

HOW TO ENSURE INTEROPERABILITY IN MASS EMERGENCIES



This paper is an excerpt from an extensive publication on critical communications supporting situational awareness. To download the full report, please click [here](#):

Shared situational awareness supported by wireless communication is critical to the success and safety of emergency response operations. When many emergency response agencies have to collaborate in mass emergencies, planning for interoperability is important for mission success.



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INTEROPERABILITY IS CRITICAL IN MASS EMERGENCIES

Extreme weather and other forces of nature increasingly cause mass emergencies, with fire departments being called upon to help each other provide emergency services, often crossing state or national borders to do so. In large scale operations such as these, situational awareness is just as critical as when a single fire crew is at work. But when several emergency response agencies have to work together, their efforts are often hampered by a lack of network interoperability.

The floodings in Germany and her neighboring countries in the summer of 2021¹ gave a stark example of this. Here, rescue and relief efforts were hampered not only by the loss of coverage due to power outages, but also by critical comms solutions unable to communicate with each other. In our opinion, being able to switch between existing networks using the equipment you already have should be a part of any emergency response agency's critical comms setup. Not only will it increase the efficiency and safety of rescue efforts, but it is also the easiest and least costly way for fire-fighting operations to ensure mission critical interoperability and situational awareness in any given location.

¹ <https://www.nytimes.com/live/2021/07/16/>

world/europe-flooding-germany

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VULNERABILITIES REVEALED



Events such as the 9/11 attacks in the US, the Boston Marathon bombing, the AT&T Tennessee bombing on Christmas Day 2020, and the massive river flooding in Germany in summer 2021 did much to highlight the practical deficiencies of traditional radio-based communication systems and their near-total lack of interoperability. Just imagine what would have happened if the emergency services had had sufficient communication capabilities during such events. Decision makers need to take questions of interoperability to heart and include them in their planning. The lives of firefighters and civilians depend upon it.



'The rapid establishment of shared situational awareness and a common operational picture essentially determines the success of all subsequent measures.'

Public Safety Communication Europe whitepaper, May 2022

PROBLEMS BEGIN AT HOME

Like the United States, the European Union¹ has recognized the need for improved technical interoperability across national borders between emergency response agencies: 'There is a need for secure, legal, and ethical communications infrastructures and data interoperability ... These are vital, because in any crisis that needs to be managed across borders, the rapid establishment of shared situational awareness and a common operational picture essentially determines the success of all subsequent measures.' Is your department's critical comms system designed with interoperability in mind – or are you running the risk of hampering rather than helping mass relief efforts?

¹ <https://www.psc-europe.eu/wp-content/uploads/2022/05/>

PSCE-Whitepaper-Transboundary-Resilience-1.pdf P.11

LACK OF INTEROPERABILITY SLOWS DOWN OPERATIONS

From the moment the alarm sounds, time is the enemy. Mass emergencies are no exception. Every second wasted having to figure out how to relay orders or information between different emergency response agencies is a second we would do well to claw back. As it is, emergency services sometimes resort to runners, or to have their messages relayed by a third party operating two or more handsets to pass the word along. This not only adds delays to the operation, but also the risk of human error. Emergency service agencies need to look at how prepared their critical comms setup is to seamlessly integrate with other networks to better serve their personnel and communities.

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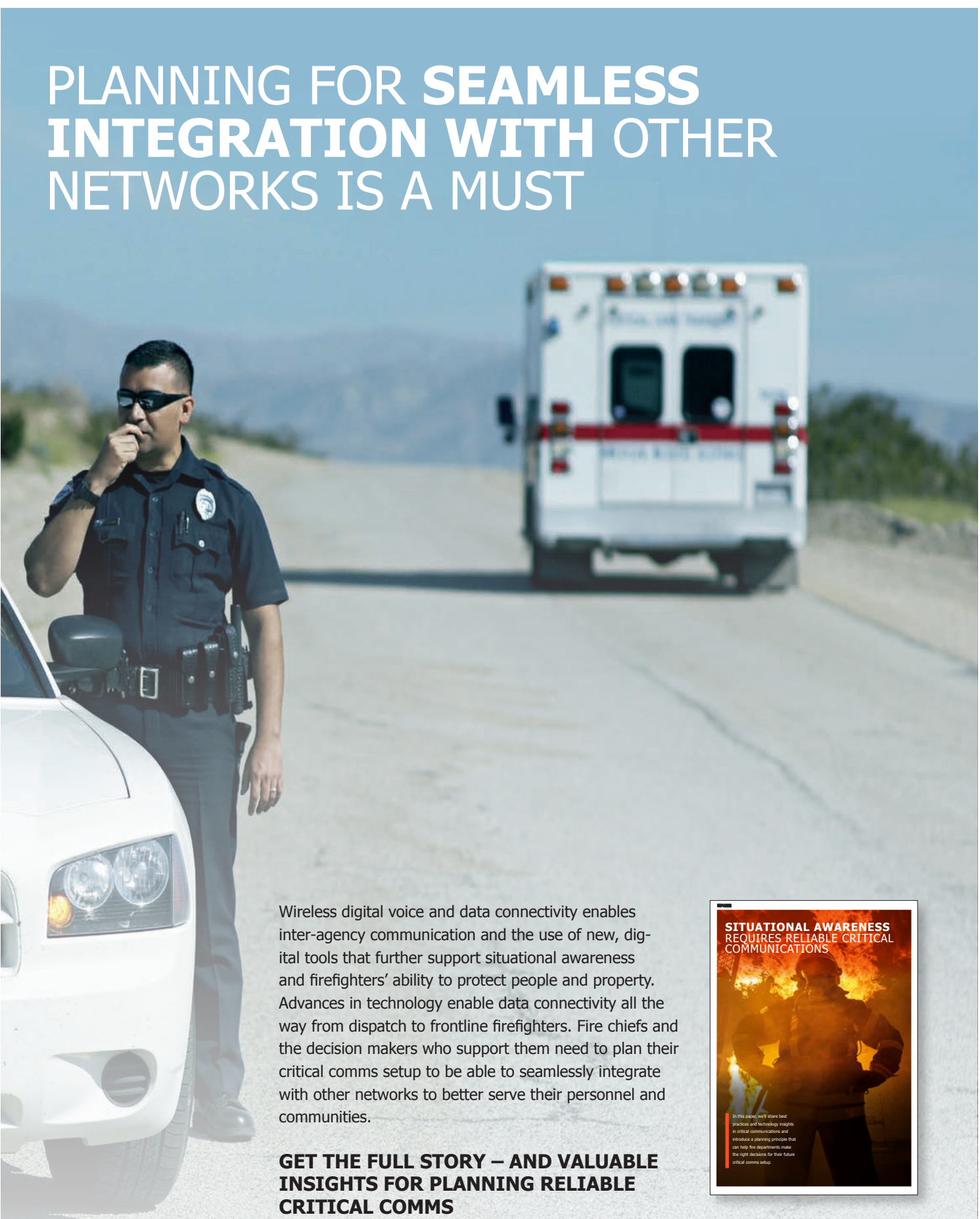
**RECOMMENDATION:
PLAN FOR INTEROPERABILITY**

Many NIOSH recommendations published following Line-of-Duty Death investigations address critical comms issues. They frequently point to the importance of keeping up with the demands of the incident, even as incidents increase in size. In case of a mass emergency tomorrow, how hard, or easy, would it be for your department's communications system to interoperate with other fire departments, police, and EMS agencies? Would your people be able to effectively save lives and property if called upon to help in another state or country? Or would they just be in the way – and possibly in danger?

**THE DIGITAL SHORTCUT
TO INTEROPERABILITY**

In our opinion, fire departments should look to digital technology to add new dimensions of interoperability. By augmenting – instead of expensively replacing – communication equipment with digital gateways in firefighting vehicles and other equipment, going digital does not have to be ruinous. In fact, routing signals through a digital gateway is the easiest and least costly way for firefighting operations to ensure reliable and interoperable voice and data services in any given location.

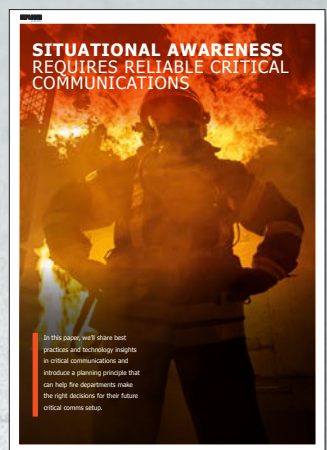
PLANNING FOR SEAMLESS INTEGRATION WITH OTHER NETWORKS IS A MUST



Wireless digital voice and data connectivity enables inter-agency communication and the use of new, digital tools that further support situational awareness and firefighters' ability to protect people and property. Advances in technology enable data connectivity all the way from dispatch to frontline firefighters. Fire chiefs and the decision makers who support them need to plan their critical comms setup to be able to seamlessly integrate with other networks to better serve their personnel and communities.

GET THE FULL STORY – AND VALUABLE INSIGHTS FOR PLANNING RELIABLE CRITICAL COMMS

To download the full report, including an introduction to PACE planning, a useful planning principle for critical comms that ensures reliable data connectivity for first responders, please click here:



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