

## RADVISION & ViDeNet - The Next Step: Internet 2 Adopts the ViDeNet Architecture for Internet 2 Commons and Other Internet 2 Applications (Part II)

Internet 2 is a consortium of over 180 universities working in partnership with industry and government to develop and deploy advanced network applications and technologies, accelerating the creation of tomorrow's Internet. Internet 2 is recreating the partnership among academia, industry and government that fostered today's Internet when it was in its infancy.

The primary goals of Internet 2 are to create leading edge network capability for the national research community that enable revolutionary Internet applications and to ensure the rapid transfer of new network services and applications to the broader Internet community.

### Internet 2 Commons: Global IP Videoconferencing Based on ViDeNet Architecture

Internet 2 has a vision of enabling ad hoc one-to-one, one-to-group, or group-to-group videoconferencing for collaboration, personal communication, meetings, conferences, teaching and learning. This vision has become the Internet2 Commons initiative. "The Commons" will provide this as a service to its members.

The planned Commons videoconferencing service will primarily use the established ViDeNet architecture. RADVISION and several members of ViDeNet are playing an active part in the planning efforts for the Internet 2 Commons.

To this end, RADVISION became a corporate sponsor of Internet 2 and donated its new vialP multifunctional platform providing cost-effective solutions for the IP communication requirements of service providers and large enterprises. The vialP integrates multipoint conferencing, data collaboration and gatekeeper intelligence into a single platform.

Ohio State University, spearheaded by Bob Dixon, Chief Research Engineer, is playing a leading operational and design role in the Commons, hosting nine stackable RADVISION OnLAN standalone MCUs and the new RADVISION vialP, as well as a loaned Accord MCU, giving a total of 179 conferencing ports. As in ViDeNet, each site participating in the Commons has its own gatekeeper.

### Global Videoconferencing – The Megaconference over Internet 2

Megaconference is an annual event to demonstrate the power of global, large-scale videoconferencing. It is a multi-site conference using videoconferencing technology to bring together universities from all over the world in the largest Internet videoconference ever.

For a short time during the Megaconference, a massive videoconferencing network is created by linking together gatekeepers and conferencing units at all participating sites. The first Megaconference, held in 1999, was a demonstration that linked the 60 sites as participating universities presented songs, dances and skits. The second Megaconference was the first totally virtual conference track in which 13 speakers from around the world interacted with audiences at 100 participating sites. The third Megaconference, scheduled for October 2001, will go beyond global, with participation from the International Space Station. The conference will also test the network's ability to support smaller conferences within the large conference as groups split off around the world to work on creative problem solving, then rejoin the larger conference to present their results. The majority of universities participating in Megaconference use RADVISION MCUs for these events. For the purpose of Megaconference, a chain of MCUs is cascaded into an ad hoc network and programmed to work together and talk to the RADVISION Gatekeeper that controls the conference.

### Distance Learning over Internet 2

Videoconferencing has practical, real-world applications that are having an immediate impact. Several universities have collaborated to provide graduate-level courses through distance learning and collaborative teaching over ViDeNet. These courses are in subjects that might not attract enough students at a single university to provide a full-scale curriculum. By joining forces, universities are able to offer real-time classes taught by experts in other universities. This is a regular use of conferencing, in much the same way as an enterprise might use videoconferencing for regular business meetings.

ViDeNet has created a community of learning for groups that may have otherwise been isolated. The Center for Islamic Studies on ViDeNet is one example. There might only be one or two scholars in Islamic studies at each university, but ViDeNet has allowed all of these scholars to collaborate on research, to conduct virtual conferences and to enhance coursework in the subject matter. Once the network was provided, people found ways of using it to form an energetic group that has enhanced scholarship for many universities.

Videoconferencing also extends opportunities to younger students. Schools that serve grades kindergarten through 12 can now join Internet2 through their state networks. Museums and libraries also have joined this effort to create an "education intranet." Many of these efforts rely on existing MCUs owned by the school districts. Because many of these conferencing units were ISDN-based, they can use RADVISION's VIU interface to connect these ISDN-based conferencing systems to an H.323 network so they can interact with other organizations through Internet2.

### Business and Interpersonal Communications

Although these more formal initiatives get the lion's share of the attention, the primary use of ubiquitous videoconferencing is to connect groups of people who are geographically separated. Small video meetings of two to three people are an everyday occurrence. People use videoconferencing to collaborate, share ideas and make business and operational decisions. Communicating by video instead of just by phone makes the interaction more personal. The discussion and decision-making process by videoconference is closer to that experienced by people who meet in person.

Just as e-mail moved from a tool used by a few engineers to an integral part of day-to-day business life, videoconferencing is becoming more of a tool in the everyday process of working with others to increase productivity, enhance communication and collaboration, and save time and money on travel.

For more information, please visit:

[www.internet2.edu](http://www.internet2.edu)  
[www.mega-net.net/megaconference](http://www.mega-net.net/megaconference)  
[www.ucaid.edu/abilene](http://www.ucaid.edu/abilene)

#### UPDATE: LOAD TEST, July 25, 2001

A load test was done in preparation for the Megaconference III and The Commons service. All users worldwide were invited to connect to the RADVISION viaIP 50-user capacity and two Accord 30-user capacity MCUs, via the Internet.

User connected with all kinds of endpoints, mostly Polycom ViaVideo and Viewstation, but also some Zydacron, VCON and Tandberg products.

There were also four RADVISION VIUs, connected legacy ISDN-based systems to the network.

"The RADVISION viaIP 50-user capacity performed flawlessly! We captured the ViaIP display showing all the 50 users, and maybe that is something we need to frame! "

*Bob Dixon  
 Chief Research Engineer,  
 Office of the CIO  
 Ohio State University*



## Customer Testimonials

"Having recently worked with other members of ViDe on a hierarchical dial plan, with multiple master gatekeepers, using ECS exclusively at it's core, I can say the following: ECS is, in my opinion, the very best H.323 gatekeeper on the market right now. It's quality and flexibility are unsurpassed. The list of features that are incorporated into the ECS -- hunt, LDAP and H.341 MIB support, to name but a few -- are powerful and important ones, and far surpassed its closest competitors."

*John Warnicke  
Multimedia Telephony Analyst  
University of North Carolina, Chapel Hill*

"I have been directing a public service project to support regional early adopters of high performance networked video technologies for about five years now. Our group is focused on public benefit applications of these emerging technologies in the education, healthcare and government service sectors throughout the Western New York region and has been growing rapidly and enthusiastically.

My experience with RADVISION has been consistent and unequivocal from the beginning; without exception they have always been able to rapidly afford access to world-class development engineering assets whenever necessary to identify obscure problems and to develop work-arounds or solutions.

Functional development and interoperability has also been a consistent RADVISION forte, particularly in Gatekeeper technology, and has consistently set the industry benchmark for functional development within a standards-compliant envelope.

To this day, if I have a choice, I will always opt for RADVISION technology -- even when my users are seduced by the marketing claims and flashy features (often highly proprietary) of competitors' products.

No manufacturer/developer of technology as new and complex as H.323 could possibly be without fault. But I'm hard pressed to identify any significant concerns about RADVISION. Well, if only they were even more successful so they could invest more in their research and development and continue with their track record at a more rapid pace; we could certainly use tomorrow's exciting promises today and want the quality and support we have come to expect from RADVISION in order to ensure our own continuing successes."

*James O. Whitlock  
Associate Director of Computing Services  
University of Buffalo*

"I have been a user and an enthusiastic promoter of RADVISION technology for quite a few years. For core H.323 technology, I would neither consider nor recommend any other manufacturer unless they were OEM customers of RADVISION, like Cisco."

*James O'Connor Whitlock  
Associate Director of Computing Services  
Director, WNY High Performance Networked  
Video Initiative  
University at Buffalo*

"Our RADVISION MCU with Embedded Gatekeeper has worked seamlessly over the past three years. We use it everyday for ad-hoc meetings and credit classes. I like the anytime, anyplace idea - I give a group of people their own number to conference in with. They can set up their own schedule and meet at their own convenience.

I highly recommend the RADVISION MCU embedded gatekeeper unit. It works well and requires little or no maintenance. I have used RADVISION products for over 5 years now, and they have performed superbly. When I need to further expand my H.323 capabilities, I will choose RADVISION."

*Thomas Brenneman  
Director Multimedia Technology Services/  
Interactive Video Network  
University of Missouri*

"We migrated from the embedded gatekeeper to the ECS-100 as it is much simpler for our video operations staff to monitor activities in real time with this gatekeeper. We use the ECS-100 to provide a simplified method for dialing as well as address some security issues. Our dial plan of seven digits allows video systems, even those without the ability to dial IP addresses directly, to connect to the bridge or to each other.

We have successfully implemented video over IP and also retained some of the trappings that ISDN users were familiar with. We have also managed to extend the lifespan of the legacy PictureTel systems by connecting them to the RADVISION L2W-323 Gateways to provide the IP link."

*Phil Coolick  
Office of Telecommunications  
Manager, Network Applications Services  
Penn State University*

"Out of all the gatekeepers currently available in the market today, RADVISION's gatekeeper is the easiest gatekeeper to use. The interface is simple, easy to understand and very straight forward. There are no hidden settings to worry about. No extra hoops to jump through to make it work. Its very refreshing to have something that works the way it's supposed to, right out of the box."

*Patrick Watson  
Sys. Analyst  
Technology Evaluation  
Office of Research and Information Technology  
University of Tennessee*

"The RADVISION Gatekeeper is a life saver for H.323 video folks like me. It has shown its worth as a true solution provider. Even to this date there is no other product in the market that can even come close to RADVISION Gatekeeper. We have been extensively using it with our setup and with the new LDAP implementation we are developing; a system that will allow our video calls to be much more secure. Our H.323 topology represents several RADVISION and ACCORD MCU's, and Starback streamers, with over 200 ports. This is one of a kind H.323 setup in the world and we are proud to have it. I have to say that the center of all this is a RADVISION Gatekeeper."

*Arif Khan  
Network Engineer  
OARnet Network Operations  
OARnet*

"Rice University wanted to establish a regular Friday videoconference with the University of Texas Medical Branch (UTMB) in Galveston in order to share a popular colloquium series.

The Friday seminars were very popular, but the room in which the colloquium was held only supported H.323 style videoconferences. For several Fridays, we used the RADVISION Gatekeeper to route the H.323 call to a LAN/WAN gateway to dial out to UTMB Galveston via H.320. Unfortunately, the H.320 call incurred long distance charges and another solution was needed.

The University of Texas Medical Branch in Galveston found a way to route their H.320 conference call via a local site in order to eliminate recurring long distant charges. But due to the complicated routing, they could not receive a H.320 call over the same path.

By using the RADVISION Gatekeeper in concert with the RADVISION Gateway we were able to accept the incoming H.320 call on the gateway and route the call to the H.323 system in the room where the colloquium series.

We have used this solution for several months. The only problem has been with the gateway freezing up after many days of inactivity. A quick reset and the system works again. We have never had a problem during a session."

*Hubert Daugherty  
Rice Multimedia and Edupop Project  
Rice University*

"The RADVISION Gatekeeper has made access and control of our video resources possible through it's ease of use and flexibility."

*Kenrick Chan  
Instructional Technology Development  
Coordinator  
Information Technology Services  
University of Hawaii*

"We are using a Cisco 3520 MCU (rebadged RADVISION MCU). We are very happy with it and the embedded Gatekeeper. From a network standpoint, it has been easy to manage and upgrade. The "automatic" endpoint registration has been a real lifesaver as more of our faculty and staff have added H.323 terminals in classroom and seminar environments. Often these have been added with little or no notice to the network engineering and management team. It's handy that the "customers" have the functionality they were expecting, and that we can identify the newly added terminals by looking at the Gatekeeper registration table. Also, being able to predefine terminals, the resources and bandwidth available to each goes a long way to make the use and management of our H.323 assets much less arduous.

I do plan to transfer the Gatekeeper duties to the NGK-100 yet this summer, and have hopes of upgrading to the newer ECS, but until then have every confidence that our current embedded Gatekeeper will continue to function as well as it has in the past. Keep up the great work."

*David H. Shantz  
CATV/Network Engineer  
The College of William and Mary  
Williamsburg, VA*

*Opinions expressed in these Customer Testimonials belong to each individual and do not reflect the opinions of their employer.*