



SOLUTION OVERVIEW

TACTICAL RESPONSE VEHICLE SPEEDS COMMUNICATIONS INTEROPERABILITY AND NETWORK CONTINUITY FOR C4I

MOBILE COMMAND AND COMMUNICATION FOR DISASTERS, HUMANITARIAN AID AND SPECIAL EVENTS

In situations that require emergency response, or for homeland defense during special events, every second counts. First responders must rapidly establish essential command presence, resource control, and communication interoperability for incident command and control. To support these objects, a tactical mobile solution must include:

- Command, control, communication, computers, and intelligence (C4I)
- Scalable, reliable, and secure interoperable data, voice, and video
- Redundant communication options for reliability in any environment

MOBILE COMMUNICATOR™ IP-ENABLED MOBILE COMMAND CENTER (MC-IP)

Whether incidents require a single responder or a large command staff to manage a team of hundreds, Cisco Systems® is helping mobile command and control centers meet the need for high-performance, IP-enabled mobile solutions. Working with industry leader L-3 Wolf Coach, first responders and incident commanders are learning what is possible when mobile command and control is enhanced with commercial off-the-shelf (COTS) products based on open-standard IP technology and communications.

Together, Cisco® and L-3 Wolf Coach have developed the a series of solutions that include IP-Enabled Mobile Communications such as the MC-IP™, which can rapidly establish essential command presence, resource control, and communication interoperability for incident response. L-3 Wolf Coach integrated radio communications, power systems and computing systems into the vehicle, while Cisco enhanced its capability with IP phone and data networks with Cisco® Integrated

Services Routers (ISR), Cisco Catalyst® switches, and Aironet® 802.11 wireless access points and bridges. The technology enables rapid deployment of secure, reliable IP capabilities into a user-friendly mobile command center environment. In addition, the MC-IP™ vehicle includes a Cisco IP Telephony solution featuring Cisco Unified CallManager Express, which enables voice communication over both fixed and wireless Cisco IP phones. By using voice over IP (VoIP) and secure virtual private networks (VPNs), dial tone can be extended beyond an effected region—a critical capability when cellular infrastructure is nonresponsive and radio networks become saturated. With the solution, tactical data, voice, or video can be gathered from any source—radio, telephone, Internet, broadcast television, and local or remote video surveillance—and can be synthesized into useful information, providing effective communication between team members and commanders. Extending this actionable information and situational awareness beyond the vehicle - to other responders or Headquarters - offers a network-centric approach to the common operating picture and situational awareness.

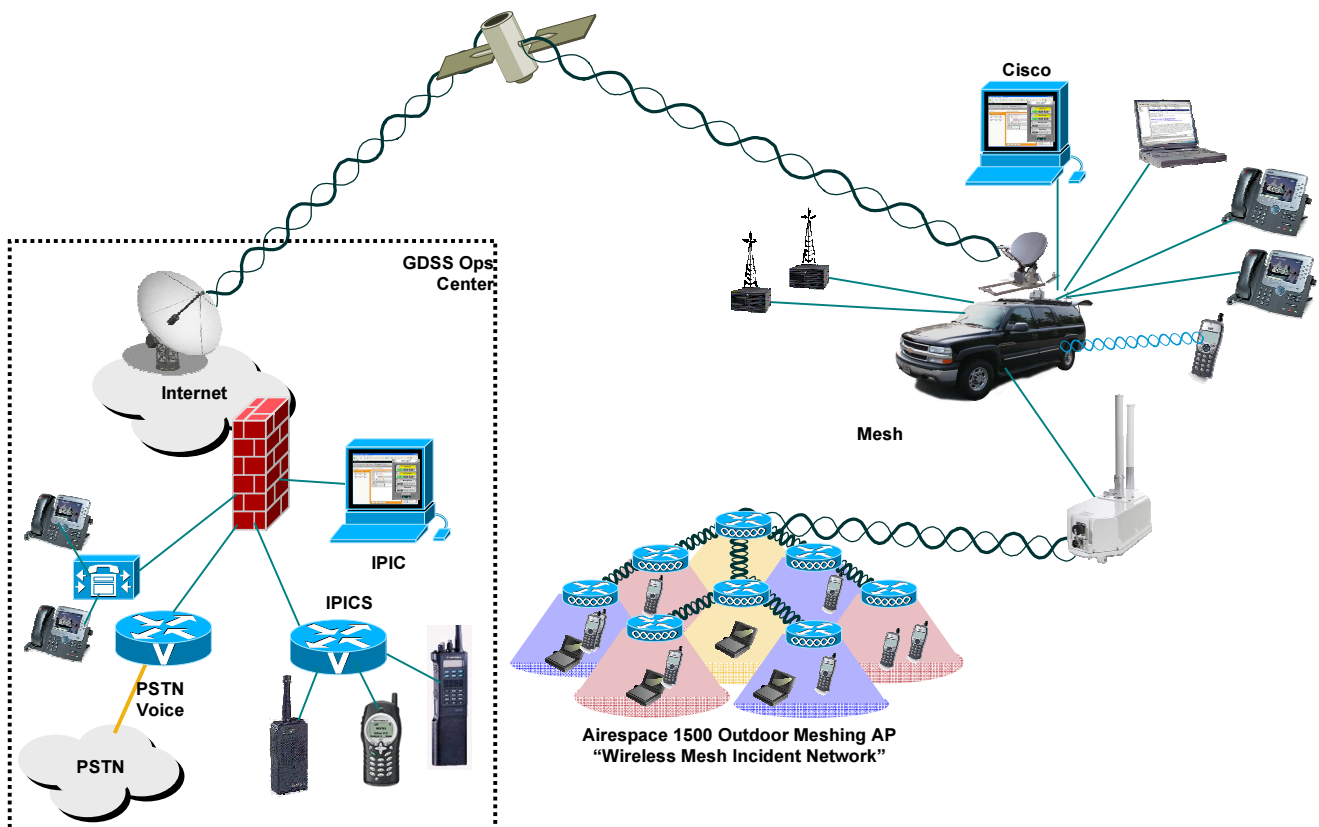


SEAMLESS CONNECTIVITY AND SECURE INTEROPERABILITY IN RUGGED, USER-FRIENDLY MOBILE UNITS

The integrated technology solution offered through the L-3 Wolf Coach incident command vehicles maximizes the capabilities of the public safety, civilian agency and other communications professionals who use them. The electronic and technology layout of the vehicle is carefully planned and configured to embody the crucial ergonomic considerations that optimize:

- Information Flow
- Intra-team Communication & Collaboration
- Comprehensive Communications Interoperability (Phone, Radio, PC & Instant Messaging)
- Situational Awareness
- Equipment Access and Usability

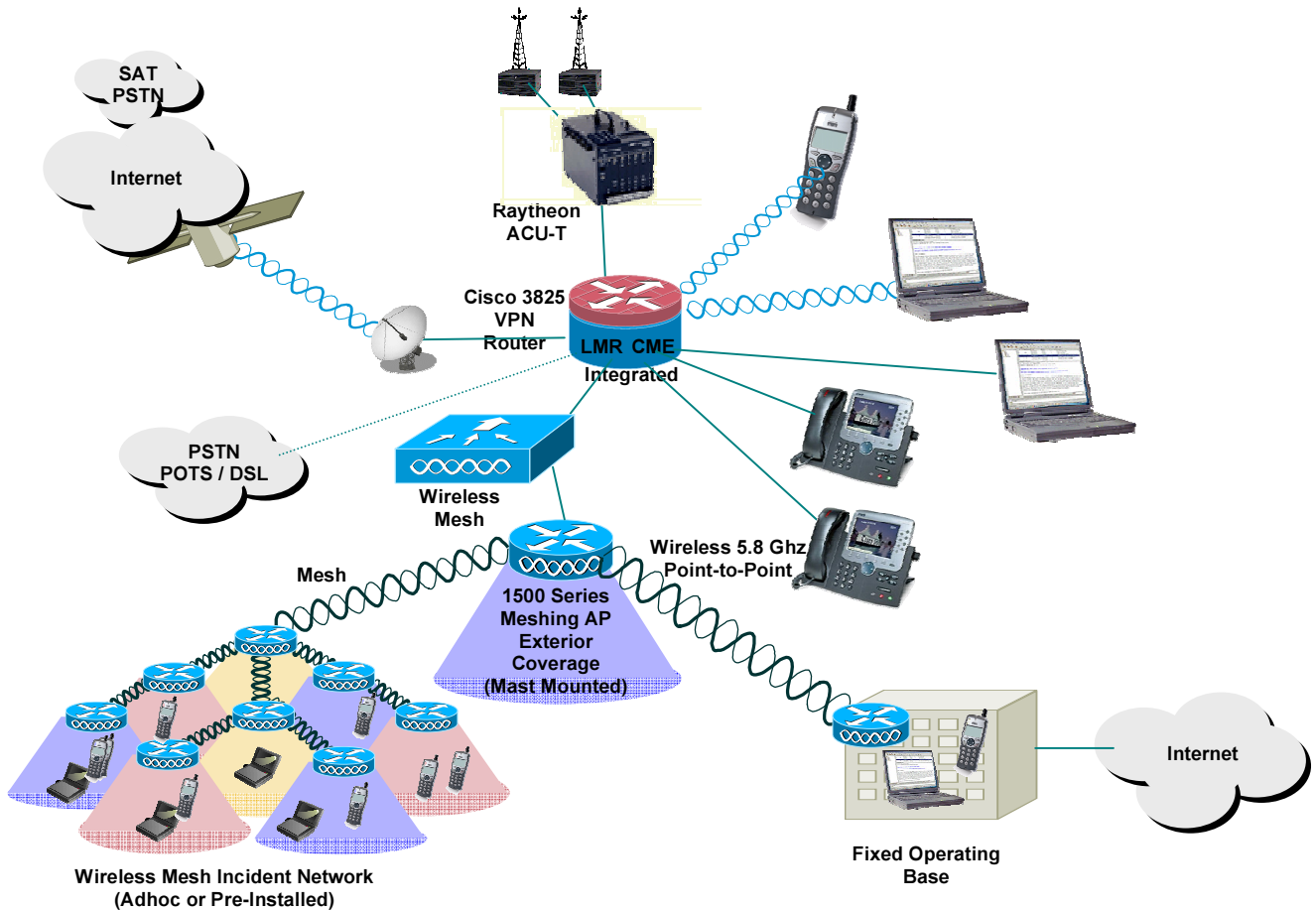
FIGURE 1. IP-ENABLED MOBILE COMMAND AND CONTROL DEPLOYMENT EXAMPLE



MC-IP™ MOBILE COMMAND CENTER

The MC-IP™ vehicle is configured with three racks of state-of-the-art radio, telecommunication, computer, video, and IP networks. Outbound and inbound communications facilitate fast and efficient decision-making and communications. A separate communicators position offers an environment ensuring information flow, while the Incident Commander works from the rear deck offering immersion into incident information flow for making real-time command and control decisions. Wired and Wireless Computer network connections, video teleconference, and radio and IP phone service offer capability for timely analysis, evaluation and communication of situational data.

FIGURE 2 MC-IP™ ARCHITECTURAL OVERVIEW



TRANSFORMING MOBILE COMMAND AND CONTROL

An IP-enabled tactical data, voice, and video communications solution provides critical communications to the extended community of assets that enable an effective response to any incident. Using the Cisco Gateway for Land Mobile Radio (LMR) featured in the Cisco Integrated Services Series Routers (ISR), the limits of traditional LMR systems are extended to include interoperability and extensibility over IP. Using IP-based incident command systems such as Cisco IPICS™, the LMR over IP functions allow for dispatch from COTS-based PC platforms as well as the ability to control on-demand conferencing between LMR, IP telephones, cellular, and push-to-talk networks (e.g. Nextel) regardless of where the communications must flow.

By interfacing the Cisco ISR Series Router with the Raytheon JPS ACU, a mobile command and control network can enhance interoperability, accommodating users located at an incident response site, positioned at an incident command center, connected to an extended intranet, or connected to a public telephony network such as cellular or standard telephone service.

FOR MORE INFORMATION

Cisco Systems is the worldwide leader in networking for the Internet, and this year celebrates 20 years of commitment to technology innovation, industry leadership, and corporate social responsibility. Information on Cisco can be found at <http://www.cisco.com>.

L-3 Communications, a Fortune 500 company, is a leading merchant supplier of components, systems, services, and support to the Department of Defense, Department of Homeland Security, selected U.S. government intelligence agencies, aerospace prime contractors, and commercial telecommunications and wireless manufactures. Information on L-3 Wolf Coach can be found at <http://www.wolfcoach.com>.

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