

Using Masks to Create Side-by-Side Video Comparisons

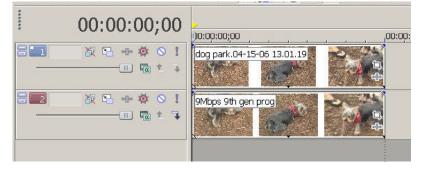
By Dennis Vogel

Recently I needed to do a side-byside comparison of two video clips. Specifically, I was trying to show the difference due to multiple MPEG2 encodings. I didn't want to do picture-in-picture since one clip would necessarily be smaller making it more difficult to see and it would obscure part of the other clip. I also didn't want to squeeze each clip vertically into the frame so they could be

shown side-by-side. That would necessitate either squeezing each clip or cropping out part of the frame. The method I chose was to use Vegas' mask feature to eliminate half of one clip and have half of the other clip show through. Here's how I did it.

First I put each clip on a separate track on the timeline, one directly above the other. It doesn't matter which clip is on top or on the bottom - you just need to remember which is which. If the filename of the two clips doesn't help identify them, add a track name that will identify each. Because of the way Vegas works, the top track will obscure the bottom one when shown in the Preview window but that's OK; you'll take care of that in a moment. Here's what the timeline looks like at this point.

Note that the cursor is at the beginning of the timeline. Make sure it is there before you go any fur-



ther so you don't accidentally add additional key frames which will cause the mask to change over time.

Now it is time to apply a mask to the first track so the desired portion of the video shows. We'll split the frame diagonally in this case but any other method would work as well such as vertically, horizontally or a different diagonal.

Select the Event Pan/Crop icon on the event on the first track. When the Pan/Crop dialog opens, click on the check box to the left of the word "Mask" in the



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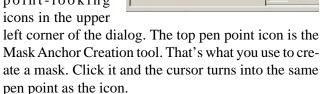
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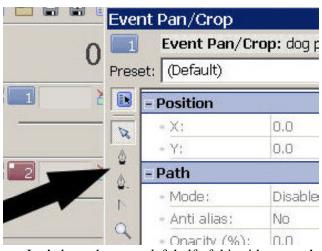
lower left corner of the dialog box. This selects the mask functions and makes the mask visible once it is drawn.

Notice the pen point-looking icons in the upper

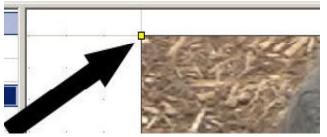


Pos

Mask



Let's keep the upper left half of this video event's frame for our comparison. Begin drawing the mask by positioning the cursor in the upper left corner of the video frame in this dialog box and click it. This creates a mask anchor point which shows up as a small square in the video frame.



Depending on how much the workspace is zoomed in, it may be difficult to get the point exactly in the corner. That is easily fixed by manually setting the X

and Y positions for the point to the desired value, 0, 0 in this case. This will put the point exactly in the corner. When the first mask anchor point is placed, the Path properties will be enabled. For this purpose leave all of them to their default values.

- Position		
- X:	0.0	
- Y:	0.0	
Path		
- Mode:	Positive	
- Anti alias:	Yes	
- Opacity (%):	100.0	
- Feather type:	None	
 Feather (%): 	0.0	

Now draw the rest of the mask. To get the diagonal split we're after, place the second point at the lower left corner of the video frame and the third in the upper right corner. Each time a point is added, a small square will be placed at the anchor point and a dotted line is drawn that connects the last two points. To complete the mask, close the figure by clicking once more on the starting anchor point.

As with the first point, if you don't click exactly on the corners of the frame for the second and third points, you can set the X,Y values to the exact values. This project is a standard definition NTSC video so the frame size is 720x480 pixels. The origin is in the upper left corner as we have seen and the X and Y axes run as you would expect. Use the appropriate values for other formats such as SD PAL, HDV, etc.

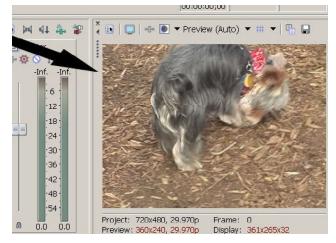


When the mask is completed after clicking the first anchor point again, the mask will be shown. Since the mode was left as Positive, the portion of the frame that was enclosed by the three points (the upper left) will

be kept and the rest of the frame (the lower right) will be masked out. The lower right is where the other frame will show through to see the comparison.

If you accidentally put an anchor point where it doesn't belong, you can remove it by first selecting the Anchor Deletion tool. That's the pen point icon with the little "-" sign next to it just below the tool used to create points. Click on the point that was added incorrectly and Vegas will remove it. Be sure to select the Anchor Creation tool again before adding more points.

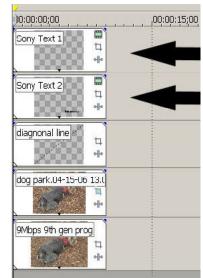
Close the Event Pan/Crop dialog and the upper left half of the first track will show in the Preview window along with the lower right half of the second track. One nice side effect of this method is that the line between each video clip will be precisely registered no matter how you orient the mask.



Depending on how much difference there is between the two clips, the difference may not be easy to see. One way to deal with this is to add a diagonal line to separate the two halves. This also gives the viewer a visual cue as to what they are seeing. Use an image editing program to create a frame with a transparent background and a diagonal line from corner to corner with the appropriate orientation using Paint Shop Pro, Photoshop, or any other image editing program. Vegas will import many different image file types but PNG is a good one to use for this purpose since it has an alpha channel which is required for a transparent background. If you use a program that creates images with square pixels, create the image at a resolution of 655x480. That way it will "stretch" to the right size when put on the standard definition NTSC DV timeline. Again, you will need to choose an appropriate size for other frame sizes. Add a new track above the other two and put the diagonal line image file on it and extend it to the same length as the video clips if necessary.

Finally, you should label each half of the frame.

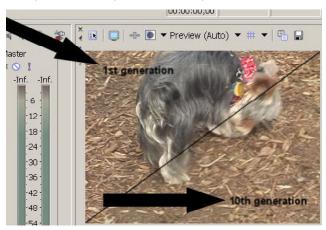
Add two more tracks above the three that are on the timeline already and put a text event with a transparent background on each. Put the appropriate label on each, size them and move each to a position that won't obscure too much of the video.



Since all of the first 3 tracks have

transparent backgrounds they can be placed in any order on the timeline. The last two tracks must be in the order they were created.

Masks are a powerful feature in Vegas. They can be used in many situations. This is probably one of the simplest uses but I found it a good way to illustrate the differences between two video clips. It is especially useful when the action moves across the diagonal. Experiment with masks and you'll find many ways to extend your creativity and enhance your videos.



Beginner's Corner - ProType Titler

By Edward Troxel

With the release of Vegas Pro 8 comes a new titler to the scene. The new ProType Titler has many new abilities not seen in the previous titler but also comes with an entirely new interface. Let's explore the basic operations of the new titler.

To begin, start a new project, add a video track, and then insert the new titler on that track. To find the new titler, go to the "Media Generators" tab and locate "ProType Titler" on the left side. Clicking on "ProType Titler" will bring up the available presets. Just click on the "Empty" preset and drag it to the timeline.

Alternately, you can right-click on the timeline, choose "Insert Generated Media", and then click on "ProType Titler" in the list that is presented. Once you click on OK, the new media will be on the timeline.

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Now that the title is in place, the question becomes how you get what you want to say in place! The new titler comes with a series of built-in titles in the "collections" area. To make life simple, let's start with one of them. To see the list of options available, click on the "Collections" button.

You can now scroll through and click on the various options and see a preview of how each looks. Once you find one you would like to use,

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click on it and drag it down to the titler timeline area. Click on the "Collections" button again to turn it back off.

Now you need to change the text. If you cannot see the text on the screen, move the cursor on

the timeline slightly to see where the text is located. An easy way to do that is by pressing SPACE (which starts playback of



the timeline) and the quickly pressing ENTER (which will stop the playback leaving the cursor at the new location).

Click on the area where the text is located and you will see a blue h i g h l i g h t

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around the text area. Now you can either doubleclick inside that box or click on the "Edit Text" button (looks like an "I") at the top of the screen.



To select the text (since CTRL-A will not do so), press "End" and then "Shift-Home" on the keyboard. Type in your new text, press "ESC" to exit editing mode, and you can now see that effect applied to your new text.

While the presets are quick and fairly easy to use, odds are high that they will not fill the particular need or look you're wanting to achieve. To do that really requires starting the title from scratch and building it up as needed. Once created, these new titles can even be saved as a "Custom" collection and shared with others.

Let's start with a new blank ProType Titler and build a new title. Start by entering your text. To do that, double-click anywhere in the titling area or press the "+" button at the top. Now change the text as desired.

While in edit mode, you can also change the various font settings. After changing the text, select it and look at the three tabs to the left. These will let you change the various aspects of the text.

Changing colors is also different. There is no "color picker" so you have to get the color by

changing either the HSV values or the RGB values. This is definitely one area where I'd like to see more options available. Change the font, size,

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	Green	_		164.80
	Blue	_		202.96
	Alpha		(100.00

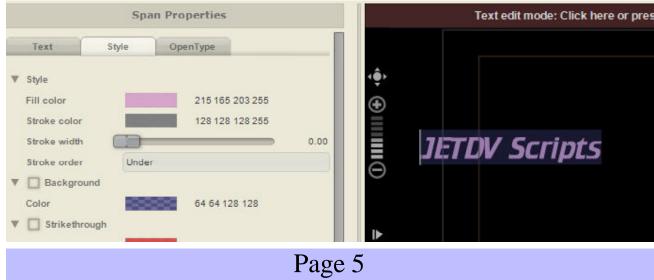
color, and other attributes as desired and the press "ESC" to exit the text editing mode and set your changes.

At this point, you technically have a title. It doesn't do anything yet but it IS a title and you can see it properly drawn in the preview screen. So now let's start by adding some movement to the text. On the left side you now see three tabs of options labeled Transform, Effects, and Layout. For this example, let's just have the text scroll in from the right side to the center of the screen.

To scroll in, all that is required is that the "Off-

set" be changed over time. Notice the curlicue to the left of the "X" and click on it to turn it on. You'll then notice several more things added to the timeline area. Here you

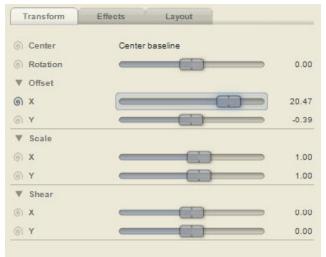




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can now change the offset over time. Notice in the image above that the beginning of the timeline has it set to about 20 - just enough to get it off the right edge of the screen - and two seconds in it is now set to zero. You can also change the "curve" of that line to control the speed of the movement.

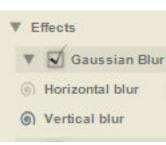
Now that the text is in place, we need to make



it leave some way. Let's have it dissolve into nothingness. This can be done via the effects tab.

Make sure that "Gaussian Blur" is checked and

"turn on" the Vertical Blur by clicking on the little curlicue. Once again, you'll see more lines have been added to the timeline area. Now we can adjust the

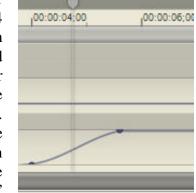


amount of blur that will occur over time.

So far the title slides in for a period of 2 sec-

onds. Let's leave the title stationary for two more seconds before it dissolves out so we need to add

Gaussian Blur keyframe at the 4 second mark with no blur and a second keyfram farther down the timeline with the blur added. Now we have a title that will slide in from the right side and then "dissolve" out.



The new titler has many interesting new features. In the future we'll look at the titler some more and also discuss how titles you have created can be saved and shared with others. Also, visit the new ProType forum at www.jetdv.com where you can share ideas, ask questions, and help others.

