ZEBRA

Northern Lakes Fire District Maintains 100% Accountability, Improves Firefighter Safety on Scene

XSLATE R12 rugged tablets exclusively power North America's first digital incident command, fire roster solution

The Northern Lakes Fire District provides an all-hazards response to the greater Hayden, Rathdrum, and Twin Lakes areas in Kootenai County, located in gorgeous North Idaho. The district is comprised of approximately 106 square miles of lakes, mountains, prairies and growing cities with a population of more than 42,000 residents. This combination fire and rescue department is comprised of thirty-six career firefighters, ten volunteers, three Chief Officers, a Fire Marshal and Deputy Fire Marshal, and three administrative support staff. In addition, all of the departments firefighters are certified EMTs, including twelve paramedics. Northern Lakes Fire staffs two fire engines and two advanced life support (ALS) ambulances with career staff that respond to more than 4,600 emergency calls annually from two strategically located fire stations. These stations are staffed 24/7/365.

Challenge

Battalion commanders needed a more reliable way to track firefighters, other first responders on scene

For nearly 200 years, North American firefighters have been using pen, paper, dry erase boards and other similar "manual" methods to track their crews' movements during calls. Passport tags, created about 20 years ago with the goal of improving accountability efforts, often prove unreliable. The Velcro uniform attachments are known to fall off, and some crew members simply forget to stop at the command center to drop them off before entering onto the scene. Plus, some command center officials admit the tags can get lost in the midst of emergency response efforts.

"Even the most organized incident commanders find it time consuming and tedious to cross-reference and manage these Passport tags alongside their dry erase board rosters," explained John Morrison, fire chief and co-founder of Battalion 3 Technologies (BATT3). "There have been many times when Incident Commanders didn't even know when people were on scene. This old way of handling firefighter accountability and tracking is potentially dangerous."

SUMMARY

Customer
Northern Lakes Fire District
Idaho, United States

Partner
Battalion Software

Industry
Public Safety – Fire and Rescue/ EMS

Challenge
Battalion Commanders Needed a More Reliable Way to Track Firefighters, Other First Responders on Scene

Solution
BATT3 Incident Command and Fire Roster Software Powered by Xplore XSLATE R12 Rugged Tablet

Results
Fire chiefs finally find an effective way to keep all fire ground personnel safe, especially during dangerous and prolonged emergency response efforts

Plus, manual accountability measures make it very difficult to comply with NFPA requirements for firefighter rehab during emergencies and training.

That is why his agency, the Coeur d'Alene Fire Department, along with two other fire and rescue agencies in his county – Northern Lakes Fire Protection District and Kootenai County Fire and Rescue – were eager to find a better solution. Morrison, along with CEO Lee Holbrook and CTO Brandon Russell, founded BATT3 in 2011 and began developing the first all-digital command, control and accountability solution for emergency response.

"We wanted to develop a solution that we, as working firefighters, would use. We didn't just need a better mouse trap. We needed something that could be trusted to protect our crews at all times, without draining our resources even further. We wanted to reduce the risk of oversights that were common with our current methods. During our extensive research efforts, we found that a technology-based solution was the best way to finally solve the very serious accountability and, thus, safety problems faced by fire grounds around the world."

"The Windows®-based Xplore R12 was the only rugged computer in the 12" category that fit all of that criteria. Even today, the Xplore XSLATE R12 remains the only large touchscreen tablet that consistently exceeds emergency response agencies' strict performance standards."

John Morrison
Fire Chief & Co-founder,
Battalion 3 Technologies

Solution

BATT3 incident command and fire roster software powered by Xplore XSLATE R12 rugged tablets

By 2011 the BATT3 Incident Command (ICx) software had been fully integrated and field tested on the Xplore R12 rugged tablet PC, the only large-screen mobile computer that was lightweight enough to take out of the Battalion Chief's vehicle and onto the scene for long periods of time. It was also the only HazLoc-certified (C1D2/ATEX), water resistant and dustproof mobile device that had a bright enough touch screen display for frequent pen, finger and even gloved-finger data interactions with the BATT3 software.

"It was very risky to develop a technology-based system for asset tracking and incident management," Morrison explained. "Many fire chiefs don't believe in using technology in the command center. They don't need anything that can disrupt or hinder time-sensitive operations, especially technology failures. So, we had to ensure the tablet we chose was

fast, reliable and flexible enough to support our ongoing software refinement. Fire and rescue agencies don't have the luxury of trying to methods – or technology systems – every year or two. If they were going to invest in our solution, they needed to be confident that it would operate to their standards, and interop with their respective jurisdiction's other IT systems, for many years."

"Of course, we also had to be confident that it was truly rugged to the core and safe to use around explosives, gasses and other common hazards it would be exposed to in the field," Morrison continued. "The Windows®-based Xplore R12 was the only rugged computer in the 12" category that fit all of that criteria. Even today, the Xplore XSLATE R12 remains the only large touchscreen tablet that consistently exceeds emergency response agencies' strict performance standards."

Northern Lakes Fire District was one of the first agencies approached by BATT3 to deploy the technology-based system. The mobile computer, which is deployed in the Battalion Chief's vehicle for Incident Command, also powers Fire Roster software and the integrated Spillman Technologies computer-aided dispatch (CAD) solution.

"Our firefighter accountability capabilities have improved significantly in the last few years. As has our ability to maintain insight into all activities, assign our resources more efficiently and effectively coordinate with partner agencies," noted Northern Lakes Fire District Chief Pat Riley.

When the BATT3 ICx software is in "fire attack" mode, there is a green indicator that lights up on the Xplore' tablet's sunlight-viewable 12.5" display to show which engine is on scene. The ICx Incident Command solution also ties in with the web-based BATT3 FireRoster staffing program to show which people specifically are currently assigned to that engine and actually on scene.

"With the tablet, we can easily keep track of 20-30 resources. My battalion commander can see and update each of the assignments on the one tablet display, no matter where he or she is on scene," Riley continued.

With the BATT3 ICx program, real people's names go into the unit and scene roster columns. Crews are no longer referred to as numbers, and they no longer have to drop Passport tags at the command post before heading into the scene. The tablet-based solution also enables commanders to see how long each asset has been in its current location, which is key to tracking firefighters' rehab and active time history – in real time – to ensure compliance with NFPA 1854 standard.

In short, the Xplore-BATT3 solution minimizes the risk of firefighter mayday. Every time a firefighter is dispatched from the command center, the ICx software's clock is turned on and the indicator next to their name turns green – similar to how the unit/engine tracker works. After 10 minutes, each crew member's indicator will turn yellow and can automatically trigger a roll call. The command center can then call back personnel as deemed necessary using the integrated Spillman CAD program, which eliminates the previously time-consuming manual call-back method.

"You know immediately if someone has been in action too long, or if they're not responding," explained Morrison. "The tablet-based BATT3 software does not leave any room for oversight, and it drastically improves safety. Battalion Chiefs have the tools to take immediate action once they identify a potential safety issue with even a single member of their crew."

Chief Riley agrees: "This automatic notification built into the tablet-based solution can literally save lives by preventing burnout, exhaustion and oversight. It finally

enables us maintain that frequent role call cadence for accountability. No other current tech or system can do this, not even the Passport tags."

Plus, the rugged tablet solution generates a digital incident log, automatically recording every action taken in the BATT3 ICx and FireRoster programs and making it readily accessible should an incident review or investigation need to occur at a later date. These "save"-triggered screenshots of the crew member's name, unit number, and progress against the timer improve the quality of incident audits. They also give fire chiefs the insights needed to improve training and adjust best practices for future calls.

"Not only do we now have constant visibility into all actions taken before and during calls, but we also have a better record of incidents so that we can evaluate our performance after calls and fine-tune our strategy for future incidents to increase our success rates," Riley continued.

Results

Fire chiefs finally find an effective way to keep all fire ground personnel safe, especially during dangerous and prolonged emergency response efforts

Fire chiefs and battalion commanders around the world cite communications breakdowns as the number one cause of accidents/incidents during response. They aren't using the Xplore rugged tablet-based BATT3 solution, though.

Chief Riley observed immediate improvements in the flow of his crew's response actions once they started using the ICx tracking system running on the Intel®-powered Xplore XSLATE R12 rugged tablet computer.

"Simply by virtue of listening to calls over the radio, I could tell that missions were running much more smoothly than before we deployed the tablet-based solution," Riley explained. "Mission requirements are filled much sooner than before due to the increased communications taking place using real-time, and accurate, information derived from the tablet. Directions being given by the Battalion Commander are clear and even assignments are easier to plan and manage thanks to the integrated Fire Roster program."

Chief Riley added that he finds himself much "more informed from a remote position" while his Battalion Chiefs much more in control.

Plus, both the Northern Lakes Fire District and the Coeur d' Alene Fire Department have also benefited from the tablet's fluidity of

information transfers when they're working with a mutual aid company on incident response – which is common in Kootenai County as well as neighboring jurisdictions. If another unit's Battalion Chief is on scene first, he or she can set up the response using the ICx-equipped tablet and then handover to the leading agency's Battalion Chief upon arrival without any worry about miscommunication. If it weren't for the highly mobile computing system, crews would have to rely on the dry erase board and Passport tags during coordination with other agencies. The problem is that this traditional incident command and response management model can increase the risk of lost accountability during multi-agency incidents. It can also complicate – and slow – the initiation of response, all of which leads to unnecessary incidents such as accidents or the loss of life or property.

"I'm sure any fire, rescue or law enforcement agency will attest to the struggle of personnel tracking during mutual aid responses. If you don't have accountability dialed for one agency, then can become a problem very quickly when outside agencies enter the scene and the incident commander is unable to confirm who is on scene or the current location of those known to be on scene," Morrison explained.

With a tablet-based solution such as the one BATT3 designed, all agencies have a way to quickly coordinate and track assets. And, since all three fire agencies in this Idaho county use the same ICx command board and Fire Roster system, they can immediately sync operations as needed to expedite their response.

"The Xplore rugged tablet and BATT3 software system really solves a problem for our entire county," added Riley. "I know it could solve the same problem for many other North American jurisdictions as well, especially if agencies in multiple neighboring geographies also made this mission-critical investment."

Since the Xplore tablet-based BATT3 solution mimics the old magnet/dry erase board method of asset tracking and accountability, it has not required a significant process change by users. In fact, the familiarity of the tablet-based incident command experience has made the on-boarding of the solution very easy for these Kootenai County agencies.

"The BATT3 ICx and Fire Roster software we developed for the Xplore tablet does not really replace traditional asset tracking processes," Morrison explained. "It simply replicates them in a way that makes them far more reliable – and far more accessible – in situations where complete situational awareness and accuracy are a matter of life or death. The highly mobile tablet-based "command center" also makes mandate roll calls and rehab sessions much easier to manage. That is why this tablet-based solution is so effective – and quickly

gaining traction among fire grounds that have long preferred to leave technology out of the command center."

In fact, the rugged tablet-powered BATT3 incident management system is so effective, Chief Riley advocates for it every chance he gets, especially when traveling to conferences and industry gatherings where he has the attention of other fire chiefs across the country.

"As a chief, crew accountability is my number one priority," Riley stressed. "That is why, in my opinion, the command, control and safety management solution from Xplore and Batt3 is irreplaceable. I know that some fire chiefs are apprehensive in using technology in the command post because they're fearful of device or software failure. However, I'm not one of them."

"In fact, I can't emphasize enough the confidence I have in the Incident Command and Fire Roster system that BATT3 has developed on the Xplore rugged tablet. I've seen its reliability firsthand, and it has proven time and again to improve the safety and accountability of all personnel working on my fire ground. "This could easily become the new standard for every fire ground in the United States and, really, around the world."

What's Next

Northern Lakes Fire District Deploying More Rugged Tablets to First Responders

The Northern Lake Fire District will soon equip additional fire engines and administrative chiefs in the fire district with Xplore XSLATE R12 rugged tablets running the Batt3 ICX and Fire Roster solutions to further enhance its incident response and accountability capabilities.

Chief Morrison also anticipates that many other agencies across the nation will start to make the investment in the solution as soon as they see the real impact it has made on early users – especially as first responder safety practices come into focus after recent accident levels garnered the national spotlight.

"Not too long ago, my fire and rescue team was called up north – outside Kootenai County – to assist with a massive wildfire. Upon arrival, we learned that many other responding agencies were lacking the tablet-based command solution, so we had to rely on both the technology and traditional accountability tools to coordinate and manage assets," he explained.

"If the other agencies had been using the tablet-based incident command solution, we would have been much more confident in

our ability to keep crews safe during this dangerous situation. However, given the lack of technology in use, we found ourselves diligently allocating resources to manage safety protocols – resources that could have otherwise been used to fight the blaze and ultimately expedite response effectiveness. Now that our partner agencies have seen the Xplore tablet-based BATT3 system in action, I'm confident they are going to do what they can to secure funds to transition to this technology solution."

Chief Morrison noted that the BATT3 solution – though initially developed to address a fire ground need – could also be used to coordinate with law enforcement and other first responder agencies.

"In all honesty, our technology system could be applied to any type of emergency response where an incident command post is setup," Morrison continued. "This could include SWAT responses, or even event resource management scenarios where it is highly inefficient to use paper-based plans to coordinate entry, backup or other response teams. We recently used the system to manage our coordination of on-site resources at the Iron Man race, and we partner agencies were very impressed with how effective the technology was in facilitating an organized command."

"Many emergency response agencies already use mobile computing technology in their vehicles for dispatch anyways. This Xplore tablet-based system simply enables them to actually take their mission-critical tools – whether it be their CAD software, reporting applications or entire command center – right into the heart of the action if needed without worrying about compromising safety. In fact, this is the best way to improve first responder coordination and communications and, therefore, safety."

NA and Corporate Headquarters | +1 800 423 0442 | inquiry4@zebra.com

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