



INTRODUCTION

Welcome to *Maya 8 for Windows and Macintosh: Visual QuickStart Guide*.

Autodesk Maya is a high-end 3D graphics program. It's widely used in the film and game industries to produce many of the CG (computer graphics) movies, special effects, games, and commercials you see daily. From characters to critters to cars, Maya provides a full toolset for each step of your project. Whether your aims are personal or professional, realistic or stylized, Maya's depth can help you bring your vision to life.

Maya has long been the industry standard software for both film and television at studios worldwide. Its myriad toolsets, powerful scripting language, and plentiful rendering options make it a good option for a variety of tasks. Recently, this flexibility, as well as continued improvements and broader options, have made Maya the software package of choice for much of the game industry as well.

This book introduces you to Maya's interface and features. You'll soon realize, though, that Maya has enough depth to keep you learning for years. This book covers the different fields in Maya, giving you the concepts and functionality that you'll need on your way to becoming a Maya guru.

Who Is This Book For?

If you want to learn basic 3D concepts, or if you're familiar with other 3D software and want to learn Maya, this book is for you. You should be familiar with computers and other graphics software packages, but you don't need prior 3D knowledge (although it will make Maya easier to learn). This book will guide you through the expansive Maya interface and show you how to animate and render your 3D projects. If you work through this book from cover to cover, you'll end up with a solid Maya foundation—familiarity with the user interface and the capability to model, texture, and animate 3D content.

After exploring Maya's various subject areas—modeling, shading, animation, scripting, and special effects—you may find that you're better at one or the other. As you work through this book, think about which area interests you most. Using Maya could develop into a hobby or even a career in creating 3D content for movies, product ads, and interactive entertainment!

What You Will Need

For starters, of course, you need a license for Maya or the Maya PLE (the free Personal Learning Edition) for Windows or Mac OS installed on your computer. See Maya's documentation for instructions on installing the program.

Maya's documentation will also give you information about the program's hardware requirements, or you can find it on Autodesk's Web site (www.autodesk.com). Maya is resource intensive, so you should beef up your machine as much you can manage. We recommend at least 1GB of RAM; and if you plan to do a lot of rendering, we also suggest ample processing power.

Another important aspect is the kind of video display card you use with Maya. The video card affects the speed of your real-time display and can drastically improve response times while you're working. The support section of the Autodesk Web site contains a current list of qualified display cards. For Windows, Quadro FX or Fire GL cards are recommended. See the Alias Web site for specific models and driver versions.

For Mac, Autodesk recommends the Quadro FX5500 display card. Always check the card manufacturer's Web site for driver updates, because out-of-date drivers are often shipped with cards.

Also be aware that Maya requires a three-button mouse, because the middle mouse button is used as a Virtual Slider feature for many functions. Using Maya without a three-button mouse is possible but very, very cumbersome: any serious Maya user will want to purchase a three-button mouse, or mouse with a clickable scroll wheel.

Check out the Maya documentation for minimum system requirements and additional information, or visit the Autodesk Web site.

Maya Versions and Flavors

This book covers Maya 8 for Windows and Mac OS X. With Maya 8, there's little difference between the Windows and Mac versions, at least in the features covered here. However, whenever a disparity in functionality exists, we'll point it out.

Let's take a closer look at the different flavors of Maya for Windows:

- ◆ **Maya Complete** comes with a full set of modeling tools for working with NURBS, polygons, and subdivision surfaces. It also includes advanced character animation tools, dynamics (the use of physics to simulate real-world forces), and effects. Maya Complete is everything you need to get started doing production work for games, video, and film.
- ◆ **Maya Unlimited** includes all of Maya Complete's tools and features, plus Maya Cloth, Maya Fur, Advanced Modeling Tools, Fluid Dynamics, and Maya Live for Matchmoving.

Because this book is for beginning to intermediate users, it covers only those features and tools found in both versions.

What's New in Maya 8?

Maya 8 marks a changing of the guard. Maya, formerly developed by Alias, is now an Autodesk product, and, as such, has undergone a facelift: the menus have been reorganized to match Autodesk standards. The end result is that most menus are clearer and more targeted than before. Additionally, some old tools have new names, and there are a few new features.

The Modeling toolset has additions to the split poly tool and more robust Transfer options; now you can transfer UVs between dissimilar objects.

UV tools are more user-friendly; now you can select whole shells, as well as color-code them and arrange them without overlap.

In rendering, all the default materials have a new Scatter attribute that provides a one-button solution for sub-surface scattering in Mental Ray.

Of course, there are many more changes, including improved cloth and hair dynamics and toon options. For a full list of changes in Maya 8 visit www.autodesk.com.

Additional Resources

Hundreds of Maya- and 3D-related resources are available on the Web. For general news about the animation industry, visit Animation World Network (AWN; www.awn.com) or Animation Nation (www.animationnation.com). You can find character animation resources and forums on CGtalk (www.cgtalk.com) and CGChar (www.cgchar-animation.com). Highend3D (www.highend3d.com) and 3D Links (www.3dlinks.com) offer tutorials and forums as well as a nice collection of inspirational images and videos. Other good 3D tutorial and informational sites include 3D Café (www.3dcafe.com) and 3D Ark (www.3dark.com).

Off the Web, Eadweard Muybridge's books of photos (*Animals in Motion* and *The Human Figure in Motion*) provide great modeling and animation references. *The Animator's Survival Kit* by Richard Williams is a great book for aspiring animators to have by their side.