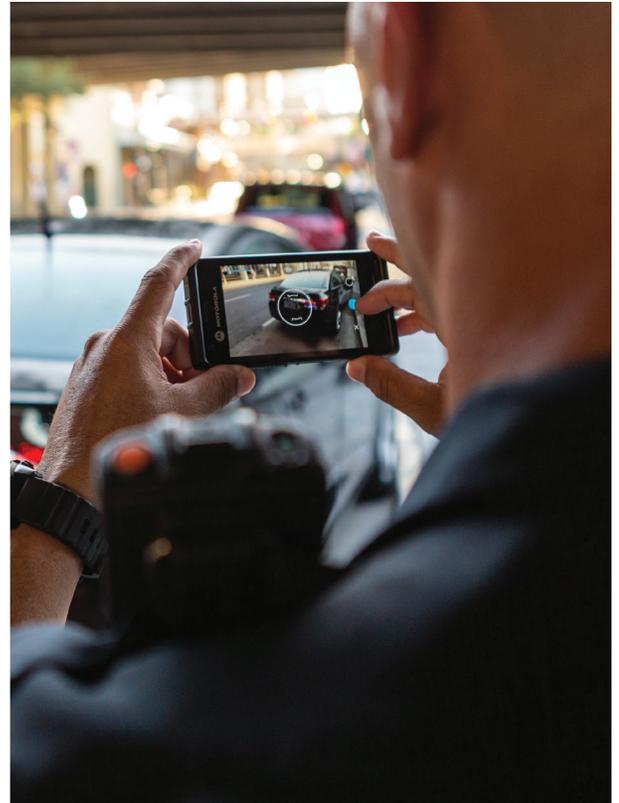




DELIVERING REAL-TIME COLLABORATION ACROSS DEVICES AND NETWORKS



COORDINATE AND COLLABORATE IN THE MOMENT

Your citizens depend on your agency to coordinate and collaborate in the moments that matter. And your first responders need to rely on technology that's second nature to keep them safer and be better prepared to carry out their missions.

Technology is empowering command staff, intelligence operators and first responders with detailed, aggregated real-time information as an incident unfolds. So they can defuse risks and change the trajectory of a single moment while in the moment itself.

Today in the U.S., there are over 4,000 police agencies using body-worn cameras, 78% of public safety agencies are using smartphones and there are nearly 2 million first responder two-way radios deployed in the field.¹ What if these devices could collaborate with each other to deliver mission critical intelligence?

EXTEND THE REACH OF INFORMATION, FROM OFFICE TO VEHICLE TO INCIDENT

When first responders use collaborative, mission critical devices, they extend the reach of information that can be harnessed and turned into intelligence. Whether it's a police officer uploading body-worn video using his cruiser's LTE modem or an undercover detective remotely controlling a surveillance camera with a public safety smartphone, all first responders can benefit from real-time mission critical collaboration.

No longer do devices operate in silos; they are part of an integrated ecosystem. That's why we're building future-ready, mission critical devices that communicate with each other seamlessly and have innovative capabilities such as fast proximity pairing using Bluetooth™ and applications that streamline information between all users and their various devices. Our solutions are purpose-built for public safety and engineered to rigorous benchmarks to deliver on their promise.

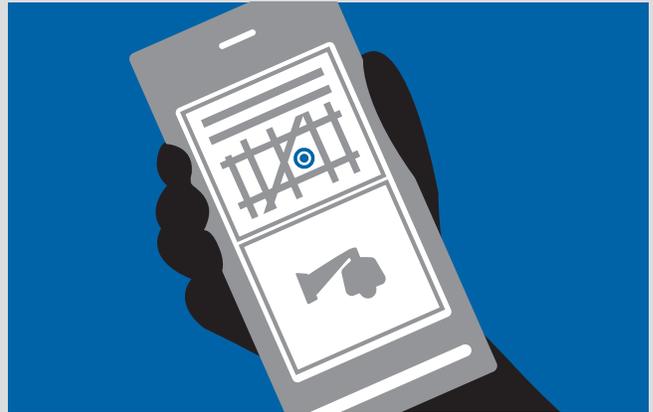
TODAY'S CONNECTED POLICE OFFICER

INCREASING CONTEXTUAL AWARENESS AND REAL-TIME COLLABORATION

Whether today's officers are pursuing a suspect or working from a vehicle, they are part of a greater mission-critical context. Vehicles are their real-time mobile office, which become an extension of a greater network centered at the precinct and command center. Their devices enable them to connect instantly, reliably and securely wherever they go, ensuring a real-time flow of information as an incident unfolds.



The officer is on patrol and is connected to ASTRO 25 and LTE networks. The officer confers with dispatch using his Bluetooth speaker microphone. He can collaborate with personnel using smartphones through WAVE.



The officer is dispatched to an incident via CAD on his LEX L10 LTE smartphone and then monitors nearby surveillance cameras to better assess the situation.



The officer approaches a suspect on the street. GPS from his APX radio sends his location to dispatch. His body camera captures the interaction with the suspect.



Back at the vehicle, he documents incident details and monitors social media, messages and maps using the Wi-Fi® from the VML 750 LTE modem. As he drives away, he uses the APX Control Head to manage the radio, sirens and lights.

TODAY'S CONNECTED FIREFIGHTER

STRENGTHENING SAFETY, PERSONNEL ACCOUNTABILITY AND DECISION-MAKING

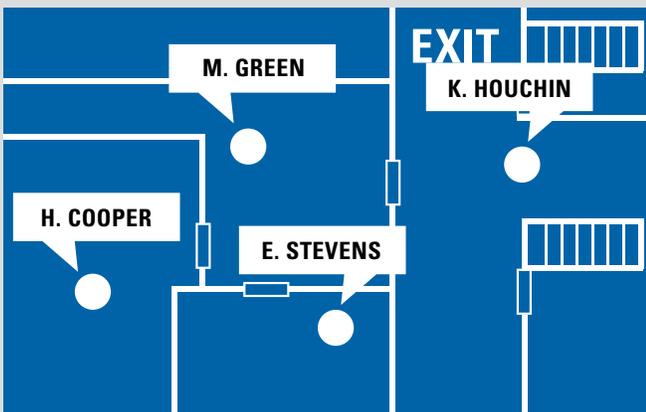
Whether today's firefighters are making their way through a burning building or operating a pump at the apparatus, they are part of a greater mission-critical context. Their devices connect them instantly, reliably and securely anywhere on the fireground, ensuring a real-time flow of information with incident command. Critical data, such as their status, health and activity levels, are monitored to help them stay safe and help commanders make better decisions throughout an incident.



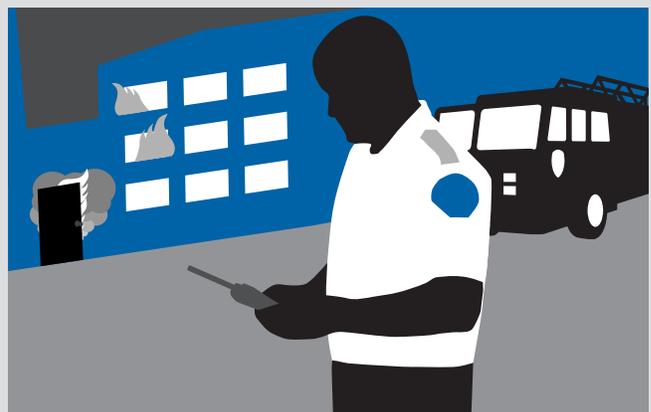
The firefighter arrives at the scene after being paged on his APX Extreme Environment (XE) radio, designed to withstand extreme conditions. On scene, he confirms readiness during the personnel accountability roll call with a simple press of the PTT button. He operates his XE remote speaker microphone and portable radio easily, even with gloved hands.



Zephyr biomonitors sends the firefighter's vitals to the battalion chief via his APX radio. If he becomes unconscious, a "man down" sensor automatically alerts incident command and dispatch.



The incident commander monitors all firefighters on the fireground. He uses his APX radio for optimal audio and interoperability with his crews. Tracks their indoor locations as they move through the building. Checks heart rates, breathing rates and their activity levels throughout the incident.



If an emergency occurs, he receives an instant alert and can respond appropriately. If the integrity of the building is compromised, he sends out an evacuation alert to all firefighters from the personnel accountability application.

TODAY'S CONNECTED EMS RESPONDER

IMPROVING OUTCOMES WITH FASTER RESPONSE AND BETTER INFORMATION

Whether today's emergency medical responders are racing to an accident or operating equipment on scene, they are part of a greater mission critical context. Their devices connect them instantly, reliably and securely as they move, ensuring a real-time flow of information with dispatch and the hospital. Valuable data, such as patient status and medical records, can be transmitted instantly to improve their response, decision-making and ultimately, patient outcomes.



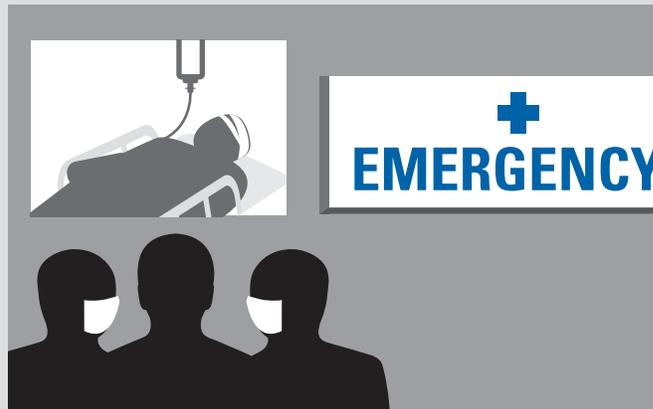
EMS responders rush to a traffic accident. A badly-injured woman is being pulled from the wreckage. On scene, the EMT captures video of the accident using her body-worn camera. As the patient is tended to, the team uses their LEX L10 LTE smartphones to capture and transmit patient vitals to the hospital.



The EMT talks to dispatch and the ER team using her LEX L10 LTE smartphone as the patient is loaded. Because the ER surgeon is off site, she connects to his smartphone using WAVE.



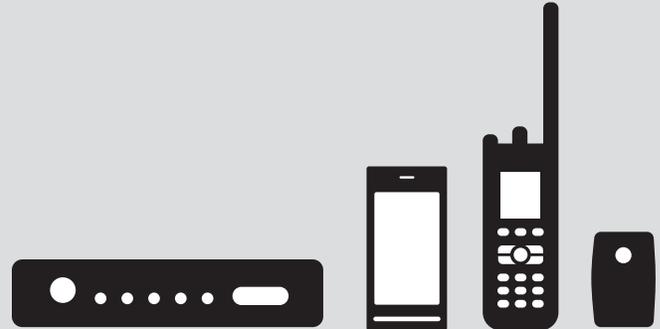
As the ambulance races to the hospital, an optimal route is determined using the GPS from the APX mobile radio.



Video footage of the patient is streamed to the hospital via from the VML 750 LTE modem. Before the ambulance pulls up, the ER team has detailed information in hand.

A MISSION CRITICAL ECOSYSTEM, DESIGNED TO WORK BETTER TOGETHER

MISSION CRITICAL DEVICES



APX™ PROJECT 25 TWO-WAY RADIOS

APX radios redefine safety in mission critical radio communications. The all band APX 8000 portable operates in all RF bands with the most advanced audio performance in the industry. This radio is Wi-Fi capable for faster and easier radio management. Connects to secure, pre-provisioned Wi-Fi access points in the vehicle or precinct to receive critical updates in seconds.

Mission Critical Wireless Bluetooth creates a personal area network around the officer. Sensors and other peripheral devices can use the APX and P25 radio network to report officer status, indoor location, health, weapons and tools to enhance situational awareness.

LEX L10 MISSION CRITICAL LTE HANDHELD

Sleek yet rugged, the LEX L10 features the Public Safety Experience (PSX) interface that responders need to work faster, safer and smarter. Mission Critical Wireless Bluetooth quickly and securely pairs with an APX portable to act as an advanced user interface. It remotely controls the zone, channel and volume, monitors battery and signal strength, and can activate emergencies.

Can generate a Wi-Fi hotspot to share broadband with laptops and other field devices. It has dedicated PTT, the world's loudest smartphone speakers, a submersible and drop-rated housing, and a hardware-encrypted security system. Louder and more rugged than a consumer smartphone, it's the ultimate "smart" device for first responders.

VML 750 LTE VEHICLE MODEM

Brings reliable broadband into the vehicle and shares it via Ethernet or a Wi-Fi hot spot. The VML 750 has built-in GPS for location tracking and route optimization – ideal for public transportation and responder vehicles. Powerful and versatile, it enables high-speed data with the priority, control, security and performance first responders need to work effectively from their mobile office.

VIEVU LE3 BODY-WORN VIDEO CAMERA

Rugged, secure and easy to use by officers in the field. Video can be uploaded from the vehicle's laptop when connected to a broadband modem and stored in a secure Microsoft® certified cloud or on-premise server. Hardened security ensures video evidence is tamper-proof and only accessible by authorized personnel. This invaluable tool helps reduce officer complaints and litigation costs, while improving officer safety and conviction rates.

MISSION CRITICAL APPLICATIONS



PUBLIC SAFETY EXPERIENCE (PSX)

This intuitive user interface automatically presents the right information at the right time turning the Android OS into something much more suitable for front-line Public Safety users. Configurable, context-aware and adaptive, it creates a unified experience among applications in the LEX L10 LTE smartphone and across agencies. Enables LEX L10 to aggregate and prioritize information to only present what is critical for the user, based on their status and activity. PSX allows personnel to access 85 percent of critical apps without using multiple menus.

WAVE WORK GROUP COMMUNICATIONS

WAVE enables public safety personnel who don't use radios to talk to other personnel on devices and networks beyond the radio system. It connects radios to smartphones, laptops, tablets,

landlines and more with simple, secure, reliable PTT. Designed to be compatible with any device, WAVE works best on the LEX L10 and can easily tap into the ASTRO 25 radio network via ISSI-based IP connectivity for maximum scalability.

INTELLIGENT DATA PORTAL (IDP)

Aggregates data and multimedia from multiple public and private systems and databases on a real-time map to show the location of personnel, resources, alerts and more. Allows for incident monitoring, strategic planning and team collaboration from any place, on any device, at any time. Integrates location-based information to help command staff and officers be more proactive about developing situations and to keep themselves and citizens safer. Role-based access means that users view only the data that matters to them.

MISSION CRITICAL NETWORKS



ASTRO 25 – P25 RADIO NETWORK

The world's most widely deployed P25 radio system supports maximum interoperability leveraging P25 Phase 1 FDMA, Phase 2 TDMA and ISSI 8000-based inter-system roaming. Users with FDMA and TDMA radios can communicate on the same talkgroup seamlessly.

Optimized for APX radios, ASTRO 25 supports unique data capabilities including enhanced data to increase GPS throughput by 10x, dynamic GPS polling, text messaging, and over-the-air programming with differential write to speed up radio updates (OTAP) by only sending information that has changed.

PUBLIC SAFETY LTE – PRIVATE BROADBAND NETWORK

Optimized to complement the ASTRO 25 network with prioritized high-speed LTE data such as photos and streaming video to improve collaboration and outcomes. You decide who accesses the system and how priority gets dynamically assigned to devices and applications.

A responder's environment, role and context are used to prioritize network resources and optimize their user interface. All responders see one view based on common location, tracking, presence, video feeds and other data for improved collaboration.

IMAGINE THE FUTURE OF PUBLIC SAFETY. WE'RE INNOVATING IT NOW.

Wearables are everywhere, and public safety is no exception. Forward-thinking agencies know they can significantly improve situational awareness, decision-making, resource management and safety.

RECON JET HEADS-UP DISPLAY ENHANCES SITUATIONAL AWARENESS



Delivers instant information to officers in the field so they can see it without accessing their devices. Enables them to work away from their vehicles hands-free. Officers receive a discreet “Hot Hit” or critical notification confirming their APX radio’s operation, including channel or volume change, low battery or out of range alerts, incoming private call, text message and emergency alarms.

Provides updated situational awareness from an officer to incident command. Video footage shows crime scenes in real time from the officer’s perspective. Footage is streamed by Wi-Fi via LEX L10 LTE smartphone over the LTE network.

TRX NEON BODY-WORN SENSOR PROVIDES REAL-TIME INDOOR LOCATION TRACKING



Tracks and monitors the location of personnel in real time, inside buildings, where GPS is unavailable. Compact and portable, it connects to APX portable radios via Mission Critical Wireless Bluetooth. Gives supervisors and incident commanders the ability to quickly model buildings in 3D, see the location of their teams at all times, and review activities thoroughly after an operation is complete.

ZEPHYR BIOMETRIC SENSOR SHARES REAL-TIME PHYSIOLOGICAL VITALS



Monitors and wirelessly transmits responders’ vital signs in real time via the Mission Critical Bluetooth on APX portable radios. Fast, one-touch pairing makes it easy for multiple first responders to be monitored simultaneously for heart rates (BPM ranges), breathing rates and activity levels. For training or the fire ground, it can help alert command that first responders may be in danger.

SMARTBELT HOLSTER SENSORS ENHANCE CONTEXT AWARENESS



Tracks weapon and tool holster status. As the officers draws his weapon, pepper spray or stun gun in the field, administrative personnel at the command center can be notified immediately.

The status of these critical tools can help alert dispatchers and peers of vital events to help deter an emergency before it happens.

Shorten response time and sharpen decision-making with collaborative technology that significantly improves the public safety experience. When devices, applications and networks work as one, you can focus on your mission, in the moment, to help keep your city safe.

SOURCES

1. The 2014 Accenture Citizen Pulse Survey

For more information on how Motorola is helping public safety agencies work better, smarter and faster through next generation technology, visit motorolasolutions.com.

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