### V. Technology and the Arts

In the early 20th century, technological change helped overwhelm one of the most exciting educational opportunities then available to rural Americans on their own turf: the Chautauqua. These 19th century forums brought lectures, concerts, plays and children's activities to out-of-the-way places, but they could not compete with the motion picture. Today, newer technologies like the Internet could have the opposite effect. Rather than undermining cultural institutions that benefit rural areas, they can enrich the lives of people who live outside cities.

Two projects supported by the Technology Opportunities Program demonstrate how new technologies can help increase educational and cultural opportunities in rural areas. The Virtual Chautauqua, which takes its name from those much-celebrated cultural festivals of a century ago, use video and audio streaming technology to bring the performing arts—music, dance, poetry and storytelling—into rural classrooms in Colorado. Dance Partners, a project of Minneapolis-based Ballet Arts Minnesota, is using videoconferencing to bring dance education to remote communities.

# Performing Artists Find a New Outlet

Colorado's expansive plains and majestic mountains draw a rich mix of poets, musicians, theater groups, and storytellers. But many of the state's people are so widely dispersed that they cannot take advantage of all the cultural opportunities the state offers. At the same time, many of the artists who are drawn to the state's trademark red rock and quaking aspens have trouble amassing enough viewers to support their work. In 1998, a diverse group of partners came together to explore whether the Internet could be used to introduce Colorado's performing artists to a broader audience. The partners, who were led by the University of Colorado at Boulder and funded in part by the Technologies Opportunity Program, sought to bring the artists' work to a group especially unlikely to see them any other way — students in rural classrooms.

The plan was audacious in its scope, bringing together public access television and radio broadcasters, scores of artists and a number of educational organizations. Perhaps not surprisingly, it had some successes and some disappointments. But along the way, it learned valuable lessons about technology, the arts and education — lessons that the partners and their supporters are putting into effect today.

# Streaming Audio and Video

The project's main tool, "streaming," was relatively new in 1998, especially for non-profit organizations. Previously, audio and video

data had to be stored in enormous files and then downloaded to personal computers, which had to have the right software to play it. Streaming technology simplified the process. With it, data could be transmitted piecemeal to viewers, who could watch it has they received it. The Virtual Chautauqua project, as it was known, demonstrated that streaming audio and video could be used to put artistic performances before the public. During the two-year span of the project, two public access television stations and a broadcaster that serves the blind recorded and edited 130 audio and visual tapes depicting the work of 60 Colorado performing artists. A community network built the project's web page as well as web pages for the individual artists, which it linked to the digitized clips.

The clips, still available on the Virtual Chautauqua's Web site, offer a rich array of music, stories, poetry and theater. From deep in the Rocky Mountains came the Celtic Singers of Grand Valley, while the front range's Geraldina Lawson told stories that brought to life what it is like to grow up as a Latino woman in the American southwest. Lakeland guitarist Neil Haverstick used a "microtonal," or 34-tone scale to create a unique musical blend of the Middle East and the American west, while Fort Collins percussionists Aaron Stone and Erik Meyer beat their drums and explained the role of rhythm in our lives. The clips also showed Boulder's Frequent Flyer Productions, whose dancers perform from swings suspended above the stage; it showcased the work of composer John Yankee, who writes original choral works for the Telluride choral society; and it put a spotlight on otherwise obscure arts organizations like the Creede Repertory Theater, which produces seven plays each summer in the San Juan Mountains of southern Colorado.

The quality of the clips is uneven. Some — especially poetry and storytelling — are accessible and compelling. Others, which require more sophisticated recording techniques and higher bandwidth, are less effective. In part, that reflected the high level of technical sophistication required to produce effective video clips of the performing arts. Some live performances, the project sponsors noted, lacked proper lighting and framing when they were re-



corded. In addition, limitations to existing computers and networks were a problem, according to the sponsors. Streaming works best with relatively high-bandwidth connections — DSL (at 256 kbps) or higher — and users should have 400 megahertz processors or higher. But many end users still rely on 28.8 kbps and 56.6 kbps modems and older processors that don't have the capacity to receive video streams without interruptions or irritating "net congestion" messages. Even schools with high-capacity T-1 lines complained of choppy transmissions, as increases in their Internet usage cut down the bandwidth available for streaming media.

Still, it was a substantial accomplishment to make a wide variety of clips available over the Internet. Three-quarters of the artists featured on the website said they probably wouldn't have any performance clip online without the project's assistance. More than one-third reported an increase in contacts with audience members as a result of their participation in the project, and 21 percent said they had more contacts with artists and other professionals. What's more, the project seemed to strike a responsive chord with the target audience. Field notes taken during a March, 2000, visit to a participating elementary school captured some of the excitement rural schoolchildren felt. The notes read:

"They would watch and wait, usually only for a few seconds. Then a smile would spread across their faces, as their eyes got bigger. 'I can hear it.' Then a head would begin to bob. A little boy kept time to the guitar music with his pencil on the desk. 'Teacher, teacher, help me.' 'I want to see the dancer on my computer like she has on her computer. Help me get the dancers.' 'Mira, mira!'...'I want to see another one. How do I see another one?' 'I want to see the dancers again. I want to hear the guitar again.' 'I don't like this one. I want to hear a different one.'"

# Sustaining the Effort

As with all projects supported by grants, one of Virtual Chautauqua's biggest challenges was to find ways to continue its work after its TOP funding ran out. At first, that appeared to be a stiff challenge. Many of the artists, while glad to have their work on the Internet, seemed unclear about what they expected to gain from the project. Most already used email and the Internet to arrange gigs, talk to other artists, and to find new pieces of music, new programs, and new grants. They approached the project with "low expectations," according to researcher Mike Anderson. "Their ideology can be summarized thusly: [the Internet] is cutting-edge, everyone is going there so it's where you want to be, and I'm ambivalent about it."

To succeed in the long run, the Virtual Chautauqua had to overcome this ambivalence — and that meant demonstrating to artists and the public that the endeavor was worth continuing, even to the point of supporting it financially. Virtual Chautauqua's sponsors believe they have found a formula for achieving that goal. It's called *artistsregister.com*, an online arts community launched in 1999 by the Western States Arts Federation (WESTAF) and the Colorado Council on the Arts. Beginning in the fall of 2001, this increasingly well-known website will be the new home for the performing arts clips generated by Virtual Chautauqua — and, sponsors hope, many more like them.

If Virtual Chautauqua was unclear about what benefits it would confer to artists, artistsregister.com explicitly states what it will do for them — help them market their work to private collectors, gallery owners, interior designers, corporate art buyers, public art administrators, and the general public. The partnership with Virtual Chautauqua marks a major expansion for artistsregister.com. It previously featured just visual artists. But just as it has build a solid reputation as a crossroads for the visual arts, it now hopes to be seen as a site where "arts presenters" — places that host artistic performances — can find promising talent to fill their schedules.

Artistsregister.com hopes to become selfsustaining, but it is not a for-profit venture. Still, it has several strengths Virtual Chautauqua would have trouble matching. First is its proven ability to attract a sizeable audience. Currently, the Web site features some 1,400 artists, mostly from Colorado, Arizona, and New Mexico. That critical mass helps attract a bevy of private collectors, gallery owners, interior designers, corporate art buyers, public art administrators, and art enthusiasts. In 2000, more than 100,000 people visited the Web site. Behind this reputation lies considerable sophistication about marketing. WESTAF has devoted a great deal of effort to designing the website to ensure that it appears high on lists generated by search engines. In addition, it advertises the website aggressively in newspapers, arts magazines and at arts fairs and festivals. And it issues press releases when it introduces new artists.

Perhaps most important, WESTAF has committed a great deal of energy — and resources — to making the *artistsregister.com* Web site an Internet venue to which people will return repeatedly. The site has a number of useful features, including curated exhibits, a sophisticated search engine, a tool that lets viewers create their own collections of works they like, chat rooms, and articles for artists on professional development. Most recently, it added an online ordering and purchase system that enables artists to sell their work electronically.

All this costs money — especially the process of continually updating and improving the web page. But WESTAF predicts that a combination of contributions from state arts agencies and modest fees paid by artists (\$100 a year at most) will soon cover the project's operating costs. "There's no question the artists are getting value from the site," says Erin Trapp, WESTAF's deputy director. She predicts the website will be particularly valuable to performing artists eager to arrange bookings outside their immediate vicinity. The video clips produced by Virtual Chautauqua will give potential hosts enough of an idea about a group to decide whether to pursue a possible relationship, she says. To the artists, the website represents in inexpensive marketing tool; press kits, the traditional tool for such marketing efforts lack the immediacy of video and can be prohibitively expensive to produce (as much as \$50 for each kit).

"Artistregister has huge leverage, and a bigger, fancier platform," says Kelleen Zubick, associate director of the Colorado Council on the Arts. She praises Virtual Chautauqua for launching a large group of performance artists on the web, and then finding an outlet that will give them a better chance of reaping tangible rewards in the future. "I commend them very much for not holding on to their turf, but looking around and asking who has the capacity to do what's needed," she says.

### Advancing Education

Virtual Chautauqua's arrangement with artistsregister.com will free it to concentrate on the other half of its mission — bringing the performing arts into classrooms. On this front, the project learned that developing resources for teachers to use in their classrooms is no easy task. It takes a lot of work and ingenuity.

Initially, project sponsors hoped that teachers themselves would be able to sift through the database of performing-arts clips, selecting ones around which they could devise "tours" for students. "Teachers could select and save a collection of clips, and include directions and questions for students as they watched and listened to the clips," wrote Mary Virnoche, the project's research director in a report to TOP. But several barriers — including conflicting pressures and demands from parents and school administrators, a general low priority put on the arts in school curricula, and a lack of time, training, interest, and support — kept teachers from using the clips as fully as sponsors hoped.

The project sought to address some of these concerns by offering honoraria to teachers who would participate, providing technology training and hiring a "curator" to write descriptions of the clips to help teachers identify the ones that would be use-



ful to them. Still, much of the material remained too raw for busy teachers to convert to use in the classroom. As Virnoche put it, "the long list of options to choose remained an obstacle."

Toward the end of the grant period, sponsors concluded that an entirely different approach might work better. The education director of the Denver Center for the Performing Arts suggested developing entire "units" for teachers. The result: so far, Virtual Chautauqua has produced two complete learning units, one on Africa for first graders, and the other on Shakespeare's *Macbeth* for older students. Both units offer complete learning packages, complete with basic materials, suggested activities for students and notes for teachers. And, both integrate aspects of the performing arts into the lesson plans. The Africa unit, for instance, includes a sections on drums in which students actually can hear drums being played; and the Macbeth unit includes a step-by-step description, complete with photographs, of how artists at the Colorado Shakespeare Festival created a prosthetic severed head for use in an actual performance.

The project hopes to help teachers create other such units in the future. In addition, it is working with two poets who have been hired to serve as artists in residence at six Colorado high schools. Virtual Chautauqua's role will be to help artists use technology. Part of the poets' mission, which Virtual Chautauqua will pursue in its own efforts to develop learning units, will be to tie lesson plans to specific curriculum standards established for Colorado schools.

So the work continues, sometimes with new players and sometimes with old players doing new things. Step by step, though, new tools are emerging that promise to create new outlets for rural artists and increase exposure to the arts among rural children. "Technology is definitely a way of reducing the distance between the rural areas of Colorado and cities," says the Colorado Council on the Arts' Kelleen Zubick.

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