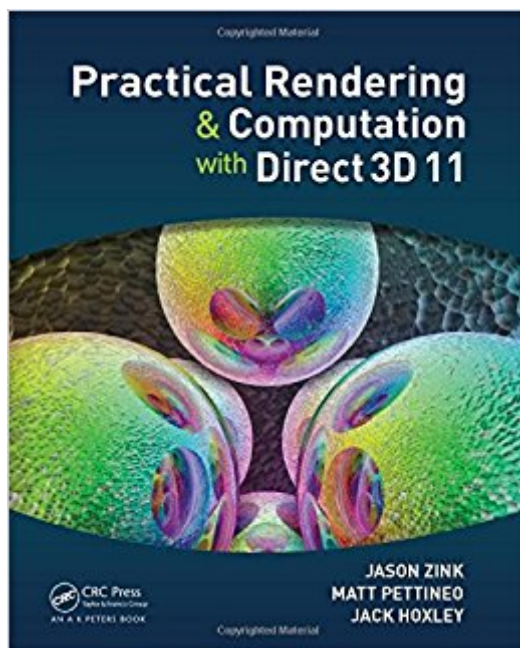## The book was found

Practical Rendering And Computation With Direct3D 11

Synopsis

Direct3D 11 offers such a wealth of capabilities that users can sometimes get lost in the details of specific APIs and their implementation. While there is a great deal of low-level information available about how each API function should be used, there is little documentation that shows how best to leverage these capabilities. Written by active members of the Direct3D community, Practical Rendering and Computation with Direct3D 11 provides a deep understanding of both the high and low level concepts related to using Direct3D 11.   The first part of the book presents a conceptual introduction to Direct3D 11, including an overview of the Direct3D 11 rendering and computation pipelines and how they map to the underlying hardware. It also provides a detailed look at all of the major components of the library, covering resources, pipeline details, and multithreaded rendering. Building upon this material, the second part of the text includes detailed examples of how to use Direct3D 11 in common rendering scenarios. The authors describe sample algorithms in-depth and discuss how the features of Direct3D 11 can be used to your advantage. All of the source code from the book is accessible on an actively maintained open source rendering framework. The sample applications and the framework itself can be downloaded from http://hieroglyph3.codeplex.com By analyzing when to use various tools and the tradeoffs between different implementations, this book helps you understand the best way to accomplish a given task and thereby fully leverage the potential capabilities of Direct3D 11.

Book Information

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Customer Reviews

With it having been several years since I last worked with Direct3D (DX9), I wanted a book as a refresher in the DirectX way of doing things when I decided to return to computer graphics. What I got, was largely unspectacular.Practical rendering is by no means a poor book. It authors are Microsoft DirectX Most Valuable Professionals. This means the material presented is accurate and well written, but it fails on too many fronts to be considered great. The first half of the book is dedicated to explaining the Direct3D 11 Pipeline or at least it tries to. What you get is ultimately a regurgitation of the freely available DX documentation. The authors do little to actually explain the behind the scenes workings and I have a feeling if it is your first foray into DX you will be quickly lost. The one bit of explanation they routinely throw at you is through the use of images to explain concepts. This sounds excellent until you realize what it really means. You get images like a cube with six exploded sides demonstrating a cube map (which is sadly one of the better images) and my personal favorite, an image of a sphere in three different positions to demonstrate translations. This examples may sound petty, but if you read this book you will constantly roll your eyes at the ridiculousness of these listings. Code listings for the book's first half are no better. They are literally ripped from Microsoft's documentation and dumped on the page in an unremarkable matter.The book improves in it's second half with more concrete examples of the concepts. They are actually interesting reads and very well explained compared to the first half. Unfortunately, here is where the book's biggest problem comes in.

I was thoroughly impressed by Practical Rendering and Computation with Direct3D 11 by Jason Zink. Microsoftâ ™s Direct3D API is certainly not for beginners, and neither is this book. But, at the same time, the author does a great job of explaining the material in a way that is approachable. The book assumes you are already comfortable with C++, and doesnâ ™t hold your hand with the syntax. This is great, since you really should have an understanding of C++ before jumping into 3D graphics programming. Itâ ™s also not the kind of book that expects you to type in long pages of example code into your computer. In fact, there are not really any complete examples listed in the book at all. Instead the author chooses to highlight specific API calls and explain how different techniques can be implemented using the GPU.This is in stark contrast to the last DirectX 11 book I read by Frank Luna. Lunaâ ™s text was great, donâ ™t get me wrong. But it was very focused on producing functional demos to showcase certain effects (like shadow mapping or ambient occlusion). Instead Zink chooses to go totally knee-deep into the API itself and, as a reader, I came away much more confident that I understood the material. Just as an example, early on in the book there is a 100 page chapter just on resources. Most other tutorials would briefly show how to create

a buffer, and then move on other stuff. Not here. In fact, the next 200 pages of the book is just about how the pipeline works. Itâ ™s really great, and rare to find such insight.Donâ ™t be fooled, there is certainly code in these pages, and there are a few examples. The book covers some topics like deferred rendering, multi-threaded graphics, dynamic tessellation, and physics.

Conclusion : all around practical guide, highly beneficial, excellent reference Recommended for experienced users. First, Windows XP can't work with DirectX 11. This isn't a beginner's book. If you started but didn't know , no worries. My advice though is to stop & read or if you want, have beside you an introductory book. You'll surely have a better learning experience with this book if you did. There are several out there. One that is notably popular that's an all-in-one (3D, graphics, gaming) book & the one I best recommend is Frank Luna's "Introductory to 3D Game Programming with DirectX 11." He has written other books like these for previous versions of DirectX too. This book is packed & technical with abundant knowledge on the subject & given to you in a logical way. What you get from this book is split up into 2 parts: You first learn the API design. Then you apply what you learned through practical rendering in which you learn how to design & implement algorithms for this purpose. Direct 3D 11 has significant features unlike previous versions . Some of these are new multi-threading ways, general purpose GPU computation & things in the Tessellation stage you can do. Some important differences in the DirectX documentation: 1. gives more low-level details on the API functions (at a technical level) 2. less info. on how to map higher level Rendering/Computation concepts -to actual API & hardware pipelines 3. may have less focus on what an api is used for 4. may have less focus on the practical uses which the book's primary focus is aimed at. I have explored this documentation to some extent. It is an exhaustive reference that comes with the DirectX SDK.

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