



Vegas + DVD

Tips, Tricks, and Scripts

Learning and using Vegas 4 and DVD Architect

Creating a PIP using Track Motion - Part 3

By Edward Troxel

As we have seen, creating, positioning, and changing the appearance is a fairly simple process. Playing with the provided effects, you can change the appearance in a variety of ways. Now it is time to add a little movement to the PIP.

In parts one and two, a PIP was created and modified in the lower left corner. It is time to add motion by moving it to the lower right corner. To do this requires the use of *keyframes*.

A keyframe stores all of the required settings for one specific moment of time. So, to move an object requires at least two keyframes: One keyframe to set the initial position and a second keyframe to set the final position. If the movement is to last five seconds, the first keyframe would be at the very beginning of the move time (or the

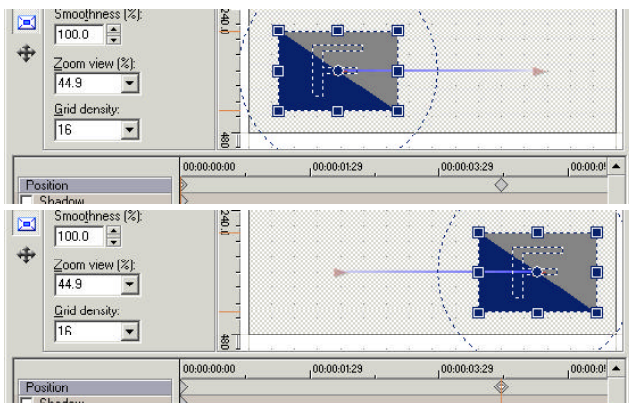
zero second mark shown here) while the last keyframe would be at the very end (or the five second mark shown here.)

This is where the power of keyframes comes into play: Once these keyframes are set, Vegas will automatically figure out every position in-between these two points so that the PIP will slide across the bottom of the screen. By setting two small snapshots of time, an entire range of time has now been affected.

To set the keyframes, click on the Track Motion button again and look at the lower portion of the Track Motion window. There will be a timeline onto which keyframes may be placed. There is always a default first keyframe on the left-most edge of the timeline bar that

looks like a triangle facing right. This keyframe is always present and, by default, is centered on the full screen resulting in no changes. To create movement, additional keyframes are added to the timeline which appear as diamonds.

There are a variety of options for adding and removing keyframes. Some options for adding keyframes include double-clicking the timeline, clicking on the timeline and making a setting change (the cause of *many* accidental keyframes), and clicking on the diamond with



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the “+” below the timeline. Two easy ways to delete a keyframe are clicking on the diamond with the “-” or pressing the Delete key. By right-clicking the keyframe, you can also cut, copy, paste, or delete one or more keyframes.

Now that the keyframes have been created, simply set the proper position for each of the keyframes and watch the PIP slide from the left edge of the video to the right edge of the video. With only two keyframes, a moving PIP has been created.



For another interesting effect, try leaving the first

keyframe at the default full screen and set the second keyframe to the PIP size at the desired location. Now, you will get a video that starts full size and slowly shrinks in size to create the PIP.

In some cases, you may not be able to see the keyframe timeline. If you cannot see the timeline, it has simply become hidden. To show the timeline, move the mouse toward the bottom of the pop-up dialog. As soon as the mouse becomes an up/down arrow, click and drag upwards. This should then reveal the “hidden” keyframe timeline enabling full use of keyframes once again.

Since virtually everything can be keyframed including Track Motion, Pan/Crop, Effects, Transitions, and Generated Media, it is a powerful tool to learn and add to your arsenal of available tools. Experiment with keyframes in each of these areas to see how editing control can be greatly enhanced. Modifying effects over time is as easy as adding a couple of keyframes.

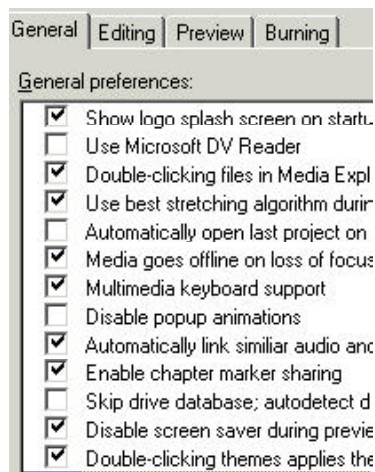
DVD Architect Preferences

By Edward Troxel

A new addition to the Sonic Foundry team of applications is DVD Architect available in the Vegas + DVD package. As with the other programs, there are many settings allowing you to configure many aspects of the program.

To change the preferences, go to Options - Preferences from the menus. On the general tab, the only setting I have changed is to disable the “**Automatically open last project on startup**” setting. This allows me to open any project when starting the program instead of, potentially, trying to open a deleted project.

Another notable setting on this tab



was added in version 1.0a. The setting “**Enable Go Up button in videos**” was added to provide compatibility with some player’s displays. By default, this option is OFF which will allow the display to show the correct information. When this option is ON, *some* players will display incorrect or no information (frequently only --:--:--:--) instead of the actual time information.

Moving to the Editing tab, the safe areas for television viewing can be defined. The defaults of 10% and 20% are good settings for the safe areas. Depending on



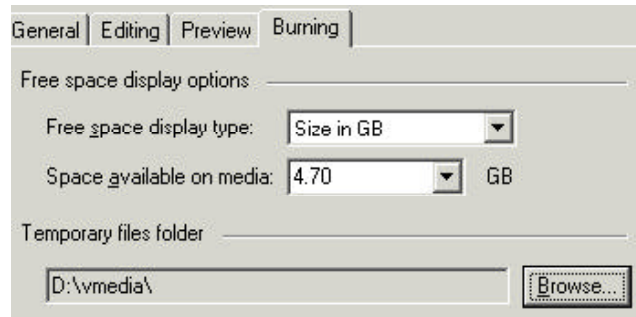
the amount of memory, the number of undo steps may need to be limited. By default, 1,000 steps will be remembered. That can be changed to any value between 1 and 9,999. By unchecking the box, the number of undo’s will no longer be limited except by the amount of memory available. I have found the default of 1,000 to be sufficient.

The Preview tab allows setting the fast forward/re-

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wind speeds in the preview window. By default the standard fast forward/rewind will jump in increments of 5 seconds while the super speed will jump in increments of one minute.

On the Burning tab, you need to specify where the temporary files should be stored. By default, it will be on your system/installation drive which may not be large



enough to hold the contents of a DVD. I usually change this to a subdirectory on my video drive.

The Burning tab also allows you to specify the size of your DVD. By default, the authoring DVD size of 3.95GB is chosen. To use the General DVD size of 4.7GB, the “**Space available on media**” setting must be modified. Finally, you can specify whether the DVD space used, as shown in the lower right-hand corner, is a percentage of the disk or specified as the actual file size used.

Additional configuration settings can be found by going to File - Properties. These properties can be modified for a single project or specified for all

projects. The first setting specifies the type of DVD to make. Both the type of video (NTSC vs. PAL) and the layout of the video (standard vs. wide-screen) is chosen.

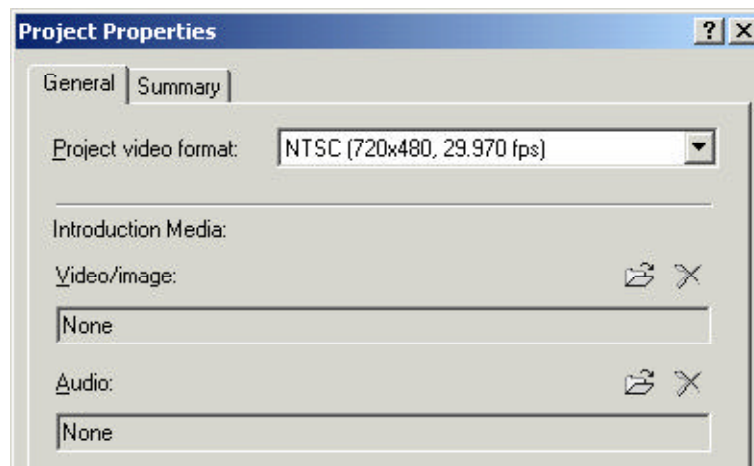
Many DVDs have a short video that plays before going to the first menu. This short video is generally called the “First Play” item. Many programs allow you

to specify the first play item - whether it be a menu or a video clip. In DVD Architect, a the main menu will automatically be the first play item *unless* something is specified in the **Introduction Media** section of the File - Properties box.

To specify the first play media, click on the folder icon just above the Video or Audio boxes, browse to the location of the file, and then select the file. Once added, that file will be the first thing that is played when the DVD is inserted. If you are selecting a video with sound for the first play, you must then repeat these steps to add the same file to the other box. The audio and video are treated as two separate entities.

When adding both audio and video to the **Introduction Media** section, It *may* be desirable to make sure they are both the same length. If the video is longer than the audio, once the end of the audio is reached, the video will continue playing until completed but will continue over silence. Similarly, if the audio is longer than the video, once the end of the video is reached, the audio will continue playing until completed and the video will simply show a black screen through the remaining audio section.

After adding audio or video to the **Introduction Media**



section, it may be desirable to remove the media. To remove either the audio or video, click on the “X” above the appropriate box. Naturally, to delete both, just click on both “X”s.

Properties can be applied to the current project only or to all projects. If the

changes made should apply to all projects, check that box labeled “**Start all new projects with these settings.**” Once set, these properties would then apply to all new projects. Should any project require some different setting, simply make the change without checking the box and only that one project will be changed. Explore the various settings and take control of DVD Architect.

Beginner's Corner - Where Do I Start?

By Edward Troxel

You've purchased and installed Vegas 4. Upon opening the program, the question becomes, "Where do I start?" I recommend start by familiarizing yourself with the various areas of the screen.

As with most windows programs, there is a menu across the top of the screen. Similarly, there is a toolbar immediately below the menu. Using the toolbar and menus, the various aspects of Vegas can be found and modified. For example, if you want to turn off ripple editing, you can either click the ripple button on the toolbar, choose Auto Ripple from the Options menu, or use the keyboard shortcut CTRL-L as shown on the menu.

Below the menu is the main timeline area and the track headers. The timeline area is where the video and audio clips are placed for editing. Just under the timeline are the Play, Pause, Stop, and other timeline controls.

The track headers allow you to specify options that affect the entire track. For example, Track Motion is found on the track header since it affects an entire track while Pan/Crop is found at the clip level since it only affects that one event. By using the solo and mute buttons you can easily view individual tracks or combinations of tracks. One track setting to watch is the Opacity on video tracks. Be careful this setting does not get accidentally lowered below 100% unless it is needed for your project.

Below the track headers is the tabbed tool area. There are several windows available arranged in a

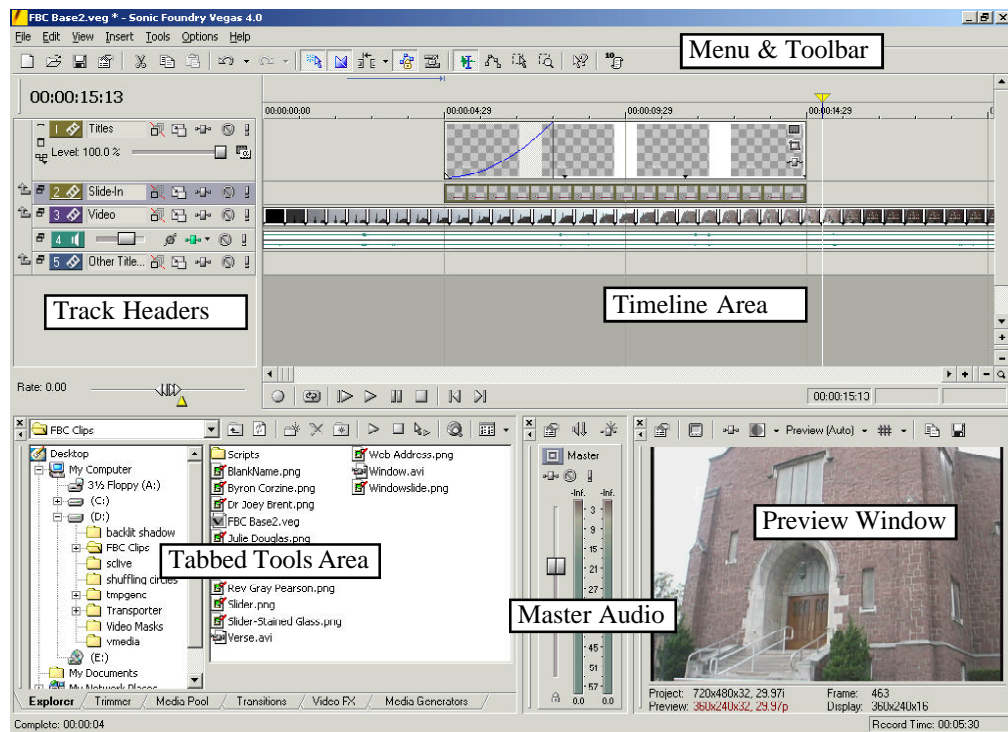
tabbed format. Shown is the explorer window but other tabs show transitions, effects, and generated media. The tabs can be turned on or off from the View menu and may be "undocked" from the tab area so they float freely on the screen.

Beside the tab area is the master audio bus area. Shown is the master volume for the entire project. If additional busses are added to the project, they will appear in this area as well.

The final section is the preview area. This screen will show the video from the timeline, trimmer, or previewed from the explorer or media pool windows. Buttons above the preview window allow external preview via firewire, setting the preview quality, setting global effects, generating snapshots of the video, showing safe area lines, and allowing split screen color correction.

This column will continue by looking at the three main steps used in the video creation process:

1. Capturing Video
2. Editing Video
3. Putting Video Back on Tape



Add Movement to the Lower-Third

By Edward Troxel

Building on all of the scripts from the previous issues, and using the keyframes discussed in this issue, it is time to make the lower-thirds fancier by adding movement. The only requirement is that the script must be able to place the picture and generated media on the timeline, add the proper movement to the picture, and insert the proper dissolves automatically thereby eliminating the many manual steps required to achieve these changes.

For this lower-third, a red gradient with a picture on the left will be used. Like the green background last week, this is a picture with a transparent background saved in PNG format. Using the code from last issue, the graphic can easily be placed on the timeline. The next step is to add the movement.



The code in Figure A is used to make the graphic start off the right-hand edge of the screen and slide into the position shown above. By dissecting the code, we reveal the required steps for adding the keyframes necessary to create the movement.

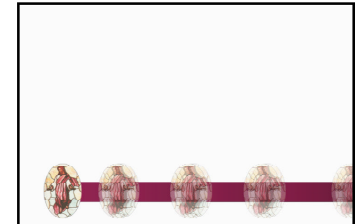
As mentioned previously, there is always a “default” keyframe. The first keyframe will be numbered ZERO (and the second keyframe will be one...). The second line of the `gets` this first keyframe and assigns it the name “key1.” This will later be used to specify the beginning location of the picture. By default, it is center screen.

Since two keyframes are required to make the picture move, a second keyframe is created and given the name “key2.” This keyframe is specified to be two seconds (2000 milliseconds) into the picture meaning the picture will require two seconds to slide into position.

Even though the keyframe has been created, it is not yet part of the picture. The next line adds this newly created pan/crop keyframe to the picture event. Once again, by default, this keyframe is center screen.

To add flexibility, the next line determines the width of the picture. Instead of moving off screen, it will, technically, be moved the width of the picture. Since this picture is full screen width, it will be moved off the screen. The desire is to move the first keyframe the width of the picture to the right and leave the second keyframe center screen.

Now, the offset must be calculated by passing the (X, Y) position difference to “VideoMotionVertex.” The difference, in this case, is a negative full width in the horizontal direction (the X value) with no changes (zero) in the vertical direction (the Y value.)



Finally, the first keyframe is moved by the offset amount. This results in the picture starting from the right edge of the screen and sliding into the normal default location.

Add Keyframes to Added Media - Figure A.

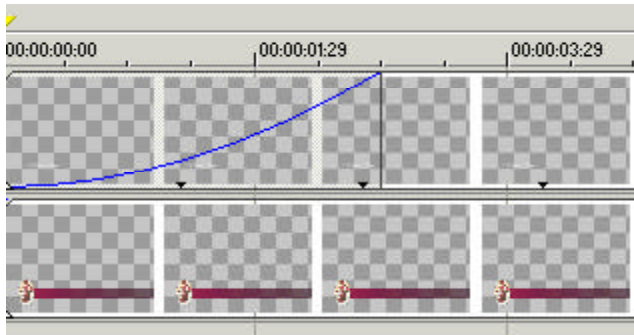
```
// Add the two keyframes to slide the bar in from the right
// Uses Pan/Crop keyframes by setting a second keyframe two seconds in to the
// standard position then changes the first keyframe to off-screen to the right.
var zero : int = 0;
var key1 = newEvent.VideoMotion.Keyframes[zero];
var key2 = new VideoMotionKeyframe(new Timecode(2000));
newEvent.VideoMotion.Keyframes.Add(key2);
var videoWidth : int=Vegas.Project.Video.Width;
var offset = new VideoMotionVertex(float(-videoWidth), float(zero));
key1.MoveBy(offset);
```

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Using the code in Figure B, the fade type for the text can also be modified. In this case, the desire is for the text to take longer appearing while the picture slides past. This is done by changing the fade time to three seconds (3000 milliseconds) and changing the fade type.

By using “newEvent.FadeIn.Curve = CurveType.Slow,” the fade type is changed from the standard dissolve to the “slow” dissolve. With these examples, it should now be possible to add any media to any track, add pan/crop keyframes, and specify dissolve lengths and types via a script. The complete sliding script can be downloaded from:

www.jetdv.com/scripts/RedSlider2.js.txt



Please note that you will have to create the necessary pictures and presets. Once created, the script will need to be modified to access those pictures and presets.

ERRATA: The **FindTrack** routine in issue two has a slight error. Instead of:

```
}
trackEnum.moveNext();
}
```

It should read:

```
}
PrevTrack = track;
trackEnum.moveNext();
}
```

Set the Dissolve Style - Figure B.

```
// Now set the fade and fade type
// Set the length of the fade to three seconds.
newEvent.FadeIn.Length = new Timecode(3000);
// Set the curve type of the fade to "slow"
newEvent.FadeIn.Curve = CurveType.Slow;
```

Shortcut Keys:

Numpad “1”: Move or trim the selected clip(s) one frame to the left.

Numpad “2”: Move the selected clip(s) one track down.

Numpad “3”: Move or trim the selected clip(s) one frame to the right.

Numpad “4”: Move or trim the selected clip(s) one pixel to the left.

Numpad “5”: Exit Trimming mode

Numpad “6”: Move or trim the selected clip(s) one pixel to the right.

Numpad “7”: Enter Trim mode at beginning of clip.

Numpad “8”: Move the selected clip(s) one track up.

Numpad “9”: Enter Trim mode at end of clip.

Contact Information

Send your tips, tricks, article ideas, script ideas, questions, articles, or registration requests to:

vegastips@jetdv.com

To register on the web to receive this newsletter, browse to:

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Thank you,
Edward Troxel