Distance Learning for All

TYPE: ARTICLE, REPORT OR WHITEPAPER

TOPICS: CONFERENCING; EDUCATION

DATE: MARCH 2012

By Tim Kridel, Special to InfoComm International®

Look in any college student's room and it's a safe bet you won't find a Cisco E20 or a Polycom VVX 1500. Their absence is a major reason why it's challenging for schools to enable one-on-one and multiparty videoconferences between students and faculty. Too often, the endpoints needed for good, collaborative distance learning aren't where they need to be. Either that or tools students currently use to collaborate online don't work with the platform the school uses.

The challenge of client-agnostic, interoperable distance learning should be seen as an opportunity for all AV vendors and integrators, even as conferencing manufacturers such as Cisco, LifeSize, Polycom, Vidyo and others make interoperability a higher priority. The catch: Many believe that adding support for pervasive tools like Skype's and Google's video services will cannibalize sales of pro-grade videoconferencing hardware and software.

"Lots of our clients are asking for Skype connectivity, and we provide it by connecting a PC to their switching infrastructure, but we don't try to make it interoperable with hardware-based (Polycom or Cisco) systems," says Brock McGinnis of AV integrator Westbury National Show Systems, which targets the distance-learning market. "Nor, because of how we earn a living, are we particularly motivated to encourage client use of free, consumer-grade conferencing solutions."

But the two don't have to be mutually exclusive. And many believe that opening established platforms to consumer clients such as Skype (a proprietary collaboration platform itself) will actually increase the adoption of fully integrated, room-size videoconferencing and telepresence systems for distance learning. Colleges and universities are increasingly seeking this type of consumer-pro interoperability, partly as a way to accommodate parental and student budgets. They also want to cater to adults who seek a degree but don't have a schedule that allows them to attend classes on campus – nor allows them to visit remote sites from where they can patch into classes on the main campus.

"The ability to help mitigate education costs through the use of videoconferencing is a viable alternative to premise-based education," says Carol Zelkin, executive director of the Interactive Multimedia & Collaborative Communications Alliance (IMCCA). "The integration of pro- and consumer-grade videoconferencing solutions will provide significant growth for the videoconferencing industry providers."

Consumer-pro interoperability could provide significant growth for schools, too, by enabling what some call "Distance Learning 2.0." That outlook is noteworthy because when colleges and universities believe that interoperability enables them to tap a wider pool of potential students, they can make a business case for spending more on videoconferencing products and services, including professional solutions.

"Distance learning has helped extend college campuses and increase enrollment over the years," says Stu Aaron, chief commercial officer of Blue Jeans Network, which provides a cloud-based service to bridge disparate videoconferencing platforms. "However, Distance Learning 1.0 required students to congregate at a distance learning location for classes. It only gets us half way to the end goal, which is to remove as many barriers as possible for potential students to attend classes. Busy professionals need the flexibility to attend classes from any location and poorer students are struggling to graduate because it is difficult to get to the distance learning classrooms."

Cannibals from the Cloud?

The quest for pro-consumer videoconferencing interoperability isn't unique to the higher-education market. Blue Jeans, LifeSize Communications and Vidtel are among a growing number of companies offering solutions for small and medium businesses that enable, for example, multiparty videoconferences where some users have room-based and executive-desktop systems and other participants use Skype or Google Hangout on webcam-equipped PCs.

Those solutions frequently use cloud computing to mask interoperability issues. So instead of enterprises having to buy and maintain gateways, the bridging hardware sits in the cloud as part of a hosted service.

"We have been talking with several higher education institutions that have adult students who are spread out around the country or state about how to use LifeSize Connections," says J. Scott Christianson, owner of Kaleidoscope Videoconferencing, a Columbia, Mo.-based integrator that targets the education market. "Since it is a service, there is little infrastructure needed on site, and you can assign seats to different students from semester to semester.

"Having multiple protocol stacks in a cloud-based service makes a lot of sense from a user's perspective. It allows for a bring-your-own-client (BYOC) model for video communications."

BYOC is important for several reasons. One is cost: Students can use their existing laptop, tablet or even smartphone instead of buying an expensive, dedicated endpoint. So can faculty, in the case of professors who want the option of interacting with students from home. Schools, meanwhile, avoid the cost of supporting and possibly subsidizing those endpoints.

Second, many students already use Skype and Google for video calling their friends. Interoperability means they don't have to learn a new platform, which in turn means they're more likely to perceive videoconferencing as a convenient way to interact with faculty and one another.

"Students participating in distance-learning courses are often deprived of study groups due to time and location constraints," says Blue Jeans' Aaron. "Wharton Business School has taken advantage of our interoperable videoconferencing solution, giving students the opportunity to schedule group study time where everyone can meet online with whatever device and solution suits them best."

As for cannibalization fears, some vendors argue that interoperability actually helps spur sales of pro gear in both the enterprise and education markets.

"Having connectivity to consumer-grade videoconferencing applications means that the investment in the enterprise-grade equipment can get more bang for its buck," says Mariette Johnson Wharton, Vidtel vice president of marketing. "It's not that useful if it just sits in a few conference rooms and is used by only a select number of people."

But if organizations are timid about cloud computing, there are premise-based solutions.

"Traditionally, the solution has been to use various network gateways to get from one network or platform to another," says Kaleidoscope's Christianson. "Radvision has a gateway that will bridge Microsoft Lync to H.323, for example. While these technically can make the connections, they usually just bridge from one network to one network, not from many networks to many networks."

Another premise-based approach to interoperability is to deploy endpoints or software clients that support multiple protocol stacks. "For example, the LifeSize Passport can act as a Skype client or Lync client, as well as an H.323/SIP endpoint: Four protocols/networks on one box," Christianson says. "However, you can just do one at a time. You can also get clients on your Windows PC or Mac that will bring together multiple networks at the same time; for example Adium or the new Messages program from Apple."

Tough Sell to IT and Faculty

For enterprises, cloud-based videoconferencing is appealing partly because it reduces their infrastructure and support costs. Those benefits apply to colleges and universities, too. "Educational institutions are under financial pressure due to budget cuts and therefore have fewer resources to invest in dedicated endpoints, infrastructure and IT resources," says the IMCCA's Zelkin.

Even so, some schools are reluctant to go the cloud route, but that may be changing.

"Five years ago, universities would have been totally opposed to cloud-based solutions," says Alan Greenberg, Wainhouse Research senior analyst and partner. "Now they're much more open to them. You see the same discussions in the higher education market that you see in the enterprise market: What is Blue Jeans or Vidtel all about? Do we trust cloud services? We're in the middle of an evolution."

In some cases, faculty embrace videoconferencing as a teaching tool but are held back by IT's concerns about security and bandwidth – not just for cloud systems, but also for premise-based videoconferencing.

"They want to do more, but the IT people lock them down," says Ellen Evin, whose Connected Junction firm specializes in videoconferencing for K-12 and higher education. "IT is not really sold on videoconferencing at all. They're concerned about bandwidth."

In other cases, faculty is the barrier to adoption. "Even the younger teachers aren't fully aware of the capabilities of videoconferencing," Evin says. "It's more student-driven than faculty-driven."

Maybe faculty just needs more examples of how videoconferencing and distance learning technologies can be applied to more than just teaching. Another application of interoperable communications is faculty-faculty interaction, such as researchers collaborating with their peers at other schools around the country or the world. Pro-consumer interoperability gives them more flexibility to communicate via video. One example is archeological studies, in which some researchers are in the field for weeks or months and have only a laptop for communicating.

The more educational institutions realize distance learning extends beyond the traditional curriculum, the more they'll demand large-scale, interoperable solutions. "The big need is for interconnectivity between different types of institutions," says Wainhouse's Greenberg.