CHAPTER 3

Understanding Final Cut Pro's Interface: An Overview

- Activating Windows
- The Browser Window
- The Viewer Window
- The Canvas Window
- The Timeline Window
- The Tool Palette
- Workshop 3: Load the First Project and Become Familiar with the Navigational Controls and Window Arrangement

Activating Windows

Clicking various windows activates them. The Canvas and Timeline activation commands and some of the commands in the drop-down menus across the top are gray and unavailable if the proper window is not activated. You can see which window is active by looking at the title bar at the top of each window. The activated window has a lighter gray color in its header than the other windows' headers.

A great way to activate any of the four major windows is to use the appropriate keyboard shortcut:

- Cmd+1 activates the Viewer window.
- Cmd+2 activates the Canvas window.
- Cmd+3 activates the Timeline window.
- Cmd+4 activates the Browser window.

What you do in each window can affect what happens in another. Figure 3.1 shows an alternative view of the interface, created by simply dragging the four windows around and resizing them accordingly.

Viewer Window

Browser Window

Canvas

Timeline Window

FIGURE 3.1   *The four major windows.*

The first window we'll discuss in greater detail is the Browser window, which you can see by pressing Cmd+4.

The Browser Window

The Browser window, shown in Figure 3.2, is where you organize your source material and keep your edited sequences. It's a visual list of records that is displayed as icons next to names. This window also contains information about your source material and your edit decisions. These records are not the media files; they are pointer files to the separate media files you have captured, digitized, or copied into your computer's hard drives for use in your project.
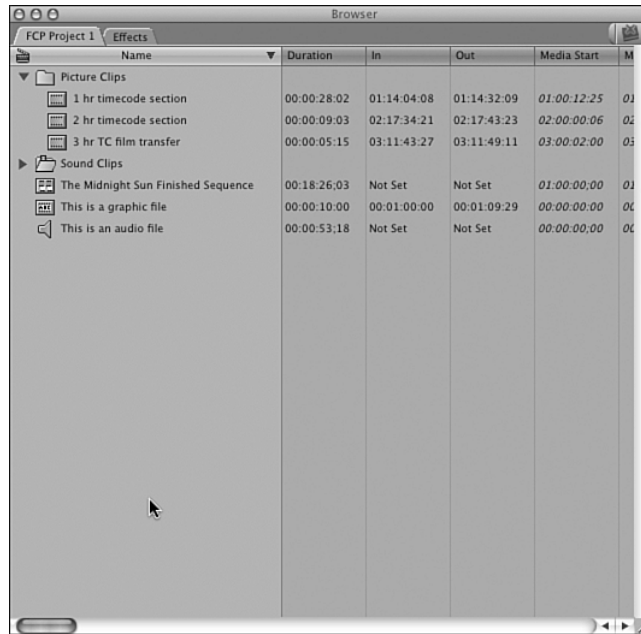
FIGURE 3.2   *The Browser window.*

The Browser window stores a reference file to every element your project contains. You'll probably also end up storing elements you didn't use in your finished program here. You drag these clips around the interface to move shots or elements into your edited program.

There are two tabs in the most basic setup of this window. One is the Project tab (named "FCP Project 1" in Figure 3.2), which contains the pointer files, and the other is the Effects tab, which contains a logically sorted list of available effects. If the Effects tab is not present, you can activate it from the menus by selecting Window, Effects or by pressing Cmd+5. You can bring it forward in the Browser by clicking its tab (see Figure 3.3). Your project will have its own tab at the top of this window.
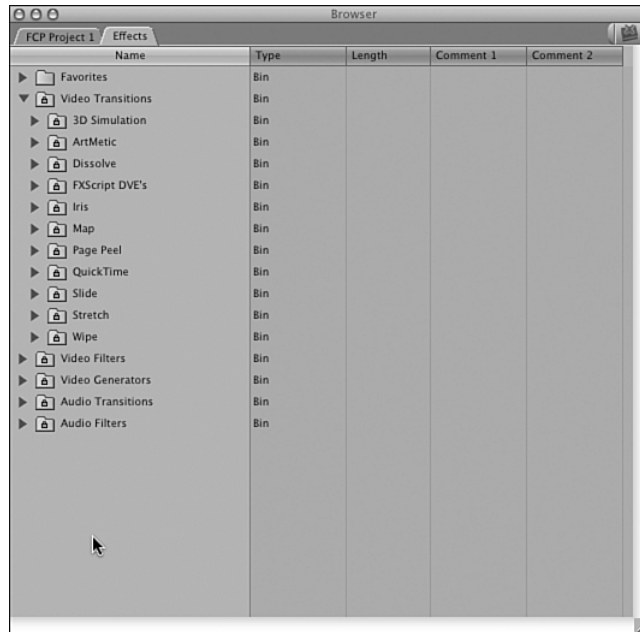
FIGURE 3.3   *The Effects tab in the Browser window.*

You can have as many projects open at the same time as you want, and you can edit between them. You can close these tabs by Ctrl-clicking (click while holding down the Ctrl key) the tab and invoking the Close Tab command (see Figure 3.4). The Close Tab menu is just one of many pop-up context menus that are available in many places around the interface. We'll explore them as we edit our movie. You can close the whole Browser window by clicking the button in the upper-left corner.
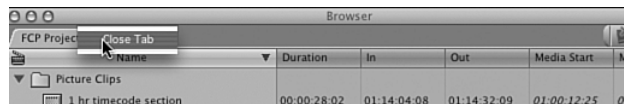

FIGURE 3.4   *The Close Tab menu.*

Types of Reference Files

Many types of elements are contained in the Browser window, as shown in Figure 3.5. Each element has its own icon (the little picture to the left of the clip name). An audio-only clip (the little speaker), a graphic clip (the little square with ABC on it), and a still frame of video each has its own icon, giving you a visual reference as to what type of element it is.
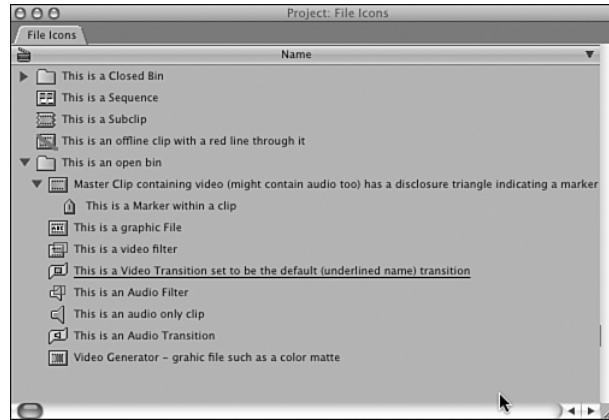

FIGURE 3.5   *The Browser window with all types of elements referenced in Final Cut Pro.*

Clips are reference files that reference individual moving picture, still, and/or sound elements such as QuickTime files, CD audio files, and still frames. Master clips have square icons. These square clips contain video and might or might not contain audio. If they do contain audio, it is usually the sound that was recorded at the same time the pictures were recorded (sync sound).

There is a way to "marry" an audio clip to a video clip. New to FCP 4 is the ability to merge clips. A *merged clip* is typically an audio file you've "married" to a video file. You can merge as many as 24 audio tracks to a single video file, for example. A great use of this feature is to sync your sound to a video clip, such as in the case of a film shoot where you've recorded audio on a DAT machine. When you edit with a merged clip, the synchronized audio and video act as if it was a single media file. You can merge up to 24 different audio tracks to one another without a video track.

To merge a clip, highlight the video (or audio) clip in the Browser and an audio clip you find useful for a merge, and Ctrl-click one of the two or more selected clips. The Merge Clips window opens, as shown in Figure 3.6. Select the appropriate method for FCP to merge the clips, and click OK. Final Cut Pro creates a new clip that, when opened, acts like a single audio/video file. It also renames this new clip with the

video file's name with the word "merged" added to the end. In the case of merging only audio clips, the topmost clip's name is used, with the word "merged" added to the end.
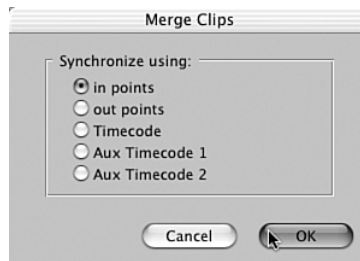

FIGURE 3.6   *The Merge Clips dialog box.*

After they are created, the only change you can make to these clips is a subframe audio slip. A way to re-create a merged clip is to edit it into a sequence and then delete the original merged clip in the Browser. Then, unlink the items in the Timeline and make any sync changes. (To unlink clips in the Timeline, use the toggle button in the top-right area of the Timeline window, or press Shift+L.) Relink the clips (just click the linking button again or press Shift+L) and then drag them back into the Browser from the Timeline to create a new merged clip.

Sequences contain these clips, all your edit decisions, and your finished program. A sequence icon is a box with yellow and blue boxes within it. You can create as many sequences and clips as you want. This comes in handy for different edited versions of the same material or different areas of your finished programs. You can use multiple sequences in many other ways, such as for a series of similar shots or a sequence for each scene of your feature film.

You can edit from sequence to sequence too, not just from clips. One way is to copy and paste a clip or set of clips between sequences. You can even add an entire sequence to another sequence by dragging its icon to the other sequence in the Timeline window, creating a nest. A *nest* appears to be a single clip, but it contains the contents of its source sequence. It's similar to what After Effects calls a *precomposition* and similar to what happens in Avid when you *collapse* a sequence. When you add an entire sequence by dragging its icon to another sequence, you see a single clip, but if you double-click this nested clip, its source sequence of clips opens in the Timeline window. Any changes made to this source sequence are reflected in the nested clip that is contained in the sequence you add it to.

A *subclip* is a portion of a clip you've set apart as an element you can quickly access. For example, this could be a single shot from a media file or a *master clip* (any original media file) that began as an entire tape with many shots. The subclip icon has serrated edges. You can make subclips from subclips. You can make subclips from audio-only clips, but their icons remain the same as what the audio-only master clip uses (the speaker icon). We'll use subclips extensively as we edit the film.

When clips are offline, they have a red line through them. *Offline* in this context means that no picture or sound files (media files) connect to them.

The rest of the icons are as follows (see Figure 3.5):

- Video transition—An effect between clips, such as a dissolve
- Audio transition—An effect between audio clips, such as a fade or audio dissolve
- Video filter—An effect applied to a video clip
- Audio filter—An effect applied to an audio clip
- Video generator—Effects that Final Cut Pro makes, such as to a title or color bar
- Marker—A reference point within a clip
- Graphic file—Pict files or tiffs are examples
- Audio-only clip—Contains no video

The Browser window also can contain *bins*. They are represented by blue folders that can contain clips, sequences, subclips, or even more bins to reduce clutter and organize your source material.

Also notice in Figure 3.5 the little triangles next to the bins and one of the master clips. These collapsible triangles, called *disclosure triangles,* open and close the bins or open and close the list of markers contained in a clip or subclip. Triangles that point down are open. Triangles that point toward the icon are closed. The bin or clip closes and opens another area for viewing items simultaneously. To open and close them, simply click them.

You can have as many sequences and clips stored in the Browser window as you want, but for good order, you should store clips in a logical bin structure. The icons are actually buttons you click to command Final Cut Pro to call up the media files to play for you in the Viewer window or Canvas window. (See the sections "The Viewer Window" and "The Canvas Window.") If you click the names of these items, you can type a name for them. When clicking the icon of these files, you can drag them or open them in the Viewer, Canvas, and Timeline windows.

This entire display of references (clips, sequences, and effects), as stored and displayed in the Browser window and project settings, comprises the content of the project file. Because the project files are only text files, you can easily back them up on all sorts of different media *away* from the computer. A large project file might be 15MB in size. Backup has to be a way of life for intensive work such as editing. You definitely don't want to lose the log or the editing that's been done. It's a great habit to back up your project file at the end of each session on media that can be stored away from the computer.

The Importance of Backing Up Your Project File

A word to the wise: More than one editor has lost his job because he failed to back up his project file. Think of what could happen if you edited something for months and then lost the use of your project file. I never want to be in that position, and I'm sure you don't either. Disaster happens from time to time during the life of any nonlinear editor (NLE), so don't get caught on this one. Backing up is absolutely the most important computer chore for anyone.

Final Cut Pro can open a saved project file and recapture it on any Mac that runs the same or a newer version of Final Cut Pro. It recaptures all time-coded source material contained in these logs automatically in a process called batch capture. You can find further discussion of backup and recapture strategies in Appendix C, "Solving Common Problems." Media files such as video captures are quite large and might be too cumbersome to back up. Project files, though, are much smaller and can easily be backed up on a Zip disc or CD. If you lose your media drives, you can restore your media files from a backup of your project file. You also can restore all the work you've done with sequences.

There is an auto backup feature within Final Cut Pro called the *Autosave Vault,* but you probably will save these backups to your startup disk, and you could lose that disk, so it's still best to back up on a Zip disc or a CD at the end of each session. The worst case is that you could lose a day or two of work, not months' worth.

Clip Information

Clip information can include reel number, media start and end points, tracks contained, file format information, and more. Clip information is stored in the columns to the right of the clip names. Figure 3.7 shows only a portion of them; you can use the arrows or the bar at the bottom of the Browser window to scroll through them. I grabbed the handle on the bottom-right corner to expand the Browser.
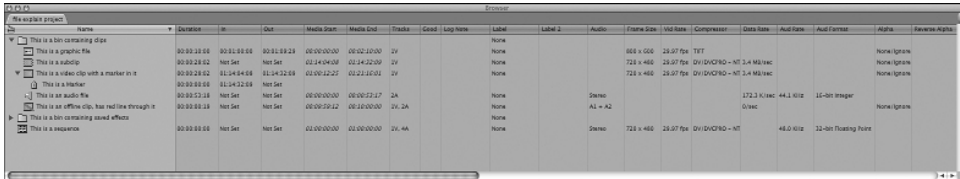
FIGURE 3.7   *An expanded view of the Browser.*

Table 3.1 is a complete list of what clip information can be stored in the columns.

Table 3.1   Columns in the Browser Window

Column	Information
Name	The clip's name as you entered it.
Media Start	The time code where your clip begins on your source tape.
Media End	The time code where your clip ends on your source tape.
Length	The duration of the entire media file.
In Point	The time code position that is set after you select an edit start point in the Viewer or Canvas window.
Out Point	The time-code position that is set after you set an edit ending point in the Viewer or Canvas window.
Duration	The duration of the In point to the Out point in hours, minutes, seconds, and frames.
Tracks	Video and/or audio tracks.
Good	A check mark to quickly sort the best takes feature.
Audio	Specifies whether the clip is stereo, for example.
Frame Size	Expressed as pixels, such as 720×480.
Compressor	Which compressor or codec the clip or sequence uses.
Data Rate	Expressed in kilobytes per second (KBps).
Audio Rate	The clip's sample rate in KHz.
Video Rate	Expressed in frames per second (fps).
Audio Format	Expressed as bits and format.
Alpha	Displays the type of alpha that FCP detects.
Reverse Alpha setting	Can be set to yes or no. A check mark reverses the current setting to invert the alpha channel.
Composite	Expressed as a type that is selectable.

continues

Table 3.1   continued

Column	Information
Pixel aspect	Expressed as a ratio.
Anamorphic	A check mark indicates whether the medium is anamorphic. You also can set this to force this condition.
Description	A user-entered phrase, for example.
Scene	A place where scene descriptions or numbers can be kept.
Shot/Take	A column for shot or take numbers.
Reel	The number or name of the tape the clip is from.
Last Modified	A date and time.
Aux TC 1	User-assigned auxiliary time code number 1.
Aux TC 2	User-assigned auxiliary time code number 2.
Type	A sequence, clip, subclip, or bin.
Log note	Another place to keep notes.
TC	Where the time code is from.
Size	The media file size in bytes. This is great for media-management decisions.
Label	User-selectable.
Source	Where the medium is stored on your disk drive.
Thumbnail	A user-selectable still frame that displays a user-selectable frame that the clip contains.
Comment columns	You can have custom names for four user-definable comments columns. You can change their names by selecting Edit, Project Properties.

Quite a bit of information is stored in these columns. The information is arranged much like a spreadsheet, with column headings at the top and the data that's particular to each clip in the rows and columns beneath the top row of column headers. What's exciting is that all the information is sortable and searchable. Furthermore, Final Cut Pro gathers much of the information stored here automatically. This automation is a necessity if you are editing a feature-length program with thousands of clips.

To sort a column, click its header name at the top of a bin or the Browser window. Click again to reverse the sort. To find a clip, select Edit, Find or press Cmd+F. You can also use the up and down arrows on the keyboard to move the highlight from

element to element in this project/display—again, much like a spreadsheet. Pressing letter keys moves the highlight between clips whose name starts with that letter. When the clip or sequence is highlighted, you can press the Return key to load the clip or sequence from the Browser into the Viewer, Canvas, and Timeline windows.

By dragging the column name headers, you can move the columns to the position of your choice. This powerful feature allows you to quickly view the information of your choice next to the Name column, for example.

You can also add or take away columns from your view by Ctrl-clicking any column header. A context menu opens, as shown in Figure 3.8. You also can save and restore custom column layouts from this menu. These layouts are saved in the User>Library>Preferences>Final Cut Pro User Data>Column Layouts folder. New in Final Cut Pro 4, these layouts can be moved from system to system.
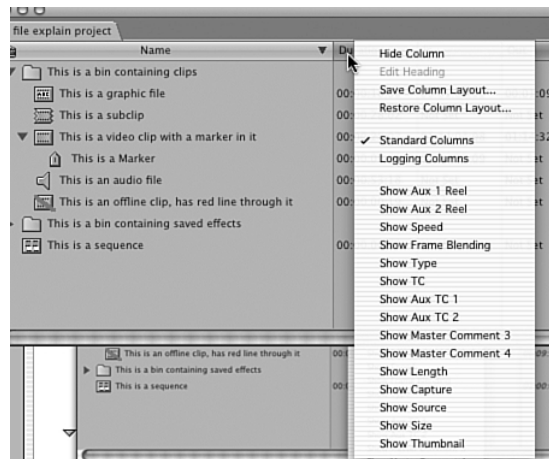

FIGURE 3.8   *The Browser Column context menu.*

You can resize the Browser window by dragging the lower-right corner of the window or clicking its green expansion button to expand its view. Keep the Browser window handy, because you select all source material for your sequence or edited show from this window. The sidebar gives you a quick lesson on some automatic arrangements that can come in handy.

Arranging Those Four Windows

Using the Window menu, you can arrange Final Cut Pro in many ways. Saving frequently used window arrangements for tasks you perform often enhances your monitor setup. If you have multiple monitors or a cinema display, your standard window arrangements

might be different from a person who has just one 15-inch monitor. Accessing these window arrangements is a snap. Just pull down the Window menu to access some arrangements that Final Cut Pro supplies, and then start with one you like. Modify the arrangement by dragging the windows to where you want to work with them, and then Cmd-click and select Window, Arrange, Save Custom Layout 1 or 2. Alternatively, you can set this new custom arrangement to be accessed through keyboard shortcuts.

Final Cut Pro then has this setting available when you work in this *particular* project. If you want to use this setting in any or all projects, you need to create a custom layout. After you've set up the windows as you want them to be, save them by selecting Window, Arrange, Save Layout. After you have saved the windows, you can restore them in any project by selecting Window, Arrange, Restore Layout. When you select this command, you see a window that allows you to select any of the saved layouts you've created for this or earlier projects.

Viewing Options in the Browser Window

There are four ways to look at items in the Browser: the List View, and three different icon views. Figure 3.9 shows the Large Icons view. To access the context menu shown in Figure 3.9, Ctrl-click a blank area of the Browser or an open bin. Note the Arrange option. Selecting this in one of the three icon views forces the pictures to fit into the Browser.
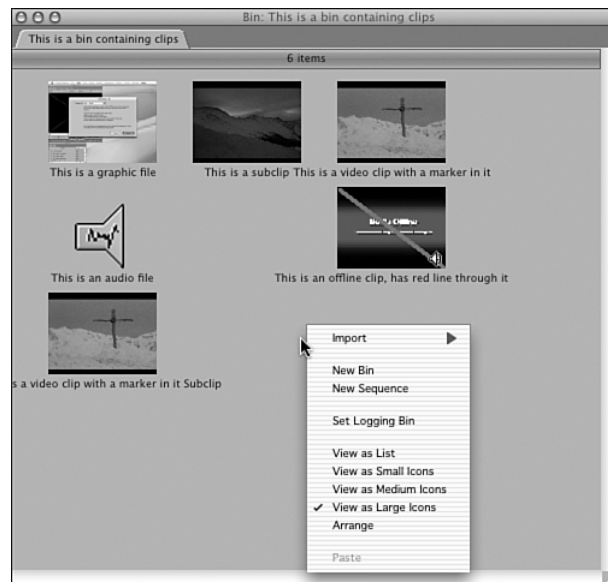

FIGURE 3.9   *The Large Icons view.*

Three other views are listed in the context menu shown in Figure 3.9: Small Icons, Medium Icons, and Large Icons. Experimenting with them is your best bet. When you select these views, the clip information is replaced by a representative frame of the clip in the case of video clips and by larger views of the icons in the case of the other types of files.

You can open a separate bin window by double-clicking its icon in the Browser. You can use all but the List view to arrange your clips in a certain order by dragging them around and then dragging them as a group to the Timeline in order from left to right and then top to bottom. It's sort of like creating a storyboard and then dragging it to the Timeline in the order of your choice. You can trim these complete shots with the tools supplied by Final Cut Pro.

The Arrange selection in the pop-up menu arranges the icon views to fit the pictures into the window shape you are currently working in.

One other context menu can be opened from this window. If you Ctrl-click a clip icon, you can pull up a set of commands to use on that selection, as shown in Figure 3.10.
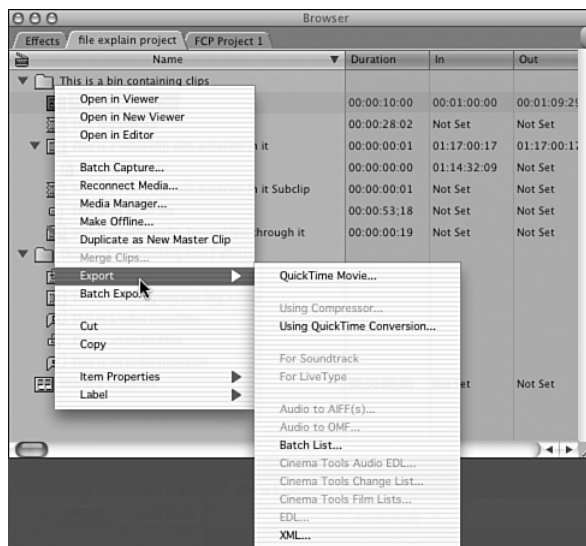

FIGURE 3.10   *The context menu containing commands available for an item in the Browser.*

The Effects tab, shown in Figure 3.11, contains all the effects you have at your disposal within Final Cut Pro. They are organized into six folders. If you open the triangle next to one of the folders, you can see the list of effects that can be applied to your clips and edit points.

The difference between a filter and a transition, whether it's video or audio, is in how it's applied. A *filter* applies to a clip or a portion of a clip (such as a color correction), and a *transition* is an effect used between two clips (such as a dissolve). Some are audio-only filters and transitions, and some are video-only filters and transitions.
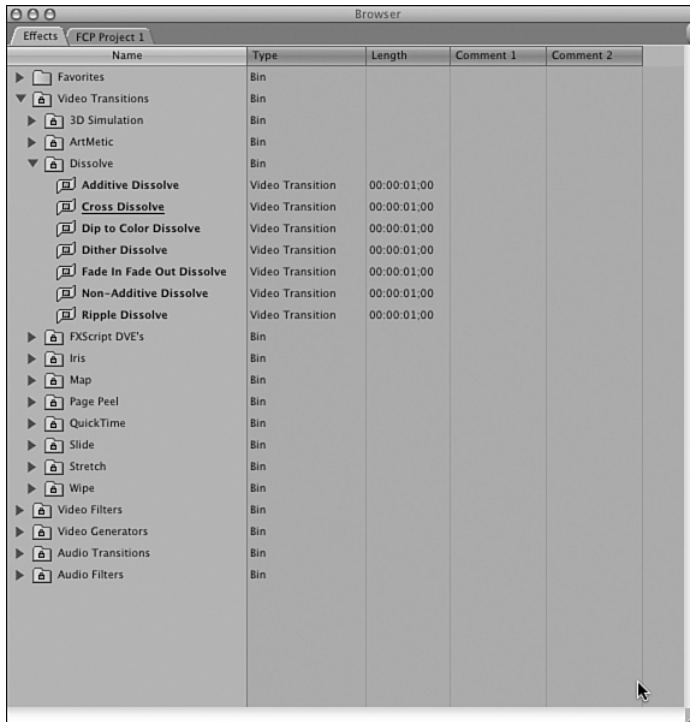

FIGURE 3.11   *The Effects tab.*

In the Favorites folder, you can drag any effect you have customized for quick access as you edit. In the Video Generators folder, you can access all the elements you can create from within Final Cut Pro, such as titles, shapes, gradients, highlights, noise, and audio tone. There are also plug-ins that can be added to Final Cut Pro, such as Boris's Graffiti and Boris's Red. They too show up in this window as generators if they have been added to your system. Note that there are no audio + video filters. Each of these elements must be affected separately.

You can add plug-in effects such as After Effects filters, which show up and are sorted into the appropriate effect categories accessed under this tab.

To add a filter or transition to audio or video, drag the effect from the Effects tab to the clip or cut point you want to affect.

The Viewer Window

The Viewer window, shown in Figure 3.12, is like a QuickTime movie player on steroids. Not only can you view clips and have full VTR-like controls while viewing them, but you can also modify any clip's playback, view source time code, edit from it to a sequence in various ways, and modify all your program's effects. Durations of transitions, amounts of color changes you make, keying parameters, and more are programmed from this seemingly simple window. Used primarily for viewing and marking source material to be added to your program, this window is where you can edit most parameters of all the elements in your finished program, whether they are clips or effects.

FIGURE 3.12   *The Viewer window.*

You can open clips into the Viewer window from the Browser by simply dragging them from the Browser to the Viewer or by double-clicking them. You can load sequence clips from your current sequence for further editing, adding, and modifying of effect parameters by double-clicking them in the Timeline window. Also you can open sequences in the Viewer by dragging them from the Browser to the Viewer.

Buttons in the Viewer Window

The controls and buttons in this window look familiar. They work much like the controls a videotape recorder (VTR) uses (see Figure 3.13). The round center button turns playback on and off. The button to the right of it is "Play Around Current Frame." This button lets you go back a bit, play through the current position, and then play past it a bit. How far it goes back and then plays past your current position depends on what you've set in the User Preferences General window in the preview pre and post roll boxes. It's a quick way to play before and through an edit point (if a sequence is loaded in the Viewer) or any position you might be sitting on to check just the footage around it.
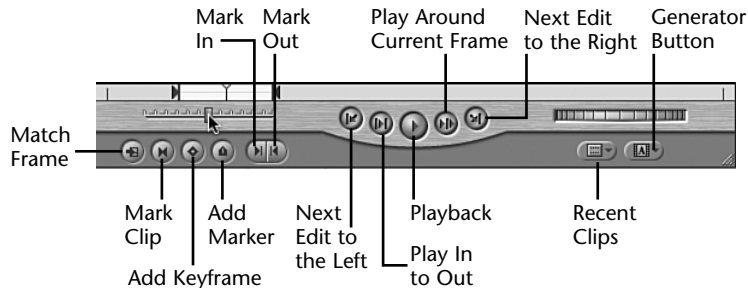

FIGURE 3.13   *Controls used in the Viewer window.*

The next button on the right is the Next Edit button. It moves the position indicator to the next edit to the right. The button on the far left moves you to the next edit point to the left of your current position.

The button with the triangle between two lines is Play In to Out. This button plays your clip from your set In point to your set Out point. The shuttle control on the left scans your material forward or backward; the farther you move from center, the faster the playback goes in either direction. The control on the far-right is the jog control. It performs much slower searching.

The scrubber bar resides just above these VTR controls. It represents the clip's entire duration. The yellow position indicator resides here as well; it's also called the *playhead*. You can click anywhere in this bar to quickly move about within the clip you are working with.

The buttons along the bottom left are as follows:

- Match Frame—Pulls up the same frame if it's in the current sequence into the Canvas window.
- Mark Clip—Selects the clip's boundaries to set an In point at its beginning and an Out point at its end.
- Add Keyframe—Adds a keyframe at the current position. *Keyframes* are markers that set certain frames to become a start, an ending, or even a midpoint for an effect to start or end.
- Add Marker—Adds a marker to the current position. This button has many uses that are explored throughout this book.
- Mark In—Sets the clip's In point at the current position, where you want to see it start in your edited program.
- Mark Out—Sets the clip's Out point at the current position, where you want playback of this clip to end in your edited program.

The two buttons on the bottom right are Recent Clips and Generator. The Recent Clips button, on the left, lists the clips you've recently loaded into the Viewer window. You set the number of clips displayed in the User Preferences General window, but this number is lost each time you close Final Cut Pro. The Generator button is quite a different animal. It lists items you can create in Final Cut Pro. You can open titles, bars, tone, gradients, matte colors, and more in the Viewer window by selecting them here. This is discussed in detail in Chapter 11, "Video Filter Effects and Basic Compositing."

At the top of this window are two time-code displays, three buttons, and a series of tabs. The right time-code display shows the duration of an unmarked clip. It changes to show the duration between an In point and an Out point. Ctrl-click it to pull up a pop-up menu, as shown in Figure 3.14. You can display the time as Drop Frame, Non-Drop Frame, or Frames. The sidebar explains the differences between the two time-code formats. Selecting Frames counts the number of frames from in to out or for the duration of the clip if you have not set these points yet. Durations can also be used to define in and Out points. When you set either point and then type a duration into the box, FCP sets the companion point (in or out) for you.
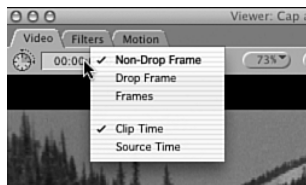

FIGURE 3.14   *The time-code views context pop-up menu.*

The left time-code display shows the time code that is associated with the current frame you are viewing. It also works as a time-code locator. Type in the time code you want to go to, and as long as the clip in the Viewer contains that number, the Viewer displays the frame stamped with that number. You don't need to type the colons or semicolons. FCP knows that the colons and semicolons are part of the number you are looking for. For example, if you want to type 1 minute, type **10000** for 1 minute, 0 seconds, and 0 frames. If you like, you can avoid adding the 0s by typing periods. For example, 1. equals 1 second, 1.. equals 1 minute, and 1... equals 1 hour.

Drop Frame and Non-Drop Frame Time Codes

Professional videotape formats include a time code, which is a unique number "stamped" on each frame of video. It is displayed as hours, minutes, seconds, and frames: 00:00:00:00. The difference between the Drop Frame and Non-Drop Frame time codes is that Non-Drop Frame (expressed as colons between the numbers) counts each frame of video in ascending order, changing over the count from 00:00:00:29 (29 frames) to 1 second, expressed as 00:00:01:00. The problem is that NTSC video is not 30 frames per second. It's 29.97 frames per second.

If you used the Non-Drop Frame code to set an in point at the beginning of your finished program and an out point at the end to have Final Cut Pro calculate your project's duration, using the Non-Drop Frame code would result in an incorrect duration. This could be disastrous for editing programs that must come to definite time durations, as all broadcast programs must do.

Enter the Drop Frame time code, which is expressed as pairs of numbers separated by colons, but with *semicolons* at the end in Final Cut Pro. At each minute changeover, the numbering system drops the numbers between the fifty-ninth second and the twenty-eighth frame and the next minute point, which starts at that minute and one frame. This numbering scheme "drops" two frame numbers. Thus, frame number 00;00;59;28 is followed by frame number 00;01;00;01. This numbering system skips the dropping scheme at each 10-minute changeover. If you do the math, this works out over a period of *actual* time, and you can rely on the duration of your edited sequence to be the actual time that is calculated using this form of time code. Most professionals use the Drop Frame code, so this "real" time problem doesn't exist. FCP can search for clips if you enter time-code numbers. If you are using Drop Frame by entering time-code numbers, and you enter a number that is not in the sequence because it was dropped, FCP displays a frame assigned with the next-higher number.

As long as your sequence uses the Drop Frame time code, it doesn't matter if your source material uses Non-Drop Frame. The timing will still be correct as long as the sequence uses the Drop Frame code.

PAL video is always 25 frames per second and always uses the Non-Drop Frame time code.

The three oval buttons near the top of the Viewer window in the middle control different viewing options as well as a new behavior that Final Cut Pro 4 introduces. (We'll discuss these buttons in depth as we edit our movie.) The button on the left zooms in or out on your clip. It invokes a command to automatically fit to the window size you've set up for viewing purposes. The button on the right selects options such as time-code overlays and title safe. The new button, in the center (it looks a bit like football goalposts), selects playback behaviors. It's called the Playback Sync button, and it has four options, as shown in Figure 3.15:

■ Off—This is the default behavior. The Viewer and Canvas windows play independently from each other.

■ Follow—Playback in the Viewer is locked to the playback of the Canvas window. Viewer and Canvas display the *same frame*. As you move the Canvas's playhead, the same frame appears in the Viewer. This is called *ganging*. Note that if the source clip is not already loaded into the Viewer, the Viewer's playhead does not follow along.

■ Open—This is similar to the Follow option, except that it automatically loads any clip in the Viewer that the playhead of the Canvas or Timeline is currently viewing. This can be useful for quick alterations to various clips next to each other in your sequence that need to be colorcorrected, for example. The active tab in the Viewer stays open, but the clips loaded in the Viewer match the clips you currently are viewing in the Canvas, and what you see in the Viewer is the color correction visual controls of the Canvas's clip.

■ Gang—When this option is chosen, the offset between the position of the playhead in the Canvas and the position of playhead in the Viewer is maintained as both playheads move together. This mode can be useful for editing operations in which you want to mark in or Out points using durations defined by clips already in the Timeline.
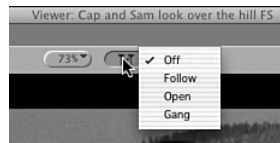

FIGURE 3.15 *Options on the Playback Sync pop-up menu.*

For example, suppose that before you turn on this option, you set an In point in a source clip and set the Canvas's playhead to the In point you want to use in the sequence as a reference. Moving the Canvas's playhead to the Out point you want to reference moves the Viewer's playhead the same amount forward in time, allowing you to set or preview in the Viewer the default Out point that will be used, maintaining the duration you moved the playhead in the Canvas. This is similar to Avid's phantom marks. It allows you to see a clip's default Out point or In point determined by the in or out of a clip already in your sequence.

Tabs in the Viewer Window

The Viewer window has a number of tabs. To open a tab, click it. The Video tab shows the video that's in the clip. The Audio tab displays audio waveforms and allows you to change levels, edit with keyframes, and pan your sound. There might be two of these tabs if your clip contains two separate tracks. A single Stereo Track tab is also seen if the source clip has stereo audio captured with it. In the case of merged clips, you have as many tabs as you have merged audio tracks with a video track. In the case of audio-only clips, you see only an Audio tab and an Effects tab.

The Filters tab is where you access controls of effects (filters) you've added them to. They can be audio filters or video filters or both. There also might be a tab for the Color Corrector, Color Corrector 3-way, and Keyer if you've added one or more of these to the clip that contains them.

Clicking the Motion tab (shown in Figure 3.16) brings up a set of standard tools you can use on any clip. These include Scale (size), Rotation, Center (determines the frame's center point), Anchor Point (the point in the frame that it is set to rotate around), Crop (where you can cut off some of the picture), Distort (where you can change the placement of the frame's four corners), Opacity, adding a Drop Shadow or Motion Blur to your clip, and Final Cut Pro 4's new Time Remap feature. I've stretched the window to reveal the entire contents of this tab. The Motion tab is the basic area for effects. It's available for use on any video clip.
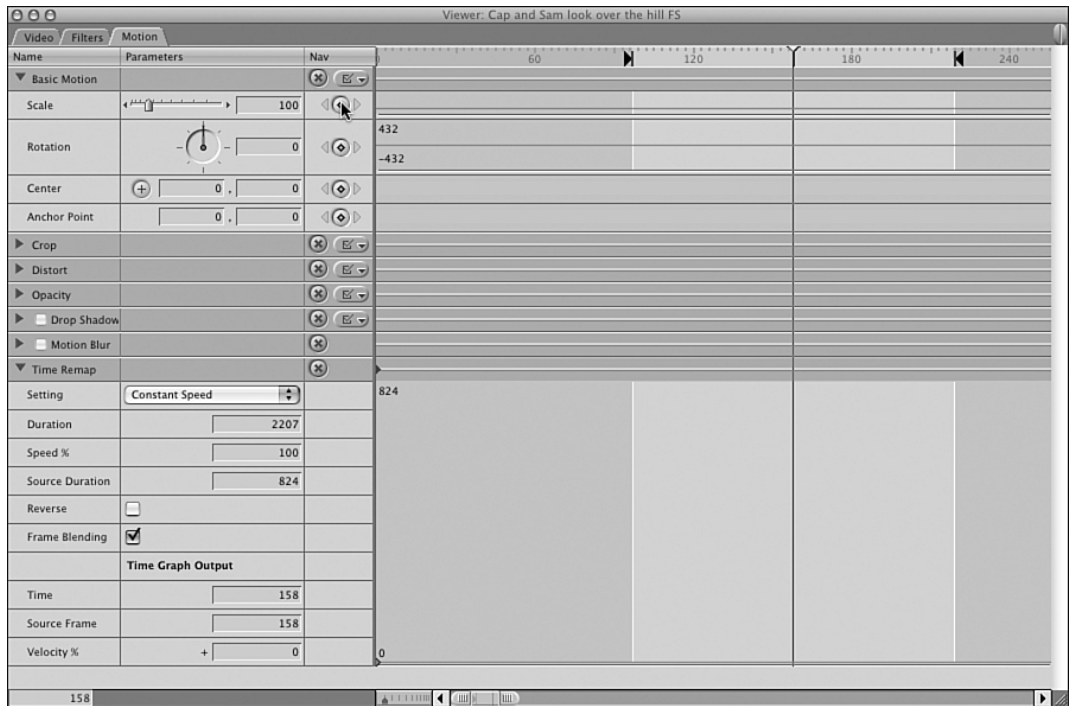
FIGURE 3.16   *The Motion tab.*

The upper bar across the top of the Viewer is a button bar. Here you can drag buttons for quick access to any command from the button list (press Cmd+J). Just select the button from the list and drag it to the small "button bounders" in the upper right of the window. These icons bookend your buttons.

The area next to the controls is a Timeline that represents the duration of the clip currently being worked with as it appears in the Timeline. After you add a clip to the Timeline, you double-click it to open it in the Viewer, click the Motion tab, and start creating effects. Keyframes are added to the light-colored area on the right side of Figure 3.16. You can add those familiar triangles next to the different effects to a clip. If you click the triangles, the controls appear, like the Basic Motion effects that are open in Figure 3.16. As we edit our movie, we'll use these effects.

When a clip is opened from the sequence Timeline, the part of the clip that is present (trimmed) in the Timeline is highlighted, but the clip's duration is available on the Motion tab. Note too that the scrubber bar has sprocket hole representations in it when you address the clip as it is present in the Timeline.

The Canvas Window

The Canvas window, shown in Figure 3.17, has many of the same controls as the Viewer window, but it functions as a window that only plays back and modifies the clips as edited in your edited sequence. You can have more than one sequence open at one time, and you can select the active one by clicking its tab at the top of the Canvas window. You can even have more than one sequence accessible here as well. You can drag its tab away from the Canvas and view two sequences side by side, playing them one at a time. Any sequences open in the Timeline window have corresponding tabs to view them from in the Canvas.

FIGURE 3.17   *The Canvas window.*

You can think of the Viewer window as a source playback or a single clip viewer, and you can think of the Canvas window as a playback monitor for your edited master-piece. The Canvas window's content is completely tied to your edited sequence. When you play back edited material, it plays back in the Canvas window. When you

close the Canvas window, you also close the Timeline window. Final Cut Pro assumes that if you don't want to view a sequence, you don't need the Canvas window open. If the Canvas window is closed, you can open it by double-clicking a sequence in the Browser. Both the Timeline window and the Canvas window open.

All the buttons that look the same as in the Viewer have the same uses, but there are some notable differences in the Canvas window. On the bottom left are three buttons. They represent edit commands, invoked after you select source material to add to your sequence that's active in the Timeline window. The first button inserts the source material into the edited show, the second overwrites material, and the third replaces material:

- The Insert edit command adds material selected with in and Out points from the Viewer to anywhere in your sequence. It also moves all material later than your selected In point to accommodate this new element. Therefore, an Insert edit command lengthens the duration of the sequence of shots.

- The Overwrite edit command covers up older material with the new material selected with in and Out points from the Viewer. The Overwrite edit command does not lengthen the duration of your sequence.

- The Replace edit command is similar to Overwrite because it covers up material, but it works a bit differently. The Replace edit puts a new clip in your sequence by replacing the frame you are currently viewing in the Viewer with the frame you are currently viewing in the Canvas.

The duration of the edit is calculated in one of two ways: in the sequence in and Out points you've made, or, if none have been set, in the duration of the clip you are viewing. You must keep in mind that you must have enough source material before and after the Viewer's frame to cover up the old clip. This does not change the Timeline's duration.

The blue Replace button has a small triangle. This triangle opens a pop-up menu with even more ways of adding material to your sequence, as shown in Figure 3.18.

FIGURE 3.18   *Pop-up edit command buttons.*

Here are the options from left to right:

- Fit to Fill—A four-point edit that calculates the speeding up or slowing down that is necessary for a source clip's in and Out point to become the duration you've selected for it by setting in and Out points in your sequence. For example, if you mark a duration of 1 second in the Viewer and mark an in and Out point with a duration of 2 seconds in the Canvas, Final Cut Pro places a 2-second clip, which is a 50% playback speed of your source clip.

- Insert with Transition—Adds the default transition you've selected. Final Cut Pro defaults to a 30-frame dissolve centered on the edit point, unless you've changed the default transition, as discussed in Chapter 5, "Basic Editing."

- Overwrite with Transition—Does the same as the Overwrite edit, but Overwrite with Transition adds the default transition you've selected. Final Cut Pro defaults to a 30-frame dissolve centered on the edit point, unless you've changed the default transition.

The Canvas Window Overlay

The Canvas window overlay, shown in Figure 3.19, lets you access the same functions as with the Canvas window's edit buttons. To activate these functions, you drag a clip from the Browser or Viewer window to the Canvas window and the appropriate overlay, to either insert, overwrite, replace, or fit to fill. You also can add the user selectable default transition at the same time. This transition will be at the beginning or In point of the edit. When the ghost image is dragged to one of the edit commands, a highlight will appear over the command.

FIGURE 3.19   *The Canvas window overlay.*

Match Frame and Mark Clip Differences

For the most part, the rest of the icons in the Canvas window, which match those in the Viewer, do the same things as those described for the Viewer window, except that they work on your sequences. However, the Match Frame and Mark Clip buttons have different functions. The Match Frame button pulls up the source clip containing the frame you are currently paused on in the Canvas and puts it in the Viewer. The Mark Clip button marks only the clip you are currently paused on and only the top track of audio or video you have targeted by clicking the yellow track indicators on the left side of the Timeline window.

The Timeline Window

The Timeline window, shown in Figure 3.20, displays the clips you have edited in your sequence. This window can contain more than one sequence. You can switch between sequences by clicking the tab at the top of the window, just as you can click the tab at the top of the Canvas window.
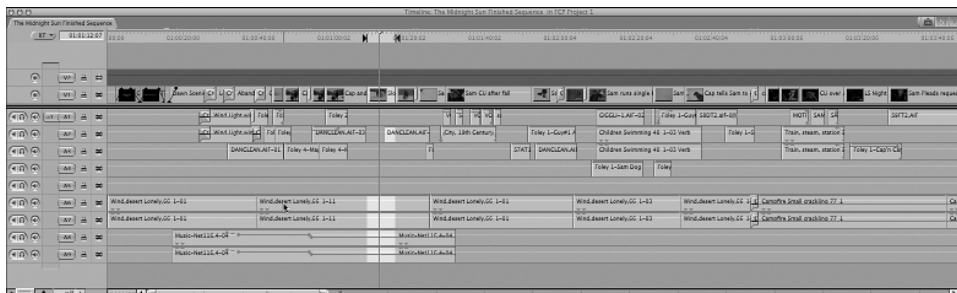

FIGURE 3.20   *The Timeline window.*

You can create a new sequence at any time by pressing Cmd+N. The default number of tracks that this new sequence contains is set in the User Preferences on the Timeline Options tab (activated from the Final Cut Pro menu). Final Cut Pro defaults to one track of video and two tracks of audio.

You can add a clip to a sequence contained in this window by either dragging the clip from the Browser to the sequence or from the Viewer to the sequence, or by marking the clip in the Viewer and editing it to the Canvas window. There's not really a best way. A lot depends on your perception of the easiest way to do this. As we edit the movie, you'll discover and use all the ways you can edit from the Browser to your sequences in the Timeline window.

The Buttons in the Timeline Window

In the upper left of the Timeline window is a pull-down menu that sets the preferences for FCP 4's RT Extreme, as shown in Figure 3.21. It allows you to set the playback quality of FCP's real-time effects. Using these options, you can determine what playback quality you want to work with. You can change it if you'd rather see the RT play back differently. In other words, you can turn on Unlimited RT and maximize your computer's power until you start to drop frames, or you can select Safe RT and have a reliable, high-quality playback.
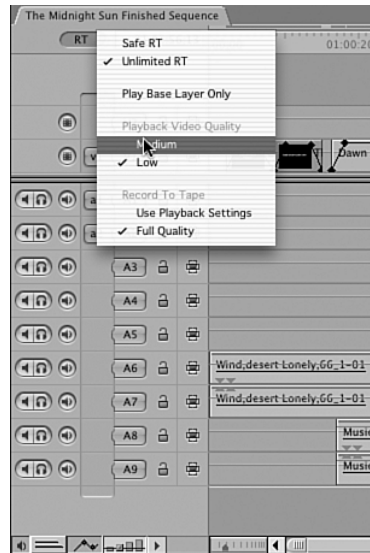
FIGURE 3.21   *RT Settings in the Timeline window.*

Real-time effects are listed in bold on the Effects menu and on the Browser's Effects tab. The number of simultaneous effects that play back in your computer is determined by the size of your CPU's Level 3 cache and the speed of your computer's CPU, memory bus, hard disks, and graphics card. (Open GL is used to speed up real-time display and playback.) The faster your machine, the more you get, basically.

The positive side of this is that it might not matter how reliable playback quality is if you simply want to check out your effects *before* you render them. No longer do you have to render, change parameters, and then render again to check your changes.

As soon as you reach your computer's limits, you either have to reduce the playback quality using the RT pop-up menu or render the clips you want to view in high quality.

note   Some capture cards offer some real-time effect support. You can select them from the User Preferences window in the Playback Control tab. From this window, you can let FCP handle the effects, or you can let your capture card handle them.

Just to the right of the RT pop-up menu is the time-code display. It shows the current time code your playhead is at in the Timeline and Canvas. You can enter a time code here to quickly jump to a specific time in your sequence.

Below the RT menu is a list of the tracks your sequence contains (see Figure 3.22). Here you "target" the tracks you will edit. The track name buttons on the right display your source material's tracks (the clip or sequence loaded in the Viewer; notice that they are lowercase on the left for your source material's track names, and uppercase on the right). The track names buttons on the right represent the tracks your sequence contains.

Auto Select Controls
Lock Track Controls
Timeline Time Code
Track Visibility Controls
Mute and Solo Controls
Audio Control Button
Clip Keyframes
Track Height
Clip Overlays
Zoom Sliders
Zoom Control
Source and Destination Controls
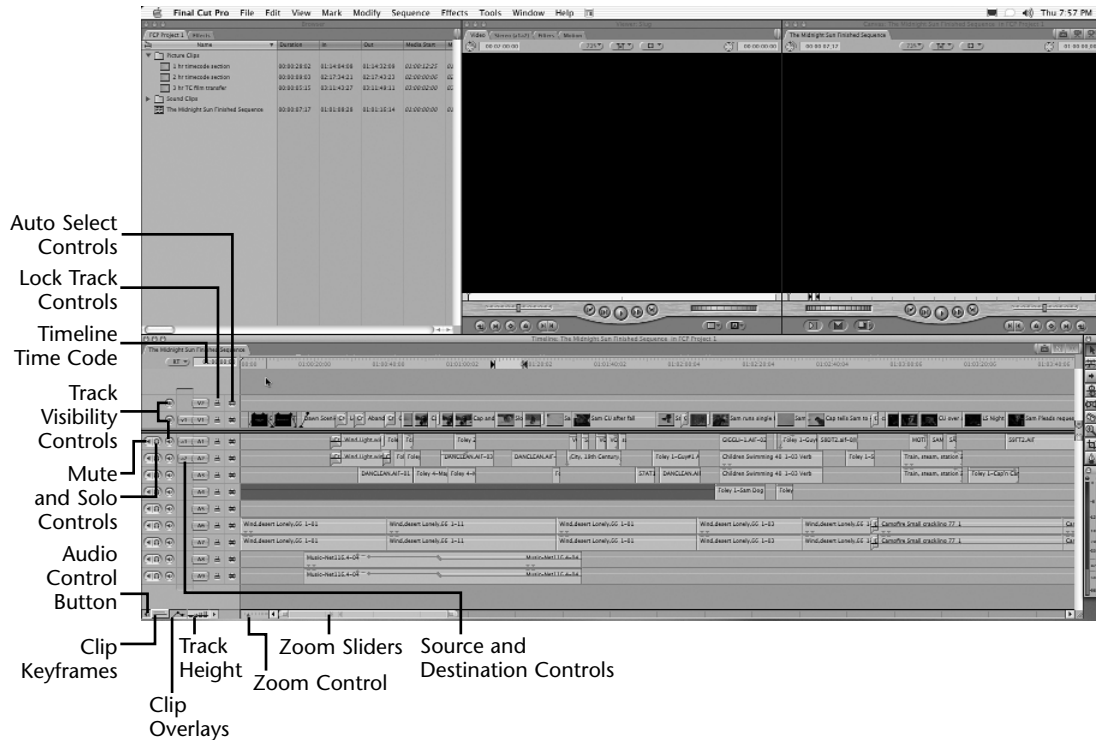
FIGURE 3.22 *Track controls in the Timeline window.*

All you need to do to put, say, a video clip from your Canvas on the V2 track of your sequence is to drag its track name to be next to the V2 sequence track. The same is true of audio clips. If your source material contains audio you don't want to edit into your program, simply slide the audio track's source control to the right to "disconnect" it. The same is true of source video tracks you might not want to include in the edit.

To add tracks to your sequence, simply Ctrl-click in this area and select Add Track. The same context menu deletes tracks and resets your target tracks to the default of v1 to V1, a1 to A1, and a2 to A2. This is handy when you have so many tracks working at once that scrolling around to change the target track settings isn't easy.

The round green buttons with the film or speaker icon just to the left of the Destination and Source Controls column select which tracks should be played back or "monitored" when you play your sequence.

Just to the right of the Destination and Source Controls column is a series of locks. If you click one or more of these locks, those tracks become "locked" and can't be edited or changed without being "unlocked." When you lock a track, a serrated line is drawn through it. Locking your tracks can be useful if you don't want your work to be altered inadvertently. You can, however, add keyframes and set audio levels or video opacities in the User Preferences General window.

To the right of the locks are Auto Select buttons. Auto Select controls have many uses. Clicking these buttons determines which track is "match framed." The highest button active (lit) is the track that is matched in the Viewer if you invoke the Match Frame command in the Canvas. These buttons also denote which tracks you'd like to make a cut with using the Ctrl+V command, which creates an edit point in the middle of a clip already in your sequence. Final Cut Pro calls these *through edits*.

Auto Select controls also allow the contents of the selected tracks to be selected via the Timeline or Canvas windows' in and Out points. For example, a portion of a clip is selected to have a filter applied to only that portion, much like a range selection. But if you use a range selection, these AutoSelect controls are ignored in favor of the selection made with the Range Selection tool. When you use the Auto Select controls, you can add filters to the area selected or delete these selections from your sequence.

On the far left in the audio track section are two buttons contained in an oval. The speaker icon is a Mute control for its associated track, and the headphone icon is a Solo control. *Soloing* an audio track means playing only that track and muting all others. You can solo more than one track at a time by clicking the solo light of another track. (This is much faster than clicking a lot of green monitoring lights in order to focus on two of your possible 99 tracks.)

If the Timeline window doesn't show these far-left buttons, you can modify it so that it does by clicking the Audio control (the speaker icon) in the bottom left of the Timeline window.

In the bottom-left corner of the Timeline are six more buttons:

- Audio control—This is the square button with a speaker icon. It toggles the visibility of the Audio Mute and Solo controls.
- Clip Keyframes control—These are the green and blue lines. Clicking this button adds a row under each video and audio track to indicate whether an effect has been applied to any clip (see Figure 3.23). If a filter has been added or you've created a motion effect (or both), you can manipulate its parameters in

the Timeline window as well as from the filter's tab in the Viewer after double-clicking the clip from the sequence. A green line near the top area means that a filter has been applied. A blue line indicates that a motion effect has been applied.
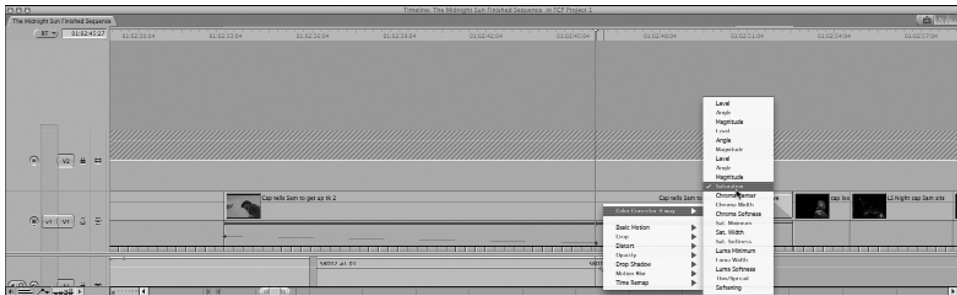

FIGURE 3.23   *The Clip Keyframe area of the Timeline window.*

Keyframes added to these filters show up in the bold colored lines. The default keyboard commands to navigate between keyframes are Shift+K to move your playhead to the next keyframe later in your sequence and Cmd+K to move your playhead to the next earlier keyframe.

Figure 3.23 also shows how you bring up any filter or motion settings you want to manipulate. In the figure, the saturation (amount of color) is set to start at full color and then slowly drop to black and white from the starting keyframe to the ending one.

Only one of these keyframeable lines can be open at a time, but it's a snap to change which parameter from any number of filters or motion effects you've applied. Just Ctrl-click in the Clip Keyframes area and select the parameter from the context menu that appears. You can use the pen tool (p) to add, move, raise, or lower the parameter settings of any give keyframe. You can also use the Selection tool to raise or lower the level for an entire clip without adding any keyframes.

In the case of audio, green lines representing filters applied are the only colored lines. Simply put, if there is a line under your video or audio clip, the Timeline indicates the presence of an effect. If you've added keyframes to the effects, they are displayed here as well, and you can change their parameters from the Timeline window. We'll experiment with these controls as we build the movie together.

■   Clip Overlays control—This button looks like a line graph. It turns on or off a black line that runs inside a video clip and a red line that runs inside an audio clip (see Figure 3.24). In the case of audio, this keyframeable line sets the audio level. In the case of video, it sets the video's opacity. You can use the mouse to set these parameters by selecting the appropriate tool from the Tools palette.

Use the selection tool to raise or lower this line between keyframes, and use the pen tool to add, raise, and lower keyframes. Figure 3.24 shows an audio clip's levels lowering for a time and then coming back up.
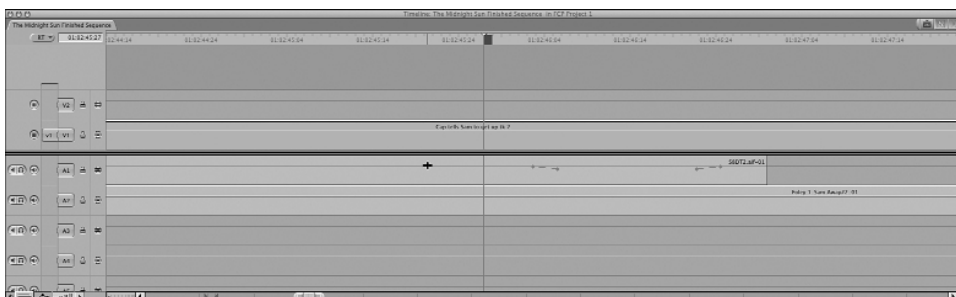
FIGURE 3.24   *Clip Overlay activated.*

- Track Height control—This button offers four different heights you can select for viewing your tracks. If you have many tracks, it might be most convenient to look at them with a short height to see more tracks at once. If you do this, though, you can't see things such as audio waveforms inside your audio clips or precise indications of the clip overlays and their keyframes. So you'll probably change this view when you need to for these adjustments to be easier. Pressing Shift+T repeatedly toggles between the four different widths.

  New to FCP 4 is another way to create different track heights. To change a track's width, just click between the track names (on the black line between them) and drag. In Figure 3.25, the audio track A1 has been expanded to show its waveform better. You can change the height of any audio or video track. If you Cmd-click a track to create a different track height, you can change all tracks of that type at the same time. In other words, if you Cmd-click to change a video track height, all video tracks follow suit. The same is true of audio track height adjustments.

FIGURE 3.25   *Individual track height adjustment.*

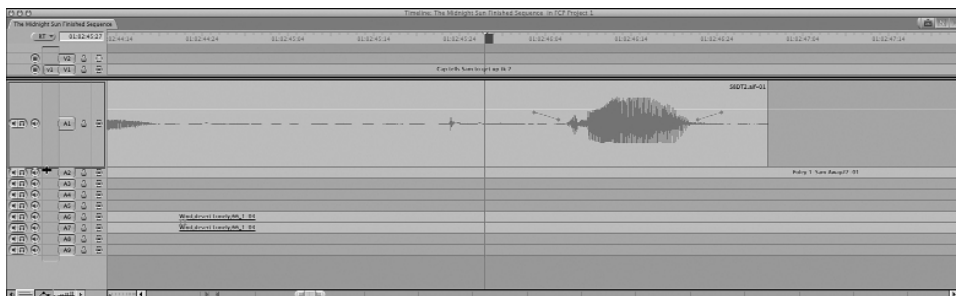■ Track Layout menu—As shown in Figure 3.26, this pop-up menu lets you select ways to change your view of the Timeline window. The selections are pretty self-explanatory, but note that you can save and restore custom layouts of the Timeline window from this menu. These files are saved in the User>Library>Preferences>Final Cut Pro User Preferences>Track Layout folder. These user preferences can be copied from one computer to another for a quick "custom setup."

FIGURE 3.26   *The Track Layout pop-up menu.*

■ Zoom control and the zoom sliders—The small box with an arrow and tick marks is the Zoom control, and the sliders go across most of the bottom of the Timeline window. Both are used to navigate around your sequence. Experimenting with them is probably the best way to get a handle on them. You activate the Zoom control by clicking and dragging the gray pointer to the left to zoom in and to the right to zoom out. The zoom sliders to the right of the Zoom control provide more control. The handles on the end of the gray bar do the zooming in and out. Clicking and dragging the bar itself moves your Timeline left and right, as do the arrows at either end of this control.

Across the top of the window is a ruler with time-code numbers to give you a rough idea of the Timeline's time code. When you click here, your playhead jumps to where you click, as shown in Figure 3.27. If you zoom all the way into your sequence at the playhead's position, you see a shaded line next to it. This line represents the duration of a single frame. This extreme zooming in helps you when you do audio intraframe editing, for example. The waveforms displayed here are much easier to edit when they are zoomed all the way in.

FIGURE 3.27   *Timeline ruler, snapping, and linking controls.*

The default setting of Final Cut Pro 4 has two buttons in the upper-right corner of the Timeline. The one with the arrows turns snapping on and off. If it's on, the position indicator jumps into position at edit points, markers, and in and Out points. With it turned off, you have more precise control of areas near these points.

The icon that looks like an 8 leaning over is the Linked Selection control. Clicking a clip's audio or video track selects any item that is linked to that clip if the Linked Selection button is activated. For example, if you click a video clip that has sync sound associated with it, the sync sound item also is highlighted. It's a way to keep edits you make that might affect sync to keep you in sync, or a way to move a video clip whose audio needs to go with it. For more information on the use of linking, see Chapter 8, "Audio Filters, Timeline Editing, and Keeping Sync." There will be times when you don't want to select linked audio and video at the same time, such as when you want to keep video but lose the sync sound or vice versa. Turning off this option lets you do so.

The controls on the far right, below the two buttons we just discussed, let you scroll up and down to reveal more tracks of audio or video (see Figure 3.28). The center controls move the divider around. It can be placed in various places in the Timeline. For example, you can separate the video from the audio or slide the divider to be between another set of tracks for organizational purposes. If you are viewing all the tracks in your sequence, the sliders disappear. They reappear if you add more tracks that remove some of your tracks from the viewing area. In the lower-right corner is a handle that sizes the whole window. Simply click and drag to resize. Hopefully you might begin to see the advantage of a larger screen space. The larger the Timeline window, the quicker you can navigate it, because you can see more of it at one time.

FIGURE 3.28   *Controls along the far right of the Timeline window.*

The Tools Palette

Figure 3.29 shows the Tools Palette. Final Cut Pro gives you seven different ways to select objects with your interface. The first three buttons are all types of selection tools. Press A on the keyboard or click the first button to activate it. You use this tool to click icons, command buttons, clips in the Canvas, and more. Its use is familiar. In some instances, when another selection tool is chosen, if you move the mouse from the area of its unique use (usually the Timeline), the selected tool defaults back to this tool.

FIGURE 3.29   *The Selection tool.*

The next tool down, shown in Figure 3.30, is another set of selection tools that work only in the Timeline window. Notice that this button has a small arrow in the upper-right corner. In fact, all the buttons beneath the first one have these arrows. They indicate that if you click and hold the button, more buttons pop up.
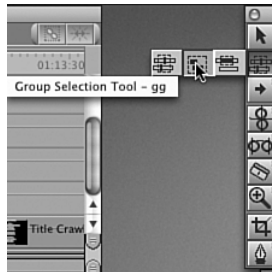
FIGURE 3.30   *Specialized selection tools.*

When you click the second button from the top, you have three choices: the Edit Selection tool, the Group Selection tool, and the Range Selection tool. The last tool selected in the group remains on the top of the Tool window until another is selected. Pressing G on the keyboard toggles through the selections. You press G once for the Edit Selection tool, again for the Group Selection tool, and again for the Range Selection tool.

The Edit Selection tool selects the edit point closest to the playhead's position and opens the Trim Edit window. You also can activate this tool by pressing V on the keyboard. The Group Selection tool selects whole clips or sets of clips. The Range Selection tool selects an area of material not limited to whole clips. You can select frames of a single clip or set of clips with the Range Selection tool.

Below the Edit Selection tools is a set of Track Selection tools (see Figure 3.31). They allow you to select whole or large parts of tracks or clips. When you click in the Timeline with one of these tools, the clip under where you click and all clips in the direction of the selection tool's arrow are selected. The single arrows select single tracks, the double arrows select all tracks, and the two-headed arrow selects entire single tracks per click. Say you want to select two entire video tracks out of five. You'd use the two-headed arrow to select the first track, hold down the Cmd key, and then select the other track. We'll experiment with these tools in the Workshop. Linking is discussed in detail in Chapter 8.
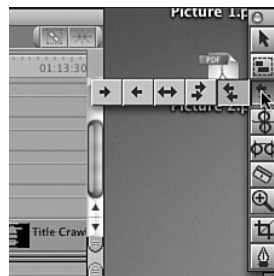
FIGURE 3.31   *The Track Selection tools.*

The next set of buttons, shown in Figure 3.32, are Trimming Edit tools. With them you can perform a ripple or roll edit in the Timeline and in transitional effect windows. Ripple edits perform moves on edit points that affect the length of the Timeline. As you add or subtract frames, the Timeline "ripples" shorter or longer. You can add a frame to a clip, move all clips down the Timeline a frame, and so on. Roll edits move an edit point sooner or later in your sequence, adding and subtracting frames at the same time on each side of the edit point. This procedure does not lengthen the sequence. Instead, it shortens one side of the edit as you lengthen the other side, keeping your sequence the same length.

FIGURE 3.32   *The Ripple and Roll edit tools.*

Below the Ripple and Roll edit tools are the Slip and Slide tools and the new Time Remap tool (see Figure 3.33). The Slip tool slips a previously edited clip's contents later or earlier without changing the clip's duration. The Slide tool preserves the clip's contents but changes where the clip resides in your sequence, moving the clip's In and Out points simultaneously. Neither tool lengthens the duration of the sequence, because they don't change the clip's duration.

FIGURE 3.33   *The Slip and Slide tools and the Time Remap tool.*

With the Slide Edit tool, the in and Out points of the clip you are affecting stay constant while the clip's position relative to the clips on either side of it changes as the fixed duration clip moves earlier or later in the sequence. With the Slip Edit tool, the Out point of the clip before is fixed, as is the In point of the clip following, but the clip being slipped moves past the opening between the Out and In points of the clips on either side of it.

The new Time Remap tool applies a variable-speed effect to your edit. It works in forward or reverse motion. This new effect is a real-time effect, whereas the constant-speed changes in earlier releases are not. Constant-speed changes alter a clip's duration. Variable-speed changes applied with the Time Remap tool do not change the clip's duration.

There are four places you can make a variable-speed change with the Time Remap tool: in the Timeline, in the Viewer's Motion tab, in the Motion bar under the clip, and in the Timeline's keyframe editor time graph. Making these changes in the Timeline is probably easiest. You can choose to display speed indicators and a keyframe graph under the clip you are affecting in the Timeline. We'll experiment with this tool in the Workshop to get a handle on it.

Next in line are the Razor Blade tools, shown in Figure 3.34. They are fairly straightforward. The single blade splices and creates a new edit point within a clip on a single track in your sequence, and the double blade slices edit points through all tracks. You could use this tool to slice a portion of a clip to remove that portion, for example. Pressing Ctrl+V accomplishes the same function on any targeted video or audio tracks at the playhead's position. Keep in mind that the double razor creates a new edit point on all tracks.

FIGURE 3.34   *The Razor Blade tools.*

The next tools are the navigational tools (see Figure 3.35). The magnifying glasses zoom in or out in the Timeline and in the Viewer and Canvas windows. The magnifying glass with a plus sign zooms in, and the magnifying glass with a minus sign zooms out. The plain hand tool moves your image around in the Canvas, Viewer, and Timeline windows. The hand with the arrows scrolls through video in the Timeline's and Browser's thumbnail pictures when you view your clips as small, medium, or large icons.

FIGURE 3.35   *Navigational tools.*

Next are the Crop and Distort tools (see Figure 3.36). The Crop tool (the one select-ed in the figure) hides or cuts off a portion of your picture for final viewing. The Distort tool drags any or all of the four corners of your image to any point on the screen. The Distort tool is useful for mapping a picture to a billboard that is shot at an angle, for example. These tools are used in either the Viewer or Canvas window when they are viewed in the Wireframe or Image + Wireframe views. These two tools parallel the numeric entries in the Motion tab.

FIGURE 3.36   *The Crop and Distort tools.*

The last set of tools in the Tools Palette is the Pen tool set, shown in Figure 3.37. There are three of them. The plain one sets keyframes in the Viewer, Canvas, and Timeline. The pen tool with the minus sign removes keyframes. The pen tool with the inverted U is the Pen Smooth tool. Smoothing keyframes creates a change between two keyframes that is not linear in its movement between the smoothed keyframe and the next one. The Pen Smooth tool adds bezier handles to the keyframe in the Canvas and Viewer, to keyframe markers in the Motion and Filter tabs, and to the Timeline keyframe graphs.

FIGURE 3.37   *The Pen tools.*

What Are Tooltips?

Tooltips are small yellow boxes that appear when you hold the selection tool over them for a few seconds. These are the Tooltips referred to on the General tab of the User Preferences window. Each name has a letter and/or number after it. These are the default keyboard shortcuts for these tools. Tooltips appear as long as you've set this function in the General tab of the User Preferences. In most cases, the cursor needs to be over the button for the Tooltip to appear, but for tools that aren't the default tool, you need to click and hold. But in most cases you don't need to click at all. Most of the buttons on the interface use Tooltips. It's a great way to learn the default keyboard commands. As you work with Final Cut Pro, you'll discover Tooltips and how they operate. Note that for a Tooltip to show for a specific control, the window that contains the control must be active.

While we're on the subject, I'd like to share with you my view on using the mouse versus the keyboard shortcuts. When you are new to a piece of software, the mouse can be your best friend. You like having a visual way of commanding the software to do what you want it to do. With the new keyboard remapping feature (discussed in Chapter 4, "Organization and Basic Editing"), this might be the way you always want to control Final Cut Pro. But after you've learned what your software can do, it's a huge timesaver to use keyboard shortcuts. There are hundreds of them. A partial list of them appears in Appendix D, "Keyboard Shortcuts." As we edit the movie, we'll discover some of them. But there is no doubt that you should learn to use them. The new keyboard remapping feature can make this a very personal way of working with Final Cut Pro.

Postproduction is always the last thing that happens in the process of producing shows. Unfortunately, it is the editor who usually delivers the final product and is up against the final deadline. If you are fast at using your edit tools, one of two things happens. If you bid your work as a flat fee, you make more per hour. But far more importantly, if you have a deadline that cannot be moved, when you are fast at commanding your computer to do what's needed, you have more time to try what-ifs: What if I edited this way or that way? You end up with a better edit if you have more time to experiment. Each time you move your hands from the keyboard, you lose time. Over a period of hours, this really adds up. After you've spent time thinking about what you want to do, why waste time getting it done? Time is a killer. You'll be hired more often and be viewed as an expert instead of an amateur if you use keyboard commands.

Learning keyboard commands is a one-at-a-time process. After you've learned to mouse to commands, it might feel awkward to learn keyboard shortcuts. Just learn one or two each session. Continue until they become like riding a bike. You won't regret it; I promise. Any seasoned producer will appreciate your speed. I'm talking about getting rehired for the next job. In the long haul, you'll spend about a fifth as much time using a keyboard command than you will using the mouse to get to the menu or button that invokes it.

Here's one other thought: You can be more likely to get carpal tunnel syndrome from repeated mouse movements than from using keyboard shortcuts. In fact, the keyboard commands used in the process of editing are very unlike a straight typing job. A letter command now and then is just not as stressful as typing something like this book or data entries. You can't get away from using the mouse entirely (nor should you), but you certainly can minimize its use.

Workshop 3: Load the First Project and Become Familiar with the Navigational Controls and Window Arrangement

Learning to navigate easily and efficiently with the default set of windows should be the first task you really feel comfortable with. You'll use these windows so much that mastering the navigation techniques becomes mandatory. As you edit the movie, you'll find lots of ways to ease your workflow as soon as you understand workspaces you can create. In this workshop, you'll open and save the project files as well.

Load the Project's Files

The first thing to do is load all the DVD's project and media files onto your computer. They are located in two folders—Project Files and Media Files. If your computer has only one hard drive, click each folder one at a time from the DVD, and unstuff (decompress) them to your hard drive in a place that makes sense to you. If you have more than one drive, click the Project Files folder and drag it to your startup disk, and drag the Media Files folder to your second disk, which usually should be reserved for holding media files only.

1. Open Final Cut Pro. If you have a project already started, Ctrl-click its tab in the Browser window, and close it. Press Cmd+O or select File, Open. Open the project file called Project 1.

2. Final Cut Pro warns you that it's missing media files. All the clips are offline, with red Xs in them. You need to reconnect them to the media files you copied in Step 1. Remember, they are just *reference* files that point to the actual media files. You know that the media files are there. It's just that they are not in the same place they were the last time this project was opened, so you need to tell Final Cut Pro where they are stored now. The same thing will happen if you move media files in the future or rename their folders from the Mac desktop. Highlight everything in the Project file's Browser (just click on the Brower and type command + a) and select "Reconnect Media" from the File menu to reconnect these reference files to the place you installed the media files when you copied their folder from the DVD. Another way to reconnect files is to highlight them in the Browser, Ctrl-click one of them, and select Reconnect Media.

Final Cut Pro's dialog boxes will ask you to find three files. The first of these is the "Boat Composite." You'll find this file in the "Compositing Material" file folder. When you open the folder, you'll see it at the top of the list, click on the "Matched Name Only" selection and also the "Reconnect All files in Relative Path" selection, then Click "Choose." Do the same dor the second file "1 hr timecode section" you'll find in the "Picture Clips" folder, and the same for the "B-Last Poem Clean" clip you'll find in the "ALL Sound Clips" folder. The rest of the files will reconnect automatically. As you import files, these three folders are where you'll find the media files.

3. Now all the entries in your Project 1 file are online, meaning that they are pointing to actual media files on your computer and are ready and available for use within your project. They should not have red lines through them (see Figure 3.38). Highlight the Browser window and select File, Save Project As. Rename this project file Project 1 (*your name*).
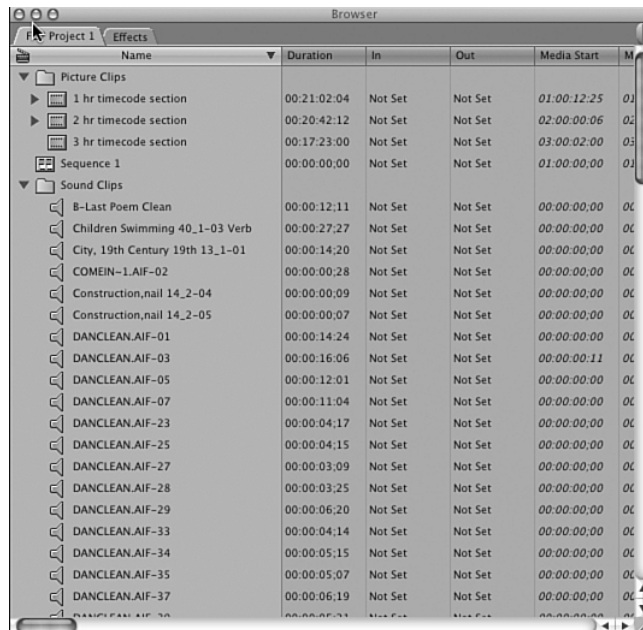

FIGURE 3.38   *The Browser after reconnection.*

4. Double-click "The Midnight Sun Finished Sequence" if it is not already open in the Timeline. This is the sequence you will build. It's included with the project file for reference if you need to look at it. We'll use it now to learn some navigation and viewing techniques. You may have to render everything in the sequence in order to play it back, and you should do so now.

The way to render everything is to open the "Midnight Sun Finished Sequence" by double clicking its Icon in the Browser. It opens in the Timeline Window. With the Timeline window active, type **Command+A**. Open the Sequence Menu and turn on every item in the "Render All" submenu (the check marks for each item will appear one by one). After you've selected them all, type **Option+R** to begin the rendering. Watch the movie so you know where we are headed, and familiarize yourself with the footage at the same time.

Arrange Windows and Viewing Options

1. The most efficient way to ease your workflow is to select the Window, Arrange command. A pop-up menu reveals a list of standard arrangement views and a way to customize window arrangements you want to use in this or any project (see Figure 3.39). The figure shows the options available with dual computer displays. FCP recognizes your computer's setup. Familiarize yourself with the standard setups available on your system by clicking each of the standard arrangements your setup provides. Especially note the new Multiple Edits arrangement and the Audio Mixing arrangement, which introduces FCP 4's Audio Mixer. We'll use it in many later Workshops.
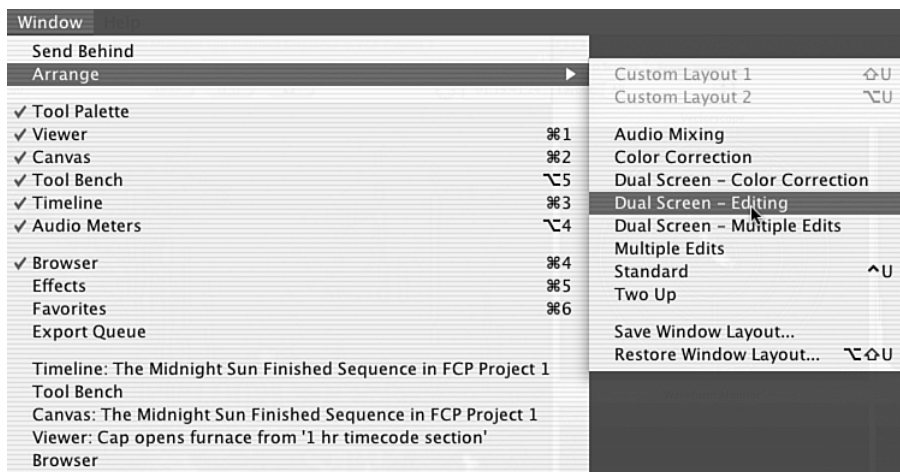
Window Help	
Send Behind	
Arrange ►	Custom Layout 1 ⇧U
	Custom Layout 2 ⌥U
✓ Tool Palette	
✓ Viewer ⌘1	Audio Mixing
✓ Canvas ⌘2	Color Correction
✓ Tool Bench ⌥5	Dual Screen – Color Correction
✓ Timeline ⌘3	Dual Screen – Editing
✓ Audio Meters ⌥4	Dual Screen – Multiple Edits
	Multiple Edits
✓ Browser ⌘4	Standard ^U
Effects ⌘5	Two Up
Favorites ⌘6	
Export Queue	Save Window Layout...
	Restore Window Layout... ⌥⇧U
Timeline: The Midnight Sun Finished Sequence in FCP Project 1	
Tool Bench	
Canvas: The Midnight Sun Finished Sequence in FCP Project 1	
Viewer: Cap opens furnace from '1 hr timecode section'	
Browser	

FIGURE 3.39   *Options available for dual computer displays.*

2. Select the Multiple Edits arrangement (Figure 3.40) and experiment with the views available in the new Frame Viewers (see Figure 3.40). Note that there are still Viewer and Canvas windows in this arrangement, but two Frame Viewers are present in Tool Bench windows. Tool Bench windows can contain other tools as well, notably the set of Video Scopes and the new Audio Mixer. We'll use these tools as we edit the movie, but experiment with the Frame Viewers now. Frame Viewers can display side-by-side views of two different clips at the same time. Note that if you are

working on a display that cannot display higher resolutions than 1280×854, the Multiple Edits arrangement is unavailable. If so, select Tools, Frame Viewer or press Cmd+7. Pressing Cmd+7 again opens a second Frame Viewer. You can drag the tab of the Frame Viewer from the Tool Bench window to see more at one time.

Frame Viewers are particularly helpful when you're color matching two clips. In fact, you can have many of them open at one time to see a whole range of clips in your sequence at once. You can even select the same frame to make one side a "before the filter is applied" view and the other side an "after the filter is applied" view.

Figure 3.40 shows five consecutive edits in the Timeline and a standard Viewer window. The current frame of the Timeline's playhead is displayed in the Canvas. Moving the Canvas's playhead updates all five frame views. The "standard" Viewer is left unchanged.

Figure 3.40   *The Multiple Edits arrangement.*

3. The pop-up menus on the bottom of the Frame Viewers allow you to split two picture views vertically or horizontally, as selected by the buttons at the bottom of the Frame Viewer. You can see various clips side by side this way. You can even swap which clip is displayed on which side by clicking the Swap button. This is perfect for matching color corrections, for example. Click and drag the green or blue buttons in a corner of one of the Frame Viewers to do your own "split screen" shapes of the two clips being viewed.

4. In the Frame Viewer on the far right in the Multiple Edit arrangement is a tab that reveals FCP's Video Scopes. You will read more about them later, but note that they are part of this window arrangement. Click the Video Scopes tab to look at these scopes. If you are working on a system that cannot display this arrangement, open the Video Scopes by pressing Cmd+9 or by selecting Tools, Video Scopes. As with Frame Viewers, you can open more than one set of Video Scopes.

5. Activate the Hand tool by dragging one of the two clips in a Frame Viewer. You can even drag which portion of a clip is being viewed, and can resize the split screen effect by dragging on one of the colored corners in this window.

6. When you are done experimenting, select Window, Arrange, Standard or press Ctrl+U.

Resize the Windows

1. Customize the arrangement of these four windows. Play with the sizing buttons. Start with the three buttons in the upper left of each window. Each of the four big windows has a handle in the lower-right corner. This handle sizes the window individually when you drag it. The only way to drag and move an entire window is by grabbing its uppermost bar. If you double-click this bar, the window is minimized to the dock. Clicking it again brings it back to its last position. You might want to do this to access the desktop, for example.

2. When you're done, reset the arrangement to the standard arrangement.

3. Final Cut Pro 4 adds a new way to arrange windows. If you move the mouse pointer *between* any two windows and then click and drag, you can resize all (or some of) the other major windows at the same time, making room for the window you want to enlarge. The currently selected tool changes to a resize pointer when you move it between any two of the four major windows. Try this between the Viewer and Canvas, and then between the Canvas and Timeline or Browser and Timeline windows. Pretty cool, eh?

4. When you are done, reset your arrangement to Standard again.

Save Window Arrangements

1. The Window, Arrange submenu has two ways to save arrangements. The first is to use the options Custom Layout 1 and Custom Layout 2. To save a layout, arrange your windows, hold down the Cmd key, and select Window, Arrange, Set Layout 1 or 2. You can save two different layouts, and they will be tied to this project file only. You can start by arranging the windows in the standard way. Set up an arrangement that maximizes the Browser's size and diminishes the size of the other windows using the resize pointer. Then save this view as Custom Layout 1.

2. If you want to save a view for use in all projects, select Window, Arrange, Save Layout. After you have named and saved a view, Restore Layout brings up this arrangement of windows in any project you work on in the future. You can then start a new project and restore these saved layouts whenever you need them.

3. While using FCP, you might inadvertently hide a window. Restoring layouts or recalling the standard set of arrangements brings them forward, as does calling up custom window arrangements and layouts. Where many users get confused is when they close the Canvas window and the Timeline window closes with it. Double-clicking a Sequence icon in the Browser opens these two windows, with the sequence in the Timeline window. Open the Browser window by dragging it to the top left of the display, and then drag its lower-right corner until it fills the display.

4. Then select one of the arrangements to quickly put it back in its place and reveal all the earlier hidden windows.

Navigate the Browser

Because you use the Browser to locate all your source material, it's wise to learn how to navigate it with ease. Using the techniques described below should get you on your way.

1. Click the arrow (the disclosure triangle) next to the Picture Clips folder (bin) to open and close this bin from within the Browser window. Double-click the Picture Clips folder (bin) icon and open it in its own window. Drag the tab in this window to the Browser window's tab area. You can now access this bin from the Browser by clicking its tab. It's a great way to access often-used bins. This is important if you have a lot of them. Documentary and feature editors will appreciate this. Ctrl-click the Picture bin's tab to close it from the Browser's tabbed area. It's still accessible from the Browser and its window. Try it.

2. Hold down the Cmd key while you double-click the Sound Clips bin in the Browser. It opens as a tabbed bin in the Browser. Either Ctrl-click its tab to close it from the tabbed area of the Browser or open it from the Browser's list and close it from the tabbed area.

3. If you close or hide one of the six major windows, you can open it again from the Window menu. Notice that most of the window names have keyboard shortcuts listed next to them. These shortcuts are displayed next to all commands that have them in all the pull-down menus. This is a great way to learn the keyboard shortcuts for the commands you use frequently. Close the Viewer window, and then open it again by pressing Cmd+1. Close the Tools Palette, and then reopen it by selecting Window, Tools. Try closing the other windows and using the Window menu to open them back up. Be sure to close the Timeline window and then reopen it by double-clicking "The Midnight Sun Finished Sequence" in the Browser. One anomaly of this behavior is when you close the Canvas. The Timeline window also closes, but double-clicking any sequence opens them both back up.

4. Open the Picture Clips bin by double-clicking it. Ctrl-click the light gray area away from a clip's name, but within the Name column. You see the pop-up menu shown in Figure 3.41. If the bin is not opened as large as it is in the figure, there might be little arrows at the top and bottom so that you can scroll through this menu. Near the bottom of this menu is a set of four viewing commands. Click each to discover how it changes your view of this information. Choose View as Large Icons, and Ctrl-click the window's gray area between two clips to access the pop-up menu again. This time, select Arrange. If some of the clips were off the picture before, they might come into view. This can be helpful when you have many clips.
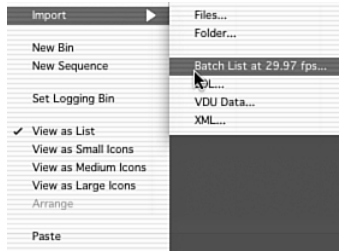
FIGURE 3.41   *The context menu found in a bin or in the Browser.*

5. Close the Picture Clips bin. Use the disclosure triangles next to the Sound Clips bin in the Browser to reopen it. Use the scrolling bar across the bottom to drag through all the information kept for each clip. Try clicking a column's name heading to sort that column's data in ascending or descending order. The arrow in the column name header tells you the sort order and which column you are sorting, as shown in Figure 3.42. Adjust the width of the Name column by clicking in the area next to its divider mark at the top between the Name column and the column to its right, as shown in Figure 3.43, and drag with the resize tool (which automatically appears) to increase or decrease the column width. Also note that you can drag the column names to rearrange their order, as shown in Figure 3.44.

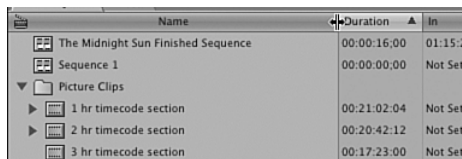**FIGURE 3.42**   *The sorting arrow display.*

FIGURE 3.43 *Sizing column widths by dragging the line between them in the column heading with the resize tool.*
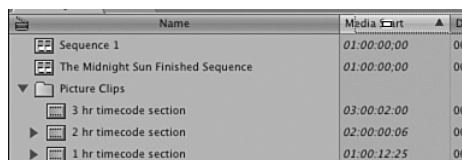

FIGURE 3.44 *Click and drag the column name to reposition the order of the columns.*

6. Ctrl-click these top column names. A context menu allows you to show more or different columns, as shown in Figure 3.45. You can choose from a Standard or Logging setup. This can help if you have many clips.
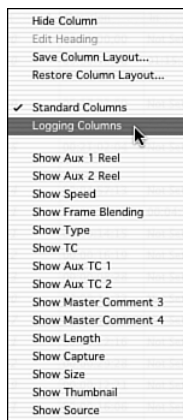

FIGURE 3.45 *The Column Names context menu.*

7. Open the Sound Clips bin by double-clicking its icon. Then maximize the bin window to reveal as much of it as possible by clicking the green maximize button. To move the Tracks column next to the Name column, click the Tracks column name and drag it to the left, next to the Name column. Then Ctrl-click each of the columns except Name, Tracks, Duration, Media Start, Media End, and Size, and select Hide until only these six columns remain.

8. Ctrl-click the Tracks column and select Save Column Layout. Name the layout "minimal layout," and click Save. Restore the Logging column's layout by Ctrl-clicking the Tracks column heading and selecting Logging Columns.

9. Ctrl-click the Media Start column and select Standard Columns to restore it to its original set of columns. You can also save a column layout that includes only the information you need to quickly review, such as a Label or Scene Number column.

    It's important to know that you can minimize what you must view in order to locate source material quickly. Sorting columns also can help you find just what you're looking for. You can sort any column by clicking its column heading. Also keep in mind that you can start with the Standard or Logging layouts and customize them. When you are done with this exercise, select Window, Arrange, Standard to put your view of the interface in order again.

Navigate the Viewer and Canvas Windows

After you've selected what you want to edit by finding it in the Browser, you need to understand how to get around the Viewer and Canvas windows. The following exercises get you on your way.

1. From the Picture Clips bin, open the disclosure triangle next to the 1 hr time-code section Master clip, and then double-click the "Cap up mtn side dusk" marker. (We'll discuss markers in the next chapter. In this case, it was added as a mark you can quickly navigate to from within a clip.) The clip opens in the Viewer window. Play it by pressing the spacebar, clicking the play button in the Viewer window, or pressing the L key. The K key stops playback, and the J key plays backwards. Pressing the L key twice plays double speed, three times plays triple speed, and four times plays quadruple speed. The same goes for the J key, except that the video plays in reverse. Holding down the K key and the J or L key plays the footage forward or backward at about half speed. If you press L four times and then press J twice, you slow down forward playback to double speed, thus allowing you to decrease the speed as you approach the area you're looking for.

2. Holding down the K key while pressing the J or L key moves the video one frame at a time. This is a great way to "creep up on" a frame. Take some time to use all the navigation buttons immediately below the scrubbing bar. Click around the scrubbing bar to quickly navigate through the clip in the Viewer. You can scan by clicking and dragging through the scrubber bar as well. Keep in mind that you can do all these things in the Canvas window too as long as it's the active window. Spend some time with all these navigational techniques to become more familiar with them. Try them all and learn them. If you use the keyboard commands to navigate in the Viewer and Canvas windows, you will find the frames you're looking for much more efficiently.

tip

If your mouse has a scroll wheel, you can use it to navigate through any active window that has vertical scroll bars, such as the Browser or the Timeline window, when working with more tracks than you can see at one time. You can use the scroll wheel to scroll up and down to reveal tracks hidden by a Timeline window that is too small to display them all. You can use a second (or third) monitor to display the Timeline and make it as tall as the monitor. This is wonderful when you're working with many audio and video tracks.

Navigate the Canvas and Timeline Windows

When you navigate in the Canvas or Timeline window, you navigate in both windows, because they are tied to each other. Moving the playhead in the Canvas moves it in the Timeline, and vice versa. You need to master the navigation of these windows. The following exercises get you started.

1. Double-click the sequence titled "Sequence 1" in the Browser window if it is not already the open sequence in the Timeline window (it should be an empty sequence). You mark clips for editing with the two buttons in the Viewer and Canvas windows or with the I or O key. Mark an In point and an Out point for a short duration in the "Cap up mtn side dusk" contained in the Viewer. Set an In point (I) near the beginning of the actor's walk up the hill at 01:13:24:04. Type +3622 in the upper-right time-code display box to jump 36 seconds and 22 frames farther into the clip. Type an Out point (O). Notice that the upper-left time-code display now shows a duration of 36:22. Click in the center of the picture in the Viewer window, and drag the ghosted square from there to the Canvas window highlighting the Insert command. Click the center of the Viewer window and drag directly down to the Timeline window, placing the clip in your sequence just past the earlier clip. Either dragging to the Canvas overlay or directly to the Timeline Window puts your material in your sequence. Highlight the first clip and press the Delete key. Now you have only the second clip. Take some time to navigate the Canvas window with this clip in it. All the same techniques of navigating in the Viewer work in the Canvas and therefore in the Timeline window as well.

2. Settle on a frame somewhere in the middle of the shot in the Canvas, and click the Show Match Frame button (in the lower-right corner of the Canvas window) or press the F key. The same frame appears in the Viewer window. Now move the Viewer's clip somewhat and press F again. The same frame appears in the Canvas. You can use this command to see if you've already used material in the sequence (in the case of match framing from the Viewer) or to pull a clip into the Viewer from the Canvas for viewing purposes.

3. Click the Toggle Timeline Track Height button. The four track height selections are shown in the lower left of the Sequence menu. Notice that they can easily be changed. You can also press Shift+T repeatedly to toggle through the different track heights. Wherever you navigate in the Canvas window, you also navigate at

the same time in the Timeline window. You can use the earlier controls in the Canvas, or you can click the ruler in the top of the sequence in the Timeline window to move around. You can also move around the Timeline by clicking around the scrubber bar at the bottom of the Canvas window.

4. If it isn't already open, open "The Midnight Sun Finished Sequence" by double-clicking it or by clicking its tab in the Canvas or Timeline window if it is already open. Experiment with the navigational sliders at the bottom of the Timeline window. Pay close attention to the handles at either end of the bar. If you move them, you expand or contract the view of the Timeline. If you slide the slider, you move earlier or later in the Timeline.

5. Press Cmd+3 to make sure the Timeline window is active. Press Shift+Z to fill the Timeline window with the entire sequence. Press Z to activate the Zoom tool. Draw a box starting in the area above all the tracks in the Timeline and "lasso" a few clips in the center of the sequence. Note that you just zoomed in on that particular set of clips.

6. Press Shift+Z again to zoom back out. You see the entire sequence, no matter what size the Timeline window is set to. I find this the most efficient way to zoom in and out of the sequence in the Timeline window. Using the Zoom tool in the Timeline, Viewer, and Canvas windows zooms in. Pressing Shift+Z with one of these three windows active zooms back out. In the case of the Canvas and Viewer, this sets them to be "Fit to Window." You'll find that the most reliable playback of your clips and sequences happens when these windows are set to Fit to Window.