



Customer Focus

Virginia Tech

Virginia Tech delivers enhanced distance learning with Codian video conferencing

Virginia's largest university uses interactive video conferencing to connect students and professors statewide

Founded in 1872, Virginia Tech has over 25,000 full-time students, making it one of the largest universities in the Commonwealth of Virginia. The university offers 60 bachelor's degree programs and 120 graduate degree programs.

The school has a long history of providing innovative distance learning to meet the needs of working adults and nontraditional students. Approximately 85 percent of the school's departments offer e-learning courses via VTOnline, which has served some 60,000 students since the school began offering the service in 1998. Over 60 in-classroom courses are part of the VTOnline program, linked by interactive video to over 30 remote classroom sites. Participants in these video conferencing sessions can see and talk to their instructors and fellow students in other remote locations. In addition, Virginia Tech uses its interactive video conference capability to promote communication both among their professors and between their school and others worldwide.

The challenge

Virginia Tech needed video conference technology that would enable the school to improve its distance learning experience on a large scale. Andrew Olson, Video Conference Engineer in Virginia Tech's Communication Network Services Group, explained: "We're extremely proud of our academic standards and the caliber of the students we attract to both our undergraduate and graduate programs. We felt that our remote classrooms should provide the same outstanding teaching and learning environment that has earned our university a world-class reputation."

Key to creating a quality classroom experience were flexible continuous presence (CP) layouts, to encourage interactivity among the remote sites, and high-resolution graphics, to help the classroom location become virtually transparent. "We wanted students at the remote sites to feel just as if they were sitting in the same room with their instructors and fellow classmates," Olson said. "We believed that if the video conference equipment were easy to use, adaptable and capable of delivering high-resolution video and graphics, we could minimize the distance aspect of distance learning."



Customer: Virginia Tech

Challenge: A video conferencing solution that can deliver high-resolution video and graphics to more than 30 remote sites. Solution should be easy to manage, regardless of the each remote site's connection speed or codec.

Solution: Two Codian Model 4220 MCUs, each with 40 ports of video, 40 ports of audio and built-in streaming server; two five-port Codian Model 2200 IP-VCRs; and two Codian Model 3200 ISDN Gateways. Infrastructure includes endpoint hardware from Aethra and control systems from Crestron.

Results: Virginia Tech now uses Codian products for virtually all of its distance learning. Remote classrooms can now define their own CP layouts based on their needs, and remote classrooms can receive enhanced graphics.

"With our Codian video conferencing bridge, all we have to do is create a conference, and the equipment takes care of all the rest. Because each participant receives an individual video conference connection, we don't have to worry about what video codec is used or the speed of each participant's connection."

Andrew Olson, Virginia Tech



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The solution

After a careful evaluation, Virginia Tech selected:

The **Codian Multimedia Conference Unit (MCU) 4220**, the first video bridge to maintain its port count, regardless of how a user connects to the video conference, the speed of the connection, the layout chosen, or equipment used.

The **Codian IP-VCR 2220**, a powerful and versatile video appliance that records video and slides from video conferencing equipment for live streaming or playback on demand.

The **Codian ISDN Gateway 3200 Series**, which seamlessly connects to the ISDN world from the Codian MCU 4200 series multipoint conference bridges without the need for a gatekeeper.

Why Codian

"The capacity of the Codian MCU 4220 is ideal for our high-demand environment, and it is exactly as advertised," Olson commented. "Regardless of the remote classroom's layout, codec, or connection speed, 40 ports are always 40 ports."

"We find that we spend much less time managing the video conferences now than we did with our Polycom and VTEL equipment," Olson added. "The Codian bridge does all the work for you. That saves my department time and increases our productivity." Olson explained that in addition to improving departmental efficiencies, the Codian MCU has enabled the university to increase student enrollments at remote sites, resulting in additional revenue, and significantly reduce teacher and student travel.

With the Codian ISDN Gateway, Virginia Tech can communicate with endpoints that use only ISDN or ATM. "Our new gateway broadens our outreach," Olson commented. "For instance, we are now able to hold video conferences with the Navy, which uses only ISDN."

All remote classrooms are now able to receive enhanced graphics. "Now that we have H.239 capability, we can do parallel presentations and video, with no degradation of graphics resolution," Olson said. "The separate channel

for graphics enables us to be more creative on the video side, such as experimenting with different CP layouts."

Of Codian's customer service, Olson commented: "We found the Codian team to be very responsive and approachable, much more so than some of the larger vendors we deal with. We were also very impressed by how proactive they were in soliciting our feedback on features and functionality."

Key advantages:

Each participant receives an individual video conference connection, ensuring the best possible audio and video quality for the bandwidth.

Each site can choose its own continuous presence layout.

Pricing is straightforward, and price per port is less expensive than competing solutions.

Supports any codec, including H.239 for enhanced graphics, with no reduction in the number of sites supported.

Streaming server built-in at no additional cost.

Virginia Tech looks ahead to the virtual classroom

Virginia Tech has near-term plans to use the Codian MCU's built-in streaming server to serve both video and data. In addition, the university is planning to add video conferencing to the desktop. "Because the Codian MCU is totally endpoint agnostic, we think that the transition to video conferencing over IP will be effortless," Olson commented. "We're finding that our instructors want their classes to be delivered to students at any location that has a network connection. We can see a time in the not-so-distant future when a student will be participating in a lecture from his home or even from a coffee shop. We believe that Codian products will help make this vision a reality."

About Virginia Tech

Find out more at <http://www.vt.edu/>

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About Codian

Codian designs and manufactures the most advanced video conferencing infrastructure products available. Codian supports enterprise and service provider customers worldwide from its main offices in San Jose California, London UK and Hong Kong. Codian's customer base includes Fortune 500 corporations, telecom service providers, educational institutions and government agencies. Find out more at www.codian.com.

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