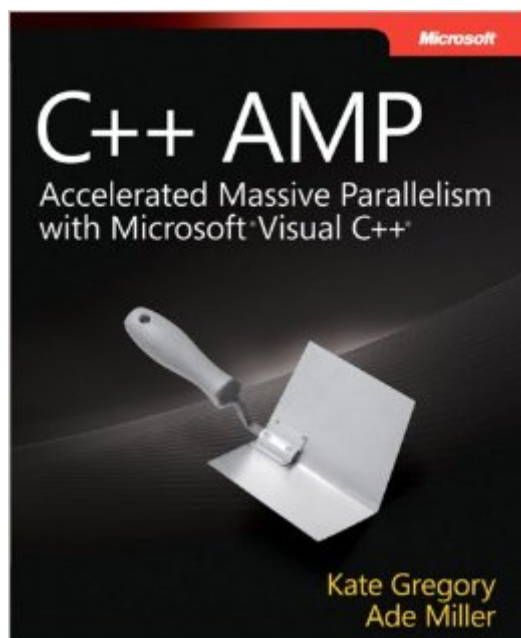**The book was found**

C++ AMP (Developer Reference)

Synopsis

Capitalize on the faster GPU processors in today's computers with the C++ AMP code library--and bring massive parallelism to your project. With this practical book, experienced C++ developers will learn parallel programming fundamentals with C++ AMP through detailed examples, code snippets, and case studies. Learn the advantages of parallelism and get best practices for harnessing this technology in your applications.Discover how to:Gain greater code performance using graphics processing units (GPUs) Choose accelerators that enable you to write code for GPUs Apply thread tiles, tile barriers, and tile static memory Debug C++ AMP code with Microsoft Visual Studio® Use profiling tools to track the performance of your code Get code samples on the webReady to download at: ampbook.codeplex.com/For system requirements see the Introduction

Book Information

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Customer Reviews

Many know that Microsoft runs background development projects that come to light from time to time with surprising advances. "C++ AMP" reveals one of those surprises that give a wake up call to programmers and technologists about the hidden computing reserves hiding in the depths of the GPU card. AMP is Microsofts foray into this area of "desktop supercomputing". The book introduces AMP by using a c++ starfield simulation that evolves from chapter to chapter. Starting with an introduction to the history of computing advancements, the book shows how Accelerated Massive Parallelism (AMP) is attainable on your personal computer.There is an entry fee for this power.

You will need to be comfortable programming in c++ and you must have a recently manufactured GPU. Furthermore, AMP is available only using the Microsoft Visual Studio 2012. The cost of the book is merely pocket change in comparison. However, I have built the starfield simulation expressed in this book and I can personally attest to a computing amplification of 112 times that of my CPU alone. The internet contains further details of how to get a high performance GPU to produce over 700 GFlops. If your hair is not standing on end by now, you don't have the heart of a technologist. This is equivalent to having a car that can do 20,000 miles per hour. Personal planitary transportation anyone? Then read a bit further.Of course there are competing computing models that don't require Visual Studio 2012. Both OpenCL and CUDA programing SDKs can get you into the stratosphere on both Windows and Linux machines using their own c++ compilers. But, you won't have the integrated tools that Visual Studio can apply to load balancing and program testing.

C++ AMP - Accelerated Massive Parallelism with Microsoft Visual C++ is the first book on the market to address the C++ AMP API. I preordered it months ago and when it finally arrived, I devoured it in just a few days.The book starts with an overview of General Purpose GPU computing and how C++ AMP provides the developer the ability to write naturally parallel general purpose solutions (normally executed on the CPU) in C++ that will execute on the GPU.Immediately following, in chapter 2, is a taste of the power of using Accelerated Massive Parallelism on the GPU, an NBody program that simulates the gravitational interaction between thousands of stars in 2 star clusters. Implemented first on the CPU and then with C++ AMP. The results are startling.Then the learning begins with the C++ AMP API, which is implemented entirely with C++ templates and just 2 new keywords added to the C++ language. The authors explain the fundamentals of C++ AMP and provide enough code to demonstrate the handful of templates that make up the API. This is followed by more advanced techniques (Tiling) that speed up your C++ AMP programs even more.As the book progresses, you will learn how to debug your C++ AMP code with the support for C++ AMP that was added to Visual Studio 2012: IntelliSence, GPU debugging and profiling with the concurrency visualizer. A few case studies, with plenty of code, are used to demonstrate what you have learned.Other chapters include: Optimization, Working with Multiple Accelerators, Graphics Interop with Direct3D and the books finale with Tips, Tricks, and Best Practices.

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