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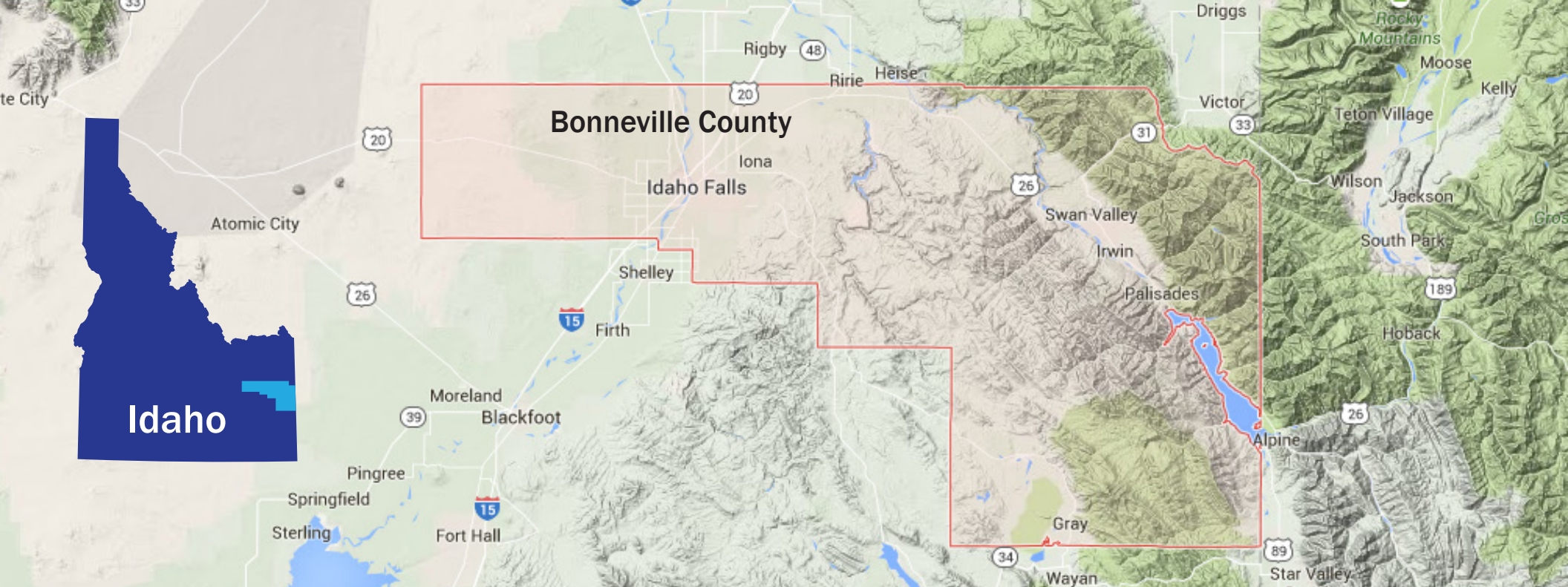
How Avtec Transformed Bonneville's Emergency Response Capabilities

Bonneville County, Idaho, provides its residents with a respite from the go-go lifestyle of big-city living.

The rural charm and remoteness of its 1,836 square miles is rarely disrupted by the distractions common in urbanized areas – but when it is, the very attributes that promote such a peaceful existence create logistical challenges to the public safety workers who need to respond. In addition to providing care to its own residents, Bonneville's first responders are often asked to traverse the Grand Tetons to work with their counterparts in neighboring Wyoming on search-and-rescue missions.

Bonneville's natural challenges include mountainous terrains, rivers, lakes, and vast agricultural tracts

typical of the western United States; as well as archaic emergency communications technologies that are commonplace where people, and in turn, public funding, are decidedly scarce. And emergency call volume in the territory – which includes Bonneville County Sheriff's Office, Idaho Falls Police Department, Idaho Falls Fire Department, volunteer fire departments (Ucon, Ammon, Swan Valley), and volunteer ambulance agency (Swan Valley) – can eclipse 100,000 calls in a typical year.



Sunset For Aging Equipment And Facilities

The emergency communications system in Bonneville County was under duress, with system failures common.

The 15-year-old phone system was dying a slow death, replacement parts were no longer made, and officials were told the system might not recover in the event of major power failure.

The county was in the planning stage for a new 911 call center that would double the existing space and bring the center out of “the dark basement” where it was previously located. The center was to be built on the Cisco® Unified SIP Proxy (CUSP) centralized hardware that uses open-standard protocol and has scalability.

At the same time, three adjacent counties – Madison, Jefferson, and Fremont – were eager to cooperate to improve interoperability and find cost efficiencies in

the region. Fortunately, the regional radio system was a P25 trunked system with support for the APCO P25 CSSI standard. The next step was to design a console with a high level of redundancy and fail-over, says Greg Warner, director of emergency communications for Bonneville County.

“The best possible architecture to achieve this objective was to be interoperable with other PSAPs in the region,” Warner said. “The goal was to get off the antiquated radio consoles and onto something that would give the center full integration to the P25 radio network. The open system advantage is that everyone benefits equally from the association with a much better return on investment than any PSAP could achieve on its own.”

A "PSAP of PSAPs"

Bonneville County's research led public safety professionals in Eastern Idaho to select Avtec dispatch consoles.

Avtec's Scout™ system was ideally suited to power what Warner calls the "PSAP of PSAPs," ensuring compatibility with a variety of radio and phone technologies. Local officials are able to retain their existing phone equipment and link to their individual as well as regional call centers via Avtec's state-of-the-art IP technology. Additionally, Avtec provided a P25 CSSI wireline connection, and facilitated "wireless" connections to create redundancies for the radio infrastructure.

"It turned out to be a perfect fit for what we were trying to pull off in the region," said Warner. "We wanted a

system with a nonproprietary protocol; it had to meet NENA (National Emergency Number Association) standards; and it needed to be easily scalable, not only with the ability to be diversified within our local jurisdiction but among regional partners."

Each regional call center was able to retain its existing phone system with its own independent Scout dispatch console system. Using Avtec's IP technology, all of the Scout systems are linked in a manner that promotes sharing of communications resources.

Other benefits Bonneville gained from the Avtec Scout system included:

- Pure IP voice recording (radio and telephony)
- Portable dispatch solution for disaster mitigation and recovery
- Ability to monitor and control links and diagnose remote connectivity issues
- Easy expansion to meet current and future needs
- A direct IP interface to all major digital radio and telephony platforms to future-proof their communications investment
- A reduction in TDM leased line costs

"Game Changing" Interoperability

After Bonneville County's implementation, the console set up was replicated and applied to the three other counties, resulting in a flawless installation.

With a data link between PSAPs, each has access to one another's resources and capabilities. PSAPs have programmed screen tabs on the consoles with each county's radio configuration, and calls can be transferred to another PSAP in the event of an overload. PSAPs can communicate with each other via position-to-position intercoms, open secured doors or other devices, view

alarm conditions and even view one another's cameras.

"Interoperability is definitely a game-changer, and as we move through and look at other systems implementing in this region, that's the kind of flexibility we're looking for," said Warner.

Looking forward . . .

With Avtec equipment, Bonneville County was able to create its own emergency services IP network (ESInet) to deliver voice, video, text, and data “calls” digitally to the PSAP. This allowed Bonneville County to retire the legacy antenna transmission array, which proved to be unreliable under the harsh conditions common in rural Eastern Idaho. And, Warner said, Avtec systems provide additional redundancies. “If a gateway fails, the system begins immediate transmission to a secondary gateway. If for some reason both those gateways fail, the system reroutes via an IP connection to the regional gateways that are located at another PSAP.”

Pooling resources, sharing expertise, and fostering an atmosphere of trust enabled counties in rural Idaho to successfully update and link emergency communications across their borders. “This is the hallmark of the Eastern Idaho story,” said Warner, “how much can be done by a small group of underfunded counties in a rural community.”



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