**EASY DCP and FCP7 - How to Make a 2K DCP or Digital Cinema Package**

**Export a self contained 23.98 quicktime of your current timeline**

You will need a 1920 x 1080 or larger file exported from your Digital Non Linear Editor of your choice. Don't use an editing timeline use a self contained quicktime!!

<table>
<thead>
<tr>
<th>Sequence Settings</th>
<th>Make a new sequence at 2048 x 858(scope) Prores 422 or HQ Or 1998 x 1080 (flat) Discrete Channels</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Sequence Settings" /></td>
<td><img src="image2" alt="Sequence Settings" /> Next Change the audio output settings for the sequence. Go to &gt;Sequence&gt;Setting s Click on 5.1 Monitoring: L+R,C, LFE, Ls+Rs Then change the Downmix to 0 and switch the Grouping to Dual Mono Then Click OK</td>
</tr>
<tr>
<td><img src="image3" alt="Warning" /></td>
<td>Ignore Warning Error The current audio device does not support the number of outputs set in the Sequence Settings Audio Outputs tab. Unsupported outputs will not be heard during playback on this machine unless downmixed to Stereo. Do not warn again OK</td>
</tr>
</tbody>
</table>
If you get an encapsulated .wav then the tracks are like this
Open ProTools to double check this if you want.
These files will come into FCP appropriately tracks 1-6 when dragged down to the audio tracks in timeline.

| Add two audio tracks to your timeline so you have 6 tracks of audio |
| If you don't have an encapsulated .wav then will need to add two more tracks to your timeline. |
| Then on right click each Final Cut Pro Timeline track change the Audio Outputs to match the track 1=1 4=4 2=2 5=5 3=3 6=6 |
Add in the 1920 x 1080 movie into the 2K Scope timeline. Choose to ignore source settings.

In Motion Tab, change scale to 107% then look at the left and right edge to make sure that you see no black on the sides. Usually, 107% to 108% scale will work.

You will lose @2% on the top and bottom. Double check distort just to be sure it didn’t distort anything.
Check Distort setting too just to be sure that it stayed at zero.

Trash Audio off Quicktime if it has any.

Then add in the 6 channel surround audio.
In Final Cut Pro line up the following:
Master Self Contained Quicktime Video
All 6 tracks of surround printmasters. Put them in this track order:
A1 = Left Channel
A2 = Right Channel
A3 = Center Channel
A4 = Low Frequency (LFE)
A5 = Left Surround
A6 = Right Surround

Make sure the end of each clip lines up exactly the same length. Check that the audio and video are in sync on all tracks.

If your timeline is longer than 90ish minutes you will have to break into segments or (reels.)

Find a break point to divide up the timeline.
Alt Option will apply cut to all tracks.
Notice that clicking the "X" will mark clip. Also on the second half when exporting notice that your mark in looks like this. Inclusive edit not the frame before it.

The position of the playhead, the frame that the playhead is on is included in your edit.

*RENDER THE TIMELINE* if it is one reel or two render the whole thing.

Next step is to export Audio to AIFF.

Pick a destination to save the files and do this for each section use mark in and out points on timeline. Click "X" to mark clip on the timeline.

Choose 48KHz and 24bit audio. Channel Grouped will export all the files in the sequence.

Export the Reels using in and outpoints to export the separate reels.
Choose self contained
QuickTime

"VIDEO" ONLY!! DON'T EXPORT AUDIO WITH THE QUICKTIME

The next step will be to convert the exported aiff audio files in protools

Open a new ProTools session
Choose .wav and 24 bit
Sample Rate 48kHz
Click OK

Save the session to a hard drive
When the session opens go to >Import>Audio
Navigate to the AIFF files to import.

Note the Channels export as shown below.
A1 = Left Channel
A2 = Right Channel
A3 = Center Channel
A4 = Low Frequency (LFE)
A5 = Left Surround
A6 = Right Surround

Choose a folder to save the converted files and click "Done"
The files will begin converting (adding pulldown to the audio tracks) and will be saved to the destination folder

Choose to add to New Track when prompted.
Make sure there is audio in all the tracks.

Now move all the Quicktimes and the pulled down audio to the DCP computer in the Grad Suite H CMB 4.112H. Below is an example of the files needed to make the DCP.

Move to the Color Correction Suite Grad Suite H CMB 4.112H – This is the only suite that has the Easy DCP software.
One Note: Please talk to tech staff as we have to authenticate you to use the Software. It will not let you open it until the License is in the proper location. FYI.
Open EasyDCP.

Right-click on the Title window and choose Edit with Digital Cinema Naming Convention...
**Example of correct DCP name**

- Choose the naming conventions shown here
- Change all the settings with arrows pointing to them

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Film Title</td>
<td>SUSIE-TEST</td>
</tr>
<tr>
<td>Content Type</td>
<td>SHR Short Subject</td>
</tr>
<tr>
<td>Content Type Version Number</td>
<td>(No Content Type Version Number Information)</td>
</tr>
<tr>
<td>Content Type Modifiers</td>
<td>Temp (Temp Version without final picture and sound)</td>
</tr>
<tr>
<td>Projector Aspect Ratio</td>
<td>1.85:1, 1.90:1</td>
</tr>
<tr>
<td>Interior Aspect Ratio</td>
<td>1.85:1, 2.35:1</td>
</tr>
<tr>
<td>Language Audio</td>
<td>EN (ENGLISH)</td>
</tr>
<tr>
<td>Language Subtitle</td>
<td>(No subtitles)</td>
</tr>
<tr>
<td>Open/Closed Caption</td>
<td>(No Open/Closed Caption)</td>
</tr>
<tr>
<td>Territory</td>
<td>(No Territory Information)</td>
</tr>
<tr>
<td>Rating</td>
<td>(No Rating Information)</td>
</tr>
<tr>
<td>Audio Type</td>
<td>ST (S.1)</td>
</tr>
<tr>
<td>Sound Format</td>
<td>(No Sound Format)</td>
</tr>
<tr>
<td>Resolution</td>
<td>2K QN</td>
</tr>
<tr>
<td>Studio</td>
<td>(No Studio Information)</td>
</tr>
<tr>
<td>Date</td>
<td>20140402</td>
</tr>
<tr>
<td>Facility</td>
<td>(No Facility Information)</td>
</tr>
<tr>
<td>Package Type</td>
<td>(No Package Type Information)</td>
</tr>
</tbody>
</table>

For more information see [http://www.digitalcinemanamingconvention.com](http://www.digitalcinemanamingconvention.com)
but set to apply to your particular DCP

Click OK
Choose the 2K 24 fps general this is the best setting unless your project is 4K or 2K Stereoscopic.
Then choose Create.
In the open project choose to Add Picture Track.
This is how the "Video Tracklocks when loaded" looks.

You will get an error for the frame rate conversion. Choose to ignore it.

23.98 to 24 will throw an error
Choose the Speaker Setup
Click on the Setup next to each track to navigate to the
Speaker Setup

Choose the Speaker Setups

 Speaker Setup
Stereo Speaker Setup
5.1 Speaker Setup
7.1 Speaker Setup
Left: /Volumes/Internal_Raid/Orbit/Audio Files/Orbit_1.wav
Right: /Volumes/Internal_Raid/Orbit/Audio Files/Orbit_2.wav
Center: /Volumes/Internal_Raid/Orbit/Audio Files/Orbit_3.wav
Sub (LFE): /Volumes/Internal_Raid/Orbit/Audio Files/Orbit_4.wav
Left Surround: /Volumes/Internal_Raid/Orbit/Audio Files/Orbit_5.wav
Right Surround: /Volumes/Internal_Raid/Orbit/Audio Files/Orbit_6.wav

Next choose to Add Sound Track

Add Sound Track
Then click *Add Sound Track* project with Track Files added.

Drag image and so
undervote the DCP Continent "New Relic with多万create there else (in this example creating 2rels) Notate that once you create other..."
Notice that there are two reels here. Both have one image file and a 6 channel audio file.
Make sure the "Intrinsic Duration" matches for both the audio channels and the video track.
Ex: Video Intrinsic Duration is 81877
Example of the audio track intrinsic duration 81877. In all cases, the Audio and Video should match or it won't work with the software.

<table>
<thead>
<tr>
<th>Annotation Text</th>
<th>6 channel audio: LHG_DCP...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel Count</td>
<td>6</td>
</tr>
<tr>
<td><strong>Edit Rate</strong></td>
<td>24 / 1</td>
</tr>
<tr>
<td><strong>Intrinsic Duration</strong></td>
<td>81877</td>
</tr>
<tr>
<td>Type</td>
<td>Sound Track</td>
</tr>
<tr>
<td>UUID</td>
<td>---Will be created during p...</td>
</tr>
</tbody>
</table>
There is not a "War ning" triangle.

The Question Mark is OK.
You can right click and copy the title of the DCP in Easy DCP and paste it on to the name of the folder. That is the easiest way to do it.
Continent to a shower if you are mapping a DC Power
Click on the DC Power
Continent to highlight the area in green.
The click "P."
Then click the "Figure 1".
Consider the "Content Kind" to short.

Then choose to "Save DCP" if you have opened a previously made DCP to chang.
Click Generate DCPI!

If you get this error it is okay to ignore it.

Issues may appear while saving the package. Please check warnings.

Ignore Show Details... Abort

No password given for Certificate!
Please go to Options-->Signature Settings... to open the settings dialog.

OK
Click Ignore on this error message. It doesn't mean anything important.

Choose where to save the files at this menu. Choose a destination folder for the package output and maximum picture bitrate (encoding). Click Start to begin the process.
e folder you created named the same way as the DCP Naming Convention Choose Start!
Package Generation successfully finished!

OK   Show Details...

When finished the DCP software will state that the process was successful.

Save project again

This is the completed DCP folder
example.
All these files should be present.
To test we can simulate through the Big Bear player in 4C.
Find Keefe, Susanor
Jeremy to setup a viewing group you can test using the local player on the computer.

Launch EasyDCP Player.
Navigate to the newly created folder containing the DCP files.

Click Choose.
The DCP will load. This might take a few minutes. You can get info in the lower left corner displaying the progress of the file loading.

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<tr>
<td>Validate XML files against their corresponding XML Schemas</td>
</tr>
<tr>
<td>Creating playlist with all CPLs of a Package</td>
</tr>
</tbody>
</table>
Double click on the file to load it into the player.

Then hit the play button on the player to play.

DCP player window playing the DCP file.
lower the aspect ratio to play in realtime
scroll along the position indicator to spot check the file

click on scroll bar to spot check different portions of the DCP file
Look at the audio. Go to Assemble WAVefrom Virtualizer.
Make sure that the waveforms look right.

Notice that Channel 3 has all the dialog audio. Generally that is the case.
Matte the audio files accurately.

Go to View > Color Transform > Correct (R' G' B').
DCP to check the quality of the image and sound. Make sure the tracks are correct and looks good.
IF THE FILE IS GOOD THEY WILL NEED TO BE COPIED TO AN FSDRIVETOCPYTOOURDCPSERVER.
To open a DCP to edit it, you can open the Application Easy DCP and go to "Load/Open Project", and Navigate to Asset Map.
Some things can be changed in a DCP open EEDCP and click Load Project.

Navigate to the Asset Map.
Right click on the file name and choose to rename using Digital Cinema Naming Conventions.
You can also change the type of track if you didn't do this correctly.

Changing the Contest Kind to a horror if you are making a D...
Click on the DCCP Content to highlight the area in green. Then click on the "Content Kind" to short.
Change the content to trailer or short cut.

Choose File > Save DCP

Issues may appear while saving the package. Please check warnings.

Ignore  Show Details...  Abort
Do you really want to overwrite the metadata of the Package at "/Volumes/TechStaff/AFF/AFF PRESHOW FINISHED DCP FOLDER/1104-WED-LOVE_TLR_F-185_EN_20_2K_20151022_IOP"?

Backup files will be saved in "/Users/commpower/Library/Application Support/Fraunhofer IIS/easyDCP Creator+/Backup/".

Yes  Cancel

Saving Package successfully finished.

OK  Show Details...