



HOW DISPATCH CONSOLIDATED WORK EFFICIENCIES IN PUBLIC SAFETY



The 350 cities and towns that make up the Commonwealth of Massachusetts have enjoyed a long history of individuality and self-sufficiency, dating back to the American Revolution. Small towns and larger cities within the state have prided themselves on their ability to provide for the good of their respective citizenry on their own.

Fast forwarding from the Revolution to just a few years ago, the Commonwealth found itself with approximately 350 cities and towns all attempting to provide 9-1-1 services to their respective residents with less than stellar results. State public safety officials eventually recognized the need to consolidate these disparate, individual public safety answering points (PSAPs) into larger, regional centers. This consolidation of smaller PSAPs could lead to more sophisticated, resilient and efficient public safety operations not possible with the historic 'one PSAP per town' model that had persisted since before the invention of the 9-1-1 system.

One such area in the state included four communities geographically linked about 30 miles south of Boston. A 2017 state initiative prompted public safety officials to consolidate the emergency services of the towns of Foxborough, Mansfield, Easton and Norton to form a regional primary PSAP and operations center known as the Southeastern Massachusetts Regional 9-1-1 District (SEMRECC).

SEMRECC is one of the largest public safety emergency command centers in the state. In addition to the four municipalities it serves, SEMRECC provides police, fire and EMS services to a nearby professional football stadium, a 20,000-seat concert venue, a municipal airport, multiple train stations operated by the Massachusetts Bay Transportation Authority (MBTA), and two local colleges. Connecting these locations are I-95, I-495, U.S. Route 1 (a major north-south highway), and U.S. Route 24 — all of which generate a large number of 9-1-1 calls to SEMRECC.

CUSTOMER PROFILE

- SEMRECC is one of the largest public safety emergency command centers in all of Massachusetts.
- SEMRECC provides police, fire, and EMS services to a nearby professional football stadium, a 20,000-seat concert venue, a municipal airport, two local colleges, and multiple train stations.

TECHNOLOGY

- Avtec Scout EX console - scalable, redundant, and able to interface with disparate radio systems (analog and digital).
- Enables monitoring of up to 50 audio streams and 2,000 channels from fixed or mobile command centers, and is compatible with Avtec Scout E1, E4 and E8 consoles for flexibility.

OUTCOMES

- SEMRECC is now in the business of taking on more communities outside the initial towns in its phased approach.
- Avtec Scout helped SEMRECC to create a forward-thinking, responsive, and more efficient emergency call center.



CHALLENGES

ESTABLISHING REGIONAL PSAPS: NOT AS EASY AS IT SOUNDS

The idea of forming a regional PSAP sounded simple — but making it a reality was a more complex undertaking.

For starters, the task at hand included combining the public safety departments of four towns into one central location. This meant taking four towns and a total of eight public safety departments (police, fire and EMS), which had disparate communication systems that ranged in age, complexity and technologies. Some of the departments still operated with analog equipment while others had evolved to P25 systems. To add more complexity, some departments operated as single-site systems; others were multi-site.

According to Robert Verdone, SEMRECC's Executive Director, SEMRECC originally considered expanding or reusing some of the existing equipment dispersed among the four towns. The biggest problems of a PSAP consolidation of this size were time and money. The planners had little of either. What they did have was a high expectation of performance and capabilities.

"The one thing all four cities had in common was that, operationally speaking, they had practically nothing in common."

"Some of the departments used old equipment. Some new stuff. And lots of legacy stuff."

— Robert Verdone
SEMRECC Executive Director

"This was not the type of mission in which we could fail. We had a lot of eyes on us," Verdone said. To complicate matters, they'd decided early on that none of the four existing municipal PSAPs would be shut down during the transition, and they couldn't greenlight SEMRECC until it was fully operational. "It was very much like trying to change out the wings of an airplane while it's still in flight."



THE THREE Cs OF PSAPs: COMMUNICATION. COMMUNICATION. COMMUNICATION.

As is common with most public safety initiatives, communication was key. How could dispatchers at a centralized location communicate with all the police, fire and EMS departments and first responders in a quick, easy and efficient way? Their search for a dispatch console system with such a capability led them to Avtec Scout dispatch consoles.

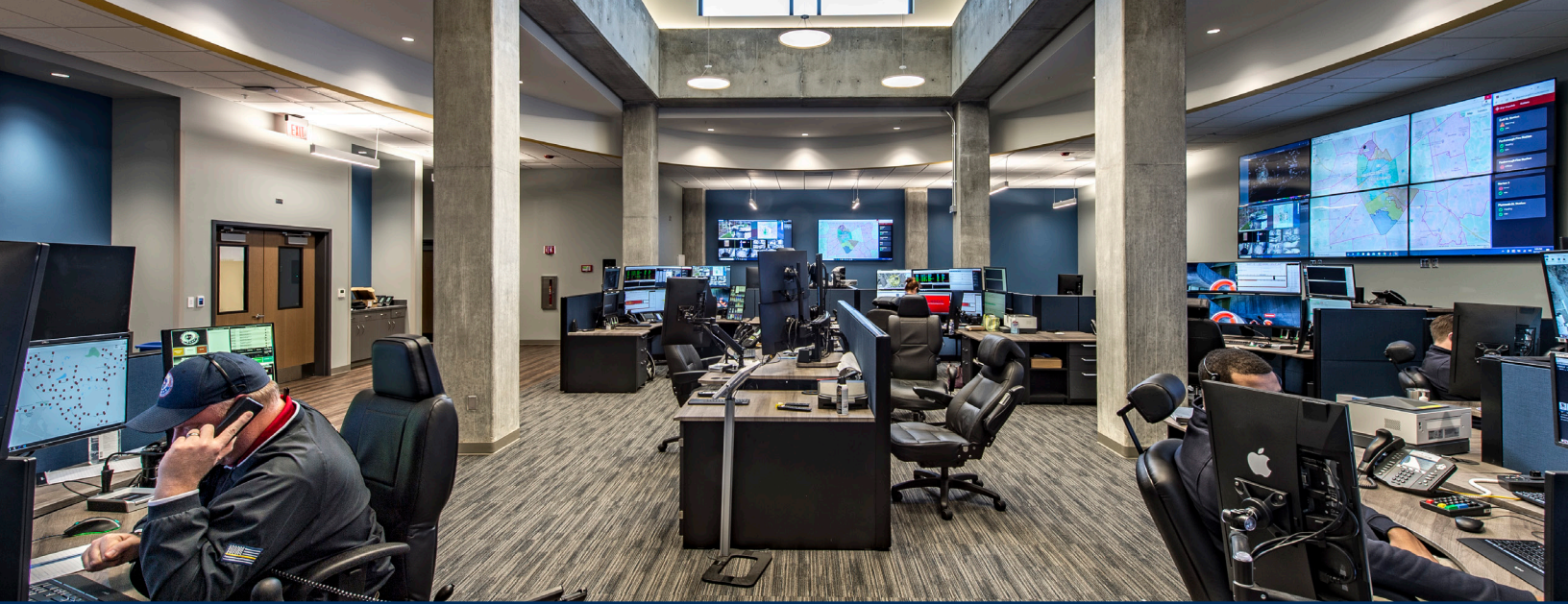
Verdone stressed that SEMRECC needed a system that was scalable, redundant and able to interface with disparate radio systems (analog and digital). It had to be user-friendly and customizable. It also had to be affordable as the facility grew.

Avtec invited Verdone and his people to review demonstrations of the console as well as site visits to other PSAPs with Scout consoles already in operation. Avtec even set up a Scout position onsite at SEMRECC to enable Verdone's staff to work with the console offline. The SEMRECC staff also studied how Avtec Scout dispatch consoles were designed and engineered.

The final verdict: Avtec Scout provided the features SEMRECC needed, and it was reasonably priced.

"With the Scout console, Avtec gave us the distributed architecture that allowed us to get into each one of these communities," said Verdone.

"We can interface with their equipment in parallel with their current equipment without interrupting operations. We can distribute it enough that it's secure. It's resilient. It's a multitasker. And it has a level of disaster recovery built in, so that if we fail in one system, it automatically picks up."



SOLUTION

TURNING A REGIONAL PSAP DREAM INTO REALITY!

The Southeastern Massachusetts Regional 9-1-1 District (SEMRECC) decided the only dispatch console fit for the job was the Avtec Scout EX console. With this dispatch solution, Avtec provided SEMRECC with a distributed architecture flexible enough to interface with the equipment used by all eight public safety departments in the four towns — without interrupting operations.

Furthermore, the Avtec Scout systems proved resiliency to Verdone and his staff via the disaster recovery capability built into the console. If SEMRECC were to ever fail in one system, dispatch operations would automatically be picked up by the backup system.

A TALE OF TWO PARTNER PSAPs

The original consolidation plan included a provision in which the four town PSAPs would remain operational until the SEMRECC center could take over — with zero down time. Accomplishing that feat required some crafty planning on the part of Verdone and his staff. Coincidentally, another regional PSAP, the Regional Old Colony Communications Center (ROCCC) had also adopted the Avtec Scout console, and they were able link their two systems together. This enabled SEMRECC dispatchers to log on to Scout consoles at ROCCC, which was located about 40 miles away in Duxbury, Massachusetts.

As far as the field was concerned, that transition happened seamlessly.

Later on, ROCCC moved into their new facility, and the partner PSAPs repeated the process in reverse: ROCCC ran its operations from the SEMRECC facility while its new center went online. This cooperation between centers led to a standing relationship that still exists today.

Historically, Massachusetts PSAPs have never had the ability to provide back up to neighboring PSAPs. But between SEMRECC and ROCCC — two different public safety agencies — both now have full console disaster recovery capabilities. For example, if one center experienced a fire, its dispatchers could easily log on at the neighboring center, and vice versa.

“With Avtec Scout we were able to deploy everything but the actual operation positions until the day we took over,” said Verdone. “On that day, all we had to do was plug in the monitors and the CPUs, and we were online and operational. Very few things impress me, but that certainly did.”

“We were able to move our entire operation to ROCCC without anyone in the field knowing. That enabled us to get the new facility fully operational and then leapfrog our console positions from Duxbury to our new facility in Foxborough with zero down-time.”



BENEFITS

Today, SEMRECC dispatchers can seamlessly work cross-functionally in any given situation. Avtec's Scout consoles have improved reliability by providing system redundancy in the event a network connection is interrupted. Also, due to the flexibility of the very reasonably priced system and to the agility of the IP network on which the Scout console is deployed, SEMRECC also installed a separate console into each of the city police departments, so that each department's front-desk officer would have an intercom directly to SEMRECC. This capability enabled the regional PSAP to communicate informally with all the police stations, off the air.

SEMRECC is now in the business of taking on more communities outside the initial towns in its phased approach. Verdone stated that with the Avtec Scout dispatch console deployment, it will be easy to repeat the process anytime they need to assimilate a new town's PSAP into its regional operation, as it leads the Commonwealth's efforts to create a forward-thinking, responsive and more efficient emergency call center.

