

## Introduction to DVD Studio Pro

<http://www.cla.purdue.edu/vpa/etb/>

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Required software for this workshop:

Description	
Apple DVD Studio Pro <a href="http://www.apple.com/finalcutstudio/dvdstudiopro/">http://www.apple.com/finalcutstudio/dvdstudiopro/</a>	

## Apple DVD Studio Pro 4 Workshop



### DVD Studio Pro

When you open DVD Studio Pro for the first time a window appears which prompts you to set your initial project settings, for now choose: configuration – advanced mode and SD DVD.

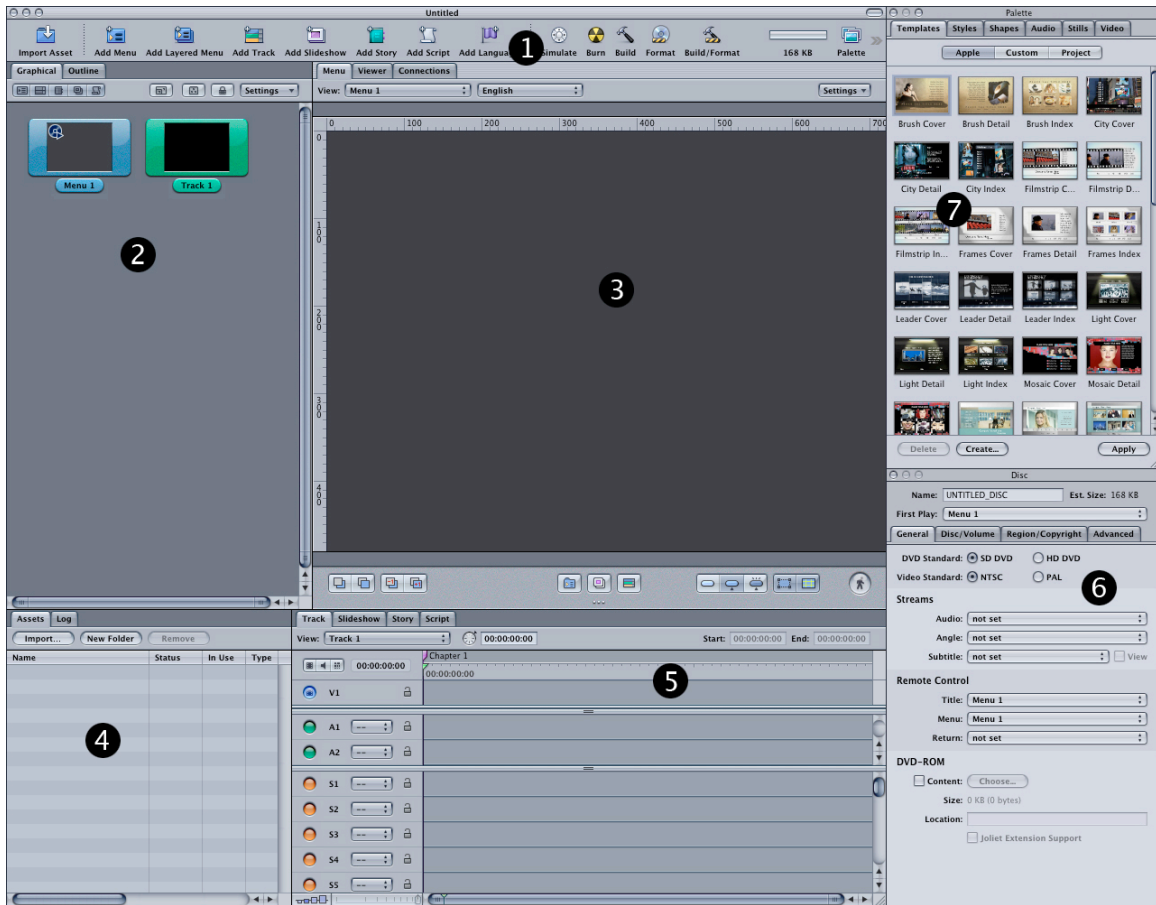
As with the other pieces of software, for all question related to DVD Studio Pro that we cannot address in class please consult the excellent DVD Studio Pro User Manual, go to:

Help > DVD Studio Pro User Manual

### DVD Studio Pro User Interface

For beginners, chapter 4 – The DVD Studio Pro Interface, might be helpful to explain all the functions of the software's user interface. Here is a short glance (please also see screenshot on page 2):

1. Toolbar
2. DVD Graphical Outline (Graphical/Outline)
3. Canvas (Menu/Viewer/Connections)
4. Browser (Assets/Log)
5. Timeline (track/slideshow/story/script)
6. Property inspector
7. Palette



If you have lost a window you can always go the “Window” menu section and specify which window you would like to open back up (For example Window > Assets in order to open up the assets window).

Even before you have started to work on anything it is a good idea to save your DVD project File > Save As...

Again, save your project in the same location as your other animation project files. DVD Studio Pro will give your DVD the same name that you just gave to your project, you can later on change the name if you like in the property inspector.

### Choosing an Aspect Ratio

With more footage being recorded in HD which is natively 16:9 and older miniDV cameras still shooting 4:3 NTSC footage, the setting of the proper aspect ratio in DVD Studio Pro can become a challenge. Ideally Your DVD should be set up to either only feature 16:9 assets or only 4:3 assets. sometimes this is not possible though and DVD Studio Pro allows you to mix aspect ratios for each media container (i.e. menus, tracks, slideshows). You should never mix 16:9 and 4:3 footage within one of these containers, e.g. within a track.

See page 50 “Choosing an Aspect Ratio” in the DVD Studio help for more information about choosing the right aspect ratio for your tracks and menus in DVD Studio Pro.

In addition to aspect ratio differences, also be aware of pixel aspect ratio differences and the pixel size for different video formats. This will be important when creating still images in Photoshop for menus or slides. As a brief reminder, here are the most common pixel sizes and pixel aspect ratio listings:

#### Standard Definition

Aspect ratio	Starting dimension	Rescale dimension
NTSC 4:3	720 x 534 pixels	720 x 480 pixels
NTSC 16:9	864 x 480 pixels	720 x 480 pixels
PAL 4:3	768 x 576 pixels	720 x 576 pixels
PAL 16:9	1024 x 576 pixels	720 x 576 pixels

We cannot burn HD DVDs, so this is just for your information:

#### HD Video Pixels

There are a variety of video resolutions supported by HD projects:

Resolution	Square pixels	Starting dimension	Rescale dimension
480p (NTSC; 16:9)	No (anamorphic)	864 x 480 pixels	720 x 480 pixels
576p (PAL; 16:9)	No (anamorphic)	1024 x 576 pixels	720 x 576 pixels
720p (NTSC, PAL; 16:9)	Yes	1280 x 720 pixels	1280 x 720 pixels
1080i (NTSC, PAL; 16:9)	Yes (anamorphic)	1920 x 1080 pixels	1440 x 1080 pixels
1080i (NTSC, PAL; 16:9)	Yes	1920 x 1080 pixels	1920 x 1080 pixels

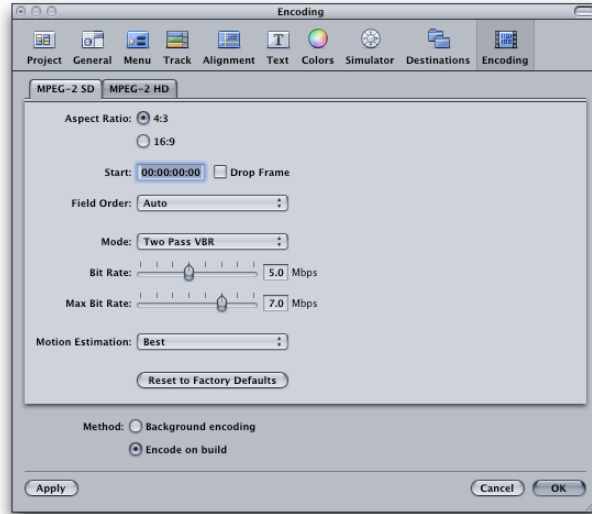
The term *anamorphic* refers to a videographic process that horizontally squeezes a widescreen image so that it can be stored into a standard 4:3 aspect ratio DVD image frame. Compatible playback equipment can then re-expand the horizontal dimension to show the original widescreen image.

#### Importing Quicktime Videos

Before you import any Quicktime video files we will need to double-check the compression settings in DVD Studio Pro. DVD Studio Pro does not work directly with the DV compressed Quicktime video files that Final Cut Pro exports but with MPEG2 compressed video files. DVD Studio Pro has a built-in compressor that will compress all video files for you.

This is a slow encoding process that you will need to sit through. Fortunately only once when you author your DVD. The result is for a very fast (real time) decoding process whenever you watch the DVD).

Go to: DVD Studio Pro > Preferences (go to the Encoding tab at the far right)



The important settings are:

Mode (set to Two Pass VBR)

Bit Rate: can be set to around 5.0 Mbps

Max Bit Rate: set at around 7.0 Mbps

Motion Estimation: set to best

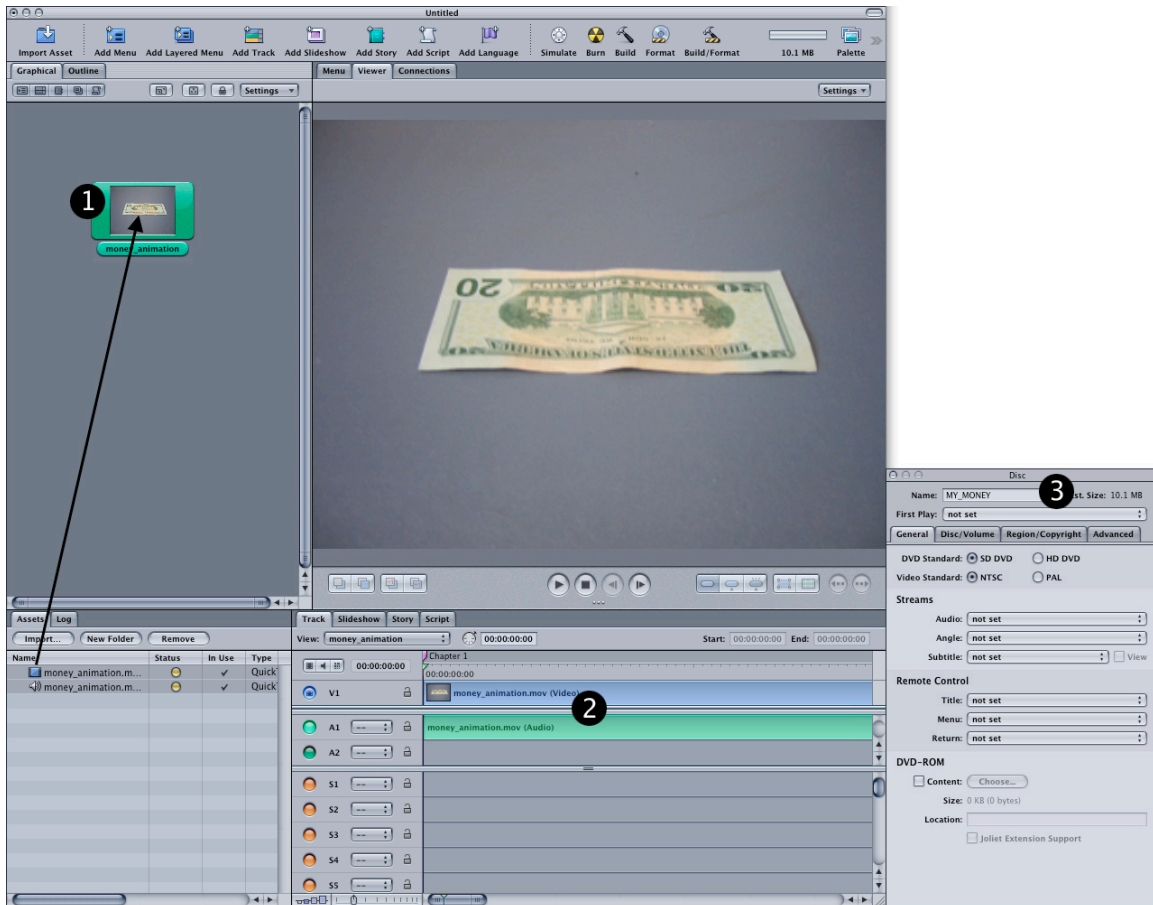
“Method” indicates how the encoding process is executed – “background encoding” starts with the encoding immediately after you have imported a video file as asset and work on the encoding in the background while you work with the DVD authoring in the foreground. “Encode on build” only starts the encoding process when you have finished working on your DVD and are ready to build and burn it, this is sometimes the more reliable way to encode your files even though effectively it costs you more time.

Now you are ready to import your video file. All media files that you are going to use in your DVD are called “assets”.

File > Import > Asset

### Working with Video Assets

Create an empty container for your first video track: Project > Add to Project > Track or simply click on “Add Track” in the toolbar.



Drag the video and audio file from your imported asset to the track container (see step 1 in the screenshot above)

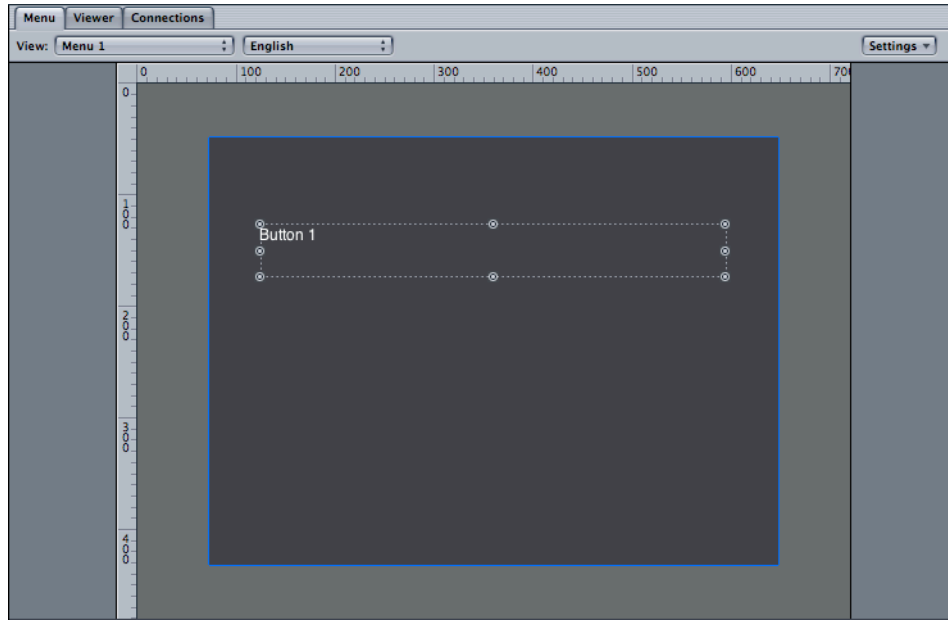
Double clicking on the track now opens the video in the viewer and you will see a timeline representation of your video in the track tab at the bottom of your user interface (see step 2).

Next, create a second video track for your second Quicktime movie.

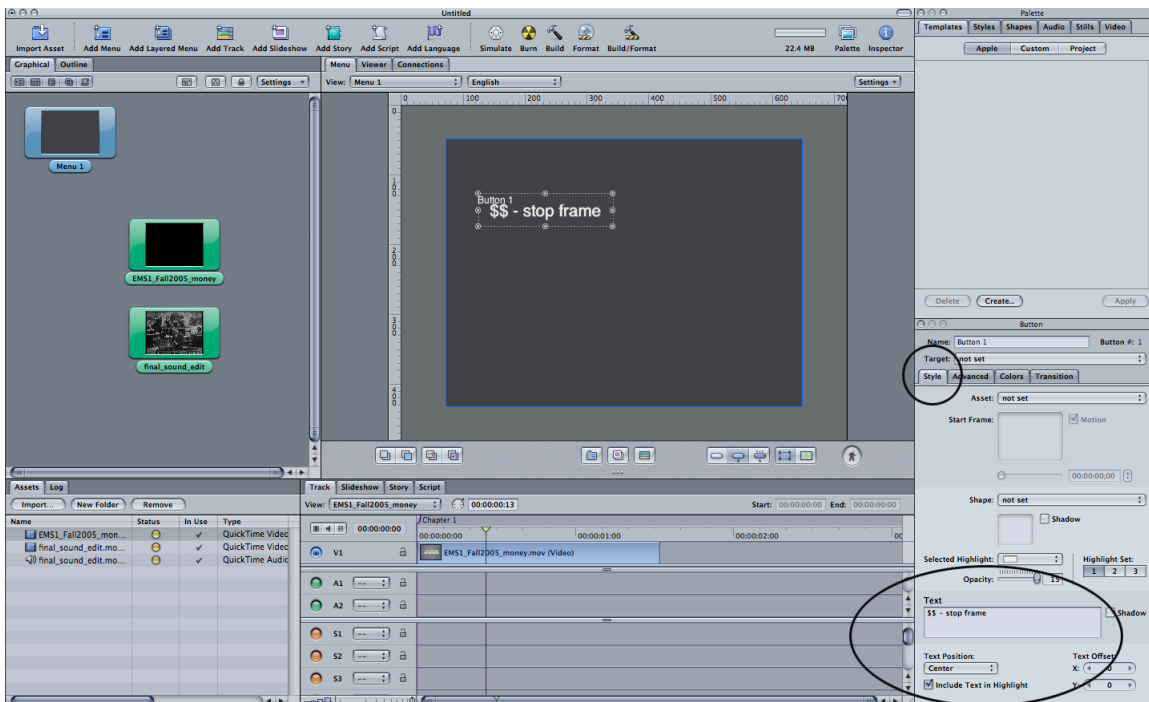
## Creating Menus

Create an empty Menu by using the “Add Menu” button in the toolbar. Double click on the menu in the Graphical Editor so that the property inspector displays the menus properties. For example, the background property allows you to select a background image for your menu (create it at 720x540 pixels in Photoshop, then in the last step before saving the file scale it un-proportionally to 720x480 – it will look squished – and save it as .psd file, import this file as an asset like you imported your movies). For the sake of simplicity I will skip over this step though (we come back to it later when we look at improved menus in DVD Studio Pro).

Now I would like to create a first text-based button, which we will link to the first video track. Just click and drag anywhere you would like the button to begin:

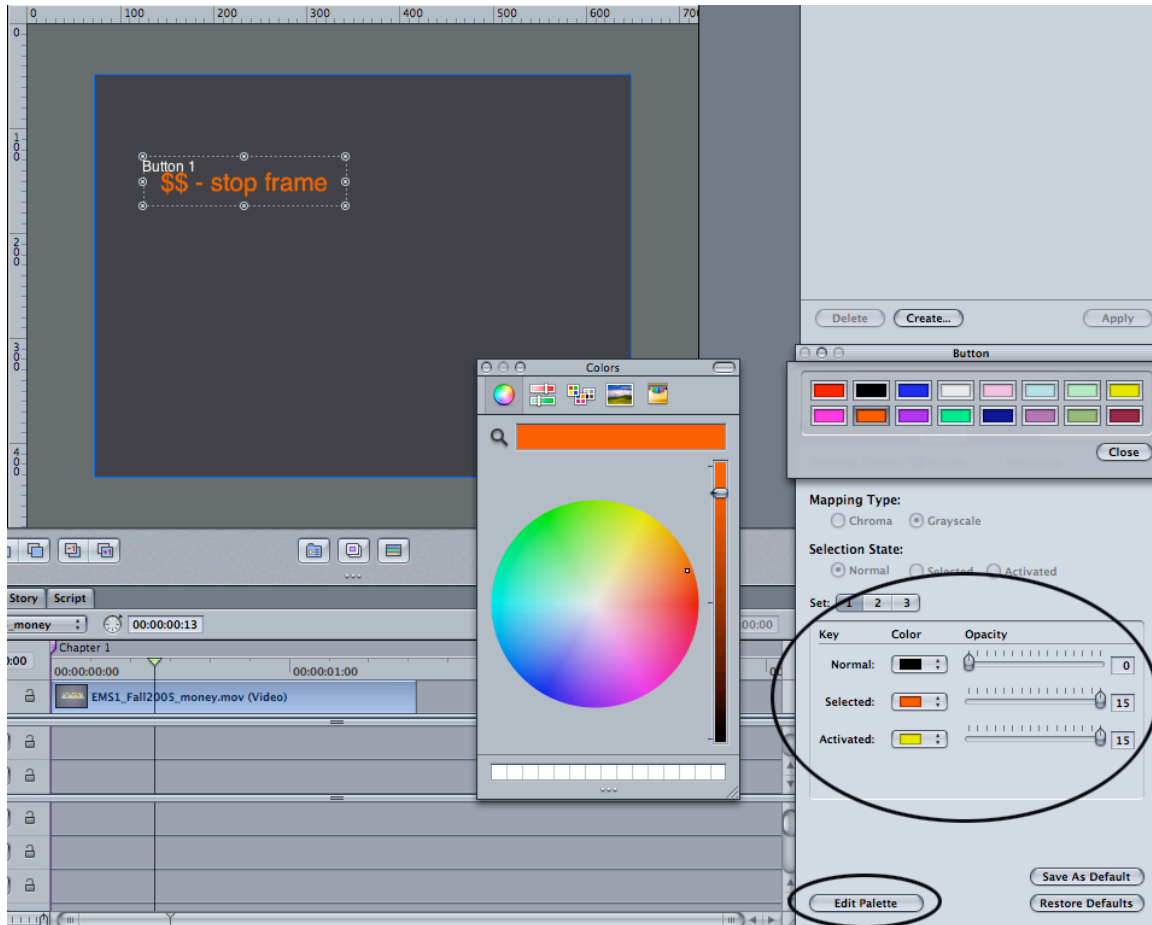


Next click on the button's outline and type in the text that you would like to have displayed in the Text property in the property inspector (which changes its appearance based on the focus of your last click). Make sure the inspector displays the "Style" tab. After you typed in the text for the button, check "Center" from the Text Position property and finally check the "Include Text in Highlights" box, so that the text changes colors based on mouse over or remote control selection.

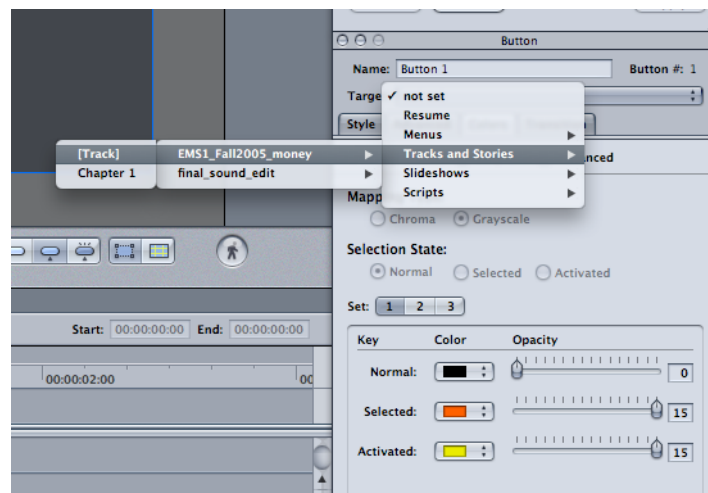


In the next step, select the colors for the button's highlights - there is one color for the button's "Normal" state (i.e. it just sits in your menu), one for the selected state (somebody selected the button or moved the mouse over it) and one for the activated state (somebody pressed the button or activated it with the "OK" button on the remote

control). Go to the “Colors” tab and set the colors accordingly. You can mix your own colors by clicking on the “Edit Palette” button on the bottom of the inspector window:

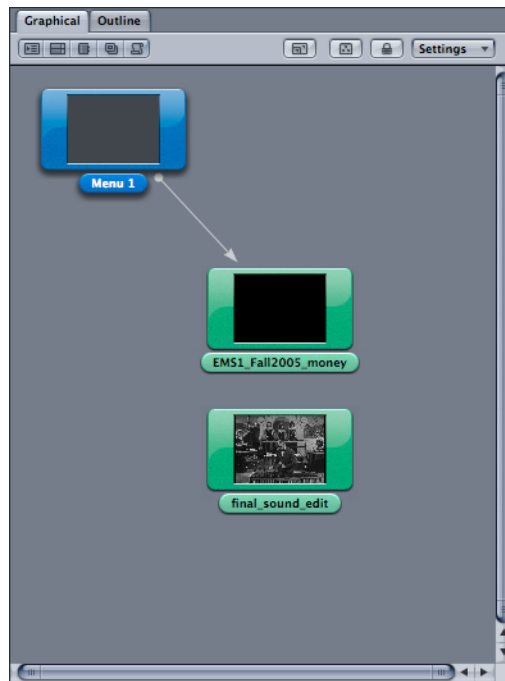


Finally, we need to link the button to the video track it should trigger. Go to the Target property in the property inspector (still with the button selected in the Menu Viewer) and choose Tracks and Stories > YourVideoTitle > [Track] from the pulldown menu.

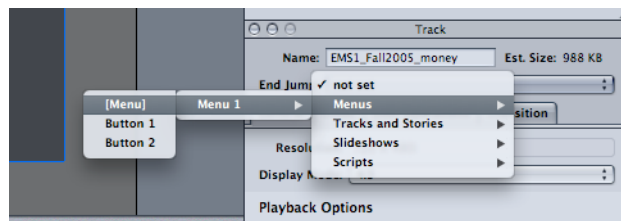




This should create an arrow that points from the menu to the video track in the Graphical view:



You can repeat the above steps for button number 2, linking it to video track 2. We still need to think about what to do when the video is done playing. Fortunately, DVD Studio Pro has an “End Jump” property, which was created for this situation. We can use it in order to jump back to the menu once a video has finished playback, allowing the viewer to choose another video. Click on a video track in the Graphical viewer and then choose: Menus > Menu 1 > [Menu] in the property inspector’s “End Jump” property.



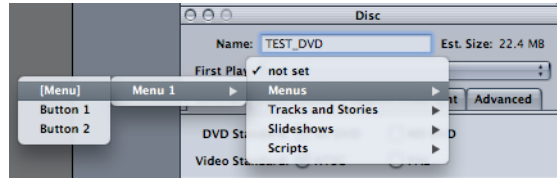
As you can see, this property even allows you to specify individual buttons that can be preselected for viewers after jumping back to the menu from a video track. The arrows in the Graphical view should now point in both directions between the menu and individual video tracks

## Setting First Play and naming the DVD

In order for DVD players to be able to read your DVD correctly, you will need to set the “First Play” action. It is a little hint for the DVD player what to play first after the DVD has been inserted. It makes the most sense in our case to choose the menu for this purpose but in other cases other media elements might make more sense (e.g. you can choose menus, tracks, scripts or slideshows to be played first). Click anywhere in the gray area

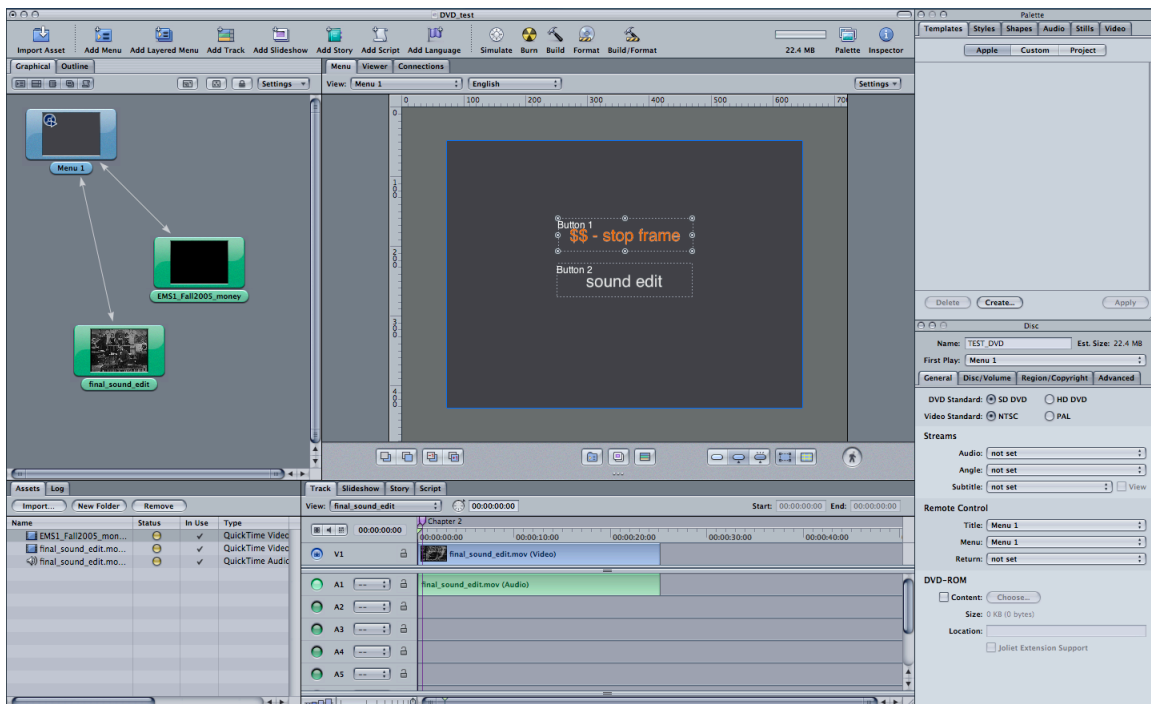
of the Graphical view window, then select: **Menus > Menu 1 > [Menu]** in the property inspector's "First Play" property.

If you like you can change the name of your DVD in the same window of the property inspector, typing it into the "Name" field.

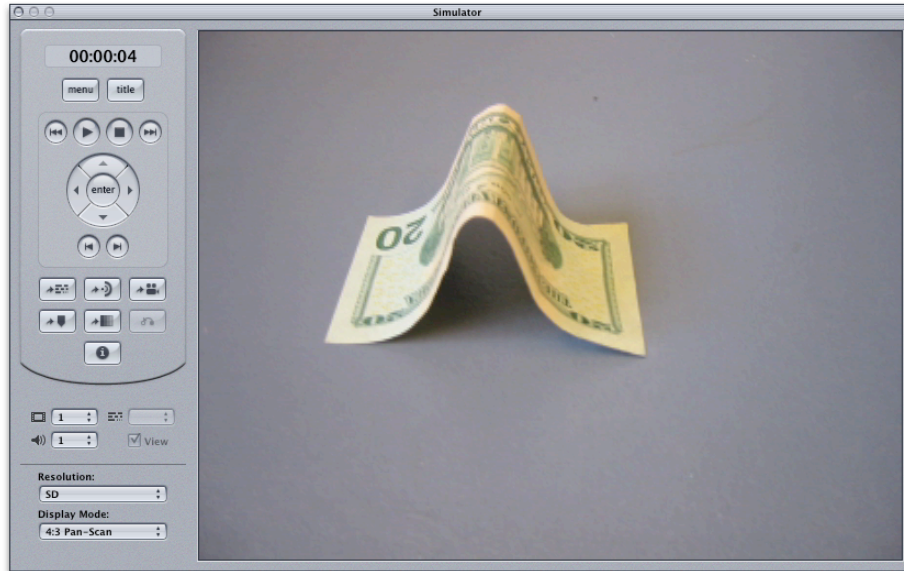


## Finishing Up and Previewing Your DVD

Your DVD Studio Pro desktop should look somewhat like this:

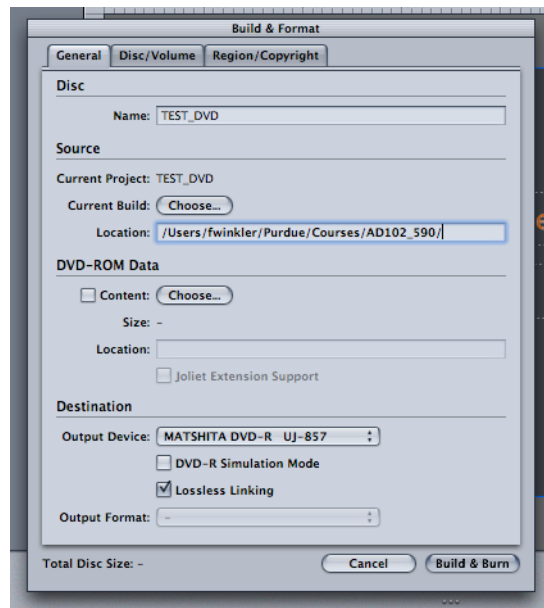


You are now ready to simulate the DVD. Click on the Simulate button in the toolbar or go to **File > Simulate Disc**



If your video plays well in the simulator and all the menu buttons work as expected (check the highlights, where they are linking to and if viewers return to the menu after watching a video) you can go ahead and build and format (i.e. burn) your final DVD. Go to **File > Advanced Burn > Build and Format** or simply click the Build and Format icon in the toolbar.

In the Build & Format menu under “Current Build” choose a new folder that you create in your project folder. This is where all the compiled files of the build process will go.



Finally, click “Build and Format” in the menu window and insert a DVD–R disc into the combo drive. From there DVD Studio Pro handles the burning process and will report to when your disc is ready. In the next DVD workshop we will look at improved menus with text that is rendered smoother and the inclusion of Photoshop graphics that you can turn into customly designed buttons.

## **Creating Menus Using the Layered Method**

If you would like more flexibility over the shape and behavior of each button in your menu, consider using layered menus instead of the default menus in DVD Studio Pro. The layered method allows you to create independent versions of each button for each of the three states. This gives you great flexibility in changing a button's appearance when it is selected and activated.

The DVD Studio Pro User Manual has an excellent introduction into creating layered menus (chapter 9 "Creating Menus Using the Layered Method", p. 323)