

## RADVISION Enables Telemedicine at Shasta Community Health Center

### Highlights:

- Client:** Community Health Center (CHC) is a non-profit primary health care system that serves Shasta County and surrounding counties and communities in rural northern California
- Product:** RADVISION Enhanced Communications Servers (ECS)  
Chassis-based *via*IP-400  
Multipoint Conferencing Unit  
OnLan L2W-323 PRI Gateway  
Data Collaboration Server (DCS).
- Number of sites:** Four offices connected through an IP WAN network. Also interworking with 22 ISDN-based telemedicine points in the region
- Application:** Provide telemedicine services to those in need of access to specialty care that is located in distant cities. Also interwork with 22 ISDN-based telemedicine points in the region run by the Northern Sierra Rural Health Network, a similar non-profit organization dedicated to improving the health of residents living in the counties of Shasta, Modoc, Lassen, Plumas, Sierra, Nevada, Siskiyou and the Yuba County foothills, to provide telemedicine to its members.

### Why CHC Chose RADVISION:

To connect all four offices to a voice and video conferencing system, Shasta CHC decided it needed to roll out an IP-based network. The health care system approached RADVISION, which donated its *via*IP and OnLAN videoconferencing infrastructure products to replace the old setup. Also the RADVISION solution's ability to not only provide an integrated IP-based videoconferencing network but also seamlessly interwork with the ISDN-based videoconferencing network run by the Northern Sierra Rural Health Network.

### Introduction

Based in Redding, Calif., Shasta Community Health Center (CHC) is a non-profit primary health care system 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, Calif., Happy Valley, Calif., and Shasta Lake, Calif.

Due to the fact that 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 that is located in distant cities. These specialists are provided to Shasta CHC through agreements with the University of California, Davis in Sacramento, Calif., 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, a similar non-profit organization dedicated to improving the health of residents living in the counties of Shasta, Modoc, Lassen, Plumas, Sierra, Nevada, Siskiyou and the Yuba County foothills, to provide telemedicine to its members. The NSRHN operates 22 ISDN-based telemedicine points in the region.

### **Problem**

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. The network could only be used for direct dial, one-to-one connections from the group's headquarters. If its more rural patients needed to utilize the system, they had to make the extended trip to Redding or visit a location hosted by the NSRHN.

Since ISDN and DSL connections are hard to come by in the more remote areas of northern California, Shasta CHC's satellite offices weren't connected to the video system. Therefore, staff members often had to travel two to three hours for meetings and training sessions, leaving offices understaffed and patients without care.

### **Solution**

To connect all four offices to a voice and video conferencing system, Shasta CHC decided it needed to roll out an IP-based network. The health care system approached RADVISION, which donated its *viaIP* and OnLAN videoconferencing infrastructure products to replace the old setup.

"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 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 RADVISION components implemented include:

- ***viaIP* Multipoint Conferencing Unit** – This MCU module for RADVISION's *viaIP* platform acts as a bridge that connects multiple video endpoints to one conference. All sites are able to see the person who is speaking and the MCU's voice activation abilities automatically switch the view as the next speaker takes over.
- ***viaIP* Enhanced Communication Service (ECS)** – The ECS is the primary gatekeeper that manages Shasta CHC's network.



- **viaIP Data Collaboration Server (DCS)** – The DCS enables multiple sites to view the same document, such as a Microsoft Word document or PowerPoint presentation.
- **OnLan L2W-323 PRI Gateway** – This gateway allows for an outside ISDN video endpoint to communicate with an IP location on Shasta CHC’s network. This is useful for communication the NSRHN or other organizations that are using circuit-switched networks for videoconferencing.

### Results and Implications

RADVISION technology enables Shasta CHC to independently provide telemedicine from any of its four locations, which are connected with video endpoints to the organization’s network. In addition to improved 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 changes the way our organization operates,” said Germano. “In addition to the drastically improved care we can 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 Shasta CHC’s most used applications of telemedicine has been gaining access to psychiatric care that is nearly impossible to find in the region. California has designated Shasta County as a mental health underserved region; a designation the county would like to quickly have removed. However, the shortage of qualified mental health professionals in the area, especially those willing to service lower income patients, makes videoconferencing a necessity for some.

“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. 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 (Nasdaq: RVSN) is the industry’s leading provider of high quality, scalable and easy-to-use products and technologies for videoconferencing, video telephony, and the development of converged voice, video and data over IP and 3G networks. RADVISION has two distinct business units. RADVISION’s Networking Business Unit (NBU) offers one of the broadest and most complete set of videoconferencing network solutions for IP- and ISDN-based networks, supporting all end points in the industry. The company also provide businesses and service providers with integrated solutions that deliver converged IP-based video telephony applications to employee computer desktops and residential broadband homes worldwide. The Company’s Technology Business Unit (TBU) provides protocol development tools and platforms, enabling equipment vendors and service providers to develop and deploy new converged networks, services, and technologies. For more information please visit our website at [www.radvision.com](http://www.radvision.com)

