Tri-Rivers Educational Computer Association Case Study

In central Ohio, video stretches the imagination

42 school districts in Central Ohio are changing the way they think about distance learning delivery through interactive video communications. Through a broadband network, this visionary consortium takes students from mid-western Ohio to Alaska and Hawaii where they learn about government, culture, and volcanoes.

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Mike Carder, executive director of the Tri-Rivers Educational Computer Association (TRECA), a consortium of 42 school districts in central Ohio, is on a mission to change the way educators think about and use interactive video communications in the classroom. He wants to inspire creativity in Ohio's teachers and help them deliver content-rich curriculums to their students by providing meaningful interactive learning experiences.

To help meet his goal, Carder is using interactive video communications technology to deliver best-practice examples from the teachers themselves. Content is delivered from one school to another where teachers in other classrooms can observe and participate in sessions created by their colleagues. Students benefit from the enriched, interactive content and teachers learn new ideas by their first-hand observations.

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A prime example is TRECA's involvement with the JASON Foundation, a worldwide science and technology organization founded by Dr. Robert D. Ballard, discoverer of the sunken Titanic. Each

year, JASON delivers to students around the world a three-week satellite broadcast from the site of one of its scientific research projects.

"The year of study leading up to the broadcast is really the culminating activity for a year of study in the classroom, with materials provided by the JASON Foundation," says Carder. "The students get very excited and personally involved with the broadcast."

TRECA, as a Primary Interactive Network Site (PIN) for the foundation, receives live satellite broadcasts directly from JASON's projects. Last year, 300 students in Ohio used Polycom's video communications systems to observe and communicate with JASON's team of scientists.

"Now we're trying to go one step further," says Carder. "We want to integrate a Polycom unit in each of the PIN sites around the country so that when the broadcast is over, the teachers and students at each site can continue to interact and share what they've seen, learned and experienced."

This year, a student in Marion, Ohio, has been chosen to become a student argonaut. The JASON Foundation will fly him to Hawaii for one week, where he'll participate in a scientific research project to study volcanic activity. He'll be part of the live video broadcasts seen all over the world.

Carder wants to expand the program once again by connecting the argonaut through interactive video communications technology directly to his own classroom and to others in TRECA's consortium. The student will be able to interact in real time with his home class in Ohio while he's exploring volcanoes in Hawaii.

"With Polycom, the students can be right there with him, using live, high-quality, interactive communications," says Carder. "The other students will be able to share the experience and grow and learn from it at the same time."

TRECA, a support agency for nearly 200 schools in Ohio, is involved in all of the technology-related activities including purchasing, systems integration, networking and wiring, professional development, multimedia, content development and student testing.

A few years ago, TRECA began experimenting with distance delivery through satellite transmissions with Alaska's classrooms. Because that proved to be prohibitively expensive, it searched for another solution.

"We're talking tens of thousands of dollars for a 60- to 90-minute satellite communication," says Carder. "The system was so technically complex that we had to hire an outside team to set it up and

manage it. Corporate funding helped, but we had to find a less expensive alternative to continue the program."

After the first year, TRECA felt knowledgeable enough to bring the project in house. It was able to do the same satellite transmission for one sixth of the cost, but at $10,000 for a 90-minute session, it was still much too expensive to maintain. That's when TRECA introduced Polycom to the system. "We sent a Polycom ViewStation™ video system to Alaska where in minutes they set up the system over the Internet," says Carder. "We talked back and forth for two and half hours about experiences and cultures and it cost us nothing more than the postage to ship the unit. Once you have access to the Internet, price is no longer an issue."

After a unanimous "yes" voted by all of the schools in its consortium, TRECA is building its entire network over T-1 lines and Internet Protocol (IP) networks. They firmly believe that the world is moving toward IP.

"IP is where the business and industry leaders are heading," says Carder. "We feel that it's much cheaper to follow an IP path of delivery than to deploy a more proprietary network such as ATM or to use ISDN and pay for access by the minute. What's more, research tells us that we have to provide experiences back down to the home level, and for that you need a broadband network and that's IP." In addition to networking, price was one of the most important criteria in choosing a video communications system for the consortium. The price point had to be low enough so the districts could afford installations in all of their schools. And since most schools use both PCs and Macintosh computers, they needed a cross-platform system that could work in both environments.

Ease of use was another deciding factor.

"We wanted a plug-and-play system that was easy to use so educators would have a positive experience," says Carder. "Polycom's ViewStation is operated much like a VCR. And it has a remote control that's even easier to use then the one for your home TV."

Marilyn Simpson, a fifth grade teacher in Edison Middle School in Marion, Ohio, is an avid user of interactive video communications in her classroom.

"It's so simple to use," says Simpson. "I can focus on developing content and creating new projects without getting bogged down by technology."

Ms. Simpson's class has participated in several collaborative projects with other schools from Alaska to Delaware. Now she plans to connect with classrooms abroad.

"We're involved in the 'Five Themes of Geography' project where geographically dispersed classrooms teleconference," says Simpson. "The students compare and contrast their geographies, school programs, cultures and experiences to broaden their view of the world they live in. There's something powerful about kid-to-kid communication. Kids really want to listen to each other."

Last year, Ohio Senator Larry Mumpher spoke in Ms. Simson's class. They were able to bring in another class through Polycom's ViewStation to share the experience and interact with the senator. "Sharing a speaker allowed us to take full advantage of this rare and wonderful opportunity," says Simpson. "Once again, interactive video communications enabled students in multiple locations to participate and learn from a single, unique experience."

In addition to enhancing projects and curriculums, Simpson uses the video communication technology for self-evaluation. She tapes the sessions, then reviews her own performance. It's a self-designed course for professional development and another focal point for TRECA.

Josie Drushal, the consortium's director of professional development, uses video communications to deliver technology and skills training to educators.

"We're constantly looking for new ways to incorporate technology," says Drushal. "We're so committed to video communications that we're developing a listserve as a resource and contact hub for teachers to say, 'I'm here. This is what I'm doing. Let's collaborate.'"

As Mike Carder would point out, using innovative ways to collaborate is a mission well worth exploring.