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## Instruction to Go

By John Laughlin



Webcasts are more and more widely used in higher education and corporate training, for good reason. Our clients are finding that the ability to review a lecture or class discussion can increase understanding, improve retention, and offer students who miss class a chance to catch up more easily.

With Pew Research now reporting that 35 percent of American adults now own smart phones, the potential gains of offering class recordings on demand are higher than ever. Students and staff can review webcast materials almost anywhere, any time, on their mobile device.

Still, the choices can be confusing and priorities unclear. I'd like to suggest that there are five key areas that you need to look at before you decide on a system to extend webcasting to your tablet or phone.

### Quality and Content

It's probably worth saying that you want a rich-media environment, with the ability to include PowerPoint slides, pre-recorded video, whiteboard, and document camera output, as well as an image of the instructor and what he or she may

be demonstrating. It can be very helpful if each of these sources is captured in high definition with full motion (24 frames per second or higher) to maximize understanding and minimize distractions.

It's especially important that quality is high if learners will access the video via a smart phone with a four to five-inch diagonal screen. These devices are very sharp, but an image of text on a blackboard or a PowerPoint slides jammed with too much content may not be readable.

### Workflow

Another important concern is how tightly you will control content.

There are at least three models you may consider, and of course you want to make sure that your system will support those that are important to you.

In a production workflow, you or your staff carefully create content to be streamed to learners. A video studio would be an example, but, most likely, you would use an automated classroom capture system, where cameras, microphones and lighting are carefully chosen and placed by a system integrator.

In this type of setup, the instructor might press a button or insert a key to begin recording, and the system would webcast the session live, post it to a video-on-demand server, or both.

In a workgroup workflow, you'll be capturing and posting video from staff who are collaborating more informally. Here a video conferencing endpoint becomes your production workstation, and the quality of the final video depends very much on the quality of the classroom, meeting room or desktop setup.

In a workplace workflow, staff or students are creating their own materials with portable cameras, desktop devices or even mobile phones or tablets. Quality control is minimal but content may be compelling.

In any of these models, it's our experience that you'll want the instructors or administrators who are ultimately responsible for the content to control when it is posted and how it is presented to users. The easier the system is to use the better. You're going to want to avoid the need for camera or computer operators and minimize support staff.

## Management

No matter what workflow model (or models) you choose, I'm going to assume that security, searchability, trackability and your ability to generate useful reports are all crucial concerns.

That is to say, you want to make sure that students or staff with proper credentials can easily find the content they need. You also want to be able to tell which content is and is not being used and, if content is assigned to particular learners, whether they watch it or not.

Take a careful look at the management tools. Do they give you ability to generate the reports you need? Will the system's web portal allow you to organize your materials in a way that makes sense for your users? If you prefer to do so, can you use a third-party portal such as Microsoft SharePoint? If you're using Blackboard or a similar distance learning solution, will your video-on-demand system integrate with it in a meaningful way?

## Delivery

Unless you are training a limited number of employees who are required to own specific types of computers or smart phones, you're going to need to provide content that can be viewed on almost any kind of device and any operating system.

For that reason, we suggest you choose a standards-based system that does not require the download of proprietary software or video players. You'll want to webcast in MP4, H.264, and perhaps Flash and MP3 (audio) as well, to be sure that users with Windows, Apple, and Android devices can play your files. Unless you control connectivity, you'll want to offer a choice of viewing resolutions, including a low bandwidth choice for those who do not have fast connections.

The bandwidth your servers require may be an issue as well, and you may find that outsourcing delivery to a third part provider is a good option. Even if you keep delivery in-house, I suggest that you make sure your new system is capable of uploading to outside providers, so you can move to that option as use grows or to cover occasional large-audience events.

## Editing

A crucial difference between rich media systems is the ability to edit finished material. How do you envision your workflow? If

you're interested mainly in the capture and archiving of lectures or conferences, editing may not be a concern. But if you want a more polished result—perhaps trimming extraneous material, reshooting mistakes or inserting new graphics, either now or to update today's materials in the future—you'll need to look carefully at the editing capabilities of your new system. With any rich media system, it's possible to go back and trim material in a video editing package. But realize that many webcasts use multiple windows, and it can be very difficult to edit just one or two windows in, say, Final Cut Pro. If this is a concern, you'll want a capture system with that ability built in.

There are any number of trade-offs involved when you implement a classroom capture/webcast solution. My final suggestion—make sure you find a good systems integrator with a strong background in video capture and webcasting to help you choose and deploy your system.

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