

Coming Together

Statewide IP-based radio network links Maine public safety agencies and opens a world of opportunities for the state.

Around the turn of the 21st century, Maine found itself in an unenviable situation: The state's 17 public safety and public service agencies were operating on disparate, outdated wide-band analog radio networks. Outages were common, and while bridges had been created to connect the systems via seven dispatch centers, responder agencies such as the State Police, HAZMAT and Emergency Management, lacked seamless communications with one another.

"Every agency did their best to ensure their staff had reliable radio communications, but over time, each agency built on their system, going in their own direction," said Maine's Director of Radio Services Shawn Romanoski. "They each had their own policies; each had their own staff for maintenance."

At the same time, the FCC issued a mandate requiring public safety agencies to move to narrowband to conserve spectrum.

Maine turned its challenges into an opportunity. After consolidating network and radio services within the Office of Information Technology, Maine is now pursuing a new statewide radio network that will provide the carrier-class reliability its public safety agencies need. And as the state moves toward converging data, voice and radio services on the same network, it anticipates big cost savings and efficiencies.

"The Maine State Communications Network (MSCommNet) project is an example of converging technologies, standardization, and multiple state agencies working together to build a state-of-the-art communications infrastructure," said Greg McNeal, Chief Technology Officer for the State of Maine. "The Office of Information Technology (OIT) is taking the lead on this project. This is a tremendous learning experience for us and our business partners. Together we will develop a system that will greatly enhance our public safety communications interoperability."

More Control

With a single statewide network, Maine's public safety and public service agencies will be able to communicate seamlessly. The new system, which will be built on an IP-based microwave

network from Alcatel-Lucent, will interoperate with both digital and analog systems used by local agencies and comply with public safety standards, such as the P25 standard for land mobile radios that many agencies are moving to.

MPLS technology will help ensure that bandwidth is allocated to the various agencies efficiently and traffic is managed appropriately. Going with an IP-based network will also afford radio services more control over the network. Because devices, like computers and radios, accessing an IP network are identifiable, officials can track network use. In addition, the integration will allow radio services to use a standards-based network management system to remotely troubleshoot problems.

Currently if the system fails, he said, the only way radio services knows is if a user reports it. "We then put technicians into a truck. We may load up ATVs or a snowmobile depending on the time and location. They then drive for sometimes six or seven hours to a site to reset a switch," Romanoski said. "Under the new system, we will be able to do that remotely."

Further Integration

Initially the state will focus on the public safety communications network. Only data traffic from the state's seven dispatch centers will be carried over the network.

"Once we determine the total capacity requirements for those seven dispatch centers, we will then start to migrate other data onto the network," he said.

Using the microwave network backhaul to move data across the state could save Maine significant money by reducing its reliance on the leased lines it currently uses to transport data. But immediate savings will come from the state's ability to consolidate its network and radio operations and improve operational efficiency.

"This allows us to operate and achieve efficiencies between network and radio," said Romanoski, "not just from a bandwidth perspective, from a leased line perspective. It's also from a staffing perspective, it's from office space, it's from billing — so many of these things will now be consolidated."



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