

Developing In-House Library Multimedia Materials Without A Computer Science Degree

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Introduction

Many years ago, I utilized programs such as Astound™ to build multimedia materials which were much more rich in content than the version of PowerPoint at that time allowed. It also allowed me to narrate the work and publish it in a format which could be put on the web or a CD. Unfortunately, it did not capture screen images and much of my teaching load was at the time the teaching of software. I depended on static screen captures utilizing such programs as Paint Shop Pro. I would then embellish and enrich the screen capture with Astound, but this was quite time consuming and took a fair amount of time to learn how to do. Lotus then came out with Screen-Cam, a screen capture software with the capabilities I needed, but it was no longer being supported by the version of Windows I was utilizing. I then switched to Real Producer which allowed me to create streaming materials which were more easily distributed via the web than PowerPoint produced materials. The software stopped being supported by Real and again I was at a loss for an easy way to produce CD-based and on-line course materials. Two years ago, I discovered SnagIt and Camtasia from TechSmith and immediately became a convert.

I had been searching for software which would allow me to create CD-based learning modules without the heavy learning curve often associated with such productions. The creation and distribution of a multimedia product via the web or on a CD can seem daunting to the inexperienced user. It is often assumed that the developer must have years of training and experience. It is also often assumed that you must utilize expensive and complicated software to produce and distribute such a product. It might never occur to you that a Librarian with very little technical experience might single-handedly tackle such a project. After finding and using the software we will discuss today for a few weeks, I offered a brown-bag workshop to others on my campus who might be interested. Among the attendees were two librarians who took an immediate interest since they had visions of creating multimedia tutorials which would supplement the bibliographic required for classes, especially given recent budget constraints and staff shortages. After a very short “show-and-tell” similar to what you’ll see today, they were ready to set off on their own and start developing materials.

The goals we started out with were to create presentations which tutored our students in the use of the bibliographic materials, especially the on-line card catalog and the on-line data bases available at USC Sumter. Up until now, live classes are being held which walk students through these resources. This face-to-face approach is effective, but somewhat repetitious for the staff since MANY classes required such bibliographic instruction. It was also repetitious for the stu-

dents since they sometimes were required to attend as part of two or more different classes. Our goal was to create live-capture sessions where a bibliographic “expert” would demonstrate the proper use of the research materials using real examples and the real data bases. The staff were not ready to give up their live classes, but did feel that such modules would be very helpful for students who missed such a live presentation, or who needed refresher courses in the use of the research facilities at USC Sumter.

We also had as a longer-range goal of developing live narrated demonstrations of performing basic research on a particular topic, including how to identify and narrow down a topic to be more manageable. Currently, all such instructional material is in written form, and is not very discipline specific. Many professors seemed to think that examples more specific to their discipline might be more effective than one “general purpose” pamphlet. Another future project may include a virtual tour of the library facilities for the general public which could be made available on a kiosk system in the library itself as well as on a web page.

This paper and related session will introduce users to Camtasia™, a piece of software that is:

- Inexpensive
- Easy for a non-computer-science-user to learn its “basics“
- Useful to those wishing to produce multimedia learning modules
- Capable of more advanced features once the user is more experienced
- Flexible in that ALL SORTS of “presentations” can be produced including “PR” materials, web-tour productions, lab-based-recordings, software demonstrations, etc.

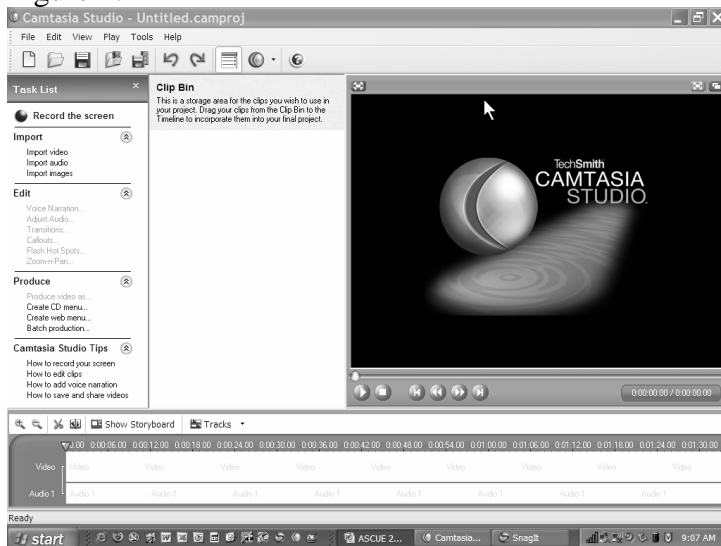
Basically, if you can see it on a computer screen, you can narrate it and produce a CD-based or on-line presentation with little or no training.

We will discuss the process of capturing video from cameras as well as screen captures, and we will see some typical examples of modules which have been developed utilizing this software. We will also demonstrate how to use Camtasia™ to actually create such a module during the paper session. We also will be offering a half-day workshop at the conference teaching the basic skills needed to create such presentations yourself utilizing Camtasia Studio™. We hope to see you at either or both of these presentations, but if not, feel free to ask any questions after reading this paper.

Camtasia Basics

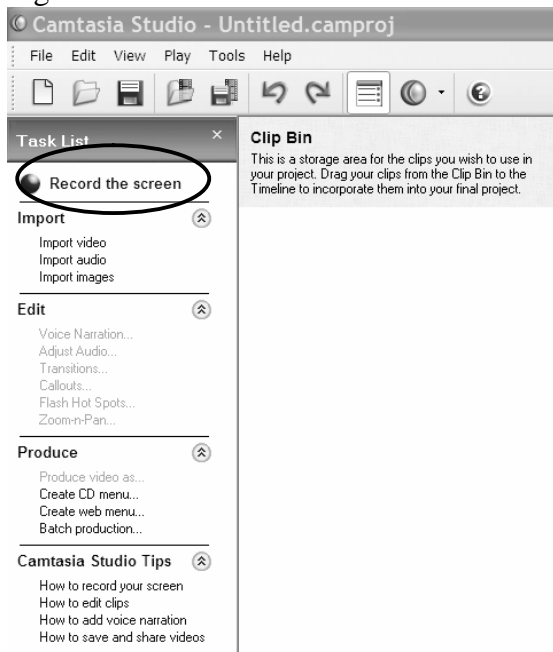
The entire Camtasia screen is displayed in Figure 1. It is straightforward to navigate and after a very short while, we were quite comfortable with basic capture, viewing and editing capabilities.

Figure 1:



The four areas of the workspace include the task list (command section), the clip bin, the preview area and the timeline/storyboard area. The task list is shown in the screen capture displayed in Figure 2 (captured with SnagIt, a companion program from the same company—Techsmith)

Figure 2:

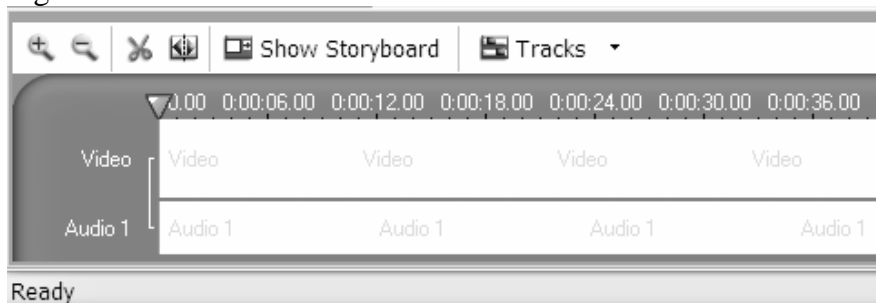


Although there are commands to “Import video, audio and images”, it should be noted that this importing directly from a digital device is NOT supported. To capture digital video from a digital camera (still or moving) you might want to utilize Microsoft Moviemaker, now freely available with Windows and at the MS web site. Many cameras have such software packaged with them, but you are encouraged to test others for ease of use and richness of content. Once captured onto a disk drive, you may import digital media files already stored on any disk drive. Note the most

unique command, *Record the screen*, allows you to start a screen recording, that is, a live capture of all or part of any part of a screen (you choose the exact region you wish to record activity on.) This definitely sets this software apart from most other video editing software. There are other software titles which now allow this feature, but we will not present a comparison here due to space limitations. Perhaps we will visit this in a future paper.

Once you have captured screen activity, or you have imported video, audio, or still images, they will all be displayed in the “clip bin,” from which they can be dragged down onto the “timeline” near the bottom of the screen as shown in figure 3.

Figure 3:



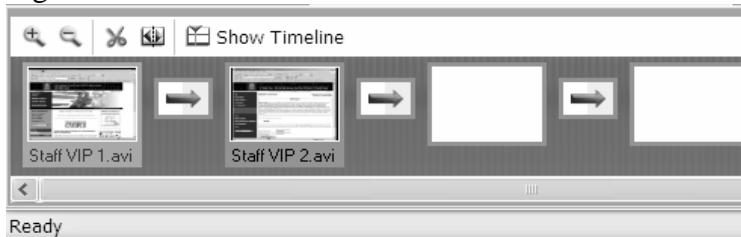
As in most video editing software, the timeline has two “views”, a timeline view and a storyboard view. The timeline view (currently displayed) is more appropriate for micro-editing such as the deletion of small portions of the clip, etc. The storyboard is best for macro-editing, such as the rearrangement of individual video clips and still images in a more discrete fashion. As we shall see later, editing is easy (easier in my opinion than MS MovieMaker.) At any time, the video can be previewed in the preview area, which has familiar “recorder buttons” to control playback as circled near the bottom of figure 4.

Figure 4:



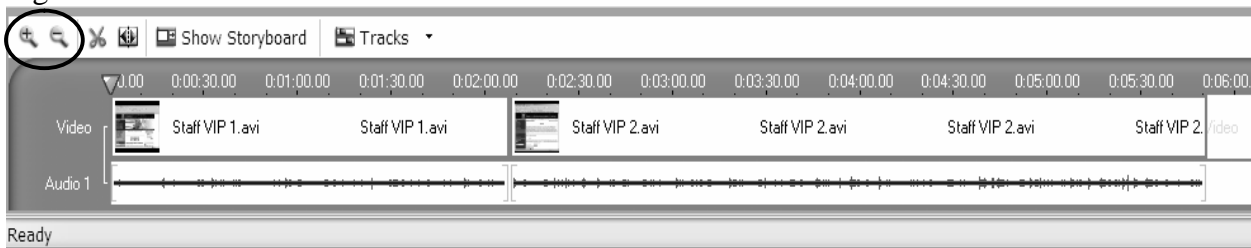
I have imported two screen captures into the clip bin and I have dragged them onto the storyboard line at the bottom of the Camtasia screen. Note that in the storyboard view as shown in figure 5, the clips are viewed as discrete units which can be rearranged, even repeated, over the course of the finished video. Transitions can be added between clips for a more professional feel, or they flow one into the other continuously if no transitions are utilized.

Figure 5:



In Figure 6, the timeline view is displayed, showing just under 6 minutes of video. Note the magnifier plus and minus circled on this figure. When performing deletions, it is imperative to see the time line in MUCH greater detail so the exact boundaries you wish to delete can easily be identified.

Figure 6:



In figure 7, I have zoomed in a huge amount so the timeline shows much greater detail... the first 14 seconds versus the 6 minutes we started with. This allows us to drag a marker much more precisely. Of course, on the preview screen, the exact slide you mark with a mouse click will be displayed. Small movements can be made with the Step Back and Step Forward buttons in the Preview area as shown in figure 8.

Figure 7:

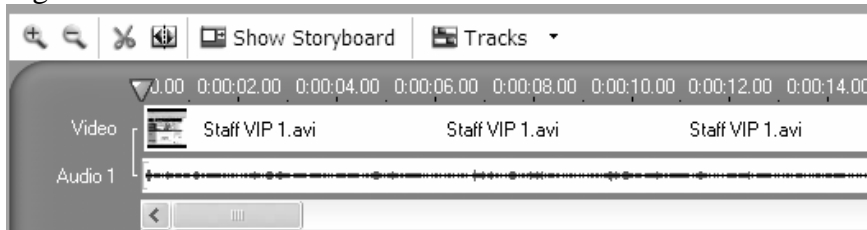
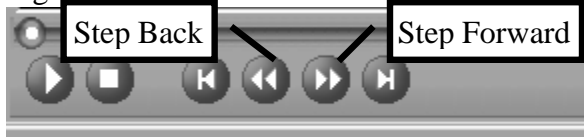
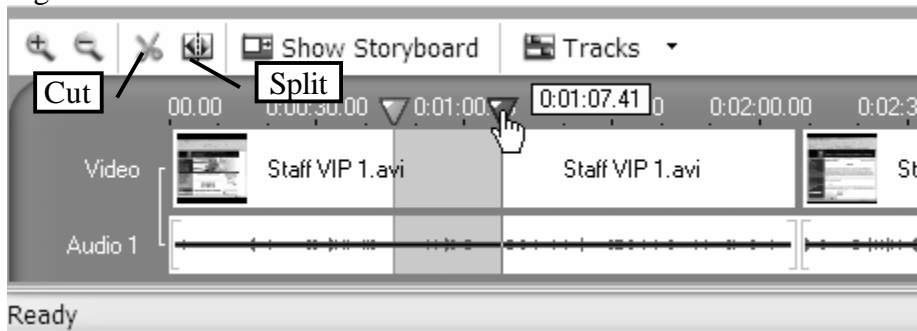


Figure 8:



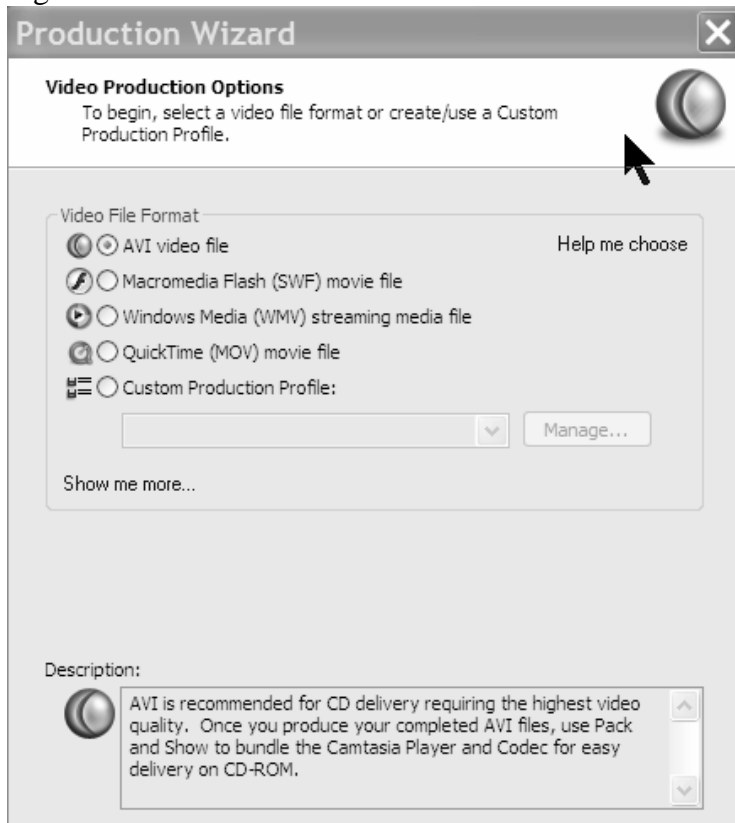
In figure 9 we see how Camtasia clearly identifies the exact position in the clip the markers are at. Markers are placed by clicking and dragging. The selection can be deleted using the delete key or the scissors icon identified below. Also, a clip can be split apart at a given point using the split icon identified in the figure.

Figure 9:



Once all editing changes have been made, it is time to “produce” the video. Camtasia is very rich in production output file format options including AVI, SWF, WMV, and MOV formats. Each has their plusses and minuses and Camtasia tries to guide you as to which is appropriate as shown in the dialogue box in figure 10 below:

Figure 10:



Even more detailed help on the best file format is available using the “Help me choose” option. Figure 11 is a screenshot of the help screen it generates. Techsmith’s help screens and tutorials are actually a tutorial in video graphics and can help guide both the novice and the more experienced user in their production issues.

Figure 11:

**TechSmith
CAMTASIA
STUDIO.**

Help Me Choose

The following are recommendations for file format compressions when producing movies with Camtasia Studio. Please note that your settings may be different from these depending on what you are producing. Many times a combination of the settings are best.

How will you share your videos?

This is one of the most important questions you will need to answer before you begin to produce your video since it directly impacts the type of video format you will choose.

See the recommendations given below and then follow the corresponding link to get specific information on that video format.

	Internet / Intranet	CD	DVD
Recommended:	<u>Macromedia Flash (SWF)</u> Ideal for shorter, 10-15 minute recordings with moderate screen motion. <u>Windows Media (WMV - Streaming Format)</u> Ideal for longer or higher motion recordings.	<u>Audio Video Interleave (AVI) and CD-ROM Distribution</u> Ideal for CD-ROM distribution because it retains the highest quality and is editable with video editing programs.	<u>Audio Video Interleave (AVI) & DVD Productions</u> Highest quality recordings which can be readied for use with DVD authoring software.
Alternative:	<u>RealMedia Streaming Media (RM)</u> <u>QuickTime (MOV)</u>	<u>Windows Media (WMV - Streaming Format)</u>	

Camtasia in Action

One example of how much difference there can be was a project I worked on this Spring with a group of Psychology students. They were creating a film clip of child activity levels after consuming various snacks, some high in sugar content, some high in artificial sweeteners and a third group of natural foods. They had to splice 55 minutes of film footage on four cameras into

around 5 minutes of footage displaying “typical activity levels.” Then they had to build three “front ends” to introduce the test condition being viewed... but they used the exact same footage in all of the clips. The test, you see, was NOT about the student activity level, but rather in measuring the bias of the audience as to their predisposition in believing that sugars and/or artificial sweeteners might cause behavioral differences as compared to natural snacks.

Our first attempt at producing the 7 minute video was to use AVI format since it was suggested for highest quality CD-based distribution. The resulting file was “Packed and Showed” and resulted in a zip file (with the CODEC and Player hidden in it) of over 1.3GB, larger than a CD! We lowered the screen recording size to 640x480 and got it to fit on one CD at around 650MB. The second two we chose to use WMV format and the same 640x480 option. The resulting file sizes were approximately 14MB, a huge savings. Granted, the WMV files were a touch blurry compared to the AVI format but the loss was acceptable. In hindsight and greater lead time (remember that STUDENTS were involved—of course I NEVER PROCRASTINATE!!!) we would have tried other options such as increasing the sampling rate to improve quality at a modest file size increase.

As we develop our library materials, another wonderful add-in in Camtasia is the ability to create menu systems and HTML support pages automatically. This enables us to export (FTP) the resulting files to a web server with ease and have our productions available quickly. We did learn some important points. If you are utilizing the screen recorder to produce a “class” (like I did to supplement my on-campus classes while I attend the conference) then minimize the editing to save time. Students tolerate our hesitations/slips/etc in class, so they do not tend to freak out when we do them on “tape.” Large bloopers can be deleted easily, especially if you remember to leave some hesitations every so often which allow easier editing later. Also learn to utilize the F-9 function key to pause the recording if you get “flustered” or interrupted during the recording process. I used it a lot while recording at home near or four dogs and at my office if the phone rang or the door slammed in the hallway outside my office.

At the time of this writing, the library productions are still works in progress (OK so maybe I do procrastinate a little!) and we expect to have similar comparisons by the time we present at the June 2005 ASCUE conference.

Summary

In summary, we found Camtasia to be an excellent screen capture as well as overall video editor. It is filled with useful help, costs a very reasonable amount, has many output options to help control file size, and has useful menu generation programs to help you produce a professional output without having to become a super expert in multimedia production. The students learned it quickly as did the library staff who attempted it. We do not have everyone on board yet (but then not all need to use it either). If you get interested in learning more about the costs and features of Camtasia and/or SnagIt, visit the Techsmith web site at <http://www.techsmith.com> Current educational discount pricing as of 4/35/2005 is as follows:

Standard Licensing Options

Single User Education Pricing	
SnagIt	\$24.95
Camtasia Studio	\$149.00
Camtasia Studio / SnagIt Bundle	\$169.00

Even better, I am trying to get Techsmith to donate a copy of some of their software to “raffle off” at the ASCUE conference business meeting. They usually come through with other promotional give-aways which I will distribute during the paper presentation (sure—bribery does work sometimes!)