SCREEN RECORDING SOFWARE
a comparative review
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Introduction:

One of the useful methods for developing training materials for learning specific software is the use of screen capture and screen recording software. Such programs have been available for some time but have become more sophisticated. This review compares some widely available screen recording applications and discusses their pedagogical implications. Only MS Windows applications have been discussed.

Overview: Screen Capturing vs. Screen Recording

Screen capturing software allows you to save anything visible on screen in a wide variety of image file formats to create a screenshot. These, however, are still images. Screen capture utilities may come with built-in image editors as to be able to add annotations to the saved images and enable you to create a printable or online tutorial. If you need to add more interactivity, though, you would go for screen recording.

Screen recording is full-motion real-time recorded activity from your Windows Desktop. With such applications an instructor can move through successive steps in using an application and have all those steps recorded in a movie of the screen, usually AVI format. The utility captures the screen, or window (even if you drag it around the screen), or a region with fixed location, or cursor area. When capturing cursor area, the capture area's size is defined by the user but it always follows the cursor. The output to AVI files usually offers choices of video codec with quality setting, including Cinepak, Indeo 3, 4, 5, Microsoft Video 1, MS RLE, or Motion JPEG. Some programs offer audio recording as add-on which are purchased separately, while others allow for real-time sound recording. The option to capture audio with customizable audio coded settings makes these products the ideal tool for making demonstration, tutorial and training videos. The recording runs in the background and is almost undetectable on modern PCs.

Four widely available applications have been tested and compared.

Table 1: Features overview

Name	RiverPast Screenrecorder 2.0.5	Camtasia Studio 2	BB FlashBack 1.2	Hero Screenrecorder 2.0.1
Publisher	River Past Corporation	TechSmith Corporation	BlueberryCnsultants Ltd UK	Century Herosoft Computer Technology Co., Ltd. China
Product type	Screen recorder	Screen capture/recorder	Screen capture/recorder	Screen capture/recorder, video capture
Language	English	English	English	English, Chinese
OS authoring requirements	Win 98SE/ME/NT/2000/XP	Win 2000/XP	Win 2000/XP	Win XP
Availability	Shareware (30 days)	Commercial	Shareware (15 days)	Shareware
Price	49,95 USD	299,00 USD single user license	100,00 USD	29,95 USD
Output media format	AVI, MPEG (video codec Cinepack, Indeo 3,4,5, Microsoft Video 1, MS RLE, Motion JPEG)	SWF (Flash), AVI, FLV, WMV, RM, EXE, Animated GIF	AVI, SWF (Flash)	AVI, EXE, GIF, HSR (its own player)
Audio capture	Customizable, variety of audio codec, from any audio source – line-in, microphone, speakers, and a combination of these – **'What U hear' – means that you can play music/sound and still can record from the microphone as you talk through the movie**	yes	Via microphone	Yes – choice what voice to record with variety of audio codec
Hardware: Authoring requirements				
RAM minimum	64 Mb (works with 32 ok)	64 Mb (128 recommended)	128 at least	64 Mb
CPU speed	500 MHz (works at lower Hz but with limited video codec)	500 MHz (1 GHz recommended)	600 MHz	Pentium 133 MMX
Free disc space	3.7 Mb	30 Mb	--?--	6.60 Mb
File size	1.7 Mb	22.39 Mb	4.77 Mb	2.06 Mb
Other software needed	Wave playback, DirectX 8.0	DirectX 8.1 and over	DirectX 7.0	DirectX **8.0**
Extra(s)	Link to DirectShow free download Warns of missing codeca nd prompts for its download	Recording Wizard; Integration with Macromedia Director, Flash MX, Adobe Premiere, Final Cut Pro-these are needed for the image editing	Built-in editor to annotate movies with text and record a spoken commentary as voiceover	Show/Hide, Use custom cursor, floating toolbar,
Limitations	Watermark is placed in the movie – logo and URL of publisher	single frames for still image AVI slideshow		Free demo – either records up to 15 seconds or doesn't save the file, custom cursors don't work

As seen, most programs are demanding on resources for authoring, the least demanding being RiverPast Screenrecorder. It also has excellent choice of audio recording source options. Moreover, it can run on most Windows OS, while BB FlashBack cannot be installed. When installed on 'non-XP', Hero Screenrecorder's custom cursors do not work.

The file size varies due to the extras offered with the main application: Camtasia Studio is 22.39 Mb offering integration with third party software needed for image editing. This is also reflected in the price – 299,00 USD. In comparison, RiverPast Screenrecorder is 1.7 Mb. In addition, RiverPast's program is shareware, uses the least disc space, and its limitations after the 30-day trial are not distracting a lot – a watermark of 10x60 px, the logo and URL of publisher, is placed at the bottom in the centre of the recorded movie. In comparison, Hero Screenrecorder offers an unlimited trial period, but records movies of only up to 15-20 seconds.

Audio capture can be from a variety of sources – line-in, microphone, speakers – and RiverPast makes use of a combination of all of these into the 'What U hear' option. This allows you to play music in the background and still record your voice through the microphone as you talk through the movie, and have both recorded in real time. While RiverPast allows for real-time sound recording, BB FlashBack audio recording utility is actually an add-on.

Some of the software features, found appropriate have been compared and presented in Table 2.

Table 2: Evaluative comparison

Legend: poor (--)   not bad (-)   ok (+)   very good (++)

	RiverPast Screenrecorder 2.0.5	*Camtasia Studio 2*	*BB FlashBack 1.2*	*Hero Screenrecorder 2.0.1*
Price	+	- -	- -	++
Least hardware authoring requirements	++	- -	- -	++
Smallest file size	++	- -	+	+
Least free disc space	++	- -		+
Output formats	+	++	+	+
Best capture options from audio source	++	+	+	+
Least limitations	++	- -	- -	- -

Evaluation:

Screen recording products greatly simplify the task of demonstrating interactively an application's options by creating a tutorial, demonstration or training movie for a class with unprecedented speed and flexibility. To use a screen recording tool it is not necessary to have any knowledge of movie authoring in general. As a consequence, instructors with little or no ICT experiences are able to create a great deal of course content in electronic format.

Screen Recording can facilitate ICT teachers' and teacher trainers' work.

- In class

You are no longer stuck at your computer to demonstrate how things are done, but free to play the movie and monitor your students' work.

- For distant education

A movie can be zipped along with printable worksheets, a list of tasks, a glossary, etc., and made available for download.

- Online

Short videos can be embedded in a web page and uploaded to online platforms on the Web (consider bandwidth) or the local network.

I personally found River Past Screen Recorder the most easy to use and extremely user-friendly and intuitive. It does not require special ICT skills. I have used it for presentations, lectures and tutorials with students, and for demonstrations in ICT in ELT teacher training workshops. A sample movie can be found at http://store4.data.bg/ict/screenrecorder/sample.html .

Limitations:

The limitations are more of technical rather than of pedagogical nature. The file size is something to consider as movie files (moreover if they include voice) tend to be huge. So do not be tempted to upload a 90-minute movie to your e-learning platform. However, this will not be much of an issue on the local network. The output EXE format can make the file size significantly smaller, followed by SWF and AVI output. The EXE compresion is something that RiverPast Screenrecorder can benefit a lot from. Screenrecording software has huge area of applicability for educational purposes and freeware will be greatly appreciated.

Conclusion:

While screen recording software provides significant functions, it is designed for general use, not specifically for language learning. However, this has the fortunate by-product of encouraging teachers to try new and creative ways to use ICT.