

Film Editing Tutorial

Quick start guide!

Terri Meyer Boake

1. Preparing yourself and your files:

This information is valid for all film editing software: FCP, Premiere (the version of FC being used is FCExpress 4.01 or FCP 5 or lower)

**Remember:
Garbage in = Garbage out!**

Video and image quality must be good.

Lighting and colour must be good.

Organize yourself

- Before you start editing
- Plan your film
- Understand your sequence
- Get your media ready
- Make sure you have enough space on your drive to store the project
- Prepare any still images
- Check all of your formats for compatibility

2. Preparing your Video Files:

If you need to download material for the tutorial

<https://dl.dropboxusercontent.com/u/15256893/film-tutorial.zip>

Video Formats

What is a Video Format?

Video formats involve two distinct, and very different technology concepts: **containers** (sometimes called wrappers) & **codecs** (short for coder/decoder). Codecs are used inside of a container and because of this video formats can be confusing.

A. What is a Container?

The **container** describes the structure of the file: where the various pieces are stored, how they are interleaved, and which codecs are used by which pieces. It may specify an audio codec as well as video. It is used to package the video & its components (audio/metadata) and is identified (usually) by a file extension such as .AVI, .MP4 or .MOV.

B. What is a Codec?

A **codec** (short for "coder/decoder") is a way of encoding audio or video into a stream of bytes. It is the method used to encode the video and is the chief determiner of quality.

Video file format

- This has become very complex due to the great variety of video cameras and formats
- The “shape” (aspect ratio) of the video as taken by your camera needs to determine the “shape” of the final video you are making
- Examine a clip of your video in Quicktime Pro Inspector to be sure of the format

Common formats


- The old MiniDV tape cameras set the standard for 4:3 ratio = 640x480 pixels
- Most current video cameras are shooting Widescreen (16:9), *but the pixel dimensions vary*
- Anamorphic is another proportion
- You need to know if you are shooting SD (Standard Definition) or HD (High Definition)
- “i” refers to interlaced footage
- “p” refers to progressive footage
- If you don’t know what you are shooting, use Quicktime Inspector to look up the details

Interlaced footage “i”

- A common way to compress video is to interlace it. Each frame of an interlaced video signal shows every other horizontal line of the image. As the frames are projected on the screen, the video signal alternates between showing even and odd lines. When this is done fast enough, i.e. around 60 frames per second, the video image looks smooth to the human eye.
- Because only half the image is sent with each frame, interlaced video uses roughly half the bandwidth than it would sending the entire picture.

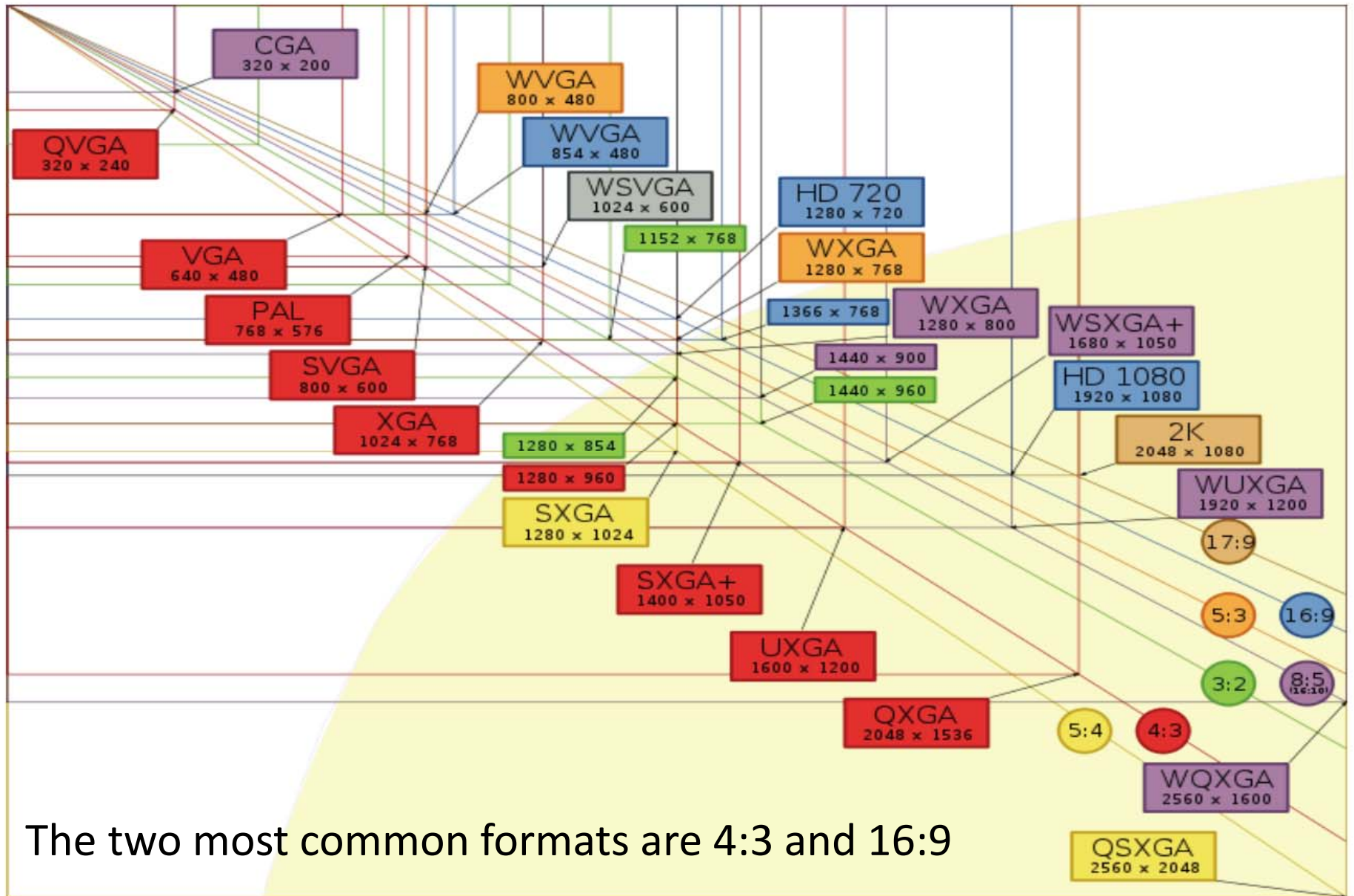
Progressive footage “p”

- A progressive scan picture draws every line in sequence. Therefore, a progressive scan video signal sends twice as much data than an interlaced signal each time it draws an image on the screen.
- Still, if a progressive scan and interlaced image are both projected at 60 Hz, the progressive scan image will usually appear slightly smoother. Video that contains fast motion makes this difference more noticeable. For this reason, the DVD and HDTV standards were developed to support progressive scan video signals.

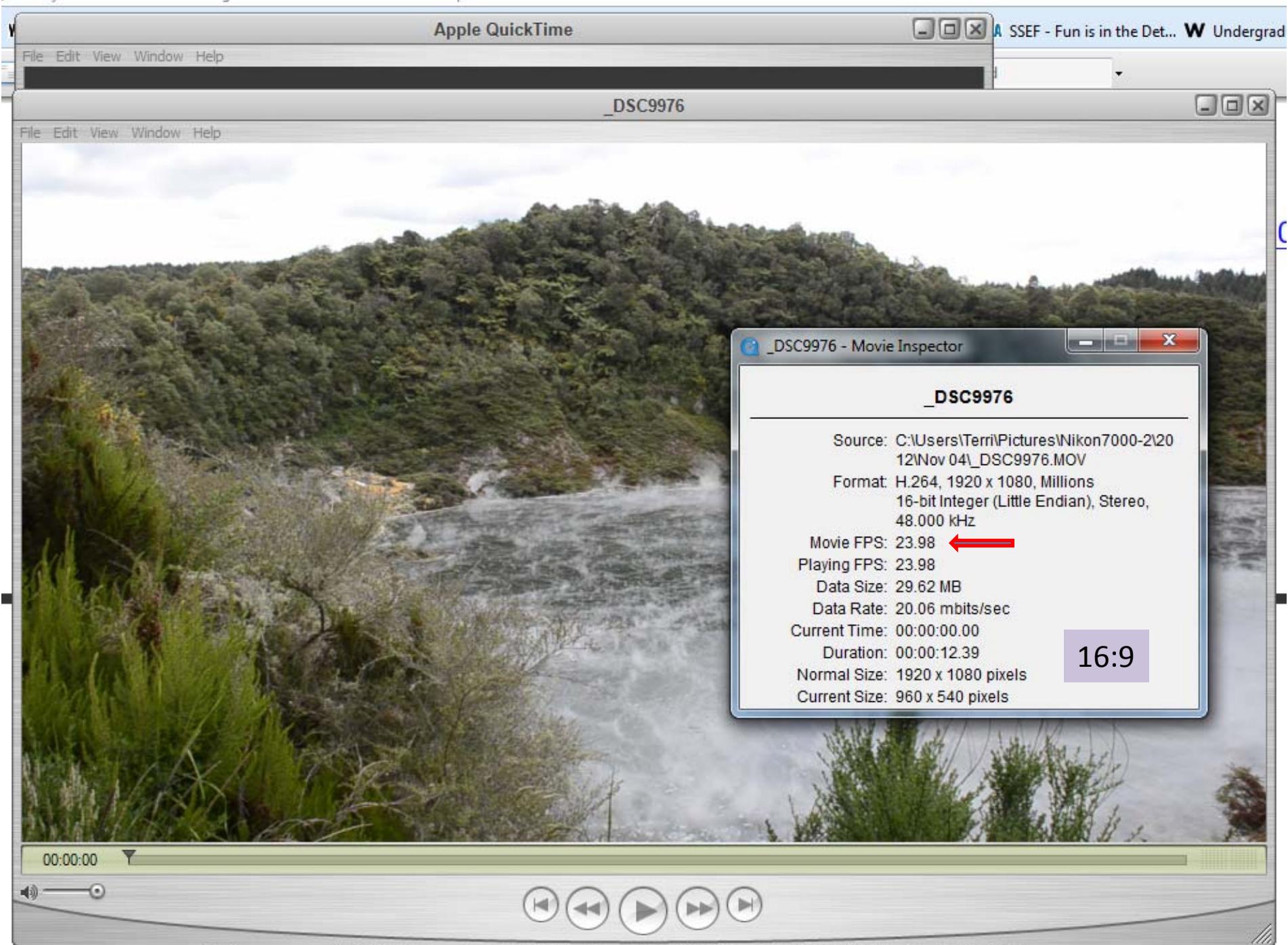
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- When you see video formats described as 480p or 720p, the number indicates how many horizontal lines of resolution the video signal uses, while the "p" indicates it is a progressive scan signal. Similarly, the 1080i format contains 1080 lines of resolution, but is interlaced. Both 720p and 1080i are used by HDTV.

Frame Rates

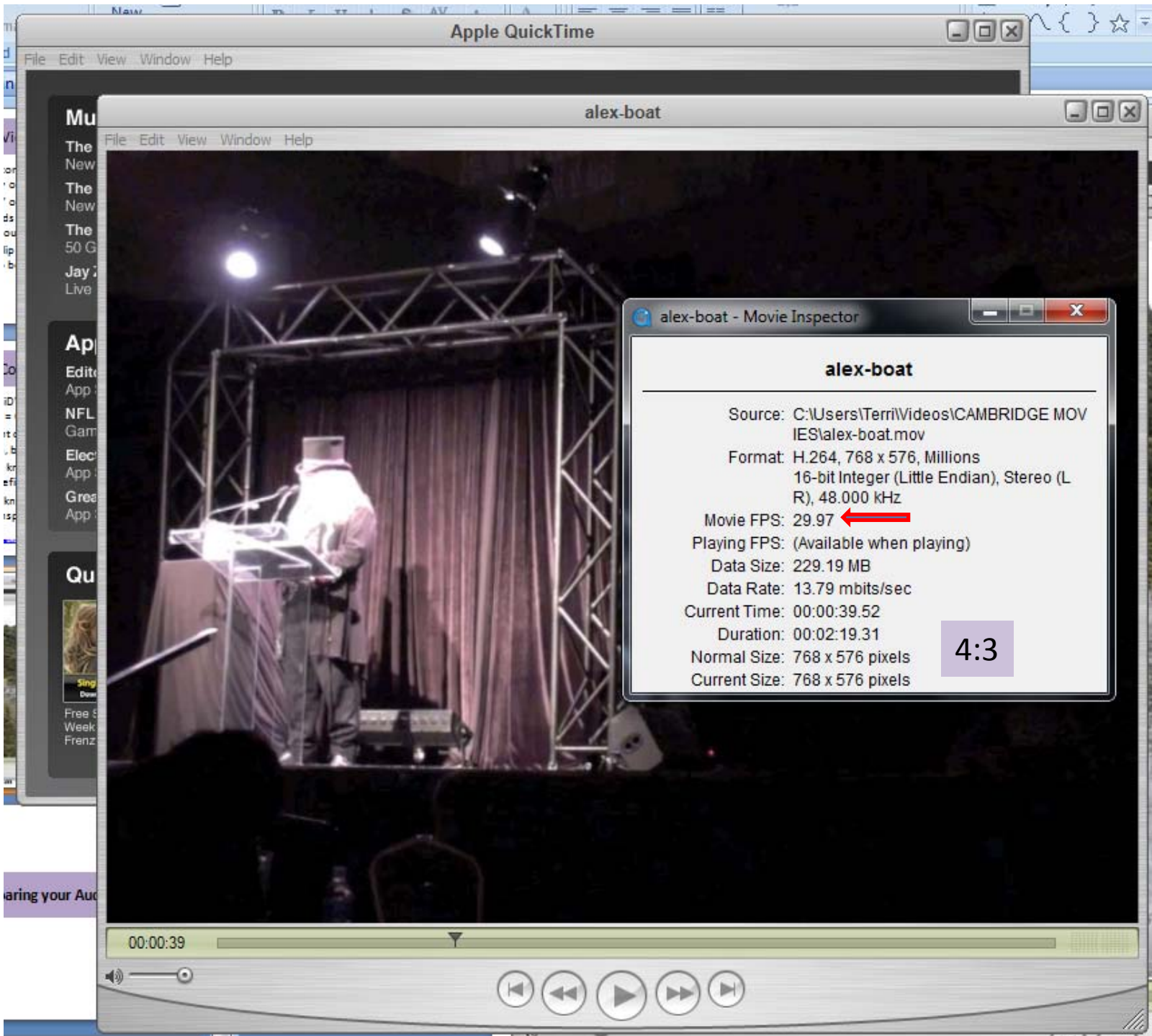
- Different cameras have different frame rates
- Most common is 29.97 (30) FPS for video cameras
- 24 and 25 can be found in many DSLR type cameras
- Make sure you set up your project film with the matching frame rate
- You should not MIX frame rates within a film

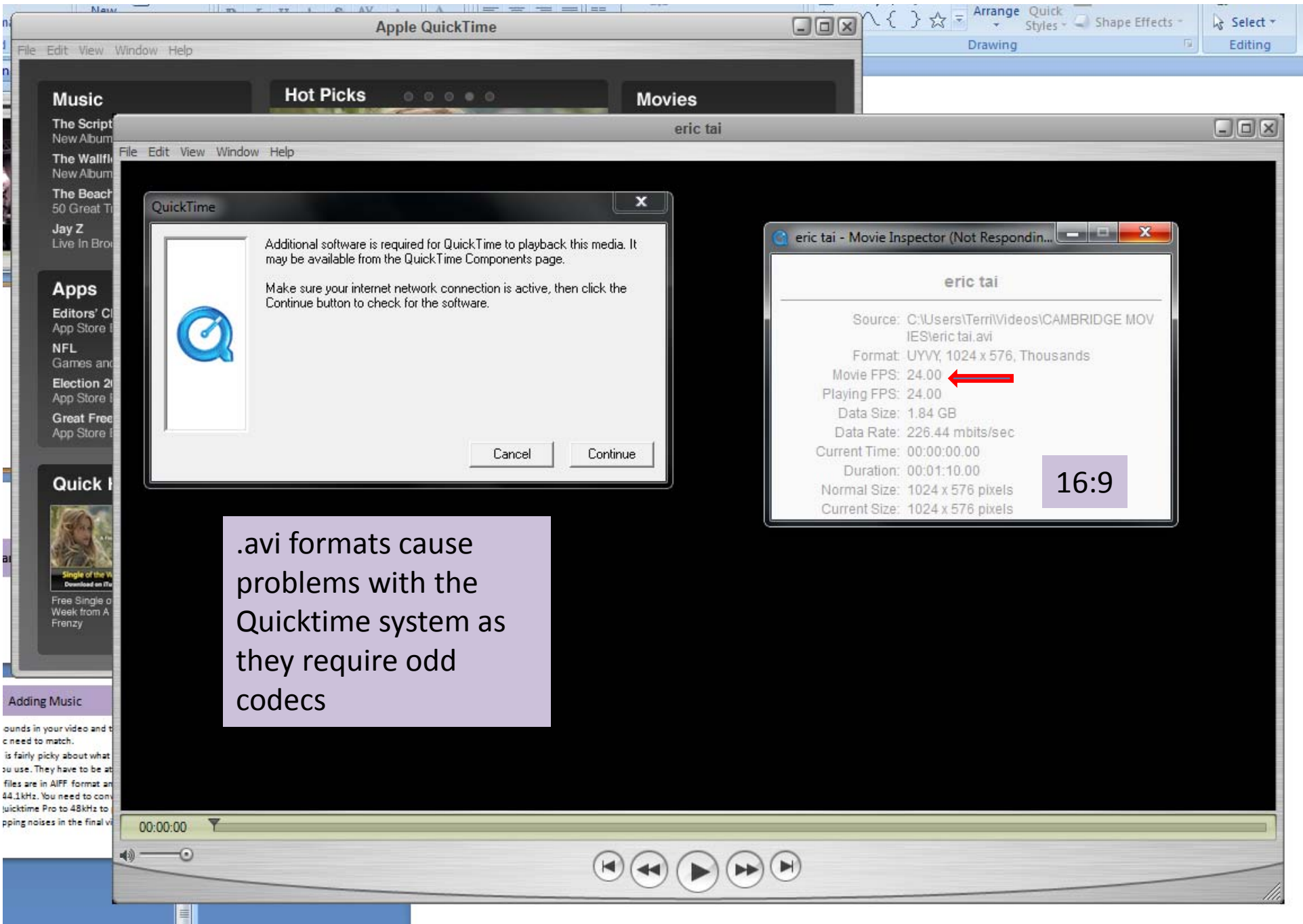


The two most common formats are 4:3 and 16:9



11. What video format should I use?





.avi formats cause problems with the Quicktime system as they require odd codecs

ounds in your video and t
c need to match.
is fairly picky about what
to use. They have to be at
files are in AIFF format an
44.1kHz. You need to con
quicktime Pro to 48kHz to
pping noises in the final v

Mixed Formats

Mixed video formats can cause trouble if:

- The pixel dimensions do not match (1:1 vs 1:1.2121) When exporting rectangular pixels they can become square and squish the video
- A 4:3 segment in a 16:9 film will have black bars at the side
- A 16:9 clip in a 4:3 film will be cut off
- Some editing programs are more accommodating of differences in frame rates, but you won't know til you are done and export if there is an issue
- When you export you can ask Quicktime to "letterbox" and this will put black bars on the movie to fit the chosen film size

3. Preparing your Image Files:

Importing files

- Put all of your images, clips and music in a file folder.
- You need to IMPORT these into your editing program using the IMPORT command.
- If you drag and drop them in from your desktop, and then move the folder, the images will disappear from your movie because they have been "disconnected".
- Some clips must be imported directly from your video camera

Image files

- make sure that your images are at 72dpi
- at least as large as the video size you are using
- in JPEG format for FCE; Premiere supports a multitude of formats (not PDF)
- You will resize in FC to adjust to your screen size
- If they are any smaller and you need to stretch them, they will be blurry (insufficient data).
- You can easily use larger images, but not "huge".
- The “rendering” process in film editing will resolve differences in resolution for final output

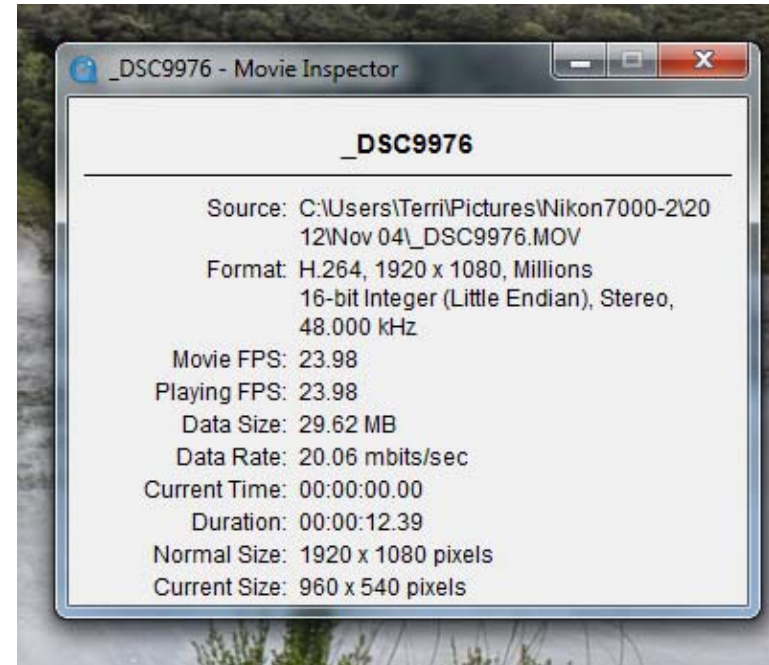
PSD files

- If you bring a PSD (layered) file into the software and drop it on the timeline, it (should) break out into its layers, so that you can manipulate the image layer by layer.
- This is good for making masks or making the different layers in the image do different motion actions, opacities, etc.

4. Preparing your Audio Files:

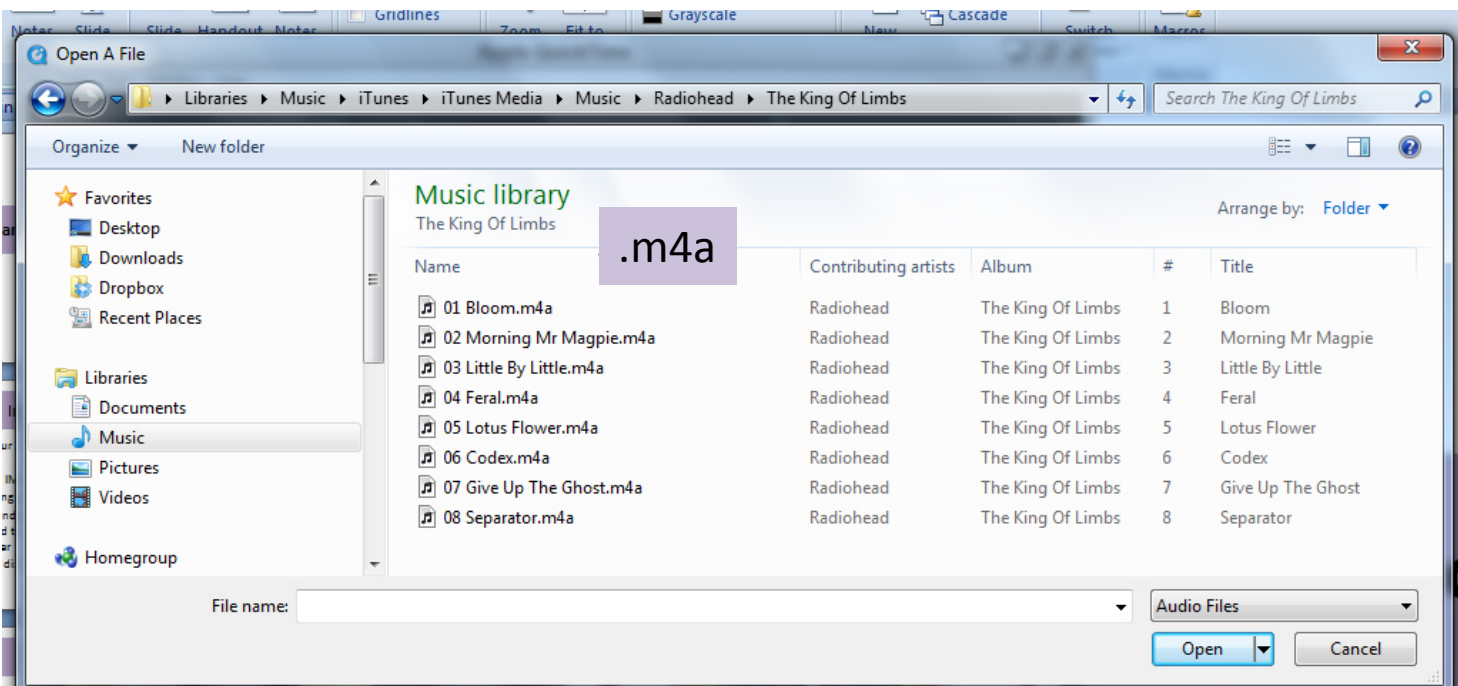
Audio Format

- Check the Quicktime Inspector to see the audio rate that your film is using
- Most common is 48kHz
- Most should be in stereo, 16-bit

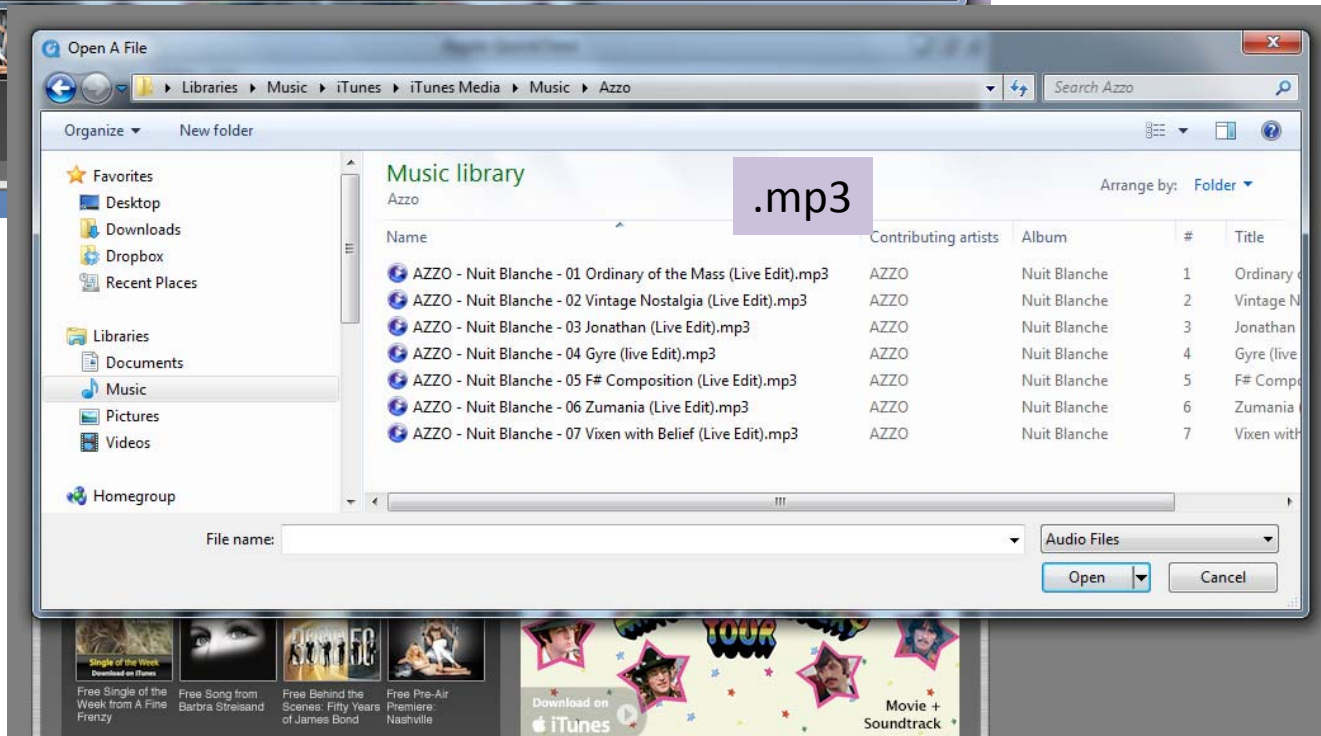


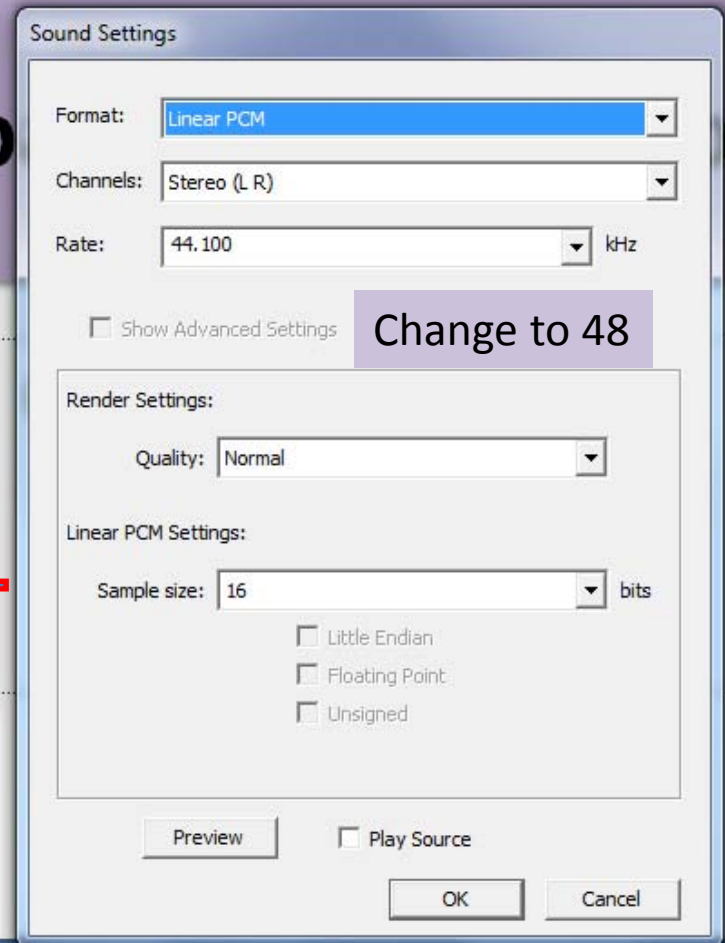
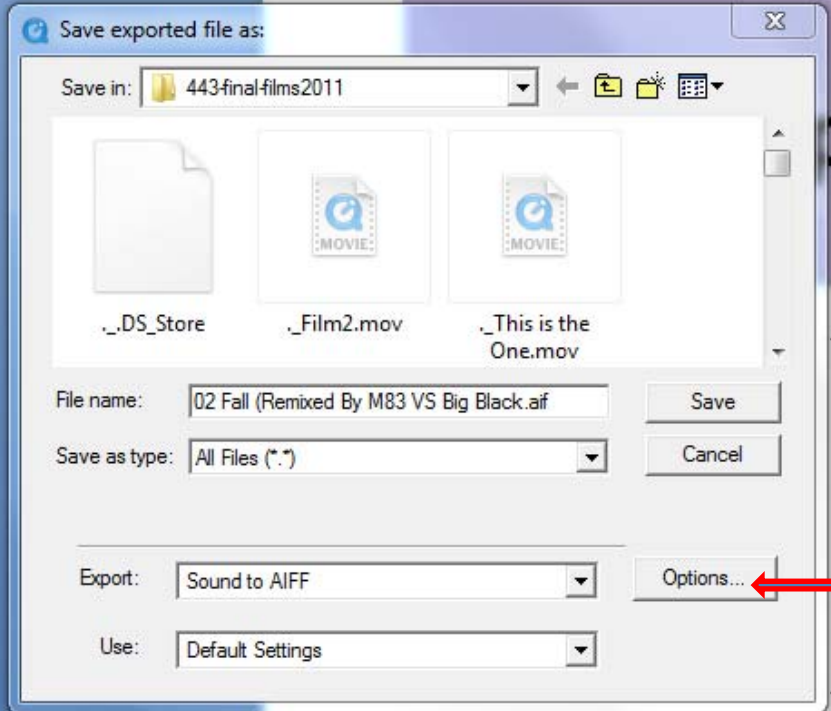
Adding Music

- The natural sounds in your video and the kHz of your music need to match.
- Final Cut Pro is fairly picky about what sort of audio files you use. They have to be at 48kHz.
- Standard CD files are in m4a or mp3 format and recorded at 44.1kHz. You need to convert these with Quicktime Pro to 48kHz to prevent potential popping noises in the final video in FCE
- Adobe Premiere seems to accommodate more variety “internally”

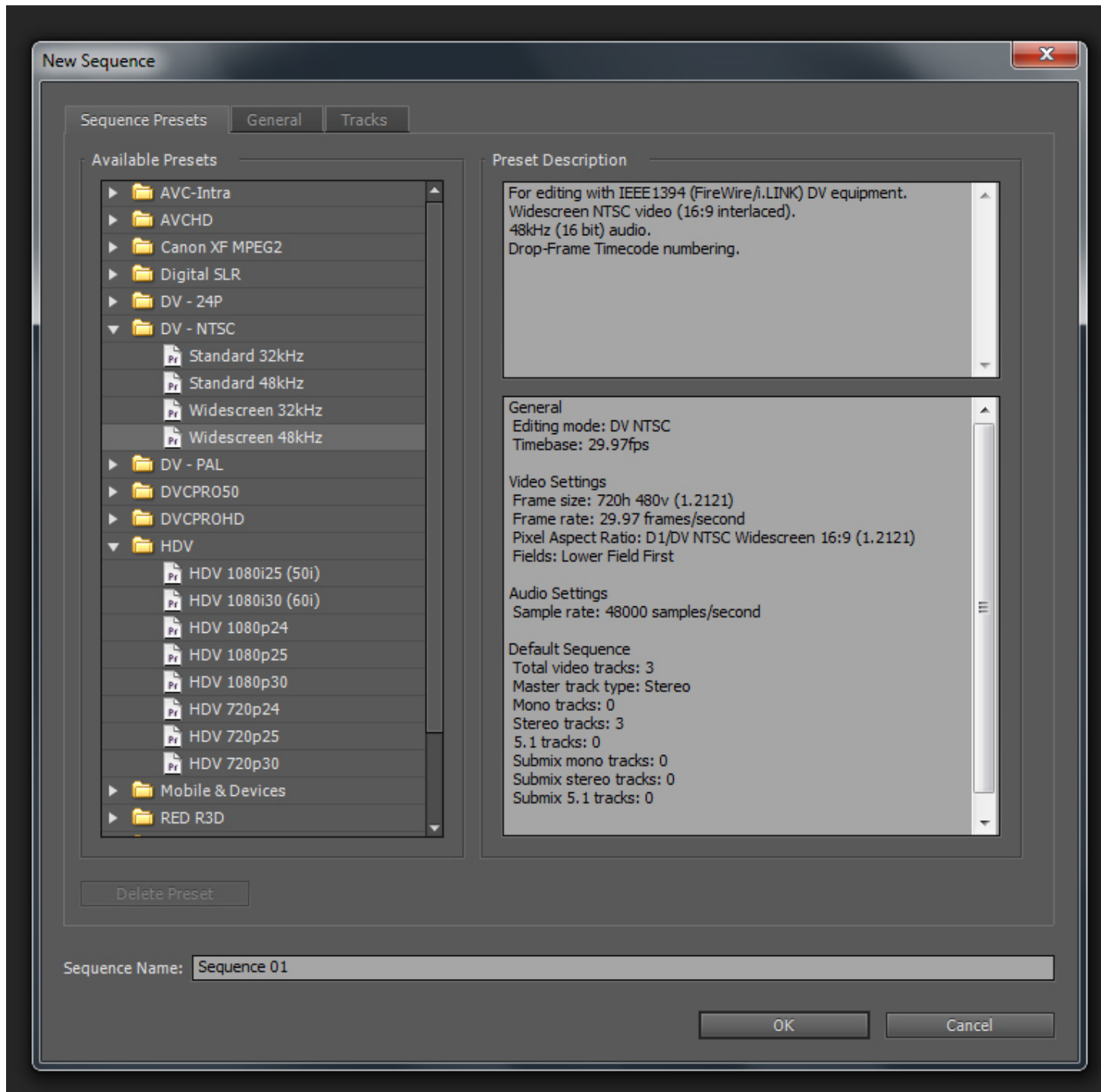


← Audio files!





5. Setting up the Film for Editing

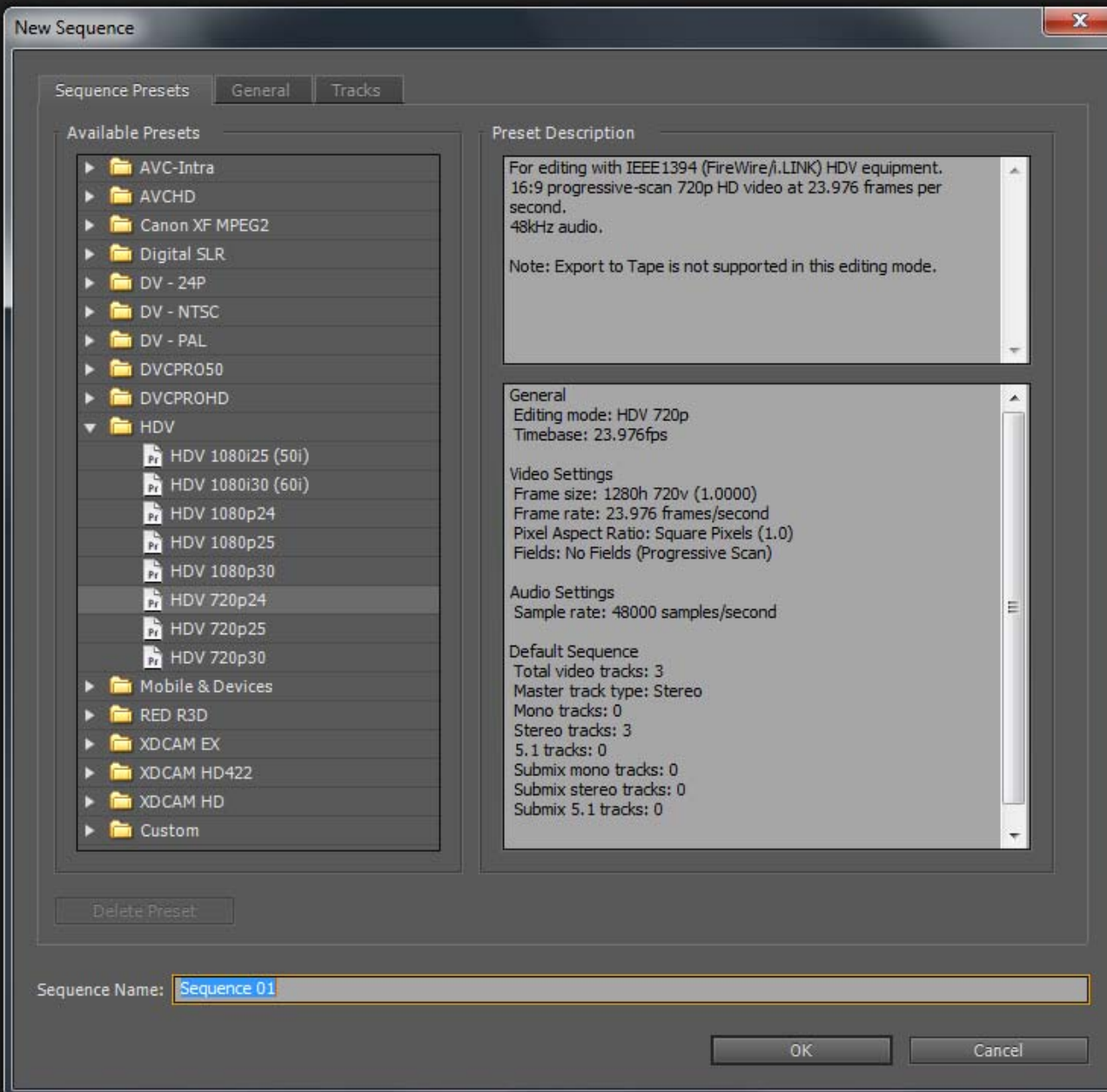


Adobe Premiere

Note the FPS are rounded up to the next even number

DV-NTSC
Widescreen
48kHz
Is the most basic
widescreen
setting

Note the pixel aspect ratio is 1:2121



Adobe Premiere

Note the FPS are rounded up to the next even number

Note the pixel aspect ratio is SQUARE

Importing your Video Files

- Once you have your project initiated, import your files
- Video will either be imported as clips from your DSLR
- Or logged and captured from a video camera
- Or a combination of the two
- Shoot more video than you need to allow for editing and loss, but don't shoot a huge amount or it gives you more work to sort through it
- Clips are easier to manage than a continuous shoot.
- Good to start and stop your camera to create clips

Editing Basics

- Editing in FCP, Premiere (and iMovie) is all “non-destructive”
- Changes made to files on the timeline do not affect the original file
- Clips, images, sound files can be used over and over
- Audio files on multiple timelines will play “all at once”
- Image/movie files on multiple timelines are layered (like in Photoshop) – the one “on top” is read first

The Sequence Line

- In both FC and Premiere you create a series of film “sequences”
- The sequence line has video tracks on top and audio tracks on the bottom
- Unlimited (to 99) of each
- iMovie is limited to one video track and two audio tracks
- For complicated movies, create multiple sequences and use one “inside” of another
- You can “lock” the tracks that you are not using so that your editing does not inadvertently move previously finished content

Title or Image Safe Areas

- Older televisions will cut off some of the area of the film when it is projected
- Find the “title safe” setting on your editing software and keep your important material and text within these frames
- This is also important when you are using your DVD making software when locating titles

Key Frames

- Key frames are points on the sequence timeline that are used to start and stop motion actions on clips or images
- You set the key frame for each type of motion or opacity change, set the “value”, then set the key frame where this motion is to terminate and set the value
- The software creates a smooth transition between the two points

Text and Titles

- In FCE text is generated in the video effects window under a pull down folder called Video Generation
- This text is pulled into the timeline/sequence once it is created
- In Premiere there is a special window for making text. Once created it will reside in your menu of files and you can pull it into your timeline

Exporting your Movie

- When you are finished editing you need to export your movie (Final Sequence)
- In FCE use Export/Quicktime conversion
- Make sure that your settings match the initial settings for the movie that you set up
- You can change the overall size, compression at export time
- Use either iDVD or Encore to create a playable DVD version of your movie (compresses it)
- The file created directly out of FC or Premiere has not been compressed and is very large