

Foundation Flash 8 Video

Tom Green
Jordan Chilcott

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*To Gary Lima, mentor and friend, who makes it clear to anyone
who will listen that everything he learned about management,
he learned in a rock and roll band.*

Tom

*This book is dedicated to my children, Margot, Henry, Jack, Joshua,
and Dina, her husband Wayne and their daughter Cassidy Helen.
You all are the reason I ever wanted a video camera in the first place.*

Jordan

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FOREWORD

“If it ain’t broke, don’t fix it.”

I couldn’t disagree more. I distinctly remember a manager in big new media company I worked at giving one of the designers a hard time for working up a neat volume slider for a website. The manager couldn’t understand why the designer wanted to waste time designing a new means of adjusting volume when the existing standard design did the job fine. His argument isn’t without merit under some circumstances. This book, for example, will show you how to use components to deliver video quickly and efficiently. Components are valuable timesavers that allow you to use standard, off-the-shelf controls.

But, imagine if James Dyson had listened to the people who laughed at him when he said he was going to invent a better vacuum cleaner? He accepted that Hoover, among others, produced a good product that worked well, but he looked for a better way, and in the process invented the world’s best vacuum cleaner. I’m sure it’s the acceptance of the accepted that is the reason my car’s engine is not powered by water, there is no cure for the common cold, and that red wine gives me a sore head the next day.

There are two types of people who are going to get the most out of this book. First there are those of us who enthusiastically embraced Flash video when it first became available and have been using it effectively on and off ever since. We’re old school, we know our stuff, and we clearly don’t need a book like this. But go on, give it a read. Flick through it for a bit.

It’s easy to become complacent with what you know when what you know works. Fortunately for us, the good people at Macromedia/Adobe have been anything but complacent and have continued to focus on developing video within Flash. The way we used to work with Flash video still works, so why fix it? Because there are newer, better ways of working. A lot of people are still embedding video into the timeline and using workarounds for hassles like synchronizing frame rates. If this sounds like you, then I suggest that you set some time aside to spend reading this book and discover a better way.

The other type of person for whom this book is perfect is the video virgin. This whole thing might seem a bit daunting—but don’t worry, it’s not. Video is too often perceived as a black art, but once you get your head around a few simple concepts, you’ll be asking yourself why it’s taken until now for you to give it a shot.

I'd like to take this opportunity to salute the authors specifically for the first chapter. You're going to be thrown in at the deep end before you know how to swim. You'll not have time to let your fear of the water get in the way and within a few minutes you'll be treading water, laughing at how easy it is. This approach to learning is nothing short of genius.

As a video virgin, you will start to hear the same kind of comment again and again from those advising you—whether they be classroom tutors, web tutorials, or indeed authors of books like this. Developments in recent years really have made life better for people looking to broadcast digital video, especially over the Internet—so much so that anyone who has been using video for more than a couple of years will be found preaching to you about how easy you've got it these days, and how difficult life used to be. I'm no exception—there never has been a better time to get into video for the first time, and here's why:

1. The creation tools are simpler and cheaper with both Apple and Microsoft's recent operating systems coming preloaded with worthwhile video capture and editing software. If you do have some extra budget available, then Adobe's latest tools (such as After Effects 7) give you a feature set previously reserved for very expensive specialist video editing suites.
2. Flash Player as the delivery mechanism makes worrying about whether end users have the right video plug-in a thing of the past. In the bad old days, the variety of video formats and incompatibilities between platforms put most clients off using video in their projects.
3. Even my mum's got broadband! We've finally gotten to the point where modem users have to admit to being the second-class citizens that they are. Okay, that's a bit harsh, but when you surf using a modem there is an acceptance that you're not going to fully appreciate everything that is out there. Your modem is enough to get your email, do your online banking, and sell your unwanted Christmas presents on eBay. Modem users have fallen to the position of lowest-common denominator.

It's okay to deliver video over the Internet now. It really is.

Come on in, the water's warm.

Hoss Gifford, 2006

Hoss Gifford is a Flash video guru based in Scotland.
For more on his work, visit hossgifford.com.

ABOUT THE AUTHORS



Tom Green is Professor of Interactive Media in the School of Media Studies at the Humber Institute of Technology and Applied Learning in Toronto. When not in class, Tom is a partner at CommunityMX and has written several articles for the Macromedia Developer Center. He is also a member of Team Macromedia, one of the founding members of FlashinTO, the largest Macromedia User Group in the world, a certified Macromedia Dreamweaver Developer, and has spoken at many web development, Flash, and distance-learning conferences throughout the world. His website can be found at www.tomontheweb.ca.



Jordan L. Chilcott, born and raised in Toronto and now a resident of Guelph, Ontario, graduated from Radio College of Canada's Electronic Engineering Technology program in 1983, only to discover that he had a passion for computer programming. Spending his days working as a service technician, Jordan invested many sleepless nights teaching himself Assembly Language. He published his first program in 1985 and started learning higher-level languages such as C and C++.

Jordan cofounded The Computer Software Specialists, now known as Interactivity Unlimited, and eventually left the computer hardware industry to focus on his passion for programming. Today, Jordan has written various web and kiosk applications for various industries, including the automotive and airline industry and programs in various languages, including ActionScript, ColdFusion, Java/J2EE, and C/C++/Objective C. When not programming or administering the Dreamweaver-Talk list, he spends time with his wife Joelle and five children, Margot, Dina, Henry, Jack, and Joshua (he has also recently become a grandfather). Jordan also loves to compose, produce, and record music, helping upcoming artists as well as producing movie soundtracks; he is a wedding photographer with Joelle; and he now holds a Black Belt in Goju Ryu Karate.

ABOUT THE TECHNICAL REVIEWER



Tim Diacon lives and works in Brighton, England. Having studied graphic design at Brighton University, he briefly worked as a freelance web designer before joining Crush Design and Art Direction, where he has worked as a print and web designer for the past three years, creating Flash-based applications for clients such as Disney, Heineken International, and Diageo.

ABOUT THE COVER IMAGE DESIGNER



Corné van Dooren designed the front cover image for this book. Having been given a brief by friends of ED to create a new design for the Foundation series, he was inspired to create this new setup combining technology and organic forms.

With a colorful background as an avid cartoonist, Corné discovered the infinite world of multimedia at the age of 17—a journey of discovery that hasn't stopped since. His mantra has always been "The only limit to multimedia is the imagination," a mantra that is keeping him moving forward constantly.

After enjoying success after success over the past years—working for many international clients, as well as being featured in multimedia magazines, testing software, and working on many other friends of ED books—Corné decided it was time to take another step in his career by launching his own company, *Project 79*, in March 2005.

You can see more of his work and contact him through www.cornevandooren.com or www.project79.com.

If you like his work, be sure to check out his chapter in *New Masters of Photoshop: Volume 2*, also by friends of ED (ISBN: 1590593154).

ACKNOWLEDGMENTS

The path to this book has been a “long, strange trip” that started over hamburgers a couple years back when Mike Downey, the Flash product manager, showed a group of us the pre-alpha version of Flash 8. He demoed a video using the FLV Playback component and the new On2 VP6 codec, and to say jaws were hitting the table would be an understatement. When Flash 8 was released in late 2005, the web video revolution kicked off and I have been writing about it ever since.

This book itself actually started over coffee with my editor, Chris Mills, at a Starbucks in New York. Since that conversation, Chris has pushed, prodded, and, on occasion, laid a swift kick into my pants as this book moved from concept to the final product. Along the way I discovered that Chris and I share the same fascination for this technology and that we have become good friends along the way. It is also odd to see Charles Brown appear on the team for this book. It was Charles who first introduced me to Chris in New York, and it was Charles who also wrangled many of the code explanations in this book into coherence. Thanks, buddy.

I would also like to thank Denise Santoro Lincoln, our project manager, who has the amazing ability to actually get a writer to meet a deadline.

This is the fourth book where Jord and I have shared the cover. We have an amazing professional relationship and have also developed a great friendship.

Finally, I want to acknowledge the support and understanding of my wife, Keltie, and my two children, Lindsay and Robert. The three of them have gotten used to me being in a “writing mood” and holing myself up in my home office for inordinate amounts of time. It will be nice to see them again.

Tom

INTRODUCTION

This book actually has its genesis back in the early 1990s when the Internet was about to arrive. Apple pulled a bunch of Humber College faculty together in one of the classrooms on campus and demonstrated a thing they called “QuickTime.” The video they showed was only 180 by 120 and the sound was pretty crappy, but it was at that point that I realized videotape was an endangered technology and that computers could actually play video.

For the next few years, like any emerging technology, Digital Video underwent a rather intense phase of competing technologies, players, formats, and so on. Just when the dust settled around the QuickTime standard, the Internet hit and another round of competing technologies and players for web video was launched.

Up until a couple of years ago, web video was something you “paid for.” If it was streaming technology, you paid for proprietary hardware and software. Consumers paid for it emotionally. Long download times, especially with dial-up modems, were the norm and the odds were pretty good that the viewer didn’t have the plug-in to view the video. Even Flash was struggling. The best we could do was drop the entire video on the timeline and pray that the viewer was as hooked on “cool” as we were and was prepared for a long wait as the SWF loaded.

In September 2003 I had an insight that, at least for me, was the equivalent to whatever happened to St. Paul on the road to Damascus. I had just finished writing a book about the Macromedia Studio and decided I really wanted to get a handle on video delivery through the Web. I wondered how to play with it in Flash MX 2004. I created the FLV and ran it through the FLV Media Controller component. What happened next is the event that caused the straight line to the book you currently have in your hands.

I dropped the SWF into a Dreamweaver page and, through the magic of CSS, ran the text around the video much like text running around an image in a print magazine. I uploaded the page to my server to test it, and when I opened the page in a browser it suddenly occurred to me that something profound was going on. First, the video played like a dream and the text ran around the image. It occurred to me as soon as I saw the page that I was looking at the future of web video.

INTRODUCTION

There was no plug-in. The delay was minimal. The video played perfectly, and it was a part of the content in the page, not separate from it. I mulled this over, played with it, and on October 14, 2003, wrote an article for Community MX titled “Bye Bye QuickTime.” The start of the piece went this way:

The other day I was sitting in the office of one of my colleagues at the college where I teach and we were discussing some rather broad web issues. He teaches the hardcore coding side of the equation and I handle the hardcore design issues. Together we are the poster boys for a “Geeks and Freaks” project team. We were talking about an upcoming presentation around the Studio MX 2004 products that I am about to do for the faculty and I casually let slip I was coming to the conclusion that “QuickTime, Windows Media Player and RealPlayer/RealAudio are dead web technologies.” His reaction was similar to someone who has just experienced a 20,000-volt cattle prod jolt to the armpit.

Now that I have your attention, as well, let me explain.

Why do we need the QuickTime, Windows Media and Real Players when it comes to video and audio on the web? I, for one, am seriously tired of Apple’s persistent begging for me to upgrade to Pro when I launch their player. I am absolutely frustrated with Windows Media Player and its inability to either find a codec or to tell me which flipping codec is missing. Real, to me is a litterbug, strewing my desktop with RAM files. Not only that, I have absolutely no guarantee the users even have the plug-ins and can see the content.

The other issue is purely selfish. If I control the web turf why am I ceding a piece of the interface to a third party?

Which brings me to that Trojan Horse known as the Flash Player 7. . .

This article still resonates today. As I was writing this Introduction my email client just dinged and the following from a “time challenged” Community MX subscriber arrived in my In basket:

Title—Bye Bye QuickTme

Feedback—I ran into this tutorial, and it impressed me to see how almost a year earlier you had foreseen what I came to dream of 7 mo ago. And yet this is my problem . . .

I didn’t include that note to prove how clever or “ahead of the curve” that I am. I couldn’t care less, but it is so typical of why this book has been written. Macromedia—now Adobe—has sparked a web video revolution with Flash Professional 8. Tie that in with Adobe’s video products, especially After Effects 7, and we are about to see uses for web video that we never thought of even three years ago. We are like kids in a candy store with web video. The creative and practical uses of this technology are immense, and, like all emerging technologies that are instant web standards, we are all in the same boat trying to figure out what we can do with this stuff.

This book is not the definitive answer to that question. In many respects it is Jord and me saying “Hey, here is what we have figured out you can do. Now go drive a truck through it.” As you work your way through the various chapters and exercises, you will be presented with techniques and ideas that range from the dead simple to the rather complex. You will see some rather cool video techniques that live in a code-free zone and techniques that fill a blank stage with eye-popping effects driven solely by ActionScript. You will build videos that have a commercial application and others that fall squarely into the “art/experimental” zone. Regardless of complexity or use, the subliminal message behind every exercise in this book is “Here is what you can do.”

This book is also the start of a dialogue between us. We aren’t going to claim we are experts in the field simply because the field is too new. We are all making it up as we go along and learning where the edge of the video envelope is on the Web. As such, as you go through the code you may find yourself saying, “That ain’t the way I would do it.” By all means contact me at tom@tomontheweb.ca and tell me how you would do it. If you have a technique you have discovered or “have driven a truck” through one of the techniques in the book, by all means let me know. I am just as eager to learn from you. This book, in many respects, is the start of a journey we are taking, together, as we come to grips with Flash video.

Like all journeys, we start at the beginning and explain how to create an FLV file and get it playing in Flash. From there you learn how to create a video using iMovie and MovieMaker. Chapter 3 starts the exploration of Flash video by looking at alternative FLV creation tools. Adobe doesn’t own the market for FLV creation; Sorenson Squeeze and On2’s Flix are explored, contrasted, and compared and. . . darned if it isn’t a draw. If all you need to know is how to create a video for Flash and create the video, then you close the book at this point and move on.

The creative exploration of video starts in the next chapter—Chapter 4—which shows you how to use the video UI components that are new to Flash 8 and how to deliver video without using the FLV Playback component.

If there is any one aspect of Flash video that has the design community just “gaga,” it is the ability to use an alpha channel. In this chapter we not only show you how to create the alpha channel video in Premier, After Effects, and Final Cut Pro, but we then show you some rather slick things you can do with it, with techniques ranging from “video-on-video” to placing the FLV on an HTML page.

We must admit that the addition of the filters and blend effects to Flash is in the realm of “ultra-cool,” and we have a whole chapter showing you how to use them singly and in combination with each other to create video effects that move way beyond cool. Staying with the “cool” factor, the next chapter shows you how to implement some rather fascinating masking effects, from placing a video in a phone to creating and adding masks to the video at runtime.

The next three chapters push the creative exploration of video even further and show you a number of techniques that will push your Flash skills to the next level. Chapter 8 shows you how to build video walls and incorporate motion graphics created in After Effects into Flash. The next chapter demonstrates a number of ways to play multiple videos using techniques that range from the simple to the complex. Chapter 10 is where you get to kick back and have a bit of fun using a webcam in ways you may not have considered.

Everything to this point in the book is stuff you can build for your clients. Chapter 11 is just for you. This chapter is devoted to creating a small project that lets you see how a video will look if you change the color, add a blur or glow filter, apply a blend mode, or apply all of these effects. In many respects, this chapter is designed to introduce you to adding the filters and blends using ActionScript.

The book ends with a number of entry-level Motion graphics techniques created in After Effects 7 and placed into Flash. These two applications were made for each other, and this chapter just scratches the surface of what will become a powerful web video production combination over the next few years.

We hope you learn something from this book and, most important of all, that you have the same amount of fun Jord and I had as we embarked upon this exploration of Flash video. In many respects, “fun” is the key word. Playing what-if games and having fun with this technology is what will drive it forward over the next several years.

Tom Green
February, 2006

Layout conventions

To keep this book as clear and easy to follow as possible, the following text conventions are used throughout.

Important words or concepts are normally highlighted on the first appearance in **bold type**.

Code is presented in *fixed-width font*.

New or changed code is normally presented in **bold fixed-width font**.

Pseudocode and variable input are written in *italic fixed-width font*.

Menu commands are written in the form Menu ▶ Submenu ▶ Submenu.

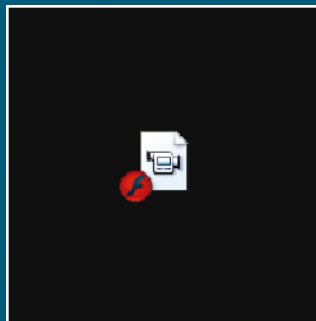
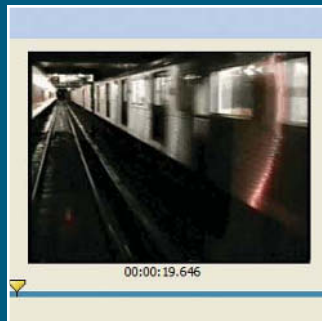
Where I want to draw your attention to something, we’ve highlighted it like this:

Ahem, don't say I didn't warn you.

Sometimes code won't fit on a single line in a book. Where this happens, we use an arrow like this: ➤.

This is a very, very long section of code that should be written all ➤ on the same line without a break.

1 CREATING AN FLV USING THE VIDEO WIZARD AND THE FLASH 8 VIDEO ENCODER



Let's start this book in an odd place. Let's learn how to swim.

There is a school of thought around learning to swim that claims the best way is to jump into the deep end and figure it out. That is sort of where we are starting this book. We are going to dive right into the deep end of creating a video for Flash Professional 8 but we will be there helping you along every step of the way.

Before you step off the pool deck and into the deep end, here are a few things you need to know:

- You are not *creating* a video. You are *encoding* a video. This means you will be simply converting a QuickTime video from one format—MOV—to another—FLV. This conversion process is referred to as encoding.
- FLV files can be encoded using the Video Import Wizard built into Flash Professional 8. The “Wizard” is really nothing more than a series of panels that carefully walk you through the process of creating the FLV.
- FLV files can also be encoded using the standalone Flash 8 Video Encoder. When you installed Flash Professional 8 on your computer, you also installed a separate application called the Flash 8 Video Encoder. You can find it on your PC by going to Program Files\ Macromedia\Flash 8 Video Encoder or Applications/Macromedia/Flash 8 Video Encoder on a Macintosh.
- With two encoding choices, you may be wondering which way to go. Either one is acceptable, but if you are new to using the video features of Flash Professional 8 we suggest you start with the Wizard. Once you start moving into more complex video use and special effects, the standalone Video Encoder will become your tool of choice.

We'll start with the Video Import Wizard built into Flash Professional 8, but first you need to know a bit about the file that is being encoded.

Before you import

Flash can only import video if you have either QuickTime 7, QuickTime 6.5, or for you Windows users, DirectX 9 installed on your computer. If you don't have them, things may not work as expected, so you may need to visit the Microsoft or Apple websites to download and install the software.

If you have QuickTime on your Mac or PC, you can import the following file formats:

- **Audio Video Interleave (AVI):** The AVI format is very common on Windows systems.
- **Digital Video (DV):** This is the format, DV, used by your camcorder.
- **Motion Pictures Experts Group (MPEG):** This is the organization that devised the MPG or MPEG standard.
- **QuickTime (MOV):** This standard, developed by Apple in the early 1990s, is the one used by most video professionals.

If you are a Windows user and have DirectX 9 installed, you can also use these formats:

- **Windows Media File (WMF or ASF):** This is the format—WMV or ASF—commonly used by the Windows Media Player.
- **Audio Video Interleave (AVI)**
- **Motion Picture Experts Group**

Knowing the formats you can use makes life easier all around. If you are creating the video, then you know what file format to use, and if someone else is producing the video file for you, you can tell them what format to use to create the video.

*Throughout this book we will be using the terms video or digital video. Both refer to a document using one of the formats listed earlier. If we are referring directly to a file produced by a video camera, we will refer to it as a **DV** file.*

The other thing you need to do is make sure the video you are using is as uncompressed as possible. That may sound odd but it really has a lot to do with the quality of the final product. The encoders used by Flash actually compress the file. Video that is compressed has already lost some information, which is why video compressors are called “lossy.” If you compress an already-compressed file you are going to lose a lot more information, and that will have a direct impact on the quality of the finished product. The thing that does the compression job is called a codec, which is short for enCOder-DECoder or COmpressor-DECompressor, depending on who you are talking to.

Importing a video with the Flash Video Import Wizard

The source video for this exercise is a music video named “Tortoise.” It is a QuickTime video that is one minute long and has a file size of 9.2 MB, which puts it in the realm of really big web files. You can download the ZIP version of this file from www.friendsofed.com or, if you have some footage you would rather use, feel free to substitute.

When importing video it is important that you closely match the frame rate—fps, or frames per second—and physical dimensions of the source video. These two values are easily obtained by opening the video in QuickTime and selecting Window ► Info (PC) or Window ► Show Movie Info (Mac). The Info window will open to display all of the information you need, as shown in Figure 1-1. Matching the values here will ensure smooth playback later on.



Figure 1-1. The sample video is opened in QuickTime and the Info window is displayed.

Now that we know what we are working with, let's go swimming:

1. Open Flash Professional 8 and create a new document; be sure to save it to the same folder as the location for the FLV (more about why in a moment). The first thing to check is the frame rate of the Flash movie. It should closely match that of the video, which, in our case, is 15 fps. If the video is shot using the North American NTSC standard, you obviously are not going to have Flash play at 29.97 fps. In this situation, setting the Flash frame rate to 24 will work.
2. The next step in the process is to select **Import** ► **Import Video**. This will open the Video Import Wizard.

The Video Import Wizard is a rather clever series of screens that walk you through the entire video encoding process, starting from locating the video to actually placing it on the stage and having it ready to play. You will be asked some rather interesting questions along the way, such as "Is the video to be played from your web server?" and "What style of video controls would you like to use?"

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3. The first screen that opens—Select Video—simply asks you to locate the video to be encoded (see Figure 1-2). There are only two places where the video can be located. The first is in a folder on your computer. The second location is on an actual server used to stream media. This means you either have a Flash Media Server, Flash Communication Server (FlashComm), or a FlashComm account with an Internet service provider. The other server location is a Flash Video Streaming Service (FVSS). These are companies that charge you a monthly fee to store and deploy Flash video on the Web.

Click the Browse button and when the Open dialog box appears, navigate to the folder containing the video to be encoded. Click on it and then click the OK button. If you have a FlashComm or FVSS account, you only need to enter the URL where the video file is located. Click the Next button.

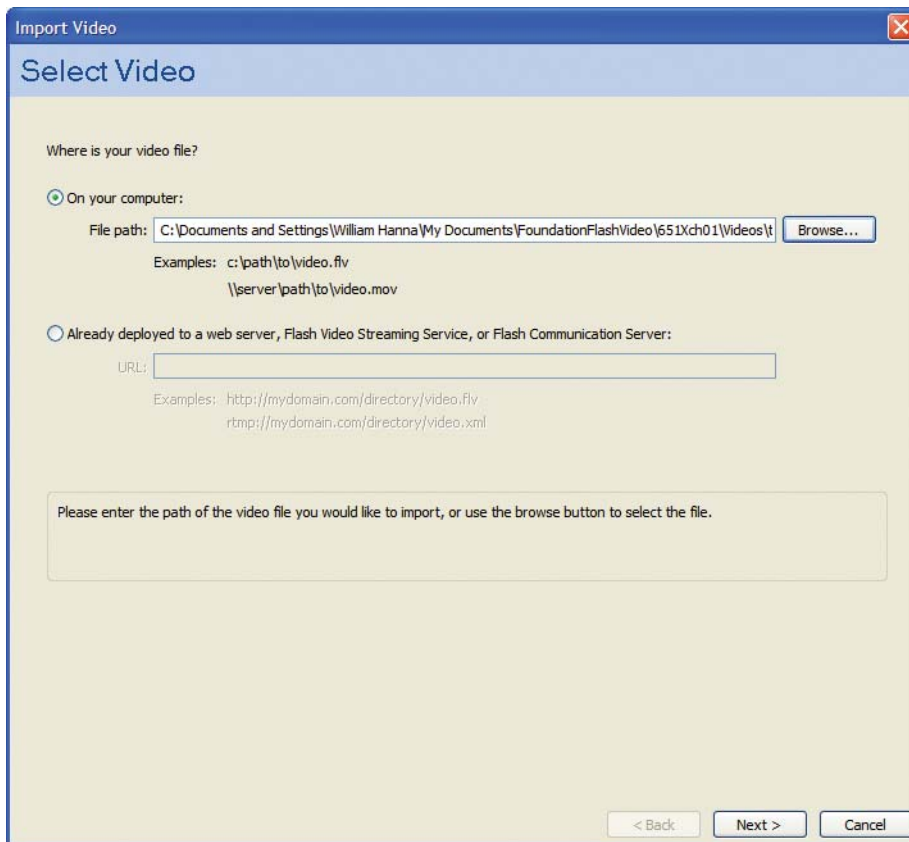


Figure 1-2. Use the Select Video panel to navigate to the location of the video to be encoded.

4. Now that Flash knows where the video is located, you need to tell it where it will be sent for playback. The next screen you see, Deployment, determines how the FLV file will be created (see Figure 1-3). Your choices are
 - Progressive download from a web server: This option assumes the FLV file will be sitting in a directory on your web server and playing from that server. When you select this option, Flash understands that the video data must be streamed into the SWF in a slightly different manner than if you were to use FlashComm or FVSS. This “slightly different manner” is called a progressive download. What happens is that enough data is “streamed” into the SWF to enable it to play smoothly from start to finish. When that point is reached, the video starts to play. This means there may be, depending on the size and length of the video, a very slight delay before the video starts to play.
 - Stream from Flash Video Streaming Service: This option assumes you have an account with one of these companies.
 - Stream from Flash Communication Server: This option assumes the FLV will be located in your FlashComm account.
 - Embed Video in SWF and play in timeline: Essentially this option will move the FLV into the Flash library and put the video on the main timeline or, if the video is in a movie clip, on the movie clip’s timeline. In many respects this is not recommended. When a video is placed on a Flash timeline, the timeline will expand to include one Flash frame for each frame in the video. For example, a 60-second video may require 720 frames to play if it were to be imported directly to the timeline. That may not seem like much, but when a SWF loads in a web page, it won’t start playing until every frame in the movie, including the 720 frames in the imported video and its audio, have loaded. The other nasty aspect of this option is a corresponding increase in the size of the SWF to accommodate the video. Still, if the video is short—5 to 10 seconds—or you want to play with it in some manner, this option works.
 - Linked QuickTime video for publishing to QuickTime: In the early pre-video days of Flash—Flash Player 5 and lower—you could actually convert the Flash movie to a QuickTime video. The upshot of this was total loss of interactivity. This feature is rarely, if ever used, these days, though animators who prepare Flash for broadcast do make use of it.

Select the Progressive download option and click the Next button.

So what is the difference between a stream and a progressive download? The difference lies in how the video is delivered to the Flash Player from the server. The first thing to understand is that a stream, in very basic terms, is the flow of information. In the case of a video, it is the information that actually plays the video in the Flash Player on your web page. The difference comes down to when the video starts to play.

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If you choose one of the two streaming options, the FLV is sitting on a server designed to stream video into the Flash Player. This server is a Flash Media Server, and FLV files arriving in your Flash Player start to play as soon as the first bit of information hits the Player. The Flash Media Server, in many respects, controls the flow of the information into the Player.

A progressive download doesn't use a media server. It uses your web server to start the flow of information into the Player. When the FLV is "called" by the Player, the FLV information starts flowing into the Player. The Player waits for enough information to arrive so it can start playing the FLV to ensure the video doesn't stop when it starts playing. For example, the Player may sit around waiting for 10 percent of the information in the FLV to accumulate before it starts playing the video in the Player. It may only take 1 second for this to happen.

So the difference comes down to time. If you are using a Flash Media Server, the video starts playing right away and "Play means Play." If you use a progressive download, there will be a very short delay before the video starts to play.

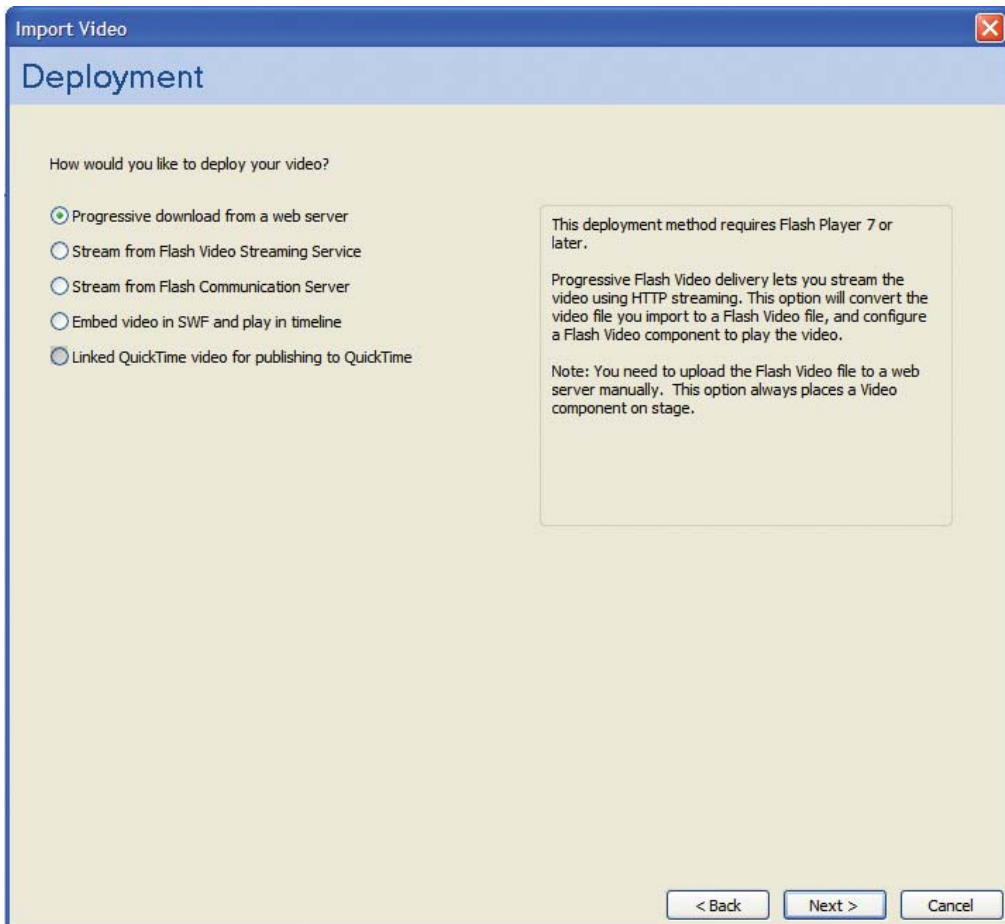


Figure 1-3. The Deployment panel

5. The next screen to open is the Encoding panel (see Figure 1-4). This is where you will have to decide what codec will be used to create the FLV, the streaming rate, the frame rate, and a number of other choices that will have an impact on playback. The decisions you make here will have a direct impact on your viewer's experience, so let's spend some time here looking at this panel.

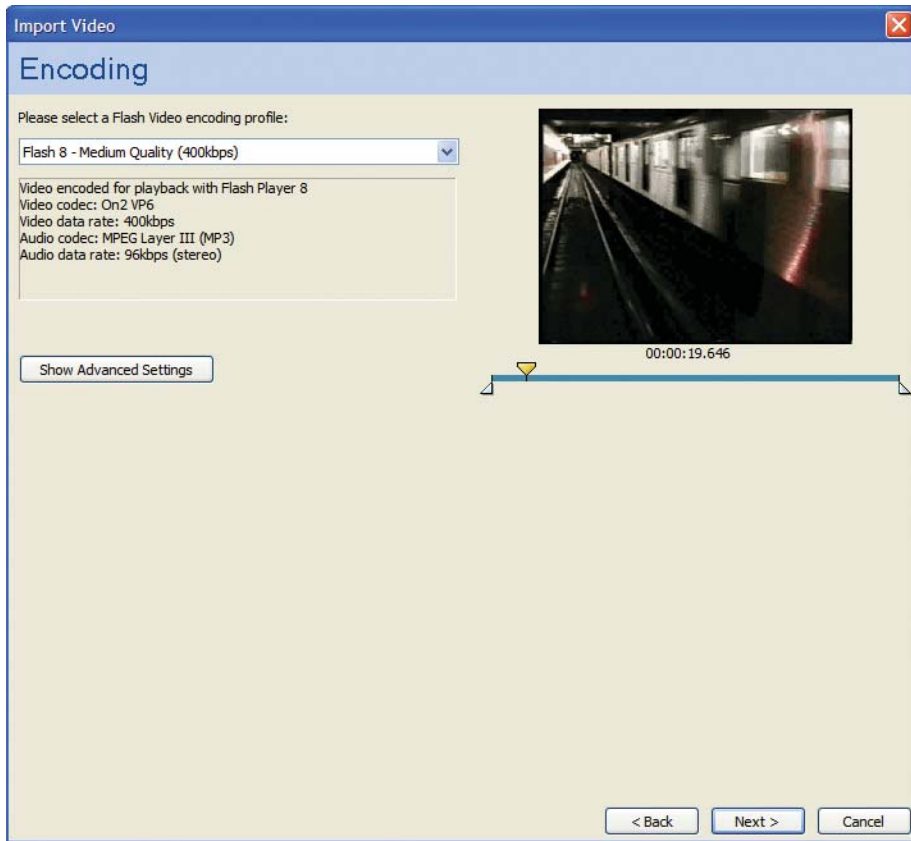


Figure 1-4. The Encoding panel

The first thing you see is the default encoding profile. If you click the drop-down menu you will see seven presets, each targeted at either the Flash 7 or Flash 8 Player. If you select a preset, the settings are outlined in the information area directly below your choice. Essentially, the choice of Flash Player comes down to a choice of codec. The Flash Player 7 only uses the Sorenson codec and the new On2 VP6 codec can only be used in the Flash Player 8.

The default you are looking at essentially says the video will only be playable in the Flash 8 Player. It is encoded using the Flash 8—only On2 VP6 codec, which explains why it can only be played in the Flash 8 Player. The rest of the information tells you the video will stream at a rate of 400 kilobits per second (kbps) and that the sound in the video will be converted to an MP3 stereo format and streamed out at 96 kbps.

Over on the right side of the screen you see the first frame of the video and under it are three sliders. The top slider lets you move forward and backward in the video. The two sliders under it set the *in* and *out* points.

The top slider is commonly called a *jog control*, and if you move it to the right you will see that you can advance through the video. The other important thing that happens is the time under the image changes to show you exactly where you are in the video. This time measurement is quite precise—hours: minutes: seconds: milliseconds. This measurement will come in very handy later on in this book when you create a movie that triggers events based on the current time of the video.

The in and out points are also quite useful. They establish the start and the end of the video and can be used to remove unwanted footage at the start or the end of the video or even to extract a short piece in the middle of the video. Using the in and out sliders to remove footage also has the pleasant side effect of reducing the final size of the FLV file.

The final feature of this panel is the Show Advanced Settings button. Click this button and the panel fills with a number of settings, sliders, and so on that allow you to precisely control many of the streaming values and other properties used when a video is encoded. We'll dig deeper into this area later on in this chapter when we use the Flash 8 Video Encoder.

6. Click the Next button to advance to the Skinning panel. Select the SteelExternalAll.swf option from the drop-down list.

The Skinning panel has a rather confusing name. In this panel you actually determine if you will add playback controls to the video. Previous versions of Flash treated skinning in much the way Henry Ford treated the color of Model T cars: *“They can have any color they want as long as it is black.”* Previous versions of Flash let you use any skin you wished as long as it was the “Halo” skin used to determine the look and feel of Flash components.

Flash Professional 8 offers you 33 different controller styles or skins that come in a variety of colors (see Figure 1-5). In addition, you can even create a custom skin—put your client's logo in the controller or whatever—and use it. When you select a skin style you can see what it looks like in the preview area of the panel. The various skins appear in one of two areas: over the video or under the video. You can't place them at the top or on the sides of the video.

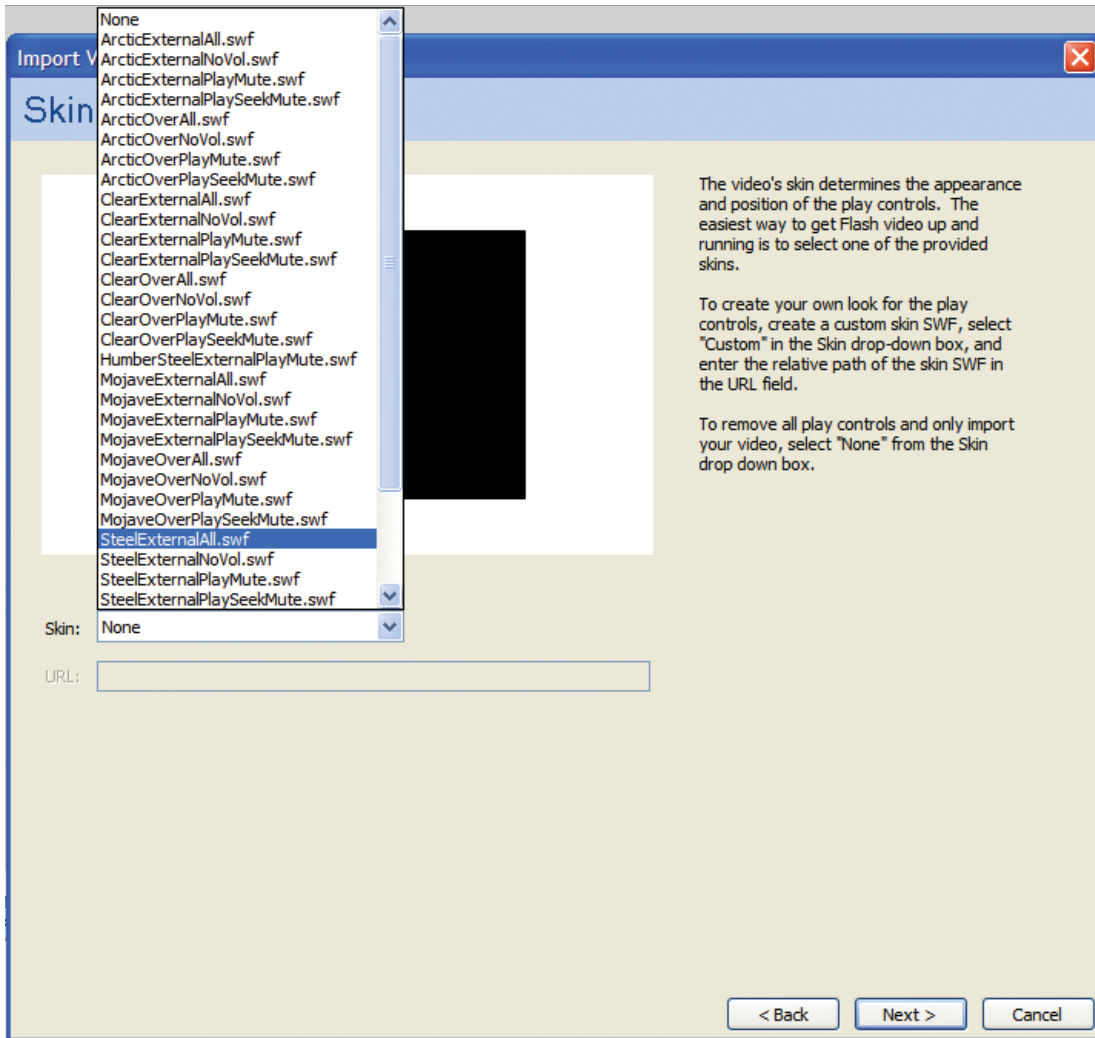


Figure 1-5. The Skinning panel with the various skin (or control) options shown

7. Click the Next button to open the Finish Video Import panel. Carefully read the instructions and click Finish.

The first thing that will happen is you will be prompted to save your Flash file. Navigate to the folder where this file is to be saved, name the file, and click OK. The window will close and you will be shown the progress of the video encoding process as well as a review of the options chosen in the Encoding panel (see Figure 1-6).

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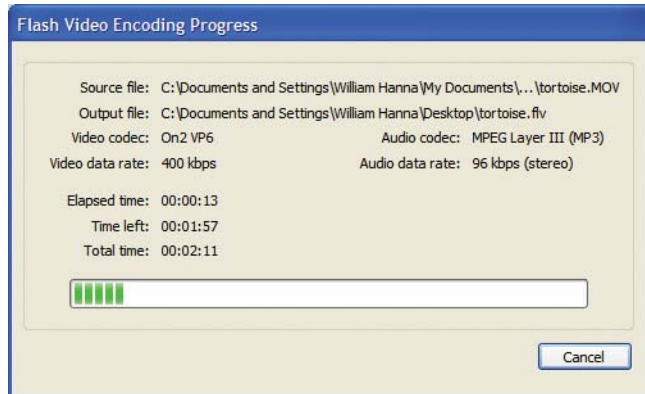


Figure 1-6. You will be shown the progress of the encoding process.

The encoding process actually does two things. It creates the FLV used in Flash and places it in the same folder as the Flash file you just saved. The second thing it does is place a copy of the `SteelExternalAll.swf` skin in that folder as well.

8. When the Encoding process finishes, you are returned to the Flash stage and the video is placed on the stage. Press `Ctrl+Enter` (PC) or `Cmd+Return` (Mac) to preview the video through the Flash Player on your computer (see Figure 1-7).



Figure 1-7. Playing back the video that has been imported into Flash

Congratulations and welcome to Flash video. You have just encoded a video, chosen the skin, put it on the Flash stage, and played the video. All of this in eight rather simple steps. If you have used previous versions of Flash, you will see that Macromedia has pulled off a rather interesting feat. They made what was a rather complicated process even more complex but easier to use. If you have never used Flash video, created an FLV, or regarded the entire video in Flash “thing” as being a bit over your head... welcome to the shallow end of the pool.

Now towel yourself off because we are going back to the deep end of the pool. Now you will learn how to use the new Flash 8 Video Encoder application.

Using the Flash 8 Video Encoder

The Video Encoder and the Video Encoding Wizard are somewhat the same but also completely different. The purpose of the Encoder is to create the FLV file and nothing more. Skins and so on are added in Flash. The Encoder is available in both Macintosh and PC versions of the application.

One of the more common uses for the Encoder is for batch-processing files. This means you can add, for example, six videos to the Encoder and convert all six videos to FLV with the click of a button (see Figure 1-8).



Figure 1-8. The Flash 8 Video Encoder icon

1. Navigate to the Flash 8 Video Encoder. The Encoder is found in ...\\Programs\\Macromedia\\Flash 8 Video Encoder on the PC and in .../Applications/Macromedia/Macromedia Flash 8 Video Encoder on the Mac.
2. The first screen that opens is where you add the video to be encoded (see Figure 1-9). Click the Add button and navigate to the folder containing the video you will be using. If you are using the materials supplied by this book, navigate to the *Tortoise.mov* file and click Open. When your video appears in the dialog box, click the Settings button to open the Encoding Settings panel.