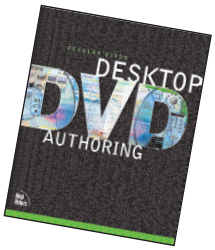
New Riders Peachpit Press

Do-It-Yourself DVD Authoring!



Doug Dixon's *Desktop DVD Authoring* brings the world of DVD to your Mac and PC whether you want to play movies, archive data, or create your own video productions. In this handy cheatsheet, Doug helps you make sense of DVD formats, takes a look into the promising future of DVD, and provides you with a complete list of DVD authoring software.

DVD Format Summary

DVD format logos are used on consumer electronics products to identify both the types of logical formats that a product can play and the physical recordable formats that it can write to. The logos also indicate which blank DVD media can be used for recording.

Table 1 lists the logos used to identify the logical DVD video and audio formats that a particular DVD set-top player or computer can read and play.

Although a set-top player with these logos can play a manufactured disc in the associated format, it may or may not be able to read different kinds of recordable discs that contain the same data. These days, most DVD players and DVD-ROM drives that can play movies on manufactured DVD-Video discs, also can play video recorded in DVD-Video format on recordable (R) and sometimes ReWritable (RW) discs. The new Video Recording (VR) format is used on set-top DVD recorders that support editing.

Table 1

DVD Video and Audio Logical Formats and Logos

Format	Supports
DVD-ROM	*DVD Read Only Memory*: Reads manufactured read-only DVD discs. Typically used for computer DVD drives that can read manufactured data DVDs and DVD-Video discs. Recent drives also read recordable (R) and often rewritable (RW) recorded formats. Often also reads CD-ROM, CD-R, and CD-RW formats.
DVD-Video	*Video DVD*: Plays movies on DVD, for two hours or more, with interactive menus.
DVD-VR	*Video Recording*: New enhanced DVD-Video format with non-linear editing capability. Plays discs from set-top DVD recorders that use VR format to provide real-time recording and updating of discs.
DVD-Audio	*Audio DVD*: Plays high-fidelity audio DVDs, with graphics and interactivity.

Consumer DVD on CD: Video CD/SVCD

Although DVD is thought of in the United States as the disc format for video, the CD format is also used for premastered material (especially CD-Audio discs), and there is nothing preventing the distribution of video on CD as well. In fact, the Video CD (VCD) and Super Video CD (SVCD) formats have become very popular, especially in Asia, as an inexpensive medium for distributing shorts, such as music videos and even full-length movies (**Table 2**). Many current set-top DVD players, and most DVD player software applications, will play discs in VCD format, and sometimes the SVCD format as well.

VCD uses the older MPEG-1 compression format, and has lower video resolution than DVD, but it can fit 74 minutes of "VHS-quality" video on a CD disc. The newer SVCD format uses the same MPEG-2 video compression format as DVD, although at a lower resolution, to fit around 35 minutes of "near-DVD" quality material on a CD. SVCD also supports interactive menu navigation like DVD.

Another approach to sharing DVD content on CD discs is to simply do exactly that: Author DVD productions that are short enough to fit onto a CD (around 18 minutes at reasonable quality). These discs typically do not play on set-top DVD players, but they can be played on a computer with DVD player software.

Table 2

Consumer DVD on CD—Video CD and SVCD Formats

VCD—Video CD
74 minutes, VHS-quality
MPEG-1 video, 352×240 resolution
SVCD—Super Video CD
35+ minutes, near-DVD quality video
MPEG-2 video, 480×480 resolution
Interactive menus
DVD on CD
Full DVD format on CD
Limited player support
Around 18 minutes at reasonable quality

The Future of DVD: High Definition

The future of DVD looks bright and shiny. As a consumer product, DVD player sales continue to set new records. As a computer peripheral, DVD-ROM readers are becoming standard on new computers—and even DVD burners are becoming more common options. The history of consumer electronics and the computer industry tell us that prices will continue to decline, as they have with CD-based products.

On the compatibility front, newer players are designed to read a wider range of formats, and to do so more reliably. You should be confident that your investment in making permanent recordings on Recordable (R) discs will not be obsolete, but for the immediate future you still need to check the compatibility of specific burners, players, and disc media.

The future of competing ReWritable (RW, RAM) formats is less clear. You can certainly use this type of media for specific applications, such as daily data backups, video check discs, and set-top video recorders. However, you need to be aware of potential compatibility conflicts if you want to use these discs in other systems and at other sites.

Meanwhile, technology continues to improve, and the DVD's 4.7GB capacity is starting to seem small, just as floppy disks and now CD discs are no longer big enough to suit our needs. Fortunately, several new technologies are being pursued to increase future DVD capacity, especially for recording and storing material in high-definition (HD) video format.

In early 2002, the DVD Forum decided to pursue the use of more aggressive, low bit-rate compression for storing high-definition material. The intent is to stay within the existing DVD technology by using a newer compression format, such as MPEG-4.

At the same time, a second consortium of nine companies, who are also members of the DVD Forum, announced a new large-capacity optical disc video-recording format called Blu-Ray Disc. Blu-Ray can store up to up to 27GB per single-sided disc, or up two hours of high-definition video, or more than 13 hours of standard definition video (at 3.8Mbps).

The Blu-Ray format replaces the red laser used for DVD with a shorter wavelength blue laser, squeezing the tracking pitch in half and permitting higher-density recording. With the increased capacity, Blu-Ray can continue to use the same MPEG-2 format used in DVD and high-definition television.

This group also aims to develop even larger capacity formats, reaching over 30GB on a single-sided disc and over 50GB on a single-sided double-layer disc.

DVD Authoring Software

If you're serious about authoring your own DVDs, you'll need the right tools. Here's a selection of desktop DVD authoring software organized from consumer to more professional. Check out Doug's **Manifest Technology** site for more information (**www.manifest-tech.com**).

Consumer Video Editing Tools with DVD Authoring

Automated/template-driven editing tools with DVD authoring export, for around $80 to $150.

- **CyberLink Corp.—PowerDirector**
  www.gocyberlink.com
- **InterVideo Corp.—WinProducer**
  www.intervideo.com
- **Pinnacle Systems—Studio 8**
  www.pinnaclesys.com
- **Roxio—VideoWave**
  www.roxio.com
- **Ulead Systems—VideoStudio**
  www.ulead.com/vs

Automated DVD Authoring Tools

Turn-key DVD authoring, direct from DV in to DVD out for under $100.

- **MedioStream Inc.—NeoDVD**
  www.mediostream.com
- **Pinnacle Systems—Expression**
  www.pinnaclesys.com
- **Sonic Solutions—MyDVD 4**
  www.mydvd.com and www.sonic.com
- **Ulead Systems—DVD MovieFactory**
  www.ulead.com/dmf

Personal DVD Authoring Tools

Simplified DVD authoring for around $300 to $600.

- **Apple Computer—iDVD**
  www.apple.com/idvd
- **Sonic Solutions—DVDit!**
  www.dvdit.com
- **Ulead Systems—Ulead DVD Workshop**
  www.ulead.com/dws

Professional DVD Authoring Tools

DVD authoring with support for many DVD-Video features at around $1,000.

- **Apple Computer—DVD Studio Pro**
  www.apple.com/dvdstudiopro
- **Pinnacle Systems—Impression DVD-Pro**
  www.pinnaclesys.com
- **Sonic Solutions—ReelDVD**
  www.sonic.com/products/reeldvd