Consolidated Public Safety Communications Center Case Study

Whitcom Regional Communication Center is a consolidated E-911 dispatch facility that unifies 72 agencies in a three-county area across two states.

Consolidated in 1996, and eventually regionalizing in 2004, Whitcom's territory includes the cities of Pullman, Washington, in Whitman County, Clarkston, Washington, in Asotin County, and Moscow, Idaho, in Latah County, as well as the campuses of Washington State University and the University of Idaho.

Covering more than 3,000 square miles of rolling hills and wheat fields, what the Whitcom region lacks in constituents – 83,000 at last count – is more than made up for in extreme logistical challenges for emergency responders. Much of the acreage can only be traversed by four-wheel-drive vehicles, and cellular service can be hit-or-miss. Managing all of this are just 26 employees, who rotate through 10 active, multidiscipline workstations at Whitcom's dispatch center.

Motorola™ Centracom Gold Elite End-Of-Life

As with many agencies, Whitcom had received an end-of-life notification about its legacy Motorola Centracom Gold Elite console system.

For Patti Kelly, the communication center's director, it was important that a replacement solution offer technological advances to position Whitcom for the future, both from a console and back-end recording standpoint. "When you go to conferences and see what's on the market, you realize that a product being at the end of its life might be a blessing in disguise."

Whitcom was already beginning to experience weekly system failures, with no resources available for parts or repairs, so time was of the essence. To further complicate the issue, funding earmarked for the upgrade had an expiration date – allowing just a few months for the selection and installation for certain phases of the new system.

HigherGround® Recording System

After extensive research, Whitcom decided the best solution was to upgrade to the Scout™ Voice over Internet Protocol (VoIP) dispatch system and to link it with a new Capture911™ recording system offered by HigherGround®.

A third integrated component – Computer Aided Dispatch (CAD) software from Spillman Technologies – provided even greater efficiency, allowing Whitcom to search recorded interactions easily and save valuable time. All solutions integrate seamlessly to provide an easy-to-use call taking, logging, and event reconstruction experience.

Prior to selecting the HigherGround recording solution, Whitcom tried an alternative product which did not meet their expectations. At this point, it became even more critical that the HigherGround solution not only meet all their needs, but that integration was seamless, to meet the now condensed deadline.

HigherGround's Capture911 system provides Whitcom a complete interaction recording, incident reconstruction, and dispatcher evaluation suite that exceeds current NENA and APCO standards for Next Generation 911 compliance. With Capture911, Whitcom captures 100 percent of their interactions, including telephone, radio, TTY/TTD, and CAD, and has a system that can expand to meet their future requirements.

The HigherGround system was seamlessly deployed, and – more importantly – did not interrupt 911 operations. Since implementing the new system, there have been no system outages or downtime. Kelly said, "The product just works as promised, without any drama. And customer service from HigherGround on the backend has been outstanding."

> "The Real-Time Monitoring feature was a major priority for us. It allows our supervisors to listen in on active calls and easily switch between active calls with one click," Kelly remarked. Additional features of the Capture911 system include:
>
> • Capture of all audio regardless of source (traditional or trunked radio, as well as circuit-switched or VoIP telephone systems).
>
> • Record interactions and associated metadata, available for immediate playback and incident reconstruction.
>
> • Easy-to-use and easy-to-learn customizable user interface saves valuable time.
>
> • Create dynamic reports with real-time monitoring for dispatcher assessment and training.

Due to challenges of the terrain and mountain top radio systems, knowing the geography and the correct radio repeater selections is critical. Now, with the metadata provided by Avtec, HigherGround is able to capture actual repeater selections chosen by the dispatchers when broadcasting. This tool is crucial for training and incident reconstruction.

Avtec's Scout Radio Dispatch Console

Avtec's Scout radio dispatch console system offered Whitcom a level of flexibility and compatibility that few other vendors could match.

This gave Kelly the peace of mind that all radios currently in use – an amalgamation including Motorola, Harris, and others – would be compatible with the new dispatching system. With the portable Scout console Whitcom purchased, which runs on a Windows® laptop, Kelly's Emergency Operations Center can offer remote dispatching and troubleshooting during crises. "They were really understanding of our needs, and amazingly flexible," Kelly said of the Avtec and HigherGround deployment teams.
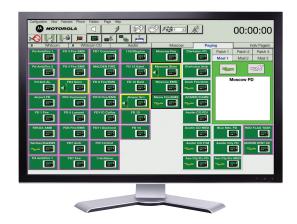
Configurable Screens

The Scout console system's interface offered custom configurability, with touch-screen buttons replicating the function and placement of commands from the legacy system. This allowed Whitcom to deploy the Scout system and legacy Motorola Gold Elite console side-by-side, so dispatchers could make the conversion at their own speed and training time was minimized. Kelly notes, "We were able to adapt our dispatcher's console screens so the transition was much simpler. If we didn't like a color, or font, or where the button was, we could make the change easily."

New Avtec Scout Console Screen

Legacy Motorola Centracom Gold Elite Console

IP Technology Benefits

The migration to a communications system based on Internet Protocol (IP) technology offered great flexibility.

This included the placement of Avtec Outpost™ devices – which perform analog-to-digital conversion of audio as well as remote monitoring and control devices – at radio locations on their IP network, which was not possible with a TDM (time-division multiplexing) -based dispatching system.

Whitcom was able to remove legacy leased lines, which resulted in measurable cost savings.

The Avtec Scout solution provides features that Whitcom relied on from their legacy Motorola Centracom Gold Elite radio dispatch console. These include NENA headset sharing for all dispatcher voice systems, and merging different ambulance and fire paging tone formats for all 72 agencies supported by Whitcom into a single console.

Other features of the Scout system include:

- Pure IP voice recording (radio and telephony with metadata)
- Portable dispatch solution for disaster mitigation and recovery
- Ability to monitor and control links and diagnose remote connectivity issues
- Easily expandable to meet current and future needs
- Direct IP interface to all major digital radio and telephony platforms to future-proof their communications investment

Project Outcome . . .

For Kelly, it was the seamless integration and zero downtime that cemented their confidence that they had chosen the right solution and vendor partners. "The collaboration and partnership between Avtec and HigherGround was impressive, and ultimately beneficial to the development and deployment of the new Whitcom solution."

Kelly reports that the level of service and support the Whitcom organization received was second-to-none. "Both Avtec and HigherGround returned calls and emails quickly, and have really been a joy to work with. And the product is very intuitive – once you log on, it is instantly set up and ready to go."

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