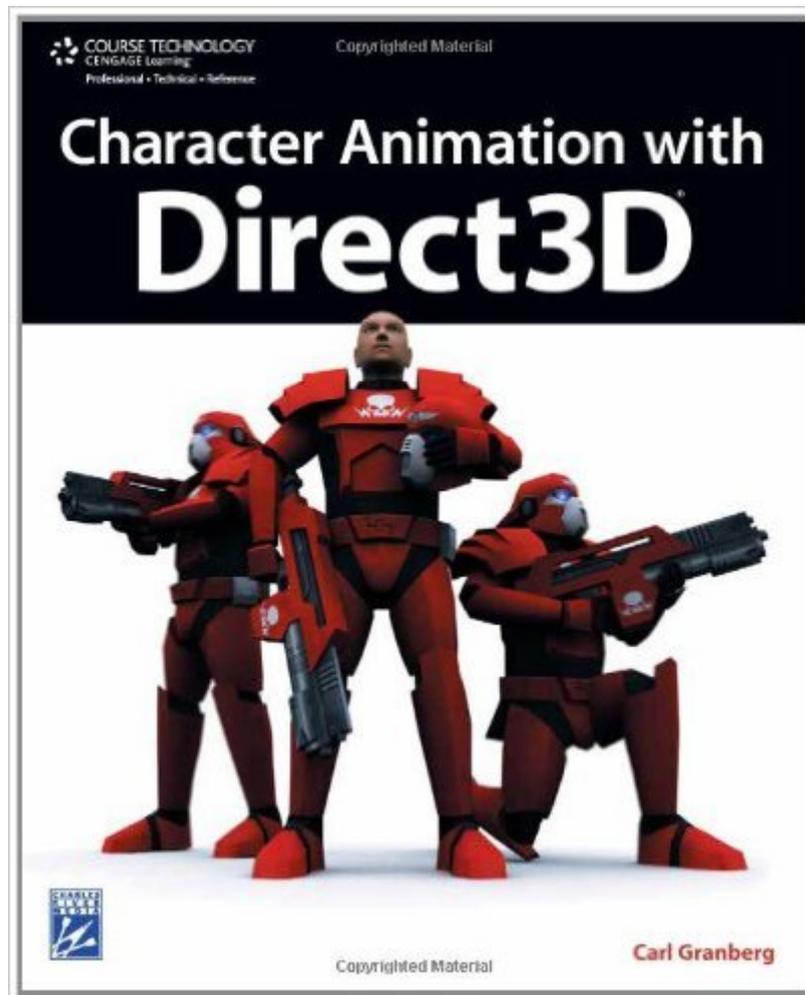


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# Character Animation With Direct3D



## Synopsis

Do you want to learn how to make your game characters look and move more realistically? Character Animation with Direct3D shows you how to apply fundamental character animation techniques to Direct3D technology to bring your characters to life. Beginning with a brief history of character animation, you'll be introduced to the most common types of character animation. This book covers skeletal animation, morphing, inverse kinematics, ragdoll animation, and much more. You'll start with a basic 3D character that you'll bring to life as you work your way through each chapter. Throughout the course of the book you'll learn how to create a character that can walk, talk, collide with objects, fall, and more. You'll utilize skeletal animation for overall movement and morphing animation techniques for more refined movement such as changes in facial expression. You can apply the character animation skills you learn in this book to any game genre. Character Animation with Direct3D is perfect for any game developer looking to create more life-like and interesting game characters.

## Book Information

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Average Customer Review: 3.8 out of 5 stars [See all reviews](#) (6 customer reviews)

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## Customer Reviews

I ordered this book soon after finishing Carl Granberg's last book. The previous book delves into many helpful techniques regarding programming a game from scratch, and many different ways of doing it well. The new book focuses on character animation, but also does it with an iterative approach, making it relatively easy to pick apart the program and figure out how everything works. If more game programming books were like this there would have many more experienced

programmers out there! The book goes through a new, separate example for each technique and covers many aspects of animation as well as many related topics. Examples are skinned meshes, skeletal animation, physics animation (leading to) ragdoll simulation, facial animation/lip sync, mapping characters, crowd simulation, decals on characters (bullet holes, etc), and adding/animating hair! Carl's style is much easier to learn from than several other authors combined, and many of the techniques will help you out even if you are not ready for character animation yet. With this book and the previous book combined, and some knowledge of C++, you have enough resources to write your own game of almost any genre.

I have eagerly awaited the release of this book since it was announced in the spring, and was not disappointed. I am using Granberg's previous book (Programming an RTS Game with Direct3D) in my intermediate-level DirectX course, and will be using Character Animation with Direct3D in my advanced-level DirectX course, which focuses on game engine development. Unlike his RTS book, the code in this one works flawlessly as published (Granberg did release a new VS2008 version of his RTS sources, and all examples are quite stable). The topics in this book are very relevant to the topics faced by programmers working on modern game engines, including facial animation, mesh animation blending (running while moving the torso and head in different directions, for instance), realistic hair, and voice-lip syncing. Along the way, the reader is treated to Granberg's step-by-step examples that teach using a natural, progressive method of increasing the complexity step by step. This form of teaching is very difficult to pull off while also demonstrating excellent, modern, real-world examples at the same time--something Granberg does very well. For instance, chapter 4 in his RTS book will teach you, succinctly, how to create smooth heightmap terrain with multi-textured smoothing, because it is presented step by step (with 12 distinct example projects in that one chapter alone). His Character Animation chapter examples follow the same technique, and is a great choice for a textbook as a result.

1. Introduction to Character Animation
2. A Direct3D Primer
3. Skinned Meshes
4. Skeletal Animation
5. Advanced Skeletal Animation Techniques
6. Physics Primer
7. Ragdoll Simulation
8. Morphing Animation
9. Facial Animation
10. Making Characters Talk
11. Inverse Kinematics
12. Wrinkle Maps
13. Crowd Simulation
14. Character Decals
15. Hair Animation
16. Putting It All Together

Not much filler in this book.. it's all work! Except for the 3D animation industry chapter.. it felt like a good break :) The book is very condensed, if you're a newbie 3D programmer like me you'll be re-reading paragraphs while following the code. Which is a great way to learn! :D Don't let it's age

and Direct3D fool you, the techniques covered here are very much relevant (shaders, texture mapping etc) and can be applied to OpenGL and game engines. Read half of it, only reading the chapters which I need, so the layout is good. The Author's site has updated code which work great. Looking at getting his RTS book also. I would give it 5/5 if it had a bit more 3D newbie explanations, the newbie parts feel a bit short for me. Looking at creating my first game, and this is a great resource. My dev blog is here:[...]

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