What you'll learn in this lesson:

- Exploring the improved drawing tools
- Using Copy and Paste Motion
- Examining improved video import and export
- Using ActionScript 3.0 and Flash Player 10
- Previewing movies with Adobe Device Central

What's New in Adobe Flash CS4?

Adobe Flash is the premier program for designing rich, interactive content for the Web. It is also a leader in the creation of games, educational aids, mobile phone content, and cool desktop applications using Adobe AIR. Flash CS4 Professional contains many significant new features and updates for designers and media publishers, including a complete overhaul of Flash's infamous animation engine.

Starting up

This lesson does not require any lesson files from the included DVD. You can start Flash CS4 Professional and explore each new feature as it is discussed. If you haven't done so already, install Flash CS4 Professional and the Adobe Media Encoder. Instructions for installation, system requirements, and information on how to use lesson files from the included DVD are in the Starting up section on page 3 of this book.

If you are new to Flash, or simply want to jump right into a lesson, move ahead to Lesson 2, "Flash CS4 Jumpstart." Like all the lessons in this book, the Jumpstart lesson is a hands-on approach to learning Flash CS4 Professional.

Testing the waters

Flash CS4 Professional includes dynamic additions and updates that appeal to all types of Flash users, designers, and developers alike. These include some great new drawing tools, 3D tools, and an all–new animation engine that makes working with Flash easier and more enjoyable. Here's an overview of some of the updates you will find in Flash CS4.

New animation engine

Flash introduces a brand new animation engine, which changes the way motion tweens (automatic animations) are created and makes the process easier and more intuitive. Animation now creates *tween spans*, groups of frames that record and animate changes in position, scaling, and color to an object as you make them on the Stage.
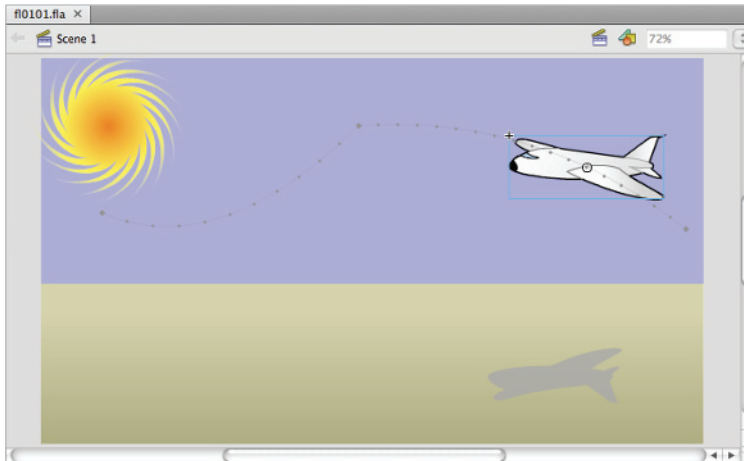

Motion tweens now automatically include motion paths, which show a symbol's trajectory on the Stage.

Now, you simply move the playhead to a position on the Timeline and reposition your object on the Stage; Flash takes care of creating the animation for you. Motion tweens now automatically display a motion path on the Stage, which shows you the trajectory your object will follow. These new motion paths can be directly selected and manipulated, allowing you to tweak the trajectory or move or resize an entire tween easily and quickly.

Motion Presets

You can now save animation behavior from any existing motion tween into a Motion Preset. You can recall and apply a Motion Preset to any tween span or tweened object to have several objects on the stage follow the same animation behavior.

The new Motion Presets panel (Window > Motion Presets) lets you manage, sort, and apply motion presets to existing tween spans on the Timeline.
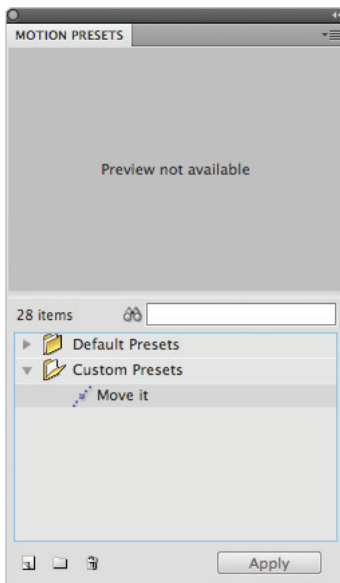
The new Motion Preset panel lets you manage saved presets and apply them to tween spans on the Timeline.

The Motion Editor

You can now fine-tune and enhance motion tweens with the Motion Editor, a new panel that displays every aspect of an animation in a graph-style format. You can visually tweak properties such as position and transparency, and add *easing* behavior to mimic forces such as gravity and inertia. The Motion Editor gives you unprecedented control over every possible aspect of a motion tween, and even lets you add to and subtract from animation behavior without having to touch anything on the Stage.
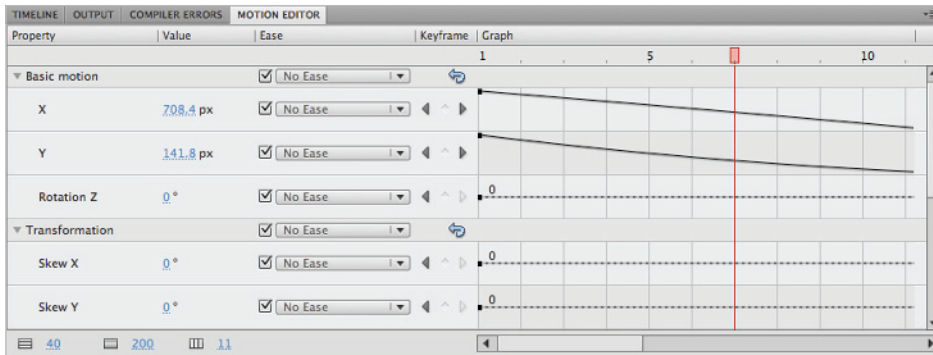
The new Motion Editor gives you a lot of tactile control over your motion tweens.

New easing behaviors

Designers and animators now have access to several new easing behaviors (such as Bounce and Spring) that were only previously available to ActionScript programmers. You can even use different easing behaviors across each property, even for a single tween.

New drawing tools: The Deco and Spray Brush tools

Flash CS4 expands on its existing creative toolset with the addition of the Deco and Spray Brush tools, both of which use symbols from the Library to create interesting patterns and effects.

The Deco tool can create elaborate fills using a *flower and leaf* style pattern that can be animated to create interesting effects with little effort. The Deco tool also includes a new Symmetry Brush, which uses symbols from your library to draw elaborate symmetrical patterns.

The Spray Brush tool lets you paint creative patterns and textures using symbols from the Library ; it also gives you full control over brush size, symbol scaling, and randomization of *ink drop* sizes.

Illustrator users will find Flash's Spray Brush tool to be nearly identical to Illustrator CS4's Symbol Sprayer tool.

Learn more about the new drawing tools in Lesson 3, "Getting Started with the Drawing Tools," and Lesson 5, "Advanced Tools."
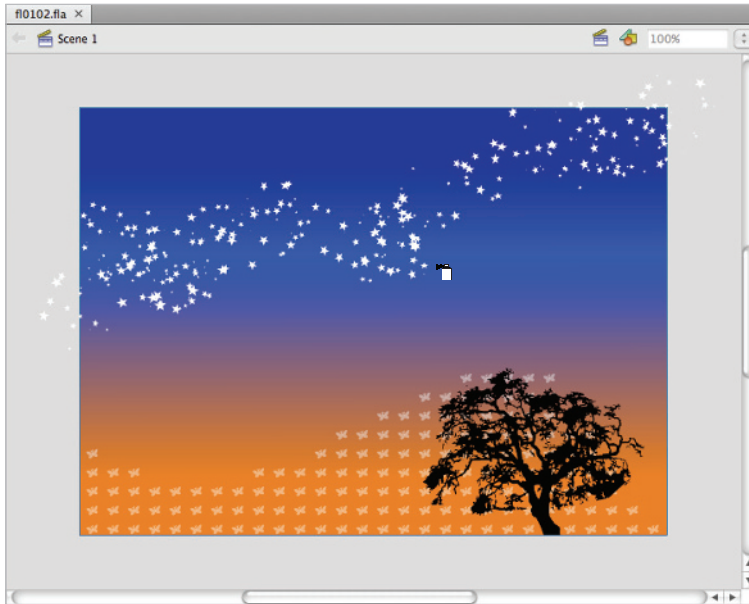
Unique patterns can be created easily with the Spray Brush tool (top) and Deco tool (bottom).

The 3D Rotation and 3D Translation tools

A significant new addition to Flash Player 10 and the design toolset is 3D support through the 3D Rotation and 3D Translation tools. You can now rotate and transform movie clip symbols along an x-, y-, and z-axis, and all aspects can be animated and edited using the Timeline and Motion Editor.

Any 2D content can be rendered into the 3D realm, which opens the door for stunning and realistic perspective and camera pan effects with graphics, type, and even bitmap images. In addition, all 3D aspects can be programmatically controlled with the addition of several new ActionScript 3.0 classes and commands.

Animation techniques and 3D tools are covered in Lesson 5, "Advanced Tools," and Lesson 7, "Advanced Animation."


You can now rotate and animate any 2D object in the 3D realm with new 3D support and drawing tools.

Inverse Kinematics: The new Bone and Bind tools

A concept very familiar to 3D artists and traditional animators is Inverse Kinematics (IK), which determines how a chain of jointed or connected objects are positioned relative to one another when one object in the chain is moved. Think of your own arm: When you move your forearm, your hand and upper arm both reposition themselves according to how the three are jointed together. Animating this type of motion in Flash has historically been very involved and difficult—until now.

You can now join together shapes and symbols to build IK objects, create poses, and animate those poses along the Timeline. The Bone and Bind tools allow you to draw virtual *bones* to join objects together and edit their connections, opening up unlimited possibilities for traditional animators and new Flash users alike.

You'll discover more about joining objects together and animating poses in Lesson 5, "Advanced Tools," and Lesson 7, "Advanced Animation."
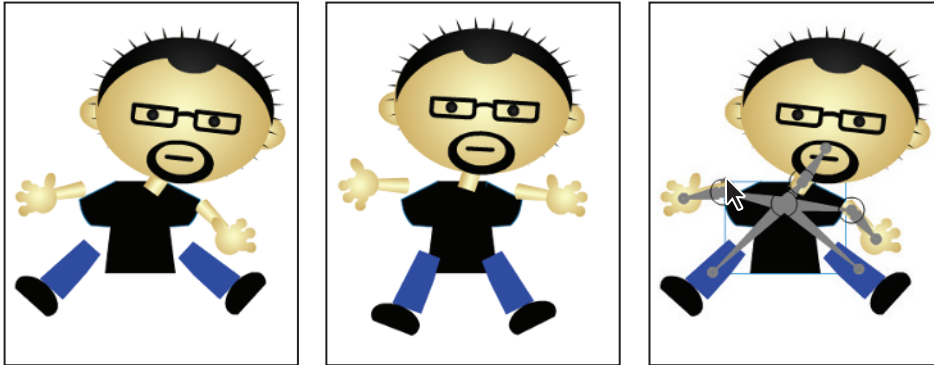
You can now join together shapes and symbols to create and animate poses with IK behavior.

Improved library management

When creating symbols or converting existing content to a symbol, you now have the ability to sort all new symbols into new or existing folders at creation time. In addition, you can search the library for assets or symbols by name using the new Search field at the top of the Library panel.
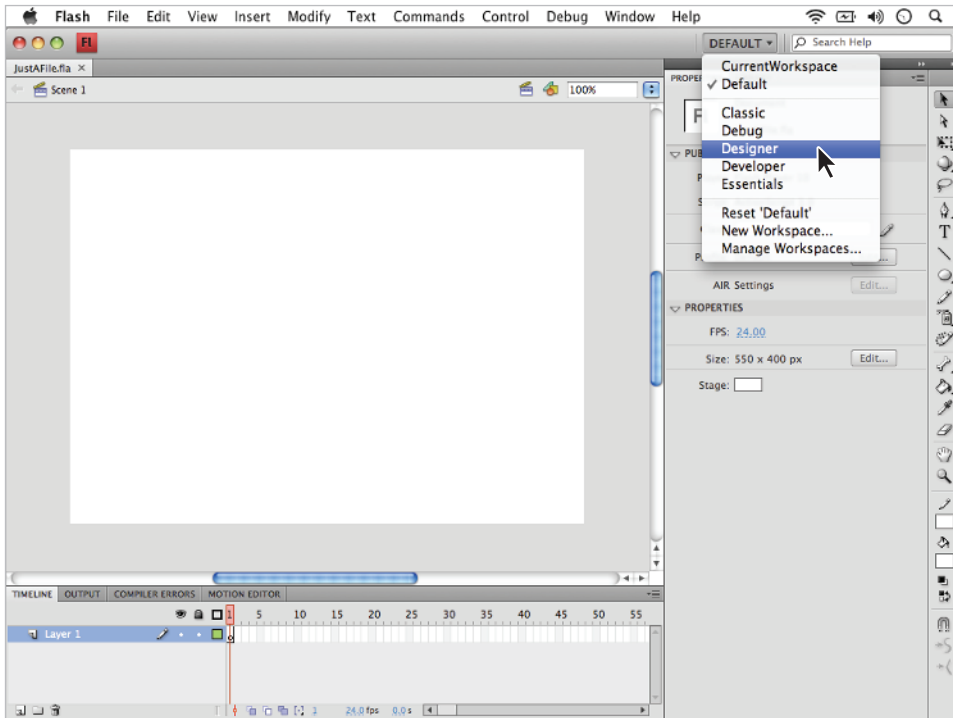
New CS4 interface

The most apparent change in Flash CS4 is the new interface and workspace, which repositions some key panels (such as the Timeline and Property Inspector) and makes organizing your workspace easier than ever. You will also find many new workspace presets, including a *Classic* preset that resets panel and Stage positions back to their traditional CS3 positions.

Many panels now benefit from the better organization and grouping of features, such as the Property Inspector, which now appears vertically in your workspace and includes dedicated sections for Color, Sound, and Filters. Panels can be collapsed to space-saving icon view or expanded for more detail, and panel sections can also be collapsed.

Experienced Flash users may notice the absence of the Parameters and Filters panels—the functionality of these panels is now included in the Property Inspector.

The new CS4 interface is cleaner and easier to use, and includes several useful presets right out of the box.

New F4V video format

Flash's new F4V video format promises higher-quality video at lower bit rates, with new support for MPEG-4 video and AAC audio to Flash. F4V supports encoding using the h.264 codec, an industry standard for the delivery of HiDef content online and on Blu-ray disk. In addition to h.264 support, F4V also supports HE-AAC audio, the higher-quality successor to MP3.

F4V encoding can be achieved through the video import process in Flash (File > Import > Import Video) or through the Adobe Media Encoder.

Adobe Media Encoder

Replacing what was previously known as the Flash Video Encoder, the Adobe Media Encoder helps you streamline common video encoding tasks. You can batch convert video into .flv and .f4v video format for use with your Flash movies or interactive projects, and even add sequences from Premiere and After Effects compositions.

Save presets for common settings, or choose from one of many pre-packaged presets.
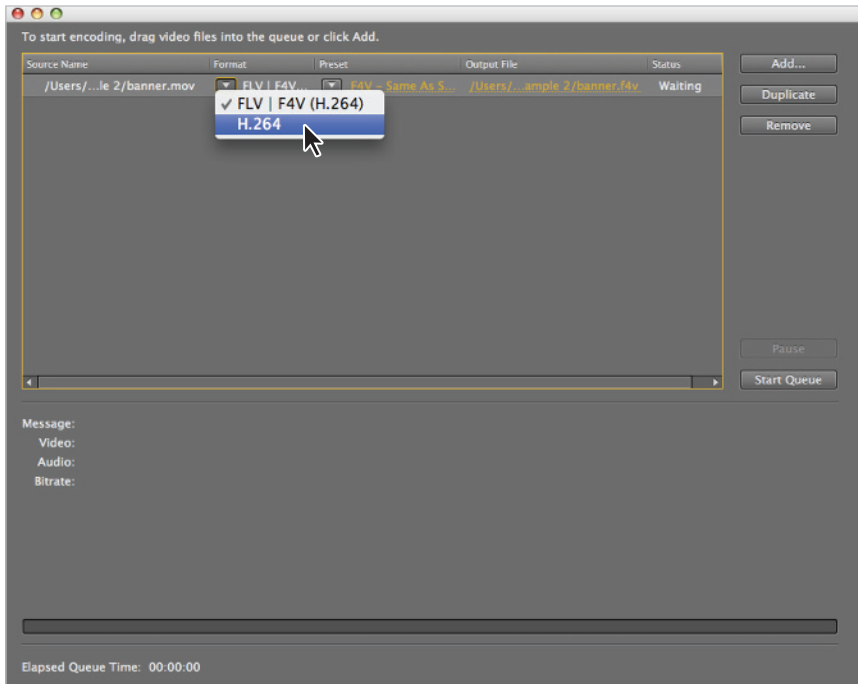
The Adobe Media Encoder helps simplify and speed-up many common video encoding tasks.

And, you're off!

Now that you've had a glimpse of the new and improved Flash CS4 features, it's time to see them in action. Head now to Lesson 2, "Flash CS4 Jumpstart," where you'll dive right in and start working in Flash CS4 Professional. You can find more specific information about each of these capabilities throughout the lessons in this book.