

Desktop DVD Authoring

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Desktop DVD Authoring

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To my mother and father, who helped start me on the journey, and to my family, Connie, Karin, and Brian, who make the trip so fascinating.

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About the Author

Douglas Dixon is a technologist and author who has worked in the “Video Valley” of Princeton, N.J. for more than 20 years, at the bleeding edge where advanced consumer video applications meet personal computers. He recently authored *How to Use Adobe Premiere 6.5*, and also writes regularly on technology and business for *Camcorder and Computer Video* magazine and the *U.S. 1 Newspaper* in Princeton.



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As a technology writer, Doug is a contributing editor for *Camcorder and Computer Video* and *Digital Photographer* magazines, covering video-editing and streaming-media technology and tools, from DV to DVD, desktop to handhelds, consumer to professional.

Doug has published technical articles related to his projects in publications ranging from *ACM* and *IEEE* journals to *Computer Graphics World*. He also is active in professional activities; and has spoken at local, regional, and national meetings, from user groups to PC Expo, Comdex and the ACM SIGGRAPH Conference.

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Jim was an editor for *Computers in Physics* magazine, chair of the Instrumentation and Measurement Science Topical Group for the AIP, held various offices in the Princeton chapter of the ACM, is a member of the American Physical Society, and a Senior Member of the IEEE. He has 15 U.S. patents and more than 50 professional publications.

About the Technical Reviewers

These reviewers contributed their considerable hands-on expertise to the entire development process for *Desktop DVD Authoring*. As the book was being written, these dedicated professionals reviewed all the material for technical content, organization, and flow. Their feedback was critical to ensuring that *Desktop DVD Authoring* fits our reader's need for the highest-quality technical information.

Philip De Lancie is a freelance writer covering technology and market developments for production professionals in fields such as video, film, audio, interactive multimedia, and the Internet. He has written extensively on topics including DVD, surround sound, streaming media, and high-definition video. Since 1985, De Lancie has been published regularly in *Mix*, where he is the New Technologies editor. He is also a contributing writer for *Millimeter*, and a frequent contributor to magazines, including *EMedia*, *Video Systems*, *NetMedia*, and *Digital Video (DV)*. His work has also been published in *NewMedia*, *Post*, *Electronic Musician*, and *WEBTechniques*. De Lancie's writing draws on his own professional experience in audio engineering, including 13 years in CD premastering, as well as in multimedia production for the web and CD-ROM.

Bruce Nazarian is an Apple Solutions Expert, a recognized DVD consultant, a factory certified DVD trainer for Sonic Solutions, and an award-winning DVD producer. He is also a member of the DVD Association—Americas Advisory Board, where he sits on the Training and Careers Working Group. Bruce specializes in digital media production for video, broadcast, DVD, and the web. Bruce is the owner of Gnome Digital Media, an award-winning DVD production company in Burbank, CA. He has created the DVD Companion for Macintosh, and the popular Pro-Pack products. You can visit his DVD web site at www.recipe4DVD.com to learn more about how to make DVD authoring easier.

Irwin Eberhart has continuously contributed his multi-faceted skills to the communications industry in various ways. While studying broadcast production at Chicago's Columbia College, he helped pioneer Chicago's own brand of music called "House Music." Under the stage name of Chip E. he produced and recorded many "House Music" classics. Many of his recordings, including "Like This," "Godfather of House Music," and "If You Only Knew," became hits in cities throughout the U. S. as well as in Europe—where Chip E. made many personal appearances. Irwin always had a keen interest in technology, and he became a key player in the Internet industry—managing web development staffs for several top communications corporations. As digital video began to play an important role in

the industry, Irwin began to hone his skills as a film, video, and DVD guru. Irwin has been a featured speaker on DVD technology at events, such as MacWorld Expo, teaches video editing and DVD authoring at Chicago's Mac University, and has authored hundreds of DVDs for corporate museum and film clients. He is currently producing his first film, a documentary about the immersion of "House Music" focusing on the unusual suspects or the unsung heroes who contributed to that style of music—and, of course, it will be distributed on DVD.

Rob Pinniger, after leaving Corpus Christi College, Oxford in 1994 quickly became involved in new media and has since held a number of senior positions at post-production facilities, new media companies and recording studios throughout London. He has also been a freelance consultant and record producer and has written training courses for a variety of major software packages. Rob encoded and authored some of the first DVDs created in the UK and recently passed his three hundredth DVD project. He is currently Technical Manager at Abbey Road Interactive, the new media division of EMI's famous recording studios. In this role he has been involved in the creation of award-winning web-sites and DVDs for a variety of national and international clients. More information can be found at www.abbeyroadinteractive.com.

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As the reader of this book, you are the most important critic and commentator. We value your opinion and want to know what we're doing right, what we could do better, what areas you'd like to see us publish in, and any other words of wisdom you're willing to pass our way.

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Introduction

Desktop DVD Authoring opens up the world of DVD at your desktop—for playing movies, archiving data, and authoring video productions. Whether for business presentations or family events, the new medium of DVD offers an exciting new way to create and distribute video material as high-quality interactive presentations.

Just as the use of CDs for creating personalized music has exploded in the past decade, DVDs are now becoming available for desktop video authoring. This is the next revolution in personal computers, with full-quality digital video and DVD on the desktop.

With a DVD-ROM drive on your computer, you can watch movies on DVD, and explore them to find hidden special features. With a DVD recordable drive, you can use DVD as a bigger and faster CD to store more data and larger files. But most of all, you now can author video productions to DVD.

With this book, you can easily create and share great-looking productions on DVD and even CD, with real, full-quality digital video and audio, complete with professional-style menus. Even better, the DVD discs that you burn at your desktop can be played almost anywhere—not only on computer DVD drives but also on consumer set-top DVD players.

But what about all the different DVD formats? And what are all these different DVD products: consumer and computer, players and recorders? How might DVD make sense for you, for your particular needs? This book will answer these questions by helping you make sense of DVD—discs and formats, consumer and computer products, computer systems and peripherals, for playback and authoring, across both the Windows and Macintosh platforms.

This book takes a broad approach because there is no single answer with DVDs. This book shows you the range of possibilities for desktop DVD authoring, whether you are starting out by just transferring some videotapes to DVD as easily and simply as possible, or stepping up to designing your own interactive presentations.

Desktop DVD Authoring introduces a wide range of DVD authoring tools, for both Windows and Macintosh, progressing from personal applications to more professional tools. It explains the different categories of tools, and shows how to use the tools step-by-step, highlighting differences and special features. Appendix D, “DVD Authoring Software Gallery,” at the end of the book then provides a visual overview of a wide range of available tools for DVD authoring and video editing.

You even can try out the software applications used in the book and work along with the text by downloading trial versions of these products from the company web sites listed in Appendix B, “DVD References.”

From CD to DVD

The tremendous interest in CDs for digital audio was of course driven by the enjoyment of music, but it was enabled by technology, standards, and declining prices. As computers became faster, and CD-ROM playback drives became standard equipment, it became feasible to record or rip music from a CD to your hard disk. With growing hard disk capacity and the standardization of the MP3 audio compression format to squeeze down the file sizes, it became quite reasonable to store your music collection on disk for convenient playback. But the final breakthrough was the growing availability of CD-R/RW drives and the decline in CD media prices to under \$1, making it possible for you to burn your own music mixes to take along with you.

And now, the same excitement is being repeated with DVD and digital video. In the first two years of the new millennium, DVD-ROM drives have become common equipment on personal computers as processor performance has increased so much that you can play DVD movies on your computer, at full rate and full-screen resolution, along with surround-sound audio. Meanwhile, the growth of digital DV camcorders and adoption of the FireWire/IEEE 1394 interface has brought full-quality digital video to the desktop, so you can capture, edit, and record video with no compromises.

Which brings us to the last component: DVD recording. Just as with CDs, DVD recording drives and recordable media are moving down the price reduction curve as manufacturing volumes ramp up. The year 2001 saw the introduction of bundled desktop computer systems; external DVD burner drives; and lower-cost, general-purpose DVD media, all supported by a wide range of DVD authoring tools. And as DVD burners fall under \$500, and recordable DVD discs fall to around \$1, the last cost barriers to DVD are being swept away.

Who Should Use This Book?

Desktop DVD Authoring is for anyone who has some interest and experience with working with video on computers, particularly digital video, and is interested in the possibilities for using DVD to create, share, and archive video material. You may already have some experience using photo-, audio-, or video-editing tools; and with playing and burning CDs. And now you would like to explore DVD authoring.

If you are just starting out with video on computers, you can use this book to learn how to use the “automated” DVD tools to quickly transfer video to DVD with a minimum of fuss, complete with professional-looking titles and backgrounds. And even if you do not have a DVD recordable drive, you can use this book to create and share DVD productions on CD.

If you want to make an interactive production, this book will show you how to use the personal DVD authoring tools, organize your clips into nested menus, and provide more customization of the menus and navigation.

And to create more complete productions, this book demonstrates the professional DVD authoring tools, with advanced DVD features, such as multiple video, audio, and subtitle tracks.

With this book, you can make sense of all the different options for DVD, and pick the right solution for your needs. If a simpler personal tool does what you need for the moment, then you can start out quickly and inexpensively. And even if you need the features in a more professional tool, you still may find it handy to use a more automated tool to quickly transfer some video with a minimum of fuss.

How to Use This Book

This book is organized into six parts, covering DVD consumer products and formats; DVD on computers; and three parts on DVD authoring tools, from automated to personal to professional. (The final part is a set of references for your use.) Trial versions of many of the software applications used in this book are available for downloading. See the author’s web site www.manifest-tech.com.

For help in getting started with DVD, start with Chapter 1, “Making Sense of DVD,” for a quick summary of the different aspects of DVD; and see Chapter 2, “Consumer DVD Players: DVD Video and Audio,” for an overview of DVD on the set-top for movies and music. Then see the second half of Part I to find out about recording to DVD for consumer products and on Macintosh and Windows computers.

Use Part II to learn how to play back DVD movies on your computers, and to explore how DVD discs are organized when they are authored.

Then see Parts III through V to dive in to authoring your own DVDs. By understanding the different types of tools, and exploring how they are designed, you can decide which tools are best for you. And by working along with the book, you can create your own first DVD productions, or step up to a more advanced tool to create more customized DVD designs.

Part I, “Understanding DVD: Consumer and Computer,” introduces you to the broad dimensions of DVD, as it was designed as a convergence medium that spanned Hollywood movies to computer data storage. It explores DVD formats for different types of content, video and audio, and the competing disc formats for recordable media. It then discusses how this wide range of DVD applications and formats is being used in both consumer and computer products.

Part II, “Exploring DVDs on Your Computer,” shows how to take advantage of a computer DVD-ROM drive to play movies on DVD, using popular Macintosh and Windows DVD player software. On your computer, you can go beyond the front-panel control of a set-top DVD player to examine and understand the contents of a DVD movie, and find the “hidden” extra features on the disc. This part also discusses web DVD movies, with both DVD video and computer and Internet applications.

Part III, “Automated DVD Authoring,” shows you how to jump right in to creating simple DVD productions, and record them on a DVD recordable drive or even on a CD. It walks you step-by-step through selecting a collection of clips or even recording directly from a tape, automatically generating DVD menus with thumbnails of your clips, and then burning the result to a disc. These are quick one-stop tools; just pick the clips, burn, and play them back.

Part IV, “Personal DVD Authoring,” introduces DVD tools that provide more flexibility customizing the design of your production. It shows you how to use these tools for importing media clips, laying out menus, linking menus and clips, changing the graphical design, and then creating a DVD recording. These applications assume that you have already edited your video content, whether one long production or a collection of clips, and now are ready to design a DVD production for them.

Part V, “Professional DVD Authoring,” opens the full potential of DVD with more advanced authoring tools. These applications let you create multiple video, audio, and subtitle tracks, give precise control over interactive graphics effects, and provide access to DVD scripting and programming. They also support advanced DVD features, such as encryption, region coding, widescreen, and Dolby Digital audio.

Finally, Appendix A provides a technical summary of DVD formats for content and discs.

Appendix B provides a list of references and web links to more information, including DVD information and hardware and software products.

Appendix C is an extensive Glossary of terms and concepts used in DVD authoring and video and audio editing.

Appendix D is a DVD Authoring Software Gallery that provides a visual overview of these and other tools for DVD authoring and video editing.