

Effective Technology Solutions for Public Safety

PURVIS Systems Ignites Success for District of Columbia Fire & EMS Department

The DCFD, like many others in the United States, had reached a point where its radio-based Fire Station Alerting System (FSAS) was nearing the end of its economic and practical life. The current system had been in operation for over 10 years and had become increasingly unreliable, requiring frequent repairs.

Further, because the current system relied on 800 MHz radio frequencies, communication quality was sporadic and prone to “atmospheric conditions,” channel interference, signal fading and intermodulation distortion.

For these reasons, the District determined its antiquated system should be replaced with a modern, Internet Protocol (IP)-based FSAS and related technologies to quickly, reliably and securely facilitate the dispatch of fire and EMS first responders to a call for service.

The directive was to design, implement and maintain a fully functional, turn-key, scalable FSAS that could support interfaces to several disparate systems, accommodate various communications protocols and operate over fiber, copper and dedicated phone lines.

And it had to be done without impacting the department’s day-to-day operations and ability to respond to emergency calls.

THE CHALLENGE

Replace existing unreliable radio-based Fire Station Alerting System (FSAS) with a modern, IP-based, state-of-the-art solution that delivers effective, reliable and secure communications from the dispatch console.

THE SOLUTION

Deploy PURVIS Systems’ highly configurable FSAS with visual and audible alerts, fully integrated with the department’s CAD and radio systems.

CUSTOMER PROFILE

The District of Columbia Fire Department (DCFD) is surrounded by one of the largest metropolitan areas in the United States. Responsible for covering over 60 square miles, the department is tasked with protecting more than 630,000 residents and over 520,000 commuters and visitors each day.



THE BENEFITS

- Enhanced communications and streamlined operations, which yield improved response times
- Reduced stress on fire and EMS personnel
- High level of system reliability and availability through automated monitoring and built-in redundancy
- Highly configurable system tailored to meet unique current and future requirements of the department

PURVIS SYSTEMS

Effective Technology Solutions for Public Safety

THE SOLUTION

The DC Office of Unified Communications (OUC), whose mission is to provide a fast, professional and cost-effective response to emergency and non-emergency calls in the District, began by defining a detailed set of requirements for the District FSAS. Once defined, they initiated a competitive procurement process. After a rigorous evaluation, taking into consideration functional, technical and cost attributes as well as past performance, PURVIS Systems was selected as the vendor of choice.

The recently implemented FSAS, which has been installed in 36 locations throughout the District including the Public Safety Command Center (PSCC), the Unified Communication Center (UCC), 32 fire stations, the fire boat and the District's radio shop, provides visual and audible incident alerts and two-way voice communications between dispatchers and fire and emergency medical services (EMS) personnel. The system is highly configurable and has been tailored to meet the specific requirements of the District.

To fully automate the dispatching of fire and EMS calls, PURVIS interfaced its FSAS with the District's CAD and radio systems. Each station was equipped with an array of alerting devices including flat panel displays, multi-colored lights, speakers, rip-and-run printers and generic device controls.

Ramped audio tones and low intensity lighting help reduce stress on fire and EMS personnel, while bay doors, traffic lights, and station appliances can be appropriately managed and controlled to simplify turnouts.

Automated real-time system monitoring and built-in redundancy throughout every aspect of the system ensures a high level of system reliability and availability.

Because PURVIS was able to work with the DCFD in a flexible way by

adjusting and utilizing legacy equipment, such as the existing reader board and some speakers, and by eliminating unnecessary relays, the District was able to save significant money which it used to invest in new functionality not part of the original specification.

In particular, front-door cameras, with an integrated two-way microphone, were installed with a doorbell at the front door of each fire station to help enhance the safety of both station personnel and the DC community.

The District also implemented FSAS software enhancements to provide station personnel with pre-alert data, which helps improve response times by providing station personnel with access to preliminary incident data before the incident is dispatched to the station.

The PURVIS FSAS™ is modular, customizable and scalable, allowing for reconfiguration and expansion as needs and budgets change. The system is designed to be easily extended to support more locations, companies, jurisdictions and alerting options (such as turnout timers, personal alerting devices, scrolling light-emitting diode (LED) displays, egress lighting and automated control of other existing generic devices around the station) to support the District's future needs.

THE RESULTS

THE PURVIS FSAS HAS BEEN OPERATIONAL SINCE AUGUST OF 2012.

Says Chief Kenneth Ellerbe, Fire Chief for the DCFD, *"With the implementation of this fire station alerting system, District first responders have seen a dramatic improvement in our ability to communicate during emergency responses. The success of this project is a direct result of the working relationship developed between the District and PURVIS Systems during the design, installation and implementation of this system."*

The District now has a more effective, reliable and secure Fire Station Alerting System that incorporates state-of-the-art electronics and design features that meet the operational and interoperability needs of the department today and into the future, to assist in enabling faster, improved response to emergencies. Ultimately, this will enhance public safety and create a better quality of life for residents, businesses and visitors.