

INTEROPERABILITY COMMUNICATIONS IN TIM

By: Florida Department of Transportation

IN THIS CASE STUDY YOU WILL LEARN:

1. How an off the shelf interoperability platform MutuaLink can provide interoperability between communications centers, field units, and partner agencies in the event of large- scale regional emergencies.
2. How the interoperability was used to increase interagency coordination to reduce roadway clearance time, minimize the risk of secondary crashes, and enhance overall efficiency and safety of our roadway network.
3. How this solution has provided a direct link between the Traffic Management Center and the communications centers for many first responders.



and to find the appropriate video feed from among the district’s nearly 1,000 freeway and arterial cameras, while simultaneously deploying resources. Partner agencies do their best to utilize the applications provided, however, these tools exist outside the responders’ day-to-day systems, posing challenges in timely access and identification. The operators within the department’s Regional Traffic Management Center (RTMC), on the other hand, locate most incidents on camera in less than 2 minutes. Connecting that skillset with the emergency responders’ existing systems is integral to enhancing interoperability in TIM.

BACKGROUND

Emergency responders participating in after-action reviews of major incidents have repeatedly identified the lack of visibility and interoperable communications as a hindrance in verifying locations and determining appropriate levels of response to facilitate safe, quick clearance of traffic incidents.



Without the “verification” phase in the Traffic Incident Management process, responders are often dispatching blindly with multiple units from different directions until someone has eyes on the scene. This is not only a tremendous burden on their resources, but on the roadway network with signal preemption and disruptions to normal traffic flow with multiple emergency response from varying disciplines en-route to the scene.

In an attempt to increase situational awareness, FDOT has provided a direct fiber connection to some local TMCs and EOCs in order to share CCTV feeds. The department also has a smart phone application to share video with emergency response partners including fire/rescue, law enforcement, service patrol, and asset management teams. Both applications are designed to provide CCTV visibility and increase situational awareness among responding agencies, however, they also require partnering responders to be aware of the incidents (even those that do not originate within their own communications centers)

TSMO PLANNING, STRATEGIES, AND DEPLOYMENT

The department is always looking for better ways to communicate and remove barriers in partnering with first responders. Local agencies shared that they were using a Commercial Off the Shelf product called MutuaLink to provide interoperability between their communications centers, field units, and partner agencies in the event of large-scale regional emergencies. FDOT looked at this interoperability platform as another way to share information; one that capitalized on the skillset of RTMC personnel in quickly verifying incident information, and identifying the appropriate CCTV feed, which can then be shared to our partner agencies via a system they are already using.

Due to the expansive functionality and low cost, MutuaLink was purchased and implemented within a few months. The system was first used in more controlled environments with traffic management of large-scale events. Interoperability in these events provided lessons that have evolved into a standard operating procedure, which is now applied to the coordinated response of day-to-day traffic events.

Aside from video sharing, MutuaLink is a virtual command center that provides the ability to more efficiently support the unified command structure with connectivity of land mobile radios and/ or cell phones for enhanced on-scene communications amongst

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agencies that are operating on completely independent networks. As such, Road Rangers can now communicate with fire/rescue or law enforcement agencies to coordinate response and TTC plans.

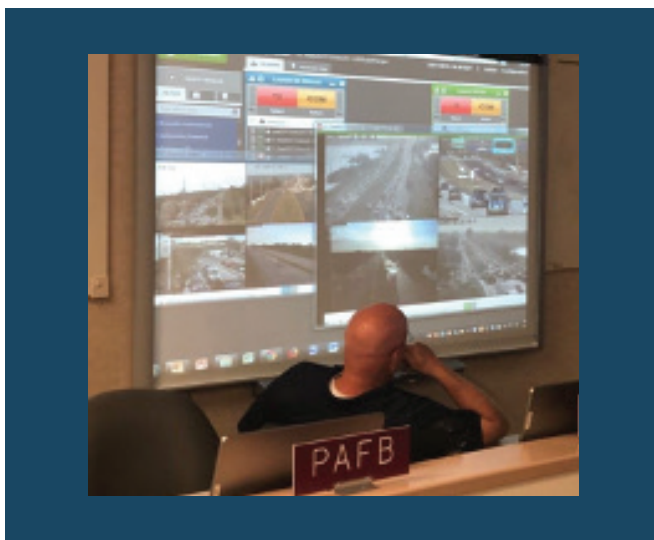


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Likewise, asset management teams can share information and visuals of emergency road work or other obstacles that may impede normal traffic flow and increase the risk of secondary crashes. Additionally, the interoperability platform allows for file sharing, text messaging, a shared white board functionality, and GPS locations of any responders utilizing MutuaLink. These tools are useful in sharing diversion plans, coordinating larger-scale incidents like hurricane evacuations, and in efficiently dispatching resources.

COMMUNICATIONS PLANNING AND EXECUTION

As the interoperability platform was a central office traffic safety solution, it was installed in the Traffic Management Center with minimal complexity. During District TIM meetings, partner agencies were made aware of the department's implementation and provided



input on how the system would be most effectively utilized in day-to-day TIM. The vendor provided initial training to TIM personnel, who then worked with local agencies to expand training opportunities and coordinated multi-jurisdictional training exercises for hands-on learning experiences. As the interoperability platform is used more and more,

TIM personnel and partner agencies continually identify opportunities for extending application of the system to new areas in Transportation System Management and Operations

(TSMO), with the ultimate goal of increasing interagency coordination to reduce roadway clearance time, minimize the risk of secondary crashes, and enhance overall efficiency and safety of our roadway network for both unexpected traffic incidents and larger-scale traffic management details.

OUTCOMES, BENEFITS, AND LEARNINGS

The solution has provided a direct link between the Traffic Management Center and the communications centers for many first responders. Responders are able to see what we see and we are able to communicate critical incident related information directly to boots-on-the-ground responders. This level of partnership has elevated the profile and recognition of the department's TIM program among emergency response agencies, making us better partners in the TIM process and increasing the level of cooperation and coordination in incident response and recovery. In fact, during a recent visit by the president of the United States, the City of Orlando chief of police applauded FDOT and other partners for, what he described as, one of the best coordinated events in his 20+ years with the Orlando Police Department. The overall result of the implementation of this project is best defined by the National Unified Goal of providing safe, quick clearance via prompt, reliable interoperable communications to increase the safety of responders and other roadway users.

FURTHER INFORMATION

NOCoE Knowledge Center: <https://transportationops.org/knowledge-center>