

Section III

Access to Programs and Services

EnVision: Connecting Students Coast-to-Coast and Face-to-Face

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The Rocky Mountain Connections Center (RMCC), a hub of WROCC, housed at Salt Lake Community College, set connecting Deaf and Hard of Hearing postsecondary students in rural areas as one of our primary objectives within our grant cycle. Postsecondary institutions and population centers in the district we serve, including Montana, Wyoming, Nevada and Utah, are spread out geographically. Oftentimes, Deaf and Hard of Hearing students exist in isolation at their college or university campus and sometimes within their towns. Nationally, and in our district, Deaf students often do not stay through to completion of their programs. We know from talking to many of these students that they feel socially and academically isolated, even when provided with accommodations. Many of these same students, as with their hearing counterparts, are non-traditional students, balancing school and supporting families, and they are often not in a position to move to population centers with greater numbers of Deaf and Hard of Hearing students to satisfy their social and academic needs. In looking for ways to connect students across these distances, we found a new technology, known as desktop video conferencing (DVC) which was developing into a way to connect students, face-to-face across distance, using whatever communication methods they preferred.

Within the last year, DVC cutting-edge technology has greatly improved in terms of its ability to keep up with individuals who are signing in real time. The best system we could find in

terms of speed and clarity for signing purposes was EnVision, a system designed by Sorenson Vision, Inc. This system consists of hardware and software which, when installed on a reasonably current PC with Internet or phone access, can allow people to see and hear each other in real time. In addition, this system allows collaboration by sharing application files, such as word processed documents, web page, e-mail, or graphics, while talking (or signing) to each other.

There were three reasons that we chose to use the EnVision product: 1) Price and practicality; 2) quality; and 3) our relationship with the Sorenson Company.

In terms of price and practicality, EnVision costs a great deal less than the competition, and it uses a standard PC/Windows platform. Some of the systems that we looked at were more than twice as expensive, and some of them required purchasing different platforms. The quality of EnVision was higher because Sorenson has invented a unique compression technology, which allows for sufficient speed and clarity under ordinary conditions to sign naturally. Many other vendors have not looked at the needs of Deaf individuals, and since hearing people rely more on the sound, they have not felt that slow-speed video was a concern for most of their business clients. Finally, we had previously purchased the prototype of EnVision, called VisionLink, from Sorenson Vision. VisionLink was a pilot video-conferencing unit (video only) made specifically for Deaf and Hard of Hearing individuals. In work-

ing with Sorenson, we found a “Deaf friendly” attitude in their staff who understand the needs of our students. EnVision’s speed was developed with Deaf users in mind. Additionally, Sorenson is a local Utah company with a demonstrated history of responsiveness to our needs as they have incorporated much of our input in EnVision’s development.

EnVision has limitations. It does not have television or movie quality, which comes across the screen at 30 frames per second. EnVision comes at 15 frames per second, which is still faster than the human eye processes. This is to allow data sharing to take place in the same bandwidth while being able to continue to talk. Some postsecondary institutions are using satellite systems fed into ISDN lines with extremely high picture quality; however, they have to pay extraordinarily high fees per minute. We are not suggesting that these could be replaced, because they are often used for multipoint teaching and training purposes. However, if contact from one person to another is desired, EnVision use is virtually free after initial purchase. There is no additional bandwidth cost except the standard Internet Service Provider fees or phone lines, which are likely already in place. Most college and university computers are already tied to a LAN, and EnVision works well through LANs. The result is that institutions can have students or others using this system at the campuses where it is installed without any fee for use. This is not yet perfect technology, and Internet traffic can sometimes interfere with quality; however, generally our experience with the quality has been good. In addition, EnVision complies with the H.323 standard for desktop videoconferencing units, so people with other types of systems can communicate with those using EnVision; however, data sharing may not work and picture quality and speed may vary.

There are a number of companies developing multipoint technology. This is not yet available with EnVision, except with an application where multiple users can take turns. This is still limited, but engineers are working on developing multipoint multiuser capabilities.

RMCC has placed 15 EnVision units at various sites within our district, and there are plans to place additional units soon.

Applications of Desktop Videoconferencing with Deafness in Postsecondary Education

We have experimented with a variety of uses of EnVision serving three general postsecondary groups: 1) Deaf and Hard of Hearing Students; 2) Interpreters or Transliterators, and 3) Administrators, Faculty and Staff. Some of the uses we have found are as follows:

Deaf and Hard of Hearing Students

- Establish student-to-student mentoring over distance
- Connect students to academic tutoring, especially for English, using ASL
- Promote social connections with students at other colleges to end isolation
- Provide distance instruction and tutoring
- Provide means for job interviews
- Provide means for interviews with potential colleges or universities prior to selection and transfer
- Provide remote video interpreting whether there are insufficient numbers of qualified interpreters (still in experimental stages)

We have had some interesting successes connecting Deaf and Hard of Hearing students. When we first demonstrated EnVision at our annual Connections Student Leadership Conference, Deaf students were really excited with the technology. However, we did not realize the potential benefits for Hard of Hearing students. One Hard of Hearing student in attendance was able to hear through the headset, and when she expressed her excitement, the other students cheered for her. Since, we have tested EnVision plugging an FM loop directly into EnVision with the T-Coil setting on hearing aids, and this seems to work well. In addition, having the visual face-to-face contact, rather than depending upon a phone, seems to work better for Hard of Hearing individuals. The “chat” box allows individuals to type to each other and to get clarification if any confusion exists.

We have had an interesting experimental project where several Salt Lake Community College students, taking the Deaf English course, were partnered with Sheridan College Interpreter Training students in their practicum semester prior to graduation. Sheridan, Wyoming, has very few Deaf individuals, and many of their interpreter training students had not yet met a Deaf individual. Through EnVision, the Deaf students in Salt Lake tutored the interpreting students at practicum sites in Sheridan and Cheyenne Wyoming, helping them become comfortable with Deaf individuals, Deaf culture, and helping them improve their ASL and interpreting skills. Some of the Deaf students took this very seriously, even designing interpreting experiences for the students. In return, the Sheridan students tutored the Deaf students with English vocabulary and idioms they were studying. This was a real “win-win” experience. Carly Flagg, director of the Interpreter Training Program at Sheridan College, was pleased that she could use EnVision to stay in touch with her practicum students placed in different towns, and the students were able to stay in touch with each other and share their experiences and concerns. Students additionally had an assignment to interview a certified working interpreter, and they conducted these out of state interviews through EnVision.

Other experiences included having Deaf students receive subject tutoring from a tutor in a different college or in a different state. A Utah Deaf student interviewed a Wyoming Deaf student majoring in the same area as the class the students were taking for a college project and videotaped it. A Deaf student in Montana had a job interview with a company in New York, and the same student received some assistance with course work from a peer in New Jersey. Another Deaf student in Montana received tutoring assistance with some college papers from the Deaf English teacher in Salt Lake. For having the network in place only five months (one semester), this shows real promise.

RMCC has experimented some with remote interpreting, and we believe that once the new version of EnVision is released, allowing for EnVision use with phone lines and portable computers (expected around Spring 2001), that this will become a reality. Communication Services for the Deaf in Texas is providing video relay interpreting services commercially right now using

EnVision. This service works on the same principle as a telephone relay service: a person calls in from EnVision and they either relay a phone call, or they may relay interpret a staff meeting or other type of contact for the Deaf individual. For postsecondary purposes, there are a number of rural areas where insufficient numbers of qualified interpreters exist. This may be a way to ease the shortages, drawing upon the resources of larger colleges to ensure access to the classroom, no matter which college the student is attending. DVC may also provide more opportunities for interpreters to work, utilizing their available hours between classes where they work. It might also eventually provide better quality in interpreting, allowing students access to better qualified interpreters with subject expertise, from remote locations.

Interpreters/Transliterators

- Establish a professional postsecondary network
- Provide assistance with technical signs
- Evaluate, train, and mentor interpreters
- Create a distance mentorship network
- Provide distance education opportunities
- Provide remote video interpreting opportunities

There have been two mentorships going on that we know about between Montana and Utah. There have also been some consultations between institutions on technical signs. We hope to really utilize this more to connect interpreters.

Administrators, Faculty & Staff

- Provide face-to-face training in all aspects of coordinating services for Deaf and Hard of Hearing (D/HH) students
- Provide equal access to Deaf, Hard of Hearing, and Hearing administrators for networking and training
- Establish networks of service coordinators for Deaf and Hard of Hearing students
- Allow collaboration through sharing and discussing in real time

- Provide resource sharing alternatives to enhance access where resources are limited
- Allow advisors to do intakes/interviews for remote distance learning sites or extension campuses

Administrators, faculty, and staff serving Deaf and Hard of Hearing can have improved access to one another, meeting communication needs. In addition, the data sharing feature in EnVision is a powerful tool. This article has been written in collaboration across states through EnVision, as well as the PowerPoint presentation used at PEPNet. Two faculty colleagues, one in Colorado Springs and one in Salt Lake, recently collaborated on a conference proposal and agenda over EnVision. Web pages can be developed collaboratively over EnVision. Training on use of EnVision and other technical assistance has been given over EnVision. Utah State University (USU) has been using EnVision to do intake interviews and advising for their distance learning sites and extension campuses, some of which are over 200 miles from the main campus in remote areas. These represent a great savings of time and travel. Diane Hardman, Director for the USU Disability Resource Center, reports that this is working so much better than trying to conduct these interviews through phone calls, TTY, or through an interpreter. The communication is much clearer, and it greatly reduces costs for these contacts. Institutions providing extension courses or distance learning courses for students in prison might benefit from using this type of system to discuss accommodations with inmate students.

There have been challenges, of course. This is cutting edge technology, and sometimes we find that we have computer software conflicts, a particular computer that has glitches, and occasionally we run into problems with campus Internet firewalls. Technology keeps changing, and it takes time to get a new release of EnVision to fit the new operating systems and platforms. For example, when EnVision was released, it worked on Windows 95/98 platforms, but not NT. However, most campuses we dealt with had NT. When we got the release for NT, Windows 2000 was released. However, the

first release of Windows 2000 has some inherent bugs, so meeting that challenge also takes time. Sorenson expects to have EnVision compatible with Windows 2000 by Spring of 2001.

Another challenge has to do with many colleges having policies prohibiting having anyone open the computer who is not with their IT department. Because disability service offices are often not on the "high priority" list, institutions have to wait for their technicians to install the system. We still have one institution who has had a unit for seven months that is not yet installed, awaiting technical support from their campus. However, Sorenson plans to release a "plug and play" version in Spring 2001 that will be less reliant on campus technical support. This should overcome that particular difficulty.

One additional challenge that is more difficult to overcome is the general attitude and fear of using this technology. It sometimes takes students, faculty, staff, and administrators time to "warm up" to the idea of using DVC. However, once they do, most love it. The EnVision interface is quite user-friendly and easy to learn. However, we depend upon the Internet, and sometimes traffic interferes a bit. Sometimes fixing this is easy, and sometimes the call needs to be placed again later. This takes a little patience, but generally contacts go smoothly. The best way to overcome this challenge is through education and developing flexible attitudes.

How We "EnVision" the Future

The Rocky Mountain Connection Center hopes to see an active network of users within PEPNet. This technology is only as good as the contacts available on the other end. We hope to see many Deaf and Hard of Hearing students connecting through this network, as well as professionals involved in postsecondary education.

Sorenson has established a meeting place online, ils.DeafOnline.com, which is accessed through the EnVision "Call Center." Through this, we can see who is online and call each other. It is hoped that the Deaf Community will start coming online and setting the trend. It is possible that in the future, desktop video conferencing could replace less satisfactory technology, such as TTYs. The RMCC staff hope that technology companies

will increasingly look to the needs of those who need visual access to language to communicate and pioneer new trends in connecting people who have historically lived or worked in isolation. We believe that this technology is just a beginning which will become a springboard to exciting technologies ahead.

For further information on how to join the DeafOnline network, please see our website, <www.slcc.edu/connections> and click on “EnVision Project,” or contact the authors at the e-mail addresses listed below:

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