

Illinois Century Network Provides Video Services To Schools Throughout Illinois Using RADVISION Solution

Highlights:

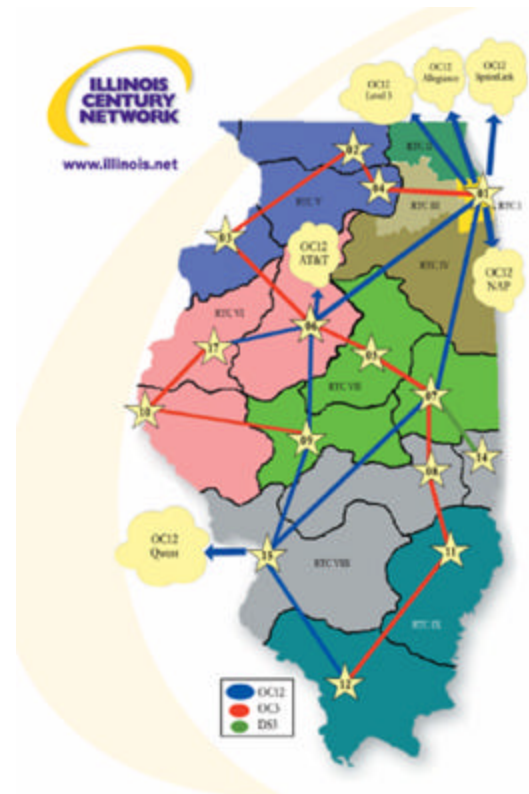
- Client: Illinois Century Network (ICN)
- Products: RADVISION *viaIP*™ Multipoint Conferencing Unit (MCU) with (Transcoding Module (TCM) and Video processing Module (VPS)
RADVISION Enhanced Communications Server (ECS)
RADVISION Gateway (GW-P20)
- Number of sites: Fifty community colleges, high schools and public facilities in the state of Illinois
- Application: Faculty and staff use videoconferencing for distance learning, curriculum development and administration among secondary schools and higher education.

Why ICN Chose RADVISION

The Illinois Century Network (ICN) is building a service on which hundreds of institutions will rely for regular communications with peers and mentors in their regions. In order for the service to be successful, ICN’s video service needs to be based on products that are highly reliable, easy for administrators as well as customers to use and scalable to meet the needs of hundreds of facilities with one or more videoconferencing end points. As a “service provider” for school and public facilities throughout Illinois, ICN turned to RADVISION and its carrier-grade solution to provide the functionality, reliability, scalability, and security necessary to deliver the best possible video communications services possible.

Introduction

ICN offers its subscribers a robust intranet, with more than 3 gigabits of Internet egress via multiple POPs and access to Internet 2. In addition to access and backbone transport, ICN provides value-added services including DNS filtering, QoS, multicasting, equipment and access circuit discounts, technical support and consulting. ICN, as a network service provider, also evaluates the need for, as well as developing and introducing other services in response to constituent requirements. Videoconferencing over IP is a new and powerful ICN service that is in high demand from its constituent members.



One of the user communities on ICN is composed of institutions communicating with video over the Illinois Video Education Network. The Illinois Video Education Network (IVEN) was established in 1995 through a joint initiative of the Illinois Board of Higher Education (IBHE) and the Illinois Community College Board (ICCB). The joint venture leverages ten regional video networks that include public and private universities and colleges; community colleges; secondary schools; health care facilities; and a few business locations. Thousands of video calls are currently made each year over this network and it is considered essential to meeting the managerial and educational objectives of the state. Many locations on the Illinois Video Education Network will soon be making their video calls on the ICN H.323-compliant network.

Background

The Illinois Century Network consists of points of presence in virtually all Illinois LATA connected in a partial mesh via OC12, OC3 and DS3 circuits. Constituents connect to the ICN via Fast Ethernet, OC12, OC3, DS3 and DS1 and other means. ATM is currently used in the backbone with implementation of MPLS planned for summer of 2003.

Videoconferencing systems purchased from Polycom, VTEL and TANDBERG and deployed in the middle and late 1990s were ISDN/H.320-compliant end points as, at the time, circuit-switched network technologies were the best option for connecting videoconferencing users. Connections to the facilities were established through dedicated T1 circuits. Currently these circuits terminate on the premises in a Madge Access Switch that provides ISDN PRI functionality over the private connection. Madge Video Switches located in the regional network centers then receive calls and provide access to other network-based locations or public ISDN services. This extensive, expensive, and complex web of leased and public circuit-switched connections is a management challenge, with limited user options and can easily be replaced with a less costly, more reliable and manageable network based on IP.

Using RADVISION's products, ICN's new IP video service will assist IVEN members and other current H.320 videoconferencing system users in migrating from the legacy networks to an H.323-based IP network.

Challenge:

"One of the problems with a circuit-switched network is that you don't know that you have a problem until your users are standing there in front of the system trying to connect to another site or a multipoint conferencing unit," says Dirk French, ICN's Senior Telecom Analyst. "Unlike systems we can purchase and deploy today, with older technologies we can not monitor all of the components of the infrastructure in real time and proactively manage the systems for our end user customers."



When a problem arises, the process of isolating the source and diagnosing problems in a circuit network can be lengthy and frequently involves the local exchange provider's involvement to test various points in the network. The problems can be as simple as the user's system not being properly configured, any component being unplugged from the telecommunications network or the power grid to failure of one port in an Access Switch.

The second critical shortcoming of switched network and ISDN-based systems for videoconferencing is that the same network connection cannot be used for multiple applications or one consolidated network for multiple smaller locations. This led most schools to have two or more dedicated T-1 or higher connections to their campuses, one for videoconferencing and the other to the ICN. By moving to IP, the schools can converge their video and data applications onto a single high speed network that both reduces the cost of ownership and operation for institutions running multiple networks as well as lower the cost of entry for other organizations currently without videoconferencing.

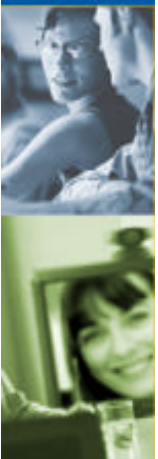
A third incentive for those using legacy circuit switched networks to migrate to an H.323-compliant videoconferencing network is the opportunity to have higher quality video and audio, higher call retention and more telephone-like features accessible to users during a video session. Compression algorithms have improved substantially since the late 1990s and not all hardware purchased in the first generation network is capable of supporting processor-intensive tasks such as required by the latest codecs. When a call is established by an IP application, such as a H.323-compliant device, the quality of service provided by the network can be specified and guaranteed during a session.

Results

RADVISION was selected as the partner of choice for the ICN video service because RADVISION products met or exceeded ICN's requirements for ease of administration, support for call detail records, strong diagnostic tools, redundancy and failover capabilities, as well as other product-specific features.

ICN is currently (9/15/03) offering services to a pilot group of approximately 50 H.323-compliant end points associated with the IVEN and ICN. Once they are registered with the RADVISION's advanced gatekeeper, the ECS provides call control, address resolution and other services for the ICN H.323 endpoint users. The ECS also manages IP-to-ISDN gateways (RADVISION's gw-P20) distributed throughout the network - for those users who are authorized and wish to access sites not currently on the ICN or the Internet and so their signal has to travel over ISDN to other legacy ISDN-based endpoints. "We found that RADVISION's gatekeeper technology is very mature," says French. The ICN gateways offer ICN constituents the ability to complete H.323-to-H.320 video calls both on-net (within the IVEN network) and via ICN-provided PRI trunks to other H.320 networks.

Enhanced Communication Server (ECS) – The RADVISION ECS is an advanced management application with H.323 gatekeeper functionality that is essential for the management of IP telephony and multimedia communication networks. The ECS can set policies and control network resources, such as bandwidth usage and traffic direction, to ensure optimal performance.





ICN uses RADVISION's multipoint control unit (MCU) to provide subscribers with the ability to participate in multi-site video calls without the expense of purchasing and maintaining regional equipment. MCU resources are configured to offer various conference services based on the number of sites in a conference, connection speeds and formats. ICN selected the 30-port RADVISION viaIP MCU for multipoint conferencing support with audio transcoding (TCM) and video processing (VPS). Speed matching permits the users on a call with multiple data rates to receive the best experience their connection will support without degrading the experience of participants who have higher bandwidth capabilities.

This initial implementation allows users to try the technology prior to committing to a full deployment of their own. A constituent wishing to enjoy the benefits of videoconferencing or distance learning can deploy a relatively low cost video system and use the existing ICN connection to connect to H.320 or H.323 sites worldwide.

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

For more information on the Illinois Century Network, please visit www.illinois.net



The ICN Video Network

