

## Screencasts

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Well-known for some years to advanced technology users, Screen Capture Software (SCS) offers the promise of recording action on the computer desktop (right down to the mouse movement and mouse clicks) together with voiceover narration, all combined into a single movie file that can be shared, emailed, or uploaded. Educause (2006) defines screencasts as the "screen capture of the actions on a user's computer screen, typically (<http://net.educause.edu/ir/library/pdf/ELI7012.pdf>) with accompanying audio, distributed through RSS. SCS burst forth on the scene in the mid 2000s with prominent names like TechSmith's Camtasia (\$299) and Adobe's Captivate (\$799). These full-featured programs include every editing, mixing, and re-mastering function imaginable, and are very user-friendly. The more recent years have seen much lower-cost alternatives such as SnagIt (\$49), FullShot (\$49), and !Quick Screen Recorder (\$29), as well as a dozen others, all of which bundle fewer services in exchange for the lower price. While maintaining the user-friendly functionality, they often restrict file output to only one or two file types, and offer minimal editing tools, or sometimes none at all.

The third wave of innovation in the SCS realm has come about even more recently, with many suitable screen capture technologies now completely free to the user. CamStudio ([www.camstudio.org](http://www.camstudio.org)) offers a free download for a minimalist screen recorder that offers output in .avi (Audio Video Interleave) or .swf (Small Web File) formats (with the latter especially recommended for direct integration with an online Learning Management System like BlackBoard). There are few other features in CamStudio, save the ability to manually set the recording field if the full screen is not desired. Because CamStudio is free of most editing tools, however, its stripped-down status renders the end user experience simple in the extreme. Users wishing to edit the videos after initial recording may find the .avi output of CamStudio useful, though .avi files are uncompressed and usually too large to upload or attach to an email, leading to a need to save the files later with a different filetype.

Screenr ([www.screenr.com](http://www.screenr.com)) presents an entirely different type of experience. Rather than download any client software, users simply click the record button on the Screenr Web site and the recorder loads inside the browser. Such "cloudware" means the program is portable; you can access your account from any computer and perform the same functions.

Screenr offers downloadable output in .mp4 (movie player 4), which is compatible with iTunes. Or, users may opt to leave the videos posted on the Screenr Web site, and provide a discrete URL to their students to watch the video. The latter option also makes possible the most-promoted featured of Screenr, that it integrates with Twitter, a free micro-blogging service. Instructors click to send the finished video to their Twitter account, which then prompts for login information. Followers of that Twitter account then see a short URL to the video, housed on the Screenr Web site. Perhaps in keeping with the philosophy of Twitter (where brevity is insisted upon), Screenr videos are limited to just five minutes in length. Everything is free in Screenr.

ScreenToaster ([www.screentoaster.com](http://www.screentoaster.com)) operates much like Screenr, with no additional software to purchase or download (and is also completely free). There are additional features in ScreenToaster which makes it perhaps the best choice for screencasts; there is no time limit, for instance. A single button on the interface makes it simple to upload the video to YouTube, or users seeking a higher-quality resolution may opt to host the movie on ScreenToaster's own Web site. Downloads are available in .mov (Movie) and .swf format. Lastly, the video stream from your webcam can be added, overlaid in one corner of the screen, lending a personal touch and human dimension to presentations.

Finally, instructors seeking to capture just a narrated PowerPoint presentation as a movie need not turn to these online tools, or to record the entire screen. A simpler tool, also free to download, can transform a narrated PowerPoint presentation in a .swf movie capable of displaying natively in course software like BlackBoard or Sakai. Called AuthorPoint Lite (see [www.authorgen.com](http://www.authorgen.com)), this tool results in crisper visuals, and even automatically creates a clickable navigation menu of the PowerPoint slides. Instructors simply capture PowerPoint narrations (under the Slideshow tab) and then import the file into AuthorPoint Lite.

The pedagogical benefits of screencasts are immediately apparent. Instructional uses range from lecture capture, such as a narrated PowerPoint presentation, to more involved demonstrations of problem-solving, online techniques, or computer-based processes - such as showing how to navigate through a database, read the Wall Street Journal, use a particular Web site, or utilize a particular piece of software like SPSS (Statistical Package for the Social Sciences) or Excel.

In addition, the ability for students to "take" the screencast by downloading it onto a portable Smartphone and viewing/reviewing later may provide powerful alternatives for asynchronous learning (Yee and Hargis, 2009). The possibilities include re-thinking the curriculum and content delivery entirely: rather than merely augment the face-to-face (F2F) lectures, it might be possible to consider delivering all course content electronically, and asking students to view the screencasts before the F2F lecture (in addition to reading the textbook).

Students prefer asynchronous access to learning materials to access them when it suits their schedules and life styles (Roach, 2006). Such an approach would free up F2F time for more interactive discussions and activities. Another possibility is to show the video during class, while the instructor observes how students attend to the material, similar to team-teaching with you.

Many instructors opt to "chunk" screencasts into shorter, more digestible presentations of 15 minutes or less (sometimes as little as five minutes). Such an approach has multiple benefits, including a more narrowed focus and an increased likelihood that students will find the time to view the videos. Chunking also increases students' ability to encode concepts thereby engaging the information processing model to transfer the material more efficiently from working memory into long term memory (Atkinson and Shiffrin, 1971).

Screencast technology and individual applications will doubtless continue to change and evolve. It seems likely, however, that student appetite for video-delivered content, either as supplementary learning materials or as the main delivery mechanism, will remain undiminished for the foreseeable future.

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