

An Introduction to Digital Video for Creative Professionals

Set your world in motion

Being a creative professional means making the content you communicate clear, concise, and compelling. You've got a lot of techniques at your disposal: color, typography, photography, illustration, and so on. But no technique is more powerful than motion. The world is no longer standing still for today's creative professionals. In the wake of the inexorable drive toward all things digital, video has found its way onto our computers and has, thereby, given you the power to set your world in motion.

If you are a graphic or web designer, an art director, commercial artist, photographer, illustrator, a communicator at work, or a fine artist, you are probably seeing video and motion graphics overlapping in your own discipline more and more. You may find yourself more frequently collaborating with videographers and animators, clients may request video and motion graphics as part of an integrated marketing program, or you may decide that a promotional video is the key to your future. Whether you want to become proficient yourself, or whether you want to know enough to be a better-informed teammate, this introduction gives you a basic understanding of digital video, ways it can help you expand your creative reach, and the items you need to get started.

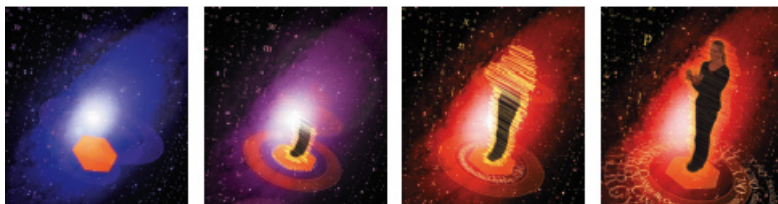
A very short history of the digital video revolution

If you have ever made or played with a flipbook, setting simple line drawings in motion as you fan the pages, you understand the basic principle of making images appear to move, also known as animation. When you show a sequence of still images to a human eye, the brain fills in the gaps and perceives continuous motion. Film and video use this same principle to animate photographic images, which appear to fluidly move when shown sequentially at an appropriate rate.

What's the difference between film and video? The answer to that question used to be a matter of physical media as well as genre: film versus videotape. The dynamic range of continuous-tone film has always greatly exceeded videotape, and many artisans and audiences believe that its dynamic range makes film a more expressive medium for arts and entertainment. The tradition of filmmaking—the painstaking lighting and direction of individual scenes typically shot by a meticulously positioned single camera in multiple takes, the art and science of processing film to achieve desired effects, the care taken in editing to dramatically develop a story, and the host of highly skilled professionals typically employed in both production and

TABLE OF CONTENTS

- 1 Set your world in motion
- 1 A very short history of the digital video revolution
- 3 There's never been a better time
- 3 Digital video opportunities
- 4 What kind of equipment do you need to get started?
- 5 What kind of software do you need to get started?
- 7 Where to begin and how to learn more



When you show a sequence of still images to a human eye, the brain fills in the gaps and perceives continuous motion. Film and video use this same principle to animate photographic images, which appear to fluidly move when shown sequentially at an appropriate rate.

post-production—has also contributed to the perception that film is a more erudite or more valuable medium.

It is true that filmmaking has traditionally cost much, much more than video production. Video originated as a technology to facilitate the real-time broadcast of live events or shows. Less emphasis was typically placed on art, and more emphasis was placed on immediacy, with multiple cameras rather than repeated takes ensuring viable footage. Footage, too, might be considered less precious—you can record over videotape. That’s not to say that practitioners of video never took great care to shoot artistic footage and to edit for dramatic effect. But film has historically been used for both documentary and narrative works in more interpretive or expressive fashions, and video has typically been used to record and transmit.

But, as in the world of graphic arts, after we entered the digital domain, everything began to change...

Like still photography, film and video used to be only analog media. The “cutting” room was just that—the place where unwanted clips ended up on the floor, and selected clips were spliced together in the desired order. The technicians who performed this labor-intensive function were specialists. As with other types of graphic media, computers have revolutionized the process of editing and assembling film and video, facilitating much more flexibility. In early stages, editing film and video on computer systems was an arcane industry requiring costly, proprietary equipment. However, digital video editing migrated to the desktop computer, and then anyone with a computer could afford and learn to use software to make their own movies. It takes some special equipment to capture analog film or video—that is, digitize it for use on a computer. But digital video camcorders (cameras) record and capture (digitize) footage that can easily be directly transferred to a computer for editing by means of an interface, such as IEEE 1394. With a DV camcorder, a computer, and desktop video editing software, creating your own movies can be practically as simple as plug and play.

If you’re thinking that digital video is only good for making home movies or the tiny talking heads you’ve seen on websites, think again. With an ever-growing selection of digital video camcorders on the market for consumers and professionals, you can record your own digital video and achieve impressive quality at an affordable price. Even major motion pictures are being shot digitally—George Lucas began a trend when he shot *Star Wars: Episode II* entirely digital, making it easier, faster, and more cost effective to enhance the footage with visual effects.

The availability of effects that make the pristine quality of video appear to take on the characteristically soft, film-like qualities many aficionados prefer is already old news. Digital video offers as great or greater resolution as standard 35mm film, and technology delivering equivalent tonal scale and brightness range has been announced. It appears that the ultimate outcome

Some terminology to get you started:

Digital video can be any type of film or video footage that digitally originated (was shot with a digital video camcorder or originated as a motion graphics file created on a computer) or began as analog footage that has been digitized (translated to pixels and encoded for computer processing).

The abbreviation **DV** is often used as a catch-all for digital video, but DV actually refers to specific digital video formats that certain camcorders use. Most consumer camcorders—usually called DV camcorders or DV cameras—use the DV25 format.

HD is the abbreviation that refers to high definition video—that is, video meeting the standards for High Definition Television (HDTV). You can use the DV100 format, along with several others, to produce HD video.

Production, in filmmaking and videography, refers to the process of filming or shooting footage and recording audio.

Post-production comprises all of the work performed after filming, shooting, or recording that includes developing film; digitizing (capturing) analog footage; transferring (also called capturing) digital footage from camcorder to computer; editing; creating and adding motion graphics, titles, and visual effects; and preparing the final production for distribution.

Comprehensive glossaries can be found in the *Adobe® DV Primer* and the *Adobe® DVD Primer*. Download free PDF files from www.adobe.com/motion/primers.html.

of the digital video revolution is that someday in the not-so-distant future, film will virtually disappear and everything from experimental videos to feature films will be shot as digital video.

There's never been a better time

Over the past few years, creative pros have discovered that niches don't last forever. To keep business flowing, yesterday's corporate identity specialist, packaging house, or annual report shop has had to become today's integrated marketing firm and become proficient at everything from web design to direct mail. To keep working steadily, freelancers and corporate creatives have had to become Jacks- and Jills-of-all-trades. Adding digital video and motion graphics to your firm's capabilities or to your personal resumé may be a matter of survival, or it may be an opportunity to fulfill a lifelong desire: Who among us hasn't dreamed of making movies?

But no matter how you look at it, there's never been a better time to get involved in video and motion graphics. If you already have a computer system optimized for high-resolution print graphics, you won't need to add much, if any, additional hardware to get started. The software products you need for developing digital video productions are affordable and, if you're already proficient at using Adobe Photoshop®, Adobe Illustrator®, and Adobe InDesign® software, they will be relatively easy for you to learn and use.

Digital video opportunities

The many ways digital video can be delivered mean that it can be viewed everywhere, from television and theater screens, personal computers, personal digital assistants (PDAs), to cellular phones. It can be distributed by means of the Internet or intranets, broadcast, cable, satellite, DVD, CD, and recorded onto more traditional media, such as film and videotape. Digital video is a growing industry with opportunities for creative professionals ranging from animated graphics and text that may be only a small portion of a larger project to complete film and video productions.

Digital video capabilities enable design firms, advertising agencies, and in-house creative departments to expand their service offerings. Potentially, these capabilities mean additional revenue streams, and perhaps even more importantly, help you maintain creative control. By providing a full range of marketing services, you eliminate the need for your clients to look to outside sources.

Think about offering your clients video and motion graphics as part of meeting, event, and tradeshow presentations; web content; training systems; sales kits; retail displays; informational and transactional kiosks; or multimedia collateral materials, such as catalogs.

There are many ways for creative professionals to incorporate video and motion graphics into their work— more than we can possibly mention in this document. The opportunities are as boundless as your imagination:

- If you excel at typography, you can begin to create titles for event videos, industrial and training films, broadcast advertising, and even motion pictures by expanding your skillset with video and motion graphics.
- If you've learned to layer photo montages, why not add motion to them? Film or video footage (animated photographic sequences) and motion graphics (animated illustrations, stills, and type) can be layered to create the rich visual imagery often seen in film titles, commercials, music videos, and on the web.

"Over the past few years, we've begun to incorporate video into sales tool kits and websites, helping our clients really bring their products and presentations to life. Getting to know Adobe digital video software gave me the confidence to convince clients we could execute large, integrated marketing projects that included video components."

—Kathryn Klein
Creative Director and Principal
After Midnight Inc.

-
-
- If you run a photography studio, you can add videography capabilities to offer clients motion as well as still documentation of special events, both personal and corporate.
 - If you offer your clients public relations as part of a multifaceted marketing mix, video press releases may get more media play than traditional public relations efforts.
 - If you are an illustrator, photographer, designer, or fine artist, an interactive DVD portfolio, perhaps including video clips of you, your studio, or your processes can make an indelible impression that enables potential clients and patrons to peruse your work and keep it on file for further reference.
 - And what about that movie you've always wanted to make? Begin with a very short subject and take it from there.

What kind of equipment do you need to get started?

Of course to answer this question, we must ask another question: What do you plan to do?

If you intend to make a full-length feature film, you'll be making a substantial investment in equipment. But if you want to incorporate some short video clips and motion graphics into the websites that you develop, you probably don't need to add much software or hardware to the system you're already using.

Equipment for shooting video

DV camcorders can produce excellent results for an affordable price. Camcorders, audio recorders, lighting, and even soundstages can be rented. You may or may not want or need a video camcorder, depending on what you plan to do. Stock footage is available from many of the same sources from which you may already procure stock photography; you may acquire your footage from your clients, or you may want to work with a specialist who is fully equipped with lighting, camcorders, dollies, and other production equipment. The decision to shoot your own video or not should be made in much the same way that you decide whether or not to shoot your own digital photography—it depends on factors such as the complexity of the project, the size of the budget, the expectations of the client, and your own level of proficiency with the equipment and the task at hand.

Hardware for editing digital video

If you want to move DV from a camcorder or deck to your computer, you need an IEEE 1394 port. IEEE 1394, also known as Firewire or Sony iLink, is standard on most new computers, but if your computer doesn't have it, you can add it with an inexpensive and easy-to-install PCI card. If you have shot or acquired analog video, you need something to play the tape through (a video camera or deck that matches the format of your material), as well as the appropriate video capture card installed on your computer to digitize the footage, and the correct cable to link them together. Video files are very large, so the factors to consider in terms of your computer system are power, speed, RAM, and storage. The easiest way to determine if your current system is capable of handling basic digital video processing is to refer to the minimum system requirements for the video editing software you plan to use. But, just as with processing huge graphics files, you'll probably want more RAM than the minimum recommendation—512 MB will probably do the job, but most professionals opt for 2 GB. It is unlikely that the amount of storage that came with your computer is adequate for video production. If you intend to produce more than very short video clips (more than a few minutes in length), you need a

storage subsystem. Individual external hard disks, available in the hundreds-of-dollars range, can hold up 200 GB of storage, making them an excellent and affordable starter solution.

Devices for outputting digital video

After you've completed your digital video production, you can store it on any type of portable medium that is large enough to hold the file, such as a CD-ROM or removable hard drive, and then display it on a computer monitor, or you may want to post adequately compressed video files to the web. You can record digital video onto videotape by outputting, by means of the appropriate cable connector, to a video cassette recorder (VCR), video tape recorder (VTR), or back to a camcorder or video camera. After it's on videotape, you can use any compatible deck to show your work on a video monitor or television set. And if you want to burn DVDs for playing on a computer or TV, you need a DVD burner.

What kind of software do you need to get started?

The video you've shot or acquired is usually nothing more than clips—often different scenes shot in different places at different times. To actually develop and deliver your story, you need to edit and assemble your clips and add visual effects, graphics, titles, and a soundtrack. This is where Adobe enters the picture with four of the industry's leading software applications specifically designed for post-production.

Adobe Premiere® Pro

Nonlinear editing (NLE) software, such as Adobe Premiere Pro, lets you work with motion assets (digitized film or video footage, motion graphics, and audio) in much the same way you work with graphic assets (typography, illustrations, and photographs) by using a desktop publishing application. Your motion document, or movie, can quickly and easily be edited until you are completely satisfied with the results. With Adobe Premiere Pro, you work with tools and methods that are familiar to seasoned professionals, yet it's easy for beginning video enthusiasts to learn and use. Because of Adobe Premiere Pro's flexibility and many customization options, this powerful, professional, real-time NLE is a good choice for beginners and experts.

In addition to providing all the tools you need for assembling your production, Adobe Premiere Pro includes a range of effects that you can use to enhance your footage, an environment for designing titles, and audio capabilities for sweetening (enhancing) and mixing sound. Your final productions can be output for virtually any application, broadcast, DVD, or the web.

The fundamental and advanced features in Adobe Premiere Pro may be all you want to start with, but as your skills develop, you may want to create even more sophisticated productions requiring additional software tools.

Adobe After Effects®

Adobe After Effects software facilitates more complex tasks, including compositing of moving imagery and very precisely controlled 2-D and 3-D animations. Many creative pros who use Adobe After Effects for developing motion graphics and visual effects think of it as "Photoshop on wheels" because it enables them to efficiently animate layered Photoshop files, and fluidly move the files back and forth from one creative interface to the other. In addition to outputting all of the formats you need for film and digital video, you'll find that extraordinarily flexible After Effects is an outstanding tool for producing Macromedia Flash (.SWF) files for use in presentations and on the web.

Adobe Audition™

An ideal partner for Adobe's other video products, Adobe Audition turns your computer into a professional multitrack recording studio. Adobe Audition is comprehensive and versatile enough to satisfy the demands of broadcast sound engineers and professional musicians. Adobe Audition provides multitrack audio file editing, looping support, and effects all in one cost-effective package. Enhance your video soundtracks with musical underscores, music beds, foley effects, and the ability to sweeten and synchronize dialog. Adobe Audition includes thousands of performance-based, royalty-free loops in a variety of musical styles.

Adobe Encore™ DVD

Use Adobe Encore DVD, a creative authoring environment for professional DVD production, to deliver your projects (or your portfolio) on DVD, which is the fastest growing medium ever introduced. Adobe Encore DVD offers a comprehensive set of text and menu design tools. Users new to DVD production can quickly get up to speed with a familiar Adobe interface and integrated workflow.

Why should you choose Adobe software for digital video production? As a creative professional who is likely to be an expert using Adobe Photoshop and Adobe Illustrator, you are already familiar with the award-winning Adobe interface found in Adobe video products. Furthermore, as for all Adobe products, there are many resources available to help you come up the learning curve quickly with Adobe video products, including books, tutorials, videotapes, DVDs, online user groups, and certified Adobe trainers offering classes.

Where to begin and how to learn more

A great place to begin is the digital video page on the Adobe website: www.adobe.com/motion. You'll find a wide variety of tools, tips, and resources to help you get started.

Download free trials of Adobe video products at www.adobe.com/products/tryadobe.



Available separately or as an affordable collection, Adobe Video software products deliver powerful post-production tools with a familiar interface to quickly get you up to speed:

- Adobe Premiere Pro—real-time editing for professional video production
- Adobe After Effects—the essential tool for motion graphics and visual effects
- Adobe Audition—the essential tool for professional digital audio
- Adobe Encore DVD—creative authoring for professional DVD production

On the Adobe digital video primers page at <http://www.adobe.com/motion/primers.html>, you can download the following resource documents plus other documents yet to be released:

- The Adobe Digital Audio Primer
- The Adobe Digital Video Primer
- The Adobe DVD Primer
- The Adobe HD Primer
- The Adobe Streaming Media Primer

