

Educator's Review: Video Too Hard? Software to the Rescue

In a technology degree program, chances are that many courses will involve "hands-on" instruction using computer applications. For most, teaching a course in a computer lab offers a host of challenges that need to be addressed:



For instance, how will students be able to watch live demonstrations during class? Trying to gather 24 students around the instructor's workstation will not work. Projecting the instructor's video onto a screen in front of the class requires the lowering of lights and may be difficult for students in the back to see clearly. How will you help students stay focused on the material being presented? With the computer in front of them connected to a T1 Internet connection, the temptation to stray from the topic being presented is always there.

At Purdue-Calumet, we have always considered some type of distributed video system for the computer labs. One that would let the instructor send video directly from his or her workstation to each student's workstation. In the past, all of these systems were hardware-based. But the problem of where to run thick video and control cables and the cost associated with a hardware solution prevented us from implementing one in our labs.

Recently we learned of the availability of a software-based distributed video solution. It relies on the existing in-place computer network to distribute the video. No extra cabling is required and the cost is significantly less than a hardware solution. We had plenty of concerns about a software solution. Would it be difficult to install? Would it work with our software applications? What would the performance over the network be like?

After researching the various products available, NetSupport School seemed to offer the features we were looking for. NetSupport School is software that enables instructors to demonstrate, monitor, and interact with an entire classroom or individual students at their workstations. It also offers the ability to distribute files, send and collect course work automatically, and launch applications. NetSupport School is available to download and install in a 25-user classroom for 30 days at no charge, so we decided to give it a try.

Installing the software was easy and involved no difficult or technical steps. We simply ran the setup program on each workstation, selected the type of network (IPX, TCP/IP, etc.), features to be used, and gave each workstation a unique name.

As each student logs into the network, the NetSupport School software makes that workstation available to the distributed video system. The "tutor" software installed on the instructor's workstation graphically shows the layout of the lab and which student's workstations are available.

At the click of the mouse an instructor can send their workstation's video to every student workstation regardless of the color depth, screen resolution or operating system at either end. This allows every student to have a front-row seat during all live demonstrations in class. To pause a demonstration and make sure you have the student's attention you can also blank the monitors and lock their keyboards and mice with another click. Control is easily given back to the students so they can continue working where they left off.

Student workstations can also be monitored. With a Scan function you can cycle through the available workstations one at a time or even display up to 16 student workstations simultaneously. This feature is very handy when monitoring an open lab session. Our lab workstations are operating at 1024 x 768 x 24 bit resolution. Even at this setting and displaying to 24 student workstations, the performance is very quick with very little delay on our 100-megabit network.

An additional feature of the NetSupport School software is the ability to distribute files from the instructor's workstation to multiple student workstations simultaneously. Students can then be directed to open the file for "hands-on" practice after the demonstration. At the end of class completed work assignments can be automatically collected and transferred back to the instructor's workstation for grading. The lab can be quickly prepared for a demonstration by starting a common application on all workstations at once from the instructor's workstation.

Some three-dimensional applications are not supported by the NetSupport School software. Be sure to take advantage of the free trial period to verify that it works with your applications. The software-based distributed video solution does a great job of answering the concerns we had about teaching in a computer classroom.

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