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Larry Jordan's Monthly Newsletter

**Editor: Larry Jordan
Issue #51 - December, 2008**

Welcome to the latest edition of my monthly Final Cut Studio newsletter for December, 2008!

The goal of this newsletter is to provide information helpful to the professional user of Final Cut Pro. This newsletter publishes each month. Key articles from past issues are posted on my website each month for your reference. At the end of each year, all newsletters for that year are bundled and available in my store. All software references are to Final Cut Studio 2 unless otherwise noted.

Please invite your friends to visit my website -- www.larryjordan.biz. There you'll find daily tips, latest industry news, over 400 articles and tutorials to help you get the most out of Final Cut!

NEWSLETTER CONTENTS

READER MAIL

WRAP-UP

WELCOME

Well, 2008 is rapidly winding to a close. At this time of the year, we can either celebrate the holidays or get depressed about the economy. I've decided to focus on celebration - its more fun.

So, here's the latest edition of my newsletter to give you something to read between rounds of egg nog, plum pudding, and holiday parties.

Also, one other note -- my team and I are planning what new training to create for the next year. I would be really grateful if you could take a minute to complete our survey. This would help us a lot in understanding the kind of training we should work on.

Finally, in case we don't chat between now and the end of the year, a very Merry Christmas, Happy Chanukah, and Happy New Year to you.

May the end of 2009 be better than the end of 2008!

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TECHNIQUE: USING NESTS TO CLEAN UP DISSOLVES BETWEEN CHROMA-KEYS

Steve Gagne sent in a question that sparked this tutorial. He was dissolving between chroma-key shots and in the middle of each dissolve, the foreground clip color-shifted to green. He thought this could be fixed using nests, but needed some help in figuring out how.

Actually, nests are an excellent way to fix this problem and Steve gave me a great reason to talk about it in this issue.

First, let's define a term: **Nesting** is the process of putting one sequence into another sequence. You can do this either by dragging a sequence from the Browser into the Timeline, or by selecting the clips you want to create a sequence from in the Timeline and applying a menu choice.

Regardless of how you create it, a nest is always a sequence contained inside another sequence.

DISSOLVING THE OLD-FASHIONED WAY

Let's start by illustrating the problem. Here's a wide shot where Katie is standing up and stretching in front of a green screen.
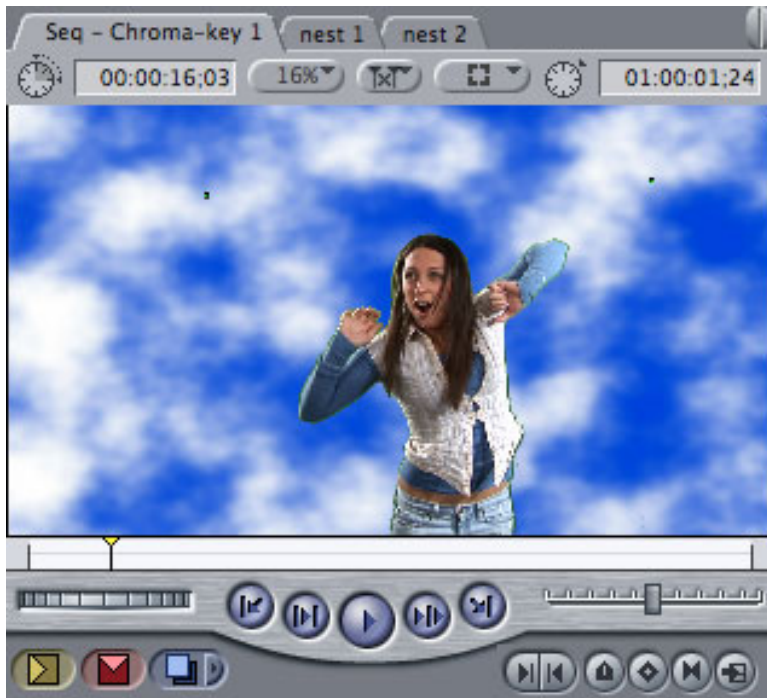
Next, we cut to a close up. Both the foreground and background images changed between shots.

If we leave this transition as a cut, everything works great. The two shots will edit together seamlessly. However, if we dissolve between them, watch what happens.
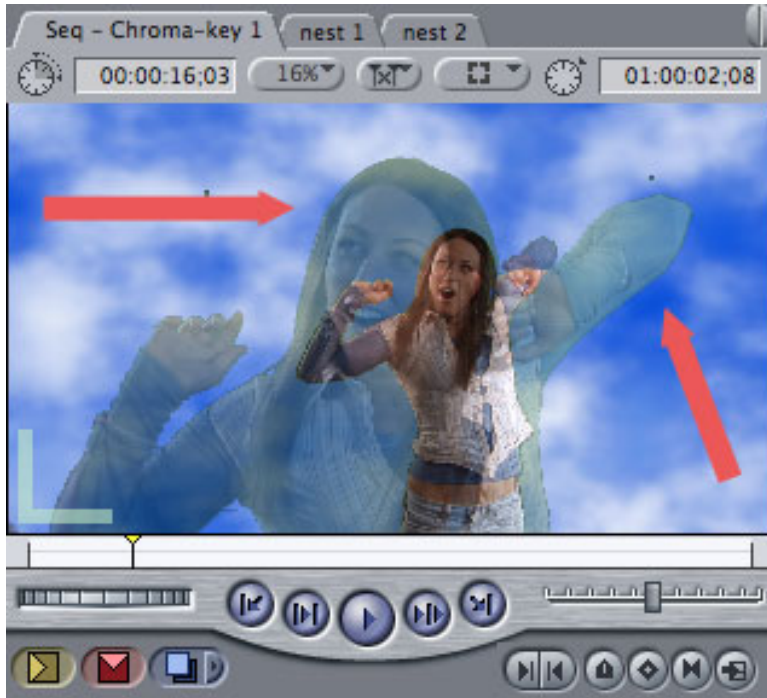
In the middle of the dissolve, the green background starts to show through Katie - look specifically at her raised elbow and arm in the upper right corner of the frame. Notice how it has gone from blue to green. This is caused by the dissolve altering the background, which changes the results of the key.
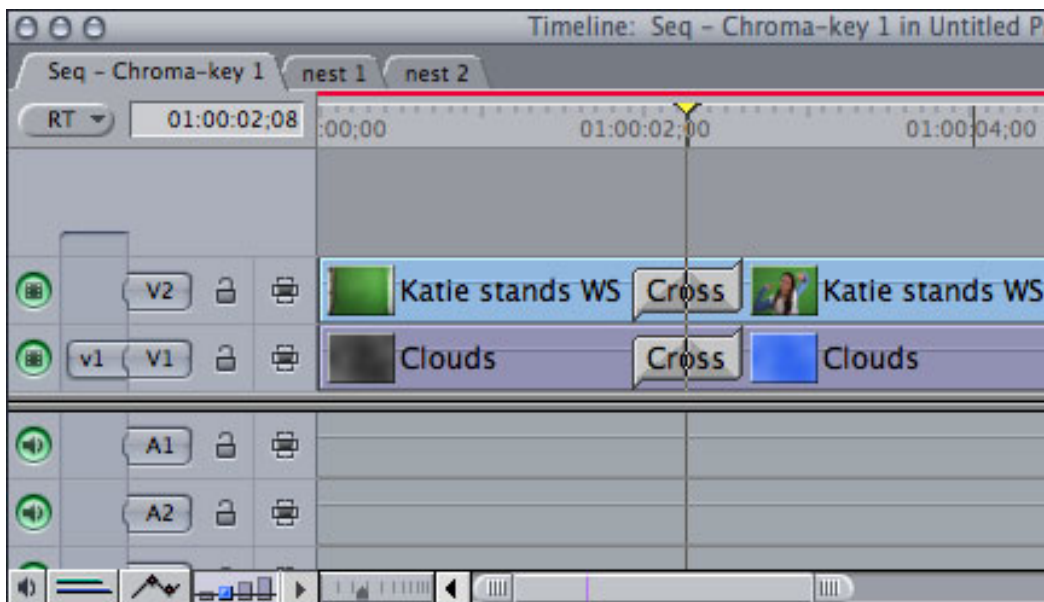
As you can see here, I'm dissolving both the foreground and the background clips. However, even if the dissolve is only in the foreground with the background remaining the same, the results are identical - the foreground goes green.

NESTS TO THE RESCUE

We can solve this problem by creating a pair of nests - sequences of clips contained in other sequences - where one pair contains the clips before the dissolve and the second pair contains

the clips after the dissolve.

To create a nest, select the clips you want to group - in this case, the first clip on both V1 and V2 - and choose **Sequence > Nest items**. (The keyboard shortcut is **Option+C**).
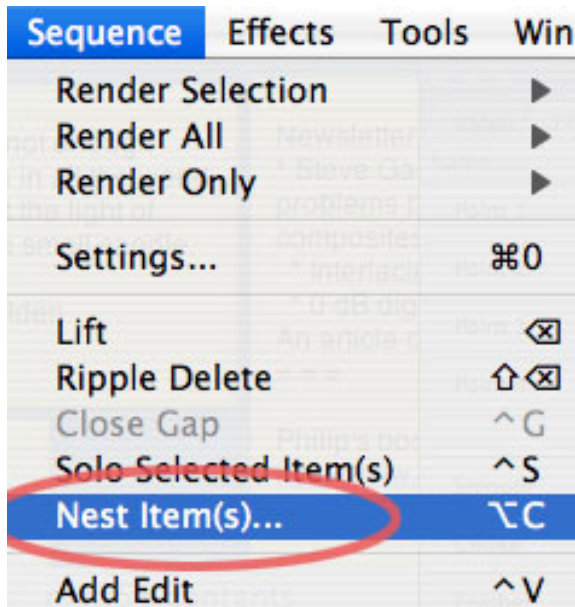
Create a nest for each set of clips you want to dissolve between. You'll need two nests, one for the clips before the dissolve and one for the clips after the dissolve.

You only need to create nests for clips you want to dissolve between. You don't need to nest clips when you are cutting between shots. There is no quality difference between nested and unnested clips.

> **Note**: Remember that dissolves need extra video before the In and after the Out. So, be sure to include extra video at your transition point inside the nest.

Here's what it looks like when you have nested both sides of the dissolve. Since each nest is a sequence, each can have its own tab in the Timeline.
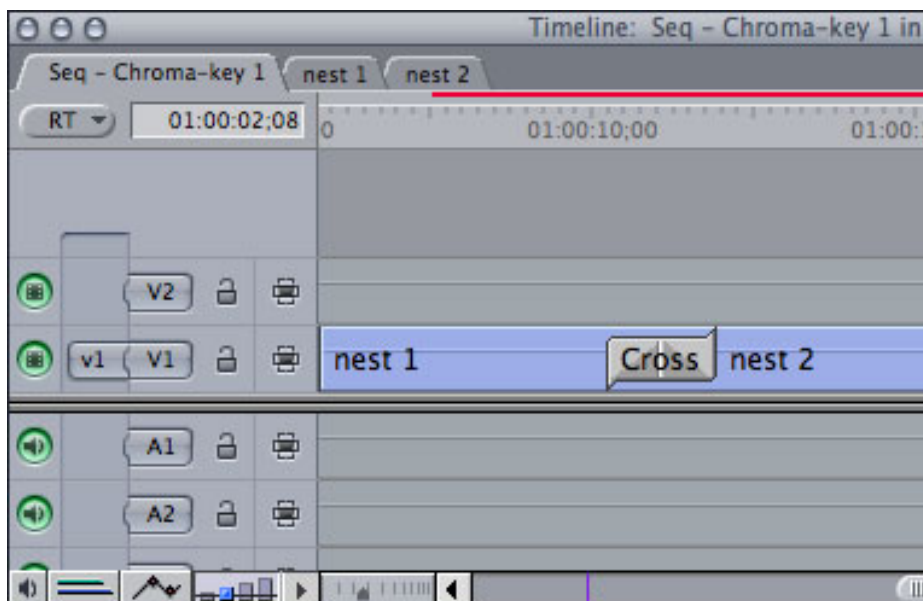
> **Note**: Nests are dynamic. That means that any change you make to the clips

inside the nest are instantly reflected back to the nest itself. To open a nest to make changes, double-click it. Once a nest is open in the Timeline, you switch between it and any other sequence the same way as always - by clicking the sequence tab at the top of the Timeline.

Now, when you dissolve between nests, the video doesn't color shift.

NOTES ON NESTS

- Nests are dynamic. When you change something inside a nest, the nest itself changes.
- To apply a filter to a nest, simply select the nest as you would a regular ciip.
- To open a nest for editing, double-click it.
- To load a nest into the Viewer so that you can adjust a filter or motion effect, **Option +double-click** the nest.
- To deconstruct a nest back into its component clips, drag it from the Browser to the Timeline and press the **Command** key once the nest icon has entered the Timeline window.
- You can nest up to eight levels deep - that is, a sequence inside a sequence inside a sequence... up to eight times.

One last thought. While I don't use nests very often, when I need to treat a group of clips as though it was a single clip, nests are perfect.

UPDATE - Dec. 17

Tom Hollingsworth had a followup question:

> I read your piece on using Nesting to improve green-screens.
> Any idea why nesting works better?

Larry replies: Tom, nesting doesn't help with the key, it helps when dissolving between keys. And the reason is that when you dissolve between nests, you are dissolving between two fully-composited images - the green background no longer exists. When you dissolve between individual clips, you are changing the relationship between the foreground and the background which causes the color shifts to occur.

UPDATE - Jan. 1, 2009

Graham Taylor, a UK-based editor, sent this comment in:

> I would add that such so-called 'dirty dissolves' can occur on all types of composites involving keyed images on a higher video layer. It is particularly common when fading a composite title+background[s] to black. It's good practice to nest the last frame and then add a fade to black to the nest. It's a pity that FCP doesn't offer a macro for doing this, however!

Larry replies: Thanks, Graham, for adding this.

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LARRY'S NEWEST VIDEO TUTORIALS

My video tutorial library is continuing to grow - we now have at least 12 tutorials, with more on the way.

One of the questions I am frequently asked is whether these tutorials duplicate my existing training -- especially my tutorials on Lynda.com. First, it would not be fair to Lynda to duplicate work I've done for her. So I try hard to avoid doing so. While there is some duplication between my newsletters and these tutorials, I try to make these video tutorials both timely and unique.

Seeing as some of my other tutorials were created a while ago, my goal with these video tutorials is to provide new or updated information that wasn't available when my original tutorials were recorded.

Also, each of these is short and focused on a single subject. For coverage of a complete piece of software, nothing is better than Lynda.com. For timely, updated, or more specific coverage, check out these tutorials.

There are three I want to call to your attention this month:

- Sizing Still Images in Photoshop for Final Cut Pro
- Fixing Tape Drop-outs and Video Glitches Using Photoshop
- Creating Traveling Mattes in Final Cut Pro **- coming Jan. 6**
- In fact, I'll be adding about **six new tutorials** after the holidays are over.

These tutorials contain all new information. In fact, the sizing stills title finally solves issues I've had with determining the correct size for multi-layer Photoshop graphics that I've been wrestling with for years. In it, you'll find a complete table of numbers to size images for NTSC, PAL, and HD so that everything comes in looking great.

Also, if you've had to fix a bad frame, or bad section of frames, of video that you could not reshoot, the Fixing Tape Drop-outs title walks you thru the process of cleaning up still frames or cleaning up video using Photoshop Extended.

Finally, my newest tutorial is Creating Traveling Mattes. This shows you how to create custom shapes, import and size them properly, create a video-in-video effect and get it to animate. (I'll also show you my favorite secret tip for playing an unrendered sequence without first rendering

it!)

I try to add a new tutorial or two each week - here's a list of what we have available.

If there's specific subject you can't find anywhere else, let me know and I'll create it for you and post it here.

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TRAINING SURVEY

My team and I are planning some new training for the first half of next year and we want to make sure what we are creating meets your needs.

I'd be really grateful if you could take a few minutes to answer our nine question training survey.

Please take our survey here - and I'll publish summary findings in next month's newsletter.

Your opinions are important to me, please click here to share your thoughts on our training.

Thanks!

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A BUG IN A NEW VERSION OF COLOR (v1.0.3)

According to reports coming in from Digital Rebellion, the latest version of Color (1.0.3) which was updated in early December, does not work with XDCAM footage.

I first posted this to the Latest News section of both the Digital Production BuZZ and my website. Since then, Digital Rebellion has found a workaround.

If you are shooting XDCAM footage and have upgraded to the latest version of Color, please read this.

UPDATE - Dec. 16

Late evening, Dec. 16, Apple posted an update to Color to version 1.0.4 which reportedly fixes this bug. I don't know yet whether it does or not. Here's a link to learn more.

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MY PHILOSOPHY ON UPGRADING

Apple has released OS X 10.5.6. And, before all the emails start, I want to reiterate:

Just because a company has released an upgrade does not mean you should upgrade to it. The world will not end if you wait a bit before upgrading.

I've written about upgrading before. But this time, I decided to summarize all my different thoughts into one article. You can read it here.

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LARRY'S SEMINARS ARE TRAVELING - AGAIN!

Well, I knew the travel bug would hit soon - I'm taking my seminars back on the road. In February, I'll be visiting **Glasgow**, Scotland, **London**, England, and **Dublin**, Ireland.

As well, I'll be speaking at the **Broadcast Video Expo**, in London.

If you have ever wanted to attend one of my seminars, but felt that flying over the Atlantic was just not worth the effort, please consider joining us at one of our up-coming events.

We have two different days planned - one for students and self-taught folks, and the other for working pros. Plus, we've worked hard to bring our prices down - something we'll be doing for our next tour in the US - which we hope will make it possible for more people to attend.

DAY ONE - WORKFLOW

The first day seminar focuses on learning **Final Cut Pro Workflow Secrets** -- getting organized for editing and improving basic editing skills.

The seminar runs four hours.

DAY TWO - TECHNIQUES

The second day seminar showcases **Final Cut Studio Pro Techniques** -- audio mixing, video clean-up in Adobe Photoshop, and color correction.

The seminar runs eight hours.

Each seminar is presented lecture-style, though you can bring a laptop for taking notes or following along.

To learn more, including agendas, times, and specific cities, please click here.

I'm grateful to our sponsors - **Academy Class** and **Creative Loop** - for making this event

possible.

TECHNIQUE: CREATING A DUAL-LAYER DVD

While I've been teaching DVD Studio Pro for a long time, I haven't had the need to create a dual-layer DVD until recently.

In doing so, I learned techniques that I've never covered in training before, so I thought I would share it with you here.

SOME BACKGROUND

First, though, a quick review.

DVDs are measured in storage capacity. A single-sided, single-layered DVD holds 4.3 GB of data if you burn it, and 4.7 GB of data if you replicate it (take it to a disc manufacturing facility).

A single-sided, dual-layer DVD holds 8.5 GB of data, whether burned or replicated.

While double-sided discs exist, they have generally fallen out of favor as there is no place to put a label. As well, the costs of manufacturing a DVD have fallen so much that it is more cost effective to release multiple discs than to use both sides of the same disc.

For those of you old enough to remember, a DVD (or CD) is like a vinyl record. There is only one track that slowly spirals from edge to edge. With a record, the track starts at the outside and spirals in. With a DVD, the track starts at the center and spirals out.

With a single layer disc, burning is easy. The laser starts at the center of the disc and lays down data until it either runs out of data or runs out of disc.

With a dual-layer disc, things get a bit more complicated.

A dual-layer disc has two layers; one stacked on top of the other. First the laser focuses on the lower layer, then, when it reaches the end, it refocuses on the upper layer.

There are two ways the laser will write multiple layer data to the disc: OTP or PTP. **OTP** (Opposite Track Path) means that when the laser reaches the end of the bottom layer it refocuses, then starts spiraling back to the center. **PTP** (Parallel Track Path) means that the laser zips back to the beginning of the DVD, then starts spiraling out from the center.

The advantage to OTP is that the track changeover is very fast, less than half-a-second. The disadvantage is that the upper track can't be any bigger than the lower track.

The advantage to PTP is that the upper track can be bigger or smaller than the lower track. The disadvantage is that it takes a long time for the laser to reset back to the middle -- several seconds.

My recommendation is to use OTP - setting the break point is harder, but the overall performance of your DVD is much better.

Finally, while DLT tape has been the traditional means of mastering your DVD for delivery to replication, increasingly DVDs are used as source masters. For a single layer disc, all you need to do is burn your material to the disc and the replicator will make a copy of it.

However, as you might suspect, dual-layer discs don't make it that easy. Instead, you need to create a master using DDP (Data Description Protocol). While DVD Studio Pro supports DDP, it isn't easy to find, nor is it intuitive to select what you need to know to create it properly.

With that as background, let's take a look at the steps to creating a dual-layer DVD that are different when compared to a single-layer DVD. These fall into three areas:

- Creating a break point
- Creating the DDP master files
- Burning the DDP files onto a DVD

CREATING A BREAK POINT

Before you spend any time worrying about creating a dual layer disc, finish all the rest of your authoring. Because setting the break point accurately depends upon working from a completed DVD; by that I mean that you need to build the VIDEO_TS folder first.

For this example, I was working on a two-disk set on horse training, where each disc was a dual-layer disc.

To start, choose the **Outline** tab and select the name of your DVD -- its at the top of the list.
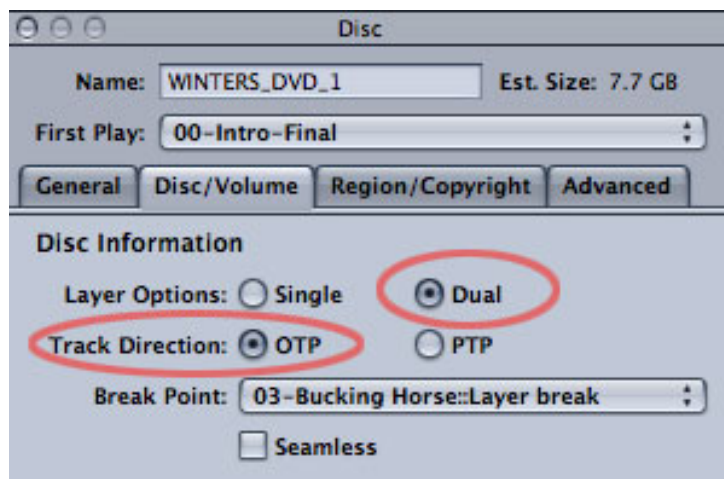
Then, in the Inspector, change the Layer Options to **Dual**. Make sure the Track Direction remains at **OTP** and don't worry about the Break Point pop-up menu quite yet.

> **Note**: Leave the Seamless option **UN**checked. Although this is *supposed* to allow smoother transitions between the two layers, in real life it causes more problems than it solves.

According to the DVD Spec, there are two rules that govern where a DVD changes layers:

- first, the lower layer (Layer 0) needs to be as close to 4.1 GB as possible
- second, the top layer can not be bigger than the lower layer

These are easy to state, but there is not an easy way to determine this without a lot of trial and error.

If your DVD has lots of chapter markers, you may be able to leave the Break Point pop-up menu set to **Automatic**. But, frankly, I don't think you'll be that lucky.

So here's one manual method:

- Calculate the total number of video minutes in your DVD.
- Figure out which track holds the half way point.

This won't actually help, but it will make you feel better. Instead, let's use DVD Studio Pro to help us figure it out. To do that, we need to burrow deep into the technical side of how files are stored.

1. Click the Outline tab to display the structure of your DVD.
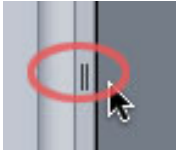
2. Grab the small two-line slider about half-way down on the right side between the Outline window and the Menu window. Drag the slider to the left to reveal a new column who's header reads "By VTS."
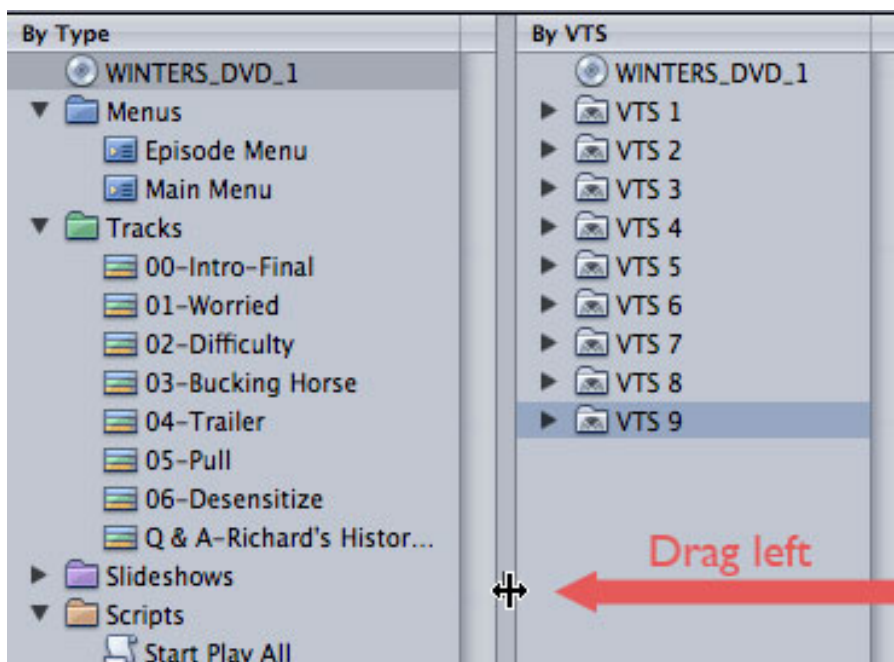
3. Video is stored in VOB's (Video Object Blocks) which, in turn, are stored in VTS's (Video Title Sets). Find the VTS that is closest to the middle of the list and twirl it down. The track listed in the middle VTS is where you need to put your Break Point.

> **Note 1** : A **Break Point** is a special track marker that tells the DVD player when to switch from the bottom layer to the top layer on your DVD. There is only one Break Point marker per DVD.

> **Note 2:** This method assumes that you have a reasonably full DVD. If you have a disk that has less information, you'll need to figure out, based on the list of tracks in the VTS column, which track is likely to fill the disc to the 4.1 GB level. That, then, becomes the track that holds the layer break point.

By VTS
- ⦿ WINTERS_DVD_1
- ▶ VTS 1
- ▶ VTS 2
- ▶ VTS 3
- ▼ VTS 4
  - 03-Bucking H...
- ▶ VTS 5
- ▶ VTS 6
- ▶ VTS 7
- ▶ VTS 8
- ▶ VTS 9
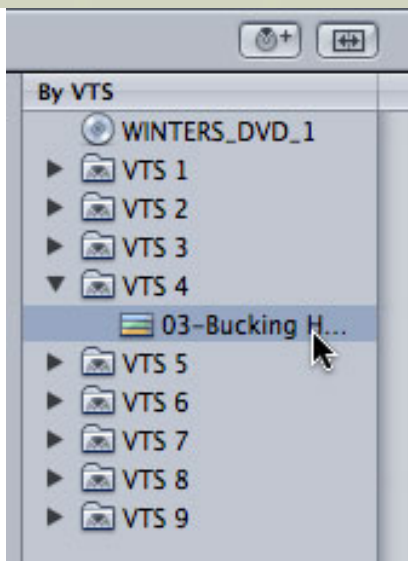
4. A break point should be set somewhere in a track where a half-second pause in the audio and video won't cause a problem for your views. I try to set mine at the end of a paragraph, when the action is fairly stationery. I'm not always able to use that point, but its always where I start.
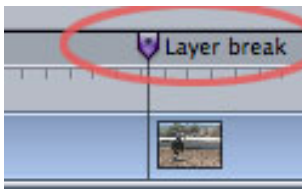
5. Put your timeline playhead where you want to set the marker and press the letter **M**. A standard green chapter marker appears at or near the position of your playhead.

Marker

Name: Layer break

End Jump: not set

General | User Operations

Marker Functions

Zero-Based: 00:43:56;03

Asset-Based: 00:44:11;05

Type: ☑ Chapter

☐ Button Highlight

☑ Dual-Layer Break Point   Save Still...
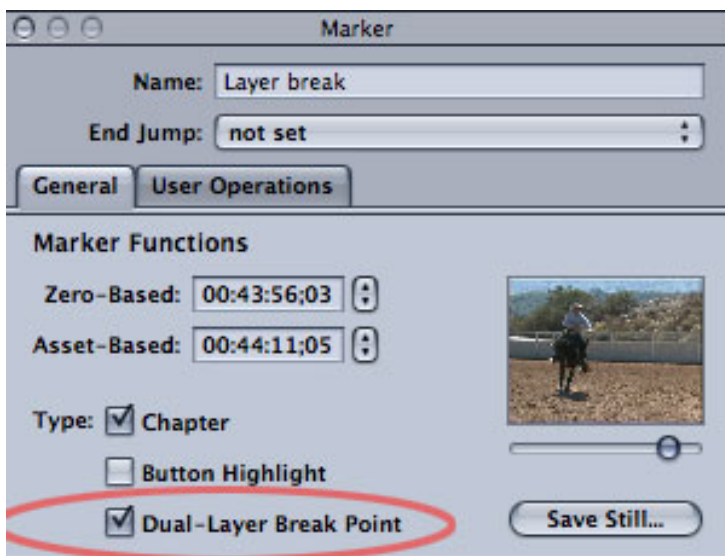
6. Click the marker to select it, then, in the Inspector, select the **Dual-Layer Break Point** check box. The color of the marker changes to purple with a heavy black dot in the center of the marker. This is now the point where your DVD changes layers.

7. If you select your DVD in the Outline tab and look in the Inspector, the Break Point menu now indicates the name of the track where your break point marker is set.

> **Note**: So far, this is really easy. The problem is that you won't know if your marker is set properly - remember those two placement rules I mentioned earlier? - until you build the DVD. This is why I always recommend getting all the rest of your DVD authoring done first. Setting a break point is always a process of trial and error and requires that all tracks and menus be completed first.

CREATING THE DDP MASTER FILES

In order to test whether your break point is set properly, you need to build your master file. In the process, you'll also build the DDP folders that the replicator needs to create the glass master disc for manufacturing.

To build the DDP master files:
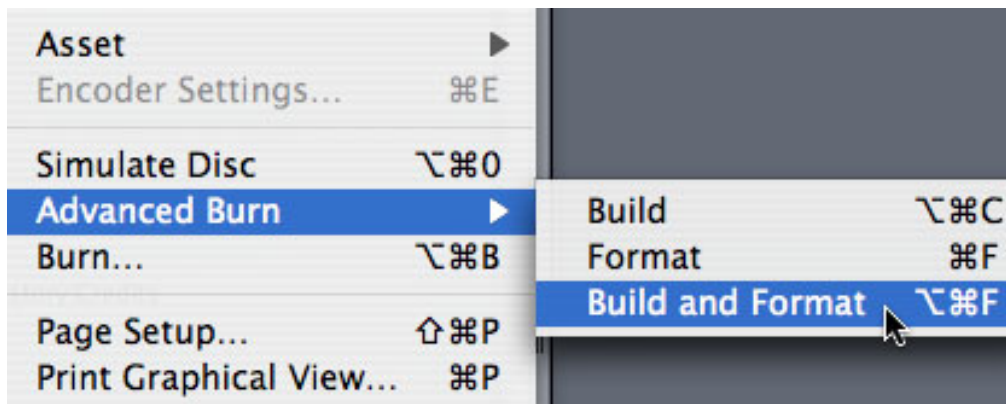
1. Choose **File > Advanced Burn > Build and Format**. You will be building four folders at this point:

- VIDEO_TS
- AUDIO_TS
- LAYER_0
- LAYER_1
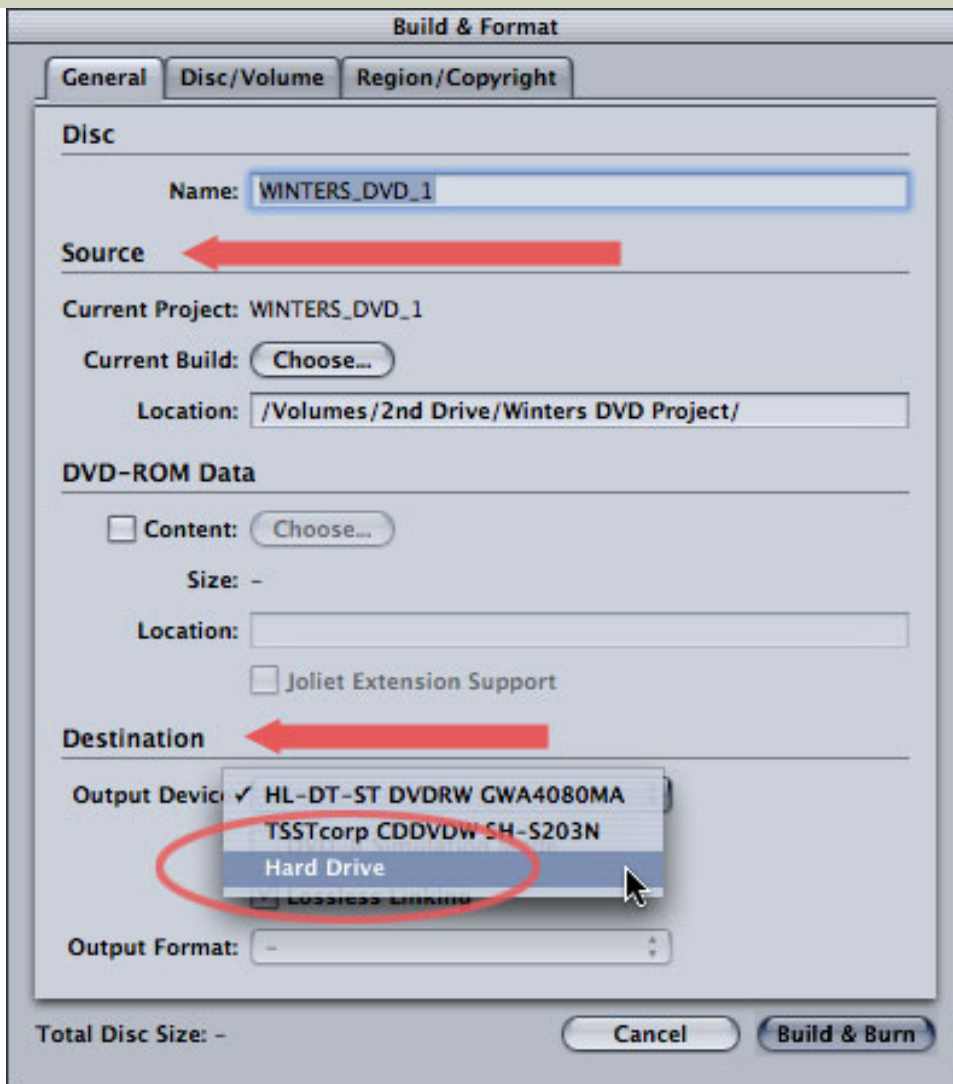
2. In the Source section, indicate where you want the VIDEO_TS and AUDIO_TS folders stored. I usually create a folder on my second drive, named the same as my DVD. Inside that is where I store the two _TS folders.

3. Then, since the Destination pop-up menu defaults to burning a DVD, I change the Output Device to **Hard Drive**.
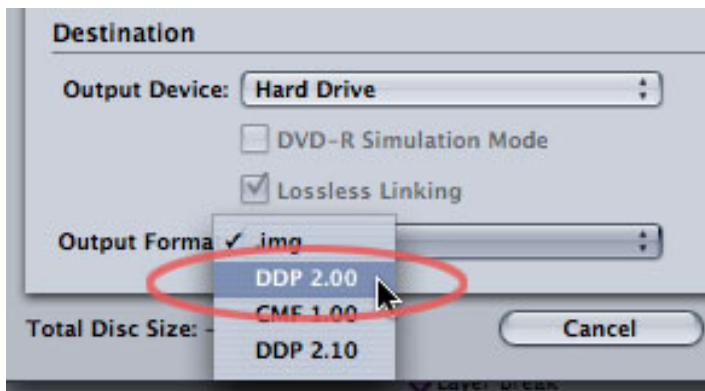
4. Here's a potential problem: check with your replicator to determine what DDP format they want. DiscMakers, for example, wants **DDP v2.0** files. This may vary by replicator so be SURE to check. Be careful not to select IMG or CMP.

5. A dialog will pop-up asking where you want the DDP folders stored. I generally put then in the same folder as the _TS folders - just so I know where they are - however, you can store them anywhere.

> **Note**: DDP files are ONLY for mastering, you can not play them on your DVD player. If you don't replicate your discs, you don't need to create DDP folders.

6. Click **Build & Burn** to create your files. This will take a while, so don't be impatient.

WHEN THE BUILD FAILS

Notice I didn't say "**IF** the build fails...."

When the build fails, you'll get one of two error messages. The first states that Layer 0 is too big. It exceeds the 4.1 GB limit. In which case, you need to go back to your break point marker and move it closer to the beginning of the track.
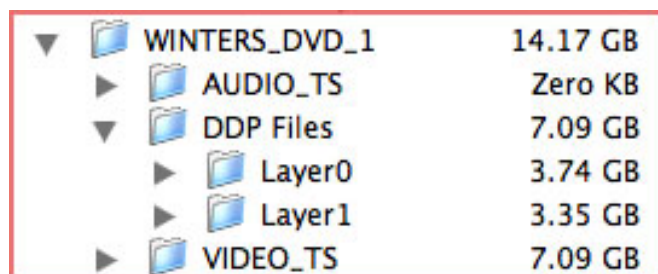
The other error message says that Layer 1 can't be bigger than Layer 0. (Remember, since the laser starts at the end of Layer 0 and spirals back to the beginning at the center of the disc, we have a limited amount of room here.) In this case, you need to move the marker closer to the end of the track.

After moving the marker, repeat the process of building your files.

This becomes a time-consuming balancing act to get the layer point exactly where both rules are met and you have a layer transition that doesn't totally destroy the flow of your movie.

It generally takes me four or five attempts before I get it right. When you get it right, no error dialogs appear and DVD Studio Pro happily builds all your files.

BURNING THE MASTER FILES ONTO A DVD

▼ 📁 WINTERS_DVD_1		14.17 GB
▶ 📁 AUDIO_TS		Zero KB
▼ 📁 DDP Files		7.09 GB
▶ 📁 Layer0		3.74 GB
▶ 📁 Layer1		3.35 GB
▶ 📁 VIDEO_TS		7.09 GB

When everything is done, you'll have a folder with the name of your DVD, with an AUDIO_TS, VIDEO_TS, and two Layer folders inside it.

The one thing you DON'T want to do is send your replicator a dual-layer DVD -- it won't work for a master. They will yell at you. It will be awful.

Also, according to the replicators I've spoken to, while DVD Studio Pro is excellent for creating DVDs, it is not a good choice for burning the masters. A much better choice is Roxio Toast. Specifically, the latest version of Toast - v.9.0.4.

That's because the DVD needs to be burned using the UDF file system (um, UDF is not Mac and not Windows - its Unix.)

So, after your Layer folders are created, open Toast and select **DVD-ROM (UDF)**. Drag the entire Layer folder into Toast and burn it. Don't rename anything.

Each Layer folder is burned to its own DVD.

Then, you ship the DVDs off to the replicator and sit back and relax - knowing that you've done everything possible to make your masters as accurate as possible.

> **Note**: There's one more thing you need to pay attention to, and that's the media you are burning your DVDs onto. Again, based on my own experience and the experts I've talked to, I recommend three brands: **Taiyo-Yuden**, **Verbatim**, and **MAM-A**. Never, ever, buy DVDs on price. The cost of the disc is nothing compared to the cost of losing your data.
>
> For more on this, see my next story on picking the right optical media.

LAST THOUGHTS

The process of creating a dual-layer disc was more complex than I expected. And it took a number of phone calls and false starts before I got it right.

Remember to finish authoring your DVD before setting your break point. And be patient, don't expect to get your break point setting right on the first try.

Oh, and one other thing. Talk to your disc replicator *BEFORE* you start creating the masters to be sure you are creating something they can work with.

UPDATE - Dec. 21

Uli Plank, a long-time reader and contributor from the Institut für Medienforschung added:

> While VOB's are limited to 1 GB in size, VTS's are not directly related to any specific size. One VTS can hold the whole movie on a DVD in a row of VOB's or there can be lots of small VTS's. So, it doesn't help very much to choose one in the middle. To take some of the guesswork out of finding a good layer-break and avoid multiple tries on time-consuming multiplexing, let DVD SP do some of the

work.

First make a duplicate of your whole project and work on that!

With your VTS list open and keeping an eye on the size of your DVD, start deleting VTS's from the end (they'll be arranged on the DVD physically in that order). When the size falls below the size for layer 0, undo the last delete. Now get into the timeline for that VTS and start pulling back the video from the end while watching the size again. You don't need to care too much about sound, since it's size is small in relation to the video.

When it gets below the layer 0 size, take note of that position. Start to look for a convenient layer- break (LB) point forward from there and set the marker. BTW, the marker doesn't need to be checked as a chapter marker as in your screenshot, it can be a LB only. You can set several potential LBs for DVDSP to choose from.

This method works pretty well with projects where video and audio are already encoded, as I'd typically do it for professional work. In most cases I don't need more than one try to get a valid LB.

While DLT is still the industry standard for DVD authoring, you can send masters for the two layers on separate Data-DVDs as you wrote, but I'd suggest to make duplicates for each layer (clearly marked as backups) if your deadline is close, for the rare case that even high-quality DVDs can't be read correctly at the replicator's plant. Plus, check with the replicator if they want DDP or CMF.

Larry replies: Uli, thanks for the additional information. Keep in mind that most DVD recorders can't create a CMF disc, that generally requires special equipment. Second, your approach assumes the size indicator is accurate. While I have serious questions about the visual thermometer in the toolbar, the size of the DVD as indicated numerically in the Inspector I've found generally accurate.

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HIGHLIGHTS FROM GV EXPO

This first appeared on my blog, but it is interesting enough to share with you here. (www. larryordan.biz/blog).

Note: By the way, if you haven't checked out my blog yet, feel free to stop by. I try to update it several times a week. You can also get it as an RSS feed.

The **Government Video Technology** Expo was held Dec 3 - 5, 2008, in Washington, DC. I was there covering the event for the Digital Production BuZZ - my podcast.

During the Expo, we interviewed something like 30 vendors to get a better idea of what we can expect in our industry next year.

You can see a list of all our interviews and shows here.

However, there were a few highlights that I want to share with you. First, because they didn't make our main show due to the press of deadlines. Second, because they discuss issues we work with every day. And, third, because it's nice to add audio to my newsletter.

PICKING THE RIGHT OPTICAL MEDIA

Kevin Towey, Regional Sales Manager for Microboards Technology. His company manufactures equipment for duplicating CDs, DVDs, Blu-ray Discs, even, to my surprise, USB drives. Anyway, during our conversation, we started talking about how to choose the best optical media for burning discs. I've been talking about this issue for a while, but Brian did such a nice job summarizing this, that I wanted to share it with you here.

If you need to make sure the discs you burn will play, you need to listen to this short interview.

> **Note**: Once the clip loads into your browser, you may need to press the RETURN key to start playback.

> Click here to play Brian's audio. (TRT: 1:29 768 KB)

THOUGHTS ON THE LIFE-SPAN OF MAGNETIC TAPE

As long-time readers know, I've been looking for ways we can safely store tapeless media for long periods of time.

Spectra Logic makes equipment for archiving servers and media. More specifically, they make LTO tape drives, which are my current favorite for backing up tapeless media.

Hossein ZiaShakiri, vice president of business development and alliances for Spectra Logic, chatted with me on my podcast - Digital Production BuZZ - about the best way to back up media, the software necessary to do so, and what kind of equipment to consider. However, toward the end of the interview, our discussion shifted to the life-span of magnetic tape.

Again, this is a short quote, but I think you'll find it interesting, since it comes from an individual with a lot of experience in making sure the data you put on the tape is able to be successfully played back.

> Click here to play Hosssein's audio. (TRT: 0:30 600 KB)

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PLUGGING THE BUZZ

If you haven't listened to the **Digital Production BuZZ** yet, click here to see what we have coming up this week.

We cover the full spectrum of digital production, post-production, and distribution. From first concept to making money. We air a new show every week - Thursdays at 6:00 PM Pacific time. Shows are archived and found on iTunes and our website.

> Click here for a listing of what's on this week's show.

> Click here to visit our archives.

> Click here to read the latest industry news.

I'm very proud of this show - the quality of our guests and the depth of our interviews make it unique in the industry.

Take a listen and <u>let me know what you think.</u> As always, I enjoy hearing from you.

[<u>Go to Top.</u>]

THOUGHTS FROM TRAINERS ON TRAINING

I had an idea a few weeks ago that I want to share with you.

I've had the pleasure of listening to or training with some truly outstanding software trainers. (I've also listened to some pretty lame ones, too, but we'll ignore them for the moment.)

The problem is that since trainers work alone, its hard to improve your skills.

So, I decided to start a series of interviews with outstanding trainers to learn what they do and what others can learn from them.

The first three interviews are complete and if you are interested in training, or improving your training skills, you'll want to listen to these.

Matthew Geller is a lead trainer for Apple, specializing in Final Cut Server and XSAN. He started is career as an actor, but in spite of that, no one does tech better than Matt.

Mary Plummer is another lead trainer for Apple, specializing in Final Cut Studio and Soundtrack Pro. She runs her own training company in Florida.

Steve Martin has probably trained more Final Cut trainers for Apple than just about anyone else on the planet. Steve was the person who suggested to me that I get certified to be a Final Cut trainer -- a piece of advice for which I am totally grateful.

Each interview runs about fifteen minutes.

<u>Click here to view a list</u> of our "Trainers on Training" interviews.

I hope you enjoy them - I had fun putting them together.

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NOTE: QUICKCLUSTERS ARE NOT YOUR FRIENDS

Compressor 3 supports two types of computer clusters to speed video compression: cluster of multiple CPUS inside one computer and clusters of multiple computers.

My advice is to avoid multiple computer clusters unless you have a VERY fast network and all your media is on shared storage.

I've been reading articles recently which detail the woes people are having trying to set up QuickClusters between multiple computers. Frankly, the speed just isn't there.

A much better choice is to create a cluster using all the CPUs in your computer. Here's an article I wrote recently that shows you what you need to know about speeding up compression on your own system.

UPDATE - Dec. 17

Lorin David Schultz, though, was confused:

> When you wrote: "You use System Preference to create a Virtual Cluster and set the number of instances to 50% of your processors..."
>
> Why 50%? Why not 100%, or at least 7 of the available 8?

Larry replies: Lorin, good question. If you are only using your system for video compression, you can assign as many processors as you want. The more you assign, the faster it will compress.

However, if you are using your computer for other tasks, assigning more than 50% of your processors will significantly slow down all the other work you are doing on your system.

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LARRY HAS A NEW BOOK!

My third book has just been released by Peachpit Press entitled: **Edit Well - Final Cut Studio Techniques from the Pros.**

What we did is take the best from over two years of Edit Well newsletter articles and recompile them in a book. Every article in the book can make a significant difference in your understanding of how to make the most of Final Cut Studio.

Peachpit describes it this way: *Edit Well: Final Cut Studio Techniques for the Pros* is the book that in-the-trenches editors have been waiting for. It offers a holistic approach to using the tools in Final Cut Studio for those who are responsible for a variety of tasks just beyond straight editing.

Written by the preeminent experts and practicing professionals in their fields, contributors include over 15 authors such as **Larry Jordan**, **Kevin Monahan, Mary Plummer, Mark Spencer, Tom Wolsky**, and **Alexis Van Hurkman**. Each chapter features insight on a particular tool in the Studio, whether it be Final Cut Pro, Soundtrack Pro, Motion, or Color. In addition, video tutorials and audio interviews of top Final Cut Pro editors around the world are available for free on the companion website.
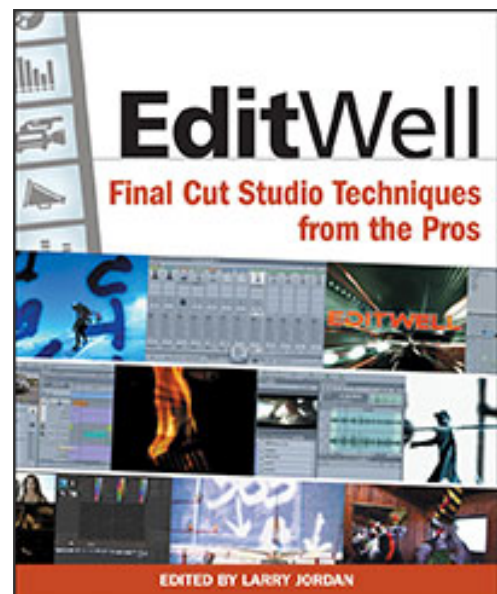
You can **save 35%** if you buy it directly from Peachpit Press and enter this discount code: **EDITWELLBOOK**. Here's the link.

It is beautifully illustrated in full color with hundreds of screen shots. 336 pages.

READER MAIL

IMPROVING EXPORT QUALITY

Paolo Raho sent in a question I've been getting a lot recently:

> I'm very familiar with all of your tutorials, and I know for the highest quality it is always recommended to export the sequence under the settings in which the footage was shot and captured. I was reading a couple of forums lately and they were discussing the idea of exporting a DV sequence as 8 or 10 bit uncompressed; a process that would yield a higher quality image, specifically for text and graphics. I wanted to get your opinion on this, whether there was any truth to it.
>
> And one other question along the same lines, let's say I have shot and captured in DVCPRO HD, and exported a sequence under the same settings, has my exported movie suffered any quality loss, or has it remained identical to the captured footage? That is to say, does exporting, even under the correct settings, result in an quality loss?

*Larry replies:*Paolo**, Damon Jamal** echoes your questions with his own:

> Can you explain:
>
> 1) why when exporting using animation or prores the resulting quicktime movie looks better and
>
> 2) why that doesn't matter?
>
> Also you wrote to export as quicktime using current settings but if your sequence is set to prores (for example) then wouldn't that result in what I wrote above in #1?
>
> I'm just a little confused, so I would appreciate it if you can shed some light on this...

Larry continues: Here's the basic problem. As Martin Baker describes in the Update below, on many systems DV is SAVED at high-quality, but not DISPLAYED at high-quality.

DV Exported

Animation Exported

Here is an example. The image on the top is a portion of an exported DV clip displayed in QuickTime, the image on the bottom is the same portion using the Animation codec. Clearly, at this level, the Animation codec is FAR superior.

DV Compressed

Animation Compressed

But, let's run both of these through Compressor and check the compressed images. Now, the two variations look very, very similar. (Both of these sets of images were further compressed into JPEG from Photoshop using the Maximum quality setting. - so some additional quality loss has occured.)

Again, the difference is that DV requires a hardware chip for high-quality display in real-time. Compressor contains all the necessary algorithms to properly compress the image, but it can't do so in real-time. For this reason, be sure to make your quality decisions after a file goes thru

compression, and not before.

So, to answer your questions more specifically:

> 1. Is it better to export as 8 or 10 bit uncompressed? My feeling is that if you are shooting DV, no. If you are working with 8-bit or 10-bit source material - yes. The problem is that DV does not display at high quality on a Mac monitor. For this reason, people assume that the video is poor quality. This is a display issue, not a video quality issue.

> I've done a test where I export DV footage using the Animation codec - the highest quality SD codec on the Mac - and the DV codec. I compressed both and compared them. To the eye, the compressed versions were identical. The intermediate versions looked significantly different - DV looked far poorer than the Animation codec. But after compression they looked the same.

> 2. Does DVCPRO HD change? Well, that depends. If you are adding effects, transitions, or something requiring rendering, then, yes, the video is being altered from its original state. On the other hand, that's why you applied the filter in the first place. As to whether that's a quality "loss" that depends on the filter you added - I would suggest that a color correction filter, properly applied, will make the clip look better.

If you are simply putting the video to the timeline and not adding effects what you get out is the same as what went in.

UPDATE - Dec. 18

Martin Baker, from Digital Heaven, wanted to clarify this a bit more, so he wrote:

> It's not a lack of hardware that causes the softness, it's historical reasons. When DV was the new kid on the block and Macs were way less powerful than they are today, QuickTime Player decoded DV at half res to reduce the amount of processing required. Apple did this by adding a "High Quality" playback flag to the DV video track and disabling it by default when exporting a movie from FCP.

> - High Quality disabled = half res
> - High Quality enabled = full res

> Most people freaked out when they saw their videos looking soft but weren't aware this is purely a playback issue inside QuickTime Player and isn't connected with the quality of the export. The DV file is full res, which explains why recompressing it to another format gives the same results as Animation codec.
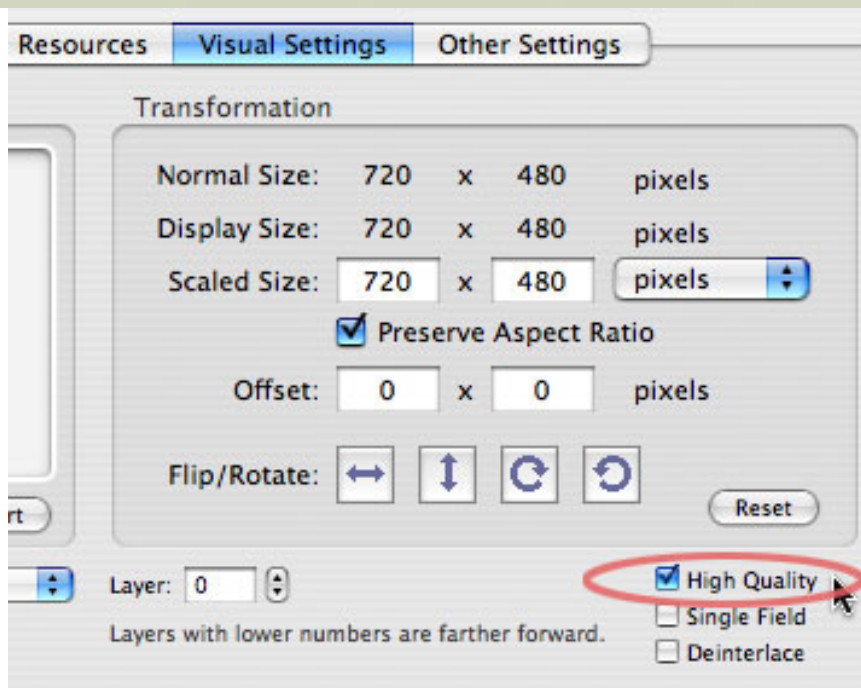
The old "fix" was to enable the flag manually by opening **Window > Movie Properties**, or typing **Command+J**, selecting the Video Track, and checking the "High Quality" checkbox inside Visual Settings tab.

When Apple released QuickTime Player 7, they added a preference (**QuickTime Player > Preferences > General > "Use high-quality video setting when available"**). If this is enabled, then QuickTime Player will override the flag in the movie and always play DV movies at full res.

Larry continues: Thanks, Martin, for the update. The only point I want to add is that in most systems I see, this High-Quality default is turned off -- which probably adds to the confusion. And thinking of preferences, Ben Balser wrote in with another that we need to pay attention to.

UPDATE - Dec. 20

Ben Balser, from the South Louisiana Final Cut Pro User Groups, added this:

To add to the discussion about QT Player's video quality settings for playing back video, there's also this preference folks should look for. I've found many of my User Group members complain about color shifts between the QT version and the FCP versions. Here's how to fix it. By the way, I'm running QT Pro 7.5.5.
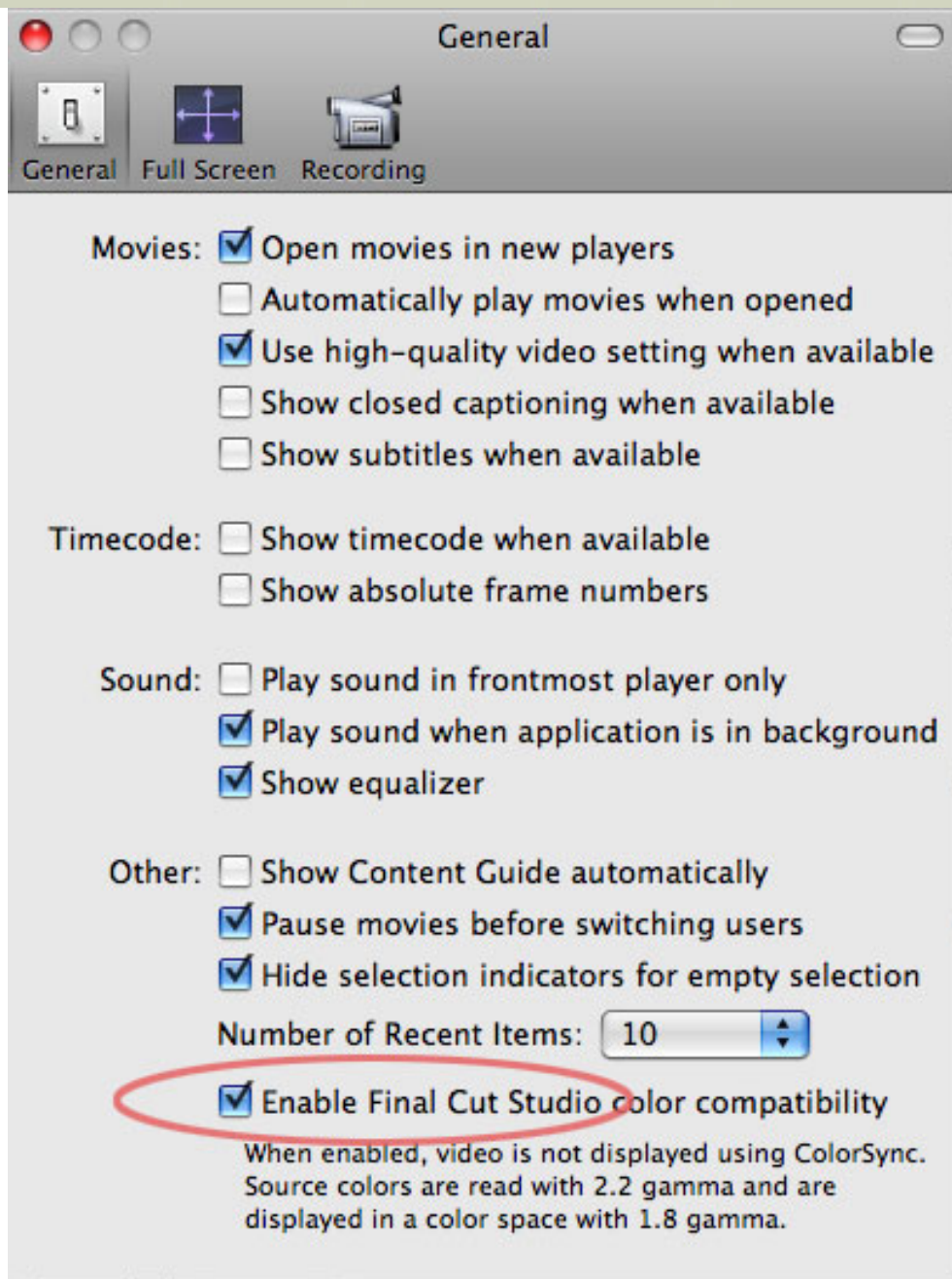
In QuickTime Player go to the "QuickTime Player" menu, to Preferences, in the
General settings, at the very bottom of this window, make sure the last setting,
"Enable Final Cut Studio color compatibility" is also checked off, as QT Player
uses a different gama than FCP does.

Larry replies: Thanks, Ben and Martin, for these updates.

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THE DREADED ERROR 34

Simon Miller, of Plainview, NY, writes:

OK. I give up. What's causing Error 34 whenever I round-trip to Soundtrack Pro?

What do I do to get rid of it?

Larry replies: Simon, Error 34 is scary, but not life-threatening.

According to Apple's Support website, Error 34 occurs when your hard disk is full. This can be caused by the disk being too full, or the settings in **Final Cut Pro > System Settings** for Minimum Free Space are set higher than the total free space on your hard disk.

In short, you either need to remove files from your hard disk, or reduce the minimum free space requirement in System Settings.

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WHEN IS ANALOG REALLY DIGITAL?

Ashish Guliani, from Delhi, India, writes:

> Sir, I have a question popping in my mind for last couple of years and i couldn't find an answer.
>
> My question is .. since we all know what an Analog video and Digital video is and what are the differences between the two, DigiBeta, DV Cam / DVC Pro are very much digital formats but they record just like analog format, i mean when we shoot with DigiBeta or DV Camera its the tape which is recorded through the magnetic head of the camera just like in analog even the player and recorder, its the same process.
>
> Normally digital camera's these days captures straight on hard drive but how Digi Beta and DV cam's are called Digital when they have same old magnet tape ?

Larry replies: Ashish, this is a great question!

And the answer is that recording to tape does not make a video signal analog. For instance, your hard disk records information magnetically, yet no one would suggest your hard disk is an analog device.

Similarly, computer servers around the world are backed up every night to magnetic tape, yet, again, no one would say that we are converting the data stored on our servers to video.

No.

It is not the magnetic recording that makes a signal analog or digital. It is the information IN the signal that makes the difference. With DigiBeta, DV, DVCPRO, and other digital formats, the data being recorded onto the tape is a series of ones and zeros. Digital DATA in a magnetic signal.

With VHS, Hi-8, Beta SP, we are recording a series of signal fluctuations, similar to a quickly-changing audio waveform, rather than digital ones and zeros. Because this analog signal is not as precise as digital, the signal has more noise or error in it.

Hope this helps.

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COMPRESSING FOR YOUTUBE

Sam Shirakawa writes:

> I have exported a project from FC to compressor, which in FCP is formatted
> Broadcast 720 x 480. I am trying to send it to YouTube, but the image looks
> squished. When I have sent the same project to YouTube using Quicktime, the
> letterbox image ratio in YT is the same as it is in FC, but the quality is awful. I want
> to use Compressor because I want a larger file to send to the YT server, but this is
> giving me major agita. I would appreciate it much if you could tell me how to fix
> this or direct me to a tutorial.

Larry replies: Sam, thanks for writing.

Brian Gary has formed an entire cottage industry around explaining how to compress for
YouTube.

Ken Stone has published a series of tutorials that you will find very helpful, as Brian does a great
job of explaining the process.

Here are the links to take you where you need to go.

> Part 1: **YouTube Encoding - Locked and Reloaded**
> http://www.kenstone.net/fcp_homepage/you_tube_redux_gary.html
>
> Part 2: **Encoding for YouTube Part 3... HD Strikes Back**
> http://www.kenstone.net/fcp_homepage/you_tube_hd_gary.html

Thanks to Brian and Ken for making these available.

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CREATING 14:9 TITLE SAFE IN A 16:9 IMAGE

David Smith, from Glasgow, Scotland, writes:

> I've had a question from a delegate who is asked at times for 16:9 with a 14:9 Title
> Safe. I cant think of a way of doing it other than bringing in a layer with a 14:9 Title
> Safe illustrated from Photoshop or similar and adjusting it's opacity in some way?
> Any suggestions?? Can you adjust the Title Safe in Final Cut or is it defaulted to
> the sequence settings?

Chris Roberts, from somewhere near Birmingham, England, responded:

> Your answer is here - http://www.digital-heaven.co.uk/fcplugins/dh_widesafe.php -
> courtesy of Martin Baker and Digital Heaven!

Larry adds: If you haven't checked out Martin's website, you owe it to yourself to do so. He has
some wonderful toys: www.digital-heaven.co.uk.

UPDATE - Dec. 17

Elliott Mitchell had a question:

> Title safe and action safe areas are a consequence of over-scanning in an analog TV receiver. I might be wrong, but I wouldn't think that there's any overscan in digital imagery presented on digital, flat screen screens. So as we move to our all digital future, will those safe areas just be artifacts of the past?

Larry replies: If all you use are LCD or LED displays, you are correct. However, there is a lot of rear-projection HD, as well as front projection HD, which still has to deal with overscan. For this reason, its too early to start taking text all the way to the edge.

Title and Action Safe will be a fact of life for a significant while longer.

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HEY, BUDDY! KNOW A GOOD SUBTITLER?

Simon Morice writes:

> The prospect of typing in ten zillion accurately spelled and ordered words for subtitles fills me with dread but I can ameliorate it somewhat by using Dragon Dictate for the English version at least. And I have tame Russian, French, German and Portuguese native speakers who are happy to translate for me. But how to handle all those translations and what document format is best? Is there a software solution? Where to start?

Larry replies: Ah - the answer is knowing where to look. **Bruce Nazarian** sent me the answer: VideoToolShed SubBits Subtitler.

Very cool.

UPDATE - Dec. 17

Andreas Kiel, from Spherico, sent me the following:

> Here some notes about subtitling. The big question here is what is a "good subtitler" - a company, a software, a plugin?
>
> [VideoToolShed's] SubBits is a great - maybe the best - tool to setup subtitles for one language - to setup subtitles for several mixed languages is another theme and mostly a tedious work - subtitles are tedious work anyway.
>
> It is quite difficult to handle for example a "multi-language" movie where let's say three languages are spoken. For subtitles for language 1 you only need language 2 and 3 as subtitles. This will be similar (with other numbers) for the other languages. For language 4 you need all of them.
>
> So these titles have to have to be organized somehow. A good way of doing that is do build a FileMaker Pro data base or something similar in Excel. But this only is organizing them.

What to do with the translators? They need a movie with sound or a sound only file and hopefully a transcript with timecode or a dialog list to do the translation. To interchange with many languages a "tab text" format might be the best idea - so you can add a translation to your data base where it is needed and do have the language you need in a column and hopefully the timecode for it as well.

All of this can be done more or less easily for the final cut of a movie but will put you into some kind of time pressure - especially if it turns out that the final cut is not the final cut.

So in my opinion subtitling starts at the beginning of the production. Final Cut Pro does allow you to do this as you can set markers on a clip where a subtitle should appear - just give the marker a unique language name. This way the "virtual subtitles" will travel with your edit. To set up this kind of workflow it needs a bit of additional work.

Anyway it's definitively worth to mention my TitleExchange which does allow to juggle with many of these subtitles formats to get them in and out of the Final Cut Studio applications for several kinds of use.

The app doesn't allow to set up title timing or render titles like SubBits or the BelleNuit app does - it's just XML and text based. This approach allows to set up the titles in many apps and platforms - you can for example use the free version of BelleNuit to create the timing, then save the file file and "map" it to the text generator of your choice in Final Cut Pro. There you can do whatever kind of changes to the titles - export them them as XML and convert them for example to "Digital Cinema Projection" which will allow independent producers to have "language packages" for digital cinemas without the cost of "burned in" subtitles. You can transfer those titles to DVD SP as well and back from there. Lot of options.

As a note: One of the big players just bought some licenses of TitleExchange, and bought some Apple FCP stations to run TitleExchange - they only do subtitles with these Macs. Their film work is done on Avid and other apps on PC.

Larry replies: Thanks, Andreas, for the detailed reply. I'm happy to share your comments.

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IS THERE SUCH A THING AS TOO MUCH RAM?

Steve Mittelberg writes:

Getting back to some basics on configuring a G5, would increasing the RAM enable faster rendering of multiple streams of video with effects? Does the RAM need to be replaced in matched pairs? Would updating the graphics card enable faster rendering times? Would a RAID system be essentially useful only for backing up or would it also increase performance time when rendering. The Drobo seems like an excellent solution for a quick and easy backup solution. You didn't seem to think it would increase speed in editing. Thanks for your feedback.

Larry replies: Wow! What a lot of questions....

Let's tackle these one at a time:

1. Does more RAM speed rendering? The sweet spot for RAM for Final Cut Pro is about 2 GB. Assuming you have that much, adding much more won't make rendering go any faster.

2. Does RAM need to be replaced in matched pairs? Yes for towers, no for laptops.

3. Would updating the graphics card speed rendering? No. Though Apple is hinting that will change in the future.

4. Would a RAID help in backing up or performance? RAIDs are designed for fast storage and performance. They have no impact on rendering.

5. Is Drobo a good choice for backups? Yes.

5a. Will it increase editing speed or rendering? No.

5b. So, then, what WILL speed up rendering? A computer with a faster CPU.

5c. How about....? Nope, just a faster CPU.

UPDATE - Dec. 17

But, **Willard Jensen** then added another question:

You make it sound that 2 gig is optimum for FCP. But when running FCP alongside with Motion, for master templates, and even FCSvr. Don't you need mote that that? And is it true that one should double Ram so either 1,2,4,8 or 16 and that anything in between could be counterproductive?

Larry replies: Well, if you insist, I'll modify my comments to this:

Changing RAM size does not affect render speed. FCP does not address more than 4 GB of RAM. However, having more than 4 GB of RAM will help when you are running multiple applications at the same time as that will minimize the amount of material that needs to be paged to and from your hard disk.

I don't think there's any significant performance benefits to increasing your RAM in multiples of 2, thus, "doubling" RAM.

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AUDIO IN DVD STUDIO PRO

Jennie Reinish, from Tidepool Pictures, writes:

Just read your most recent newsletter, and its so valuable, as always! I have definitely been a victim of this economy, seeing clients dropping so fast I am stunned.

Anyhow, here is my question, and this has been bugging me for a long time, I should have asked you a year ago! When I create a DVD in DVD Studio Pro, I have already adjusted all the audio Final Cut on the video files. If I add audio to

the menu on the DVD, it is always louder than the audio on the video tracks. I have tried everything I could think of to adjust the volume, but it hasn't worked. So... how can I adjust the volume on the song/audio file that's on the DVD menu???

Hope you have an answer!

Larry replies: There is no way to adjust the audio of a clip in DVD Studio Pro. If the levels need adjusting, you'll need to load the clip into Soundtrack Pro, Final Cut Studio, or ProTools, adjust the audio level there, then re-export it.

Thanks for the kind words about my newsletters - I'm glad you find them helpful. And I'm keeping my fingers crossed for ALL of us that we come out of this economic downturn successfully!
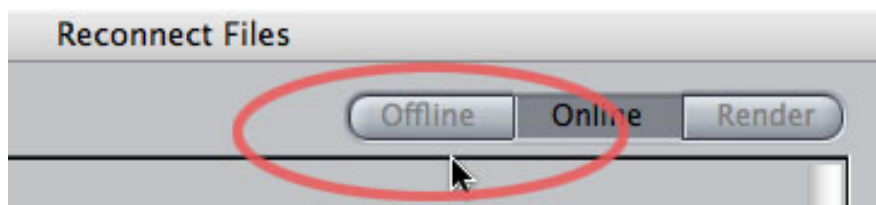
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LEE'S QUICK TIP #1

Lee Berger sends in the following tip:

Yesterday a friend of mine told me a tale of woe. 1,000 DVDs duplicated and the client discovers a few seconds of "Media Offline". Of course watching the program carefully is the best way to check for errors, but sometimes if you blink or look away for a moment you can miss something. This is especially true if the program is long and you are tired of looking at it. I recommended using the Reconnect Media function.
Right or CMD click the Sequence in the bin and choose Reconnect Media.

In the Reconnect Files window you should see any missing files or renders.

Larry replies: Lee, this is a great tip. Select all the clips in your sequence and choose **File > Reconnect Media**. If there are no clips offline, the Offline button will be gray.

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LEE'S QUICK TIP #2

Lee Berger, who obviously has WAY too much free time, then sent in a second tip:

I noticed that one of your recent tips suggests the normalize filter as an alternative to stacking audio tracks to fix low audio. Another approach is to use the AUDynamicsProcessor filter which has a Master Gain slider. This filter allows a great deal of gain adjustment on the fly. Also some audio may benefit from judicious application of compression.

Larry replies: Thanks, Lee!

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CHANGING LOCKED FILE NAMES

Steve Griepp writes:

> Hi Larry, when I went into the finder to change the name of a file it wouldn't let me. I couldn't add any letters or take any away. What is the problem?

Larry replies: Generally, this is because the file is locked, preventing changes -- or it is open somewhere.

Make sure the file isn't open in an application, then, select the file.

Type **Command+I** and the Get Info dialog appears.
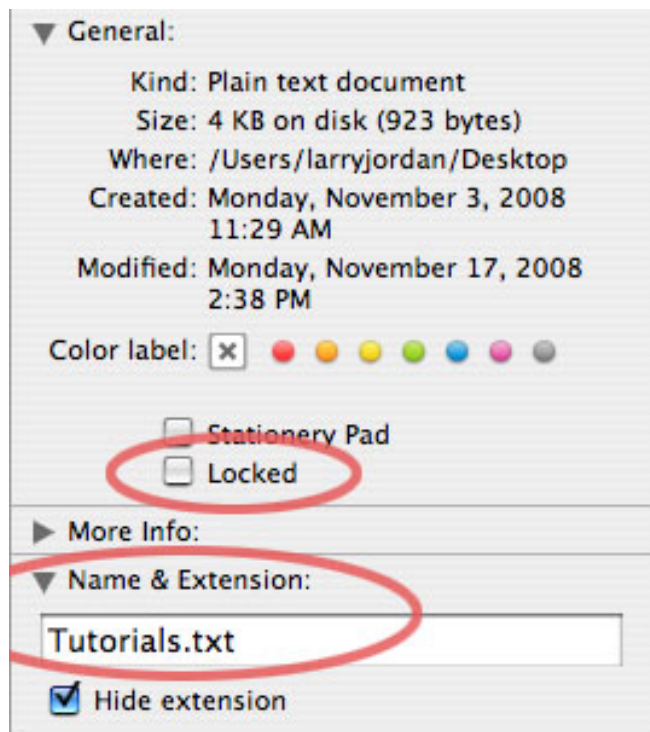
Make sure the Locked checkbox is **not** checked, then enter your new name in the Name & Extension text box a little lower in the window.

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USING MULTICLIPS IN COLOR

Karl Arndt sent in the following:

Larry, just an update regarding the Multi-cam/multi-clip/Color problem: As of now, multi-clip sequences are not supported in Color. Hoping Apple will address this as the relationship between Multi-cam and Color would be huge. I'm depressed this morning with all the additional work that will be necessary to complete this project.

Larry replies: Thanks, Karl, for this update.

UPDATE - Dec. 17

Shane Ross read this and sent the following:

Why would anyone want to have multiclips in Color? The whole point of color correction on that level is that you are done. Picture is locked and you are color correcting now. You no longer need to have the other angles at your disposal. If you still do then you don't have picture lock and you are not ready for color correction.

Are they wanting to do some sort of preliminary color correction before they cut? Then use the 3-way. I understand that the settings you have on the 3-way (one layer of 3-way only) carries over to Color.

Either way...the guy has to think of color as a final step in the process, not one at the beginning. Collapse the multiclips, then send to Color.

Larry replies: Shane, thanks. This seems like a much better way to work.

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FREE STUFF

Jon Thorn, at AJA Systems, followed up on a recent article talking about ways to calculate the speed of your hard disks.

AJA provides a great free utility called the AJA Data Rate Calculator that you can use to determine how much drive capacity is required for working with a selected format and a given amount of footage. The application also shows you the data rate for a given format. To determine if a drive solution has sufficient performance to support a format, AJA also offers the AJA System Test for benchmarking storage.

Both the AJA Data Rate Calculator and the AJA System Test are freeware and can be downloaded form our website. In fact many of the storage manufacturers use our benchmarking application in their testing and even their advertising!

Larry replies: Thanks, Jon. The AJA website is: www.aja.com.

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MORE COOL ARTICLES

I'm behind in sharing this with you, but **Allan Tépper** from the Pro Video Coalition, sent me the following:

> Here are two new video articles I just published which may be of your interest or for your readers:

When to edit native, When hybrid, When pure i-frame, and Why.

> Prior to FCP 6.0, in order to have real time editing we had to convert all footage to the target format (codec, frame rate, resolution, etc.) before editing… or edit natively. Now editors need to decide, on a case-by-case basis, whether to edit native, hybrid, or pure i-frame.

> Read the article here.

When 25p beats 24p

> There are many times when it makes more sense to shoot and edit video at 25p than at 24p, regardless of the final frame rate(s) to be delivered to various distribution formats, even if you live in an NTSC (or ex-NTSC) country.

> Read the article here.

UPDATE - Dec. 21

Andreas Kiel, from Spherico, points out a potential problem with this approach, however:

> I read this article "When 25p beats 24p…" and I somehow totally agree as I've done several movies using this method.

> But there is one big thing which can make this whole method useless - artificial light. This is (after all the cams and formats become more international) the "old thing we can rely on". PAL countries do have 50Hz NTSC will have 60Hz.

> With my scientific work I have to use a NTSC 30P FPS setup since the projection systems rum at that speed, but is a nightmare to correct all the traffic lights which run at 50 Hz AC here as they are switching on and off in the recorded video. Same could happen with 25P in NTSC lands.

Larry replies: Thanks, Andreas.

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COMPOSITING CONUNDRUM

Dick Osso sent me the following:

> I have an image that is basically a commercial product that has a decorative frame. I want to load it into FCP and add an image or clip inside the frame.

> This image loads into Photoshop and shows the transparency inside the drop in frame area.

When I load this into Final Cut Pro, it does not load with it the transparency within the image!

What happened?

Larry replies: Here, **Ken Stone** came to the rescue. Here's Dick, again, with an update.

Ken took my files and discovered that the fix was to change the Alpha Type to 'Straight' and not use COMPOSITE ALPHA. It then worked. I thought I'd pass on the fix to you in case you were going to try from your busy day.

Larry adds: Thanks for the update. The alpha key is controlled from an unusual place: **Modify > Alpha Type**. If you ever have problems with a key, especially one created in either Photoshop or After Effects, changing one of these settings will often solve the problem.

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BLACK SIDEBARS

Denny Goodrich, from Iowa State University, writes:

We are shooting DV and in FCP I am using a DV timeline. The Media 100 would be 720x486. We noticed that whenever we encoded something for web there would always be little black bars on each side. After getting clued in to this, I notice that there are, indeed, very narrow black bars left and right. Why should this be? The material I get from the Media 100 are QuickTime movies that have been cropped to 720x480, but these black bars appear here, too. Our current work around is to blow everything up to 102-percent, but I really don't like to do this.

Larry replies: Denny, please, for the love of humanity, DON'T enlarge your video image past 100%. That's just wrong!

Those black bars called, I believe, horizontal blanking, are a part of every DV frame. It is designed to allow the electron beam in a CRT to switch from one side of the picture tube to the other.

If you want to get rid of them, crop your image 2-3% during compression. Or leave them alone. You'll never see them on a TV set and most people won't notice on video posted to the web.

But get rid of them during compression, not by enlarging your image during editing.

UPDATE - Dec. 21

Uli Plank adds:

While enlarging vertically would be wrong (and very bad in case of interlaced video), enlarging horizontally only is correct for square pixel displays.

You are right about blanking, and digital video is meant to be 702 pixels wide (plus 9 pixels of blanking on both sides). This size will contain the full 4 by 3 or 16 by 9 image! TVs take this into consideration.

So, if you crop, your image will be ever so slightly squeezed from the sides on square pixel displays. Adobe has changed it's attitude towards this issue recently (check out AE in CS4), while Apple still insists on digital video being 720 pixels wide…

Larry replies: Thanks, Uli. Except, if the cropping is done during compression and you take the revised dimensions into account for your final image size, the web will display it properly. Clearly, you would never crop if your goal was to put the material on a DVD or broadcast.

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A REQUEST FOR APPLE

Bob Cusumano, from Boston, writes:

I was working in FCP and was using a master template from Motion. I chose 'open copy in editor' to work on the fonts in Motion. Could you write your friends at Apple and ask them if they might include a 'replace this font throughout template'. this way we don't have to go in and change each title if there are, three, for example.

UPDATE - Dec. 21

Andreas Kiel, from Spherico, has a different opinion, however:

I'm not Apple and I don't think Apple needs to change anything in this case.

If you use the master templates from Motion in the generators [menu] you should open a copy in Motion if you want to change one clip. If you want to change all [iterations of this template] open the master file - [this] could be dangerous if you used the master with other projects.

I made a simple tutorial some time ago how to use Motion templates for subtitles: http://www.spherico.com/filmtools/TitleExchange/MotionTutorial/index.html

Larry replies: Thanks, Andreas. I agree with your thoughts that changing the Motion template in Motion would allow Bob's font substitution to occur.

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FIXING PROBLEMS WITH A JVC PROHD CAMERA

Mark was having a problem with a JVC ProHD camera continuously disconnecting from his system.

He wrote in saying "The Belkin External AC Firewire Hub solved the disconnect with the JVC-PROHD Camera on the MAC Tower."

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PROBLEMS WITH FREQUENT CRASHING

Frank Jonen sent in the following:

> I just traced this bug an hour ago and could verify it via a few twitter followers.
>
> If a Final Cut system or Photoshop (or both) is crashing often or becoming very slow at seemingly random times check if a process called Nalpeiron is running. While it behaves like a trojan horse virus in the amount of outgoing traffic and random system blocks (8 cores at 90% for 30 minutes) it is just a vile copy protection scheme.
>
> So far I haven't found the files yet on my system since they're hidden with what seems to be a root kit. When I find a way to safely remove Nalpeiron I'll post it.
>
> The applications that are known to infect systems with it are:
>
> > - Tiffen DFX series for Photoshop and Standalone
> > - Tiffen DFX for Final Cut
>
> The only workaround I have so far is right after the system starts to go into Activity Monitor and force quit the Nalpeiron process. But then if you need one of the Tiffen apps you'd need to reboot. Not favorable.

Larry replies: Thanks for letting us know. If this problem has been fixed, please tell me so I can update this article.

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A GLIMPSE OF THE FUTURE

Simon Morice, from London, sent me this:

> I came across something I think may find its way into the TV landscape one way or another. Millicent is a sort of DTP system for broadcasting TV which can output to HD/SDI as well as web. Apparently it's been trialled at the BBC and Channel 4.
>
> Being something of an enthusiastic puppy I had a chat with Mark Rock, the big banana behind it. It's early days but if it goes wide and cheap then scheduling disparate material from around the Internet may become a new form of broadcasting to reach the potato on his couch. A new way to add value for those disinclined to search out their own material yet who have a computer, a DivX Connected Set top box or Apple TV etc...

Larry replies: Thanks, Simon. Very interesting.

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REQUEST FOR HELP

Claes Jonasson asks:

> For years when recording live training sessions to video, I have used a multi-camera approach to capture everything as it happens. A Canopus TwinPact100 connected between the presentation computer and projector tapped the graphics signal coming from the computer and converted it to DV, ready to record. All worked beautifully.
>
> Now all the cameras are HD (720p or 1080p/i). What I haven't found yet is a good replacement solution for the TwinPact that will take the graphics signal from the computer and turn it into a recordable HD video signal (preferably 1080). Do you know of a box that can help me?

Larry replies: Nope. Not a clue. I'm hoping a reader has some ideas...?< (Seconds later, a reader sent in an answer.) /p>

UPDATE - Dec. 17

So, **Mark Triplett**, from Sagemont Church, has a suggestion:

> You might want to check out the Matrox MXO.
>
> We've used them on 2 iMacs for a year or so now in both SD & HD SDI modes with great success.

Larry replies: This is a great idea. I worked with one last year and was very impressed.

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A SADDER, BUT WISER, EDITOR

David Scott sends in this sad moral lesson:

> Flush with pride at having set up the "perfect" workflow for my Canine Assistants shows (build it in high def for projection, output sd to DVD for distribution), I apparently got full of myself. Since the FCP high def build no longer permitted me to monitor the 16:9 720p image on my trusty Sony monitor, I had a Matrox MXO overnighted to me (got it this morning). After hours of trying to get it to work, I gave up and tried to go back to square one and live without external monitoring. Now playback on the FCP timeline stops cold when it hits the first clip. In fact, all I have on there now is a slug (plays fine through that) and two FCP-generated, simple text clips of 5 seconds each. As soon as the playback bar hits the first clip, playback halts and I get the standard "dropped frame" error message (never had it before) and none of those suggestions helps.
>
> Moral: Never, never, NEVER introduce ANYTHING new to the workflow when on deadline (mine is tomorrow night at 7). Ordinarily, wouldn't consider violating this cardinal rule of video editing but I wrongly assumed the substitution of one external display for another would be no biggie. How absolutely wrong I was.
>
> Now I face an all-nighter and that's assuming I can get my workflow settings back to where they were. I am sadder and not any wiser.

Larry replies: David, I'm VERY sorry for YOUR problems. Even updates for the most innocent of reasons can backfire when deadlines loom. I'm using your predicament as an object lesson for the more exuberant among us.

For those that need the reminder, please read my thoughts on upgrading here.

Thanks for writing!

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THE INS AND OUTS OF INS AND OUTS

Stephen Larcovic writes:

> I am editing an audio and video clip for a friend. I removed two sections of the clip and then pieced the 3 remaining clips together, including the Command T transition. I rendered them and after saving the project, I set out to export it to Quicktime movie, as you suggested. However, the results provided me with only the third part of the three clip sequence. Is there anything obvious to you that I might be doing wrong? I just want to export the file to my 2nd hard drive and then run it through Apple Quicktime Export for Web. Please help.

Larry replies: Thanks for writing. The solution is easy. You forgot to remove the In and Out from the Timeline before exporting. FCP exports the entire sequence, UNLESS you have an In or an Out set, in which case it only exports from the In to the Out.

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WRAP-UP

Well, that's about it for this month.

For current news and in-depth interviews on what's happening in our industry, be sure to listen to the Digital Production BuZZ every week.

- Please check out my latest video tutorials.
- Visit our store and buy something nice - **FREE shipping thru the end of January!**.

In the meantime, please continue sending me your comments and questions. I love hearing from you and enjoy the conversations that develop around these stories.

Until next month, take care, and edit well.

Larry

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