



Vegas + DVD

Tips, Tricks, and Scripts

Learning and using Vegas 4 and DVD Architect

Capturing Snapshots from Video

By Edward Troxel

A common task required of any NLE is the ability to capture a single frame of video. Vegas includes this ability and can directly save video frames in either .PNG or .JPG format. While simple and easy to do, the process required can be overlooked.

There are two ways to get an image from the video in Vegas - saving to a file on disk or copying the image to the clipboard. Using the clipboard method, it is possible to save an image into any desired format. While the process for each is very similar, there are some differences.

In NTSC, the standard video frame is 720 x 480. Because of the differences in square vs rectangular pixels, saving a file on disk will create an image that is 655 x 480. While this may seem



720 x 480 image

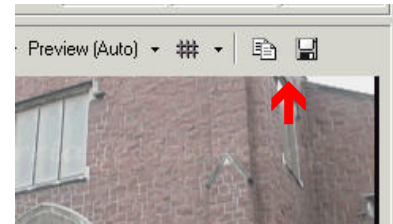


655 x 480 image

strange, the image will actually look correct when viewed on the screen and printed.

However, if the same image is copied to the clipboard, the copied image will be the full 720 x 480. Because of this difference, you can also work with the full size image if desired. If you are working with PAL, the image sizes would be 786 x 576 and 720 x 576.

To create a snapshot, press the “**Copy Snapshot to File**” or “**Copy Snapshot to Clipboard**” button. These buttons are located just above the preview screen.



Upon pressing the “**Copy Snapshot to File**” button, a dialog box will appear allowing the name and location of the saved file to be chosen. This file can then be placed on the timeline, edited in a photo editor such as Photoshop, or printed.

When the “**Copy Snapshot to Clipboard**” button is pressed, nothing seems to happen. In actuality, the image is placed on the clipboard. Once on the clipboard, it is necessary to open a paint program, such as Photoshop, create a new blank document, and paste the image from the clipboard to save it in the desired format.

If you have try this, you will discover a couple of

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problems. The first problem is that the image probably isn't full size. The second problem is that the image may not be the best in quality. Fortunately, both of these *problems* can be solved by changing a couple of settings no matter if you are saving to a file or to the clipboard.

If you are using Vegas Video 3.x, multiple steps are needed to get good quality, full-sized, images. The preview quality needs to be changed from "*preview*" to "*best*." Then, right-click the preview window and choose "*Display at Project Size*." These two extra steps should drastically improve the quality of the image.

To improve the image even more, some people recommend taking changing the field order in **File - Properties** to "*None*." Either way, I suggest using the de-interlace filter of your photo editing program.

Once all of the desired snapshots have been taken, it is now necessary to *undo* all of the changes made to the project. If you changed the **File-Properties** setting, return it back to "*Lower-Field First*" or however it was previously set. Then return the preview mode back to your normal setting - "*Preview*" in most cases. Finally, right-click the preview window and turn off "*Display at Project Size*."

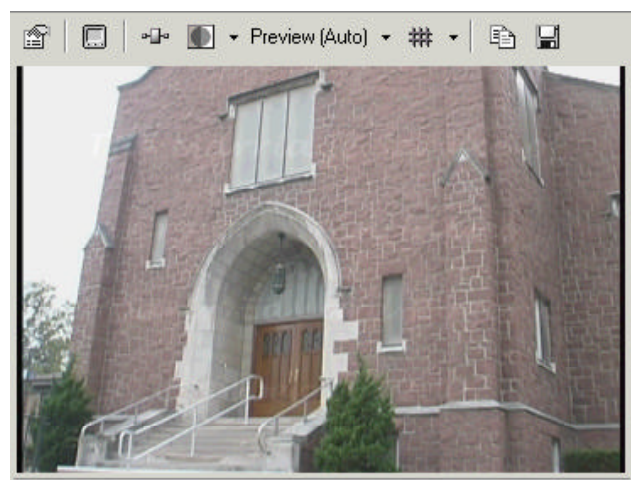
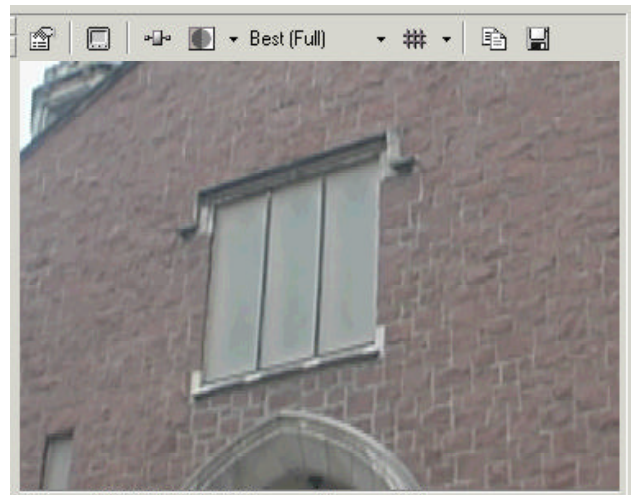
With the release of Vegas 4, generating snapshots has gotten much easier. Not only are fewer steps required, but the entire process can now be programmed via scripting onto a single button. Generating snapshots via scripts will be discussed later in this issue.

The basic procedure for getting the snapshot images has changed very little in Vegas 4 - there are still two buttons for copying to the clipboard or to a file. However, there are now fewer extra steps. To get a full sized, full quality, image, change the preview mode to "*Best (Full)*." When finished, change it back to whatever it was previously set - probably "*Preview (Auto)*."

Once again, you may want to change the interlace mode before taking the snapshot. Don't forget to change it back once the snapshot has been made.

The difference in "*Auto*" and "*Full*" modes can be seen in the images on the right. "*Full*" mode is, basically, the same as "*Display at Project Size*" option in Vegas Video 3.

The Vegas capture program can also be used to get images from a video. The one advantage to using the



capture program is that the image can be taken directly from tape without having to capture to AVI first. Looking at **Options - Preferences** on the *Capture* tab, there are several options related to capturing stills. Adjust these as needed for your purposes.

To capture an image from tape, use the capture program to display the desired frame on the screen. As with Vegas, right-click the preview screen and change the preview size to 100%. To capture the still image, from the **Transport** menu choose **Capture** and then **Capture Image**.

With multiple ways to capture stills from the video, it is possible to get any format desired. Experiment with the different methods to find the one that works best for your needs keeping in mind the different aspect ratios of each method.

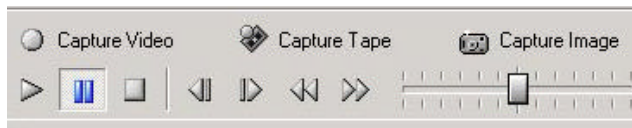
Beginner's Corner - Capturing Video

By Edward Troxel

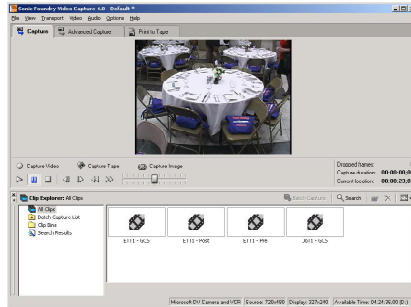
Before editing can begin, there must be some video in the computer. The process of getting the video from tape into the computer is referred to as capturing the video. While capturing is accurate when using analog sources, for miniDV tapes it is more like a file transfer from tape to hard drive. However, the generic term, "capturing", is used to describe getting video into the computer, no matter the source.

To capture video from within Vegas, choose *Capture Video* from the *File* menu. The main capture screen will be displayed. When a tape is placed in the camera/deck, you will be asked to name that tape. This is important for batch capture and each tape should be given a unique name.

When entering the tape name, you are presented with three options. The first option is "Don't capture any clips right now" which will be selected if you wish to manually start and stop the capture or use Batch Capture. The second option, "Start capturing all clips from the current tape position," will begin the capture process immediately. The third option, "Start capturing all clips from the beginning of this tape," will rewind the tape and then begin the capture process. I always choose the first option so I can manually control the process.



The easiest way to capture a tape manually is to press the Capture Tape button. This will rewind the tape and



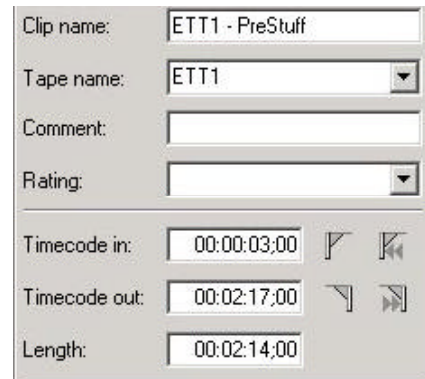
begin capturing from the beginning of the tape. To begin capturing at a specific location, press play on the video controls and press the Capture Video button. To stop capturing, press the Stop button. Until stopped, all video from that tape, depending on your preference settings, will be recorded into a single

AVI file. If the file system has a size limit (i.e. FAT32 is limited to 4GB), the capture will automatically be broken into several smaller files.

For better control, I always use Batch Capture. By scanning the tapes, I determine what sections I want to capture and the names of those sections. To get to Batch Capture mode, click on the Advanced Capture tab. Here you can enter the information for the clips for capture.

The clip name will default to the tape name followed by " - Clip 001." Change the clip name to something more meaningful. If desired, a comment and rating can also be added.

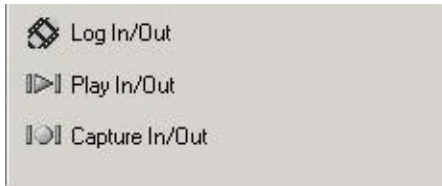
The next step is to specify the area of the tape for this clip. The *timecode in* value will be the timecode at which capturing begins while the *timecode out* value will be the timecode at which capturing ends. The length will be automatically calculated based on the in and out times.



You can also set the in and out times while previewing the tape. If you pause the deck/camera at the point you wish capturing to start, just press the little flag beside the *Timecode in:* button and the numbers will be changed to the current tape position. The same is true for the *Timecode out* - just press the flag to set it to the current tape position once at the end of the section.

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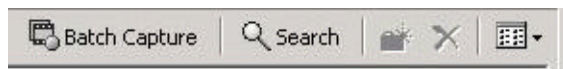
Below the timecode entry, a few options are presented. The first option is “Log In/Out” and will add the clip to the list (log) of clips to be captured. You would normally repeat the above process for all clips, pressing Log In/Out for each clip, so the capture program could



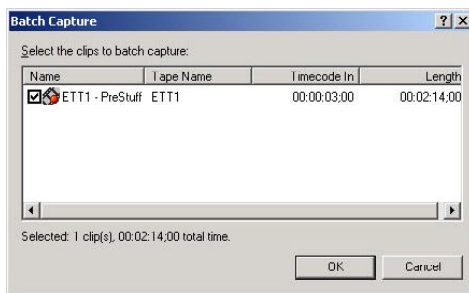
automatically capture all clips in one pass of the tape. The second option is

“Play In/Out” which will simply play the marked section. The third option, “Capture In/Out,” will actually capture the section immediately without actually using batch capture. If you only have one clip to capture, this would be a faster way to quickly grab one area of the tape.

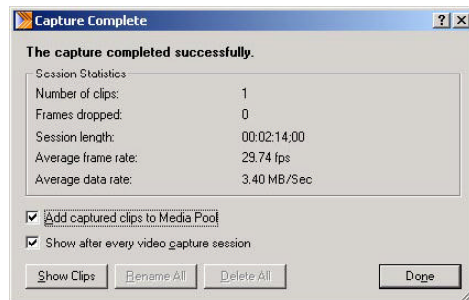
After all of the desired clips have been logged, it is time to let Vegas capture those clips. To capture the



logged clips, click on the Batch Capture button. This will bring up the Batch Capture dialog allowing the selection of clips to be captured. Make sure the desired clips are checked and press OK to begin capturing. The tape will be moved to each location on the tape and capture for the specified length of time.



After all clips have been captured, either by using Batch Capture or any of the manual processes, another box will appear indicating whether errors occurred while capturing.



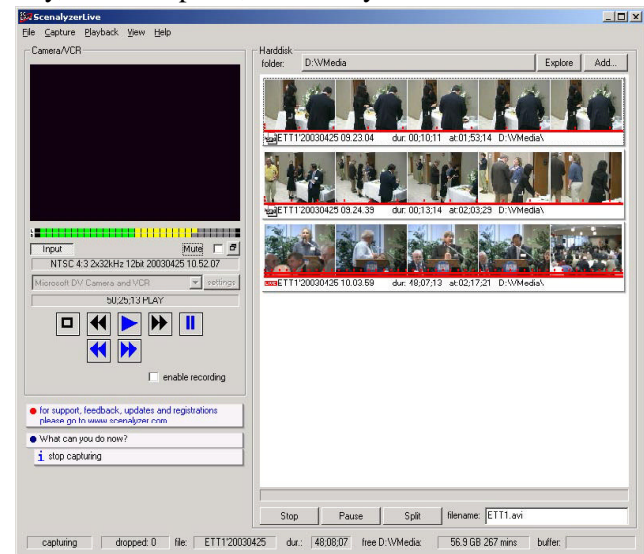
Many statistics are given as well as a few additional options such as renaming clips, deleting clips, and adding the clips to the Media Pool.

While the Vegas capture programs provides many features, there is, at least, one option missing - the ability to capture 4-channel audio. When taping events, I use one camera to tape ambient sound on stereo 1 (channels 1 and 2) and tape our wireless mic on stereo 2 (channels 3 and 4). Fortunately, a very inexpensive (\$33 US) solution is available - Scenalyzer Live.

Scenalyzer live can capture to a variety of formats and sizes. When setting up Scenalyzer for Vegas, I have found that the Type 2 AVI setting with Unlimited File Size (for NTFS only) settings work well. Naturally, if your drive is FAT32, the 4GB setting must be used. Explore the other settings to see which will work best for your needs.

My main usage for Scenalyzer Live is capturing 4-channel audio. A great feature of Scenalyzer Live is the ability to capture Video + Stereo 1 into a standard AVI file while *simultaneously* capturing Stereo 2 into a separate WAV file. Two files, 4 audio channels, and video - in **one** pass. Since you cannot enter Batch information directly into Scenalyzer, just rewind the tape, press play, and the press the Capture button to begin capturing.

The process of getting video into the computer is not overly complicated once the basics are understood. Explore the various options so you will be able to capture in a way that best suits your workflow - whether manually, Batch Capture, or Scenalyzer Live.



Single Button Snapshots

By Edward Troxel

While generating snapshots is an easy processes, there are a few extra steps needed in order to get the best quality images. These steps are each fairly simple but do take time to set and then additional time to unset. Thanks to scripting, all of the setting and unsetting can be left to the program. We just need to push the button and let the magic happen in the background.

The snapshot script code below is used with permission by Joe Sacher. His complete script can be downloaded from the Sundance Media Group web site located at <http://www.sundancemediagroup.com/help/kb/>. If you have not previously visited that site, you will be required to register. The origins of this script may have preceded this version.

In order to return all settings back to normal the first step is to get the current values of all settings that need to be modified. The code in Figure A creates a series of variables and places the current value of the preview

render quality, preview size, project field order, and project de-interlace method.

Once the current values have been saved it is time to modify these settings for getting an optimal image. The code in Figure B accomplishes this task. First, the preview render quality is set to best and the preview size is set to full size. This is the equivalent of manually changing the preview mode to “*Best (Full)*.”

After the preview settings have been modified, the project settings are changed. The project is set to “*Progressive Scan*” and the de-interlace method is set to “*Interpolate Fields*.” These changes reduce problems associated with video interlace. To manually change these settings, go to **File - Properties**.

Upon completion, the settings need to be reset back to normal. Figure C shows how each of the settings are reset back to the original settings that were saved in Figure A. This way, the project is returned to normal

Save Original Settings - Figure A.

```
// Save original Settings
var origPreviewRenderQuality = Vegas.Project.Preview.RenderQuality;
var origPreviewFillSize = Vegas.Project.Preview.FullSize;
var origFieldOrder = Vegas.Project.Video.FieldOrder;
var origProjectDeinterlaceMethod = Vegas.Project.Video.DeinterlaceMethod;
```

Change Settings for Image Capture - Figure B.

```
// Setup Preview for image capture
Vegas.Project.Preview.RenderQuality = VideoRenderQuality.Best;
Vegas.Project.Preview.FullSize = true;

// Set the field order and deinterlace method
Vegas.Project.Video.FieldOrder = VideoFieldOrder.ProgressiveScan;
Vegas.Project.Video.DeinterlaceMethod = VideoDeinterlaceMethod.InterpolateFields;
```

Restore Original Settings - Figure C.

```
// Restore Previous Settings
Vegas.Project.Preview.RenderQuality = origPreviewRenderQuality;
Vegas.Project.Preview.FullSize = origPreviewFillSize;
Vegas.Project.Video.FieldOrder = origFieldOrder;
Vegas.Project.Video.DeinterlaceMethod = origProjectDeinterlaceMethod;
```

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upon completion of the script.

Now that we can save, modify, and restore the project settings, it is time to get the actual snapshot. The code for getting the snapshot should be placed between Figure B and Figure C.

In order to save the snapshot to the clipboard, the following line of code is all that is needed:

```
// Copy Snapshot to Clipboard  
Vegas.SaveSnapshot()
```

After placing the image on the clipboard, you must now open a paint program and paste the image into a new document. This image can then be saved into whatever format you desire.

The process of saving to a file is much more complex - especially if you want to provide a dialog box asking where to save the file and what to name it. The script in the Sundance Media Site has these functions built-in.

The main command for saving to a file is:

```
// Copy Snapshot to a Specified File  
Vegas.SaveSnapshot(imageFileName,  
imageFormat, currentTime)
```

The imageFileName is the full path and file name where the snapshot is to be stored. The imageFormat may be either ImageFileFormat.JPEG or ImageFileFormat.PNG depending on the type of file you desire. The currentTime is the timecode of the frame to be saved. If the current cursor position is to be used, this can be Vegas.Cursor.

Download the SnapshotToClipboard script from http://www.sundancemediagroup.com/help/kb/kb_download.asp?id=138 and also the SnapshotToFile script from http://www.sundancemediagroup.com/help/kb/kb_download.asp?id=139 to simplify capturing snapshots. Special thanks to Joe Sacher to permission to use portions of these scripts in this newsletter.

Shortcut Keys:

CTRL-N: Start a new project.

CTRL-S: Save the current project.

CTRL-O: Open a project.

ALT-Enter: Open the project properties.

Contact Information

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

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

www.jetdv.com/tts

Thank you,
Edward Troxel

Snapshot Sizes (+/- a pixel or two):

NTSC - to Clipboard:

Draft/Preview/Good/Best (Auto): Preview Size
(may be 90x60, 180x120, 360x240, or 720x480)

Draft/Preview/Good/Best (Full): Full Size-720x480

NTSC - to File:

Draft/Preview/Good/Best (Auto): Preview Size
(may be 82x60, 164x120, 327x240, or 655x480)

Draft/Preview/Good/Best (Full): Full Size-655x480

PAL - to Clipboard:

Draft/Preview/Good/Best (Auto): Preview Size
(may be 90x72, 180x144, 360x288, or 720x576)

Draft/Preview/Good/Best (Full): Full Size-720x576

PAL - to File:

Draft/Preview/Good/Best (Auto): Preview Size
(may be 98x72, 196x144, 393x288, or 786x576)

Draft/Preview/Good/Best (Full): Full Size-786x576