IDC

Enhancing Public Safety with Interoperable Real-time Situational Awareness

Digital Deluge Highlighting the Need for Public Safety Interoperability

INTEGRATED SERVICE PROVIDERS		MAJOR OPERATIONAL AND INVESTIGATIVE SYSTEMS	
NEXT GENERATION DATA SOURCES, MANAGEMENT AND ADVANCED ANALYTICS			
IoT/Sensors	**Biometric Recognition Technologies**	**Visual Data, Management and Analysis**	**Advanced Analytics**
Wearables	Imaging Technology	Video Sources	Artificial Intelligence
Smart Weapons		BWV In-Car CCTV	
Early Warning Systems	Digital Fingerprinting	Drones 3D Crime Scene	Evidence-Based Policing
Location-based Services		Video Management Systems	
Audio	Algorithmic DNA	Video Analytics Software	Operational Analytics

DIGITAL EVIDENCE AND INTELLIGENCE PLATFORMS		DATA SHARING AND VISUALIZATION			
Digital Evidence Management	Digital Forensics and Intelligence	Data Visualization	Platforms	Mobile	Public Alerting

INFRASTRUCTURE			
Cloud	Networking/Connectivity		NG9-1-1
Priority	Preemption	Quality of Service Enhancements	

As is evident from the graphic above, public safety agencies today are drowning in data. As the data types and volumes continue to spiral, the need for interoperability continues to be vitally important; further, the infrastructure and connectivity is fundamental to the management of this burgeoning tsunami. These growth trends are set to continue apace. IDC forecasts that the total volume of data created or replicated globally will grow to 180ZBs in 2025 (*Worldwide Global DataSphere Forecast, 2021–2025: The World Keeps Creating More Data—Now, What Do We Do with It All?* March 2021, Doc #US46410421.); for perspective, one ZB of data equates to 250 billion DVDs. For public safety agencies on the ground contending with their own growing volume of data, this creates life or death challenges when responding to and investigating critical events.

To better manage data volumes in support of their missions, agencies are looking to digital platforms to enhance situational awareness. This means leveraging technology to automate the culling of information from the flood of datasets and sources, and augmenting decision-making by using automation to find the signal in the noise, which can seem like the typical needle in the haystack. Interoperability is a critical enabler of real-time situational awareness and decision-making and is built on standards-based technology. Data interoperability helps agencies unify the flood of information coming into responding agencies during large-scale events; not only does interoperability separate pertinent data from the noise, but it does so in a condensed timeframe that enables actionable insights.

Let's examine further how interoperability underpins the data demands required of public safety agencies' day-to-day operations. Recent best practice insights from real-time operations centers (RTOCs) illustrate how they have both a governance structure, and a technology architecture based on interoperability. Within the centers, all lead and supporting agencies have representation and their positioning within the center is strategic and deliberate. The center of the room is configured for the lead agency; the next circle of seats outward is for the other local first responders, surrounded again by meteorology professionals, and finally the critical infrastructure (water, power, gas, and communications) providers.

This governance structure is mirrored by interoperable, standards-based technology that automates and visualizes data analysis in real-time. Video/knowledge walls are broken into various screens with 911 CAD data, a social media sniffer and a series of news channels down at the bottom, including weather info, live surveillance scans, and other valuable situational awareness feeds. Information on the video walls is prioritized with the common operating picture presented at the center and less pivotal but still valuable information depicted on the edges. Moving toward the center, the wall displays information on active incidents, detailed visuals, and so forth. Based on "human-centered design principles," the visualization optimizes situational awareness in crises and is a vital tool amid the rising digital deluge. Anything that prohibits fully interoperable communications across devices, applications and networks could potentially negatively impact these operations.

Criminal investigations are similarly getting larger, more complex, digital, frequently interjurisdictional and inundated by data. Dane County Wisconsin's Sheriff's Office realized it had an auto-theft crime spree that worsened during the pandemic, and decided to take a data-driven approach to the investigation. Working across several jurisdictional lines, and incorporating all manner of next-generation data sources like in-car diagnostics, social media posts, and GPS data, the agency was able to track, identify, connect and ultimately charge a broad network of car theft ring members. As criminals become more stealthy, shielded by the digital world, public safety is also undertaking a more stealthy approach to situational awareness and investigative capabilities.

This example illustrates the critical role that interoperability plays in automating the incorporation of critical data feeds to enhance situational awareness.

For more information on the critical need for interoperability in public safety,

download the white paper

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Message from the Sponsor

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