case study

RADVISION
the V²oIP™ experts

RADVISION Enables Telemedicine at Shasta Community Health Center

Introduction

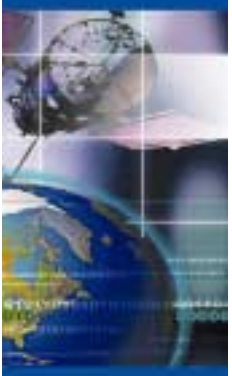
Based in Redding, California, Shasta Community Health Center (CHC) is a non-profit primary health care organization that serves Shasta County and surrounding counties and communities in rural northern California. Shasta CHC provides care to approximately 40,000 low-income and special needs patients through its main office and three subsidiaries located in Anderson, Happy Valley, and Shasta Lake, California.

Because most of Shasta CHC's patients live in remote, medically underserved areas, the organization implemented a videoconferencing system in 1999 to provide telemedicine services to those in need of access to specialty care in distant cities. These specialists are provided to Shasta CHC through agreements with the University of California, Davis in Sacramento and Cedars-Sinai Health System in Los Angeles.

In addition to its own videoconferencing system, Shasta CHC works with the Northern Sierra Rural Health Network (NSRHN), a similar non-profit organization, to provide telemedicine to its members. The NSRHN, dedicated to improving the health of residents living in the counties of Shasta, Modoc, Lassen, Plumas, Sierra, Nevada, Siskiyou and the Yuba County foothills, operates 22 ISDN-based telemedicine points in the region.

Challenge

Shasta CHC's ISDN-based videoconferencing system was of help to many of the organization's patients but was limited in what it could provide the center. Since ISDN is extremely costly and broadband connections are uncommon in the more remote areas of northern California, Shasta CHC's satellite offices weren't connected to the video system and the current network could only be used for direct dial, one-to-one connections from the group's headquarters to the hospitals providing telemedicine assistance. Therefore, the group's more rural patients were unable to take advantage of the system unless they made expensive, extended trips to Redding and staff members often had to travel two to three hours for meetings and training sessions, leaving offices understaffed and patients without care.



Solution

Shasta CHC decided to implement an IP-based network to connect all four offices to a voice and video conferencing system.They chose the IP-based network because IP is readily available, unlike the traditional high-speed connections to the Internet such as ISDN and DSL. The health care system approached RADVISION, which donated its *via*IP and OnLAN videoconferencing infrastructure products to replace the current infrastructure.

"We approached RADVISION because, quite simply, they have the best products on the market," said Dean Germano, executive director of Shasta CHC. "We tested lower end, less costly solutions and weren't satisfied with what we saw. We need an enterprise-caliber system that is 100 percent reliable and truly supports our physicians and the rest of the staff."

To provide videoconferencing to the IP endpoints at its offices, Shasta CHC chose RADVISION's Multipoint Conferencing Unit (MCU) IP conferencing bridges, gateways and gatekeepers, all of which conform to the latest H.323 standards, allow for interfacing with traditional circuit-switched networks and are interoperable with the health centers' video endpoints from Polycom and PictureTel.

The components implemented include products from RADVISION's OnLAN and *via*IP lines of networking solutions. RADVISION's OnLAN suite of networking products includes individual stackable gateways and conferencing bridges along with embedded and standalone gatekeeper applications.

- **OnLAN L2W-323 PRI Gateway** – Shasta CHC chose to employ the OnLAN multimedia gateway to enable easier communication between itself and organizations such as the NSRHN that rely on traditional circuit-switched networks for videoconferencing. This gateway allows for an outside ISDN video endpoint to communicate with an IP location on Shasta CHC's network.

RADVISION's *via*IP multi-service platform is a chassis-based solution for deploying IP-centric voice, video and data conferencing services. This all-in-one solution for service providers, large enterprises and government agencies integrates multimedia gateway, multipoint conferencing, data collaboration and gatekeeper intelligence into a single platform. In addition, this compact, scalable solution can be made to fit any network configuration due to its tremendous flexibility.

- ***via*IP Multipoint Conferencing Unit Card** – Chosen by Shasta CHC for the large number of video endpoints it supports, this MCU module for RADVISION's *via*IP platform acts as a bridge that establishes voice, video and data conferences between three or more people.
- ***via*IP Enhanced Communication Server (ECS)** – Occupying only a single slot in the *via*IP chassis, the ECS card is the primary gatekeeper that manages, monitors and controls Shasta CHC's network resources and usage.
- ***via*IP Data Collaboration Server (DCS)** – The DCS card for the viaIP platform makes meetings among multiple sites run smoother by enabling all viewers to see the same document, such as a Microsoft Word document or PowerPoint presentation.

Results and Implications

RADVISION networking solutions now enable Shasta CHC to independently provide medical treatment, consulting and training from any of its four locations, which are connected with video endpoints to the organization's network. In addition to enhanced patient care, Shasta CHC personnel have noticed improved operational efficiency due to reduced travel. Meetings involving the entire staff are now possible and development and training of personnel can take place over the videoconferencing system.

"RADVISION's technology fundamentally changed the way our organization operated," said Germano. "In addition to drastically improving the care that we provide to our patients, multipoint conferencing enables us to conduct staff meetings, implement distance learning and training programs and allows each office to work interdependently with outside care providers and consultants. We are extremely grateful to RADVISION for its generous contribution."

One of the most common uses of telemedicine by Shasta CHC has been to gain access to psychiatric care that is nearly impossible to find in the region. The shortage of qualified mental health professionals in the area, especially those willing to service lower income patients, makes videoconferencing a necessity.

"A number of our developmentally delayed patients that live in rural areas would not have access to quality mental health professionals if it weren't for videoconferencing," said Dr. Patty Sand, medical director of telemedicine for Shasta CHC. "There are often a number of limitations that make travel extremely difficult for these patients and their families. Now that we have video endpoints in our satellite locations, these people's lives have been made much easier."

"We utilize telemedicine to treat a number of children here, especially through Cedars-Sinai pediatric neurology specialists," added Dr. Sand, "Without videoconferencing, families would have to wait two years for a specialist, instead of a few days. Nothing compares to the feeling of seeing the relieved, and often tearful, parents of a child who has just come out of a telemedicine session, knowing that the help they've been longing for is finally available."

Shasta CHC's new RADVISION-enabled video communications network is allowing the center to develop new programs and additional uses to improve the lives of the staff and patients. One such use is translation service for the deaf and hard of hearing. Before every Shasta CHC office was wired with a video endpoint, this service was available only at the Redding headquarters. Additionally the organization is also grooming additional telemedicine partnerships with hospitals in order to secure specialists to help treat HIV and other specialty cases.

"The vast majority of people in this country still live outside of major metropolitan areas," said Germano. "As videoconferencing technology advances, the entire medical community will come to view telemedicine the same way we do; a necessity as opposed to a luxury."

About RADVISION

RADVISION is a leading provider of products and technology for real-time voice, video, and data communications over packet networks; this includes the Internet and other Internet Protocol (IP) based networks. Recognized universally as the experts in real-time voice and video over IP (V^2oIP), RADVISION offers the broadest and most complete set of enabling technology and networking systems needed to enable enterprises and service providers to migrate their voice and video communications from traditional telephone networks to new converged networks. Today, hundreds of thousands of end-users around the world communicate over next-generation networks, using IP-centric products and solutions built around RADVISION products and technology. RADVISION's multi-protocol software toolkits for developers of IP communications include: SIP, MEGACO, MGCP, and H.323; RADVISION's V^2oIP networking products include: gateways, conferencing bridges, and gatekeeper applications. For more information, please visit our website at **www.radvision.com.**