This all-new guide presents a real-world workflow from raw media to finished project to demonstrate the features of Final Cut Pro X and the practical techniques you will use in editing projects. Using professionally acquired media, you'll utilize the same tools and editing techniques used by editors worldwide in this revolutionary editing software. Renowned editor and master trainer Brendan Boykin starts with basic video editing techniques and takes you all the way through Final Cut Pro's powerful features.

The lessons start as real world as it gets—with an empty timeline. After downloading the media files, you will be guided through creating a project from rough cut to final edit. The basic workflow and tools are covered in Lessons 1 through 4 where you will create a rough cut. The real-world workflow continues through the remaining lessons as you take the basic project and enhance it with a deeper dive into the more advanced Final Cut Pro X features including how to efficiently organize and share media with the new Libraries, enhanced audio tools, streamlined media management, retiming, and more.

- Downloadable lesson media files to work sequentially through exercises for hours of hands-on training.
- Focused lessons teach concepts and take students step by step through professional, real-world editing scenarios to create a final project.
- Chapter review questions summarize what students learn to prepare them for the Apple certification exam.

The Apple-Certified Way to Learn

The Apple Certified Pro Training Series is both a self-paced learning tool and the official curriculum of the Apple Training and Certification program. Upon completing the course material in this guide, you can become Apple Certified by passing the certification exam at an Apple Authorized Training Center. To find an Apple Authorized Training Center near you, please visit training.apple.com.

Also in the Apple Pro Training Series:
- Logic Pro X
- Motion 5
- OS X Support Essentials 10.9
- OS X Server Essentials 10.9

About the Author

Brendan Boykin is a trainer, editor and consultant based in Colorado. With his background in broadcast and corporate video combined with his designation as an Apple Certified Master Trainer, Brendan provides training to post-production, education and broadcast facilities nationwide. Brendan consults on several books in the Apple Pro Training Series.

Level: Beginner/Intermediate
Category: Digital Video/Film
Requires: Final Cut Pro X 10.1, OS X 10.9 or later, 64-bit processor
Apple Pro Training Series

Final Cut Pro X 10.1

Brendan Boykin
Acknowledgments  My first thanks go to Steve Martin of www.rippletraining.com and Mitch Kelldorf of www.h5productions.com for allowing me to share the love of flight and the love of video through their footage. And directly to Steve, thank you for your support, trust, and encouragement from day one, my friend.

Many thanks to Noah Kadner and Christopher Phrommayon as well as Steve Bayes, Peter Steinauer, Kenny Meehan, and Toby Sidler of the Final Cut Pro team for the opportunity and support. This was a huge project to entrust with me and I am grateful.

Also at Apple, my thanks to Eugene Evon, Cindy Waller, Judy Lawrence, John Signa, Shane Ross, Raj Saklikar and Camille von Eberstein. These are my hard-working colleagues and friends that strive to put the "Apple" in Apple Certified Training. Their tireless commitment to make the highest caliber Apple Certified Training for OS X, iOS, and Pro Apps is humbling and appreciated.

A big thank you to Lisa McClain of Peachpit Press. Her unwavering commitment to me and the project created this book. And with the editorial tasks, thanks to Darren Meiss for taking on an adventure.

Lastly, to my 24-7 incredible editor and friend Bob Lindstrom, Bob is the best there is. Bob, thanks.
Contents At a Glance

Lesson 1  Getting Started .................................................. 1
Lesson 2  Importing Media ................................................... 13
Lesson 3  Organizing Clips .................................................... 45
Lesson 4  Making the First Edit ............................................ 105
Lesson 5  Revising the Edit ................................................. 211
Lesson 6  Enhancing the Edit ............................................... 271
Lesson 7  Finishing the Edit ................................................. 333
Lesson 8  Sharing a Project .................................................. 389
Lesson 9  Managing Libraries ............................................... 409
Lesson 10 Advancing Your Workflow .................................... 429
Appendix A  Keyboard Shortcuts ....................................... 465
Appendix B  Editing Native Formats .................................... 477
            Glossary ......................................................... 481
            Index ............................................................. 483
# Table of Contents

**Lesson 1** Getting Started ................................. 1  
Learned from a Legacy ..................................... 2  
Upgrading Existing Events and Projects ................. 3  
Reference 1.1 Using This Book ............................... 4  
Exercise 1.1.1 Downloading the Source Media Files 5  
Exercise 1.1.2 Preparing the Source Media Files .... 5  
Reference 1.2 Introducing the Job and the Workflow 9  
Lesson Review .............................................. 11  

**Lesson 2** Importing Media ................................. 13  
Reference 2.1 Understanding Clips, Events, and Libraries 14  
Exercise 2.1.1 Creating a Library .......................... 16  
Exercise 2.1.2 Preparing to Import Camera Source Files. 18  
Reference 2.2 Using the Media Import Window .......... 19  
Exercise 2.2.1 Creating a Camera Archive ............... 22  
Reference 2.3 Importing Source Media from a Camera 24  
Exercise 2.3.1 Navigating Within a Filmstrip Preview 26  
Exercise 2.3.2 Importing Clips from a Camera Card ... 28  
Reference 2.4 Choosing Media Import Options .......... 31  
Exercise 2.4.1 Applying Media Import Options ......... 34  
Reference 2.5 Import Files from a Volume .......... .... 36  
Exercise 2.5.1 Importing Existing Files from a Volume 38  
Exercise 2.5.2 Dragging from the Finder or Other Apps 40  
Lesson Review .............................................. 42
<table>
<thead>
<tr>
<th>Lesson 3</th>
<th>Organizing Clips</th>
<th>45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference 3.1</td>
<td>Introducing the Libraries, Browser, and Viewer Panes</td>
<td>46</td>
</tr>
<tr>
<td>Reference 3.2</td>
<td>Using Keywords</td>
<td>48</td>
</tr>
<tr>
<td>Exercise 3.2.1</td>
<td>Keywording a Clip</td>
<td>50</td>
</tr>
<tr>
<td>Exercise 3.2.2</td>
<td>Keywording a Range</td>
<td>61</td>
</tr>
<tr>
<td>Exercise 3.2.3</td>
<td>Adding Notes to a Clip</td>
<td>65</td>
</tr>
<tr>
<td>Reference 3.3</td>
<td>Assigning Ratings</td>
<td>69</td>
</tr>
<tr>
<td>Exercise 3.3.1</td>
<td>Applying Ratings</td>
<td>70</td>
</tr>
<tr>
<td>Exercise 3.3.2</td>
<td>Customizing a Favorite</td>
<td>80</td>
</tr>
<tr>
<td>Reference 3.4</td>
<td>Search, Sort, and Filter</td>
<td>81</td>
</tr>
<tr>
<td>Exercise 3.4.1</td>
<td>Filtering an Event</td>
<td>86</td>
</tr>
<tr>
<td>Exercise 3.4.2</td>
<td>Working with Smart Collections</td>
<td>91</td>
</tr>
<tr>
<td>Exercise 3.4.3</td>
<td>Detecting People and Shot Composition</td>
<td>93</td>
</tr>
<tr>
<td>Reference 3.5</td>
<td>Roles</td>
<td>96</td>
</tr>
<tr>
<td>Exercise 3.5.1</td>
<td>Assigning Roles</td>
<td>97</td>
</tr>
<tr>
<td>Lesson Review</td>
<td></td>
<td>103</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lesson 4</th>
<th>Making the First Edit</th>
<th>105</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference 4.1</td>
<td>Understanding a Project</td>
<td>106</td>
</tr>
<tr>
<td>Exercise 4.1.1</td>
<td>Creating a Project</td>
<td>106</td>
</tr>
<tr>
<td>Reference 4.2</td>
<td>Defining the Primary Storyline</td>
<td>109</td>
</tr>
<tr>
<td>Exercise 4.2.1</td>
<td>Appending the Primary Storyline</td>
<td>111</td>
</tr>
<tr>
<td>Exercise 4.2.2</td>
<td>Rearranging Clips in the Primary Storyline</td>
<td>119</td>
</tr>
<tr>
<td>Reference 4.3</td>
<td>Modifying Clips in the Primary Storyline</td>
<td>121</td>
</tr>
<tr>
<td>Exercise 4.3.1</td>
<td>Performing Insert Edits</td>
<td>122</td>
</tr>
<tr>
<td>Exercise 4.3.2</td>
<td>Rippling the Primary Storyline</td>
<td>126</td>
</tr>
<tr>
<td>Reference 4.4</td>
<td>Timing the Primary Storyline</td>
<td>131</td>
</tr>
<tr>
<td>Exercise 4.4.1</td>
<td>Inserting a Gap Clip</td>
<td>133</td>
</tr>
<tr>
<td>Exercise 4.4.2</td>
<td>Blading and Deleting</td>
<td>136</td>
</tr>
<tr>
<td>Exercise 4.4.3</td>
<td>Joining a Through Edit</td>
<td>139</td>
</tr>
<tr>
<td>Exercise 4.4.4</td>
<td>Refining Some Sound Bite Edits</td>
<td>140</td>
</tr>
<tr>
<td>Reference 4.5</td>
<td>Editing Above the Primary Storyline</td>
<td>143</td>
</tr>
<tr>
<td>Exercise 4.5.1</td>
<td>Adding and Trimming Connected B-roll</td>
<td>144</td>
</tr>
<tr>
<td>Exercise 4.5.2</td>
<td>Understanding Connected Clip Sync and Trimming Behaviors</td>
<td>152</td>
</tr>
<tr>
<td>Reference 4.6</td>
<td>Creating a Connected Storyline</td>
<td>156</td>
</tr>
<tr>
<td>Exercise 4.6.1</td>
<td>Converting Connected Clips into a Connected Storyline</td>
<td>157</td>
</tr>
<tr>
<td>Exercise 4.6.2</td>
<td>Appending Clips to a New Connected Storyline</td>
<td>161</td>
</tr>
<tr>
<td>Reference 4.7</td>
<td>Editing Below the Primary Storyline</td>
<td>179</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>Exercise 4.7.1</td>
<td>Connecting a Music Clip</td>
<td>180</td>
</tr>
<tr>
<td>Reference 4.8</td>
<td>Finessing the Rough Cut</td>
<td>181</td>
</tr>
<tr>
<td>Exercise 4.8.1</td>
<td>Adjusting the Edits</td>
<td>183</td>
</tr>
<tr>
<td>Exercise 4.8.2</td>
<td>Adjusting Clip Volume Levels</td>
<td>187</td>
</tr>
<tr>
<td>Exercise 4.8.3</td>
<td>Connecting Two Additional B-Roll Clips</td>
<td>189</td>
</tr>
<tr>
<td>Exercise 4.8.4</td>
<td>Refining Edits Using Cross Dissolves and Fade Handles</td>
<td>192</td>
</tr>
<tr>
<td>Reference 4.9</td>
<td>Sharing Your Progress</td>
<td>197</td>
</tr>
<tr>
<td>Exercise 4.9.1</td>
<td>Sharing an iOS-Compatible File</td>
<td>198</td>
</tr>
<tr>
<td>Lesson Review</td>
<td></td>
<td>206</td>
</tr>
</tbody>
</table>

**Lesson 5**

<table>
<thead>
<tr>
<th>Reference 5.1</th>
<th>Versioning a Project</th>
<th>212</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise 5.1.1</td>
<td>Snapshotting a Project</td>
<td>213</td>
</tr>
<tr>
<td>Reference 5.2</td>
<td>Lifting from a Storyline</td>
<td>216</td>
</tr>
<tr>
<td>Exercise 5.2.1</td>
<td>Lifting Clips Out of a Storyline</td>
<td>217</td>
</tr>
<tr>
<td>Reference 5.3</td>
<td>Replacing a Clip</td>
<td>217</td>
</tr>
<tr>
<td>Exercise 5.3.1</td>
<td>Replacing the Primary Storyline</td>
<td>219</td>
</tr>
<tr>
<td>Exercise 5.3.2</td>
<td>Creating Time at 0:00</td>
<td>221</td>
</tr>
<tr>
<td>Reference 5.4</td>
<td>Working with Markers</td>
<td>228</td>
</tr>
<tr>
<td>Exercise 5.4.1</td>
<td>Creating Markers</td>
<td>230</td>
</tr>
<tr>
<td>Reference 5.5</td>
<td>Using the Position Tool</td>
<td>235</td>
</tr>
<tr>
<td>Exercise 5.5.1</td>
<td>Realigning Sound Bites and B-roll to Music</td>
<td>235</td>
</tr>
<tr>
<td>Reference 5.6</td>
<td>Working with Auditions</td>
<td>243</td>
</tr>
<tr>
<td>Exercise 5.6.1</td>
<td>Repositioning Storylines and Deleting Within</td>
<td>244</td>
</tr>
<tr>
<td>Exercise 5.6.2</td>
<td>Importing the Aerials</td>
<td>246</td>
</tr>
<tr>
<td>Exercise 5.6.3</td>
<td>Working with an Audition Clip</td>
<td>247</td>
</tr>
<tr>
<td>Reference 5.7</td>
<td>Trimming the Tops and Tails</td>
<td>251</td>
</tr>
<tr>
<td>Exercise 5.7.1</td>
<td>Trimming the Aerials</td>
<td>253</td>
</tr>
<tr>
<td>Lesson Review</td>
<td></td>
<td>267</td>
</tr>
</tbody>
</table>

**Lesson 6**

<table>
<thead>
<tr>
<th>Reference 6.1</th>
<th>Enhancing the Edit</th>
<th>271</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise 6.1.1</td>
<td>Retiming Clips</td>
<td>272</td>
</tr>
<tr>
<td>Exercise 6.1.2</td>
<td>Setting a Constant Speed Change</td>
<td>273</td>
</tr>
<tr>
<td>Exercise 6.1.2</td>
<td>Editing with Blade Speed</td>
<td>278</td>
</tr>
<tr>
<td>Reference 6.2</td>
<td>Working with Video Effects</td>
<td>285</td>
</tr>
<tr>
<td>Exercise 6.2.1</td>
<td>Experimenting with Video Effects</td>
<td>287</td>
</tr>
<tr>
<td>Exercise 6.2.2</td>
<td>Creating a Depth of Field Effect</td>
<td>293</td>
</tr>
<tr>
<td>Reference</td>
<td>Exercise</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>----------</td>
<td>-------------</td>
</tr>
<tr>
<td>6.3</td>
<td>6.3.1</td>
<td>Working with Video Transitions</td>
</tr>
<tr>
<td>6.4</td>
<td>6.4.1</td>
<td>Compositing Using Spatial Parameters</td>
</tr>
<tr>
<td>6.5</td>
<td>6.5.1</td>
<td>Compounding Clips</td>
</tr>
<tr>
<td></td>
<td>6.3.1</td>
<td>Experimenting with Transitions</td>
</tr>
<tr>
<td></td>
<td>6.4.1</td>
<td>Creating a Two-Up Split Screen</td>
</tr>
<tr>
<td></td>
<td>6.4.2</td>
<td>Exploring the Video Animation Editor</td>
</tr>
<tr>
<td></td>
<td>6.5</td>
<td>Collapsing a Composite into a Compound</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lesson Review</td>
</tr>
<tr>
<td>7.1</td>
<td></td>
<td>Using Titles</td>
</tr>
<tr>
<td>7.1.1</td>
<td></td>
<td>Adding and Modifying a Lower Third</td>
</tr>
<tr>
<td>7.2</td>
<td></td>
<td>Working with Audio</td>
</tr>
<tr>
<td>7.2.1</td>
<td></td>
<td>Adding Sound to a Clip</td>
</tr>
<tr>
<td>7.2.2</td>
<td></td>
<td>Adjusting Volume Levels over Time</td>
</tr>
<tr>
<td>7.3</td>
<td></td>
<td>Understanding Audio Enhancements</td>
</tr>
<tr>
<td>7.4</td>
<td></td>
<td>Correcting the Image</td>
</tr>
<tr>
<td>7.4.1</td>
<td></td>
<td>Neutralizing a Clip</td>
</tr>
<tr>
<td>7.4.2</td>
<td></td>
<td>Matching Color</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lesson Review</td>
</tr>
<tr>
<td>8.1</td>
<td></td>
<td>Creating a Viewable File</td>
</tr>
<tr>
<td>8.1.1</td>
<td></td>
<td>Sharing to an Online Host</td>
</tr>
<tr>
<td>8.1.2</td>
<td></td>
<td>Sharing to a Bundle</td>
</tr>
<tr>
<td>8.1.3</td>
<td></td>
<td>Sharing a Master File</td>
</tr>
<tr>
<td>8.2</td>
<td></td>
<td>Creating an Exchangeable File</td>
</tr>
<tr>
<td>8.3</td>
<td></td>
<td>Utilizing Compressor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lesson Review</td>
</tr>
<tr>
<td>9.1</td>
<td></td>
<td>Storing the Imported Media</td>
</tr>
<tr>
<td>9.1.1</td>
<td></td>
<td>Importing as &quot;Leave Files in Place&quot;</td>
</tr>
<tr>
<td>9.1.2</td>
<td></td>
<td>Importing as Managed Clips</td>
</tr>
<tr>
<td>9.1.3</td>
<td></td>
<td>Moving and Copying Clips Within a Library</td>
</tr>
<tr>
<td>9.1.4</td>
<td></td>
<td>Making a Library Portable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lesson Review</td>
</tr>
</tbody>
</table>
Lesson 10  Advancing Your Workflow .................. 429
Sub-workflow 10.1  Using Manual Settings for a New Project................. 430
Sub-workflow 10.2  Synchronizing Dual System Recordings.................. 435
Sub-workflow 10.3  Using Chroma Key................................. 439
Sub-workflow 10.4  Working with Multicam............................ 449
Lesson Review .................................................. 464

Appendix A  Keyboard Shortcuts ......................... 465
Assigning Keyboard Shortcuts............................... 466
Reviewing the Default Command Set.................. 468

Appendix B  Editing Native Formats
Native Video Formats ........................................ 478
Native Still-Image Formats ................................. 478
Native Audio Formats ........................................ 479

Glossary ...................................................... 481
Index .......................................................... 483

See last page of this eBook for instructions on downloading your lesson files.
This page intentionally left blank
After importing and organizing, the story elements sit as clips in the library, ready for editing. The editing phase of the post-production workflow involves crafting a story from the library clips into a project or timeline.

The first edit, or *rough cut*, of a project involves some or most of the major tasks from the remainder of the post-workflow. An edit of the project is created; it's trimmed down for timing, pacing, and conciseness; additional elements such as music may be added; and then the project is shared out of Final Cut Pro for client or producer approval.

You are ready to embark on the post-workflow with the Lifted project. In this lesson, you will assemble the interview sound bites and the helicopter B-roll to form the story. You'll trim the edits to remove any extraneous content, and then add a music clip. Lastly, you will export this first edit of the project as a file that is playable on a Mac, PC, smartphone, or tablet.

**GOALS**

- Create a project
- Add and rearrange clips within a primary storyline
- Ripple and Roll trim clips
- Blade, replace with gap, ripple delete, and join through edit
- Perform connect edits
- Create and edit in a connected storyline
- Adjust audio levels
- Share the project to a media file
Reference 4.1
Understanding a Project

The editing phase occurs in a *project*—a timeline-based container of sequentially arranged clips that tell a story. Projects are simple or complex timelines depending on the technical depth of the story.

Projects are stored within individual events in a library: the super-container of your Final Cut Pro editing project that makes loading/unloading and transporting all your clips, events, and projects for a show, client, or movie much more convenient.

Events may contain as many projects as you need. For example, a news editor may need three projects for the VO (voiceover), the package, and the teaser. A documentary editor could easily use 10 to 30 projects when breaking down an edit by segment, creating a variety of video news releases, posting online teasers, and developing various versions of the documentary based on running time and/or content.

You already have the Lifted library with two events of clips. Let's edit.

Exercise 4.1.1
Creating a Project

To start the first edit, you must create the project. A couple of clicks and you've got yourself a starting project.

1 In the Lifted library, Control-click the Primary Media event, and from the shortcut menu, choose New Project.
The Project Properties dialog opens to the default automatic settings.

**NOTE** ▶ If your dialog opens to the custom settings, click the Use Automatic Settings button.

2. For the Project Name, enter *Lifted Vignette*.

3. Click the In Event pop-up menu.

In Event specifies the event in which to save the project you are creating. The pop-up menu displays the events available in the open libraries.

4. Ensure that the In Event pop-up menu is set to Primary Media, and click OK.

The project is created and saved in the Primary Media event.

5. If necessary, in the Lifted library, select the Primary Media event.
The project appears at the top of the Browser.

6 Double-click the project to open it in the Timeline.
Reference 4.2: Defining the Primary Storyline

Every project in Final Cut Pro is based around the primary storyline, identified by the dark stripe across the Timeline. The primary storyline contains the clips that drive your project. For a documentary, a combination of sound bites and a narrator’s VO could constitute the primary storyline. For a project that starts with a montage, you could consider placing the music intro in the storyline followed by the on-camera host. The primary storyline is flexible content-wise.

By default, clips in the primary storyline interact with each other and incoming clips. This interaction is similar to that of two magnets: attraction or repulsion.

**NOTE**  ▶  See Lesson 10 for more information about the automatic vs. manual project settings.
When you drag a new clip from the Browser to the far right of the project, that clip is attracted to the end of the primary storyline, and "magnetically" snaps to the preceding clip.
Exercise 4.2.1: Appending the Primary Storyline

You are ready to edit your first clips into the Lifted Vignette project. Because this project is sound bite–driven, you will edit the sound bites into the primary storyline. Let’s first alter the interface so you can see as many clips and notes as possible in the Browser.

1. If necessary, in the Browser, select the list view.

2. With the Interview collection selected in the Libraries pane, click the Hide Libraries button.
3 Drag the toolbar down to create more vertical room in the Browser.

Expanding each clip listing reveals the favorites you marked previously, along with the notes you applied to each clip. You'll use these to create the rough cut of the sound bites. Remember that "great passion" sound bite that Mitch started with when you were marking favorites? Let's search for it.

4 In the Browser search field, type *passion*.

As you begin to type, the Browser updates immediately with the matching results: **MVI_1042** and **MVI_1055**.

5 In the Browser select **MVI_1042**, and skim the clip to review the marked favorite.
As you skim the clip, notice that its audio is pitch corrected, which allows you to quickly review the clip's contents at variable speeds while maintaining the aural clarity of its contents.

**NOTE** You may also review the clip by pressing the navigation controls: the Spacebar and the J, K, L keys.

Your search results include a second clip tagged with the word *passion*.

6 In the Browser, play **MVI_1055**, and review its contents.

With a little *trimming* later in the edit, both sound bites could fit back to back into your storyline. Let's edit these into the project as the first two sound bites.

7 In the Browser, select the favorite with the "passion when kid" note listed under **MVI_1042**.

8 Click the Append button, or press E, to add this clip selection to the project.
The clip’s selection is edited into the primary storyline. The E stands for "End." No matter where the skimmer or playhead is currently located in the project, you can press E to quickly edit the active Browser selection to the end of the storyline.

Currently, the playhead is at the end of MVI_1042. The playhead always jumps to the end of the clip you append edited to the project. This default playhead behavior in Final Cut Pro anticipates your next edit. But what happens if you move the playhead before the next append edit? Let’s find out.

9 Move the playhead to the left by clicking the empty gray area above MVI_1042.

This cues the playhead over MVI_1042, which you can see in the Viewer. Now you will append edit with the playhead placed in the middle of MVI_1042 and observe the results.

**NOTE** Depending on your display’s resolution, your clip may appear short and shoved to the left of the interface. After clicking to move the playhead in the previous step, press Shift-Z to fit the project within the Timeline. Alternatively, you could drag the Zoom slider at right to change the zoom setting.

10 Returning to the Browser, notice the Used entry under MVI_1042.
The Used listing identifies the clip's selection used in the open project. As that was the only favorite for that clip, you will go to the next clip for the next edit.

11 In the Browser, select the "really the passion is" favorite in the **MVI_1055** clip, and then press E to append this clip to the end of the storyline.

![Clip selected in the Browser](image)

![Clip append edited into the primary storyline](image)

That was quick. The clip was edited to the end of the storyline immediately following **MVI_1042**. The playhead's position had no impact on the append edit. You are two sound bites into the edit with several more to go. You could continue with this one-at-a-time approach to editing, but Final Cut Pro offers a slightly faster edit method.

**NOTE** ▶ If the previous edit caused the **MVI_1042** clip to not be visible in the Timeline, you need to change the zoom setting. Click once in the Timeline, and press Shift-Z or adjust the Zoom control at right.

### Appending a Batch Edit to the Primary Storyline

You can use the append function to edit more than one clip at a time into the primary storyline. As you are building your first edit, you will be looking for your next clip in the Browser. Append allows you to remain in the Browser and storyboard the next few clips with one edit. This batch editing technique is a fast and simple way to edit several clips into your project at once.
1 In the Browser, switch to filmstrip view.

Currently, you are looking at two clips that were identified in your earlier search. You'll need to clear the search field to reveal the rest of the sound bites.

2 In the Browser, click the Reset button (X) in the search field to clear the previous search.

The remaining clips in the Interview collection appear. You may select multiple sound bites to append at one time, and the order in which you select the clips is the order they will be edited into the project.
3 If desired, you may increase the size of the filmstrips by changing the Clip Appearance’s Clip Height slider.

4 In the Browser’s filmstrip view, click within the first green range in **MVI_1043**.

The favorites you marked earlier appear as green stripes that you may use to quickly select the favorited ranges.

5 Command-click the following clips in this order to add them to the selection: **MVI_1046**, **MVI_1045**, and **MVI_1044**.
6 Press E to perform an append edit.

The clips appear at the end of the project in the same order you selected them in the Browser.

7 To see the entire project within the Timeline, click once in the Timeline gray area, and press Shift-Z.

How Did Final Cut Pro Know Where to Put the Clips?
If you have prior editing experience, you may have noticed that you didn't need to assign tracks, position the playhead, or set a start point to make this edit. The append edit function efficiently takes legacy overwrite editing to the next level.

Playing the Project
To play the project, you may press the Home key to cue the playhead to the beginning of the Timeline; but on Apple Wireless Keyboards and laptops, the Home key is not labeled.

1 Hold down the fn (function) key at the lower left of keyboard, and then press the Left Arrow key to simulate pressing the Home key on your keyboard.

The playhead is now cued to the beginning of the project.

2 Press the Spacebar to start playback.
Playback will stop when the playhead reaches the end of the project.

**NOTE** ▶ When loop playback is enabled (by choosing View > Playback > Loop Playback), your project will not stop automatically but will repeat over and over until you manually stop playback.

**Exercise 4.2.2**
Rearranging Clips in the Primary Storyline

The sound bites don't quite flow yet. It’s time to rearrange them into an order that more fully supports your storyline. Working in a storyline makes such changes incredibly easy. Just drag a clip to a new location in the Timeline, wait for the interface to preview the results, and then release the mouse button.

1. In the project, select the fourth clip, **MVI_1046**.

The playhead must be located over this clip to preview it. Your playhead is currently located at the end of the project. You do not need to move the playhead because the skimmer relocates the playhead if the skimmer is visible when you start playback.

2. Move the mouse pointer slightly to verify that the skimmer is active.

The skimmer extends vertically up to the timestrip across the Timeline pane, the same as the playhead; however, the skimmer does not have an arrowhead on top as does the playhead.

3. Press the Spacebar to play the clip.
The playhead relocates to the skimmer's position and the clip plays. **MVI_1046** starts with Mitch saying, "At the end of the day." It sounds as if that phrase should be placed nearer the end of the storyline.

4 Drag **MVI_1046** toward the end of the storyline, but don't release the mouse button just yet.

5 Position the clip so that a blue clip box appears in the primary storyline after **MVI_1044**. Release the mouse button.

**MVI_1046** is edited in as the last clip in your storyline.

Some extra words, phrases, and syllables remain in your clips. One clip may cut Mitch off too early. That's OK. We'll trim those troubled frames later in this lesson. For now, let's try moving another clip in the storyline.

6 Locate **MVI_1044**, which is now the second clip from the end of the project. Drag the clip between **MVI_1043** and **MVI_1045**.
As you drag MVI_1044 between the two clips, an insert bar appears. If you continue to hold the clip in that position, MVI_1045 will slide to the right to allow MVI_1044 to drop into place. The magnetic storyline enables these quick, reorganizing edits as you explore your story flow.

NOTE ▶ While dragging a clip, the delta, or timing change, of the clip’s position within the Timeline appears above the clip.

Reference 4.3
Modifying Clips in the Primary Storyline

When reviewing the storyline’s flow, an additional clip or two may fill in story gaps. The flow may be disrupted by extra words or sounds at the start or end of a sound bite. Thanks to the magnetic properties of the storyline, the solutions to these problems are painless.

The append edit added the selected clip or clips to the end of the storyline. Sometimes a clip needs to be placed between those appended storyline clips; an insert edit will wedge a browser clip between two storyline clips.
Making the First Edit

The trimming tools allows you to remove, or add, an extra breath, sound, word, or movement from or to a clip. Final Cut Pro includes several trimming tools. The basic trim tool you’ll learn in this lesson is called ripple trim.

The ripple trim allows you to remove media from a project clip, frame by frame if desired. The ripple trim also allows you to insert media to a project clip.

Whether you’re performing an insert edit or a ripple trim in the storyline, the adjoining clips in the storyline stick together. Remove a clip and the subsequent clips move forward and hook up to the previous clip. Insert a clip between others and the subsequent clips move right to make room.

**Exercise 4.3.1 Performing Insert Edits**

When you dragged MVI_1044 to its new location, you performed an insert edit. Clips to the right of the new clip slid right to make room, while clips to the left retained their positions. Previously, you marked another sound bite as a select that needs to be added to the project. In this exercise, you will insert this clip into the project, but without dragging it.
1 In the Browser, switch to thumbnail view, then perform a search for awe.

The search identifies one clip, MVI_1043. The filmstrip displays two favorite ranges within the clip.

2 In the Browser, skim the second favorite of MVI_1043.

Depending on your display’s resolution, you may have difficulty skimming the clip at a speed that makes the audio intelligible. Expanding the filmstrip by zooming in will help you skim the clip.

3 Drag the Zoom slider to right until the zoom scale reads 5s.

4 Skim the second favorite in MVI_1043 again.

At this scale setting, each thumbnail in the filmstrip represents five seconds of source media. This time you can identify the sound bites by listening to the pitch-corrected audio. Notice the torn edge on the left end of the row. That indicates the clip continues from the previous line of thumbnails. The start and end of the clip are represented by a solid edge as shown on the right side of the filmstrip.
5 In the clip's filmstrip, ensure that the second favorite range is selected.

Next, you need to choose where this clip belongs in the storyline by cueing the playhead to the desired location.

6 In the Timeline, skim between MVI_1043 and MVI_1044.

MVI_1043 must be edited between those two clips with frame accuracy. To help you precisely place the playhead on the edit point between the two clips, you can turn on snapping.

At the upper-right of the Timeline locate the Skimming, Audio Skimming, Audio Soloing, and Snapping buttons.

7 If necessary, click the Snapping button to turn on snapping, or press N.

8 Skim over several clips and edit points within the project.

Notice that the skimmer jumps to the edit points. To prepare for the insert edit, you need to cue the playhead to the desired edit point.
9 Snap the skimmer to the edit point between **MVI_1043** and **MVI_1044**, then click here to cue the playhead.

![Image of video timeline with skimmer and edit points](image)

**NOTE** ▶ The edit point between is the start frame of the right clip (the starting clip), and not the end frame of the left clip (the ending clip). A "start bracket" is overlaid on the clip to visually identify that the playhead is on the start frame.

The "L" bracket indicates this frame is the start point.

10 In the Browser, verify that the clip’s second range is still selected.

11 In the toolbar, click the Insert edit button, or press W.

![Image of toolbar with insert edit button highlighted](image)

The second select of **MVI_1043** is placed into the project between the two storyline clips, and a missing sound bite becomes part of the storyline.
Exercise 4.3.2
Rippling the Primary Storyline

When you pulled your select sound bites in Lesson 3, you included some extraneous material. (The reason you left some extra material in your favorites will become apparent during this exercise.) However, everyday editing is all about trimming down to create a more concise story, or padding the story to extend its length. You will now learn how to use ripple trimming to remove that extra content, and also how to reinsert content when you trim off too much.

NOTE ▶ Because Final Cut Pro is context sensitive, you may not have to activate the Trim tool. The Select tool automatically switches to the Trim tool's ripple function when necessary.

1 Locate the playhead at the end point of MVI_1055, the second clip in the project.

Some extra content, where Mitch says, "Uh, so," needs to be trimmed, leaving a new end point after Mitch says, "Whole new look."

Before you perform this bit of clip trimming, zoom in on the edit so that you may operate the tools with greater precision.

2 With your skimmer or playhead cued around the end of MVI_1055, press Command-= (equals sign) to zoom into the Timeline.

As you zoom, the thumbnails and waveforms expand to reveal where the trim should occur. The "uhh, so" phrase is displayed as the peaks of waveforms at the end of the
clip. Those need to be removed. You can approach this edit in several ways. In this exercise, you will use the ripple trim function without getting the Trim tool.

3  Identify the new end point by cueing the playhead before Mitch says, "uhh, so" at the end of **MVI_1055**.

Locating the playhead at the desired trim point allows you to use snapping to make an exact trim with the default Select tool. This tool automatically changes function based on its location in the Timeline.

4  In the Tools pop-up menu in the toolbar, verify that the Select tool is chosen, or press A.

5  In the Timeline, place the mouse pointer over the end point of the clip.

6  Without clicking, slowly move the mouse pointer back and forth across the edit point between the two clips' edit points.
Notice how the pointer icon changes as the mouse pointer moves from one side of the edit to the other. The changing icon indicates that the Select tool automatically becomes the ripple trim tool.

The ripple trim icon has a small filmstrip that always points toward the clip you will trim. Because you want to change the end point of **MVI_1055**, the filmstrip must point left toward the clip.

**7** With the ripple trim’s filmstrip pointing toward the left, drag the end of the clip until it snaps to the playhead.

**8** Review the edit you completed by playing this portion of the Timeline.

You easily changed the end point of the clip, thereby removing the extraneous content. The ripple trim also moved all the following clips earlier in the Timeline to fill in for the removed content. Now you’ll trim off the start of the same clip.

**9** Scroll left in the project and adjust the zoom level of the Timeline to see the start point of **MVI_1055**.

**10** Play the start of the clip to identify the new start point before Mitch says, "And really the passion."
Exercise 4.3.2: Rippling the Primary Storyline

You will cue the playhead here between Mitch saying, "of film" and "And really." Ideally, you will find a frame for an edit that has the interview subject appearing with eyes open and mouth closed. In this clip, you'll find such a frame just as Mitch finishes the word "film."

11 With the playhead parked at the new start point's location, place the Select tool over the current start point of the clip.

This time, the filmstrip of the ripple trim pointer will point to the right toward MVI_1055.

12 Drag the start point of MVI_1055 and snap it to the playhead.

When ripple trimming a start point, you may notice that the clip to the left appears to move. However, the clip did not move because it still starts at 0:00. As you trimmed content from the beginning of MVI_1055, the clip's duration shortened, the following clips rippled left in time, and the Timeline timecode shifted accordingly.

Using the Keyboard to Ripple Trim an End Point

Sometimes the mouse or trackpad does not offer sufficiently fine control to perform a trim without setting an extreme view or altering your System Preferences. Fortunately, you can use keyboard shortcuts for greater precision.

1 Locate the end point of the second, shorter MVI_1043; and cue the playhead before Mitch utters an extraneous "so." Ordinarily, you might press Command-= (equals sign) a few times to zoom your view into the edit.
Because you have heard this interview already, you know that Mitch runs words and sentences together, thereby making this edit more difficult. Let's turn to keyboard shortcuts to help trim this clip.

2. Select the end point of the second MVI_1043.

With the end point selected, you can use keyboard shortcuts to trim the clip one frame at a time.

3. Press the , (comma) key multiple times to ripple trim, removing content frame by frame.

4. If necessary, press the . (period) key multiple times to insert content frame by frame.

5. Skim to just before the edit point, and then play back the project to check your results.
   This trim edit will take a few tries to perfect, but let's leave it for now and move on.

6. Proceed through the project removing extraneous clip content. When you're finished, the project should resemble the following table:

<table>
<thead>
<tr>
<th>Lifted Vignette Edit in Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clip</strong></td>
</tr>
<tr>
<td>MVI_1042</td>
</tr>
<tr>
<td>MVI_1055</td>
</tr>
<tr>
<td>MVI_1043</td>
</tr>
<tr>
<td>MVI_1043</td>
</tr>
</tbody>
</table>
Lifted Vignette Edit in Progress

<table>
<thead>
<tr>
<th>Clip</th>
<th>Start dialogue</th>
<th>End dialogue</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVI_1044</td>
<td>You know it’s</td>
<td>opener for me</td>
</tr>
<tr>
<td>MVI_1045</td>
<td>Every time we may be</td>
<td>see or capture</td>
</tr>
<tr>
<td>MVI_1046</td>
<td>At the end of the day</td>
<td>adventure I went on</td>
</tr>
</tbody>
</table>

**NOTE** ▶ You may hear a slight click or pop on some of your edits. You’ll learn to resolve those errors later in this lesson.

Reference 4.4
Timing the Primary Storyline

Every edit in a project is based upon the primary storyline. Up to this point, the concern has been to place the select sound bites into the project and organize them to reflect the story structure. Now that the structure has been established, the task switches to adjusting the timing and pacing. The sound bites should not be a hailstorm of thoughts spewed at the viewer, but should flow like everyday conversation.

The first technique to pacing the sound bites involves a gap clip, which is an empty clip container in the Timeline. Gap clips may be applied as placeholders until additional material arrives, such as more B-roll content, clips from a hard-to-schedule interview, or a late shipment of second unit content. Gap clips are also used as the spaces, pauses, and breaths that enhance your story flow.
The second technique to pacing the sound bites involves removing segments of a clip or entire clips. The Blade tool segments a clip to remove one or more clip ranges from the project. Each time you blade a clip, you create a *through edit*.

A through edit marks the clip into segments without breaking the clip into two physical clips. If you blade that clip a second time, you mark it into three segments with two through edits. You can rejoin these segments if you inadvertently blade the wrong frame. The repair is called a *join through edit*.

When you are ready to delete a segment, you can do so in one of two ways. Simply pressing the Delete key performs a ripple delete. The selected clip segment is removed, and the subsequent clips slide left to occupy the Timeline position of the deleted segment.
The second delete method is a replace with gap. This deletion, performed by pressing Shift-Delete, removes the selected segment and leaves a gap that occupies its former position in the Timeline. As a result, the following clips do not ripple, but remain in place.

Blade to segment unwanted content.

Select segment for removal.

Press Shift-Delete to replace segment with a gap clip.

**Exercise 4.4.1**

**Inserting a Gap Clip**

Currently, your project sound bites are sequenced very tightly. This breathless stream of consciousness does not lend itself to clear storytelling. Let's separate some of these clips so the storytelling relaxes a bit.

1. Park the playhead between MVI_1042 and MVI_1055.
Placing a gap clip here allows Mitch to take a breath. Don't worry about the visual break. The B-roll clips you will add later can fill in those pauses.

2 To insert a gap clip, choose Edit > Insert Generator > Gap, or press Option-W.

A three-second clip is inserted between the two clips at the playhead location. Those three seconds may be a little too long for this edit. As with any other clip, you may ripple trim a gap clip to adjust its duration.

3 Place the mouse pointer over the end point of the gap clip. Ensure that the ripple trim's filmstrip is pointing left, and then drag the end point to the left.

As you drag, the clip's new duration and the delta (the amount you have changed the clip's duration while dragging) appears above the edit.

4 Trim the gap clip to a new duration of one second, thereby removing two seconds from its length.
5 Skim to just before the gap clip, and play back to review the edit.

That’s not bad. It allows just a moment for your audience to understand the who, what, and where of Mitch’s comments. Let’s repeat that for the next edit.

6 Advance the playhead to the next edit by pressing the Down Arrow key.

![Image of video timeline showing clips MVI_1055 and MVI_1043]

The playhead jumps to the edit between MVI_1055 and MVI_1043. Mitch is offering more details in MVI_1043, so placing a longer gap before this clip may help transition the audience into this sound bite.

7 With the playhead cued, press Option-W to insert a three-second gap clip.

![Image of video timeline with gap inserted]

8 Review the edit.

Now that you have silence between the two sound bites, you may discover the "breath" at the end of MVI_1055. As you proceed with your edit, you will probably notice more of these fine details.

9 If necessary, adjust the end or start points surrounding the gap clips to tidy up the trimmed clips.

You are listening for extra syllables or breaths to remove. For example, you would trim the end point of MVI_1055 to the left a few frames to remove the breath.

These gap clips won’t necessarily remain at the durations you just set. They may flex as you continue to build the story...or tear out parts of it.
Exercise 4.4.2  
Blading and Deleting

The Blade tool allows you to quickly break a clip into smaller sections to be moved elsewhere or completely removed from your story. In the first instance of MVI_1043, some pauses in Mitch's interview can be removed to tighten the edit.

1 Play the project, and locate the point at which Mitch says, "And film at the same time, (breath) uhhm," in the first MVI_1043. This occurs about four seconds into the clip.

2 Cue the playhead after the breath and before the "uhhm."

You will blade the clip here to divide it into two segments. You will then blade the clip again after the "uhhm" to separate this sound from the good content that occurs before and after it.

3 From the Tools pop-up menu, choose the Blade tool, or press B.

4 With snapping turned on, move the Blade tool over the MVI_1043 clip and toward the playhead until it snaps to the playhead.
With the Blade tool snapped to the playhead, click to segment the clip at this edit point.

You can choose the Blade tool while still using the Select tool. Let's switch to the Select tool to blade on the other side of the "uhhm."

**6** Press A to choose the Select tool.

Remember, A stands for arrow. Because the Select tool is already located next to the edit you just made, the ripple trim icon may appear.

**7** Press the Right Arrow key—and the Left Arrow key, if necessary—to advance the playhead to after the "uhhm" and just as Mitch is starting the word "you're." Instead of choosing the Blade tool, let's use its keyboard shortcut.

**8** Without moving the mouse, press Command-B to blade the clip at the playhead.
The single clip is now three segments. You need to remove the middle segment. Remember, there are two types of clip deletion. Let's use both to see the difference between them.

**9**  Select the middle clip segment, and press Shift-Delete.

The clip segment is replaced with a gap clip. Called a "replace with gap" edit, this edit type is also known as a lift.

**10**  Press Command-Z to undo the previous edit.

**11**  Reselect the "uhhm" clip segment, if necessary, and press Delete.

The segment is removed, and the following clips slide to the left to replace it.

**12**  Play the edit and listen to the results.

The current second clip might sound like the first word is cut off a bit, what is commonly referred to as an *upcut*. In addition to that concern, does the breath at the end of the first clip distract and call attention to the edit? Or, does the breath naturally flow into the next clip?
Using the ripple trim techniques you’ve learned, clean up the edit to smooth the audio transitions between these two new neighbors.

You may first want to remove the breath at the end of the first, or ending clip. You may also need to insert or remove frames to the start point of the second clip, the starting clip. Refer to Using the Keyboard to Ripple Trim an End Point in this lesson to review ripple trimming.

Visually, this edit is a *jump cut*. A jump cut occurs when similar but nonsynchronized content appears to jump in space and time at an edit point. The B-roll you will add in the next section will hide this error.

**Exercise 4.4.3**

**Joining a Through Edit**

In the previous exercise, you used the Blade tool to divide a clip into segments. The resulting through edits may be easily repaired if you made them in error or change your mind about splitting up a clip.

1. In your project, locate **MVI_1044**.

2. In the Tools pop-up menu, choose the Blade tool, or press B.

3. Skim toward the end of the clip just after Mitch says, "New," and then pauses.

The audio waveform displays a definite pause, represented as a "valley" in the waveform.

4. Click in this waveform valley to blade the clip and create a through edit.
5 The through edit point appears as a dashed line. Because we really did not want to split this clip, you are going to rejoin the through edit.

6 Press A to choose the Select tool.

7 With the Select tool, click the through edit point (dashed line) to select it.

Only one side of the through edit will be selected with the Select tool active. That's OK.

8 Press Delete.

The through edit point is removed and the two segments are rejoined into one clip.

**Exercise 4.4.4**

**Refining Some Sound Bite Edits**

Before progressing to the next layers of B-roll and music, let's polish the "technically flying in awe" section of the project by adjusting the sound bites' contents and pacing.

Currently, the second instance of **MVI_1043** ends with the word "shooting," which does not flow smoothly into the next clip. This occurs at roughly the 40-second mark in the Timeline.
Earlier, you trimmed off Mitch saying, "so." You could use that here to blend into the next sound bite.

1. Place the skimmer so that the ripple trim appears with the filmstrip pointing left at the end of the second instance of **MVI_1043**.

2. Ripple trim the end point of the second instance of **MVI_1043** to the right to insert roughly 11 frames of content.

3. Review the edit.

That created a nice story flow.

The end of the third instance of **MVI_1043** will be a little tougher to get a "clean" ending; that is, a natural-sounding ending when you are actually cutting the sound bite off mid-sentence. The clip's current end point is at "experiencing," which doesn't sound right. Let's trim that end point to a little earlier in the sentence.

4. Ripple trim the end point to the left roughly one second.
The clip should now end after Mitch says, "filming," and most likely has an extra syllable or two that need to be removed.

5 With the end point still selected, press the comma (,) and period (.) keys to nudge trim frame by frame, refining the edit point.

This trim edit may take a few moments to get the right frame for the end point. That frame is going to be right on the “g” of “filming.”

As for MVI_1044 and MVI_1045, these two get the axe. For timing purposes, let’s leave these out of the story for now.

6 Select both clips, and press Shift-Delete to replace both clips with a gap clip.

7 Trim the gap clip to a duration of three seconds.

Trimming creates room for a natural sound break and music swell before Mitch segues into the next sound bite.

With these edits in place, you have built the sound bite foundation for your project. Take a moment to review your story.
Reference 4.5
Editing Above the Primary Storyline

The primary storyline has established the content foundation, timing, and pacing for the project. It's time to see what those sound bites are discussing. At this stage, you'll edit B-roll clips into the project by placing them above the primary storyline, and connected to it.

With these B-roll edits, your editing approach changes to a "lane" above the primary storyline. Clips in a lane outside the primary storyline are vertically connected back to the primary storyline, thereby establishing a synchronized relationship in this project between the sound bite and the B-roll. When Mitch says "helicopter," your audience sees a helicopter.

These connections keep clips synchronized even when a ripple edit occurs in the primary storyline. An upstream ripple that shifts a sound bite's timing in the project will also shift the B-roll clips connected to that sound bite. The connection ensures that the sync is maintained by shifting the connected clips the same amount. You first establish the connection and then Final Cut Pro maintains it so your focus may be on the rest of the story edit.

In the following exercises, you will connect B-roll clips to the sound bite–driven primary storyline you've already edited. Then, you will trim these connected clips and observe their unique trimming behaviors.
Exercise 4.5.1
Adding and Trimming Connected B-roll

B-roll is the editor's friend. Sometimes referred to as *cutaways*, B-roll clips allow you to smooth discontinuity in your primary storyline, and in this project they will help you hide the jump cuts and soften the audio edits made to the sound bites. Furthermore, good B-roll content may also include great natural sound audio, or *nats*. An editor can use the nats to cover a tight audio edit, such as the one you now have with the word "filming."

Let’s start by resetting the interface and searching those keywords you applied earlier to quickly locate B-roll of a hangar door opening.

**NOTE** ▶ For the purpose of training, we’ll start at the beginning of the project and continue forward by adding B-roll content. However, an actual workflow could begin by adding B-roll anywhere within your project.

1. In the Browser, click the Show Libraries button.

2. In the Lifted library, select the Hangar Keyword Collection.

   To ensure that you are seeing all the hangar clips, double-check the Browser’s sorting and filtering options.

3. In the Browser, from the pop-up menu, choose Hide Rejected; and then ensure that the search field is clear of any criteria.

4. From the Action pop-up menu in the Browser, set Group Clips By to None and Sort By to Name.
5 If necessary, drag the toolbar up to open more vertical room in the Timeline.

6 In the Browser, adjust the Zoom control to All.

With the environment properly set up, you will search for the first clip of the hangar door opening.

7 In the Lifted library, verify that the Hangar Keyword Collection is selected.

The Browser displays the clips you previously tagged with the Hangar keyword. The first clip you want is **DN_9390**.
8 Skim the clip to refamiliarize yourself with its contents.

This clip starts in the dark before the hangar door opens. Mitch walks in from the left, crossing to center to preflight the helicopter. The clip is currently 13 seconds long. Let’s trim the clip down before connecting it to the primary storyline.

9 In DN_9390, mark a start point when you first hear the hangar door motor.

10 Mark an end point when Mitch drops down to inspect the camera.

The clip is ready to edit into the project.

11 In the Lifted Vignette project, cue the playhead to the beginning of the Timeline.
Cueing the playhead tells Final Cut Pro where the hangar clip belongs time-wise in the Timeline. In this case, locating that point is easy because it will be the first shot in the project.

You will edit this clip into the project so that we hear Mitch speaking while watching the hangar clip. You can do this by connecting the video clip in a higher lane.

12 In the toolbar, click the Connect button, or press Q.

The hangar clip is stacked into a lane above the first sound bite. Let’s review the edit to see the results.

13 Cue the playhead to the beginning of the project, and play the Timeline.

You see the hangar and hear the hangar motor while also hearing Mitch’s sound bite. The video hierarchy rule makes the video in a higher lane visible, while mixing and playing all the audio content in the clips.
Connecting the Second B-roll Clip
As you can see, the DN_9390 clip extends over the second sound bite. That's OK for now, so let's look at the next B-roll clip to add to the project.

1 In the Browser, skim DN_9465.

![DN_9465]

In this clip, Mitch enters the hangar from the right side, approaches the helicopter, and then kneels to inspect the camera. Although Mitch enters from the opposite side of the hangar, you can set a start point as he's kneeling to inspect the camera. With finessing, this clip can be made to match the previous shot of Mitch approaching the helicopter.

2 In the Browser, mark a start point when Mitch has already started to kneel to inspect the camera.

![DN_9465]

Now you need to locate the Timeline point at which this clip can be matched to the previous edit.

3 Cue the project playhead over DN_9390 where Mitch has started to kneel at the helicopter's camera.

![DN_9390]
4 Click the Connect button, or press Q, to make a connect edit.

The second B-roll clip stacks into a higher lane above the previous edit. When two connected clips will impact one another, Final Cut Pro automatically avoids a "clip collision" by moving one of the clips to a different lane. The edit still cuts to the second B-roll clip at the connection point.

5 Review the edit to see the results.

Does the action of Mitch kneeling flow from one clip to the other? If not, this situation is easily corrected.

6 Place the mouse pointer over the center of the DN_9465 clip and drag it to the left or right until the action of Mitch kneeling appears to be one smooth movement.
Once **DN_9465** is in place, you can ripple trim the end of **DN_9390** to lower **DN_9465** into the same lane.

7. Ensure that snapping is turned on (the Snapping button in the Timeline is blue).

   ![Snapping button](image)

   **NOTE** ▶ Press N to turn snapping on and off.

8. Drag the end point of **DN_9390** to the left until **DN_9465** drops into the same lane.

   ![Timeline with Snapping](image)

   With snapping turned on, the end point of **DN_9390** will snap to the start point of **DN_9465**.

   Notice that **DN_9465** extends down the Timeline. We'll trim that clip after connecting a third B-roll clip.

**Connecting the Third B-roll Clip**
Let's connect one more B-roll clip before analyzing what you've created.

1. In the project, cue the playhead over clip **MVI_1055** when Mitch says "nobody."
You’re telling Final Cut Pro to make a precise start edit based upon the contents of the primary storyline. Now let’s find a clip for that edit.

2 In the Browser, locate clip DN_9470, a close-up of Mitch inspecting the camera.

3 Mark a start point about halfway through the clip as Mitch turns the camera counterclockwise.

4 Set an end point as Mitch’s face moves halfway behind the camera.

5 Press Q to connect this clip to the primary storyline at the playhead.
Although the edit cuts nicely to the close-up, in your Timeline, DN_9465 resumes playing after the close-up ends.

6 Trim the end point of DN_9465 to the start of DN_9470 so that the two B-roll clips are sequential.

Now DN_9465 doesn't give an encore performance.

**Exercise 4.5.2**

*Understanding Connected Clip Sync and Trimming Behaviors*

Each of the three B-roll clips has a vertical connection point that synchronizes it to the primary storyline. These vertical relationships remain intact even when you alter the primary storyline. Let’s see how this works.

In the project, notice the vertical spikes that extend from the B-roll clips to the sound bites in the primary storyline. Those are the connections you established by making a connect edit.

If a sound bite moves within the Timeline, that movement will also be applied to any connected clips.
1 Drag the middle of **MVI_1042** to the right until the clip is located after **MVI_1055**.

Notice that **DN_9390** was relocated with the sound bite, and the other two B-roll clips also slid to the left to remain synchronized with their connected sound bite.

2 Press Command-Z to undo the previous edit.

Connected clips are still independent clips that can be moved away from their synchronized, primary storyline clip.

3 Drag the middle of **DN_9465** to the right until it connects after **DN_9470**.

**DN_9465** establishes a new connection with the primary storyline.
NOTE ▶ Every clip outside the primary storyline must connect to the primary storyline.

4 Press Command-Z to undo the edit.

Final Cut Pro will maintain the synchronization of connected clips until you change the connection point or tell Final Cut Pro to ignore the connection.

Overriding the Connection
After connecting your B-roll clips, you may realize that you need to move a sound bite elsewhere in the primary storyline, but also need to leave the connected B-roll clips in place. The B-roll story you've created works great, but you've discovered your project is running too long. Or, you may want to experiment with a different arrangement of the sound bites without disturbing the B-roll order. You can temporarily suspend a connected clip's sync point while adjusting the primary storyline clip.

1 In the project, position the mouse pointer over MVI_1042.

2 Hold down the ` (grave accent) key, and drag MVI_1042 after MVI_1055.
When you press the grave key, the pointer becomes a crossed-out connection symbol. Dragging a clip while holding down the grave key tells Final Cut Pro to ignore any connected clips during that edit.

The **DN_9390** B-roll clip remains in place while the sound bite is moved later in the primary storyline. When the move is completed, the **MVI_1055** sound bite slides to the left along with its two connected B-roll clips. Final Cut Pro automatically bumps **DN_9390** to a higher lane to avoid a collision with the two oncoming B-roll clips. Rather than canceling the edit due to a potential clip collision, Final Cut Pro maintains sync and shifts the clips vertically out of the way of one another.

3 Press Command-Z to undo the edit.

Connected clips help your editing by maintaining the sync between clips you established when initially making the edit. Final Cut Pro lets you change your mind while maintaining that sync, or will sync to a different clip if you desire.

**Trimming Connected Clips**

Unlike the sound bites in the primary storyline, connected clips are independent of other connected clips and do not have a horizontal relationship with them. As a result, performing a trim edit on a connected clip produces results different from applying a trim edit to a clip in the primary storyline.

1 Place the Select tool over the end point of **DN_9390**.

Notice that a filmstrip does not appear on the trim icon as it would when trimming a clip in the primary storyline. You cannot ripple trim connected clips because no horizontal relationship exists between them.
2 Drag the end point to the left to trim the clip.

Only **DN_9390** was affected by this trim edit.

3 Press Command-Z to undo the edit.

This default behavior of Final Cut Pro is not necessarily a bad thing because you may want connected clips to remain independent of other connected clips. However, when it is desirable, you can establish a horizontal relationship between connected clips.

**Reference 4.6 Creating a Connected Storyline**

When B-roll clips are connected to the primary storyline, the B-roll takes over the video storytelling of the project. When reviewing the project, you may want to shift the B-roll timing to better align the visuals with the audio-driven storyline. Because each connected clip is independent, trimming one B-roll clip does not ripple trim to affect the others. The vertical relationships of each connected clip isolates it from adjacent clips.

However, an editor may establish horizontal relationships between connected clips by placing them within a *connected storyline*. Doing so creates a horizontal relationship between the grouped connected clips, reducing their individual vertical relationships to a single connection between the connected and primary storylines. Furthermore, by creating a connected storyline, you gain access to several trimming options such as ripple trim.
A connected storyline is a container identified by a gray handle across the top of the grouped clips. This handle is the selection point when you want to apply an edit to the connected storyline. To insert edit a clip into a connected storyline, you must select the storyline's handle, and not the clips within the storyline.

Creating a connected storyline is as simple as selecting connected clips and instructing Final Cut Pro to group them as a storyline. However, not all connected clips may be added to a group. Only connected clips that can exist in the same lane without overlapping may be converted into a connected storyline.

Exercise 4.6.1
Converting Connected Clips into a Connected Storyline

You can create a connected storyline comprising the first three B-roll clips in two easy steps.

1. Select the three connected B-roll clips at the start of the project.

2. Control-click any one of the three, and from the shortcut menu, choose Create Storyline, or press Command-G.
Notice the gray bar or handle above the clips that becomes the outline of a container surrounding the clips. Now that the clips are contained in a storyline, you can ripple trim them.

3  Place the Select tool over the end point of **DN_9390**.

The ripple trim icon appears with the filmstrip.

4  Drag the end point to the left to shorten the clip, but do not release the mouse button yet.

A few things for you to notice. First, the two following B-roll clips ripple along with the trim. The storyline established a horizontal, magnetic relationship similar to the primary storyline clips.
Second, as you ripple trim the edit point, a *two-up display* appears in the Viewer. The area to the left shows the new end point of the hangar door opening clip while the right shows the existing start point of **DN_9455** recorded from under the helicopter. The two-up display allows you to see both sides of the edit so you may match the action between the two clips.

![Two-up display](image)

5 Referencing the two-up display, ripple trim the end point of **DN_9390** appearing on the left to match the action appearing on the right in the Viewer’s two-up display.

Enclosing connected clips in a storyline gives you the advantages of a storyline’s magnetic properties when trimming and rearranging the B-roll clips.

Another trim tool similar to ripple trim is roll trim. Whereas ripple trim modifies the duration of one clip (and potentially the project’s duration), the roll trim modifies the adjoining points of two clips, not affecting other clips or the total project duration. The roll trim achieves this net-zero duration change by trimming the opposing edit points in opposite directions: inserting frames at one edit point while removing the same number of frames from the adjoining edit point.

In the edit you just completed, the roll trim is handy for fine-tuning the cut’s trigger. With the ripple trim, your focus was on continuity of action at the edit. Now that the continuity is in place, you may need to adjust when the cut happens. Should the cut to the shot underneath the helicopter occur as Mitch reaches for the camera, while Mitch is dropping down, or even after Mitch has stopped moving? The roll trim allows you to explore all of those options.
6 From the Tools pop-up menu, choose the Trim tool.

The roll trim function requires that the Trim tool be selected when working with storyline clips.

7 Place the Trim tool over the edit point between DN_9390 and DN_9465.

With the Trim tool on the edit point, the tool becomes the Roll trim with filmstrips pointing at both clips to indicate that the end point of DN_9390 and the start of DN_9465 are about to be changed.

8 Drag to the right until Mitch has squatted down, which you can see in the Viewer two-up.

9 Drag back to the left and decide where within the action to cut between the two clips.
The roll trim allowed you to move the edit to find the best cut point between the two clips. This roll and the earlier ripple trim worked because the clips are enclosed in a storyline. Connected clips do not interact with other connected clips editing-wise. Grouping them together in a connected storyline brings the trimming and magnetic properties of the primary storyline to these clips.

**Exercise 4.6.2**

**Appending Clips to a New Connected Storyline**

In this exercise, you will create a connected storyline, and append additional B-roll clips to it. This editing method offers the speed and convenience of the batch and ripple trim techniques that you previously performed on the primary storyline.

1. In the Libraries pane, select the Pre-Flight Keyword Collection.

2. In the Pre-Flight collection, find DN_9455.

This clip shows Mitch getting into his helicopter, and is the first of a series of clips depicting the preflight and startup.

3. In DN_9455, mark a start point just before Mitch appears in the frame. Set an end point after Mitch is in the helicopter.
Next you need to define where this clip goes timing-wise within the Timeline.

4 In the project, cue the playhead after Mitch says, "has been shot on the ground."

You'll connect the first clip of this series of B-roll clips at this point.

5 Click the Connect button, or press Q to make the edit.

**NOTE** To enable the Connect button when it is dimmed, move the mouse pointer back into the Browser to activate the Browser pane. The Q keyboard shortcut works with the button dimmed.

To quickly set up an append edit for the following B-roll clips, you will convert this one clip into a storyline.

6 Control-click **DN_9455**, and from the shortcut menu, choose Create Storyline, or press Command-G.
The clip is now contained in a storyline. To make additional edits to this storyline, you must select the storyline’s handle rather than the clip inside.

7 Click the storyline’s handle to select it.

When you select its handle, the storyline is outlined in yellow. The goal is to efficiently add the subsequent B-roll clips to the selected storyline.

8 In the Browser, locate **DN_9446**.
9  Mark a start point on the jib's first take of Mitch's feet on the pedals. Set an end point after the jib movement ends for that take, leaving the clip duration at approximately six seconds.

![Image of jib's first take]

10  Press E to append this clip to the end of the selected storyline.

![Image of Browser with highlighted storyline]

**NOTE** ▶ The highlighted storyline is dimmed because the Browser is the active pane if you are skimming the Browser before pressing E.

You also can batch edit clips into this storyline.

11  Mark the following ranges for each listed clip:

<table>
<thead>
<tr>
<th>Clip</th>
<th>Start</th>
<th>End</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>DN_9453</td>
<td>Start of third take tilt/pan on Mitch</td>
<td>End of tilt/pan move to panel</td>
<td>![Image of DN_9453]</td>
</tr>
<tr>
<td>DN_9454</td>
<td>Flips switch and the displays change</td>
<td>Releases switch and displays change again</td>
<td>![Image of DN_9454]</td>
</tr>
</tbody>
</table>
After marking these three clips, you can select all three for the append edit into the DN_9455 and DN_9446 storyline, which we'll call the Preflight storyline.

12 With DN_9452 still selected, Command-click the ranges you marked for DN_9454 and DN_9453 to select the three clip ranges.

13 In the project, ensure the gray handle of the Preflight storyline is still selected. Make sure you select the gray handle and not DN_9455 or DN_9446. The outline will be yellow if the Timeline pane is active, or dimmed if the Browser is active.
A selected storyline in the active Timeline pane

Storyline selected but Timeline pane is not active.

14 Click the Append button, or press E, to append the three clips to the selected storyline.

The clips are added to the selected storyline in the order you selected them.

**NOTE**  ▶ With the Timeline pane active (move the skimmer into the Timeline to make it active), press Command– (minus sign) to zoom out the Timeline view.

**Editing Within a Connected Storyline**
Because these clips are now inside a storyline, rearranging and ripple trimming them is a breeze.
1 Drag **DN_9452** to the end of the Preflight storyline after **DN_9454**.

Next you'll ripple trim each of these storyline clips to reduce their durations. The goal is to finish playing the first four clips in this storyline by the end of the **MVI_1055** sound bite. There's a lot of content to remove!

No joke. The selected clip, **DN_9453**, should end a few moments before the end of **MVI_1055**, where the playhead is located in the previous image. This is a common editing scenario and the reason why you batch edited the clips into the storyline. The durations you marked earlier in the Browser were set to narrow down the clips to the needed content. But the timing of these clips with the sound bite and to each other is what determines their final durations and positions.

The art of editing is the art of compromise. You need to present just enough information for the viewers to understand the actions they are seeing and tell the story. You want to present these four preflight actions while Mitch is talking about the whole new look of shooting something from the air. When he finishes that statement, the rotors start turning and the helicopter takes off. The compromise to make that edit happen is to adjust the timing of not only these preflight clips to Mitch's sound bites, but also adjust the earlier hangar storyline clips' timing to the sound bites. Don't be afraid to look at previous edits when trying to make up time in a project.

Let's first gain a few seconds by trimming the hangar storyline.
2 In the hangar storyline, ripple trim the start point of **DN_9390** so the clip begins with just a sliver of light visible through the hangar door.

Reference the start frame of **DN_9390** in the Viewer’s two-up display.

After trimming the start of **DN_9390**, the start of **MVI_1042** is now visible. You can drag the hangar storyline to realign it with the beginning of the project.

3 Drag the storyline to the beginning of the project.
Remember the gap clip you previously added to the beginning of the primary storyline? You can gain some additional time by lengthening that gap clip. Increasing its duration allows you to shift the start of the Preflight storyline earlier in relation to the sound bite *MVI_1055*.

4. In the primary storyline, drag the end point of the first gap clip to the right to a duration of about 2:15.

![Image](image.png)

**NOTE** ▶ You may need to disable snapping to get the desired duration. Press N while dragging the edit point to disable snapping without releasing the mouse button, and then enable snapping for the next step.

The hangar storyline now ends and Mitch’s interview video becomes visible as he says, ”Nobody.” Mitch needs to be on camera for a short time to accommodate a graphic you will add in a later lesson, so you will leave a few seconds of him visible. The Preflight storyline can now start a little earlier.

5. Drag the Preflight storyline so that its first clip starts at the "standpoint" audio cue.

![Image](image.png)

That edit gained you another two seconds, more or less. But more trimming is still needed.

*DN_9455* is much too long. When you review the clip’s content, you see that the real action occurs at the end of the clip when Mitch gets in the helicopter. Cutting the clip duration to that last action will make the shot more interesting and gain you time.
When you trimmed the start of DN_9390, you did so using the Select tool and moving the entire storyline to the beginning of the project after the trim. This time, you'll save a step by performing a ripple trim using the Trim tool.

6 From the Tools pop-up menu, choose the Trim tool, or press T.

![Trim tool selection]

7 Drag the start of DN_9455 to the right, but don’t release the mouse button yet.

![Two-up display in Viewer]

As you drag with the Trim tool, the two-up display appears in the Viewer. The area on the right shows the new start point you are setting for DN_9455 with the Trim tool.

8 Referencing the right frame of the Viewer’s two-up, drag the start point until you see Mitch stepping on the skid to get in the helicopter. Release the mouse button.
Now you'll trim the end point of **DN_9455** to tighten the shot.

9 Drag the end point of **DN_9455** to the left until the two-up display shows that Mitch just got into the helicopter.

The end result is a clip just over two seconds long. That's quite a bit of tightening for that clip. Let's shorten **DN_9446**, too.

10 Using the Trim tool, drag the start point of **DN_9446** right until the two-up display in the Viewer shows the body of the helicopter at the bottom of the frame blocking the transport cart from view.
Now trim the end point of **DN_9446** to realize an overall clip duration of two seconds.

**NOTE** ▶ Don’t forget to disable snapping using the N key, when necessary.

The next clip should be **DN_9453** followed by **DN_9454**. Because these two clips are inside a storyline, this involves only a simple rearrangement of the two clips.

Switch to the Select tool, and then drag **DN_9453** left to insert the clip before **DN_9454**.
13 Staying on **DN_9453**, trim the start point to where Mitch is centered in the image and starts to reach forward.

14 Trim the end point to a clip duration of around 1:20, the point at which Mitch has his fingers on a switch and drops his hand to a "wrist low" position.
To create the pacing and the feel that Mitch is starting the engine, you will cut from this movement to a closer "throwing the switch" shot.

15 In DN_9454, trim the start point to where Mitch's hand is still open before pointing and throwing the switch.
NOTE ▶ This may require dragging to the left to add frames.

16 Trim the end point to realize about a 1:15 clip duration ending while Mitch is holding the switch.
Finally, you'll trim the clip of the helicopter rotors starting to move.

17 Trim **DN_9452**'s start point so the rotors have already started to turn. Trim the end point to a clip duration of about two seconds. Review the edit.

You have just one more B-roll storyline to go!

**Creating and Editing the Third Connected Storyline**

Use the following tables to create and trim the third Takeoff storyline.

**NOTE** Don't forget that you have two events in the Lifted library that contain clips for this project. Also remember that dragging a range point displays the range's duration.
Mark each clip as detailed in this table:

<table>
<thead>
<tr>
<th>Clip</th>
<th>Keyword Collection</th>
<th>Start</th>
<th>End</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>DN_9463</td>
<td>Takeoff</td>
<td>Before forward movement</td>
<td>Exits frame</td>
<td><img src="image" alt="DN_9463" /></td>
</tr>
<tr>
<td>DN_9415</td>
<td>In Flight</td>
<td>A couple of seconds before the mountain is</td>
<td>Duration of five seconds</td>
<td><img src="image" alt="DN_9415" /></td>
</tr>
<tr>
<td>GOPR1857</td>
<td>In Flight</td>
<td>Two seconds before Mitch stretches his arm</td>
<td>Duration of five seconds</td>
<td><img src="image" alt="GOPR1857" /></td>
</tr>
<tr>
<td>IMG_6493</td>
<td>Flight Controls</td>
<td>Just before hand leaves shot and lens flare ends</td>
<td>Duration of four seconds</td>
<td><img src="image" alt="IMG_6493" /></td>
</tr>
<tr>
<td>GOPR3310</td>
<td>In Flight</td>
<td>Last third of clip; before Mitch leans forward into sunlight</td>
<td>Duration of five seconds</td>
<td><img src="image" alt="GOPR3310" /></td>
</tr>
</tbody>
</table>
With the clips' start and end points marked, Command-click them in the order they are listed in the table.

**NOTE** Selecting the Lifted library in the Libraries pane and selecting a smaller Clip Height in Clip Appearance may ease this process.

In the project, cue the playhead immediately after **DN_9452**, if necessary.

You will perform a connect edit first to place these clips in the project, and then group these clips into a connected storyline.

Click the Connect button, or press Q, to connect edit the selected clips into the project.
Now that the clips are part of the project, you can group them.

5 In the project, select the connected clips you just added. Control-click any one of the selected clips, and from the shortcut menu, choose Create Storyline, or press Command-G.

The clips are grouped into a connected storyline, the third such storyline in your project, which we'll refer to as the Takeoff storyline.

You have two more B-roll clips to add, you also have some very loud nats on a couple of B-roll clips, but let's take a break from B-roll to add a music clip, and align some edits to it.

**Reference 4.7**

**Editing Below the Primary Storyline**

Audio clips are typically edited "below the line" meaning physically beneath the video clips. In Final Cut Pro, you may place audio clips below or above the primary storyline. The vertical positioning of audio clips is not as critical as when prioritizing video clips because Final Cut Pro mixes together all audio clips—such as sound effects and music—and plays them simultaneously.
Exercise 4.7.1
Connecting a Music Clip

For this first rough cut, you will include a music clip that plays in the background during the entire edit. The music contains an apex moment towards the end that you will synchronize with a specific clip.

1 In the Audio Only Smart Collection, select the Tears of Joy-Short clip.

2 With the playhead cued to the beginning of the project, click the Connect button, or press Q.

The music clip is added to the beginning of the project.

The music will be a little too loud, or hot. You can adjust its volume level in the Timeline. Every audio clip has a volume control: a black, horizontal line that overlays the clip’s audio waveforms.
Move the Select tool over the volume control in the *Tears of Joy-Short* music clip.

The current volume level setting appears as 0 dB (decibels), which means that Final Cut Pro currently plays the clip at its original volume level.

Drag the Volume control down to around –15 dB to play the music clip at 15 dB below its original recorded level.

As with all the other clips, this is not the final volume setting for the music. This was simply a "sanity" adjustment so the rest of the audio clips are audible while editing. There is more audio work to be done.

**Reference 4.8**

**Finessing the Rough Cut**

Your project is racing to the end of this phase of the workflow. The details and adjustments you need to perform become more granular as you finish addressing the major editorial issues. You may still perform some major changes, but you should now see the light shining at the end of this editorial tunnel. At this stage, a project generally needs audio adjustments and a bit more trimming. By now, your project is definitely ready for a run-through with the slip trim.

The slip trim changes the content within the clip container. You change the start and end points of the content simultaneously revealing earlier or later source materials without changing the clip’s duration or position in the project. Think of the clip as your iPhone and the clip content as the photos on your iPhone. When you want to see earlier photos, you swipe with your finger from left to right to pull the earlier photos into view. The reverse to see later content is to swipe right to left to pull that content into view.
While performing a slip trim, two-up display of the new start and end points appears in the Viewer. The two-up display shows your changes in real time as you drag the slip trim across the clip. When you release the mouse button, the clip is already updated in the project.

Slip trimming may also be used on audio-only clips. However, for smoothing out audio edits at this stage of the workflow, adding some transitions and audio fade handles will do the job. Every clip that contains audio content has fade handles to create audio envelopes for ramping.

Your project has a basic music bed, the B-roll edits, and even the sound bites positioned and trimmed to align them to visual or audio cues in other clips. For this first rough cut, you will adjust some clip positions and timings to coincide with the music clip's major moments.
Exercise 4.8.1
Adjusting the Edits

In DN_9420, the sunset shines dramatically through the helicopter's windows; and during the clip, the music swells to a climax. But we can do better. In this exercise, you will align those audiovisual moments for maximum effect.

1 In the project, select DN_9420, and skim to the first frame of the sun coming through the helicopter windows.

2 Press M to set a marker at that dramatic visual moment.
Now you need to set a marker on the music swell. Unfortunately, it’s a little hard to hear while the previous sound bite is playing.

3 Select the music clip, and then click the Solo button, or press Option-S.

Only the selected audio clip is audible and in color while the nonselected clips’ audio is muted and desaturated in the interface.

Now that you can hear the music clearly, let’s place a marker on the music swell.

4 Using the Select tool, click the music clip, skim to the music swell, and then press M to set a marker.

5 With the marker set, click the Solo button again, or press Option-S, to disable the Solo function.

Now the task is to align those two markers. You’ll perform two edits with the ripple trim: shortening the B-roll and extending the last gap clip to align the music swell with the sunset.

6 Ripple trim to remove a few frames from each clip of the Takeoff storyline. Your goal is to move the sunset marker closer to the music swell.
Here are some trim points to consider:

▶ Start of **DN_9463**: Could the helicopter already be in forward movement? You’ll need to reposition the storyline after any adjustment to this point.

▶ **DN_9415**: Don’t trim too much here. This is a "landscape" shot that needs time for the viewer to gain perspective.

▶ Start of **GOPR1857**: Trim to just before Mitch turns his head.

These edits should get you very close to aligning the markers.

7 Also using the ripple trim, push the last sound bite farther out by lengthening the gap clip. Insert enough frames so that the last sound bite starts when the music starts again.

You can finish aligning these markers using one or both of these methods: ripple trim more of the earlier B-roll clips, or slip edit the content of **DN_9420**.

**Using the Slip Edit**

The slip edit is a safe edit for setting the B-roll clips to their best content without disturbing other edits.

1 From the Tools pop-up menu, choose the Trim tool, or press T.

2 Move the Trim tool over the middle of **DN_9420**.

   ![Image of Slip tool over DN_9420]

   The Slip tool appears.
3 Drag **DN_9420** until the marker aligns to the music marker.

While dragging with the slip trim, a two-up display of **DN_9420** appears in the Viewer.

The image on the left shows the start point of the clip, while the right image shows the end point. The start and end points are updating in real time as you drag the slip trim. Although not particularly needed for this edit, the two-up display is great for ensuring that the best content is included between the displayed start and end points.

4 With the two markers aligned, play the entire project, slip trim at the ready, evaluating whether the B-roll clips are displaying their best contents within their current durations.

While you review the project, ask questions about the effectiveness of your results. Can you avoid the lens flare in the instrument/GPS panel shot? Should there be more lens flare content? Should the project show less of Mitch leaning back and pointing out the side window, or should you slip the clip to include Mitch pointing out the front?
Exercise 4.8.2
Adjusting Clip Volume Levels

The two basic rules of mixing audio are: Don’t peak the meters; and if it doesn’t sound good, change it. That change should not be a knee-jerk reaction. Don’t get in the trap of continuing to boost the volume of a clip to make it louder than the other clips. If the sound bites are too quiet, you don’t necessarily crank up the sound bites. Maybe you need to turn down the volume of the music or B-roll nats.

In this exercise, you will perform some simple volume level adjustments to ensure that the sound bites are clearly audible, and that the overall audio mix does not reach up to 0 dB on the Audio meters. A safe target is to not allow any of your loudest audio go above –6 dB on the meters.

1 In the Dashboard, click the Audio Meter button.

The larger Audio meters open to the right of the Timeline. Although you’ll delve deeper into audio mixing in Lesson 6, at the present you just want to ensure that your audio levels don’t peak at or beyond the 0 dB mark.
You experienced changing the volume of one clip, the music clip, a few minutes ago. When you want to change the volume levels of multiple clips at once, you can use a keyboard shortcut to do so.

2 In the Takeoff storyline, select all the B-roll clips.

3 While watching the clips’ volume controls, press Control-- (minus sign) and Control-- (equals sign) to lower and raise the volumes of the selected clips.
Exercise 4.8.3: Connecting Two Additional B-Roll Clips

4. Continue playing through the rest of the project listening to the mix while watching the Audio meters. Select a clip or multiple clips, and use the volume control or the shortcut keys to keep the meters below 0 dB, and more importantly, so you can clearly hear Mitch talking.

The peak indicators, the thin lines left over from the highest meter reading should not go much over −6 dB.

Know Your Volume Controls

A great practice to establish early on when dealing with audio is to understand that you have access to at least two volume controls. The volume level controls per clip in Final Cut Pro are the only ones that affect your audience. Turning down your Mac computer's volume or separate speaker volume control will not affect the volume in Final Cut Pro.

The built-in Mac speakers are good quality for a computer, but they won't do the job for professional editing. At the very least, you'll want to have good over-the-ear studio headphones, and at best, powered near-field loudspeakers. Audio monitoring equipment is a key investment that will add immeasurably to your final output's quality. Just because you're not listening on good equipment doesn't mean others won't either; viewers with high-quality equipment will probably notice audio issues you couldn't even hear.

Exercise 4.8.3
Connecting Two Additional B-Roll Clips

To complete this rough cut's B-roll edits, you've got two concluding B-roll clips to add. Currently, the sunset shines through the helicopter’s windows at the music swell and grand pause. Then the music starts again, and Mitch begins his last sound bite. Time to land the helicopter "at the end of the day," and to fly off into the sunset when remembering the day's adventures.

1. In the GoPro event, locate a clip assigned the Landing keyword.
Looking in the Landing Keyword Collection of the GoPro event, you find **GOPR0009**.

**2** In the Browser, skim to where the helicopter is completely visible in the frame, and mark a start point.

Although you just trimmed this clip, its duration is still almost 30 seconds. You might need only 10 of those seconds.

**3** Skim **GOPR0009** and set an end point as the helicopter lands.

The duration should now be roughly 10 seconds.

**4** Using the connect edit method of your choice, connect edit the landing clip to the primary storyline about where the music restarts. This will also be just as or slightly before Mitch starts talking. Play the results.
Exercise 4.8.3: Connecting Two Additional B-Roll Clips

This edit feels choppy because the sunset clip cuts to black followed by another clip cutting in from black. Before fixing that, you have one more clip to edit into the project.

5 In the Browser, search for an In Flight B-roll clip that shows the helicopter flying off into the sunset. You should find **DN_9424**.

6 You will be trimming this clip to get it just right, but for now, set a start point before the helicopter enters the frame. You want that action to happen just as Mitch is finishing the last sound bite.

7 Connect edit **DN_9424**, "flying into the sunset," just as Mitch is saying, "Adventure I went on." Trim the clip to end after the music.
That works. To finish with this clip, give its content some breathing room by adding several seconds to the clip’s start.

Drag the start point of the "flying into the sunset" clip, and extend the start point to the left to when Mitch says, "Wow."

Since you just added these two clips, take a moment to adjust their audio levels to more closely match the previous adjustments you made to the other clips.

Great! All the clips for your first edit are in your project. A final refinement pass will soften some not-so-clean edits.

**Exercise 4.8.4**

**Refining Edits Using Cross Dissolves and Fade Handles**

Some of your audio edits may contain a click or pop at their start or end points. Every clip that has audio has the potential to "catch a click." A quick solution is to rapidly fade the audio in or out using a technique called *ramping*. 
Catch a Click

Pleasant sounding audio travels in a sine wave with a peak and a trough per cycle.

Each cycle of the waveform traverses the zero crossing point 2x as the soundwave peaks and then goes down to the trough and then repeats. When an audio clip has a start point that catches the audio soundwave anywhere other than at zero, you may hear a click as the playhead grabs on to the soundwave in progress.

1 At the end of the first sound bite, move your pointer over the audio waveform of MVI_1042.

Two fade handles, or "birds-eyes," appear at the ends of the clip. These envelope handles allow you to quickly or gradually ramp the audio into or out of the edit.

2 Move your pointer over the ending fade handle.

When positioned over the handle, the pointer changes to a pair of arrowheads pointing left and right.
NOTE ▶ If you have difficulty seeing the fade handles, use the Clip Appearance button at the lower-right to increase the clip height. Also, you may select a larger waveform presentation.

3 Drag the fade handle to the left about five frames.

The number of frames to move is dependent upon how tight the edit is against "kid." You do not want to cut off the last word Mitch says.

4 Position the pointer over the beginning of the next sound bite.

5 Drag the fade handle right from the start point to add a small ramp into the clip’s audio.

The clicks and pops are fading away. These audio ramps also soften the clip’s entry and exit. When an audio clip was recorded in a noisy environment, a cut into or out of the clip will make the edit undesirably obvious as the noise pops into or out of the mix. In addition to audio edits, let’s soften some video edits. A fade-in is not necessarily required if your edit starts with black. But the sunset clip definitely needs an easy, blending transition in and out.

For now, you will use a keyboard shortcut to apply the default transition: cross dissolve. When placed between two clips, a cross dissolve transition blends two images together by varying their levels of transparency. One appears to fade away while the other appears to fade into view. When applied to a single edge of a clip that does not
adjoin another clip, the Command-T cross dissolve will either fade the clip in from
black or fade out to black. A few cross dissolves placed into your project will smooth
the clips’ entries and exits.

6 Using the Select tool, click the start point of the sunset through the windows clip, and
press Command-T to add a cross dissolve.

A cross dissolve with a one-second duration blends the previous shot into the sunset
shot. This sets up the shot and begins to slow down the pacing for the ending segment.

NOTE ▶ Connected clips are automatically placed within a connected storyline when
a transition is applied.

While you may apply many transition types and customizations here, let’s add a few
more cross dissolves to your project.

7 Select the end point of the sunset through windows clip, and press Command-T.

8 Select the start point of the GOPR0009 clip, and press Command-T.

9 Review this transition by playing the project.
Notice that while the video is fading in from black, a momentary cut to Mitch on-camera appears as the helicopter landing clip continues to fade in. This occurs because the Mitch clip starts while the transition from black is still in progress.

10 You will need to either drag the **GOPR0009** storyline left until the transition does not overlap the Mitch clip, shorten the transition duration, or lengthen the gap clip to push Mitch’s sound bite to start after the transition completes.

As easy as it is, selecting single points is tedious. Fortunately, you can apply a transition to both points of the same clip at once.

11 In the project, select the **DN_9424** clip, and press Command-T.

A cross dissolve is applied to both edit points, but the ending dissolve should be a little longer than the default duration of one second.

12 Place your pointer over the left edge of the transition in the project.
The pointer becomes a resize icon without a filmstrip. This allows you to set the transition’s duration.

13 Drag the transition’s start edge to the left away from the transition’s center until the duration info indicates two seconds.

Now you have a slower fade to black at the end of the project.

14 Review your project, looking and listening for edits that could be softened with a cross dissolve or audio ramp. A quick tip while you are reviewing: When it comes to video transitions, less is more.

With a few audio ramps and a couple of video cross dissolves, your rough cut is ready to show to the client.

Reference 4.9
Sharing Your Progress

When a project is ready to be shared, the project is exported from Final Cut Pro. The Share pop-up menu includes several preset destinations for many popular delivery platforms.
Making the First Edit

The preset destinations include desktop formats such as Apple ProRes and H.264 as well as iOS devices; DVD/Blu-ray; and online services such as YouTube, Vimeo, and Facebook. These presets may be customized and additional presets added to this list within preferences. The destinations are even more customizable through the use of Compressor, the Apple batch transcoding application available in the App Store.

**NOTE** Due to copyright restrictions, you cannot use the supplied media materials for any purpose other than performing the exercises in this book.

**Exercise 4.9.1**

**Sharing an iOS-Compatible File**

You’ve done a lot in this first edit of Lifted Vignette. In this and the previous lessons, you’ve gone through a typical post-production workflow using Final Cut Pro. Although it’s not perfect, this rough cut must be shown to the client, the producer, or your colleagues attending an upcoming lunch meeting. The following exercise briefly describes exporting your project to a media file that is playable on a Mac, PC, smartphone, or tablet. Such media files are also acceptable for upload to most popular online, video-hosting services.

1. With the Lifted Vignette project open, ensure that no clip or range is selected in the project by pressing Command-Shift-A.
This keyboard shortcut deselects any selected items and clears any marked ranges, which is important because Final Cut Pro will share a range if one is selected instead of the entire Timeline.

2 In the toolbar, click the Share button.

The Share Project pop-up menu appears with a list of preset destinations. Most of these presets focus on delivering high-definition content to online hosting sites or to desktop, portable, and handheld devices. For this exercise, let's create a file that we can AirPlay to the conference room’s projector by way of an Apple TV.

3 From the list of destinations, choose Apple Devices 720p.
The Share dialog that appears contains four main elements: a skimmable Preview area to verify the content for export, Info and Settings panes, and a File inspector that summarizes the exporting file's settings.

The Info pane displays the metadata that will be embedded into the file. This metadata will be visible in the exported media file's Info inspector when it is opened in QuickTime Player.

4 Set the following metadata information:

▶ Title: Lifted-Rough Cut
▶ Description: A helicopter pilot and cinematographer describes his passion for sharing aerial cinematography.
▶ Creator: [insert your name]
▶ Tags: aerial cinematography, helicopters, aviation

**NOTE** ▶ To enter the tag "tokens," type the tag's text followed by a comma, or press Return to close each tag.

5 After entering the metadata, click the Settings tab to modify the file's delivery options.
By default, the selected destination preset automatically saves the file to your iTunes Library. You may alter this behavior in the "Add to playlist" pop-up menu.

6 From the "Add to playlist" pop-up menu, choose "Open with QuickTime Player."

**NOTE** ▶ If the Open With option lists another application, choose Other from the Open With list, select QuickTime Player from the Application folder, and then click Open.
In the Settings pane, the "Add to Playlist" line has converted to "Open with QuickTime Player."

7 Click Next.

8 In the Save As dialog, enter *Lifted-Rough Cut*, if necessary, and from the Where pop-up menu, choose Desktop. Click Save.

The Background Tasks button displays the progress of the share.

When the file has been shared, the file will automatically open into QuickTime Player and an OS X Notification will appear.
NOTE ▶ The QuickTime Inspector window is available by pressing Command-I in the QuickTime Player application.

9 Play the movie file in QuickTime Player.

If the file looks and sounds as expected, you have several options for delivering the file to Apple TV. Several of the options are available within QuickTime Player using OS X Share services.

10 To the right of the QuickTime Player transport controls, click the Share pop-up menu.

<table>
<thead>
<tr>
<th>To Send the File to a</th>
<th>Use This Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mac</td>
<td>AirDrop</td>
</tr>
<tr>
<td>iPad, iPhone</td>
<td>Messages</td>
</tr>
<tr>
<td>Hosting service</td>
<td>Vimeo, Facebook, YouTube, Flickr</td>
</tr>
</tbody>
</table>

If you have not set up these Internet accounts, OS X will prompt you to enter your username and password for the selected service.

If you send the file to an iPad or iPhone using Messages, when the message arrives, simply choose to Save Video from the Messages Share button. The movie file will be available to share to AirPlay in the iOS Photos app.

If you choose to use a hosting service such as Vimeo, you may access the file directly using the Apple TV Vimeo application.

Alternatively, you could use a file-sharing service such as Dropbox to transfer the file to your iPad or iPhone.
**Using AirPlay with QuickTime Player**

You may also stream the file from your OS X Mac to an Apple TV. However, you must use the correct video resolution. When you send your OS X desktop to the Apple TV, you may choose to send the full desktop resolution over AirPlay or restrict the desktop to the Apple TV resolution, which may be $1920 \times 1080$ pixels, compared to your video file, which is $1280 \times 720$ pixels in QuickTime Player. Forcing QuickTime Player to the desktop resolution will degrade the video playback quality. Here's how to maintain QuickTime Player at the movie file's resolution.

1. With the shared file still in QuickTime Player, click the AirPlay menu button.

   ![AirPlay menu](image)

2. From the "Connect to" options, choose the desired Apple TV.

   The AirPlay menu button turns blue when connected to the Apple TV.

3. Once connected, click the AirPlay button again.

4. Under Match Desktop Size To, select the Apple TV.

   ![AirPlay settings](image)

5. Return to QuickTime Player by clicking the displayed video.
6 In QuickTime Player, choose View > Enter Full Screen, and then choose View > Actual Size.

Your video now appears on the Apple TV at its native 1280 x 720 resolution surrounded by a black background.

**NOTE** ▶ If you have a 2nd Generation Apple TV, the video will fill the screen.

Congratulations on completing the first edit of the Lifted Vignette project. You have gone from nothing to a rough edit in a short period of time. You created a project and learned the various trim commands of append, insert, and connect to get clips into a project. The rearranging of clips in the primary storyline introduced you to the magnetic properties of a storyline. For the B-roll, you learned how to create connected storylines. A variety of tools for trimming clips and for softening the edits and adjusting the audio levels rounded out the finishing tools. And finally, you learned some ways to share the project out of Final Cut Pro. No matter which projects you will edit in the future, every project will be edited using this same import, edit, and share workflow.
Lesson Review

1. What do the Automatic Settings do when creating a new project?
2. Where are projects stored?
3. Which edit command is depicted in the following figure?

![Image of the first edit command]

4. Which edit command is depicted in the following figure?

![Image of the second edit command]

5. Which toolbar button performs an append edit?
6. What do the green, blue, and purple colored stripes overlaying the clip identify?

![Image of the strips overlay]

7. When in filmstrip view, which modifier key do you hold down to edit clips into the project in the order that you select the clips in the Browser?
8. When performing an insert edit, what marks the Timeline location for the edit: the playhead or the skimmer?
9. Identify the trim type used in the following figure.
10. Which two interface items provide additional skimming precision in the Browser?
11. What does the Viewer overlay in the following figure indicate?

12. With the primary storyline determining the project's timing, what generic clip can be inserted to "create" time between storyline clips?
13. In the scenario shown below, what type of edit was performed in one command?

14. Identify the edit functions indicated by the mouse pointer in the following figures.
15. To append edit a clip into a connected story, what must be selected and what must not be selected before pressing E?

16. What does the −15 dB indicate in the following image?

17. Identify the interface element that displays the Audio meters.

18. Describe what will occur during playback of this transition.
19. Which interface element lets you export an iOS- and AppleTV-compatible file of your project?

**Answers**

1. They conform the project's resolution and frame rate to the first video clip added to the project.
2. Projects are stored within a designated event.
3. Append
4. Insert
5. 
   ![The Append edit button]
6. Favorite, user-applied keyword, and analysis keyword
7. Command
8. The skimmer, if active; otherwise, the playhead
9. Ripple trim
10. The Zoom slider allows you to see more clip content horizontally, and Clip Appearance permits you to increase clip height and hide and view waveforms.
11. The playhead or skimmer is cued to the start frame of a clip.
12. A gap clip
13. Replace with Gap or Lift edit (keyboard shortcut: Shift-Delete)
14. A: Ripple; B: Roll; and C: Slip
15. The connected storyline's handle must be selected, but not the clip's handle inside the connected storyline.

16. The audio volume control has been lowered to play the audio clip −15 dB quieter than the audio clip's recorded level.

17. ![Meters](image)

Show/hide the meters in the Timeline pane

18. The GOPR009 clip will fade in from black; but halfway through the transition, Mitch's interview will suddenly cut in and be visible until the GoPro clip becomes fully opaque.

19. ![Share](image)

The Share pop-up menu
Index

Numbers
12-dB dynamic-range mix, 362, 366
36-dB dynamic-range mix, 362

A
Add Default Transition
(Command-T)
cross dissolve, 195–196, 302, 304, 307–309
defined, 474
montage or collage edits, 301
Page Curl, 312
Add Role (+) pop-up menu, 98–99
Add Rule (+) button
applying filters, 83–85, 87–90
creating Smart Collections, 91–93, 215
Add Subrole (+) button, 102
Aerials
editing with blade speed, 278–282
revised edit on, 246–247
speed transitions applied to, 284–285
Aerials, trimming
adding B-roll, 257–258
aligning bites and bits, 260–267
overview of, 253–257
removing transition and moving clips, 258–260
AirPlay, 199–205
All Clips command, 78, 82, 87
Analysis keyword, 49
Analysis options, Media Import, 33
Analyze and Fix command, 94, 375
Analyzed state, Balance, 374, 376
Angle Editor, multicam clip, 453
Angle Viewer, 456–460, 462
Append button (E key), 113–114
Append edit
batch clips to primary storyline, 115–118
chroma key workflow, 440
crps to connected storyline, 161–166
crps to primary storyline, 111–115
defined, 121
Apple ProRes 422 format, 401, 433–434
Apple TV, 203–205
Archives
creating, 22–24
creating library, 425–426
master file of final project for, 399–403
recovering original source media files, 426
setting up multicam clip, 450
storage locations, 24
Aspect, defined, 21
Attributes
copying and pasting, 323–325
editing Info pane, in Share inspector, 396–397
nesting compound clips, 325
Audio
adding sound to clip, 343–349
adjusting volume levels over time, 358–372
analyzing and fixing, 34
clip-by-clip focus on, 342–343
editing clips below primary storyline, 179–181
effects in Event Browser, 286
enhancement features, 372–373
investing in monitoring equipment for, 189
keyboard shortcuts/command set, 471–472
native formats for, 479
retiming borrowed, 349–352
slip trimming only, 182
source channel configuration and, 34
splitting with another clip, 352–357
synchronizing dual system recordings, 435–439
trimming at subframe level, 337
volume levels. see volume levels
Audio and Render properties, New Project, 431–432
Audio channels
configuring, 34, 438–439, 462–464
manually setting number of, 432–433
switching from stereo to mono, 364
Audio Enhancements, 372–373
Audio inspector, 363–364, 372–373, 438–439
Audio meters
adjusting clip volume levels, 187–189
dynamic range and, 362
reading, 361
setting volume levels by role, 366
Audio Only Smart Collection
connecting music clips, 180
overview of, 91–93
replacing primary storyline, 220
roles, 99–100
Audio role, 97, 101–102
Audio Skimming button (Shift-S), 269, 470
Audio waveforms, 352–353, 366–369. see also volume levels, adjusting over time
Audition window, 248–250
Auditions
aligning bites and bits, 261–267
avoiding ripple induced by, 250
building audition clip, 247–248
importing aerials, 246–247
overview of, 243–244
repositioning storylines/deleting within, 244–246
spotlight badge identifying, 248–249
using Audition window, 248–250
Automatic setting, New Project frame size/rate, 430

B
Background clip, chroma key workflow, 440–443
Background Noise Removal command, 373
Background Tasks, Dashboard, 95–96, 202, 395
Backspace key, as Delete key, 77
Backtimed connect (Shift-Q), 317, 472
Backup
automatic library, 426
camera archive, 22–24
master file of final project, 399–403
Balance feature, image color, 374–376
Batch edit, clips into storyline, 115–118, 164, 167
Batch renaming, of camera clips, 60–61
Blade command (Command-B), 137, 240, 474
Blade Speed (Shift-B), 280–282
Blade tool (B)
editing multicam clip, 458, 462
joining through edit, 139–140
splitting clip into two segments, 132, 136–139, 474
Blend, previewing audio, 353–355
Brightness (luma), Waveform scope, 377, 379
B-roll clips
aligning bites and bits, 261–267
appending to connected storyline, 163–166
clip volume levels, 187–189
connected clip sync, 152–155
connecting two additional, 189–192
converting into connected storyline, 157–161
defined, 144
editing within connected storyline, 178
realigning to music, 235–238
ripple trim, 183–185
in second edit pass, 257–258
slip trim, 185–186
trimming aerials, 253–257
trimming connected clips, 155–156
Browser
adding keyword to clips in, 52–53
assigning role to batches of clips, 99
batch renaming camera clips, 60–61
creating compounds in, 327
displaying all ratings in, 78
dragging new clip to project from, 110
new project displayed in, 108
sorting and organizing clips in, 47
text searches in, 82–83
three-point edit for split screen in, 317
viewing keywords in list view, 64
Browser pane
defined, 20
enabling Connect button when dimmed, 162
hiding, 456
how source files are displayed, 26
volume vs. camera import in, 36
Bundle destination preset, 397–399

C
Camera
angle, editing multicam clip, 454–460
creating archive, 22–24
date and time settings, 454
disabling audio, 437
importing source media from, 24–25
navigating within filmstrip preview, 26–28
preparing to import source files, 18–19
SD card. see cloned (simulated) SD card
synchronizing dual system recordings, 435–439
"Catch a click," audio clips, 192–193
Centered Title, 336–340, 341–342
Channel Configuration
changing audio, 362–364
disabling camera audio, 437
multicam edit, 462–464
synchronizing dual system recordings, 438–439
Chapter markers, 228
Chroma key
- manually selecting color key samples, 445–449
- masking objects, 443–444
- workflow for, 439–443

Chroma Key Keyword Collection, 440–443

Circle Mask effect, 296

Clip Appearance
- Control-Option-1, 366, 469
- Control-Option-Down Arrow, 367, 469
- Control-Option-Up Arrow, 367, 469
- creating markers, 233–234
- duck/swell sound effects and music, 366
- keywording clip, 51
- viewing fade handles, 194

Clip container, 14

Clip skimming, 252, 263–264, 356, 371

Clips
- deleting with Delete, 138
- deleting with gap clips. see gap edit (Option-W)

Clips, organizing
- adding notes, 65–69
- applying ratings. see ratings
- assigning roles, 96–103
- in Browser, 47–48
- customizing favorites, 80–81
- filtering event, 86–90
- Find People analysis, 93–96
- keywording. see keywords
- keywording ranges, 61–65
- in Libraries pane, 46–48
- overview of, 45
- review Q & A, 103–104
- search and filter, 83–85
- searching metadata, 82
- in Smart Collections, 85–86, 91–93
- sorting, 82
- in Viewer, 47–48

Clips Index, 228–230, 363

Cloned (simulated) SD card
- creating camera archive, 22–24
- importing camera source files, 18–21
- importing clips from, 28–30
- leaving files in place, 36–37
- navigating within filmstrip preview, 26–28
- recovering original source media files, 426

Close Library command, 17

Codec (COmpressor/DECompressor), 21, 481

Collage edit, placing transitions, 301

Color
- balance, 33
- indicating active angle, 457, 459
- manually selecting chroma key, 445–449
- matching clip, 384–386
- text font, 339–340

Color Adjustment pane, 376, 384

Color Board, 379–380, 382–384

Color Correction tools, 373–374

Command Editor window, 25, 466–468

Command key, selecting multiple items, 28

Command list, Command Editor, 466

Command set, default, 468–475

Compatibility checker, Share window, 390

Completed markers, 228

Components, defined, 481

Composite of multiple clips, collapsing into compound clip, 326–327

Compositing Opacity parameter, Video Animation Editor, 322

Compositing using spatial parameters
- creating two-up split screen, 314–321
- overview of, 312–314
- using Video Animation Editor, 321–325

Compounding clips, 325–327

Compressor
- adding setting to shared destinations, 404–405
- creating master file of final project, 399–403
- when to use, 406

Connect clip (Q)
- adding/trimming connected B-roll, 147, 149, 151
- appending clips to connected storyline, 162
- backtimed connect (Shift-Q), 317, 472
- chroma key workflow, 441
- connect edits, 223
- editing within connected storyline, 178
- enabling when dimmed, 162
- music clips, 180
- retiming borrowed audio, 350

Connect edits
- connecting two B-roll clips, 190–192
- creating time at 0:00, 222–223
- editing within connected storyline, 178–179
- performing, 144–152

Connected clips
- creating connected storyline, 156–161
- overriding connection, 154–155
- synchronization, 152–154
- trimming, 155–156
- when transition is applied, 195

Connected storyline
- appending clips to, 161–167
- converting connected clips into, 157–161
- creating, 156–157
- creating and editing third, 176–179
- defined, 156
- editing within, 167–176
- relocating connection point, 251

Connection point, relocating, 251
Consolidate Find People results, 94–96
Consolidate Library Files command, 424–425
Context sensitivity, Final Cut Pro, 126
Continuous selection (Shift-click), 363, 475
Contrast Balance maximizing image, 374 with color correction, 377 defined, 481
Copy Events to Library command, 426
"Copy files into"
importing media as external, 32, 35–36, 41–42 multicam clip setup, 450 redirecting imported media to external location, 416
Effects Browser, 286–288, 296, 440–444
End point
aligning bites and bits, 263–264
extend edits on title, 341–342
refining, 142
removing transitions, 258–260
retiming borrowed audio, 349
ripple trimming with keyboard, 129–131
trimming aerials, 253–257
video transitions. see video transitions
Enhancement pass
compositing. see compositing using spatial parameters
compound clips, 325–327
overview of, 271
retiming clips, 272–285
review Q & A, 328–331
video effects. see video effects
video transitions. see video transitions
Escape key, 337
Event container, 14–15
Event Manager, 4
Events
combining library, 426
copying to portable library, 422–425
creating, 107–109
defined, 106
deleting extraneous, 426
dragging items to, 41
filtering, 86–90
importing as managed clips, 415–417
metadata command set for, 471
moving or copying between libraries, 419–421, 426
naming, 17
upgrading existing, 3–4
virtual storage and, 31
Exchangeable file, creating, 404
Expand Audio/Video (Control S), 355–357, 473
Exporting, 404–406. see also sharing project
Exposure, manually correcting clip, 376–381
Exposure pane, 378–379
Extend edits (Shift-X), 341–342, 345, 474
Extended view, Info inspector, 451
EXtensible Markup Language (XML), outputting to third-party apps, 404
External media as best practice for storage, 411
copying source media files into, 37
creating portable library, 421–425
defined, 481
importing as "Leave files in place" to, 412–414
moving and copying clips within library, 419–421
overview of, 32
setting in Media Import options, 39
symlinks created when using, 37, 411
Extras folder, 435
Face parameters, text font face, 338–339
Fade handles, 192–194, 322–323, 360, 368
Falloff parameter, Vignette effect, 289–290, 292
Favorite (F)
adding camera archive to, 23
appending batch edit to storyline, 115–118
appending clips to storyline, 112–115
customizing, 80–81
as not always favorite, 76
overview of, 69
performing insert edits, 122–125
rating clips as, 76
setting marked ranges as, 73–75, 471
unrating (U key), 76–77
FCPX Media folder, 7–8, 18–19
Filmstrip preview, 26–28
Filmstrip view
appending batch edit to storyline, 115–118
in Browser pane, 20
expanding, 27–28
keywording clip in, 50–51
manually applied keywords in, 49
navigating within, 26–28
Filter pop-up menu
applying rules for searches, 83–85
creating Smart Collections, 91–93
filtering event, 86–90
sorting clips, 82
Filters, 215
Final Cut Pro command set, keyboard shortcuts, 475
Find and Replace Title Text, 342
Find People, 33, 93–96
Finder
dragging from, 40–42, 418
harnessing metadata using keywords, 39
locating camera archives in, 426
managing external source media files, 32
preparing source media files, 6, 8
Finessing, of first edit
adjusting edits, 183–186
clip volume levels, 187–189
connecting additional B-roll clips, 189–192
cross dissolves and fade handles, 192–197
overview of, 181–182
Finishing edit
adding and modifying lower third, 335–342
adding sound to clip, 343–349
audio, 342–343
audio enhancements, 372–374
neutralizing clips. see neutralizing clips
overview of, 333
retiming borrowed audio, 349–352
review Q & A, 386–388
splitting audio with another clip, 352–357
titles, 334–335
volume levels. see volume levels, adjusting over time
First edit (rough cut)
appending batch edit, 115–118
appending primary storyline, 111–115
in connected storyline. see connected storyline
creating project, 106–109
defining primary storyline, 109–111
editing above primary storyline, 143
editing below primary storyline, 179–181
finessing. see finessing, of first edit
modifying clips in primary storyline, 121–122
overview of, 105
performing connect edits, 144–156
performing insert edits, 122–125
playing project, 118–119
rearranging clips in primary storyline, 119–121
review Q & A, 206–210
ripping primary storyline, 126–131
share project to media file, 197–205
timing. see timing primary storyline
understanding project, 106
Folders
creating for downloaded media, 6
importing as Keyword Collections, 33
Foreground clip
chroma key workflow, 440–443
manually selecting color key samples, 445–449
masking chroma key clips, 443–444
Formats
available for this book, 4–5
custom settings for new project, 430–434
custom settings for non-native resolutions, 430
editing native, 477–479
master file of final project, 400–401
Frame rate, 21, 430–434
G
Gap edit (Option-W)
deleting clips with, 138
first edit, 133–135
lengthening connected storyline, 169
Position tool replacing existing content, 235–238
refining sound bite edits, 142
replacing deleted clip, 246
replacing deleted segments, 133
replacing in primary storyline, 219–221
revising edit, 225–227
Shift-Delete to replace selection with, 133
timing primary storyline, 131
Gaussian Blur effect, 298–299
Generators Browser, 441, 443
Getting started
downloading source media files, 5
introducing job and workflow, 9–11
learned from a legacy, 2–3
overview of, 1
preparing source media files, 5–8
review Q & A, 11
upgrading existing events and projects, 3–4
using this book, 4–5
Glossary, 4, 481–482
Graphics, 335
Grave key, overriding connected clips, 154–155
Grouping, 96, 481
H
H.264 format
as native video format, 478
preset destinations and, 198
sharing master file, 399
sharing to hosting service, 397
Hand tool, 462
Hardware, 3, 17
Help tag, adding notes to clip, 67
Hide application (Command-H), 18, 475
Hide Rejected, Filter pop-up menu, 82
Hum Removal, Audio Enhancements, 373
I
iLife sound effects and musical clips, 343
Image Capture, 18
Image correction
balancing color automatically, 375–376
Color Board, 381
correcting clip color manually, 382–384
correcting clip exposure manually, 376–381
finishing edit, 373–374
matching color, 384–386
Image Mask effect, 296
Images
native still-image formats, 478
synchronizing dual system recordings, 435–439
Import All, clips from camera card, 28
Import Folders as Keyword Collections, 50
Import options
creating Smart Collections, 93
expanding filmstrip view, 27–28
importing camera source files, 19, 24–25
importing existing files from volume, 38
importing files from volume, 36
media management, 31
using, 19–21
Importing
camera source files, 18–19, 24–25
clip container, 14
clip from camera card, 28–30
creating camera archive, 22–24
creating library, 16–17
by dragging from Finder, 40–42, 418
event container, 14–15
existing files from volume, 38–40
files from volume, 36–37
as "Leave files in place," 412–414
library container, 15
as managed clips, 415–417
Media Import Options dialog, 31–34
Media Import window, 19–21
navigating within filmstrip preview, 26–28
options, 34–35
recovering original source media files, 426
review Q & A, 42–43
for revised edit, 246–247
setting up multicam clip, 450–454
synchronizing dual system recordings, 435
Info inspector
reassigning audio and video to correct roles, 365
setting up multicam clip, 451
verifying additional roles are added, 103
verifying clip received assigned role, 99
verifying events copied to portable library, 423
viewing, 67–68
viewing managed vs. external media in, 416–417
Info pane, Share window, 200, 392–393
Insert edits (W), 122–125, 157, 249, 257
Inspector button (Command-4), 99, 288, 469
Inspector pane
Exposure pane in, 377–381
Info and Share inspectors in, 396–397
Text inspector in, 337
Transition inspector in, 309
Intelligent Assistance, 4
Interface command set, keyboard shortcuts, 468–469
Inter-library copying, 90
Interviews, pre-editing process, 70
IOS-compatible file, sharing, 198–203
Keyframes
adjusting volume levels over time, 358–361
defined, 482
ducking/swelling sound effects and music, 367–369
Option key with Select tool creating, 358
Range Selection for, 369–372
Keyword Collections
adding keyword to, 52–53, 54–56
assigning keyword to clip range, 62
import folders as, 33, 39
keyword shortcuts and, 58–60
organizing clips with keywords into, 49
removing keyword, 54
Smart Collections vs., 85–86

J-cut, 353, 481
Job, workflow and, 9–11
Join through edit, 139–140, 462, 481
Jump cut, 139, 481

K
Keyboard, ripple trimming with, 129–131
Keyboard shortcuts
assigning, 466–467
audio commands, 471–472
Command-Z, 11
customizable in Command Editor, 25
editing commands, 472–474
enhanced content for, 4
event metadata commands, 471
Final Cut Pro commands, 475
interface commands, 468–469
navigation commands, 470
for playback, 27
tool palette commands, 470
using command list, 468
using keyboard to assign, 467
using search field, 467–468
Keyer effect
chroma key workflow, 440–443
controlling with Strength slider, 446
manually selecting chroma key color, 445–449
masking chroma key clips, 443–444
Keyframes
adjusting volume levels over time, 358–361
defined, 482
ducking/swelling sound effects and music, 367–369
Option key with Select tool creating, 358
Range Selection for, 369–372
Keyword Collections
adding keyword to, 52–53, 54–56
assigning keyword to clip range, 62
import folders as, 33, 39
keyword shortcuts and, 58–60
organizing clips with keywords into, 49
removing keyword, 54
Smart Collections vs., 85–86
Keyword Editor (Command-K), 52–53, 56–60, 62
Keyword shortcuts, 56–60, 63
Keywords
  adding clips to Keyword Collection, 54–56
  adding to one or more clips, 52–53
  analysis, 49
  applying to ranges, 61–65
  batch renaming of camera clips, 60–61
  filtering event, 87–90
  harnessing metadata in Finder, 39
  organizing clips using, 48–49
  overview of, 50–51
  ratings with, 69
  removing, 54
  search, sort and filter metadata, 81
  searching and filtering using, 83–85
  using shortcuts, 56–60

Lower third
  adding title, 335–336
  defined, 482
  identifying who's who in project, 334
  modifying title text, 336–340
  performing extend text on title, 341–342
  Luminance, 378–379, 482

M
  Magnetic storyline, behaviors of, 109–111
  Managed media
    archiving library as, 426
    copying source media files into, 37
    creating portable library, 421–425
    defined, 482
    importing media as, 415–417
    moving and copying clips within library, 419–421
    overview of, 32
  Marked clip, selected clip vs., 315
  Markers (M)
    adjusting edits with, 183–184
    aligning bites and bits, 262–265
    breaking up/adding new sound bites with, 243
    creating, 230–234
    overview of, 228
    previewing audio blend, 354–355
    repositioning storylines/deleting within, 245
    using Timeline Index, 228–230
  Marquee selection, manual chroma key color, 447–449
  Mask
    compositing clip with, 298–299
    creating depth of field, 295–298
    defined, 482
    Mask effect, 443–444
Index 491

Master files, sharing, 399–403
Match color feature, 384–386
Maximize button, Video Animation Editor, 322
Media empty libraries, 411, 482
Media full libraries, 411, 482
Media handles, 302–307
Media Import (Command-I)
  applying Media Import options, 34–35
  choosing Media Import options, 31–34
  creating camera archives, 24
  creating Smart Collections, 92–93
  defined, 469
  expanding filmstrip view, 27–28
  importing aerials, 246–247
  importing as "Leave files in place," 413–414
  importing as managed clips, 415–417
  importing existing files from volume, 38–40
  importing files from volume, 36–37
  importing source media from camera, 24–25
  setting up multicam clip, 450
  using, 19–21
Media management. see also libraries
  beginning editorial process with, 13
  clip container, 14
  defined, 482
  event container, 14–15
  library container, 15
  using inter-library copying, 90
Media volume. see volume, media
Merge Events command, 426
Metadata
  adding keywords. see keywords
  adding notes, 66–68
  applying ratings, 71–75
  automatic backups of library, 426
  camera archives, 24
  customizing, 81
  exchangeable file, 404
  Final Cut Pro creating, 46
  master file of final project, 400
  multicam clip, 451–452
  roles. see roles
  searching, 82–83
  sharing iOS-compatible file, 200
  sharing to online host, 392–393
  viewing shared project in Inspector pane, 396–397
  Motion, 335
  Move Connection (Command-Option-click), 251, 474
  Move Events to Library command, 426
  Move tool, titles, 338
Moving
c  clips within library, 419–421
  events between libraries, 426
  Multicam
    configuring audio channels/components, 462–463
    editing clip, 454–460
    fine tuning within clip, 460–462
    opening Angle Editor, 446
    overview of, 449
    setting camera date and time, 454
    setting up clip, 450–454
    switching angles, 462
  Music and Sound Browser, 343–344, 349, 356
  Music clips
    adjusting clip volume levels, 187–189
    adjusting edits, 183–186
    connecting, 180–181
    creating markers, 232–234
    ducking and swelling, 366–369
    finessing. see finessing, of first edit
    lifting sound bites from storyline, 216–217
    replacing in primary storyline, 219–221
    repositioning storylines/deleting within, 244–246
    using Range Selection for keyframing, 369–372
  Music role, 100

N
  Naming
    batch of camera clips, 60–61
    destinations (presets) for sharing media, 398
    markers, 228, 232, 262
    new role, 99
    preparing source media files, 7
    project, 107
    subroles, 102
  Native formats, editing, 477–479
  Nats
    adjusting volume levels over time, 358
    in B-roll content, 144
    defined, 482
    as natural sound audio, 98
    turning down volume of, 187
  Navigation
    controls, 27–30, 113
    within filmstrip preview, 26–28
    keyboard shortcuts, 470
  Near-field loudspeakers, 189
  Nesting compound clips, 325
  Neutralizing clips
    balancing color automatically, 375–376
    Color Board, 381
    correcting clip color manually, 382–384
    correcting clip exposure manually, 376–381
  New Compound Clip (Option-G), 326–327
  New Folder button, camera archive, 23
  New Keyword Collection, 55
New Multicam Clip command, 451–454
New Project
creating, 106–109
editing multicam clip, 454–460
using manual settings for frame size/rate, 430–434
New Smart Collection, 91–93, 214–215
Non-native resolutions, custom settings for, 430
Nonvideo clips, custom settings for, 430
Not Analyzed state, Balance feature, 374, 376
Notes, 65–69, 81
Notification alert, sharing to online host, 395
Nudge Left (, [comma ] ), 454, 473
On the Go” library, 421–425
Online host, sharing project to, 391–397
Opacity controls, Video Animation Editor, 322
Opacity tool, compositing, 313
Open in Timeline, 437
Optimized media, 33, 426
Option key
combining operation with, 462
with Select tool, 358
Overwrite edits, 235, 241
Parameters, modifying video effect, 288–290
Paste Attributes, 323–325
Pasting (Command-V), 294, 323–325
Pause (K key), 27, 47–48, 470
Period (.) key, 130, 142
Physical storage, Media Import, 32–33
Play (L key), 27, 47–48, 470
Playback
keyboard shortcuts, 27
previewing video effect, 288
reverse, 223–224, 272
setting speed manually, 275–278
Playhead
applying ratings to clips, 71–75
editing multicam clip, 455
importing ranges from within camera file, 29–30
moving with Control-P, 222
playing project, 118–119
rearranging clips in primary storyline, 119–121
trimming start point to, 456
Portable library, creating, 421–425
Position playhead (Control-P), 222, 242, 470
Position tool
breaking up/adding new sound bites, 239–243
overwrite editing, 235
realigning sound bites/B-roll to music, 235–238
Select tool vs., 235–238
Preferences (Command-,), 40, 397–398
Preview (Spacebar), 26–27
Previewing audio blend, 353–355
Primary storyline
append batch edit to, 115–118
appending clips to, 111–115
connected. see connected storyline
editing above, 143–156
editing below, 179–181
lifting clips out of, 216–217
modifying clips in, 121–122
performing insert edits, 122–125
rearranging clips in, 119–121
replacing clip in, 219–221
rippling, 126–131
timing, 244–246
working with behaviors of, 109–111
Projects
creating, 106–109
understanding, 106
upgrading existing, 3–4
Properties, customizing for new project, 431
Proxy media, 33, 426
Puck values, clip exposure, 379
Q
QuickTime, sharing master files, 401–403
QuickTime Inspector window, 203
QuickTime Player
sharing iOS-compatible file, 201–203
using AirPlay with, 203–205
R
RAID (redundant array of independent disks), camera archives, 24
Ramps
adjusting volume levels over time, 358, 360
defined, 482
dragging fade handles for, 182
fading audio in or out with, 192–194, 197
previewing audio blend, 354
retiming borrowed audio, 352–353
Range End, additional (Command-Shift-O), 30, 471
Range End (O key), 29, 471
Range Selection tool (R), 252, 366, 369–372
Range Start, additional (Command-Shift-I), 30, 471
Range Start (I key), 29, 76–77, 222–223, 471
Ranges
adding notes to, 66, 69
applying keywords to, 61–63
deselecting when sharing, 198–199, 391
importing from within camera file, 29–30
performs insert edits, 122–125
performing three-point edit for split screen, 315–317
setting as favorite, 71–75
viewing keywords in list view, 63–65
Rate percentage field, Custom Speed window, 276–278
Ratings
 applying, 70–75
customizing favorites, 80–81
favorites as not always favorites, 76
rejecting clips, 77–80
search, sort and filter metadata, 81
system of, 69
unrating favorites, 76–77
Reading Audio meters, 361–362
Record button, pre-editing interviews in field, 70
Redundant array of independent disks (RAID), storing camera archives, 24
Refine Key's Sample Color button, 447
Reimport from Camera/Archive command, 426
Rejected rating, 69, 77–80
Relink Files, 414–415
Remove pulldown, transcoding and analysis, 33
Render Format pop-up menu, 433–434
Replace command, 218
Replace edits
 creating time at 0:00, 221–228
performed by audition clip, 249
replacing primary storyline, 219–221
using ripple trim to shorten clip, 219
versions of, 217–219
Replace from End command, 218–219
Replace from Start command, 218–219
Replace with gap edit (Shift-Delete), 133, 138, 142, 209, 246
Reset button (X), 116, 290
Reset Speed, 275
Resolution, custom settings, 430–434
Retime Editor (Command-R) associated with every clip, 274
creating time at 0:00 and, 224
defined, 474
editing blade speed, 278–282
setting constant speed change, 274
setting playback speed manually, 275–278
with speed transitions, 282–285
Retime pop-up menu, 223–224
Retiming clips
 for borrowed audio, 349–352
editing with blade speed, 278–282
overview of, 272–273
setting constant speed change, 273–274
setting playback speed manually, 275–278
with speed transitions, 282–285
Reveal Project in Browser (Option-Shift-F), 395
Reverse playback (J key), 27, 47–48, 223–224, 272, 470
Review Q & A
 advancing workflow, 464
enhancement pass, 325–327
finishing edit, 386–388
first edit, 206–210
getting started, 11
importing media, 42–43
libraries, 426–427
organizing clips, 103–104
revising edit, 267–269
sharing project, 407–408
Revising edit (second pass)
aligning bites and bits, 260–267
Auditions. see Auditions
continuing to add B-roll, 257–258
creating time at 0:00, 221–228
importing aerials, 246–247
lifting from storyline, 216–217
overview of, 211–212
removing transition and moving clips, 258–260
replacing clip, 217–221
review Q & A, 267–269
snapshotting project, 213–215
trimming aerials, 253–257
trimming tops and tails, 251–252
using Position tool, 235–243
versioning project, 212–213
working with markers, 228–234
RGB Parade, 377–379
Ripple deletes, 132
Ripple field, Custom Speed window, 277–278
Ripple trim
added B-roll clips, 257–258
adding sound to clip, 347
adjusting music edits, 184–185
aligning bites and bits, 260–261, 266–267
avoiding Audition-induced, 250
breaking up/adding new sound bites, 240–241
within connected storyline, 167–168
converting connected clips into connected storyline, 158–161
customizing transition, 310–311
defined, 122
editing multicam clip, 455
editing within connected storyline, 170–176
in primary storyline, 126–131
refining sound bite edits, 141–142
shortening clip for replace edit, 219
tightening edit, 139
Roles
assigning, 98–103, 269
creating, 97–100
delivering master file of final project, 401–403
overview of, 96–97
setting volume levels with, 364–366
Roles as Multitrack QuickTime Movie, 401–402
Roles Editor, 98–103
Roles Index, 229–230, 239, 242, 364–366
Roll edit
converting connected clips into connected storyline, 160–161
customizing transitions, 310
ripple trim vs., 159
Roll edit tool, 461
Rolling shutter, 94, 482
Rules, searching using filter, 83–85
Sample Color button, chroma key, 447–449
Sample rate, 348, 432–433
Saving
libraries, 16
master file of final project, 403
portable library as On the Go, 422
search collections as Smart Collections, 91–93
Search field, Command Editor, 467–468
Searching
marker names in Timeline Index, 228–230
metadata, 82
Sound Effects folder, 343–344
Second pass. see revising edit (second pass)
Select tool (A)
adjusting volume levels over time, 358–359
blading, 137–138
breaking up/adding new sound bites, 240
fine-tuning within multicam clip, 461
joining through edits, 140
Position tool vs., 235–238
removing transitions around start/end points, 258
rippling primary storyline, 127–129
trimming audio clip, 345–347
using Range Selection for keyframing, 371
Selected clip, marked clip vs., 315
Selection commands
continuous selection (Shift-click), 363, 475
selecting multiple items (Shift key), 28
Trim to Selection (Option-\), 252–257, 473
Send to Compressor command, 405–406
Settings tab, Share window
creating master file of final project, 400–401
sharing iOS-compatible file, 201
sharing to online host, 393
Share button, 199–203, 392, 400
Share inspector, 396
Share phase, workflow, 10–11
Sharing project
to bundle, 397–399
creating exchangeable file, 404
creating viewable file, 390–391
master file, 399–403
with media empty library files, 411
to online host, 391–397
overview of, 389
review Q & A, 407–408
utilizing Compressor, 404–406
Sharing project to media file
overview of, 197–198
sharing iOS-compatible file, 198–203
using AirPlay with QuickTime Player, 203–205
Shortcuts, keyword, 56–60
Show Angles, Angle Viewer, 456
Show Video Animation, 321
Show Video Scopes (Command-7), 377
Sidebar, Media Import window, 20
Size parameter, Vignette effect, 289–290
Skimming (S)
aligning bites and bits, 263–264
breaking up/adding new sound bites, 240
creating markers, 230–234
filling project duration, 221–222
identifying/defining, 267, 269
performing extend edits on title, 341–342
performing insert edits, 125
positioning for zooming in on edits, 260
rearranging clips in primary storyline, 119–121
Smart Collections
creating, 85–86
creating after analysis, 34
creating for compound clips, 327
creating projects, 214–215
saving search collections as, 91–93
working with, 91–93
Snapping (N)
adding/trimming connected B-roll, 150
disabling to lengthen gap clip, 169
identifying/defining, 267, 269
placing playhead between two clips with, 124
tightening edit with Blade tool, 136–137
toggling, 244
Snapshots, 213–215, 273
"Social Sites for Lifted bundle," 398–399
Software, not upgrading in midst of job, 3
Solo command (Option-S)
  adjusting edits, 184
  creating markers, 232, 234
  example of, 268–269
  identifying/defining, 267, 269
Sorting clips, 82
Sound, adding to clip, 343–349
Sound bites
  aligning, 260–267
  breaking up/adding new, 239–243
  changing Channel Configuration, 362–364
  lifting from storyline, 216–217
  realigning to music, 235–238
  refining edits, 140–142
  selecting just, 363
Sound effects
  adding, borrowing, splitting audio, 355–357
  adding to clip, 343–349
  adjusting volume levels over time, 358–361
  changing Channel Configuration, 362–364
  ducking and swelling, 366–369
  previewing audio blend, 353–355
  Range Selection for keyframing, 369–372
  reading Audio meters, 361–362
  retiming borrowed audio, 349–352
  setting volume level by role, 364–366
  splitting audio with another clip, 352–353
  understanding audio enhancements, 372–374
  using range selection for keyframing, 369–372
Sound Effects folder, 343–344
Source frame editor, speed transitions, 283
Source media files
  clip container, 14
  copying to portable library, 422–425
  creating camera archive, 22–24
  downloading, 5
  event container, 14–15
  importing from camera, 24–25
  importing from volume, 36–37
  importing to library by dragging from Finder, 418
  ingesting with Media Import window, 19–21
  no duplicate entries created in libraries, 418
  preparing, 5–8
  preparing to import camera source files, 18–19
  processed as clips during import phase, 10
  recovering, 426
  relinking offline clips to, 414–415
  storage. see libraries
  using Media Import window to ingest, 19–21
Source Media pop-up menu, 350
Spacebar (preview), 26–27
Speed effects, 351. see also retiming clips
  transitions, 282–285
  Spacebar (preview), 26–27
  Speed effects, 351. see also retiming clips
  transitions, 282–285
  Speed pop-up menu, 276
  Spell check, title text, 338
  Split audio edits, 352–357
  Spotlight badge, 248–249
  Stabilization, 84, 94, 482
  Stacking, video effects, 291–293
  Stand-alone audio, 348
  Standard markers, 228, 230–234
  Stems, 401, 482
  Stereo, 364, 403
  Still images, native formats, 478
Stock footage, 421
Storage. see also libraries
  dragging items from Finder or other apps, 40–42
  external media, 32
  managed media, 32
  physical, 32–33
  preparing location for source media files, 6
  virtual, 31
Storyline primary. see primary storyline repositioning/deleting within, 244–246
Strength slider, Keyer effect, 446
Studio headphones, 189
Subclips, 65, 482
Subframe level, trimming audio at, 337
Subroles, 97, 402–403
Swell, 366–369, 482
Symlinks, 37, 411–414
Sync keyword collection, 436
Synchronization
  of connected clips, 152–154
  dual system recording workflow, 435–439
  setting camera date and time, 454
  setting up multicam clip, 452
Synchronize Clips command, 436
T
Tags
  sharing iOS-compatible file, 200
  sharing to online host, 393
Tags Index
  creating markers, 232–234
  listing all markers in project, 229
  overview of, 229–230
  selecting just sound bites in, 363
  setting constant speed change, 273–274
Takeoff storyline, 244–246
Templates, Motion, 335
Terms of Service, sharing to online host, 394

Text
- adding notes to clip, 66–67
- exiting entry with Escape key, 337
- extending edit for title clip, 341–342
- modifying title, 336–340
- replacing title, 342
- searches, 82–83
- using titles, 334–335

Text inspector, 338–339

Third-party applications, outputting project in XML for, 404

Three-point edits, 314–321

Through edits, 132, 139–140, 482

Thumbnails, displaying in Timeline, 437

Timeline
- adjusting audio in, 180–181
- deleting video effect to, 288
- fitting entire project within, 114, 220
- opening project in, 108–109
- retiming borrowed audio, 350
- selecting just sound bites in, 363
- synchronizing dual system recordings, 437
- three-point edit in, 314–321
- zoom into, 126

Timeline Index (Command-Shift-2)
- editing blade speed, 279
- setting constant speed change, 273–274
- setting volume level by role, 364–366
- using, 228–230
- working with audio clips, 348

Timeline Navigator, 325

Timing
- creating at 0:00, 221–228
- retiming clips. see retiming clips

Timing primary storyline
- blading and deleting, 136–139
- inserting gap clip, 133–135
- joining through edit, 139–140
- overview of, 131–133
- refining sound bite edits, 140–142

Titles
- adding, 335–336
- modifying, 336–342
- performing extend edit, 341–342
- replacing text, 342
- using, 333–335

Titles Browser, 335–342

To-do markers
- creating, 230–234
- defined, 228
- previewing audio blend, 354
- retiming borrowed audio, 352
- setting constant speed change, 273–274
- working with audio clips, 348

Tool palette, keyboard shortcuts, 470

Traces, defined, 482

Transcode and analysis, Media Import options, 33–35

Transform tool, 313, 318–319, 444

Transition inspector, 309–312

Transitions
- aligning bites and bits, 260–267
- deleting for depth of field, 294
- removing around start/end points, 258–260
- speed, 282–285
- video. see video transitions

Transitions Browser, 307–309

Trash can, emptying, 426

Trim Edit (Option-[]), 251–257, 283, 345, 473

Trim Start (Option-[), 251–257, 456, 473

Trim to Selection (Option-[]), 252–257, 473

Trim tool (T)
- ripple trims with, 170–176
- roll trims with, 160
- slip edits with, 185–186

slipping to create media handles, 306–307
- three-point edits for split screen with, 316
- trimming audio clips with, 347
- between two clips, 225

Trimming
- audio clips, 345
- defined, 122, 482

Trimming tops and tails
- continuing to add B-roll, 257–258
- removing transition/moving clips, 258–260
- revising edit, 251–252
- trimming aerials, 253–257

Two-up display
- converting connected clips into connected storyline, 159
- editing within connected storyline, 170
- slip edit for, 182, 186
- three-point edit for, 314–321

U

Undo (Command-Z), 11, 236–237, 474

Unrated status, 69, 76

Unrating clip as (U key), 76

Update All option, events and projects, 3–4

Update Later, events and projects, 3–4

Upgrading, events and projects, 3–4

"Use audio for synchronization” checkbox, multicam clip, 452

Use Custom Settings button, new project, 430–434

V

Variable speed change, 278–282

Vectorscope, 379–380, 382–384

Versioning, 212–217

Video
- adding cross dissolve, 194–197
- angles. see multicam
customizing properties for project, 431
native formats, 478
Video Animation Editor, 313–314, 321–325
Video effects
deleting, 293
depth of field, 293–299
locating in Event Browser, 286
modifying, 288–290
overview of, 285
previewing and applying, 287–288
stacking, 291–293
Video inspector, 288–293, 313, 375–377, 384–386
Video role, 97, 101–102
Video scopes, 377–381, 482
Video transitions
adding more cross dissolves, 312
customizing, 309–312
experimenting with, 301–302
media handles, 302–307
overview of, 300–301
using Transitions Browser, 307–309
Viewer
defined, 20
Display options, 377
positioning images, 318–321
Transform, Crop and Distort in, 313
working with clips, 47–48
Vignette effect, 288–293
Vignette Mask effect, 288, 296
Virtual storage, Media Import option, 31
Visit button, sharing to online host, 395
Volume, disabling camera’s, 437
Volume, media
importing existing files from, 38–40
importing files from, 36–37
importing source media files from, 32–33
storing camera archives on separate, 24
Volume levels
adjusting, 187–189
adjusting in Timeline, 180–181
knowing controls, 189
previewing audio blend, 353–355
replacing music clip in storyline, 220
Volume levels, adjusting over time
Channel Configuration, 362–364
ducking/swelling sound effects and music, 366–369
keyframing using Range Selection, 369–372
overview of, 358–361
reading Audio meters, 361–362
setting by role, 364–366
Waveform scope, 377–379
Wireframe, positioning images in Viewer, 319–320
Workflow
manual settings for new project, 430–434
overview of, 429
phases of, 10
review Q & A, 464
synchronizing dual system recordings, 435–439
using chroma key, 439–449
working with multicam. see multicam
XML (eXtensible Markup Language), outputting to third-party apps, 404
XSAN, 3–4
Zoom In (Command-=), 126, 129, 244, 468
Zoom Out (Command--), 114, 166, 469
Zoom slider, 27–28, 51, 244
Zoom to Fit (Shift-Z), 114, 118, 220, 468