



Jim Endicott

Jim Endicott is owner/manager of Distinction, a business communications company that provides creative and consulting support services. He assists business professionals in enhancing the content, tools and techniques related to effective presenting. Jim can be reached at 503.554.1203, jim.endicott@distinction-services.com.

Learning the basics of digital video is worth the effort

Because this business communication stuff is what I have a passion for, it's fairly easy for me to work up the enthusiasm to go the extra mile and turn a good presentation into a great one. Unfortunately, this usually means more work. And I'm well aware that for most of the people who read this column, preparing presentations is already time-consuming enough.

But as my high school coach said, it's easy to be mediocre; if you want to be exceptional, you have to push yourself. One good way to flex your presentation muscles is to learn the fundamentals of digital video.

For many, the perceived pinnacle of a really hot business presentation is the digital video clip. That's because, aside from the gee-whiz factor, a properly used video clip — one that demonstrates a product, say, or delivers a customer's testimonial in his own words — adds depth to your message and provides an element of visual sophistication that most presentations lack.

Of course, it wasn't long ago that digital video tended to look like a badly dubbed foreign film, with jerky movement and sound that was hopelessly out of sync. But recent improvements in hardware and software have made it possible to create high-quality digital video that looks and sounds like it should. Multimedia projectors have improved so much in the past two years that most new ones can project clean images that don't ghost or blur. Computer processors are now fast enough to handle relatively large video files and video-editing software is getting easier to use.

Indeed, the technical team has done its part. Now it's time to do ours.

How does digital video work?

When I was a kid, I remember getting a little stack of movie cards in the bottom of a Cracker Jack box. As I held one end and flipped quickly through the cards with the other hand, the images seemed to move.

That same concept is what creates the illusion of movement in film, and it's at the root of how digital video works. Instead of flipping through cards, your computer is quickly decompressing and displaying a series of single images (frames). At the rate of 15 frames per second, the fluidity of movement in such a video file is perfectly acceptable for most business presentations.

There's just one problem: Uncompressed digital video can take up hundreds of megabytes of hard-disk space. Fortunately, available software and hardware tools significantly compress those images into a much smaller storage size.

Software decompression

Different approaches to software compression are often referred to as codecs (compression/decompression), and there are plenty of them. In most cases they already reside on your laptop or desktop computer and are ready to be called into action when you play a video file. Microsoft Video 1, Cinepak and Indeo are a few of

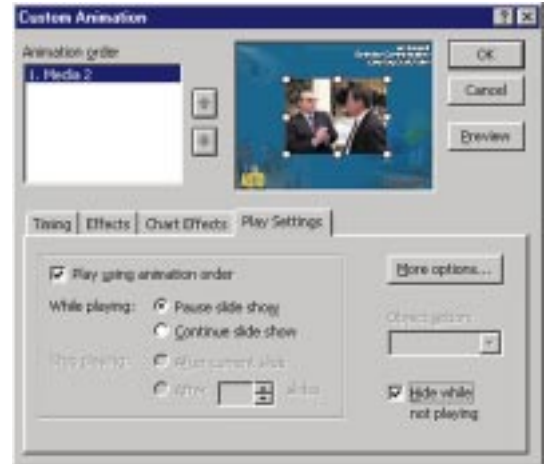
the most common codecs.

(QuickTime, originally a Mac-based video architecture, has been available for some time in a QuickTime for Windows version, making cross-platform digital video transfers much easier.)

Each codec has its relative strengths and weaknesses, depending on the specific playback situation. The important thing to remember is that your video needs to be digitized using a codec that's supported on your computer.

In a Windows environment, video (or movie) files are typically stored in AVI or MOV file formats. Don't expect these digital video clips to fill your entire screen, however. Because of the horsepower required to decompress and display images rapidly, you're typically limited to a maximum 320 x 240-pixel window requirement — the equivalent of a quarter-screen at a VGA 640 x 480 display resolution.

TIP: If you plan to play back a video sequence much longer than



PowerPoint's CUSTOM ANIMATION menu (Step 4) gives you a number of display options. Among them is the HIDE WHILE NOT PLAYING option (lower-right-hand corner), which will keep your movie hidden until you are ready to play it.



a minute, consider playing the video directly from a VCR into your electronic projector. Most projectors will allow you to seamlessly switch between computer and video sources with the touch of a button on the remote. The obvious advantage to using a VCR in such situations is that you can have a full-screen image with relatively unlimited playback time. The disadvantage is having to haul more equipment to your presentation.

Hardware decompression

In recent years, you've no doubt heard the term MPEG (now often referred to as MPEG-1), a compression standard devised by the Moving Picture Experts Group. A few years ago, MPEG playback required an expensive chip on the computer's motherboard to assist with the decompression process, but it's now possible with onboard software on newer computers.

Once upon a time, the equipment needed to do this MPEG compression cost more than \$20,000. Now, parallel-port encoders that do the job well are available for less than \$500 (see "Capture digital video with a magic little box" in the March 1998 issue). And some digital video camcorders — such as Hitachi's new M2 — even record directly into an MPEG format, eliminating the need for an encoder altogether. Most newer video-capture cards also provide MPEG compression capabilities, but count on the actual compression time taking longer than traditional codecs.

With today's equipment, MPEG compression ratios of higher than 100:1 are possible at 30 frames per second.

When should I use video?

As we've discussed in the past, sound and animation tend to lose effectiveness if they're overused. Inserting a brief video of your CEO talking, instead of simply putting her words up on the screen in quotes, is a great way to drive home a key point. But a 20-minute video of your CEO probably is overkill, no matter how enthralling she may be.

Video files don't have to be

talking heads, either. They can be clips that illustrate a manufacturing process, screen-cam images, 3D models — just about anything, really. They can even be animated logos that rotate slowly in the title slide. Whatever the clips, they work best when used to add credibility to your presentation and to support and reinforce your core message.

How do I import it?

Now that you've decided to go the extra mile, here are the basic steps to incorporate a completed video clip into your presentation.

STEP 1: Move your video clip to your hard disk for playback. CD-ROMs and other external devices may not provide a smooth enough flow of data to keep up with your decompression software. Also, for PowerPoint to link to the file, it must always find the file in the same place, or you'll get an error message. Keep video files you use in the same directory with your presentation.

STEP 2: Go to the specific slide where you want to insert the clip. In PowerPoint 97, select INSERT, then MOVIE AND SOUNDS. (Depending on the codec used, you may need to use INSERT, then OBJECT and embed a different movie player). Choose MOVIE from FILE option and navigate to the folder in which your video file is stored. Select the file and click OK. You will see that the file has dropped into your PowerPoint screen.

STEP 3: To ensure that the clip is the right size when played back, right-mouse-click on the video file and select the FORMAT PICTURE option, the SIZE tab, then BEST SCALE FOR SLIDE SHOW to choose your computer screen resolution. (e.g., 800 x 600). Resist the urge to stretch your video image any larger on your screen. Trust me, the resulting decline in both quality and performance isn't worth the extra inches.

STEP 4: Make another right-mouse-click on the video and select the CUSTOM ANIMATION option. (Don't let the word *animation* throw you off; this option simply lets you orchestrate your

video playback with any other animations on the screen.) Your video file will show up under the TIMING tab as an unanimated media object. When you click on your video file (or any other media image), you will get additional options that you may not have seen before. In the same CUSTOM ANIMATION menu, select the PLAY SETTINGS tab. The HIDE WHILE NOT PLAYING option will make your video visible only when it's playing.

Ordering out

With the proper equipment, you can convert already-produced video into computer-ready files. If you don't have the time or inclination to learn how, there are hundreds of service bureaus that can take care of this chore for you.

To find one, search the Web with the keyword string *digital video*, and look specifically for service bureaus. You can also check out the Yellow Pages under *video production*, but there's no guarantee that outfits under this listing can work with digital video.

If a service bureau understands the concepts discussed in this column, you're probably in good hands. But be sure to request that the data rate (how quickly the video data is fed to the processor) is appropriate for your application. Hard-disk playback can usually accommodate 1,000 Kbps, and CD-ROM playback maxes out at about 300 Kbps. Expect to pay \$90 to \$150 to have a service bureau digitize a 60-second cut from your original videotape.

Once you work through this process a few times, it won't seem like such a stretch. But you won't know until you try. Like my coach always said: No pain, no gain. ■

Tech tip

In Windows 95 and 98, you can get a list of the video compression codecs installed on your computer by going to the START menu, selecting SETTINGS / CONTROL PANEL. Then choose MULTIMEDIA, click on the ADVANCED tab, then double-click on VIDEO COMPRESSION CODECS.