



IMPROVE SAFETY AND INCIDENT COMMAND DECISION-MAKING

SUBURBAN ILLINOIS FIRE DEPARTMENTS UPGRADE TO THE PERSONNEL ACCOUNTABILITY
SOLUTION AND STANDARDIZE FIREFIGHTER ACCOUNTABILITY ACROSS 30 FIRE DEPARTMENTS





PERSONNEL ACCOUNTABILITY SOLUTION STANDARDIZES FIREFIGHTER ACCOUNTABILITY ACROSS 30 FIRE DEPARTMENTS

NOW INCIDENT COMMANDERS CAN BETTER MANAGE SAFETY AND RESOURCES; FIREFIGHTERS HAVE GREATER PEACE OF MIND

The South Holland Fire Department, located south of Chicago, Illinois, employs 24 full-time and 19 paid-on-call firefighters. These employees staff two stations 24 hours a day and respond to nearly 4,500 calls annually. The department protects approximately 22,000 residents with a response area comprised of over 8,000 homes, industrial facilities and commercial businesses.

Just a few miles to the West, the Midlothian Fire Department, located in the village of Midlothian, Illinois, maintains two fire stations with 16 full-time and 16 part-time firefighters who respond to around 2,300 emergency calls per year.

Both the South Holland and Midlothian Fire Departments are part of the MABAS (Mutual Aid Box Alarm System) network located within the State of Illinois. MABAS was created in partnership with IEMA (Illinois Emergency Management Agency) to establish a statewide, mutual aid response system for fire, EMS and specialized incident operational teams. South Holland is part of MABAS Division 24, which includes 20 fire departments while Midlothian is part of MABAS Division 22, which includes 10 fire departments.

CUSTOMER PROFILE: South Holland and Midlothian Fire Departments

INDUSTRY

Public Safety

SOLUTIONS

Motorola Solutions APX™ Personnel Accountability Solution

- APX P25 portable radios with Xtreme Environment (XE) package
- APX XE500 Remote Speaker Microphones
- APX Personnel Accountability Application (APAA) software
- APX P25 mobile radios (RF Modem)
- Laptop PCs

BENEFITS

- Automatic accountability information sent to incident commander for all firefighters on the ground, regardless of department
- Ability to instantly send customizable visual and audio alerts to individuals or a group of firefighters, such as evacuate, roll call and Mayday notifications
- Seamless communications across 30 fire departments all operating on APX portable radios
- Critical accountability information captured and displayed on a single screen view for incident commanders to effectively manage multiple tasks

THE CHALLENGE

MANUAL PERSONNEL ACCOUNTABILITY PROCESSES WERE UNRELIABLE AND INCONSISTENT

Knowing how many firefighters are on the scene and their exact status during a fire is easier said than done. Fire departments in suburban Illinois were struggling with the implementation of personnel accountability solutions, with time-consuming, manual and inconsistent processes being the norm. Manual attempts, such as accounting for firefighters using a whiteboard or removing Velcro® tags from a firefighter's helmet and handing them to the incident commander were unreliable and inefficient—particularly when firefighters and incident commanders arrive to an incident at different times.

“Firefighter accountability was inconsistent at most of our local stations and simply wasn’t acceptable,” said Stephen Hotwagner, Fire Chief with Midlothian Fire Department. “We wanted to be able to account for all on-the-scene firefighters and enable them to receive and hear incoming safety alerts in the most chaotic of conditions—whether we’re battling a fire in our own village or providing assistance two towns over.”

INCIDENT COMMANDERS NEEDED INSTANT VISIBILITY INTO FIREFIGHTERS SAFETY

In the past, if a firefighter didn’t answer their radio, incident commanders didn’t know for certain if the individual was injured, the equipment was damaged or they’d simply turned their radio off to reduce chatter on the fireground. In treacherous firefighting situations, every second counts. From incident command to the personnel on the front line, fire departments everywhere need faster, more reliable methods of determining when someone needs help and when they don’t.

“Fire scenes are complex and dynamic,” said Fire Chief Hotwagner. “We knew the more we could standardize our processes, equipment and communications, the safer our first responders would be.”

TRUSTED TECHNOLOGY ON A TIGHT BUDGET

Technology is an investment. The unfortunate reality is that some fire departments don’t have the budget to invest in technology and improve their fireground operations. Plus, there was a concern that introducing new, complex technology would require extensive on-site management, taxing financial and personnel resources even further.

“Complex technology equipment can increase the administrative oversight required—along with the risk of potential failures,” said Bryant Krizik, Deputy Fire Chief with South Holland Fire Department. “We needed a reliable, simple-to-use solution that could be easily managed within the cost points that departments in our region can afford.”



CASE STUDY | SOUTH HOLLAND AND MIDLOTHIAN FIRE DEPARTMENTS



THE SOLUTION

FROM MANUAL TO AUTOMATED FIREFIGHTER ACCOUNTABILITY

Today, manual check-in processes are a thing of the past. Motorola Solutions partnered with Systems Definition, Inc. (SDI) to develop an innovative approach to personnel accountability. With Motorola and SDI's solution, commanders automatically receive accountability information at the scene via a computer or tablet as soon as a firefighter turns on their APX radio. The system is based on SDI's patented method of personnel accountability using the portable radio as the firefighter's accountability tool. It combines Motorola Solutions APX radio messaging and push-to-talk actions with fire department unit and member data to considerably enhance the speed and accuracy of firefighter accountability.

"With APX radios, firefighters have a voice communications and personnel accountability solution in one—they simply turn the radio on and they're checked in," said Fire Chief Hotwagner.

Critical accountability information is displayed on a laptop in a single screen for incident commanders, integrating multiple tasks into one user-friendly interface. Having all of the information on one screen simplifies the task of monitoring multiple resources to keep the focus on ensuring firefighter safety.

In addition to monitoring firefighter status, incident command can also perform robust accountability functions to aid in personnel monitoring. The Personnel Accountability roll call function operates via a push-to-talk (PTT) button press acknowledgment rather than a verbal check-in. This information is automatically captured on the accountability screen and immediately displays if a firefighter does not respond. This eliminates the need for manual reporting, significantly reduces personnel accountability reporting time and reduces fireground radio traffic.

LEVERAGE EXISTING STATEWIDE RESPONSE NETWORK

Since both the South Holland and Midlothian fire departments are members of Illinois' Mutual Aid Box Alarm System (MABAS-IL), they had a unique opportunity. Along with other fire departments in neighboring towns, they could take advantage of their existing land mobile radio (LMR) radio frequencies to dramatically enhance day-to-day operations—supporting personnel accountability processes on the same mission-critical radio channels used for voice communications.

ENHANCED FEDERAL GRANT OPPORTUNITIES

With budgets tight, the departments decided to apply for funding to purchase new technology enhancing fireground operations. Spearheaded by Deputy Fire Chief Krizik, the departments received Assistance to Firefighters Grant (AFG) funding for the purchase of nearly 400 APX two-way radios, integrated with Motorola Solutions Personnel Accountability solution.

"With funding assistance, we were able to spread the costs among 30 fire departments, which made equipment purchases possible," said Deputy Fire Chief Krizik. "As a result, we have a common accountability system to support 500 firefighters across two MABAS systems."





THE BENEFITS

ESTABLISHED ACCOUNTABILITY BEST PRACTICES

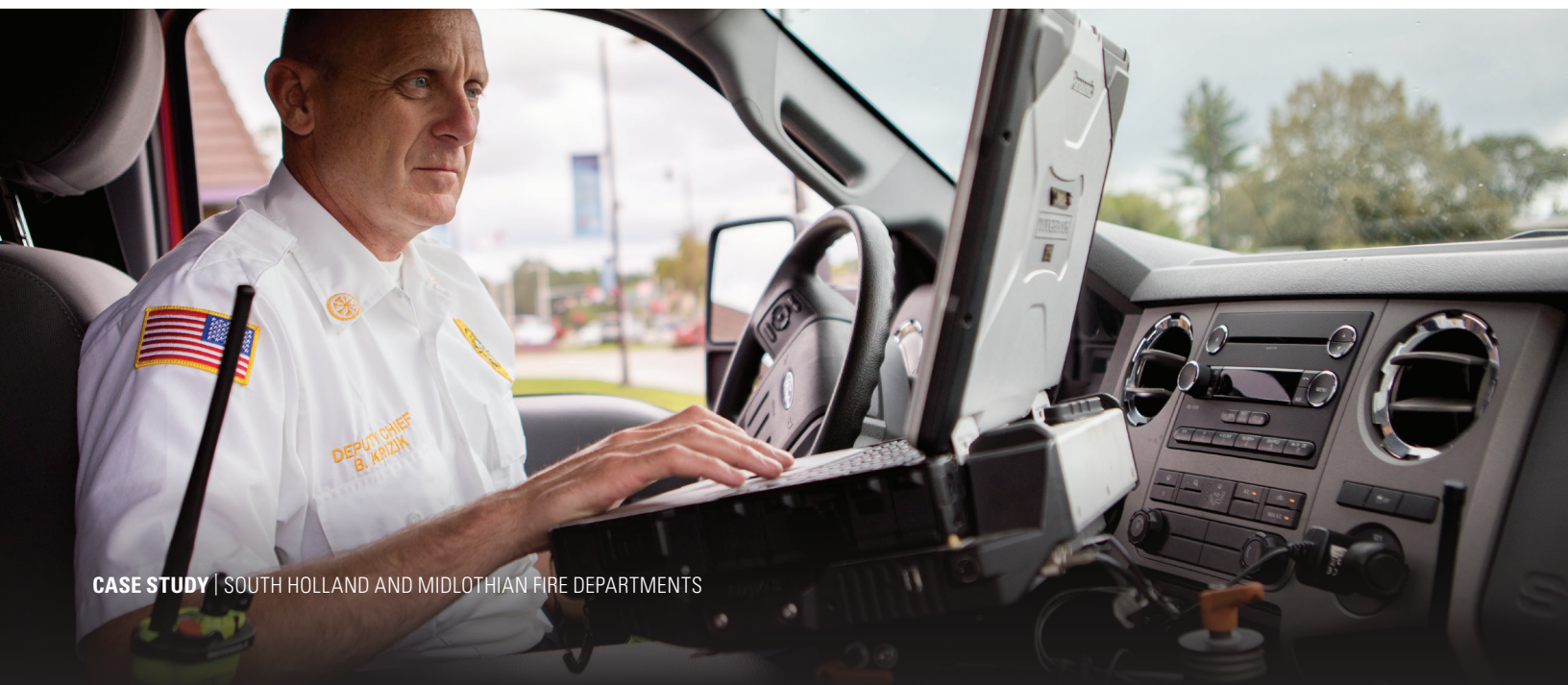
Leveraging the Personnel Accountability application is now a routine part of every fireground operation responded to by MABAS 24 and MABAS 22 fire departments

"With 30 departments now operating on the same radios, we saw an opportunity to standardize our operating processes and on-the-scene protocols," said Deputy Fire Chief Krizik. "We trained all of our staff about how best to communicate with incident commanders and other public safety officials, and the importance of following new safety procedures."

"The APX Personnel Accountability System is on our mobile laptops running in the background, collecting data of our on-scene personnel. The system does not require added tasks to manage for busy incident commanders," said Deputy Fire Chief Krizik.

"We practice safety communications and protocols on each and every active call, to keep on-scene firefighters safer and make incident commanders more effective."

— Deputy Fire Chief Krizik





STREAMLINED ROLL CALL PROCESS

The solution was recently put to the test at a large fire in a two-story residence. Firefighters were already inside when the safety officer arrived on the scene and determined the conditions inside the home were quickly deteriorating. The officer radioed the incident commander to evacuate, who in turn sent an evacuation tone to the firefighters inside the house. Firefighters were outside the home within 30 seconds, an impressive time reduction for a procedure that can take minutes to complete. From there, the firefighters fought the fire from the outside to prevent it from spreading, with all personnel safe and accounted for.

SEAMLESS COMMUNICATIONS—FROM SUBURB TO SUBURB

Thirty fire departments are now all using the same radio capabilities, fostering close interagency collaboration and providing instant, interoperable voice and personnel accountability information across departments and locations.

"When we come together at a major emergency, we're all checked in and communication is seamless," continued Deputy Fire Chief Krizik.

"First responders can collaborate on a single channel as needed or split off by department, with EMA and fire suppression using shared lines of communication."

REAL-TIME, ON-THE-GROUND SAFETY INTELLIGENCE

Instant access to fireground personnel status results in better decisions that lead to better outcomes—outcomes that improve firefighter safety. In addition to accounting for all of their personnel, incident commanders can monitor battery life and view off-channel and radio power-down indications received from the firefighters' radios.

"Firefighters are amazed—I can tell when their radio battery is low, if they switched to another channel or turned off their radio. And, I know their names and their departments, even from two towns away," said Hotwagner. "It makes firefighters feel confident that they are being watched and accounted for."

For more information, please visit us on the web at: MotorolaSolutions.com/Fire



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