

Working with Other Media: Audio, PIP, and Title Clips

Now that you have your various screen video clips assembled and edited to your liking, you've got a good foundation upon which you can build by adding a few additional media streams. Back in the previous chapter, we talked about importing all sorts of different media types for use in your video presentations. While it's true that two of the three items we'll be discussing in this chapter (audio narration and camera video) can also be created during the recording process, to be frank, I find that concentrating on one stream of content at a time yields a much better quality product. This chapter addresses how to create these elements in *post-production*, that is, after recording has taken place. In the case of audio and PIP video, these can be done in post just as if you had created them while recording. You need only to tag along as the Video Preview progresses, recording your camera video and/or audio as you go. Just follow the steps laid out in this chapter, and you'll discover just how easy it is to assemble the "multiest" multimedia presentation on the block.

In Chapter 9, you learned how to use the Import media... command to bring various production elements into your Clip Bin. In this chapter, the focus will be on the remaining three commands in the Add section of your Task List. We'll be chatting about getting the most out of the following supplementary media:

- **Title Clips.** No more having to assemble a title screen using a huge, cumbersome image editing package and then importing it as a still image. Camtasia Studio offers a one-stop workshop for constructing title and ending screens. Add text, adjust the color, and even import a background image.

- **Voice Narration.** This is where you'll find out about the ins and outs of recording and editing quality audio narration to go with your video content. We'll cover the Voice Narration tool, discuss the importing and saving of your audio tracks, and finally, offer tricks and troubleshooting tips for achieving the best sound possible.
- **Record Camera.** In addition to including a PIP track in your video during the recording process, you have the option of recording camera video after the fact as well. Here, I'll give you the basics of recording video content from a webcam or digital camcorder.

Adding Title Clips

Two of the most essential elements of video production are the opening and closing credits. The opening credits “warm up” the audience by providing a sense of what to expect in the upcoming material. The closing credits tell who's responsible for the work as well as possibly prompt the audience to action by telling them what they can do next. There are, of course, a gazillion variations on these themes. For example, title segments can also be placed in the middle of a video rather than just the beginning and end. And a title screen's content can be just as varied as its timing. Here are just a few ideas about where title screens work well with Camtasia Studio content:

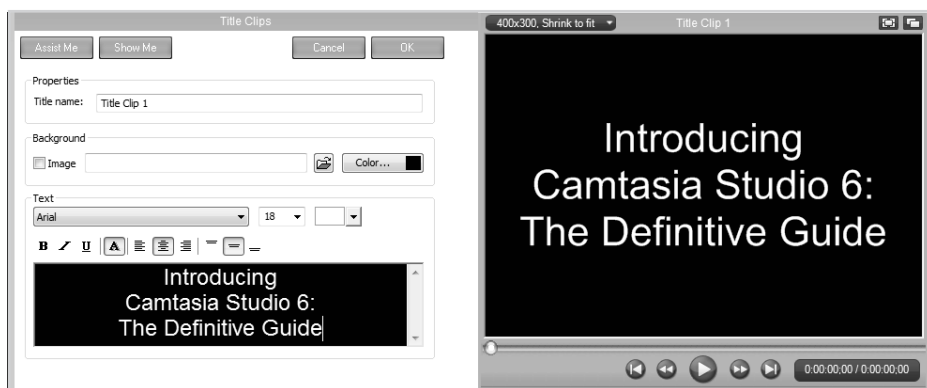
- Placing an introductory screen at the beginning of the video to announce its content.
- Giving sales or contact information at the end of the video.
- Splitting the content into palatable chunks by introducing each new topic or theme with a new title clip.
- Setting up individual case studies or usability studies by introducing each new user's vital statistics.

Essentially, if you need to get a text message across in your video unfettered by other screen content, title clips are the way to go. And with all the formatting options available right within Camtasia Studio, you can easily crank out title screens that are as attractive as they are functional.

To get started with **creating title clips**, do the following:

- From the Add section of your Task List, choose **Title Clips....**
- or
- From the **Edit** menu, choose **Title Clips....**

Either one of these will bring up the Title Clips pane, which looks a bit like this:




As you can see, there are two areas that help us determine what our title clip will look like:

- The Title Clips pane, which lets you specify the text font and formatting, the background, and the clip's name.
- The Video Preview, which allows you to determine the placement of the clip's textual elements.

So, let's **create a title clip**:






1. **Title name.** The first order of business is to give the clip a name, which serves no purpose whatsoever other than as a reminder to yourself when looking over the items in your Clip Bin. Just enter a name into the field that'll help you remember the clip's actual content later on.
2. **Background.** You have two options in selecting the background of your title clip. You can go with a solid color, in which case you need only click the **Color...** button to specify a color from the palette.









or

You can go with a background image, which can be a BMP, GIF, JPG, or PNG file. Just click the **Image** check box, and then click the **Browse** button () to navigate to your image, choosing **Open** after you've found and selected it. Either that, or you can actually type the full file path of your image directly into the corresponding field, but honestly, who does that?

Now, since the background image will be stretched across the entire title clip, make sure that the dimensions of your image file correspond to those of your video's output dimensions as closely as possible, or you might just find that lovely image stretched beyond recognition like a Sunday comic on a piece of Silly Putty.

3. **Text.** Once you've got the background taken care of, let's add our text. Just click inside the text box and start typing. You've got some standard formatting capabilities here. As you've probably fired up a word processor application once or twice in your life, I'm quite certain that these tools are already second nature to most of you. However, to be complete (this is the *Definitive Guide*, after all), here's a handy reference table. I've also thrown in some useful editing commands, just for kicks.

Name	Button	Hotkey	Notes
Font		---	Since your callouts are rendered prior to production, you don't have to worry about whether the desired font is on your users' systems.
Font size		---	
Bold		Ctrl-B	
Italics		Ctrl-I	
Underline		Ctrl-U	

Name	Button	Hotkey	Notes
Color		---	Lets you change the color of any piece of selected text.
Text Drop Shadow		---	Places a gray drop shadow beneath your text.
Align Left		Ctrl-L	The six alignment keys are useful in placing the text so that it's legible and so that it doesn't obscure the background image.
Align Center		---	
Align Right		---	
Align Top		---	
Align Vertical Center		---	
Align Bottom		---	
Select All	---	Ctrl-A	Selects all text for formatting change or deletion.
Copy	---	Ctrl-C	Copies selected text.
Cut	---	Ctrl-X	Cuts selected text.
Paste	---	Ctrl-V	Pastes any text from the clipboard into your text window.

4. **Video Preview.** Notice how the Title Clips pane and the Video Preview work in unison. The preview area is helpful for adjusting exactly where on the title clip you'd like the text to appear. To restrict the text to a particular section of the clip, simply resize the green bounding box by clicking and dragging one of its black handles. This is particularly

important with background images where there may be a portion of the image you don't want obscured by text.

5. Click **OK**. Notice how your brand-new title clip now appears in your Clip Bin. You can preview it at any time by simply double-clicking the clip in your Clip Bin, or by right-clicking it and then choosing **Preview Clip**.
6. To add the clip to your Timeline, right-click it in your Clip Bin, and then choose **Add to Timeline** (or **Add to PIP** if you'd prefer the title clip to appear on your PIP track). It will appear as the last clip on the track.

or

Click and drag the clip from your Clip Bin onto the Timeline or PIP track. This option gives you the added flexibility of being able to place the clip wherever on the track your heart desires, not just at the end.

7. As with any static image clip in your project, your title clip can be split or extended. You can also adjust the duration of the clip by right-clicking the instance on the Timeline and choosing **Title Duration...**



The default duration of your title clips can be set anywhere from 1 to 60 seconds. Go to **Tools > Options...**, and then enter a value into the Title clips field in the Default duration (seconds) section.

One of the great things about doing your title clips directly within Camtasia Studio rather than in an image editing application is that your clips stay completely editable. However, I *must* make absolutely clear to you exactly what happened when you dragged that title clip down from the Clip Bin onto the Timeline, as it will have a profound effect on how and where you edit your title clips should you ever decide to make changes.

Perhaps an analogy would be helpful. While in college, I worked in a costume shop, where I learned how to sew and make clothes from patterns. That title clip sitting in your Clip Bin is like a dress pattern. You can use that pattern to make an infinite number of dresses. Each dress, once created, can be custom tailored without changing the original pattern. Likewise, the pattern itself can be altered, meaning that every dress created from it from that point onward will incorporate those new alterations, but the dresses you made *before* you changed the pattern will obviously still sport the older look.

I can put a dozen or more instances of a single title clip onto my Timeline. Once it's on the Timeline, though, it becomes a completely separate entity from that clip currently sitting in the Clip Bin that spawned it. They no longer have *anything* to do with each other. I can make changes to the title clip in the Clip Bin, but any instances of that clip already on the Timeline will be unchanged. Only *new* instances will have the changes. I can also change a single instance on the Timeline, but neither the other “sibling” instances of the clip on the Timeline nor the “parent” clip in the Clip Bin will be touched as a result. Clear as mud? One obvious lesson here is to make absolutely sure the title clip you created is *really* what you want (in terms of both accuracy and design) before you start dragging a hundred instances of it onto the Timeline.

Here's how to **make changes to your title clips**, regardless of where they are:

1. For clips in the Clip Bin, simply right-click the title clip, and choose **Edit Title Clip**.

or

For clips on the Timeline, just right-click the desired instance of the title clip on the Timeline, and choose **Edit Title Clip**. Double-clicking the clip works, too.

2. Make the requisite changes, and click **OK**.

If you wish to get rid of the title clip entirely, you may do so the same way you would remove any other clip from your Clip Bin: Simply select it and press **Delete**. Alternatively, right-click the clip and then choose **Remove from Clip Bin**.

Finally, you can get basic information on title clips in your Clip Bin by right-clicking a clip and choosing **Properties...** You'll see its name, its default width and height (which, by the way, correspond to the editing dimensions you set in the Project Properties dialog), its background image (if set), and the hex value of whatever background color you've chosen.

That's all for title clips. While not as flexible from a design perspective as something produced in Photoshop, for example, these clips have the wonderful advantages of being easily created and edited. This can be a godsend when deadlines are tight. And when altering a particular project to incorporate software updates (possibly months later),

it's also nice to know that everything you need in order to make changes is right there inside the Camtasia Studio project file.



The Title Clip feature works great for static title screens, but occasionally it's called for to spice things up by turning an average title screen into an animated extravaganza, complete with flying title text and dancing logos. For this, you'll need to turn to third-party applications. Two such programs, BluffTitrer DX9 and WildFX Pro, can more than accommodate that need. Demos of both are included on the companion CD.

Working with Audio

In the previous chapter, I taught you all about how to import media clips, including audio, as well as how to add them to your Timeline for inclusion in your final production. This is fine and dandy if you already have some audio clips lying around that, by some miracle, are perfect sounding and already perfectly cut to the length of your video. Chances are, however, that you're not quite that lucky. This section is sort of a catch-all for all things audio. As you'll soon see, we've got a *lot* of ground to cover:

- We'll start by going over the essentials of recording audio narration using the **Voice Narration** tool.
- We'll talk about how to perform some basic editing of your audio directly on the Timeline.
- Finally, I'll give you some tips for getting a good recording from any source (including system sound). If you're having trouble with the logistics of getting your system set up to record sound, you might want to look here first. Appendix C, "Equipment Buyer's Guide," is also a good resource for those who are experiencing poor quality. It discusses the most common microphone setups, and can let you know when it's time to upgrade one or more components.

The Voice Narration Tool

Whether you end up adding voice narration to your video is a matter of personal taste. Some people decide to use captions and/or frequent callouts in lieu of narration, particularly in locked-down corporate environments where not every machine is equipped with a sound card. With my clients and trainees, I always strongly recommend that they

narrate their videos. In addition to adding a more personal touch to your content, you've got a whole new stream of information available to you, an ability to engage another of the senses. The multimedia aspect has the capacity to truly draw the user into the video experience. And for vision-impaired users, it may be the primary (or only) way of receiving your information.

Say you do decide that narration would work well for your video. The next logical question is *when* you wish to add it. As I've mentioned earlier in this book, you can do so while you're recording your screen video. Many users of Camtasia Studio prefer to do it this way (I'm told), mainly because there's a certain simplicity in recording everything at once. I find that this system works mainly for quickie tutorials where you're nursing somebody you know through the process of executing a computer task. This is the kind of video where a barrage of awkward pauses and "Ums..." is completely acceptable, since it's likely that only one other person is ever going to see it.

For soon-to-be-published tutorials and marketing spots, however, the task of recording everything in one take, while maintaining an acceptable level of polish, becomes a virtual impossibility. You've got to keep one eye on what you're doing with the mouse and keyboard, another eye on the storyboard to know what you should be doing next, another eye on your narration script, and yet another eye on your Recording Toolbars window to make sure your audio levels are okay. That's a lot of eyes. It therefore behooves you to focus on the screen video aspect at record time, and to narrate your video footage *after* the fact, in post-production.

Fortunately, this is not a complicated thing. When you decide to make an audio recording after the initial capture, you've got the **Voice Narration** tool to help you through it. It is embedded into the main Camtasia Studio interface, and with good reason. Its singular purpose is to let you narrate what's going on in your video. When you record narration with the Voice Narration tool, your Video Preview is playing back through the Timeline as you go along. During recording, you're simply talking about the various topics as they're happening on-screen. It's an organic process that feels very easy and natural.

So how do we get going? For starters, I recommend performing a first editing pass on your project *prior* to laying in your audio. Why is this? Well, when you add narration with the Voice Narration tool, you're synchronizing that audio with the video content. Keeping things neatly synched then becomes a challenge when you have a lot more editing to do. As I explained in Chapter 9, you have the ability to lock certain tracks so that any editing changes you make don't affect that

track. So, if you have an audio track already in place on a video you want to extensively edit, you've got two choices:

- Leave your audio track unlocked so that everything stays in synch throughout the editing process. Unfortunately, this means being very aware of where the sound waveforms are and only cutting video sections where there are pauses in the narration, or you could find that individual word and sentence fragments have been unintentionally destroyed.
- Lock the audio track so that it isn't touched when you edit your video. However, keep in mind that cutting out sections of video will knock your audio and video tracks out of synch, forcing you to do some creative audio editing later to resynchronize them.

Either way, editing gets a lot more complicated once you've laid in an audio track. So do yourself a favor and edit the video first, keeping one eye on your script (now that you have an eye to spare) to make sure you're leaving enough room in the video to eventually say what you want to say.

So, you've got a nicely edited video. The final step before recording is to make sure you've got your audio hardware set up correctly. See the end of this section for setup tips, and also be sure to check out Appendix C, "Equipment Buyer's Guide," to see if you're missing any vital components. Now, on to recording your narration...

The first step is to **open the Voice Narration tool**, done thusly:

- From the Add section of your Task List, choose **Voice Narration....**
or
- Choose **Voice Narration...** from the **Edit** menu.

The Voice Narration pane appears. Before we actually begin recording, we have a few options to set. Our first choice pertains to which track we want to use, and yes, there *is* a difference between these tracks. The Audio 1 track has historically been reserved for pre-existing audio tracks of AVI files. It's where your audio would be if you recorded the narration during the actual capture. So, if you plan on doing background narration for videos that already have some sound effects in them, you'll want to use your Audio 2 or Audio 3 track if you don't wish to overwrite the audio that's already there.

One other interesting note about Audio 1 is that in versions prior to Camtasia Studio 6, it was inescapably tied to your Video track. If you wanted to edit the Video track, then the sound data in Audio 1 track was along for the ride. There was no locking, hiding, or otherwise protecting it. Fortunately, this is no longer the case. If there's pre-existing audio in your Audio 1 track that you recorded during capture time, you'll have the option of keeping it linked with the Video track vs. unlinking it, where the data will behave just like the audio in Audio 2 and Audio 3. However, if you choose Audio 1 as your chosen track for narration, a small dialog will appear warning you that the Video and Audio 1 tracks *will* be unlinked. We'll talk more later about the advantages of a linked vs. unlinked Audio 1 track, but for now, just know that if you're populating that track with the voice narration, it won't be linked to the Video track.

Our next set of choices concerns the portions of the audio track we wish to use for recording. Camtasia Studio is kind enough to auto-terminate our recordings based on the parameters that we set here. We've got three options from which to choose:

- **Until end of selection on timeline.** If you have a particular section of your Timeline selected, this option will only record as far as the right-hand edge of that selection, ensuring that any pre-existing audio outside your selection remains untouched. You cannot make Timeline selections while in the Voice Narration pane *until* you click this option.
- **Until end of clip.** This option is especially handy if you're working with multiple segments, and certain clips already have audio in them that you don't want to disturb. When the playback head reaches the end of the current clip, the recording will stop automatically.
- **Until end of timeline.** Recording won't stop until the end of the last clip in your Video track. If there's already material on the track, any audio in front of the recording will be pushed to the right if there's not enough space.

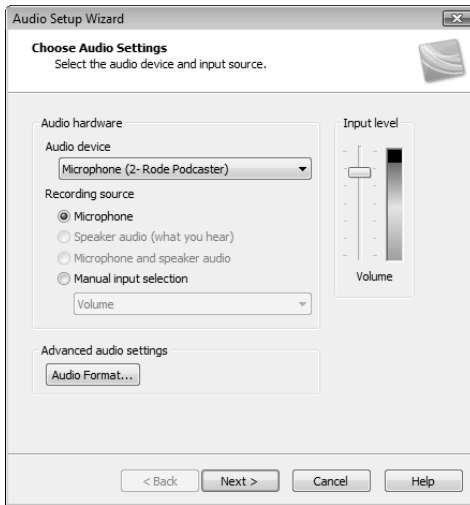
Regardless of what you choose, there is one option that can make life much easier if you suddenly find that the amount of planned narration vastly exceeds the length of your video footage. Checking **Auto-extend last video frame while I continue narrating** takes the final frame of the selection, clip, or Timeline (whatever you chose) and automatically extends it while you continue talking. The result is pretty seamless; no one will ever know that the original segment wasn't long enough. Of course, Camtasia Studio also offers a way of

doing manual frame extensions while recording audio, and I'll talk about this in a moment.

If you've already got audio anywhere on your Timeline when you set out to record, one option you'll probably want checked is **Mute speakers during recording**. If left unchecked, all sound will be played back during recording. As you can imagine, having other bits of audio blasting from your speakers (and having your mic pick up the ambient sound) while you're trying to record your narration will probably lead to some nasty background artifacts that you really don't want on your narration track. So, what if the sounds between your various audio tracks are supposed to interact, and you therefore *need* to hear what's happening on the other track while you're recording? Leave Mute speakers during recording unchecked, and invest in a good pair of closed-ear headphones. That way, you'll be able to hear the playback of your other track, but your microphone won't. In fact, I generally recommend having an audio setup that allows you to monitor what your mic is picking up, anyway. While it might seem unnecessary (considering that you're already in the same room with your mic), what you hear and what your microphone hears may not be the same thing. When I started monitoring my input, I was able to catch errors and anomalies as soon as they were recorded. I could then quickly correct them. We'll talk more about audio monitoring in Appendix C, "Equipment Buyer's Guide."

The final part of the Voice Narration pane lets you adjust the volume of your mic as well as your audio settings if you haven't already done so. Just speak into the microphone normally while you adjust the accompanying slider. We'll discuss volume adjustment in detail in just a moment.

If you're not seeing any activity *at all* on the volume bar when speaking into the mic, then there's a problem. Address it by clicking the **Audio Setup Wizard...** button. It's this dialog that lets you choose the device and source from which you want to record.



Here are the basics in terms of choosing the right device and source to record your audio:

- **Audio device.** Your sound card will be listed here, as will any software-based recording devices. If you have an audio interface, it too will be represented here, possibly with multiple listings that correspond to the box's various inputs. USB mics and webcams (if they're audio-enabled) will also be present. Make sure you have your sound card selected if you wish to record system sound.
- **Recording source.** Certain devices (especially sound cards) offer multiple input sources, and this section gives you the chance to select between them. You can pick Microphone, Speaker audio, or both if you want to capture everything. There's also a Manual input selection option for more off-the-wall choices. For example, virtually all sound cards have a microphone port. Many others also sport a line in jack as well, which you could use for recording from an external CD device or your iPod.
- **Input level.** This slider control allows you to set the volume of your currently selected input source. To do this, you'll want to first check your levels by speaking into the microphone.

For the best results, try to keep the peaks of your audio just below the maximum, somewhere orangey red. If the peaks of your audio are consistently maxing out in the red, then some portions of your audio may be *clipped* when digitized, and the result does not sound pretty. Just adjust the slider up or down to find the right

level while speaking normally into the microphone. For owners of audio interfaces, keep in mind that most of these devices have their own hardware- and software-based controls for volume, and as such, tweaking the slider may do nothing. Consult your interface's documentation for details on adjusting the recording volume.



If you don't trust yourself to accurately find the "sweet spot" of your audio volume, consider letting Camtasia Studio do the heavy lifting *for* you. Click **Next**, and you'll be able to automatically set the recording volume by clicking **Auto-Adjust Volume**. You'll be given a brief sentence to read into the mic (though you can probably get away with saying anything you want), and Camtasia Studio adjusts your recording volume based on what the microphone picks up. After soliloquizing your way to an ideal audio level, click **Finish** to lock in your adjustment.

So, once you've got your source selected and your levels adjusted, it's time to start recording. Pick a quiet time of day and post a sign outside your door that says, "Quiet, please. Recording in progress," or perhaps something a bit surlier depending on how much you like your office-mates. Please see the buyer's guide in Appendix C for some good information on setting up your workspace for desirable acoustics.

Now that you have your options set, here's how to actually **record your narration using the Voice Narration tool**:

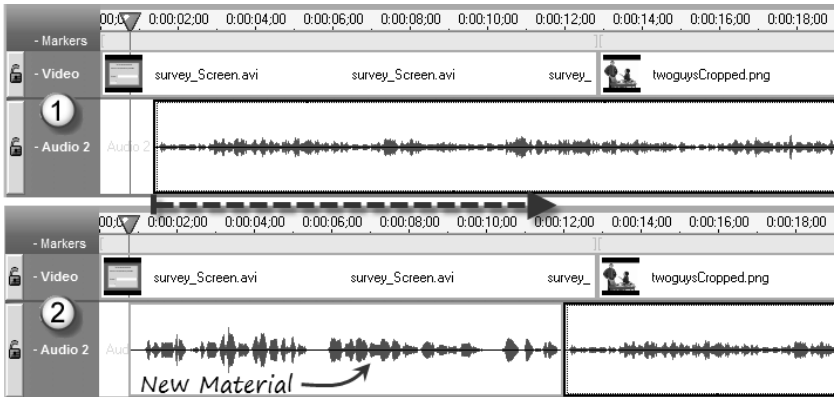
1. Place your green seek bar at the point in the Timeline you wish to begin recording. If only recording a selection of content or recording until the end of a given clip, make sure you've set the appropriate record option on the Voice Narration pane. Bear in mind that you are not allowed to record from a spot on your Timeline where recorded content already exists in that track. Delete the old content first, or at least move it out of your way.
2. Click the **Start Recording** button. This will start the playback head in motion, and you will see your video progress in the Video Preview.
3. Speak into the microphone at the appropriate points in your video.

4. If the amount of script exceeds the amount of footage, consider clicking the **Extend Current Frame** button to “pause” the video playback head while you finish talking, and then click **Resume Video Playback** to keep going. In actuality, it stretches out the frame on which you first clicked the button, spawning all the video frames you need in order to finish up your spiel. This extension will appear on the Timeline as a separate clip.
5. At some point, you’ll want to stop recording. This can be done either automatically (e.g., at the end of a selection or clip), or manually by clicking the **Stop Recording** button.
6. You’ll be prompted to save the recording as a WAV file. Simply navigate to your project folder and specify a file name. Click **Save** to preserve the recording, or **Cancel** if you’re not happy with your narration and want to begin again.
7. The WAV file will appear both in your Clip Bin and in the appropriate place on your Timeline, where it can be further edited if desired.



Keep in mind that the new content is in fact kept in the file you just created. If you recorded over the pre-existing audio track of an AVI file, for example, the sound data in that original file was *not* affected when you recorded over it. Pursuant to Camtasia Studio’s nondestructive philosophy, all of these items are tracked by the project file. The media files themselves aren’t touched.

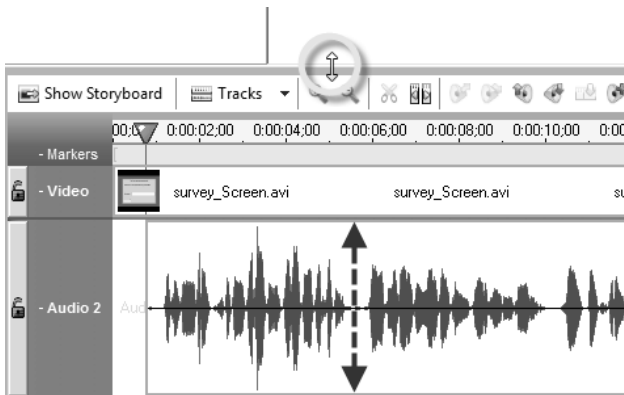
When narrating, you cannot record over old content. It’s not kosher to place the seek bar in the middle of an existing audio clip and click **Start Recording** — you’ll get an error message if you try. You’ve got to start in a blank spot on that track. So what happens if there are audio clips to the right of your current recording, and you end up exceeding the available empty space by making a lengthy new recording? No, those clips aren’t cannibalized; they just get pushed to the right:



1. My Timeline with a pre-existing audio clip in my second audio track. 2. This clip gets pushed to the right when I record a longer new clip right before it.



If you want to get a better view of your audio waveforms, simply resize the Timeline to give your audio some breathing room:



The audio tracks will expand, whereas the others will remain the same height. And of course, using the Zoom tools will do the same thing on the horizontal plane.

The duration of your recorded content is up to you. Each new recording creates an audio file, and this can lead to problems considering that most of us stammer or otherwise mess up from time to time. A full-length video is a *loooooong* way to go without making a mistake. So how do we address this? Some people create a new recording for every sentence, or every clip, or every topical section, while others just throw caution to the wind and try to do the entire video in one take. Both ends of the spectrum have their advantages and disadvantages. The multiple files approach gives you flexibility because you can quickly move clips around and edit them freely without affecting the

timing of the other clips. However, more files also means more “stuff” to keep track of.

Another option is to record everything at once, saving it as one file, and then split it up and move the parts around during the editing process, which we’ll be talking about next.

Basic Editing of Your Audio Tracks

Once you’ve got some audio clips on your Timeline, they can be edited just like any other series of clips. Again, there are a few differences between the Audio 1 and Audio 2 tracks. Let’s talk about these differences for a moment:

The **Audio 1 track** (for material that you’re importing) is the counterpart to your Video track. You have no control over the placement and duration of sound clips in your Audio 1 track — the duration and location of an Audio 1 clip exactly mirrors its corresponding video content. All cuts to your Video track will also affect Audio 1, and vice versa. The two tracks are bound together by default. You can unlink them, and I’ll teach you how in just a sec, but first, let’s talk about how Audio 1 content behaves by default...

In just a bit, we’ll be talking about some “audio only” edits you can perform (such as fades, volume adjustments, and silencing a selection) that won’t affect your Video track. But when it comes to the synchronization of the elements in Audio 1 with your video content, every sentence is pretty much glued in place. Your **PIP Audio** track functions very much the same way; it too is tied to its corresponding Video (PIP) track. If the timing of your video and audio elements are exactly synchronized, this may be exactly what you want. But obviously, it is also quite limiting.

The **Audio 2 and Audio 3 tracks** offer a lot of comparative freedom. You can add as many sound clips to these tracks as you like. You may freely move these tracks around and change their order. Additionally, unlike the clips on your Video track, your clips do not necessarily have to butt right up against one another. You can leave some blank space between clips, making it easy to fine-tune the synchronization of your audio clips to whatever’s happening in your video.

Speaking of which, if you happen to have your audio clips aligned to exactly synchronize with the video material, gaps and all, it used to be a royal pain when you needed to add a new clip earlier on the Timeline, meaning that you had to individually move over and resynchronize all the audio clips that followed it individually. Thankfully, there’s a new “ripple move” command that will let you move

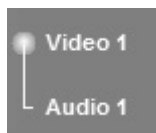
over a series of audio clips at once, including preserving all the gaps between them. Just click and hold on the leftmost clip you want to move, and hold down the Shift key. A special icon will appear...



...and your clicked-upon audio clip, and all the ones that follow it, will move as a single unit.

At any rate, the gist of how Audio 2 and Audio 3 work is that you can leave numerous portions of your clips on the cutting room floor, and it won't affect your Video track (or Audio 1), provided you lock your Video track. Conversely, you can apply the lock to Audio 2 and/or 3, and any video edits won't hurt your narration.

So, what do you do if you recorded your narration during the initial capture, hence relegated it to Audio 1, but you require the flexibility of how audio behaves on the Audio 2 or Audio 3 track? Just unlink it. If you look at the track itself, you'll notice a small circle next to the Video track:



Clicking the circle will unlink Audio 1 from its corresponding video stream, where it will then behave just like Audio 2 or Audio 3. You can divorce the PIP audio track from PIP video in exactly the same way. Just keep in mind that this separation is permanent; there will be no reconciliation possible for these estranged media streams.

But of course, there are editing commands that are common to all tracks, whether they're linked to a video or not. Let's now discuss some basic editing techniques you can perform on these sound files.

Trimming a piece of an audio clip is done the exact same way you do it for video:

1. Make sure that any tracks you do *not* want trimmed are safely locked.
2. On the Timeline, select the section of audio you wish to trim. Remember, when editing any material on your Audio 1 track that hasn't yet been unlinked, any video within that selection also gets the ax.

3. Click the **Cut Selection** button (✂).
or
Press **Ctrl-X**.

Unlike the editing of video content, where trimming is basically the one-trick pony of your whole editing arsenal, you've got a few additional techniques you can use to bend your audio content to your will. Camtasia Studio is kind enough to make these tools accessible directly from your toolbar:



From left: Fade In, Fade Out, Volume Up, Volume Down, Replace with Silence, and Audio Enhancements.

Taking advantage of these tools is simple: Just select the content to which you'd like to apply one of these effects, and then click the button to apply the effect.

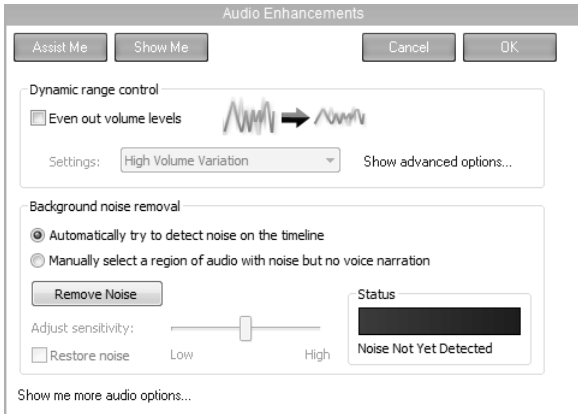


Remember that these tools will affect any and every audio track that isn't locked tight. If you're not careful, the execution of that Replace with Silence command you used to stifle a cough might also have just gotten rid of an entire measure of your background music as well as a sentence fragment on your PIP Audio track. Be sure to make judicious use of track locking in order to avoid these difficulties.

These six tools do the following:

- **Fade In.** Begins the selection at 0% volume, and as the selection progresses, gradually and steadily builds up to 100%. The speed of your fade therefore depends on how much material you select.
- **Fade Out.** Essentially the same process, except in reverse. Handy for bringing background music to a close.
- **Volume Up.** This raises the volume of your selection by 25%. Clicking the button multiple times has a cumulative effect. Just be sure not to increase the volume to the point that the sound exceeds 0 dB, where clipping (and therefore distortion) will likely occur.
- **Volume Down.** Clicking this button reduces the volume of your selection by 25%. I'll often use volume reduction to "balance" my tracks, making sure that my background music doesn't overpower my narration, for example.

- **Replace with Silence.** This option reduces the volume of your selection down to 0%. It's excellent for getting rid of clicks, pops, and other annoyances that would otherwise mar a good recording.
- Finally, we come to **Audio Enhancements.** This handy set of tools gives you a tremendous advantage in cleaning up an essentially good but flawed audio track. Let us examine this pane in greater detail.



The Audio Enhancements pane consists of special filters that can really help improve how your audio sounds. With these filters, you can normalize the volume, knock out background noise, and even improve the vocals. Let's begin with the volume.

If you've done some audio recording in the past, you may have noticed that the volume of your recorded material wasn't entirely consistent. This can happen for several reasons. Some people have a natural tendency to trail off as they approach the end of a sentence. Others fail to maintain a consistent distance between their mouth and the microphone. And most of us just have a particular rhythm to our speech where the loudness naturally waxes and wanes. Volume differentiation can also happen when you record different audio segments on different days. The microphone placement and your distance to it probably varied a bit, and the new segment can sound a little different as a result. Camtasia Studio offers a way of overcoming these inconsistencies.

In the section marked Dynamic range control, click **Even out volume levels**. You'll notice that the waveform on your Timeline changes. Depending on the level of normalization you select, this will bring the volume levels of all your narration more in line. Note that you can select between high, medium, and low volume variation, and

even select custom values if you're the sort who likes to tweak in order to achieve the best possible outcome. Click the **Show advanced options...** link to adjust the following using the corresponding slider controls:

- **Ratio.** How much compression (increased loudness) gets applied to everything above your established threshold (see below).
- **Threshold (dB).** The threshold is your baseline of how loud the audio should be before Camtasia Studio begins to limit it.
- **Gain (dB).** This setting can increase overall volume by a set amount *after* compression is applied.

These three settings will all change by an incremental amount whenever you adjust the (high/medium/low) volume variation levels, and once you've found a level that you're more or less happy with, you can customize the individual settings from there. And keeping in line with Camtasia Studio's nondestructive policy toward original video and audio footage, all the tools on the Audio Enhancements pane are applied without actually touching the underlying files. This means that you can undo the effect(s) whenever you wish. If you ever want to remove the Dynamic range control, just uncheck **Even out volume levels**, and you'll find that the original audio has returned in all its glory.



Keep in mind that the Dynamic range control options, along with the other settings offered by the Audio Enhancements pane, apply changes to *all* audio on your Timeline, regardless of what you have selected, regardless of what track(s) contains the audio, and regardless of whether any (or all) of these tracks is locked. *Everything* will change when you execute an audio enhancement command.

The next section, Background noise removal, is designed to get rid of excess noise in your recording. This tool can target things like the hum of your computer fan and other equipment, distant voices from across the hall, or the sounds of traffic from outside. It does this by silencing everything that falls below a certain decibel level (the noise), while keeping everything above its established decibel level (your narration). There are a couple of ways in which you can help the noise removal tool do its job:

First, you'll need to select whether you want the tool to **Automatically try to detect noise on the timeline** or if you'd rather **Manually select a region of audio with noise but no voice narration**. I generally find the latter more effective, particularly if you recorded in a loud environment where the *noise floor* was high, meaning you have less difference in volume between your signal (the

desirable part) and all the noise. Just select a small snippet of your Timeline where you weren't speaking. It doesn't have to be much; the one-second pause between two sentences will work just fine.

Once you're ready, just click **Remove Noise**. The audio waveforms on your Timeline that were once green will suddenly turn maroon. You can preview the changes by playing back your Timeline content per usual. You can do a quick "before and after" comparison by selecting a sample of narration, playing it back, and toggling the **Restore noise** check box to sample the original audio. If you notice certain anomalies with Restore noise enabled (such as the ends of words dropping off), you can reduce the sensitivity of the noise removal tool with the **Adjust sensitivity** slider control.



While audio enhancement capabilities such as these can employ little tricks to increase the perceived quality of your narration, nothing can take the place of a high-quality original recording, and no amount of waveform manipulation will yield a truly higher-quality file than your original audio. These techniques can do wonders to clean up a good recording, but they cannot salvage a bad one. Therefore, try to avoid the complacent attitude that you can always "fix it in post." A carefully recorded master file may reduce or eliminate the need to apply audio enhancements entirely, and those that are applied will be all the more effective.

Noise reduction is a good example of this. If there's not a lot of noise in the original recording, then the noise removal tool can better target what little there is, while leaving the desirable portions untouched. Also, the noise removal tool has a hard time differentiating background noise that occurs while the narrator is speaking, so while it's a handy tool to have in your arsenal, it does have its limits. So keep it happy by feeding it good, wholesome recordings instead of auditory junk food, and it will serve you well for many years to come.

But we're not finished yet with the audio enhancements. There is a third (somewhat hidden) tool, called **Vocal Enhancements**, that you can bring up by clicking the **Show me more audio options...** link at the bottom of the pane. This tool sports several options, the first of which is vocal optimization. This tool helps remove annoyances like *plosives* (those "popping p" sounds) and *sibilants* ("hissing s" sounds). Since the algorithms it needs to effectively do this are somewhat different for the male vs. the female voice, you'll need to pick the gender of the narrator by clicking the appropriate button.

You also have check boxes for eliminating *clipping* (where part of a loud waveform gets chopped at the 0 dB threshold) and *clicks* (mouse click sounds, microphone rustling, and other assorted fizzles and pops that just shouldn't be there). You can set the sensitivity of the click removal tool by adjusting the accompanying slider.

Recording System Sound

Up to now, you've learned about your various software options for getting your narration into Camtasia Studio. Now we're going to discuss changing the recording source from the microphone to your internal system sound. From PowerPoint presentations to games to Windows alert sounds, sometimes you'll want to record the audio from your computer. This handy guide will help you do just that.

Technique 1: Using Your Sound Card

If your microphone is plugged into your sound card (which it probably is, if you're not using an audio interface), you've likely been using "Microphone" or "Line In" as your audio capture source. It may interest you to know that most modern sound cards offer an input source that "listens" directly to what's happening on the system. Camtasia Studio's Audio Setup Wizard will almost always select the correct source for recording your system sound automatically. Just select your sound card as the Audio device and then choose **Speaker audio (what you hear)** as the Recording source.

If, for some reason, Camtasia Studio does not correctly select the source, you can choose one manually by choosing **Manual input selection** as the Recording source and picking your source for the system sound. Different sound cards call it different things. If your sound card offers one of the following as an audio capture source:

- Mixer
- Mono Mix
- Stereo Mix
- Wave Out
- What U Hear

...then you're in business. What's nice about using your sound card for recording system audio is that everything is happening right on the sound card — you don't even have to buy a cable. In fact, a few sound cards will even let you select multiple sources from which to mix audio.

When exploring all the possible sources offered by your sound card, it's just a matter of selecting each one individually, and then doing a test capture to see if the source is indeed picking up your system sound as expected. I've outlined a testing procedure for you at the end of this section. Once you've got the correct input source selected, recording system sound works just like recording your microphone.



If you're a user of **Windows Vista**, recording directly from your sound card may or may not be an option for you. Vista's audio implementation was always a bit wonky, and the drivers put out by the various manufacturers reflect this. In the case of my system, I did indeed have the ability to record system sound, but for some reason it was listed as an entirely different device rather than a separate source of one device. I have no idea at this point how common this phenomenon is, but I'll go ahead and give you the steps, just in case it helps a few of you:

1. First, choose **Start > Control Panel > Sound**, and select the **Recording** tab. The list of potential recording devices appears.
2. Even if a system sound option is available (we'll call it "Stereo Mix" for the purposes of this discussion, but it could go by another name), it may yet be hidden. Right-click anywhere in the dialog and choose **Show Disabled Devices**. See if Stereo Mix shows up. Even if it does, it might be listed as "Currently unavailable." Let's fix that...
3. If your system is set up like mine, you'll need to first disable the source making use of the device before you can enable Stereo Mix. Right-click the device marked "Working" (probably your microphone), and choose **Disable**.
4. Right-click your Stereo Mix device and choose **Enable**. Click **OK**.
5. Go ahead and bring up Camtasia Studio (or Recorder), and select the new device in the Audio Setup Wizard. You may have to restart the application in order for the new device setting to be recognized.

Play an MP3 file or movie trailer and see if the Input level meter detects any activity. If it does, you're all set. If not, take heart. We have a few more options to explore....

Technique 2: Total Recorder

If you don't have the hardware setup to record your system sound, you might want to consider a software-based solution. High Criteria, Inc., offers one such solution in the form of their **Total Recorder 7.1** audio capture utility. A demonstration version is included on the companion CD. Total Recorder installs a special driver that works to capture the digital sound directly from the output of your sound card. Aside from Technique 1, this is the only means of recording system sound that preserves the audio in 100% digital form (in other words, no conversion takes place).

Once you've got the application installed, simply run it and click the **Record** button. This puts Total Recorder into "listening" mode, and recording begins when the actual audio does. The only major drawback is that the Camtasia Studio suite of applications cannot utilize the Total Recorder driver — only the Total Recorder application itself can. This means that you'll have to save off a separate audio file, import it into Camtasia Studio along with your recorded video, and then take a moment to resynchronize the two streams. Not a dealbreaker, but a pain nonetheless.

Technique 3: Creative Cabling

So you've tried every potential audio input source that your sound card has, and nothing picks up your sound card's audio. You may also be in a "locked-down" work environment where you aren't allowed to install driver software. In this case, you might need to invest in a cable or two to make the recording of system sound an option for you. The easiest solution is to purchase a single stereo cable with a stereo mini-plug on each end, jacking one end into your line out or headphone port and the other into the microphone port. You'll probably have to adjust both the recording and playback volume settings in your sound control panel, but this is a workable solution. The only inconvenience is having to unplug the cable end every time you want to play back what you've recorded. This problem can be circumvented with the additional purchase of a stereo Y-cable, so that you can plug your "recording cable" and your speakers into your line out port simultaneously. This has the added advantage of actually being able to monitor what you're recording.

Another solution, rather than going from the headphone jack to the microphone port, is to cable from the headphone jack into one of the audio input ports on your preamp, or into your audio interface if you happen to have one (and you *totally* should — see Appendix C for a discussion of this point). This can allow you to *mix* audio content from your speakers with another source (such as a microphone). If using an analog preamp, the output from the preamp would then feed into your sound card.

There is but one drawback to both of the "creative cabling" options. The first two techniques we discussed allow you to record everything digitally. With this technique, however, you're taking a signal destined for loudspeakers (an analog signal), and then re-digitizing it when the signal travels *back* into your sound card by way of the microphone port. This digital to analog to digital conversion will probably mean somewhat poorer quality than you would otherwise have gotten.

Technique 4: Miking the Speaker (Not Recommended)

There is of course one additional "poor man's" solution, namely to set up your microphone next to your speaker. This has the advantage of being able to record your voice and system sound at the same time (though most sound cards will let you do this also). It has the major disadvantage of picking up all other ambient sound in the room, and the sound quality is, well... something akin to a grainy Xerox copy of a vibrant color photograph. I do not recommend this option, but enough

people will end up doing it anyway that I may as well teach you how to do it “right.”

First off, it’s helpful to use an omnidirectional microphone for this purpose, so that your voice and your speaker (or your two speakers, in the case of stereo recording) are picked up equally (see Appendix C for the lowdown on microphone directionality). Also, I find that I can reduce ambient noise on the recording by lowering the recording volume of the mic while increasing the playback volume of the speaker. Finally, if you’re recording a stereo source, make sure that the microphone is equidistant from your two speakers so that *both* channels are picked up. You’ll be converting a stereo signal to a mono one, but it’s a lot easier than separately miking both speakers.

Testing Out Your Settings

If you’re testing out audio input sources to see what works for you, or even after you’ve found what you’ve needed and are just gearing up to record your session, I strongly recommend performing a brief test to make sure you’re picking up system sound okay before committing to a full-length recording.

Just follow these steps to do a quick **10-second sound check**:

1. Make sure you’ve got the right audio input source selected.
2. Perform an action on your machine that gets some audio cranking out of those speakers. Opening a movie trailer or a music MP3 file will do the trick.
3. Don’t forget to enable the **Record Audio** command in Camtasia Recorder.
4. Start the capture, making sure to check your audio levels in the Statistics area of your Recorder window. If you see movement on the audio levels bar, then you’re picking something up.
5. Wait about 10 seconds, and then close whatever sound or video file you opened. You should be hearing nothing but silence at this point.
6. Now, as a final sanity check, stop the recording and preview the clip. Does your recording play back the audio at a volume and quality level that’s appropriate?

Provided your sound test works out, then you're ready to roll on a full-length recording. If not, here are a few handy troubleshooting tips you may find useful. These tips apply to recording your microphone as well as your system sound.

If there's *no* sound on your video preview...

- When recording from Camtasia Recorder, make certain that your Record Audio check box is checked. Forgetting to set this option is typically the most common cause of dropping an audio recording.
- Make sure that the correct audio capture device and capture source are set in your Audio Setup Wizard.
- Check to ensure that your Volume slider isn't set to zero.
- Double-check your connections. If capturing microphone audio to your sound card, make sure that the line going from your preamp is plugged into your microphone port as opposed to one of the myriad other jacks on the back of your card.
- If using a preamp (whether analog or digital), double-check the volume dial on the unit itself, making certain that you've adjusted the right dial for the input port in question.
- If using an audio interface, USB headset, or any other microphone with a USB or FireWire connection, check to make sure you have the latest drivers for your unit installed.

If the sound in your preview is muffled, garbled, or just not at the level of quality you expected...

- Check your Audio Format settings. Master-quality recordings should have an audio format of **PCM** (uncompressed), with attributes of at least **44.1 kHz, 16 Bit, Mono**.
- It's possible that your recording volume is set too loud, and that clipping is occurring. Both Camtasia Recorder and the Voice Narration tool in Camtasia Studio have a volume unit meter to test out your recording volume. Double-check it to make sure you're not "residing in the red zone." If it's too high, adjust the dial on your preamp/audio interface, or turn down the volume of your capture source in the Audio Setup Wizard.
- One of the links in your audio recording chain (microphone, preamp, sound card, cables) could be malfunctioning, or be of such poor quality that it requires replacement. Swap out one component at a time to see if you can find the culprit. Note that this doesn't always have to be costly. My setup once experienced a sudden onset of horrible *staticitis*, and after nearly ripping out my hair from trying out new components with no change in quality, I finally

discovered that the \$5 cable going from my preamp to the sound card had become damaged. In this case, a quick trip to Radio Shack had me back in business. If it turns out that one of your components *does* need to be retired, be sure to look at Appendix C, “Equipment Buyer’s Guide,” for help in finding an acceptable replacement.

Recording Picture-in-Picture (PIP)

As we talked about back in Chapter 5, Camtasia Recorder supports the recording of an additional video stream, typically coming from a webcam or video camcorder (though it can actually be pretty much any video source). However, just as we discussed earlier in this chapter, managing the screen recording alone during your capture is already quite a handful. In the previous section, we talked about how you could postpone the capture of your audio narration until after the initial screen recording was done. Now, you’ll learn how to do the same for your PIP track.

To get started with recording your camera video, you have to **open the Record Camera pane** in Camtasia Studio, like so:

- From the **Edit** menu, choose **Record Camera....**
or
- In your Task List, click **Record Camera....**, located in the Add subsection.

At this point, you’re probably noticing something of a similarity between the Record Camera tool and the Voice Narration tool from earlier in the chapter. The functionality of these two utilities is actually remarkably similar. You still need to select a source, choose if/when you want the recording to automatically terminate, etc. The only difference is that this time, we’re working with both audio and video, so rather than producing a WAV file, you’ll have the audio and video tracks encapsulated into a single WMV file.

So, we've got three basic sections with which to concern ourselves: Recording duration, Camera, and Audio. Starting with Recording duration, notice that you have the same options as the Voice Narration tool for the automatic termination of your recording:

- **Until end of selection on timeline.** If you have part of the Timeline selected, your PIP capture will only run as long as the selection, after which it will stop and prompt you for the file name. If you have this option selected with *no* selection on the Timeline, the program will capture your camera video until you manually stop it by pressing the Stop Recording button.
- **Until end of clip.** If you have more than one clip on the Video track of your Timeline, the capture will only last until the end of the current clip.
- **Until end of timeline.** If this option is selected, your PIP capture will last as long as there's material in your Video track. This is a good option for making sure that there's no extraneous PIP material that artificially extends the length of your video.

Just as with the Voice Narration tool, you also have a check box called **Auto-extend last video frame** that will help ensure that you never run out of room when recording your camera video segment. The final frame of your screen video (which will obviously vary depending on which of the above duration options you have set) will be extended to make up the extra length.

In the Camera section, you'll have the opportunity to select from your various installed video sources. If you open the drop-down menu, you'll be able to select between your webcam and, say, your TV tuner card, your FireWire-enabled DV camcorder, and your video capture board. As you'll soon discover, everyone will see something different when they open this list because we all have different video devices installed on our machines. So what if a device you're expecting to be there is missing from the list? It's usually due to one of the following factors:

- The device isn't currently connected to your computer.
- The device isn't powered up.
- The proper drivers are not installed, or parts of the installation have been somehow corrupted.

If you have selected a valid video device, you should immediately see an image appear in your Preview box. In the case of a webcam, you'll be able to adjust the focus and zoom at this point to get the best quality possible prior to hitting that Start Recording button.



Newer webcams are designed to take advantage of the USB 2.0 standard and the increased bandwidth it affords you. If you're experiencing blurry, laggy video quality with a recently purchased webcam, double-check to make sure it's not plugged into a USB 1.0 hub.

Then, you've got the **Camera Properties...** and **Video Format...** buttons. These buttons both key into settings dialogs determined by the video device software, so again, everyone will see something different (though I've compiled a list of likely possibilities in the section called "The Camera Tab" in Chapter 7). And of course, if you've played around with your settings so much that you completely forgot what you did (and hence, how to undo it), you can always click the **Default** button to go back to your default video capture device. It will also reset everything and reinitialize the video stream, so it's a good button to have if your Preview box gets corrupted for whatever reason.

Now, moving on to the Audio side of things: The **Record audio** check box will determine whether or not you desire a PIP audio track, so make sure it's checked if you'll be narrating your PIP video at all. The other settings are essentially pulled right from the Voice Narration tool, so I'll describe them here only briefly:

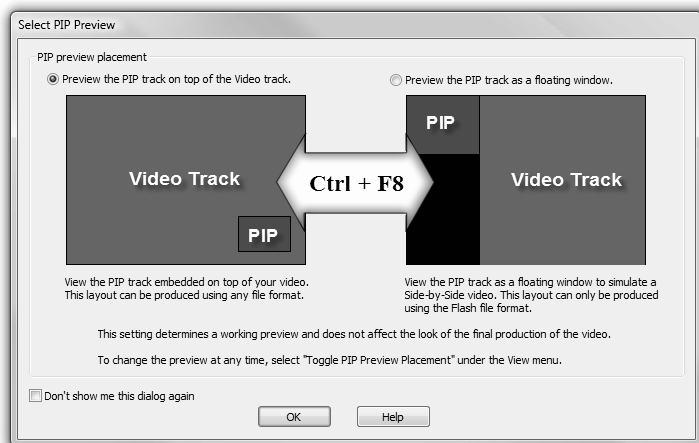
- **Mute speakers during recording.** Mutes the playback of your sound card so that your mic isn't picking up feedback from your speakers.
- **Audio Setup Wizard....** Lets you choose an audio device as well as what you want to record, manually selecting a source if necessary. You can also have the system auto-set an optimal recording volume if you're recording from the camera's microphone.
- **Input level.** Allows you to preview the recording volume and adjust the input level slider accordingly.

Let's now get started on **recording a new PIP video**, done just like this:

1. Make sure that you can see a good image of yourself (or whatever you're trying to capture) in the Preview box on the Record Camera pane. Make any focus/position adjustments as necessary.
2. Place your green seek bar at the point in the Timeline you wish to begin recording. If only recording a selection of content or recording until the end of a given clip, make sure you've set the appropriate record option on the Record

Camera pane. Keep in mind that you are not allowed to record from a spot on your Timeline where recorded PIP content already exists. Either delete/move the old content first, or start in a different place on the Timeline. If there's already PIP content to the right of your recording, it will be pushed farther over as needed to accommodate your new recording.

3. Click the **Start Recording** button. This will start the playback head in motion, and you will see your video progress in the Video Preview. It might take a second or two for the video device to initialize before the capture starts in earnest.
4. Record your PIP video (and possibly audio) as appropriate.
5. At some point, you'll want to stop recording. This can be done either automatically (at the end of a selection or clip), or manually by clicking the **Stop Recording** button.
6. You'll be prompted to save the recording as a WMV file. Simply navigate to your project folder and specify a file name. Click **Save** to preserve the recording, or **Cancel** if you're not happy with your PIP capture and want to begin again.
7. If this is to be the first PIP clip on your Timeline, you'll see a dialog that looks like this:



Here you can choose how you want to preview your PIP video within Camtasia Studio. You can view it **on top** of your screen video, simulating what you would see in an actual picture-in-picture video. Your other option is to view the PIP

preview **in a separate window** (which can be either floating or docked, based on your preference). Keep in mind that this option is *for previewing purposes only*. It has *no* bearing whatsoever on the actual production. See Chapter 12 for information on choosing an appropriate production layout.

If there's a pre-existing video clip in your Video track, then the WMV file will appear both in your Clip Bin and in the appropriate place on your Timeline. However, PIP tracks need a Video track in order to exist, so if there's nothing on the Video track, your recording will still be saved, but it will only appear in the Clip Bin. You'll need to drag it to the Timeline manually after you've added content to the Video track.

Once you've got the PIP content on the Timeline, it can be edited (or locked for editing) just like any other video content. Your PIP clips can be repositioned simply by clicking and dragging the clip on the Timeline. PIP clips are not visible in Storyboard view.

Now, by default, the audio stream of your PIP clip functions just like the Audio 1 track does — it is tied to the PIP Video track. This audio can be edited using the tools on the Camtasia Studio Editing toolbar, but the PIP Audio track cannot be moved separately from its corresponding video unless you explicitly unlink it. The PIP Video track, in addition to supporting the same editing techniques available to your screen video content, offers a few special editing commands that allow you to control the position of the PIP window as well as fade in and out, add a border or drop shadow, or even hide the PIP window at certain points in your video. We'll be discussing these tools at the beginning of the next chapter, so stay tuned....

Summary

In this chapter, you learned about some of the additional media types available to help you augment your screen video footage. In addition to your Camtasia Recorder captures and still images, you can create special title clips to help you label your content, audio content using the Voice Narration tool, and camera video using the Record Camera tool.

Inserting a **title clip** is simple. After choosing **Add Title Clip...**, you must give the clip a name, choose a background color (or image to serve as the background), and then add your text. The text content can be formatted just like you would in any word processing application.

Options for changing the font, size, color, and alignment are all represented.

For adding **audio narration** post-recording, you have the Voice Narration tool at your disposal. You can easily record onto one of three tracks, and edit the content later, cutting out unneeded segments as well as adjusting the volume, fade, noise gate, and other settings.

For the **recording of system sound**, you were presented with four options:

- Change the input source of your sound card to “listen” to the system sound rather than your microphone.
- Use Total Recorder to digitally capture the audio signal being processed by your sound card.
- Run a cable from your sound card’s output to loop back into its microphone or line in port.
- Position your microphone to record the sound coming from your speakers.

Finally, we discussed the recording of **picture-in-picture** content. Once you’ve selected the right video device and set your audio options, adding PIP video to your screen recordings post-capture becomes child’s play. You’ll learn how to position and otherwise edit this newly recorded content in the next chapter.

Exercises

1. Open your **MyProject.camproj** file from the previous chapter. If you skipped those exercises, you’ll find an exported project called **MyProject_ch10.zip** in this chapter’s media folder.
2. In the audio file (somewhere in the clip **06.camrec**), I accidentally coughed into the microphone. Replace the cough with silence.
3. If desired, use the Voice Narration tool to rerecord the narration using your own voice. You’ll find the script available in this chapter’s media folder (**narration.doc**).
4. Whether using my narration or your own, optimize the sound using the audio enhancements tools.
5. Create a title clip called **Intro**. Use the file **bkgd.png** from this chapter’s media folder as your background image (you might want to copy it to your project directory first). Change the font size to

- 48 pt.**, and enter the text **Intro to Camtasia MenuMaker**, using a font of your choosing. Place your new clip on the Timeline.
6. Using the Voice Narration tool, record the following piece of narration over the top of the title clip: **This brief tutorial will give you the basics of creating a CD menu front-end with Camtasia MenuMaker. We'll start by making use of the MenuMaker Wizard.**
 7. Once satisfied with the quality of your recording, save it as **intro.wav**. If needed, adjust the volume to more or less match that of the other clip. Trim out any unneeded pauses.
 8. Stretch your **Intro** title clip to approximate the length of your **intro.wav** sound clip.
 9. Create another title clip called **Ending**. Enter this text: **Thanks for watching!** Use the **Align bottom** command to place this text at the bottom of the window. Change the font and size as desired. Once finished, drag the title clip to your Timeline, this time at the end of the presentation.
 10. If you have a webcam or camcorder attached to your computer, place your seek bar right at the start of your Ending title clip. Record a PIP clip, using the following piece of narration: **Thank you for watching our training video today about Camtasia MenuMaker. If you haven't already done so, feel free to check out the other tutorials in this series.** Save this file as **PIP.wmv**. It should get added to the Timeline automatically.
 11. Adjust the duration of your Ending title clip to reflect the length of the PIP clip. Use the volume tools to adjust the loudness of your PIP clip to match the other two.
 12. You may notice that the audio and video tracks of your PIP clip are slightly out of synch. Separate the PIP Audio track from its video counterpart and gently synch them up.
 13. Save your project.