

DVD Screeners

The other popular way to screen films is on DVD. Almost every household has a DVD player and thanks to the prevalence of large-screen TVs, DVDs are a great choice for work-in-progress screenings and focus group tests. Most festivals still require DVDs for submissions and most sales reps, publicists, and distributors will ask for DVDs as well.

Use a simple DVD authoring app like Roxio Toast Titanium to create a DVD video disc that will open in any DVD player and start playing (see Figure 18.5). This will ensure that pretty much anyone will be able to watch it without technical problems. It's common to use watermarks on DVDs screeners because piracy can happen with them as well. If you want to know more about DVDs for mass distribution and also Blu-ray discs, check out Chapter 19.

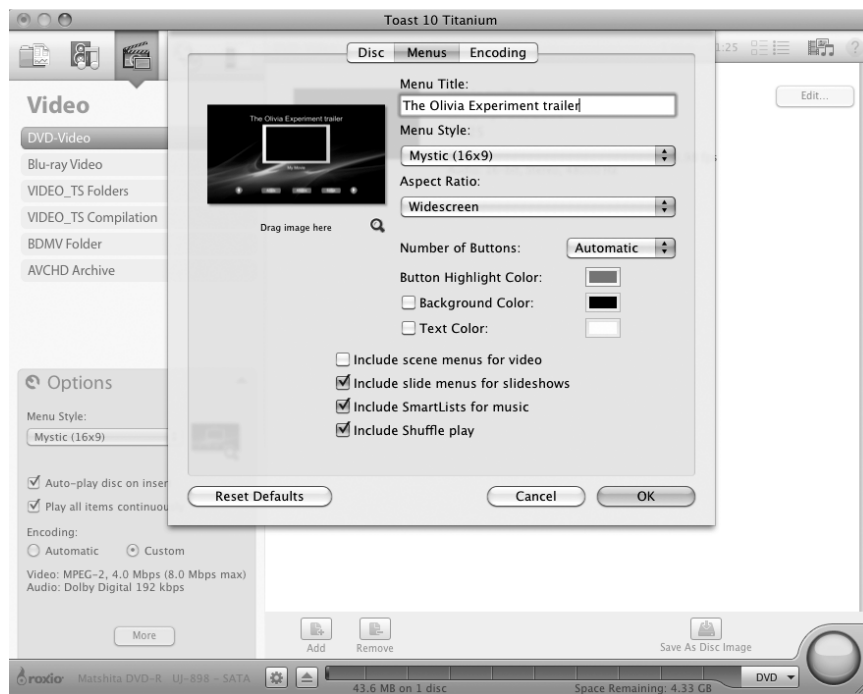


Figure 18.5

Use a simple DVD authoring app like Roxio Toast Titanium to create viewing copies for works-in-progress and festival submissions.

Different Types of DVD

Data DVDs are different than video DVDs, even though they use the same type of disc media. Data DVDs are simply another way to store files and folders, like any drive. Video DVDs use MPEG-2 encoding to store video, audio, and other media in a format that is readable by DVD players. In other words, if you drag a QuickTime movie onto a data DVD to save it, you're not making what we refer to as a DVD. You're just dragging a file onto a disk. To make a true DVD, you'll need DVD authoring software like iDVD or DVD Pro.

DVD and Blu-ray Discs

DVD and Blu-ray Discs are great ways to watch movies. They're small, portable, and in the case of Blu-ray, offer full HD quality. Web-based video-on-demand is poised to take over the market, but DVDs and Blu-ray Discs are still an important part of the delivery spectrum, and it's hard to beat the Blu-ray format when it comes to quickly accessible high-quality playback.

There are two types of DVD production: the small batches that you can make at home using your computer's DVD disc burner (see Chapter 18), and larger batches that you can have created by a professional duplication house. We discussed the basics of creating a DVD screener in Chapter 18, but if you are making DVDs for mass distribution, it gets a bit more involved.

While most people use the term "DVD" to refer to a DVD disk containing video, it's important to remember that there are different DVD specifications. There are the DVD-ROM formats that your computer can read data from (these, in turn, break down into subcategories by format and operating system), and there's DVD-Video (or DVD-V), which is a complex specification for presenting standard definition video onto a DVD disk. You'll use DVD-ROMs for backing up your project and other data, but you'll use DVD-V when you want to give someone a copy of your video that can be played in a normal DVD player. For Blu-ray Discs, there are also three types: BD-ROM is the counterpart to DVD-V, a complex specification for presenting high-definition video on a Blu-ray Disc. BD-R is the Blu-ray data disc format, and BD-RE is the rewritable Blu-ray data disc format. For this discussion, we'll be concerning ourselves with DVD-V and BD-ROM.

Technically speaking, DVDs and Blu-ray video discs are simply optical discs, a type of file storage media that will contain a file-based master of your film. But making DVDs and Blu-ray Discs is a little more complicated than simple file-based mastering. In addition to having to compress your final video into the MPEG-2 or H.264 format that these optical disc formats demand, you'll need to author the menu system of the disk. If you've ever watched a commercial DVD video, you know that they can have complex interactive menus that allow the viewer to select specific scenes, configure special audio options such as commentary tracks, activate and deactivate subtitles, and view slide shows of still images.

Even if you don't want a menu, if you want a disk that simply plays your movie when you press play, then you'll need to do a tiny bit of authoring to set up the disk so that it works this way. All of these tasks are accomplished using a DVD authoring program.

Often, the biggest selling point for DVDs and Blu-ray Discs is the supplemental content beyond the feature film itself. Outtakes, gag reels, featurettes, original storyboards, rough special effects shots, director commentaries, and interviews with cast and crew members are all part of what makes DVDs and Blu-ray Discs worth owning. The latest trends include Web links and hidden bonus tracks. The production of some of these materials will require time during your regular production schedule—on-the-set interviews, making-of segments, and so on. Other features, such as audio commentaries, can be produced after you've finished your final cut.

The commercial DVDs and Blu-ray Discs that you rent come in several different formats. Although they all conform to the DVD-V or Blu-ray Disc specification, they might have very different capacities, depending on whether or not they have information on both sides or on separate layers within the disk. Table 19.1 shows standard DVD-V and BD-ROM formats.

Table 19.1

Standard Optical Disc Video Formats

Name	Type	Capacity
DVD-5	Single-sided, single-layer	4.7GB
DVD-9	Single-sided, dual layer	8.54GB
DVD-10	Dual-sided, both sides single-layer	9.4GB

DVD-14	Dual-sided, one side dual-layer	13.24GB
DVD-18	Dual-sided, both sides dual-layer	17.08GB
BD-ROM	Single layer	25GB
BD-ROM	Double layer	50GB

(Note that in terms of actual storage capacity, these formats all have slightly less capacity than what's listed here. A DVD-5 disk only holds 4.37GB, as far as your computer is concerned. This is because computer manufacturers consider a GB to be 1,024MB, while DVD manufacturers consider a GB to be 1,000MB. The figures listed here are the numbers you'll see preferred by DVD manufacturers. They are the numbers you'll most commonly see.)

Most computer-based DVD burners write in the DVD-5 format. Although this is the lowest capacity, it's still enough room to easily hold a two-hour movie while maintaining decent image quality.

What format you need depends largely on your project. If you simply want to create viewable DVDs as a way to give copies of your movie to people, then a single-layer DVD burner will be fine. Similarly, if you're creating a final master for delivering to a DVD/Blu-ray Disc duplication facility, and you've authored some simple menus and added a couple of audio commentary tracks, then a single-layer DVD or Blu-ray Disc will still probably be plenty of capacity. (We'll talk more about preparing for mastering at a duplication facility later in this chapter.)

If you've got a more complex project that requires more storage—a movie with lots of menus, lots of extra video, several commentary tracks, or different audio mixes—then you may not be able to fit all of that onto a 4.7GB DVD or 25GB Blu-ray Disc, so you will need to consider moving to a higher capacity.

You probably won't ever need to worry about DVD-14 and 18. These are generally used for distributing entire seasons of TV shows or extremely long documentary productions.

DVD and Blu-Ray Compression

Your first step in outputting to optical disk begins with encoding your file-based master. Video for DVDs and Blu-ray Discs gets compressed using MPEG-2 or H.264 (a type of MPEG-4) compression. After your video is completely finished and you've locked picture and audio, you can consider your compression options.

There are several different ways to go about encoding for optical disks:

- Most authoring packages include built-in encoders. In most cases, you can take your file-based master and import it into your authoring program, and it will perform the necessary encoding for you.
- You can install a software-based encoder and compress the video yourself, such as Apple Compressor. In addition to stand-alone software encoders, you can export MPEG-2 or H.264 video directly from your editing program.

To encode a DVD or Blu-ray Disc, whether you're using an editing application or authoring software, you'll need to give careful consideration to your compression settings. Choosing compression settings is a process of balancing disk capacity, image quality, and the throughput capability of the DVD and Blu-ray specification. If you're trying to cram a lot of extra material onto a disk, you might have to sacrifice some image quality.

DVD and Blu-ray audio come in five flavors: PCM, Dolby AC-3, MPEG, DTS, and SDDS. PCM audio is the same as the audio that's recorded on audio CDs, and you can use any WAV or AIFF file as the source for PCM audio in a DVD project. Dolby AC-3 is 5.1 channel Dolby Digital Surround Sound that has been compressed using a special codec. Typically, the 5.1 channels are designed to create a surround environment in a movie theater, so the channels are laid out as left, center, right, left surround, right surround. The .1 channel is an optional subwoofer track for low-frequency sounds. However, if surround sound is out of your league, don't worry. Dolby AC-3 doesn't require that your sound tracks be arranged this way—you can also have just a normal stereo mix. MPEG audio is not used in North America. DTS and SDDS audio are other forms of surround sound used for feature films—we discussed them a little in the section on audio mixes earlier in this chapter. You'll need a professional mixer to get DTS or SDDS sound, and that person will be able to give you the mix in the properly encoded format for inclusion on a DVD or Blu-ray Disc. DVDs and Blu-ray Discs can also have multiple streams of sound, each containing a full mix for

different language versions or extras such as director commentaries. Though you might often err on the side of PCM audio, since it's uncompressed, if you have a lot of audio or alternate audio tracks, then you might need to compress some or all of them using Dolby AC-3, simply to fit them all onto your disk.

Finally, DVDs and Blu-ray Discs have up to 32 special built-in subtitle tracks, again for distribution in many languages.

All of these details and concerns will be further explained in the documentation for your DVD/Blu-ray authoring package.

i Presentation Values

If you make your own DVDs or Blu-ray Discs, be sure to create professional looking labels. 3M and Avery create blank laser printable optical disk labels, or you can enlist one of several online self-publishing services such as wwwcreatespace.com. Labels should include the following information: production company, producer/director's name and contact info, project title, date, total running time (TRT), and format.

DVD and Blu-Ray Disc Authoring

After you've compressed your files, you're ready to author the menus and interactivity that will form the interface for your DVD or Blu-ray Disc. Through special authoring software, you'll use still images and short video clips to create the menus and interface for your disc, as well as establish how the user will navigate using the player's remote control.



Figure 19.2

Apple's DVD Studio Pro lets you author professional-quality DVD and Blu-ray videos, complete with menus and interactivity.

When creating your DVD or Blu-ray Disc, here are some technical tips to keep in mind:

- Optical discs are designed to play on both video and computer monitors. This means that they are susceptible to all the limitations of video. Unless you're absolutely certain that your DVD or Blu-ray Disc will only play on a computer monitor (perhaps because it's a corporate or industrial presentation that will

be shown under controlled conditions), you'll need to make sure your DVD interface uses only NTSC-safe colors, and that the buttons and text all fall within the standard title-safe area. Test your DVD or Blu-ray Disc on a video monitor before you publish it.

- Pretty much all DVD or Blu-ray Disc players have a handheld remote control device, while computer-based DVD players include an equivalent virtual remote. Don't forget to program interactivity for the remote as well as the on-screen menus.
- Whatever the size of your DVD or Blu-ray Disc, you'll need to double that in computer storage space in order to create the disc. If your DVD is 4GB, you'll need 4GB for the source materials for your compressed MPEG-2 video and 4GB for the rendered DVD files.
- Blu-ray Disc graphics should be created at 72dpi, with a pixel resolution of either 1920 x 1080 or 1280 x 720, depending on which type of HD you prefer.
- DVD graphics should be created at 72dpi, with a pixel resolution of 720 x 480 (for SD video). Remember that if you create menus and buttons in a square-pixel environment, like Photoshop, you should work with files that are 720 x 540, and then resize them to 720 x 480 when you're ready to import them into your DVD authoring application.

If you plan on burning the disk yourself using a recordable DVD or Blu-ray Disc drive, you'll want to be sure that you buy the right type of media for authoring. Check the packaging and your disc burner's manual to be certain.

If you plan to have your DVD or Blu-ray Disc mass produced by a professional replication house, then you should consult with them about the different capacities (and prices) that are available. If your final DVD or Blu-ray Disc will be a higher-capacity disk and you only have a single-layer burner (or no burner at all), you can still author the disk yourself. You'll just have to write the final files to a hard drive and move the resulting files to the replication house when you're ready to make the disk. Most authoring programs allow you to output to a disk image or to a hard drive. Check with your replicator to find out what media they can accept.