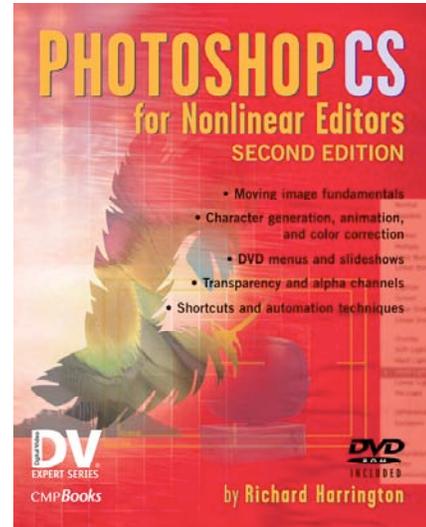


Creating DVD Menus & Slideshows

By Richard Harrington, PMP

RHED Pixel

703•560•0220



Do you DVD? Chances are you do, or soon will be. The Digital Versatile Disc or DVD format has helped jump-start several industries. It is also the hottest way for designers to distribute their content. Getting your still images sized for a DVD slideshow can be an easily automated step. Creating great menus will also keep your viewer's attention and invite them to explore.

For many, the world of video production can be a confusing place. It is common to come across conflicting information (even the software companies disagree, sometimes they even contradict themselves). Let's try to dispel a few myths, teach a few tricks, and get some immediate results.



Why Does it Have to Be So Hard?

Hey, if DVD were easy, everybody would do it... so it'd be just as cluttered an unrewarding as your email inbox. With that in mind, accept that there are some new 'rules' that you must follow and that you are going to have to learn to thrive under severe limitations. The DVD format is one of many compromises... for all its coolness, it's remarkably low-tech. You're going to need to think of creative ways to stay inside of the box (and get your audience to come in and join you).

Design specifications & constraints

When designing for DVD, you must keep a few key specs in mind.

- **Square vs. Non-Square Pixel Aspect Ratio:** DVDs use non-square pixels. If you are building in Photoshop CS, this is no problem. If you are using an earlier version of Photoshop, you will have to resize your graphics.
- **The Screen is Smaller than You Think:** A certain portion of the menu design will be lost by consumer TV sets. To counterbalance this, we reserve a bleed area. Title safe is 80% of the screen; action safe is 90% (but the background goes edge-to-edge however).
- **Final File Ends Up 720 X 480 Pixels:** Whether its widescreen or standard, you still only have an area that's 720 pixels across and 480 pixels tall to design for. Extra ppi (often called dpi) are as useless as an elephant at a backyard barbeque.



- **Buttons Use Grid Slices:** You need adequate separation around buttons. Links are assigned to a rectangular target and you must be able to draw a clean rectangle with no overlapping between button areas.
- **Swapping Layer – OR – a Motion Menu:** Many designers like to build "Photoshop" style menu where different layers are

substituted during the click or highlight stages (think GIF rollover). Other designers build elaborate menus with video and motion using After Effects and other content apps. Never shall the two meet, you can have layers that sub in and out, or a motion menu with a colored highlight layer.

Prepare Movie Assets

It is important to export your movies at the highest quality possible. To harness the full power of the original sequence, choose to export with the native compression rate.

1. Mark an In and Out point in your sequence or on an individual clip.
2. Ensure that ALL media is rendered between the In and Out points.
3. Choose File > Export > QuickTime Movie.
4. Set a destination for your target file. Be sure to select a destination that has adequate space.
5. Be sure to manually add the proper .mov extension to ensure maximum compatibility.

Working with Video

If you want to use video clips, then you are going to need to use a program like After Effects to do the final compositing. However, you may want to use frames of video for design sources or as placeholders for moving clips. Going from Photoshop to After Effects is a mostly painless process and it is quite easy to replace a still proxy with a moving clip.

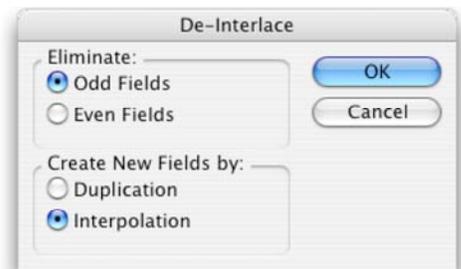
To use still frames in your Photoshop design

1. Get video clips from your client or access them from your NLE system. Most NLE systems allow you to place the playhead indicator on a frame and export a still (see your NLE documentation).
2. You are going to need the video as QuickTime in order to author a menu with it.



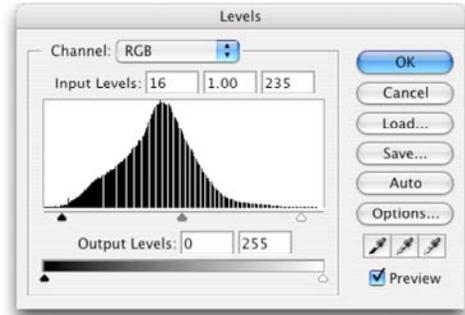
You cannot work with MPEG-2 streams as they are too compressed and do not read into most authoring and design tools.

3. If you need a Frame Grab still, open the clip in QuickTime Pro.
4. Place the playhead on the frame you want and choose Cmd+C (Ctrl+C).
5. Switch to Photoshop and choose to create a new document. It will be automatically sized for your clipboard.
6. Paste the Frame by pressing Cmd+V (Ctrl+V).
7. Choose Filter>Video>De-Interlace to remove interlaced lines.
8. To bring the video frame back to RGB levels, you will need to run a Levels adjustment by pressing Cmd+L (Ctrl+L). Set the white point to 235 and the Black point to 16. This will restore the proper contrast to the image.





9. To get the color back, duplicate the frame by pressing Cmd+J (Ctrl+J). Blur this new layer with a Gaussian Blur filter (set to a pixel radius between 15-50, vary by taste). Change the blending mode of the blurred copy, Overlay or Soft Light often works well, but you will need to experiment here.

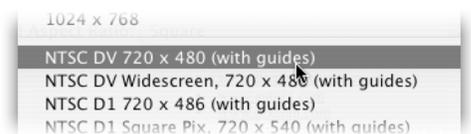


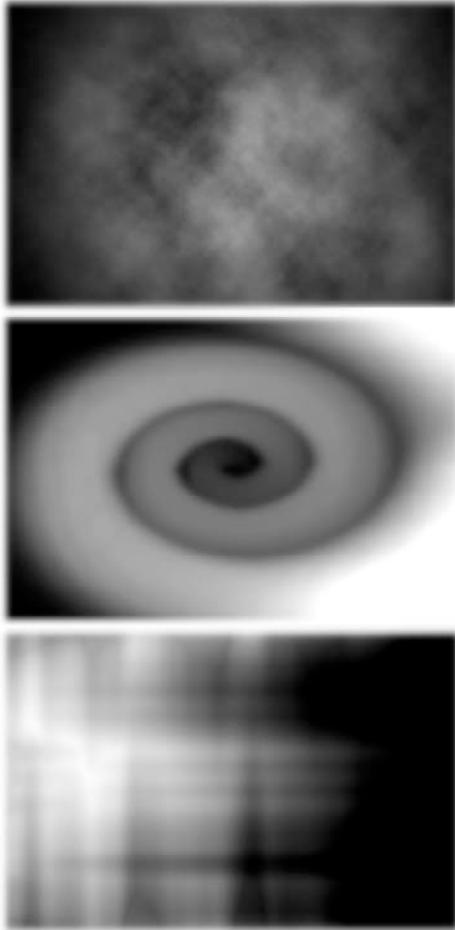
10. Flatten the image.
11. If you are in Photoshop CS, be sure to set the Pixel Aspect Ratio settings to match your clip (usually D1/DV NTSC (0.9)). IF working in an earlier version of Photoshop, you will need to resize the image to account for pixel aspect ration.
 - DV goes from 720X480 to 720X534
 - Standard Def goes from 720X586 to 720X540

Backgrounds from Stills

When designing a DVD, you are going to need a backdrop to hold your menu. There are several sources for these, but lets go ahead and make our own from scratch. By harnessing gradient layers and blending modes, we can quickly create rich backgrounds with depth and color.

1. Create random gradient layers using the gradient tool and filters. Limit yourself to working in the grayscale mode or working with blends between black and white. The important thing is we are going to combine these layers and only want to affect the results based on luminance. If you need some examples of gradients try visiting the following websites for free samples.
 - www.thepluginsite.com
 - www.autofx.com
 - www.pixelan.com
2. We are now going to create a new document to mix our ingredients together. Choose File New or press Cmd+N (Ctrl+N).
 - In Photoshop CS choose New 720 X 480 DV NTSC preset
 - In Photoshop 7 choose New 720 X 534 DV/DVD NTSC preset
3. Add three to four gradients into your composition by dragging them in.
4. Turn off the visibility of all but the two bottom-most layers.

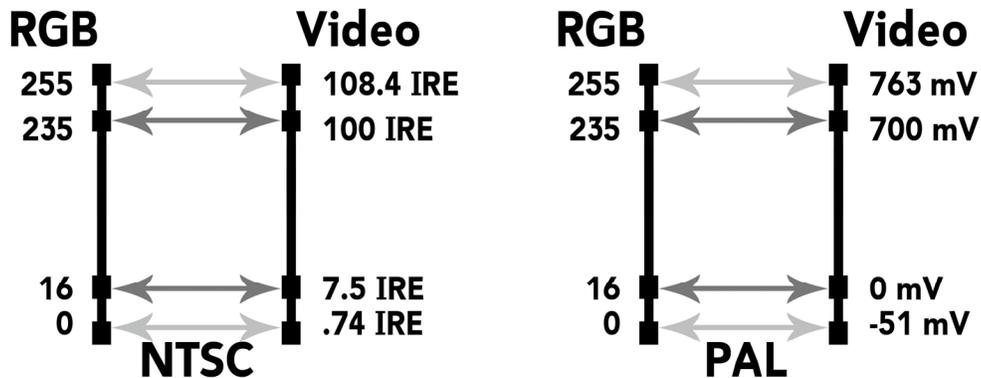


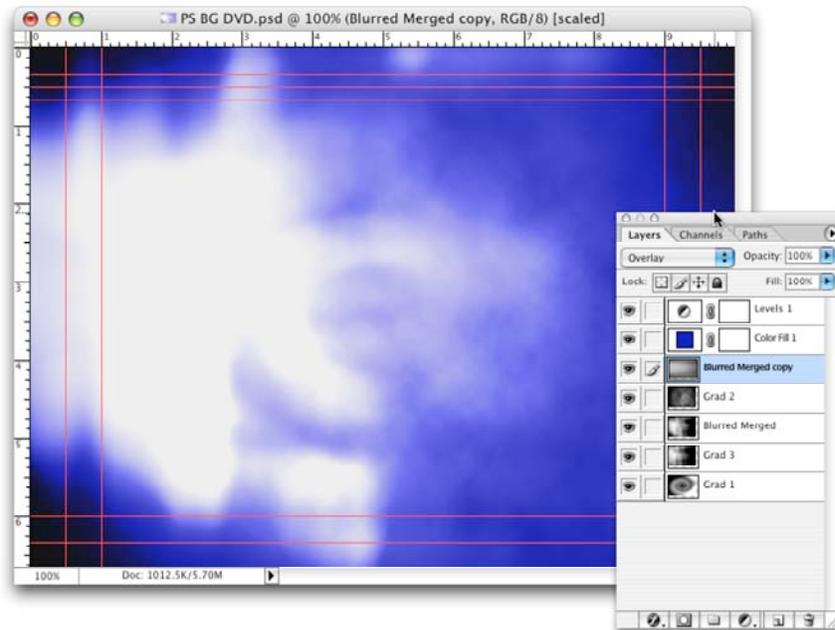


5. Select the layer second from the bottom. We are now going to blend... but let's use a shortcut. Shift+= or Shift + - will cycle through blend modes. If you have a tool selected with modes it changes those, if you have a tool without modes, the layer's mode will change. Pick the move tool and press Shift + = to change the layer's mode. Stop when a resulting pattern interests you.
6. Turn on the next layer and blend. Repeat as needed.
7. When satisfied, we will make a flattened copy of these layers. Make a new layer and then choose Merge Visible while holding down the Option (Alt) key. Apply a slight blur using Gaussian Blur or the Median filters.
8. To bloom it out, duplicate the flattened layer and blur it heavily. Try blending again to get a softer pattern.
9. We are now going to add color.
 - Placing a solid color fill layer or a color gradient above the composite can do this. Then adjust the layer's blending mode to taste.
 - You can also try using a Gradient Map Adjustment Layer. This too can

be further refined with blending modes.

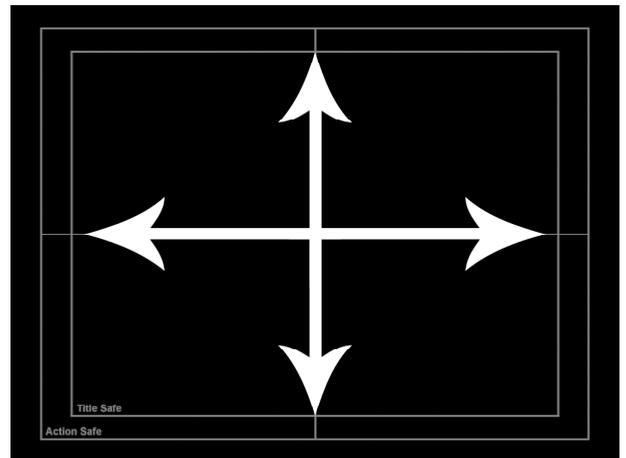
- Tweak stacking order and modes to refine the background.
10. Add a Levels adjustment layer. Clamp the output levels by adjusting whites to 235 and the Blacks to 16.





Make your own title safe guides

1. Go to View>Rulers
2. Select>All or press Cmd+A (Ctrl+A)
3. Select>Transform Selection
4. In the option bar for the selection link the width and height together and scale the selection to 90%
5. Drag four guides to each edge of the selection for action safe
6. Without hitting return, change the value of the scale of the selection to 80%
7. Drag out four more guides to each edge of the selection for title safe
8. Press ESC to drop the transformation and go to Select>Deselect to clear the selection
9. Design your menu.



Using Type

Remember when you were a kid watching Saturday morning cartoons? Did your Mom or Dad yell at you for sitting too close to the TV? “You’ll go blind!” Well that’s good advice to remember. Type for the Television screen is very different than for print or web. Here are some things to keep in mind.

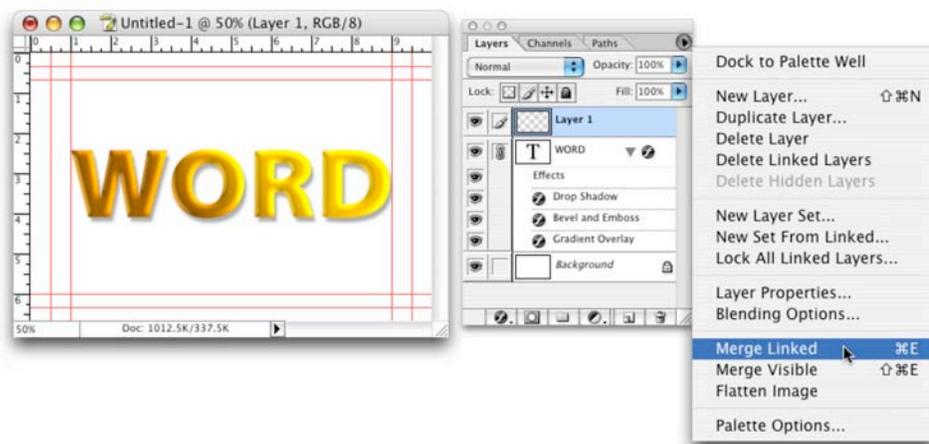
- Use a larger point size. Stand up and walk 20 feet away from the computer screen. Can you still read it?
- White is 255 on a RGB scale, Black is 16. When picking colors for screen usage, do not exceed this color range for any of the RGB values.
- Be sure to anti-alias your type for smoother edges at low-resolutions.
- Layer styles help readability. Don’t over-bevel, but a light bevel can help. Also add a contrasting edge with either a glow or drop shadow
- Sans serif fonts are often easier to read on television sets. If using a serifed font, be sure to use a true bold version, not a Faux Bold effect.



Prepare Photoshop Files

If you have applied layer styles, you must flatten them before input.

1. Select the layer that has the layer style applied.
2. Create a new (empty) layer
3. Link the two layers together
4. Choose Merged > Linked from the Layer’s Palette submenu



Other tips

- Blending Modes do not import to many programs, you may need to merge them.
- Try to minimize the number of layers used, but use separate layers for each button and highlight.

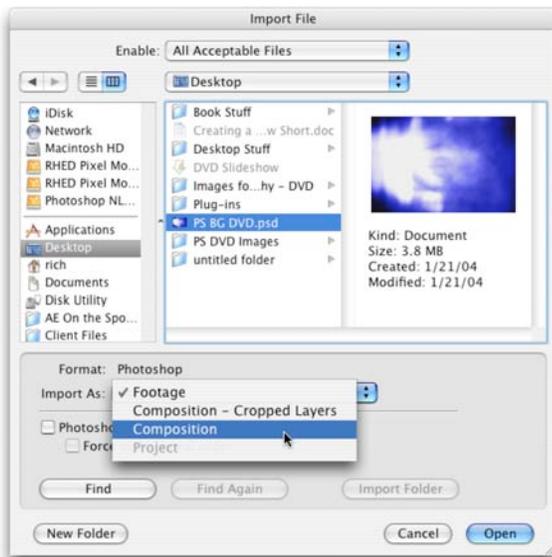
The Split in the Road

At this point you can choose to stop your journey. Stay in Photoshop and finesse your design... the comfortable path. Or you can take the leap into Adobe After Effects and make the plunge into a full-motion menu. Adobe After Effects is often called Photoshop with a timeline, and for good reason. Your PSD file will come in easily, including type layers and blending modes. If you're ready for "more" keep reading.



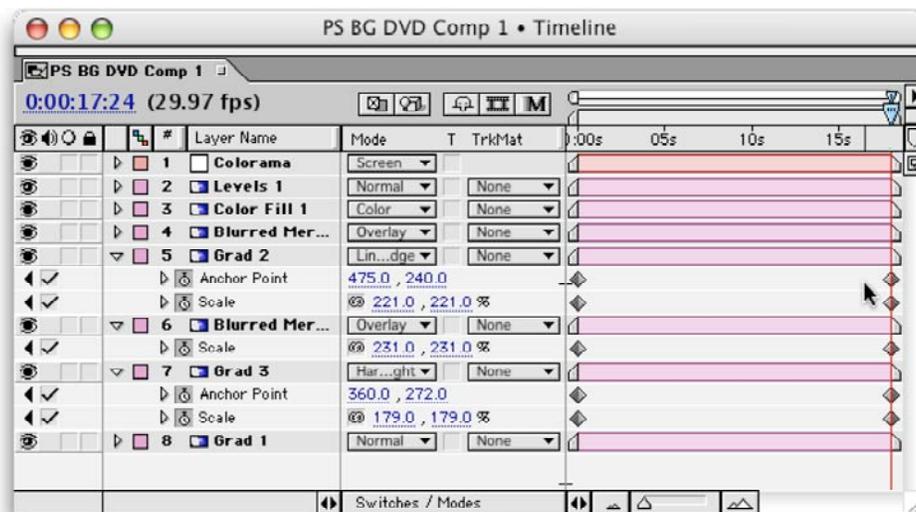
In After Effects: Let their be motion

We now must animate our layered PSD file to create movement. We will employ transfer modes, scaling, pre-compositions, overlapping and color mapping. This method of creating looping backgrounds requires very little effort. You must be comfortable with blending modes however to achieve results.



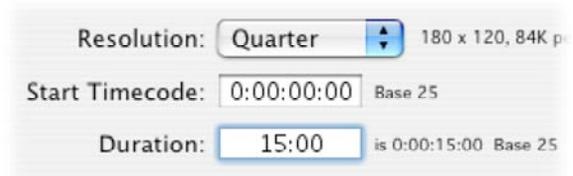
1. Create a new project.
2. Import your PSD document you created for the background by choosing File>Import and specifying as a Composition.
3. Select the Composition from the project window and modify its settings by pressing Cmd + K (Ctrl + K). From the preset menu, choose NTSC DV, 720 X 480, and gave the comp a better name. Also, set the duration to 18:00.
4. All of your layers and blending modes should have imported. If used a gradient map, you can recreate or improve the effect using AE's Colorama filter.
5. Turn off visibility for all layers except the bottom-most.
6. Select the bottom layer and press S for scale. Then hold down the shift key and press R for Rotation and A for Anchor Point. By using Anchor Point, instead of position, we get better results (especially when rotation is involved).

7. Turn on the stopwatch icons for all three properties. Choose random values for the start and end keyframes. All you are trying to accomplish is movement (just be sure that the image always fills the entire screen).
8. Activate RAM preview to see your results.
9. Activate the next layer and repeat the animation technique. Try to achieve a different motion path (thus creating 'interference'.)
10. Adjust the blending mode and/or opacity to achieve a soft look.
11. Repeat for all of the remaining layers. You can delete the flattened composite images and color layers.
12. To create the soft bloom, add an Adjustment Layer. Apply the Gaussian Blur effect and adjust the layer's blending mode and opacity settings.



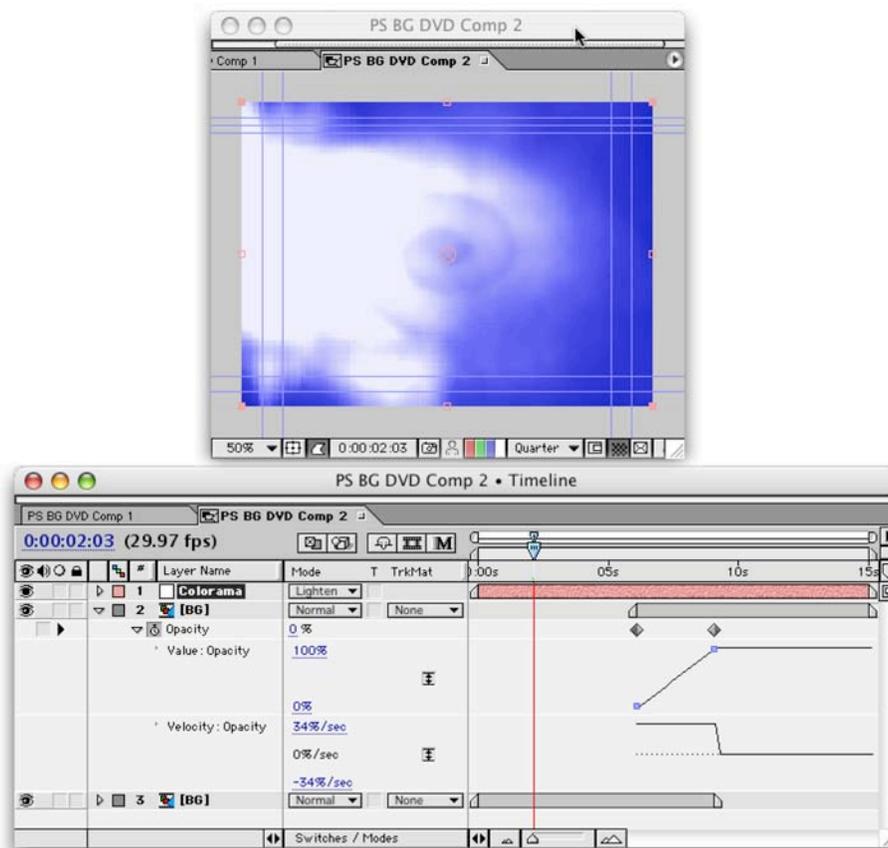
Make the Loop

13. Now its time to create the loop. Highlight all of your layers and create a Pre-Composition by choosing Layer > Pre-compose or pressing Shift + Cmd + C (Shift + Ctrl + C).
14. Access your composition settings by pressing Shift + Cmd + K (Shift + Ctrl + K) and shorten the comp to be 15:00.



15. Go to the 8:00 mark by pressing Cmd + G (Ctrl + G) and entering 8:00
16. We are now going to split the layer in half, thus creating our loop point. Select the layer and press Shift + Cmd + D (Shift + Ctrl + D).
17. We now must overlap the layers. With Layer #1 active, jump to the end of the composition by pressing the END key on your keyboard. Press the right bracket key (]) to move the layer's out point.
18. Select Layer #2 then press the HOME key. Press the left bracket key ([) to move the layer's in point.

19. Activate layer #1 and press I to jump to the layer's in point.
20. Press T for opacity and activate the stopwatch.
21. Set a keyframe for 0% opacity.
22. Jump forward three seconds by pressing Cmd + G, then typing + 2:15.
23. Set a key frame for 100% opacity.
24. Flip the quality switches to Best Quality,
25. Add an Adjustment Layer at the top of your stack (Layer > New > Adjustment Layer).
26. Apply a colorization effect such as Colorama (Effect > Image Control > Colorama), Tint (Effect > Image Control > Tint) or Hue/Saturation with the colorize option selected (Effect > Adjust > Hue/Saturation).



27. You may also experiment with other effects on the adjustment layer such as Glows, Blurs, or Trapcode's Shine.
28. Flip all your quality switches to Best Quality, and render at Lossless Settings.

Keep it Moving

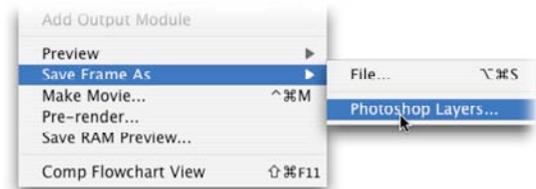
You can now import your still menu that you designed in Photoshop

- Replace the static background with the animated one you created,
- You can replace stills with moving clips for background layers or buttons.
- Feel free to add gentle blurs, fades, and moves. Be sure your first keyframe and last are identical if you want to maintain a loop.
- When finished, you'll need to render the file out for encoding.
 - End in Non-square pixel size
 - Render to High-Quality codec such as Animation
 - Loop and Add Audio in a Video Editing Program or in AE
 - Loop video multiple times but carry music through
 - Encode to MPEG-2 or bring into DVD Authoring as QT

Export Highlight Layer

Your DVD authoring app is going to need a map image to determine what lights up. This grayscale image identifies where the glows appear. It is an overlay for the moving video file.

1. Complete your DVD menu and render out the final version.
2. Save your File to capture any changes.
3. Set your Comp Window to 100% and Full Quality.
4. Go to an appropriate frame and choose Composition>Save Frame As>Photoshop Layers
5. Open the file in Photoshop
6. Turn off the visibility icon for all layers that are not part of the Overlay.
7. Select one of the visible layers and choose Merge Visible from the layer palette submenu.
8. Lock the transparency for this new merged layer by clicking on the Lock transparent pixels box.



9. Choose Edit>Fill and fill with Black (or White, depending on your DVD application)
10. Create a new Empty layer and place it in the background.
11. Select All and Fill this layer with White (or Black, again depending on your DVD application)
12. Delete any unused layers

13. Choose File>Save As and save a flattened PICT or TARGA file to create an overlay layer. Again, you don't need to save layers or alpha channels.
14. Save the layered PSD file in case you have changes.
15. Duplicate the Flattened file, open it and choose Select All. Pressing Cmd+I (Ctrl+I) to Invert the image. This way you'll have both for your DVD authoring application if needed.

Creating a DVD Slide Show with Adobe Photoshop CS

One of the best things about DVDs is the bonus material, whether it's a behind the scenes feature, extra interviews, or a look at the storyboards. DVD slideshows are also a mainstay of DVDs because they take up very little space on the disc.

But making slideshows isn't as easy as you might think. Sure, the authoring side is pretty straightforward, most DVD authoring applications support drag-and-dropping folders of images. But, if those images aren't sized right, you'll have problems: strange cropping, bad aliasing, and softening. Sounds like you've got a lot of work ahead of you... or not.

The Power of Automation

By harnessing the several of Photoshop's automation features, as well as Photoshop CS's support for non-square pixels, building a slide show will be easier than making a pot of coffee. There are several steps, but when we're done you will have an action and a droplet that can be used for every job.

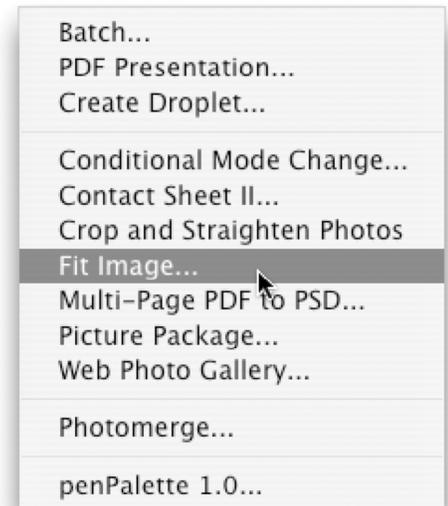
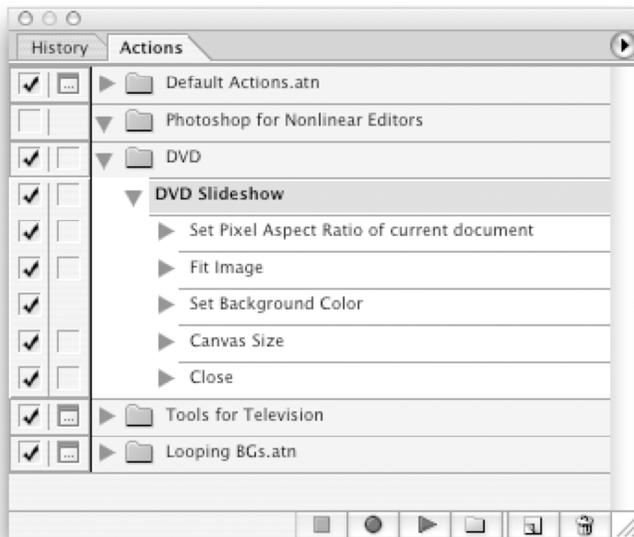
To get started, you will need a folder of images. They should be bigger than television resolution.

1. Open up your first image (this will serve as the basis for the others).
2. Call up your Actions Palette by choosing Window>Actions.
3. Create a new set to hold your action and name it DVD.
4. Make sure the image window is selected for the picture you want to process.
5. Click the Create new action button, name it DVD Slideshow, and press Record.
6. We now need to properly format the image's pixel aspect ratio (Image>Pixel Aspect Ratio>...). This will change the pixel shape and allow the image to display properly on a television.
 - a. Choose D1/DV NTSC (0.9) for a standard 4:3 screen
 - b. Choose D1/DV NTSC Widescreen (1.2) for a 16:9 screen
 - c. If working in PAL, choose from the PAL presets



We are now going to force fit the images, but instead of cropping, we will preserve the entire image. This will leave a color around the top or bottom of the images.

7. Click on the background swatch and pick a color for the border (usually black).
8. Choose File>Automate>Fit Image. This allows you to set a 'not to exceed' size. Enter 720X480 if working in NTSC space and Click OK.
9. Choose Image>Canvas Size and enter 720X480.
10. The Image should now be sized properly, if so close the image and click Save.
11. Press **Stop** on the Actions Palette.



12. We're going to make the action a drag-and-drop command. Choose File>Automate>Create Droplet.

- a. Click the Choose button and specify a destination to hold the droplet.
- b. Choose the Set and Action that you need.
- c. Check the Include All Subfolders command and the two Suppress options

13. Click OK to Save the Droplet.

14. You are now ready to go. It is a good idea to put all of your images into one folder for processing. You should also duplicate the folder so you have an original copy if needed.

15. Drag the folder on top of the droplet and let it rip. Drink some coffee, check your email, or just sit back and relax because Photoshop is now on autopilot. If you are processing JPEGS, it will ask you to recompress each time you save. This is BAD! Convert your JPEGS to PICTs or TARGAs before making the slideshow.

16. Follow the instructions on your DVD authoring application for slideshows. This is usually as simple as dragging and dropping or pointing to the folder's location.



DVD Slideshow



R H E D

P I X E L

www.rhedpixel.com
703.560.0220

Instructor: Richard Harrington

Richard Harrington is a certified Project Management Professional, Adobe Certified Expert in Photoshop and After Effects, and Apple-certified instructor in Final Cut Pro. Additionally, he has completed Avid's Master Editor Workshop and the Avid Certified Instructor Program.

His visual communications consultancy, RHED Pixel, creates motion graphics and produces video and multimedia projects. He is a faculty member at The Art Institute of Washington, a popular speaker at conferences, and an instructor for Future Media Concepts. Richard is the author of *Photoshop for Nonlinear Editors*, and co-author of *Final Cut Pro 4 On the Spot* and *After Effects On the Spot*. If you have more Photoshop questions, Richard is a moderator of Creative Cow's Photoshop Forum. Richard was also named Program Manger for the NAB PostProduction World Conference to be held in Las Vegas in 2004.