. With Windows NT becoming the worldwide server operating system
of choice it is very important that drivers work and work well. This book not only discusses all
phases of driver development, but teaches the audience correct methods of developing robust
drivers. In a matter of weeks you will learn techniques and kernel programming practices that
normally take years to develop. The granularity of the book is well thought out and will serve the
kernel programmer well. If you have been given the task of developing a bus master DMA driver
simply turn to chapter 17 and you will learn more than you ever wanted to know about DMA with
examples! If you just want to learn about how NT manages memory turn to Chapter 3. This book will
become the de-facto standard for NT device driver development and must have on any serious
developer’s bookshelf. Technical Reviewer Mike Barry Sr. Vice President-Development/Engineering
T/R Systems

This is a very complete and good book on NT 4.0 device drivers. The book takes you through lots of
architectural issues in the first 400 pages or so, then walks you through details of drivers. The
authors have a readable style and know what they are talking about. The biggest short coming in
the book is a lack of real information on NT 5.0 drivers. Paul Lever, BlueWater Systems, Inc.

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