Multimedia Module

FINAL CUT PRO 2 INSTRUCTOR MANUAL

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INSTRUCTOR SETUP:

Prerequisites:

♦   iMovie 2 module

Materials:

♦   Final Cut Pro 2 Instructor Manual with disk of accompanying files
♦   Final Cut Pro 2 User Manual (1 copy per user)
♦   Job Aid (1 copy per user)

Equipment::

♦   Electronic Classroom (class size is limited by available equipment)
♦   PC or Mac workstations (1 per user) with Final Cut Pro installed
♦   Instructor PC or Mac workstation with Final Cut Pro installed
♦   1 DV Camera, 1DV Tape, 1DV Camera battery, and 1 FireWire cable per user
♦   1 DV Camera, 1DV Tape with prerecorded footage, 1DV Camera battery, and 1 FireWire cable for instructor
♦   Overhead projector connected to instructor workstation
♦   Flip Chart and markers

Setup:

♦   Session length is approximately 2 hours
♦   Instructor should be familiar with aspects/components of Final Cut Pro and non-linear digital video editing
♦   Instructor should be familiar with all aspects/components of this Final Cut Pro module
♦   Instructor should be familiar with DV Cameras and FireWire setup
♦   Check that all computers and equipment are functioning properly
♦   Turn on and test projector
♦   Prepare flip chart of key points/items to be covered (listed on next page). Make sure view is unobstructed
♦   Have users sit at their own computer
♦   The disk contains some sample files that the users may use to practice importing. Copy these files onto each workstation, including the instructor station
♦   The Instructor Manual is set up so that you can see the corresponding User Manual page next to it. To make copies of the User Manual for the participants of the workshop, print out the PDF version from http://mll.arizona.edu/workshops.shtml?tutorialpdfs
♦   When teaching this module, make sure you demonstrate steps and ideas for the users FIRST. Do not allow them to follow along on their own while you are demonstrating; they will have the opportunity to practice steps on their own after.
♦   Be sure to read through and go over all material for the users, as they may not have all of this information in their User Manuals

Flip Chart Preparation:

♦ Flip Chart #1 - Key points to be covered

♦ Intro to Final Cut Pro
♦ Key words/terms for Final Cut Pro
♦ How to attach a DVCamera
♦ How to open Final Cut Pro
♦ Basic set up in Final Cut Pro
♦ Capturing video and importing files
♦ Basic Editing
♦ Advanced Editing
♦ Exporting and Printing to video

INTRODUCTION AND OVERVIEW

*Instructor Note: At this time, pass out the User Manual to the students. Turn the flip chart to page #1 so the users may see the key points. Indicate that the students are **Not** to get ahead and do anything without the instructor. Indicate that the students are **Not** to do anything on the computer besides the indicated tasks at the indicated times. Remind them that they are to watch you first as you demonstrate, then they will be able to practice on their own.*

In this class, you will learn the basic layout and key terms to using Final Cut Pro 2. You will learn how to open the program and set up the Project Settings, capture video and import files, edit, and export the finished video to tape and QuickTime formats. Once you have successfully completed this course, you will be able to answer most questions dealing with the basics of Final Cut Pro 2.

The following are the key points we will be covering:

- ♦ Intro to Final Cut Pro
- ♦ Key words/terms for Final Cut Pro
- ♦ How to attach a DVCamera
- ♦ How to open Final Cut Pro
- ♦ Basic set up in Final Cut Pro
- ♦ Capturing video and importing files
- ♦ Basic Editing
- ♦ Advanced Editing
- ♦ Exporting and Printing to video

LECTURETTE 1: THE FINAL CUT PRO DESKTOP

Instructor Note: *Read and go over the following information for the users. Be sure to demonstrate on the overhead.*

All of these are movable and the standard positions can be accessed again by selecting: **Window > Arrange > Standard**

1. The **VIEWER** is analogous to a source monitor. You use it to watch individual clips, mark edit points, and apply effects. You can also load clips from the current sequence into the Viewer to refine details such as edits, effects, and audio volume.

2. The **CANVAS** is analogous to a record monitor and looks like the Viewer. It displays the composited results of the edited sequence as you are creating it. You also use the Canvas to edit clips in relation to one another in the sequence.

3. The **TIMELINE** displays a chronological view of a sequence. As you drag the playhead along the Timeline ruler, the current frame of the sequence is updated in the Canvas window and vice versa. Video tracks are displayed in descending order. Track V1 is the base layer. Clips placed on track V2 are composited onto the clips in track V1, and so on.

4. The **BROWSER** is used to organize and locate the source material for your project and the finished product. The Browser is not a collection of files; it is a collection of references to files, which you organize in the context of your project. You can group Browser items in bins, which are similar to folders. The Browser's scrollable columns provide information about your files. When you move Browser resources from one bin to another, their corresponding files are not moved. This means that disk organization is independent of Browser organization. It also means that you can place the same clip in the Browser for several projects.

5. The **MENU BAR** is at the top of the screen and offers many options, including HELP

6. The **TOOL PALETTE** contains tools for selecting and manipulating items in the Timeline (and Canvas)

   NOTICE there are familiar tools like the Magnifying glass to zoom in and out of the Timeline, the Hand tool to move around, etc. Move and pause mouse over tool to read its name label, and there are tools that have hidden tools underneath which are accessed by clicking and holding on them.

EXERCISE 1: MATCHING TERMS AND CONCEPTS

Instructor Note: *Have the users turn to Exercise 1 in their User Manuals. Allow them to complete the matching exercise on their own. They must match the names to the windows that correspond to them. After they have finished, go over the answers with them quickly.*

Browser   Timeline   Menu Bar   Canvas   Tool Palette
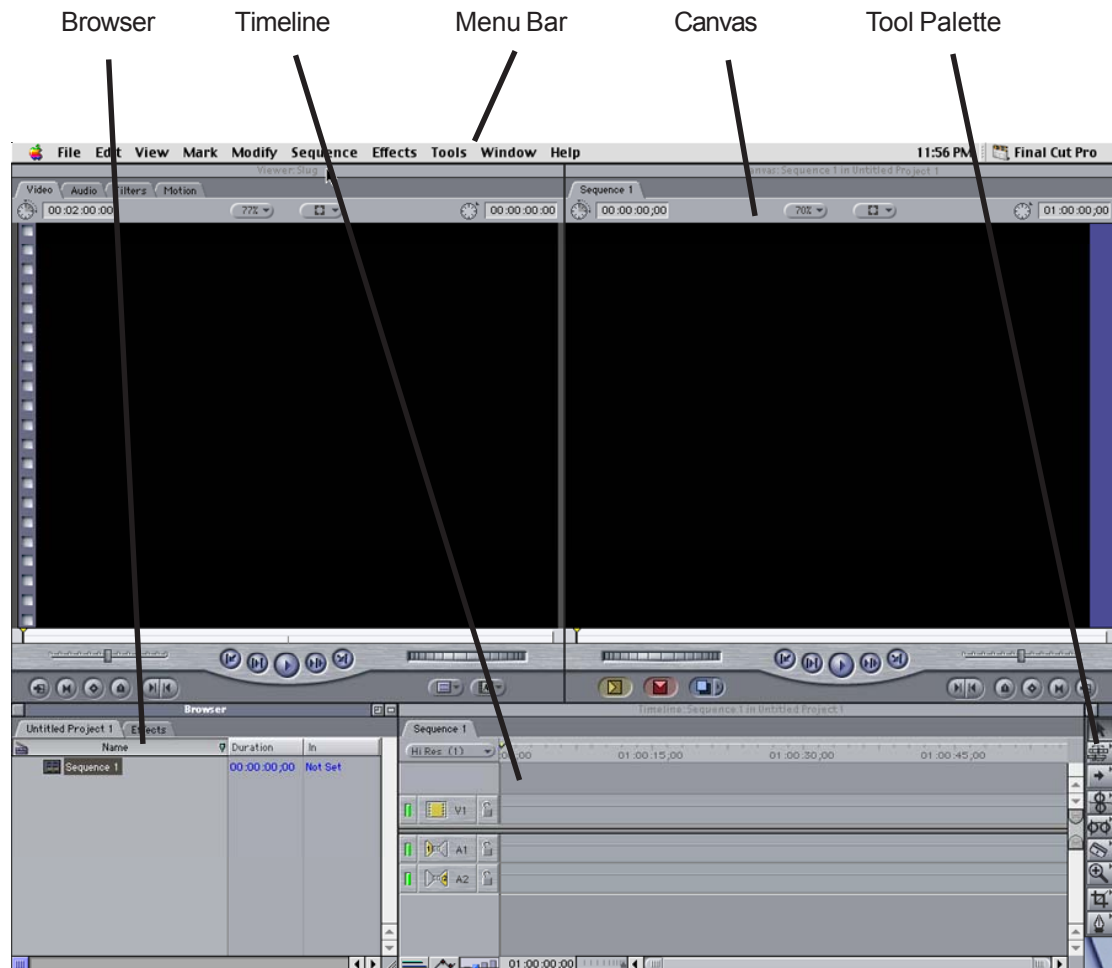
EXERCISE 2: CONNECT DV CAMERA VIA FIREWIRE

Instructor Note: *Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.*

Steps:

1.   Connect firewire cable to **breakout box**

2.   Connect firewire cable to **DVCam**

3.   Turn DVCam On and switch to **VCR/VTR** mode

4.   Connecting DVCam via firewire is the only way to insure device control

EXERCISE 3: OPENING FINAL CUT PRO 2

Instructor Note: *Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.*

Steps:

1.   Locate and **Open** Final Cut Pro 2

2.   If you haven't yet connected the camera you will receive a warning that the program doesn't recognize the camera. Press **Continue** or attach camera via firewire at this time.

3.   Open a New Project by selecting **File > New Project**

EXERCISE 4: SET UP AUDIO AND VIDEO SETTINGS

Instructor Note: *Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.*

Steps:

1.   Choose **EDIT** from menu bar

2.   Scroll down to **Audio/Video Settings**.

3.   Make sure the presets are as indicated by screenshot below for traditional digital video.

4.   Notice: DV (digital video), NTSC (the color model for American TV), 48KHz (audio level), Firewire (connection to device/camera), and 720x480 (size of digital video)
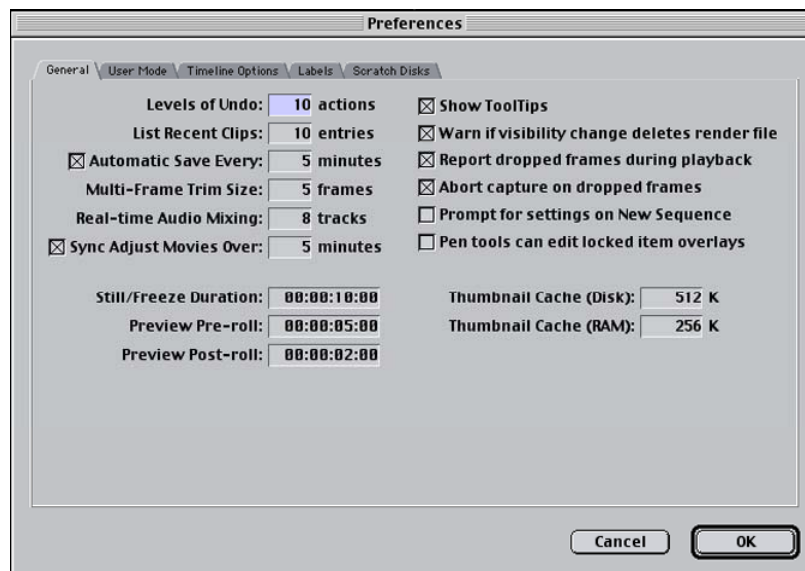
     Click **OK** to save settings
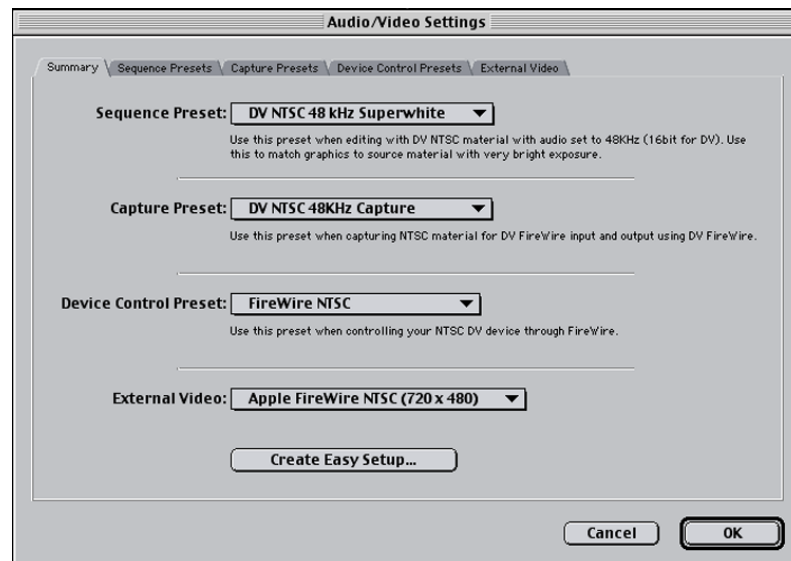
EXERCISE 5: SET PREFERENCES

Instructor Note: *Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.*

Steps:

1.   Choose **EDIT > Preferences**

2.   First, check the **General** tab

3.   Make sure the presets are as indicated by screenshot below.

   Notice the box next to "Abort capture on dropped frames"-This does just what it states…it <u>aborts</u> the capture. It is often necessary to uncheck this box. If capture is not able to capture the clips-even if they are short, uncheck this box. Often, one or two frames (not a big deal) are dropped and this will abort the whole thing if the Abort box is checked.

   Notice The number of frames dropped will be reported because/if the Report Dropped Frames box is selected

4.   Next, go to the **Scratch Disk** tab

5.   Select the first **Set button**

6.   Navigate to the drive and folder that you want files to be saved

7.   You MAY select other locations here in the secondary rows, but often computers only have one hard drive so this step is unnecessary

8.   Click **OK**

EXERCISE 6: EASY SET UP

Instructor Note: Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.

If the user has no specifications you can use the Easy Setup option.

Steps:

1.   Access this through **Edit > Easy Setup** and selecting **DV-NTSC**

2.   Click **SETUP**

QUESTIONS FOR REVIEW

Q: How do you access the A/V Settings?
A: Edit > A/V Settings

Q: How do you access Preferences?
A: Edit > Preferences

Q: How do you access Easy Setup?
A: Edit > Easy Setup

Q: Which tabs should be addressed in the Preferences?
A: Scratch Disk, General

LECTURETTE 2: IMPORTING FILES

Instructor Note: Read and go over the following information for the users. Pass out the Job Aid. Have everyone look at the list of files that can be imported into Final Cut Pro 2. These are specific to Final Cut Pro 2 and are included on Job Aid.

1.   **Video formats** - MOV, Type 2 AVI

2.   **Audio formats** - AIFF, WAV, AVI, MOV, this includes an Audio CD

3.   **Still image formats** - TIFF, PICT, Photo JPEG, JPEG, TGA, and also PSD, GIF, SGI, PNG, PNTG, QTIF, Quicktake, Photo CD, PCX, FLC/FLI, BMP, PICS animations
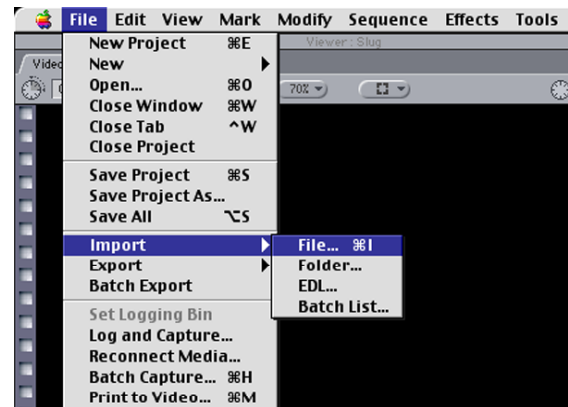
EXERCISE 7: IMPORTING FILES

Instructor Note: *Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.*

Steps:

1. Choose **FILE** from the menu bar

2. Choose **Import > Import File**

3. Select desired file from hard drive

4. Click **Open** to import file

Imported files will appear in the Browser

EXERCISE 8: LOG AND CAPTURE WINDOW

Instructor Note: *Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.*

Steps:

1. Make sure DVCam is connected, turned on and rewound or cued

2. Choose FILE > Log and Capture

3. On the left side of the Log and Capture window is the preview area. Directly below the preview is a set of VCR controls that operate the camera.

    ** Directly below the controls is a display that indicates that there the device control status that should state that "VTR OK" if there is device control. If this says "no communication" either check the connection of camera to computer, make sure that camera is turned ON, is in VCR or VTR- -NOT camera or record mode!

    If you try this and it still doesn't recognize the camera, you will have to manually control the camera by pressing play on the camera itself-at which time the log and capture window SHOULD display clip from the camera
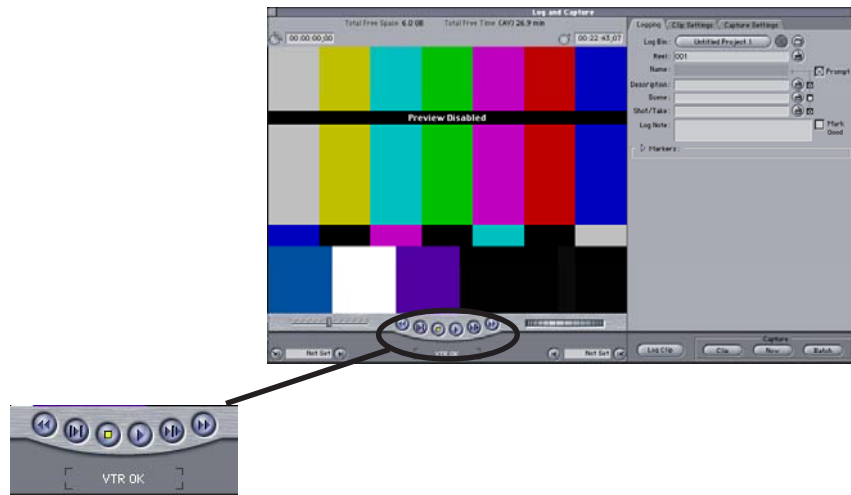
Additional Troubleshooting: Make sure that you check under **File > Audio/Video Settings** and check that the Firewire options are selected as the Device Control Preset and External Video. Then, try Easy Setup to see if that works.

4.   On the right of the Log and Capture window, you will see **Logging, Clip Settings, and Capture Settings tabs.** First, go to the **Capture Settings tab** and notice the same presets and settings that affect capture that are in the Audio/Video Settings window.

These options are also available in the Log and Capture window-specifically: Device Control, Capture, and Scratch Disks. Whether you change these settings here, in the Audio/Video Settings window, or by selecting the Easy Setup option- you are changing the same settings, so whatever you select is mirrored in the other windows.
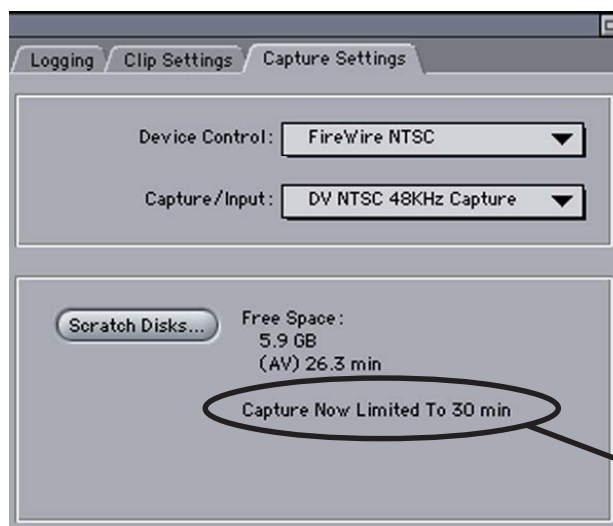
Notice that at the bottom it states approximately how many minutes of footage is able to fit on the scratch disk.

5.   Next, go to the **Clip Settings** tab
      and make sure that you check the
      setting on the bottom says that you
      are capturing both Audio and Video if
      you want both to be Captured/
      Digitized
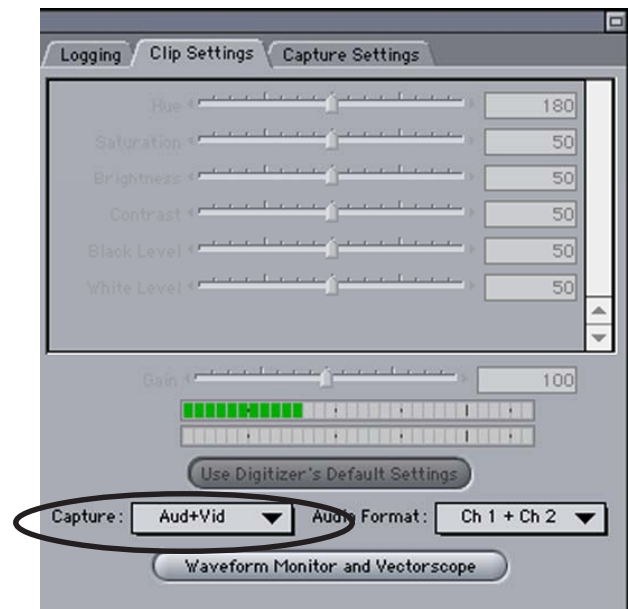
QUESTIONS FOR REVIEW

Q: Which settings are addressed in the log and capture window?
A: Clip Settings - Make sure Audio and Video is selected
      Capture Settings - Select A/V settings (Device Control, Capture-
      Input, Scratch Disk)

EXERCISE 9: CAPTURING VIDEO INTO FINAL CUT PRO

Instructor Note: *Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.*

Steps:

1. Make sure DVCam is connected and turned on

2. Choose **File > Log and Capture**

3. Control camera from **VCR** type buttons on the bottom of blank screen of Log and Capture window

4. Press triangular "**play**" button (looks like VCR play button) to begin playing using device control of camera, press the double arrows both on the far left and right to Fast Forward and Reverse

5. On the lower right-hand corner of Log and Capture window notice the Capture options.

6. Choose **Now** to Capture Now

7. A Capture Now –Capturing window appears and the footage plays in this new preview window. The computer is capturing or digitizing this footage.

8. Press "**escape**" key on keyboard to **end capturing**

9. If any frames were dropped it will alert you at this time, click **OK**

   The clip is now in its own window

10. You must then **DRAG** the clip into the **Browser** (or the Timeline)

11. Name the clip. It is important to choose meaningful names for your clips, not something as general as "Clip 1".

12. **Close** Clip and Log and Capture window when finished

    Captured clips will should then appear in the browser

14. BINS are folders in the Browser to help organize the browser- create a new bin by choosing **File > New > Bin**

EXERCISE 10: ADDING CLIPS TO TIMELINE

Instructor Note: Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.

Steps:

1. **Drag** desired clip from bin to timeline, drop it into the **V1** (Video track One) row of the timeline

2. **Drag** the next clip (or the same clip if desired) into timeline, placing it either next to the first clip, or in another track

3. Creating another track is achieved by dragging a clip so that it is above the default V1 track and dropping it in the blank space (see picture). There can be **99** layers of video and audio.

4. To play the Timeline, position the playhead at the beginning of the clip by clicking the mouse there and press the **space bar**
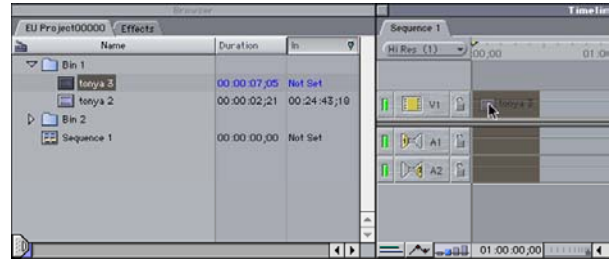
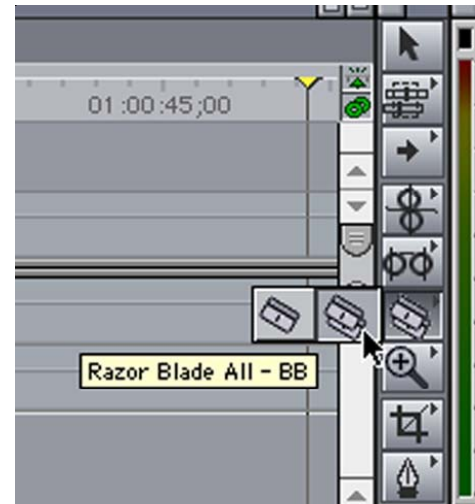## EXERCISE 11: SHORTENING AND SPLICING CLIPS

Instructor Note: Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.

Steps:

1. Choose the **Selection** (arrow) **tool**

2. Position the mouse and the end of a clip in the Timeline, the cursor changes to a vertical line with little arrows- **click and drag** the ends of clips in the timeline to shorten them

3. **Trim** the end of the first clip and trim the beginning of the second clip and position them next to each other in the same video track **Remember that trimming the clip does not get rid of the footage- to extend the clip just drag it back out.

4. You can only extend the clip to as long as the clip that was digitized/ captured.

5.   Choose the **razor blade tool**

6.   Splice clips by clicking on them with the razor blade tool (this splits them wherever you click). You can do this in the Timeline and in the Viewer

7.   Click and hold the razor blade tool to expand other tools and you will find a tool that looks like a double razor- (see picture) using this tool slices BOTH video and audio at the same time

EXERCISE 12: ADDING TRANSITIONS BETWEEN CLIPS

Instructor Note: Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.

Steps:

1.   Place first clip in V1 track and **trim the end**

2.   Place second clip in V1 track and **trim the beginning**. Then, position the clips so they are touching in the timeline- **notice: if you drag a clip on top of another clip and then drag it off—you have clipped off or clipped out of the original clip

3.   Choose a **transition** from the transitions window located in the Browser by selecting the **Effects tab**, navigate to **Video Transitions > Dissolve > Cross Dissolve**

4.   Drag the transition you want into the "**transition**" **track** of the timeline, between clip #1 and clip #2

5.   To preview a transition do either a scrub render or actually-physically render (rendering means preparing composited video for viewing)
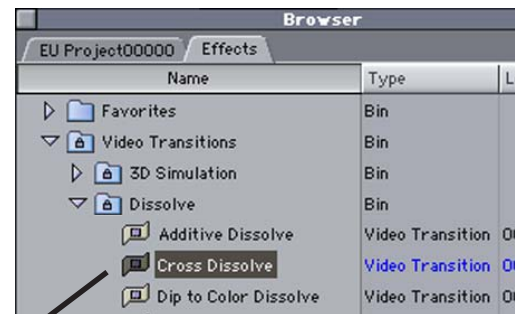
5. **Scrub render** by clicking and dragging through the top of the timeline marked with the frames, second, etc. (see picture) while "scrubbing" through to see the transition you will see the transition at the speed you scrub

    Or

    You can select the transition with the **Selection** (arrow) **tool** and select from the menu bar: **Selection > Render Selection**. This will render the transition or prepare it to be viewed in real time. It may take a few minutes. After it has finished rendering, you can move the current time indicator in the Timeline to before the transition and you can hit the spacebar to play the sequence and watch the transition
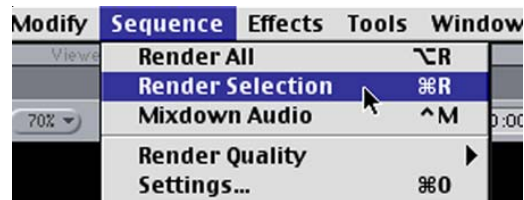

Fade to Black Fade to black is a transition that goes to between a clip and nothing. Some programs requires you to put a black clip in the Timeline to fade between- Final Cut Pro 2 does NOT require one. To fade in: trim the front of a clip and place a cross dissolve on the edit point at the front of the clip. This is the same exact process as a regular transition.

EXERCISE 13: CHANGING OPACITY OF A CLIP

Instructor Note: Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.

Steps:

1. Place a clip in track V2 or higher above another clip in track V1

2. Select the Clip Overlays button to display Opacity Overlay (black) lines toward the top of the video clips and Volume Level Overlay (red) lines in the middle of the audio clips

3. Select the pen tool from the tool palette

4. Click on the Opacity Overlay (black line) with the pen to make anchors on the black line

5. Anchors are movable points; drag them down and up using the Selection tool

6. Drag Opacity Overlay (black line) to desired opacity: the top is 100% opacity-which makes it impossible to see what is underneath and the bottom is 0% opacity in which you see through it completely to the layer underneath
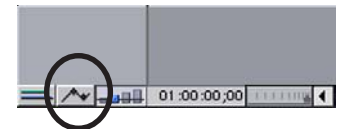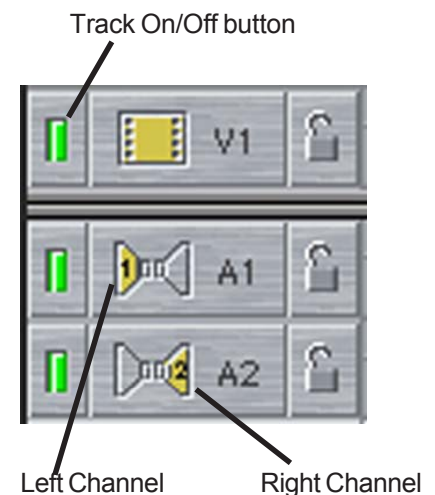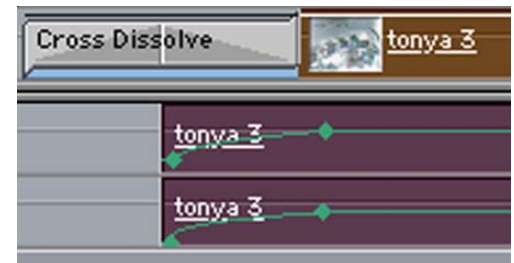
EXERCISE 14: ADJUSTING AUDIO LEVELS AND PANNING

Instructor Note: Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.

Steps:

1. Place an audio clip in any **audio track** on the Timeline

2. View the volume by clicking the **Clip Overlays button**

3. The volume is represented by the **Volume Level Overlay** (red or green if track is selected) line in the middle of the track

4. **Drag red line** to desired levels for desired volume

5. For panning, there can be audio in two different tracks. If the tracks were imported as stereo tracks, they <u>may</u> be linked. To change this so that each channel is adjusted separately, select from the Menu Bar: **Modify > Stereo Pair** so that there is **NOT** a check mark by it. This is also the way to <u>create</u> a stereo pair by "shift-selecting" two tracks and then selecting Stereo Pair from Modify again

    OR

    To adjust the panning in a mono channel audio clip, drag the clip into the Viewer and select the **Channel 1 tab**. Drag the purple pan slider to adjust it. You may use the pen tool here also to add anchor points which can then be adjusted using the Selection (arrow) tool

Track On/Off button

Left Channel   Right Channel

**There are yellow triangles specifying whether the track is the right or left channel. Also, check that the green box is selected to have the track play.

EXERCISE 15: CHANGING THE SPEED AND PLAY DIRECTION OF A CLIP

Instructor Note: Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.

Steps:

1. Select desired clip with the **Selection** (arrow) **tool** from the Timeline

2. Choose from the Menu: **Modify > Speed**

3. Reverse clip by checking the **Reverse** box

4. Change speed by entering new rate or desired duration and clicking **OK** (a negative number will also cause the clip to play in reverse)
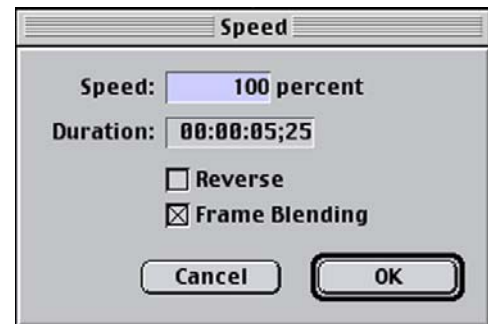
EXERCISE 16: CREATING TEXT TITLES

Instructor Note: Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.

Steps:

1. Select the **Title button** from the bottom right hand corner of the Viewer and select **Text** and then type of text that you want, Text for stationary text, Scrolling Text, etc.

2. Then, select the **Controls tab** in the Viewer window and replace sample text with desired text.

3. **Click and drag** the whole title screen from the **Viewer into** the **Browser**

4. Then, place the title into the **Timeline**

5. Preview by **rendering**

EXERCISE 17: RENDERING WORK AREA

Instructor Note: *Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.*

Steps:

1.   Select **Sequence > Render All**

2.   Wait for rendering to finish (length of wait determined by length of movie and complexity of edits)

      Rendering **MUST** be done to view transitions, titles, etc. and can sometimes take hours (as does Exporting to QuickTime), but after rendering-Printing to Video happens in real time

EXERCISE 18: RE-LINKING MEDIA FILES

Instructor Note: *Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.*

Occasionally, when saved files are accessed from different computers- they are referenced incorrectly and will not show up. You will then need to re-link them.
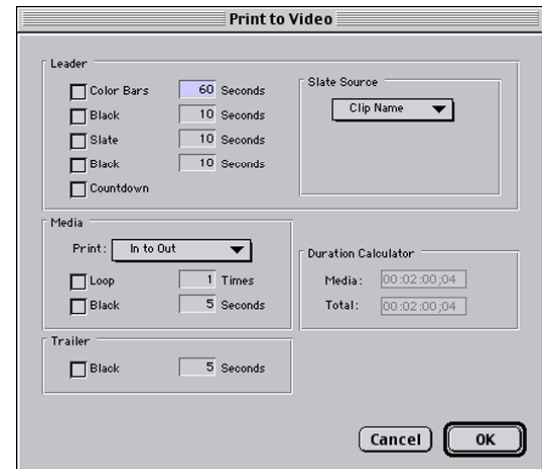
Steps:

1.   Select the clip, title, file, etc. from the Browser.

2.   Select **File > Reconnect Media…**

3.   Navigate to the location and re-link it to the source. It should be in the folder that was set up on the Scratch Disk

EXERCISE 19: PRINTING TO VIDEO

Instructor Note: *Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.*

Steps:

1. Make sure DVCam is connected and turned on to **VCR** mode

2. Select **File** from menu bar and hit **Print to Video**

3. Make selections for Leader, Project Media, and Trailer

4. Click **OK**

EXERCISE 20: EXPORTING TO QUICKTIME

Instructor Note: *Remember to demonstrate first, then allow the users to complete on their own, following the steps in their User Manuals.*

Steps:

1. Select File from the menu bar and go to **Export > Quicktime**

2. Select the **Options** button to access compression, frame rate, etc. if the end user has specific specifications

3. OR use a default setting. If unknown, make a guess depending on the content of the video. Also, 20kbps will make a smaller file size than a 100kbps, BUT it will not look as nice-SO, pick depending on whatever is the most important to the end result

4. OR **Export > Final Cut Pro Movie** and select a **self contained movie** and then Import it into **Cleaner 5** and compress it using that program

5. For all options, make sure that you name file with the proper file extension (.mov) and of course name it
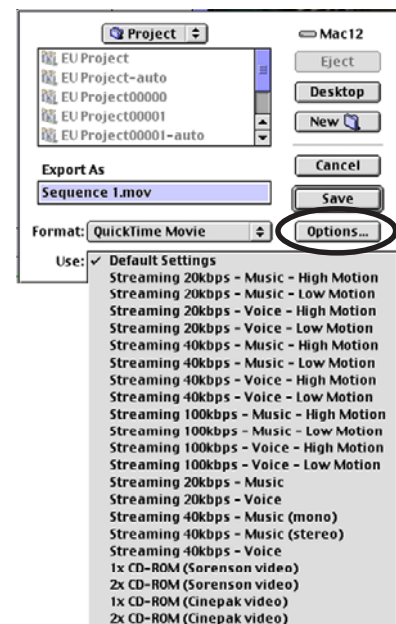
CONCLUSION

In this class you have learned the basic layout and key terms to using Final Cut Pro 2. You have learned how to open the program and set up the Project Settings, capture video and import files, edit, and export the finished video to tape and QuickTime formats.

Now that you have successfully completed this course, you are ready to take the Criterion test. After passing the Criterion Test, you will be able to answer most questions dealing with the basics of Final Cut Pro 2.

CRITERION TEST:
25 min

Instructor Note: *Instruct the students to turn to the last page of their User's Manuals. Inform the students they have 25 minutes to complete the Criterion Test, which should be more than enough time. At the end of the time allowed, check the students' final products to ensure they have passed successfully.*

This is the criterion test for the Final Cut Pro 2 module.   It is going to test your comprehension of the module you just participated in or allow you to test out of the Final Cut Pro 2 module.

1.	Capture several video clips onto the Browser in Final Cut Pro 2.

2.	Place them in the Timeline.

3.	Trim and split clips so that there are 7 different clips of about 4-5 seconds each.

4.	Put a scrolling title at the beginning that has 5 short lines of text such as:

- ♦	Directed by (your name)

- ♦	My Movie

- ♦	Starring Me

5.	Put a Cross Dissolve Transition between the first two clips about 1-2 seconds long.

6.	Make the third clip play in reverse.

7.	Make the fourth clip play is slow motion.

8.	Make the last clip fade to black.

9.	Put a stationary title of your choice at the end with one line of text such as:

- ♦	Year

10.	Adjust the fifth clip so that the audio is very soft.

11.	Export movie to Quicktime (using Streaming 20kbps-Music)

12.	Export movie again back onto the camera at the end of the footage.