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FROM FCP TO RESOLVE

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Purpose

This procedure will explain all the steps to prepare the elements needed to conform a project edited in Final Cut Pro 7 needed to conform in DaVinci Resolve 9 for Color grading. At the end of the first part you should have all the elements to send to your colorist:

- All the medias needed to rebuild the timeline
- An XML file needed to conform the clips and cuts in DaVinci Resolve 9
- A reference quicktime to use for confidence check and resizing
- A Final Cut Pro project of the “Media Managed” sequence for troubleshooting

You will need:

- The original medias and projects
- Final Cut Pro 7
- An empty hard disk with enough space to contain all the medias necessary to send to the colorist. (Looks at the ‘Media Manager’ section for specs)
- You DON'T need DaVinci Resolve to perform these tasks

On the last page of the document, you'll find a form to fill and send with your project. It will help you and the Colorist to better understand the project.

Prepare your FCP Project

Compatible media

Before sending your Final Cut Pro project to Resolve you got to make sure your medias are compatible. Some types of media cannot be interpreted by other software and can only exist in the FCP environment. So, if you have the following types of medias and want them to be graded in Resolve, make sure to render them, export them as a self-contained movie, and replace them in the timeline:

- Freeze frame
- Moving/keyframed images
- Generators (cercles, slugs, colorbar, particles...)
- Effects and filters on which color grading must be applied
- Motion projects
- Image sequences
- Nested effects or sequences

Good practice

To make sure the communication between edit software (Final Cut Pro7) and Resolve is optimal and to make the conform process as painless as possible here are a couple of rules to follow.

- Make sure all the clips, upon import, have been logged in with proper tape or reel names
- Make sure the clips and sequences don't have inappropriately long file names
- Make sure all files (files on the disk, not clips in FCP) have unique file names
- As much as possible, make sure all the media files are in the same folder or nearby subfolders

Cleaning the timeline

Once the offline is done, there often are a lot of disabled, unused and hidden media clip that can be removed from the timeline. It's also a good idea to arrange the tracks along with the types of clips it contains. Here are the steps to get a clean timeline.

1. Open your FCP7 project
2. Select your final timeline. Make sure its length, images format, timecode format and resolution are right. If you have to add a color bar, slate, 2-pop or a countdown, now is the moment.
3. Make sure the timecode is right (yes, again) and that the program starts at 10:00:00;00

The reference movie should have the same framerate and the same start timecode as the timeline sent in Resolve. You can choose another codec like H.264 if you want to save hard disk space. I usually prefer to get an "as-is" or "Current settings" Quicktime of the timeline, I can ultimately use it with Scene Detection if XML conform isn't possible.

So, the reference movie should have the same name as the timeline with the suffix `_REF`. Make sure the `.mov` extension is there. Specially if your colorist works on a PC.

4. Create a new BIN (command+B) in FCP and call it `FOR_ONLINE`
5. Copy your final timeline in the new BIN and add the suffix `_ORIGINAL` to it
6. Duplicate this new timeline. Remove the `_ORIGINAL` suffix at the end of its name and add `_CLEAN`
7. Open the new `_CLEAN` timeline in the timeline window
8. With the Timeline window opened, do a select all (command+A), then go to Modify->Collapse Multiclips. This will remove the links to all the angles that weren't used in the edit and will only keep the selected angle.
9. Select all the clips in the timeline again (command+A) and go to Modify->Link (command+L). This will unlink the audio and the video. This is necessary as we will be moving video clips in the next step but we don't want to move audio.
10. In the timeline, lock all the audio tracks. You can do this by doing option+click on the lock at the left of the timeline. This will assure you that no audio will move during this process.
11. At this point, you should output the reference movie. Why so early? Because if you move, remove, delete or overwrite any clip by mistake, this reference clip will be your master reference. This reference movie will be used when conforming the timeline in Resolve.
12. It's now time to simplify the sequence. If you don't have split screens effects in your edit, you should be able to bring all the visible clips on the top bottom track (V1). So only the visible clips will remain in the project. Be careful not to write, delete or crush clips that are used in the edit. Here is the standard video track naming convention I use:

- V6: Packaging (opening, credits, bumpers)

- V5: Lower thirds (names, dates, location...)
- V4: Translation text
- V3: clips with special needs (B&W, blur, resizes,)
- V2: clips used in split screens or mix
- V1: main program/edit

This is a suggested use of tracks, you can adapt it to your project, the idea is that every clip in the timeline should be visible at some point and no hidden clip should remain.

13. Once it's done, double check with the reference movie created earlier to make sure all the clips are at the right place and that none are missing.

14. Save your FCP project

Media Manager

Final Cut Pro has a tool that will help you copy the medias used in your timeline to a hard disk. It's called the Media Manager. This tool can copy, recompress and delete files so make sure you know what you do before starting this process. For the purpose, we will use its "Copy" function.

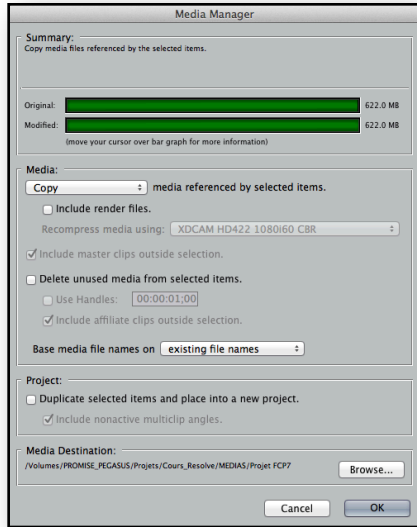
1. Plug the destination drive that you will use to send the project to the colorist in your Mac and power it up.

Ask the colorist what time of disk he prefers. Not all external drives are made equal.

- Firewire 800 and eSata drives are usually quick enough for fast file transfer. The colorist won't spend much time transferring your projects on his own drive
- If the colorist is on a tight schedule, you can send a FW800 or eSata RAID and he might be able to work right off this drive. This will save you precious minutes or hours.
- New Mac now come with USB3 and Thunderbolt connections which are up to 10x faster than FW800. These are my preferred interfaces for transfer and working disks.
- **PLEASE, BY NO MEAN SEND MEDIAS ON A USB2 DRIVE! YOU'LL HAVE TO PAY UP TO AN EXTRA DAY OF TRANSFER. NO USB2 DRIVES**

Also, the drive should have enough space for the colorist to send you back the graded medias on the same drive. So, depending on the original media, it's safe to say that it shouldn't be more than half-full when sent to the colorist.

2. Open your Final Cut Pro 7 project
3. Choose your cleaned timeline
4. Right-click on it and choose "Media Manager". At that point, the Media Manager window will open



In the **Media Manager** window, you will see two green lines. The top one represents the disk space used by the original media used in your timeline. The second one represents the estimated disk space that the copied media will take on the transport hard disk.

The other options are used to reduce the space the new media will use.

5. In the first drop-down menu, just under **Media**, choose Copy. This will tell Media Manager to copy all the media used in your sequence to a new destination without touching the original media. This is a non-destructive operation...so far.
6. Here are the options that should be activated if you have enough space on your hard disk and want to copy the whole files to the hard disk (recommended):

	ORIGINAL FILES (recommended)	Trunkated files (smaller files, longer conform)
Include render files:	NO	NO
Include master clips outside selections:	YES	YES
Delete unused media from selected items	NO	YES
Delete unused media from duplicated items:	NO	YES
Use handles	NO	00:00:01:00
Include affiliated clips outside selection	NO	YES
Duplicate selected items and place them into a new project	YES	YES
Include nonactive multiclip angle	NO	NO

7. At Media Destination, click the Browse button and browse the destination disk to create and choose a folder named FCP_Media_manager.
8. In the Media Manager window, click the OK button. You will be prompted with a browser window. Browse to the folder created in the previous step and type in the name of the project and add the suffix _MM (for media managed). Click the Save button

9.FCP will then copy the media files to the destination hard disk and create a new project as specified. Once it's done, it will open the new project linking to the newly copied media.

10.Make sure all the medias are save at the right place. If you really want to make sure it's ok, open the project on another Mac and see if all the files are reconnecting.

11.Go get your reference movie (ending with _REF) and copy it on the transport drive in a folder called REF.

12.Import the _REF movie in the Sequence and compare to make sure no clips have moved. Take a special look at clips with different frame rates and time remap.

13.In the FCP browser window, open the Master Clips BIN and select all the clips.

14.Right-click on one and choose Rename-> Clip to match file (***WARNING: if you choose File to match clip you will screw you footage with a destructive procedure that can't be undone.**) This will rename each clip in the timeline to the file it refers too.

15.Save the project (command+S)

Export the XML

1.Open your Media managed project in FCP7

2.Duplicate the timeline named XXXX_CLEAN and change the suffix to _FOR_RESOLVE

3.Choose the new _FOR_RESOLVE sequence and open it

4.Lock all the tracks containing video. Leave the track with the audio, packaging, lower thirds and translations unlocked

5.In the timeline, select all the clips and hit DELETE to erase all the clips on the unlocked tracks

6.Go to Sequence->Delete Tracks. Select Video Tracks and Audio Tracks and click the OK button. This will delete all the empty tracks created.

7.Save the project again

8.Right-click on the _FOR_RESOLVE timeline in the Browser window and choose Export-> XML

9.In the Export XML window, choose a Version 5 format, leave the Options unchecked and activate Save project with latest clip metadata. Click OK

10.In the pop-up window, create a folder named XML on your transport disk and save the XML in it. The XML should have the same name as your sequence _FOR_RESOLVE



11. In your project, you should now have:

- A BIN named Master Clips containing all your master clips
- A sequence named XXXXX_CLEAN
- A sequence named XXXXX_FOR_RESOLVE
- A reference movie called XXXXX_REF.com

12. Save your project and quit Final Cut Pro

13. Make sure everything is on the transport drive:

- A folder named FCP_MEDIA_MANAGER containing your media managed project and the files
- A folder named XML containing the XML
- A folder named REF containing the REF

14. If all the items are there, you can eject the drive, package it safely in a shock absorbing case and send it to your favorite colorist.

Receiving a graded show

What's on the drive

When the show is graded, the colorist will send you back the drive with the graded medias and the project file. Here is what you'll find on the hard disk:

- A folder named RENDERS containing all the graded clips in high resolution at the highest quality
- A folder named RESOLVE_XML containing the XML Resolve exported to conform back in FCP for the online
- A folder named FULL containing a clip of the full project rendered in one piece in full resolution and quality (upon demand)
- A FCP_PROJECT folder containing the reconformed timeline in FCP (upon demand)
- All the folders that were there to conform in Resolve (XML, FCP_MEDIA_MANAGER, REF)



PROJECT DATA

Project info

SHOW _____ EPISODE _____

COORDINATOR _____ PHONE _____

EDITOR _____ DIRECTOR _____

DP _____

DATE SENT TO COLORIST _____

DELIVERED PROJECT

Timeline length (without bars and slate) _____

Timeline frame rate: __ 23.98 __24 __29.97NDF __29.97DF __59.94P __60P __25

Timeline resolution: __SD __1080 __720 __other: _____

Media frame rate: __ 23.98 __24 __29.97NDF __29.97DF __59.94P __60P __25 __various: _____

Media resolution: __SD __1080 __720 __other: _____ __various

Codec (s) used: _____

FINAL PROJECT

Timeline frame rate: __ 23.98 __24 __29.97NDF __29.97DF __59.94P __60P __25

Timeline resolution: __SD __1080 __720 __other: _____

Conform with: __offline media __high res media __original camera media (R3D, RAW...)

Renders: __one clip __independent clips __image sequence

Format: __QuickTime (.mov) __Avid MXF __DPX

Codec: _____

Interchange format: __XML __FCP project __FCPX project __Avid AAF

__Broadcast safe colors __Full cinema range