Introduction To 3D Game Programming With DirectX 12 (Computer Science)
Synopsis

This updated bestseller provides an introduction to programming interactive computer graphics, with an emphasis on game development using DirectX 12. The book is divided into three main parts: basic mathematical tools, fundamental tasks in Direct3D, and techniques and special effects. It shows how to use new Direct12 features such as command lists, pipeline state objects, descriptor heaps and tables, and explicit resource management to reduce CPU overhead and increase scalability across multiple CPU cores. The book covers modern special effects and techniques such as hardware tessellation, writing compute shaders, ambient occlusion, reflections, normal and displacement mapping, shadow rendering, and character animation. Includes a companion DVD with code and figures.

FEATURES:
- Provides an introduction to programming interactive computer graphics, with an emphasis on game development using DirectX 12
- Uses new Direct3D 12 features to reduce CPU overhead and take advantage of multiple CPU cores
- Contains detailed explanations of popular real-time game effects
- Includes a DVD with source code and all the images (including 4-color) from the book
- Learn advance rendering techniques such as ambient occlusion, real-time reflections, normal and displacement mapping, shadow rendering, programming the geometry shader, and character animation
- Covers a mathematics review and 3D rendering fundamentals such as lighting, texturing, blending and stenciling
- Use the end-of-chapter exercises to test understanding and provide experience with DirectX 12

Book Information

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Customer Reviews

Absolutely no effort was put into this book. It’s a copy paste of the previous book on DirectX 11. In several chapters, the author didn’t even bother changing "Direct3D 11" to "Direct3D 12", so it creates a very confusing mess.

I haven’t read the entire thing but so far it’s pretty good. But just so people know, the chapters on terrain rendering and particle systems that were in the d3d11 book are gone. And the book doesn’t teach you "how to take advantage of multiple cores." as it states on the back, the book directs you to look at Microsoft samples. One cool thing though is the lighting model you implement is a bit more advanced than the one in the d3d11 book.

Smile. Every program on this disk compiles and runs perfectly. I was not able to compile any program of his previous book on DirectX 11.0 and most of the of content came from his previous book for DirectX 11. He talked little about sharers but never mentioned new tool which is provided by Microsoft. I wish at least he provided some information on that tool. I wish he included at least one simple game as well. As always this book is good, because this is only book new available on this subject.

This book has definitely been an invaluable asset to learning Direct3D! My only gripe and the reason for 4 stars instead of 5 are some problems with the samples. For example, entering full screen or changing multi-sampling settings at runtime will crash your application. These issues have been reported long ago on the GitHub repo but there has been no response from the author. Nevertheless, they don’t take away from the content of the book. I’d strongly recommend this book to anyone interested in learning DirectX!

more like introduction to directx12 with 3d game programming. it has everything I need to get started programming graphics and as a beginner I can only get better with this book.

Currently read around 200 pages. So far so good. The maths are well explained and resemble a high-school textbook. Yet you may be shocked on how complicated the initialization of DX12 is. The author made a little framework to simplify that initialization, with important codes printed in the book, which is a nice approach IMO. (better than any OpenGL book). More review as I read along... I've deducted 1 star for 2 things: > a delay of a whole season... while expected the book to be released
in late December 2015, it ends up April 2016 to be delivered (well... I can forgive this if this lead to better quality)> Poor packaging. This is the worse packaging I ever received from US. The cover of a supposedly new book looks like an old one: corners are all blunt and wrinkled. The cardboard packaging was squashed on arrival.

I certainly haven't read this book from cover to cover - as I purchased it in the hope it might be more organized and cover some of the nuances of DirectX12 than Microsofts documentation. Unfortunately this doesn't really help that much. The vast majority of the book is general 3d graphics concepts that could apply to any rendering API. Although I don't have it - it feels like it’s the DirectX11 book with a few changes and DirectX12 slapped on the front. As another example - each time I look up a concept in the index there’s nothing there. I just looked up barrier or transition (pretty fundemental stuff in Dx12), it’s either not in the index or in the case of transitions it’s nothing to do with Dx12. Does it have something on the subject? Err yeah, you can only find it in the contents(?) And the concept is covered really in less than a page. It is the only DirectX12 book out there as I write this. I’m hoping someone is going to write something that really digs into the API and good usage, because this isn't it. It has the feeling of a Andre LaMothe book - it’s largely filler. That I'd be much happier with a book of 100 pages that actually was concise well structured and all about DirectX 12. All that can be said for it is that since the Microsoft documentation is so weak, that it’s better than nothing.

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