

University Improves Day-to-Day Operations and Campus Safety

Bryant University deploys Cisco IPICS to enable campus and town agencies to collaborate using disparate radio systems.

EXECUTIVE SUMMARY

BRYANT UNIVERSITY

- Higher Education
- Smithfield, Rhode Island
- 3600 students

BUSINESS CHALLENGE

- Enable communications interoperability
- Streamline day-to-day campus operations
- Enhance campus safety

NETWORK SOLUTION

- Deployed Cisco IP Interoperability and Collaboration System (IPICS) for interoperable voice communications over an IP network based on the Cisco Service-Oriented Network Architecture (SONA)

BUSINESS RESULTS

- Enabled direct communication between different organizations, without a dispatcher
- Enhanced collaboration with public safety agencies
- Achieved return on investment (ROI) in less than one year

Business Challenge

Located on 420 acres in Smithfield, Rhode Island, Bryant University is a private undergraduate and graduate school with more than 3600 full-time and part-time students. Like many higher education institutions, Bryant owns multiple radio systems used by different organizations on campus, including the campus department of public safety, residential life, conferencing, and facilities and maintenance. About 80 campus employees have been issued a radio.

The radio systems, which include UHF and 800 MHz push-to-talk (PTT) systems, operate at different frequencies, which ordinarily do not interoperate. Therefore, someone using one system could not communicate directly with someone using another. If an incident occurred in a residence hall, for example, the advisor could not radio the department of public safety directly, but instead had to radio a dispatcher,

who would relay the message. "Dispatchers have to interpret questions and answers, so misunderstandings are inevitable," says Rich Siedzik, network manager.

Lack of interoperability also had a detrimental effect on safety, because the campus department of public safety and the nearby towns of Smithfield and Harmony, which provide emergency services to the campus, all use different radio frequencies. "If a student calls 911, the Smithfield fire department dispatcher alerts the university's department of public safety, which dispatches its own personnel," says Art Gloster, vice president of information systems. "But lack of radio interoperability meant that the two or three first responder organizations could not communicate directly with each other to coordinate an effective response."

The university also wanted to facilitate communications between university officials at home and campus staff who

carry radios. The range limitations of the radio systems prevented off-site officials from communicating directly with staff on the scene to gain situational awareness. For example, the university's chief financial officer (CFO), who decides whether snow conditions are bad enough to warrant closing school, could not talk directly to the on-campus facilities staff to accurately assess the situation.



Finally, the lack of interoperability between radios and other communications devices, such as IP phones and PCs, increased capital expense for the university. “Even people in the facilities group who work at a desk using a PC needed a radio so that they could talk with other people in the group,” says Gloster.

Network Solution

Bryant University’s Cisco® infrastructure is based on the Cisco Service-Oriented Network Architecture (SONA), an architectural framework that enables the university to quickly deploy advanced voice and data services over a common, unified platform, which increases efficiency and the value of the university’s network assets while lowering capital and management costs.

Bryant took advantage of its existing Cisco SONA framework to deploy the Cisco IP Interoperability and Collaboration System (IPICS). “With Cisco IPICS, any of our campus employees who have any type of radio can communicate directly with each other, as well as with people who have Cisco Unified IP Phones or PCs with the appropriate software,” says Gloster. PCs are equipped with the Cisco IPICS Push-to-Talk Management Center (PMC) client software, which emulates a PTT radio. Gloster adds, “Cisco IPICS is also accelerating ROI [return on investment] on our wired and wireless IP infrastructure by extending its value. In addition, our president, CFO, and head of public safety can participate in radio talk groups from their home computer as if they were carrying a radio themselves.”

“Everyone at the university benefits from voice interoperability—from the president, who can communicate with public safety personnel from home during a hurricane, to students locked out of their rooms, to anyone on campus who experiences an injury and needs emergency medical services.”

—Art Gloster, Vice President for Information Services, Bryant University

Cisco IPICS solved problems with poor radio coverage, as well. The university’s IT group, which uses PTT radios, previously could not communicate from areas on campus with weak reception. After deploying Cisco IPICS, the IT group provided staff with very inexpensive consumer-grade radios to augment their standard radios. If staff members find themselves in an area where their standard radios do not work, they can instead use their consumer radios, which interoperate with all other radios in use on campus over the IP network.

Now that the university’s radios communicate over the IP network, they are managed by the IT group, relieving the university’s department of public safety of the burden of technology purchases. “Managing Cisco IPICS requires little overhead,” says Seizdik. “At the beginning, we set up our talk groups and added users, and that was about the extent of it.” As part of the deployment, Bryant University addressed concerns about governance, or how to control access to various channels. Today the IT department enforces an approval process when someone requests a connection to the Cisco IPICS.

The IPICS solution has helped Bryant implement a new campuswide emergency notification system that allows university officials to issue emergency alerts and urgent messages to flat-screen televisions positioned throughout the campus, and to its IP phone network of first responders on

and off campus. This centralized method of electronic information dissemination means improved response times and more coordinated response efforts, which results in increased safety standards for students and school personnel in emergency situations.

Business Results

“Cisco IPICS not only facilitates response in emergency situations, it also streamlines day-to-day operations on campus,” says Gloster. “Everyone at the university benefits from voice interoperability: from the president, who can communicate with public safety personnel from home during a hurricane, to students locked out of their rooms, to anyone on campus who experiences an injury and needs emergency medical services.”

Bryant achieved return on investment (ROI) in less than one year. Deploying Cisco IPICS cost less than deploying multiple bridging products, each of which would have bridged just two radio systems, not all of them. It also enabled the university to defer purchase of ten radios for new staff. These employees, who work from their desks, can instead participate in radio conversations using their existing Cisco Unified IP Phones or PCs.

Communications interoperability streamlines day-to-day campus operations. During graduation ceremonies, the facilities and maintenance groups are able to coordinate crowd control better than ever before because they could communicate directly. On-campus dispatchers can answer emergency calls more quickly because they no longer need to relay day-to-day requests, such as a call to the campus locksmith, between people using disparate radios. “Using Cisco IPICS to temporarily link the locksmith radios to public safety radios on the opening day of school eliminates some 30 to 40 calls to the dispatcher,” says Gloster.

PRODUCT LIST

Routing and Switching

- Cisco ISR 2811 Integrated Service Routers
- Cisco Catalyst® 3550 Series Switches
- Cisco Catalyst 4500 Series Switches
- Cisco Catalyst 6500 Series Switches

Voice and IP Communications

- Cisco IPICS
- Cisco IPICS Push-to-Talk Management Center (PMC) Client Software
- Cisco Unified CallManager
- Cisco Unified IP Phones 7960 and 7920
- Cisco IP Communicator

Wireless

- Cisco Aironet® 1200 Series Wireless Access Points

Enhanced collaboration with public safety agencies is improving campus safety. When town fire or police departments are dispatched to the campus, they can now communicate with the university’s public safety personnel while en route to the scene, increasing their situational awareness, and also collaborate more effectively when they arrive. Cisco IPICS enables direct connections to be established dynamically, for the duration of the event.

University officials can participate in talk groups from home. During snowstorms or flooding, Bryant’s CFO, who manages the facilities group, can communicate directly with staff in the field from his

home, using a PC and secure VPN connection. Similarly, the director of the department of public safety can connect from home to talk directly to an officer at an incident scene. “A direct connection avoids the misunderstandings that can result when conversations are relayed through a dispatcher,” Gloster says.

IT staff can use radios even when outside of ordinary radio range. Bryant is currently providing Cisco IPICS services for Community College of Rhode Island, which has four campuses that are outside of radio range of each other. With Cisco IPICS, the community college’s help desk organization can radio each other for advice from any campus because the radio traffic travels over the IP network.

Innovative use of technology helps make Bryant University attractive to prospective students and faculty. In fact, Bryant was ranked as the second safest school in APBnews.com, a factor that can influence student application and enrollment.

Next Steps

Bryant is investigating plans to capitalize on its Cisco SONA framework to send video from its wired or wireless CCTV cameras to first responders in Smithfield and Harmony, giving first responders more time to plan an effective response in the event of a fire or medical emergency. "Increasing situational awareness with video will enable the fire and police departments to respond with sufficient resources and avoid the considerable expense of sending more fire trucks than necessary, for example," says Gloster.

"As Cisco introduces new modular capabilities for Cisco IPICS, such as cell phone connectivity, instant messaging, and video, we hope to be an early tester," says Siedzik. "Our IT group is leading the industry in communications interoperability, which benefits our own department, the students, and the surrounding community."

For More Information

To find out more about the Cisco IPICS, go to: <http://www.cisco.com/go/ipics>

To find out more about Cisco Unified Communications solutions, go to:
<http://www.cisco.com/go/voice>

To find out more about Cisco SONA, go to: <http://www.cisco.com/go/sona>



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