

# Vegas + DVD Vol 2 No Tips, Tricks, and Scripts

## Learning and using Vegas and DVD Architect

## Excalibur 3 - Multi-Cam has Never Been Easier

By Edward Troxel

Building on a solid foundation of providing powerful Multi-Cam and other tools for Vegas, Excalibur has been reworked to add even more power, simplify the process, and present an easier to use interface. Major changes in Excalibur 3 enhance usability and functionality. A minimum of Vegas 5.0b is required to run

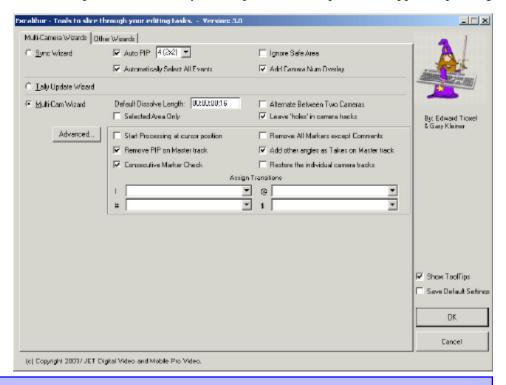
Excalibur 3.

Excalibur will now automatically detect and install directly into the "Script Menu" folder. This will allow Vegas to immediately detect the presence of Excalibur. Toolbar icons are provided for all scripts included with the Excalibur package. You can manually add Excalibur to the toolbar or any keypress.

Upon running Excalibur, you will see the user interface has been totally redone. Tools are now available on one of two tabs: **Multi-Camera Wizards** which contains all of the tools associated with Multi-

Cam editing and **Other Wizards** which contains the remaining tools included with Excalibur.

The global option "Save Default Settings" has been separated from the rest of the tools. There is also a new global option: "Show ToolTips". By hovering over any of the options, a tool-tip will now appear explaining



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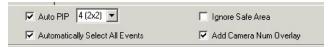
the purpose of that option. While not replacing the manual, it will give a quick summary of each option.

Wizard selection is also easier. Now if any of the options for a tool is selected, that tool will also be selected.

Major enhancements to Multi-Cam editing is available in Excalibur 3. The Sync Wizard and Multi-Cam Wizard both have new functionality. There is a new Tally Wizard and many additional support scripts.

The Sync Wizard has many new abilities. First it can now automatically select all events on all tracks. With this option, it is no longer necessary to press CTRL—A before running Sync Wizard.

Sync Wizard can now create the PIP layout so all cameras can be seen at once. Four options are available: 2x2, 3x3, 4x4, and 5x5. You would select the ap-



propriate size for the number of cameras you are using. After creating the PIP, it can also add a camera overlay allowing easy identification of which camera is in which location. When using 2x2 or 3x3, you also have an option to observe the safe-area. This can be handy when watching on an external monitor.

Because of the Auto-PIP and the new number over-



2x2 layout with 3 cameras and Number Overlay

lay option, the track names are now much more important. When using the 2x2 or 3x3 layouts, it is now recommended that the cameras be called 1 through 9. The extra helping scripts also rely on these names.

Once syncing has been completed, it is time to start placing the markers for the actual edit. This can still be done in the same manner as Excalibur 1 or 2. However, there is now a new method to simplify it further and give even more information.

In the Excalibur folder there are now three sub-folders: Standard, Cut, and Dissolve. Each of these contain nine camera scripts for cameras 1 through 9. These

scripts can be placed on the toolbar or assigned to a keypress for use by devices such as the Contour Shuttle Pro. Here's the difference between them using camera 3 as an example: The one in Standard will name the marker "3" which will allow it to cut or dissolve - which-

ever is the default. The one in Cut will name the marker "3c". The one in Dissolve will name the marker "3d".

These new camera scripts provide another advantage. Using the new "Tally" feature, the



Tally Indicator on Camera 3

tally indicator will be set for that camera at that marker location. The Tally feature will put a blue border around the current active camera. This simplifies remembering which camera is currently selected. It will also let you play back the project watching the tally change positions for each camera change.

There may be times when some camera changes need to be moved or you wish to manually add some markers by hand. In these cases, the Tally feature can still work. Just run the new *Tally Light Wizard* to update the tally indicators for all markers.

Multi-Cam Wizard has also received a face-lift. Some options are now classified as "Advanced" and can be shown or hidden simply by clicking on the "Advanced" button. Generally speaking, these should be fine when left at the default but you are free to adjust them as needed.

A few old options were removed as the functionality did not require them. For example, the automatically select and deselect event options are gone. This will be

Default Dissulve Length 00:00:00:16	☐ Alternate Between Two Carreiras
☐ 5elected Area Only	☑ Leave 'holes' in camera tracks
Start Processing et cussor position	Remove All Markers except Comments
Remove PIP on Master track	✓ Add other angles as Takes on Master track
Consecutive Marker Check	Restore the individual camera tracks
Assi	ign Transitions
E .	<b>y</b> ⊚
#	<b>T</b> \$ <b>T</b>

done by default and should never have been turned off anyway. Several new options have been added in their place.

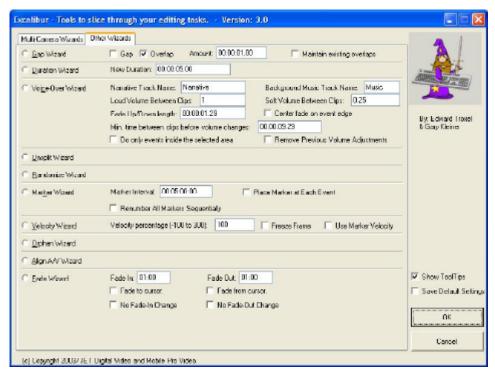
First of all, Multi-Cam has been updated to remove the PIP and Tally indicators added by the Sync Wizard and Tally Light Wizard. Ther is no longer any need to worry about creating or removing the PIPs or adjusting Pan/Crop or Track Motion.

A major new feature in the *Multi-Cam Wizard* is the ability to add the alternate cameras as Takes on the master track. For example, if camera 2 is the

selected shot, cameras 1 and 3 will also be added to the master track as Takes to the camera 2 selection. This will facilitate quickly changing to a different camera angle if you determine the current choice simply does not work in that position without having to rework the entire project.

Comment markers have been allowed since version 2 by beginning the marker name with ">". Another new feature allows for all markers *except* the comments be removed after the edits have been completed. Then the added ">" will also be removed. If you have placed comment markers on the timeline for DVD Architect chapter points, for instance, they will be properly named with the extra ">" removed.

When manually adding markers, it is possible to switch to the same camera - not remembering that you were already on that camera. The new Tally feature should help eliminate this problem but there is also a new option to check for consecutive changes to the same camera. If two markers in a row change to the same camera, a warning will appear displaying all locations where this occurs. You may then decide to continue processing or cancel processing to fix one or more of these locations.



Mulit-Cam now has the ability to restore the original tracks. Currently, all camera tracks are split at each marker. The "*Restore Individual Camera Tracks*" option will "unsplit" all tracks.

There have been a few changes on the "Other Wizards" tab as well. A couple of unneeded options are now gone. For example, the "Reverse" option in the Velocity Wizard is no longer available. Since Vegas 5 added a built-in reverse option, it is no longer a necessary tool.

The *Orphan Wizard* now implements the new grouping ability found in Vegas 5.0b. Once the orphaned piece is added to a new track, it will also be grouped with the original event. It is no longer necessary to select them both and press "G".

The Marker Wizard also has a new function. It can now take all markers on the timeline and renumber them so they are in numerical order. So, if you had the markers: 1, 2, 6, 4, 5, 3, they would become 1, 2, 3, 4, 5, 6. Now your timeline can remain orderly.

Excalibur 3 is a giant leap forward in multi-camera editing. The Tally Light and individual camera scripts ease the process greatly. Plus the new user interface enchancements make it easier than ever to use.

# Beginner's Corner - Using the NumPad

By Edward Troxel

When editing, many people like to keep their hands on the keyboard. This makes learning keyboard shortcuts very important. While ignored by many people, the numeric keypad has many useful shortcuts.

Moving events is made simple with the numeric keypad. If you need to move an event up to a higher track, just select the event and press the "8" key. The event will move up one track for each time the key is pressed. Similarly, the "2" key will move an event downward one track for each press.

There is a great advantage to using these keys to move events. When using a mouse to move the event you must worry about moving the event left or right at the same time. When using the numeric keypad keys, it is simple to move the events between tracks without any chance of the event shifting in time.

Since "8" and "2" move an event up and down between tracks, you would expect "4" and "6" to move the event left and right. That is exactly what happens "4" will move an event left while "6" will move an event right. However, there is a catch: *The event will move one or more frames depending on your zoom level*. If you are zoomed in fairly close, the event will probably move one frame. If you are zoomed out farther, the event may move 4 frames, or 6 frames, or 10 frames. By definition, they will move the event "one pixel" on the screen. So, the farther out you are zoomed, the greater the number of frames the event will move.

While this works well, there may be times when you want to move the event one frame no matter how much the timeline is zoomed. Fortunately there is an easy method to accomplish this task - use the "1" and "3" numberpad keys instead. The use of these keys will always move the event a single frame. They can be very useful when fine-tuning the sync between two event on separate tracks.

So far, we've looked at all of the numbers on the numeric keypad except "0", "5", "7", and "9". These are also very useful when wanting to precisely edit a clip. To start editing, press either "7" or "9". When you press the "7" key, you will move to the beginning of the event and it will turn red. This means you have entered

"editing mode". Similarly, pressing the "9" key will move you to the end of the event and it will turn red. Now you are ready to edit the length of the event.

The same keys that move the events left and right will now resize the event. If you are editing the beginning of the event, pressing the "1" key will make it one frame longer while pressing the "4" key will make it one or more frames longer - depending on the zoom level. Likewise, the "3" key will make the event one frame shorter and the "6" key will make it one or more frames shorter. These four keys work exactly the same way when editing the end of the event except "1" and "4" make the event shorter and "3" and "6" make the event longer. Once the size of the event has been adjusted properly, simply press the "5" key to exit "editing mode".

As the length of the event is adjusted, notice that rippling will automatically occur based on your current ripple settings. If this is not desirable, turn off rippling until the edit is completed.

There is another interesting side effect to the "7" and "9" keys. Pressing "9" repeatedly will continue to take you to the end of the **next** event. So, you can use the "9" key to move forward through a project stopping on the end of each event and the "7" key to move forward through your project stopping at the beginning of each event.

The last remaining key, "0", will let you preview the project around the cursor. Simply press "0" and it will play two seconds around the current cursor position by default. Experiment with the number pad keys to help speed up your editing tasks.

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Thank you, Edward Troxel

# Scripting - Introduction to JScript (Part 1)

By Edward Troxel

Before attempting to write scripts, a general knowledge of programming is needed. Since the examples will be in JScript, this article will begin a brief introduction to the Java language constructs. Only a few of the most used Java commands will be covered. Other books are available if a full description of the JavaScript language is desired.

### **Comments**

Good scripts will have a liberal number of comments scattered throughout explaining why any given segment of code is used. Also, scripts should have an introductory block of text explaining the purpose of the script and any other introductory information desired – such as the author and version number.

To create an introductory comment block, start with a line that reads "/\*\*". Each line of the introductory comment would begin with "\*" followed by the comment or nothing if additional spacing is desired. Finally, add a line with "\*\*/" which will end the introductory block. Here is a sample introductory block:

/\*\*

\* This script will split the selected tracks

\* at the marker points

\*

\* Written By: Edward Troxel \* Modified: 08-09-2004

\*\*/

To add comments within the code of the script, it is a little bulky to add the "/\*\*" and "\*\*/" lines with the comments in-between. To make things easier, anything following a "//" will be ignored. These should be used to help explain sections of code. For instance, before the loop that looks at the markers in the project, this comment may be used:

//Go through the list of Markers

Finally, comments can also be added to the end of a line of code. If some line needs further explanation, just add a comment after that line by adding the "//" followed by the comment.

The good use of comments will make code much easier to edit and modify. This is especially true if it has been a while since the script was written or you are modifying a script written by someone else. Don't be afraid of adding too many comments.

#### **Variables**

Variables are used to temporarily store pieces of information that may be needed later. Think of variables as a post office where the boxes are named. Before variables can be used, they must first be defined. To define a variable, use the var command and declare the name of the variable. For example, look at the following declarations:

var I; var MyNum, Junk; var NewNum;

Ι	MyNum
Junk	NewNum

As you can see, multiple variables can be defined in a single statement by simply separating the names with commas. As our "post office" shows, the individual boxes are named with the names specified by the var command. Once the variables are declared, values can be assigned to those variables. Look at how our "post office" changes after adding the following lines of code.

I = 3; MyNum = 25; Junk = 5;

I	MyNum
3	25
Junk	NewNum
5	

Our "post office" now contains the values we specified with our code. Once variables have been assigned values, these values can then be modified. Look at the results of the "post office" after the following statements:

NewNum = MyNum / Junk; Junk = Junk \* I;

I++;

NewNum = Junk + 5;

I	MyNum
4	25
Junk	NewNum
15	20

Take a look at these statements individually. First, NewNum is assigned MyNum (which is 25) divided by Junk (which is 5) so NewNum gets the value of 5. Secondly, Junk is assigned the value of Junk (which is 5) multiplied by I (which is 3) giving Junk the value of 15. Thirdly, I is incremented by one so the value of three becomes four. The "++" command is a special command that says "take the current value of the variable and increment that value." The

fourth command takes the value of Junk (which is now 15) and adds five giving NewNum the new value of 20.

An important thing to remember when using variables in JScript is that they are case-sensitive. This means that junk, Junk, and JUNK are three different variables. So if the script engine complains that a variable has not been declared, double check that you have typed it in the proper case.

Declaring variables in this way will create a general type of variable that can hold many different types of information. In come cases, the variable should hold a specific type of information. Variables holding time-codes should be of type "Timecode" while numeric representations of time-codes should be of type "Double." Likewise, track variables should be of type "Track." To define a variable of a specific type, follow the variable name with a ":" (colon) and the desired type as shown here.

> var zeroMark: Timecode; var zeroDbl: Double; var track: Track;

Variables can also be assigned a value as it is being declared. To assign "zeroDbl" the value of zero, use the following assignment statement:

var zeroDbl : Double = 0;

Take one more close look at the end of each line of code. You will notice that each line ends with a semi-colon (;). The semi-colon is used in JScript at the end of each line of code. Omitting the semi-colon may result in errors.

#### while loops

In order to look at a number of objects, a while loop can be used to locate each object in a sequence. For example, while loops can be used to:

- Look at all tracks in a project
- Look at all events on a track
- Look at all takes in an event
- 4. Look at all keyframe points on an envelope
- 5.

The function of the while loop is fairly simple: While a condition is true, continue looping. The basic format of the while loop is as follows:

```
while (condition) {
         Stuff to do while true
```

When entering the command, place the condition inside parentheses. Upon running, everything between the "{" and "}" brackets will be executed as long as the condition is true. The following loop would continue as long as "I" is less than 10. After exiting the loop, the value of I will be 10 (i.e. it is no longer less than 10.)

```
var I = 0;
while (I < 10) {
  I++;
```

Like variables, Java commands are also case-sensitive. When entering the "while" command, make sure you do not enter "While" instead or you will get an error.

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