Bryant University Extends Emergency Response Network to Create a Safer Community

Executive Summary

CUSTOMER NAME
Bryant University

INDUSTRY
Higher Education

COMMUNITY CHALLENGES
- Tighten integration between public safety agencies and the campus community
- Enable interoperable communications across public safety agency boundaries

SOLUTIONS
- Connect local agencies and organizations to improve response time within the community
- Use existing Cisco IPICS network to create a virtual public safety net for Bryant

RESULTS
- Enhanced incident management, quicker response time, and faster "time to information" within the community
- Created interoperable communications between public safety agencies with little or no additional investment

In an age where campus safety has become a critical priority, Bryant wanted to improve emergency response time by extending the capability of its Cisco® IPICS network to link the campus with public safety agencies both on and off campus. With, however, Rhode Island's public safety agencies relying on a single intercity radio frequency, channel congestion often caused delays and miscommunications, preventing collaboration between multiple dispatch centers. Using Bryant's campus IPICS network, six regional dispatch centers now have their own virtual public safety channel to help them coordinate both large and small response operations, enabling Bryant to communicate directly with local fire and emergency dispatch centers.

Community Challenges

Located on 420 acres in Smithfield, Rhode Island, Bryant University is a private undergraduate and graduate school with more than 3,600 full- and part-time students. Three years ago, Bryant upgraded its Cisco network to enable campuswide IP telephony and other voice, video, and data applications that would enrich the learning experience and extend networking resources beyond the classroom and into the local community.

Bryant deployed a Cisco IP Interoperability and Collaboration System (IPICS) in 2006 to improve campus operations, and enable direct radio communications between Bryant's public safety, campus management, and residence-life departments. With the success of its IPICS network firmly established, Bryant recognized an opportunity to extend its interoperable communications network to public safety agencies within the region.

The Bryant University campus community extends beyond the borders of the campus into the local community. In order to build a safe environment on campus, Bryant viewed the need to create a safer off-campus community environment as well.

"We wanted to use IPICS as the fabric of a safety quilt to cover our campus and enhance public safety," says Richard Siedzik, network manager, Bryant University. "Bryant wants to be a good neighbor and good partner and we use any opportunity to extend our resources to the community."

While Rhode Island has made progress toward first responder interoperability, lack of countywide central dispatch capability meant that each fire dispatch center located in each city and town used its own radio frequency. Not only did this present a problem when coordinating dispatch of multiple agencies to a disaster, large fire, or other crises, it also limited the number of radio frequencies available to interoperate with other public safety agencies.

"We found that most public safety departments in this area don't have secondary channels for patching different departments together," Siedzik says. "For example, fire departments in Rhode Island rely heavily on a single intercity fire channel."

Because of this, that channel was often so congested that when a dispatch center needed to contact another dispatch center for backup, dispatchers frequently had to wait for a break in the radio traffic. Rather than wasting valuable time, the dispatcher would often pick up a telephone.

"With IPICS, we recognized early on that community partnerships would be a valued proposition for everyone involved," Siedzik says. "The value to both Bryant and the Rhode Island community goes up exponentially as more organizations and agencies become part of that system."

Solutions

Community Partnerships: Building a Safer Community

Bryant began to work with regional agencies in the Rhode Island towns of Smithfield, North Smithfield, Cumberland, Woonsocket, and Glocester, as well as with Connecticut's Quinebaug Valley Regional Dispatch Center. Bryant demonstrated how a virtual public safety network could connect regional dispatch centers through OSHEAN, a nonprofit corporation that provides high-speed networking throughout the state for higher education, K–12, libraries, and federal and state agencies throughout Rhode Island.

"We created an incident channel and gave virtual talk groups to several dispatch centers," Siedzik says. "Once they understood that IPICS could supplement their primary communications with little or no investment and then saw how easy it was to use, they immediately saw the value."

Using a Windows-based application that enables push-to-talk functionality for PC users, Bryant's IPICS system allows dispatchers to communicate over multiple communications channels and monitor broadcasts of those channels. The system bridges push-to-talk networks and IP and non-IP networks, enabling agencies to use existing radio handsets, laptop PCs, IP phones, landline phones, and cell phones.

"The capability to send firsthand information from the source directly to the right group of people in the shortest possible time, no matter where they are or what they happen to be using to communicate, can make all the difference in an emergency or crisis situation," Siedzik says. "The bottom line is that you're shrinking time and distance and reducing your time-to-citizen safety and that's what it's all about."

"Cisco's IPICS VoIP technology has proven very effective in resolving/eliminating many of the communications problems. To date, the region has linked fire dispatch centers that operate in two different states, on three different radios bands, and on five dissimilar radio frequencies."

C. Wayne Brown
Deputy Chief
Smithfield Fire Department

Results

Bryant's IPICS network has already proven its worth, including efficient coordination of a response effort for several recent events, such as an accident that occurred across state lines between Connecticut and Rhode Island. When a motorist witnessed the accident on the Rhode Island side of the border and called it in, the call went to the E911 center in Connecticut, which dispatched it to the Quinebaug Valley Regional Dispatch Center. Quinebaug, however, did not have enough location-specific information to determine in whose territory the accident happened.

"With a click of their IPICS soft-radio button, they were in contact with Northern Control," says Siedzik, explaining that Northern Control is a mutual assistance partnership made up of Smithfield, North Smithfield, Cumberland, and Glocester. Siedzik says. "Almost immediately, the Rhode Island agency for that territory was identified, alerted, and responded."

In another incident, Quinebaug Valley Emergency Communications received a call reporting a house fire in Putnam, Connecticut. Dispatch called for mutual aid and one of the responding units was a tanker from West Glocester, Rhode Island. Throughout the response effort, Northern Control in Smithfield and Glocester Dispatch worked together using IPICS to transmit information back and forth. The West Glocester tanker made it to the scene in good time and the fire was extinguished, preventing major damage to the structure.

"Cisco's IPICS VoIP technology has proved very effective in resolving and eliminating many of the communications problems," says Deputy Chief C. Wayne Brown, Smithfield Fire Department. "To date, the region has linked fire dispatch centers that operate in two different states, on three different radios bands, and on five dissimilar radio frequencies."

A Repeatable Model for Interoperability

By piloting IPICS on their campus first, Bryant believes they can assist in extending IPICS services and Bryant's model to OSHEAN, who in turn will provide those services to other OSHEAN members.

In the Bryant model, the educational institution becomes the IPICS host site for local public safety agencies and serves as the head-pin for that geographical area, connected via the statewide network provider, OSHEAN. The model ensures uniformity, consistency, and best practices shared throughout the state, driving efficiencies in both cost and operation.

"What Bryant and the community of Rhode Island have done is significant as it entails facilitating cooperation and establishing trusting relationships with the community stakeholders around a single outcome, which is in this case safety," says Dr. Tracey Wilen-Daugenti, lead consultant, IBSG, Higher Education Practice. "While it seems simple, it is a complex undertaking in terms of establishing trust and collaboration."

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Richard Siedzik
Network Manager
Bryant University

IPICS enables a campus public safety officer on the scene of a situation to be put in direct communications with the fire and emergency service dispatch center to give a firsthand account of the situation, eliminating the need for the campus dispatch operator to relay that information. This firsthand account allows the public safety agency to determine the resources they should dispatch, reducing cost and increasing productivity.

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Expanding Bryant's IPICS to the public safety community has achieved:

- **Increased communication:** Bryant's public safety dispatch can now communicate directly with the local fire/EMS dispatch center over the campus IPICS network.
- **Enhanced incident management:** Dispatchers and incident commanders can effectively dispatch operations and resources from multiple locations.
- **Improved collaboration among agencies:** Accelerates "time to information" to improve response and ensure that first responders arrive on the scene fully informed and adequately prepared.
- **Reduced costs:** Capitalizes on existing communications investments and provides multichannel push-to-talk services on a PC or laptop by eliminating the need for costly "hard radios" for desk-bound individuals that can be served better with a soft-radio on their PC. Public Safety agencies were able to

purchase 25 low-cost ultra high frequency Citizens' Band Family Radio Service radios for emergency use. The walkie talkies, or radios, can be distributed to volunteers and merged onto the public safety frequency, enabling a cost avoidance of $21,750.

- **Increased operational efficiency:** Bryant's resident assistants and directors can also use the additional radios to enhance communication in the event of on-campus emergency situations. This strategy enables Bryant's facilities staff to communicate efficiently between supervisors and the workers who perform day-to-day tasks. Bryant estimates that this strategy will result in significant savings in labor annually.
- **Accelerated return on investment:** The investment in IPICS was recovered within a 12-month period, considering the cost savings in handheld radios, and radio equipment that would have been required to extend and improve radio signal quality in the desired areas.
- **Simplified network management:** IPICS enables an organization to implement clean lines of delineation between the IT aspects of the system and the operation and control portion of the system, putting specific tasks in the hands of the right individuals.

IPICS delivers seamless integration, interoperability, and enables public safety agencies to rely on a data network for communications solutions that are comprehensive, quicker to implement, and can build upon infrastructure that is already in place.

More Information

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Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems, Inc.
168 Robinson Road
#28-01 Capital Tower
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7799

Europe Headquarters
Cisco Systems International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
www-europe.cisco.com
Tel: +31 0 800 020 0791
Fax: +31 0 20 357 1100

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