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## Getting Started

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This chapter provides background information related to Adobe® After Effects® 7.0 Professional as well as introduces motion graphics. If you are anxious to get into the hands-on exercises, feel free to skip ahead to Chapter 2, *“Understanding the Workspace.”* This is not a required chapter; instead, it is here to help readers who are not familiar with the capabilities of After Effects or who want an overview of the application before getting started. Even if you’re a seasoned After Effects veteran, you might want to read the “What’s New in After Effects 7?” section to see what new, exciting, and creative features are in store!

# What Is After Effects?

If you watch TV or movies, you've already seen footage developed in After Effects, though you might not have been aware of it at the time. For example, the title sequence with the raining text in the feature film *The Matrix* and the dancing silhouettes in Apple iPod commercials both use footage created in After Effects. After Effects is used professionally throughout the motion picture and video industries for title sequences, identity campaigns for TV stations, TV commercials, industrial videos, CDs and DVDs, Web animations, and much, much more. One of the coolest features of After Effects is that you can make a single project

yet publish it to a variety of formats for playback in video, film, CD, DVD, or Web content.

After Effects allows you to compose moving images in the same way an artist might compose a drawing or a painting. It gives you the ability to create relationships between images, sounds, and moving footage. You can compose an animation by positioning images in locations on the screen and moving them or changing their characteristics (such as opacity, scale, and rotation) over time. In addition, After Effects lets you synchronize audio to play back with your moving images.

## What's New in After Effects 7?

For those of you who have worked with a previous version of After Effects, you are surely eager to know what new features have been added to this version. The following chart identifies the new features.

**Note:** For this release, Adobe released two versions of the software—After Effects 7 Standard

edition and After Effects 7 Professional edition. Some of the new features are unique to After Effects 7 Professional edition. Please refer to the notes in the following table and the Adobe Web site for more details:

After Effects 7 New Features	
Feature	Description
Unified user interface	After Effects 7 has a redesigned, unified user interface, which simplifies working in the application. For the first time, After Effects eliminates floating palettes and overlapping windows and features dockable panels, which are consistent with the other programs in the Adobe Production Studio. You can create custom workspaces by moving panels and resizing panel groups and by adjusting the brightness and colors. You'll take a tour of the redesigned interface in Chapter 2, "Understanding the Workspace."
Graph Editor	The new <b>Graph Editor</b> lets you set animation properties with a graph, which provides finer control over keyframe editing and the ability to visually align motions across multiple layers. You'll learn how to use the <b>Graph Editor</b> in Chapter 5, "Creating Keyframes and Animation in the Timeline."

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## After Effects 7 New Features *continued*

Feature	Description
<b>Project templates and animation presets</b>	Project templates and animation presets make setting up a project and creating complex motions a breeze. Animation presets include settings for text, effects, transitions, background movies, and expressions. As an added bonus, you can select from a variety of <b>behaviors</b> , which automate the animation process by eliminating the need to keyframe many types of motion. You'll learn how to use project templates and animation presets in Chapter 5, "Creating Keyframes and Animation in the Timeline," and in Chapter 9, "Working with Text Layers."
<b>New file format support</b>	After Effects 7 supports a variety of new file formats, including HDV (High-Definition Video), Camera Raw, OpenEXR, AAF, 10-bit YUV, and 32-bit TIFF and PSD. You'll learn more about how to work with these new file formats throughout the book. <b>Note:</b> File format support varies between After Effects 7 Standard and After Effects 7 Professional.
<b>High Dynamic Range color</b>	After Effects 7 supports HDR (High Dynamic Range) color, which more closely matches the properties of color and light in the real world. HDR is a bit of a step forward for high-end special effects and color correction work, allowing you to increase brightness without losing detail in an image. An example of an HDR file is an OpenEXR file, which was created by the special-effects company ILM (Industrial Light & Magic) for feature-film work. You'll learn about HDR color in Chapter 10, "Applying Effects." <b>Note:</b> HDR color is available only in After Effects 7 Professional.
<b>Timewarp</b>	<b>Timewarp</b> lets you smoothly slow down or speed up footage, producing dramatic speed changes without the uneven results produced by ordinary methods of duplicating or eliminating frames. You'll learn about <b>Timewarp</b> in Chapter 8, "Working with Layers." <b>Note:</b> This feature is available only in After Effects 7 Professional.
<b>Blur effects</b>	After Effects 7 includes new blur effects. <b>Lens Blur</b> accurately simulates the properties of a defocused camera, and <b>Smart Blur</b> creates soft images and colors without destroying detail. Additional blur effects include <b>Fast Blur</b> , <b>Box Blur</b> , and <b>Compound Blur</b> . You'll learn about the blur effects in Chapter 10, "Applying Effects."
<b>Enhanced OpenGL 2.0</b>	After Effects 7 has enhanced support for OpenGL 2.0, which provides better previewing and rendering capabilities that support enhanced blending modes, motion blur on 2D layers, anti-aliasing, track mattes, shadows, and accelerated rendering of common effects. You'll learn about the enhanced OpenGL support in Chapter 20, "Rendering Final Movies."

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## After Effects 7 New Features *continued*

Feature	Description
<b>Integration with Adobe Bridge</b>	After Effects 7 supports Adobe Bridge, Adobe's asset management application, which provides a better way to browse and search for assets (using metadata), manage files, and preview or apply presets and effects. You'll learn about integration with Adobe Bridge in Chapter 21, "Integrating with Other Programs."
<b>Enhanced integration with Adobe Photoshop CS2 and Adobe Premiere Pro 2</b>	After Effects 7 provides enhanced integration with other applications in the Adobe Production Studio, including Adobe Photoshop CS2 and Adobe Premiere Pro 2. For example, you can create new Photoshop layers from within After Effects 7, export After Effects 7 projects as Premiere Pro 2 projects, or use Adobe Dynamic Link to update After Effects 7 compositions without rendering. You'll learn more about integration with other Adobe Production Studio applications in Chapter 21, "Integrating with Other Programs."

## What Are Animation and Motion Graphics?

The word **animation** comes from the Latin word **anima**, which means life or soul. As an artist working with images, you bring them to life when you make them move. Still images can appear to move by arranging them in a specific order and changing from one image to the next in a fairly rapid sequence.

A flip book is a simple form of animation, but live-action filmmaking and video also bring still images to life. Although not all films and video are classified

as being animated, they all share the same principle of animation.

The term **motion graphics** is used quite a bit in conjunction with After Effects 7. The term usually refers to taking a static image and making it move. In this context, the term **animation** contrasts with the term **motion graphics**, because animation involves creating new artwork for each frame within a sequence. Often, the terms are used interchangeably.

### NOTE:



### Why Does Animation Appear to Make Still Images Move?

Our eyes have sensors that retain an image for a moment. Stare at a high-contrast image for a while and then close your eyes. You'll see a ghost image even though your eyes are closed. This is called **persistence of vision** or an **after effect** of vision. The name of the computer program After Effects comes from this sensory phenomenon.

The trick of animation is to move a series of related images quickly enough so our eyes do not perceive the difference between the separate images. It takes about 24 individual images per second to overcome the tendency for the images to appear separate and to gain an illusion of fluid motion.

# What Formats Does After Effects 7 Produce?

You can use After Effects 7 for film, video, digital video, CD, Web, and print output. It produces a wide variety of file formats that are specifically tailored to each medium. After Effects 7 provides ample options to meet the demands of artists and media professionals.

The most common video formats to output from After Effects 7 are QuickTime (MOV), Windows Media Video (WMV), and Video for Windows (AVI), which can be published at a variety of resolutions, supporting everything from Web content to feature-film quality. In addition to QuickTime for Mac and WMV or AVI for Windows, After Effects 7 supports all of the following formats and more (refer to the After Effects 7 documentation or visit the Adobe Web site for information about additional formats):

- QuickTime Movie (MOV)
- Video for Windows (AVI)
- Windows Media Video (WMV)
- DV Stream
- MPEG-2
- MPEG-4
- Image Sequences
- Macromedia Flash (SWF)
- Macromedia Flash Video (FLV)
- FLIC (FLC, FLI)
- Animated GIF (GIF)
- Audio Interchange File Format (AIFF)
- WAV
- MP3
- AU audio file (AU)

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## How Is After Effects Different from Adobe Photoshop?

Photoshop is designed to work with still images. If your project demands high-quality still images, Photoshop is probably the best tool for the job. You can use Photoshop images in After Effects projects with great results, so many people use

Photoshop and After Effects together. To differentiate the two tools, think of it this way: Photoshop is great for still images, and After Effects is great for moving images.

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## How Is After Effects Different from Avid Xpress DV, Apple Final Cut Pro, and Adobe Premiere Pro?

Software such as Avid Xpress DV, Apple Final Cut Pro, and Premiere Pro are for nonlinear editing. They are geared toward putting finished video shots together as a single short-form or long-form movie. They don't focus on creating frame-by-frame animation, creating sophisticated video title effects, or manipulating special effects. You can

do some similar work in these programs, but After Effects has far more features for creating professional animation and motion graphics. You wouldn't want to cut a movie in After Effects, and you probably wouldn't choose to do a complex title sequence in a nonlinear editing program.

# How Is After Effects Different from Apple Motion?

Recently, Apple introduced their own animation and motion graphics software called Apple Motion. If you are working on a Mac, you may wonder about the differences between these two applications. Motion relies heavily on using a real-time workflow, manipulating images, and instantly viewing the results of the preset patterns, particles, and animation behaviors you have applied. It requires the fastest video cards on the market to produce a satisfactory working experience. Motion was created to integrate closely with other Apple software in the Apple Final Cut Studio suite. Generally speaking, it is for creating title sequences and DVD menu designs (although it can be used for general compositing and effects work as well), with an emphasis on ease of use, which is appealing to the casual user.

Although After Effects has many of the same features (particularly in the latest release), it is suited

to the most intricate and professional projects and situations you might encounter. For example, arranging layers in 3D space is possible only with After Effects (although available in other applications, such as Autodesk Combustion). It also provides high-end features, such as motion tracking, image stabilization, and flexible keying options, with numerous available plug-ins and support from third-party software developers. In addition, After Effects provides a more traditional workspace, familiar to users of Photoshop and Premiere Pro. It will also run on a wider variety of machines, both Macs and PCs, and has less-intensive hardware requirements (although it does benefit from newer video cards and faster processors). In addition, After Effects integrates seamlessly with other Adobe applications while providing files that can be used just as easily in Final Cut Pro, Avid Xpress DV, or other professional video software.

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# How Is After Effects Different from Macromedia Flash?

Macromedia Flash lets you combine still images, video, and sound, just like After Effects. Flash also offers, through their native scripting language called ActionScript, the capability to create interactive presentations, making it ideal for creating graphical Web sites. After Effects does not offer ActionScript and can be used only for animation and sound. However, you can use After Effects to create and export animations into SWF, which is the same format used to export movies from Flash.

Apart from the lack of ActionScript capabilities and interactivity, After Effects is different from Flash in more subtle ways. For example, Flash writes files with vectors and bitmaps; After Effects writes movie files that are converted entirely to bitmaps, even if the movie contains vector artwork to start. **Vector artwork** is composed of mathematically generated lines and shapes; **bitmap artwork** is generated by turning pixels on or off. The key

advantage to vector artwork is its crisp, pristine appearance (as well as smaller file sizes), whereas bitmap artwork can look more realistic with shadows, gradients, glows, and blurs.

In general, After Effects is used for TV and film, which require larger frame sizes and faster frame rates. This is particularly the case with new digital formats, such as HD (High Definition) and film projects, all the way up to IMAX. However, because of the nature of vector artwork, you can easily increase the scale of Flash animations to any size you want, although they are generally less sophisticated in appearance (bold colors and outlines are the norm) and therefore most often used solely for the Web. Examples where Flash technology has overlapped with video and film are the movies *Waking Life* and *Through a Scanner Darkly*, which began as videos that were later traced with similar vector-based software.

After Effects also has much more sophisticated effects and keyframe manipulation than Flash. You can bring an After Effects sequence into Flash, but After Effects does not offer any interactive features like Flash does. Also, Flash is time based, whereas

Flash is frame based. This makes it possible to change the timing of an After Effects piece easily and stretch it from two seconds to two minutes without losing any of the animation relationships. This is not true in Flash.

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## What Is Compositing?

**Compositing** is the process of combining multiple sources of images, film footage, animation, text, or sound. Just like in Photoshop, After Effects uses **layers** (stacks of content laying on top of each other) to create composites. Compositing can be as simple as using two layers or as complex as using hundreds of layers. After Effects has won-

derful features supporting sophisticated masking with alpha channels, as well as tools for extracting subjects from a background for placement on top of new layers. (You'll learn more about alpha channels in Chapter 13, "Creating Masks," and about separating objects from a solid color background in Chapter 15, "Working with Color Keys.")

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## How Do I Get Video Content into After Effects?

You can get video content into After Effects in a number of ways. The first method involves a digital video format, such as DV (Digital Video) or HDV (a new, high-definition video format), and an Apple FireWire connection. For this method, you need the following: a DV or HDV camera or playback deck with a FireWire port, a computer with a FireWire port, a FireWire cable to connect the camera to your computer, and software that controls the transfer of digital video into your computer, such as Premiere Pro 2 or Final Cut Pro.

Most computers with FireWire ports also include the software required to transfer digital video. Examples of software products supporting this process include Premiere Pro and Adobe Premiere Elements, Microsoft Windows Movie Maker, Final Cut Pro, Apple Final Cut Express, and Apple iMovie. Transferring the footage from a camera or video deck to the computer is usually a simple process using this method.

In the second method, using analog video, you must convert an analog video signal into a digital format as part of the process. You can do this using

numerous tools, including the following: an analog video camera or playback deck, a computer with video-digitizing hardware, an appropriate cable to connect the camera with the digitizing hardware, and software to control the digitizing process.

Digitizing analog video is generally not a simple process and can require a fair amount of time and technical knowledge to ensure success. In general, we recommend using digital video (such as DV) and FireWire connections rather than analog video as source footage for your video projects. The image quality is usually higher with formats such as DV and much more so with HDV, and today's technologies make it easy to bring digital video directly into your computer.

In the third method, video already transferred to a computer may be available to you on CD, portable hard drives, or other computer storage media. You can copy this video directly to your computer system, and then After Effects can use it.

Ultimately, all of the footage content After Effects requires must be in a digital format.

# What Tools Do I Need in Addition to After Effects?

If you are using After Effects to produce animations for the Web, you may need only an image scanner. For a video project, you'll need access to appropriate hardware for your chosen video system. A motion-picture film project might require you utilize an outside service to scan your film images into digital form and provide recordings of your finished output on film.

The extra software tools, if you need any, depend mostly on the type of media you plan to create.

After Effects can import a wide variety of file formats, allowing you to work with many types of computer art, such as bitmap images (from programs such as Photoshop), vector graphics (from programs such as Adobe Illustrator), and 3D content (from programs such as Autodesk Maya or MAXON Computer CINEMA 4D). You don't need extra programs, but it's great to know that if you create artwork in them, you can use these images easily in After Effects.

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# How Do I Learn More About Animation, Video, and Compositing?

This book introduces all of these subjects, and you'll get a strong foundation to make the process clear. In Appendix B, *"After Effects 7 Resources,"* you'll find a reference section of books, videos, and CDs you can use to further your knowledge.

In summary, this chapter has offered an overview of some of the concepts and features of After Effects

and related pursuits. I'm sure you're anxious to move from passively reading to actively completing hands-on exercises. In that case, see you in Chapter 2, *"Understanding the Workspace."*