Programming the Cell Processor: For Games, Graphics, and Computation

Von Matthew Scarpino
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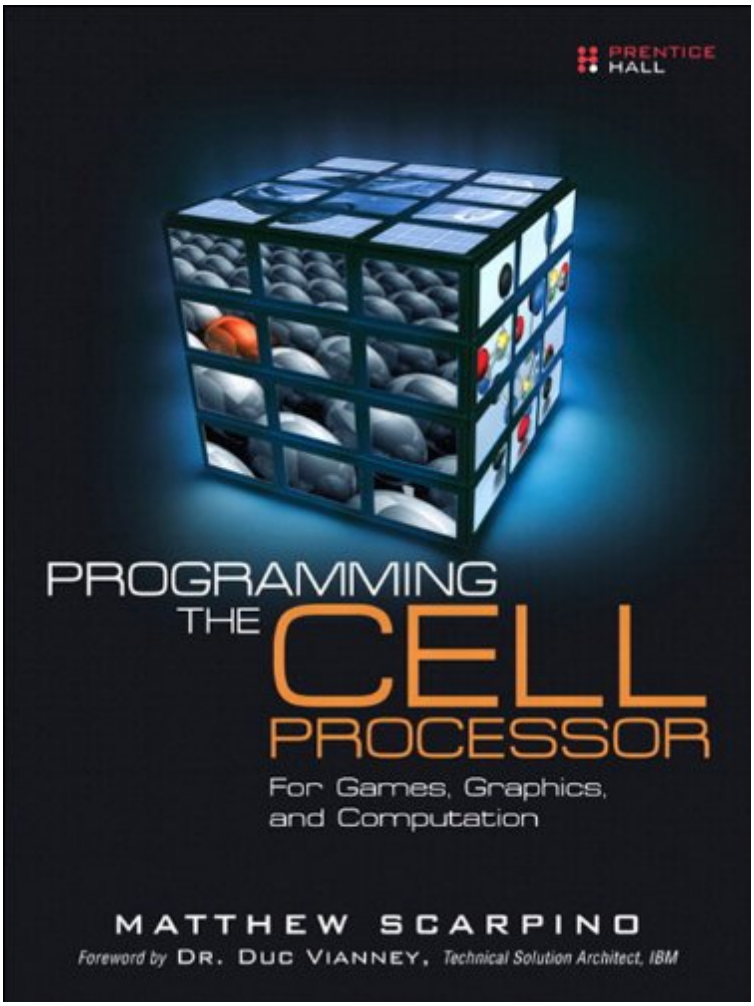

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KundenrezensionenHilfreichste Kundenrezensionen0 von 0 Kunden fanden die folgende Rezension hilfreich. good and interestingVon Kun ZhaoThis book is super. I am a student, I bought this book when I was doing my internship project on cell platform. This book is good for people who want to begin to learn or to improve their cell programming, or even if you just want to know more about cell processor, which has a unique and powerful architecture. I used to read this book when I was in the train, before I went to sleep etc. It's a technical book, but not boring at all. If you have a PS3 at home and Linux running on it, and u want to mess around with the cell processor,

it's a good start with this book.

Kurzbeschreibung Make the Most of IBMs Breakthrough Cell Processor in Any Gaming, Graphics, or Scientific Application IBMs Cell processor delivers truly stunning computational power: enough to satisfy even the most demanding gamers and graphics developers. Thats why Sony chose the Cell to drive its breakthrough PlayStation 3 and why Cell processors are at the heart of todays most powerful supercomputers. But many developers have struggled to create high-performance Cell applications: the practical, coherent information they need simply hasnt existed. Programming the Cell Processor solves that problem once and for all. Whether youre a game developer, graphics programmer, or engineer, Matthew Scarpino shows you how to create applications that leverage all the Cells extraordinary power. Scarpino covers everything from the Cells advanced architecture to its powerful tools and libraries, presenting realistic code examples that help you gain an increasingly deep and intuitive understanding of Cell development. Scarpino illuminates each of the Cells most important technical innovations, introduces the commands needed to access its power, and walks you through the entire development process, including compiling, linking, debugging, and simulating code. He also offers start-to-finish case studies for three especially important Cell applications: games, graphics, and scientific computing. The Cell platform offers unprecedented potential, and this book will help you make the most of it. Kurzbeschreibung Make the Most of IBMs Breakthrough Cell Processor in Any Gaming, Graphics, or Scientific Application IBMs Cell processor delivers truly stunning computational power: enough to satisfy even the most demanding gamers and graphics developers. 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The Cell platform offers unprecedented potential, and this book will help you make the most of it.*Mastering the Cell SDK, including the GCC-based buildchain, ppu-gdb/spu-gdb debuggers, IBM Full System Simulator, and Cell IDE*Understanding the Cell's central processing core, the PowerPC Processor Unit (PPU): structure, programming libraries, and AltiVec instructions*Programming the Synergistic Processor Unit (SPU): vector processing, communication, caching, assembler coding, and more*Leveraging SDK vector and matrix libraries, including the Large Matrix Library, BLAS Library, FFT libraries, Multiprecision Library, and Monte Carlo API*Coding basic 2D graphics using the Linux frame buffer*Building 3D graphics with the new Gallium OpenGL library *Constructing 3D games with Ogre3D and packaging them using Collada digital content interchange*Optimizing the performance of your Cell applications*Developing on standard PCs and transferring code to Cell systems such as the PlayStation 3 Foreword xv Preface xvii Chapter 1: Introducing the Cell Processor 1 Part I: The Software Development Tools 13 Chapter 2: The Cell Software Development Kit (SDK) 15 Chapter 3: Building Applications for the Cell Processor 35 Chapter 4: Debugging and Simulating Applications 53 Chapter 5: The Cell SDK Integrated Development Environment 83 Part II: The PowerPC Processor Element (PPE) 97 Chapter 6: Introducing the PowerPC Processor Unit (PPU) 99 Chapter 7: The SPE Runtime Management Library (libspe) 125 Chapter 8: SIMD Programming on the PPU, Part 1: Vector Libraries and Functions 153 Chapter 9: SIMD Programming on the PPU, Part 2: Methods and Algorithms 195