

Mobile Command Vehicles (MCVs)

Full Communications Interoperability for Mobile Command Vehicles

Mobile Command Vehicles are now standard equipment at disaster sites and major special events. These technologically advanced vehicles enable first responders and emergency services personnel to take their office resources with them, get close to the action, make decisions on the spot, and coordinate tasks among the agencies supporting the event or emergency.

The ARINC Wireless Interoperable Networks Solutions (AWINS™) architecture significantly enhances the capability of any MCV. Built on a standards-based platform using commercially available products, AWINS acts as a universal translator—converting all types of radio signals, phone signals, cellular transmissions, and network data into a common Voice-over-IP (VoIP) format. This allows MCVs to connect and inter-communicate on scene immediately, without re-training personnel or replacing existing equipment.

Inter-agency efforts require the highest levels of coordination: groups that do not work together on a day-to-day basis often struggle to achieve simple, concerted goals. Adding to this, several technical challenges must be overcome to facilitate the communications; it is often the case that each agency that responds will have a different radio technology, which prohibits direct agency-to-agency communication. AWINS overcomes these primary issues by enabling users of completely different radio manufacturers and frequency bands to talk to each other seamlessly. Ultra High Frequency (UHF), Very High Frequency (VHF), marine, aviation, 700 MHz, 800 MHz, and amateur bands can all talk as if everyone on the scene has the same type of radio. This includes the ability to extend communications to users without local radio coverage directly from the MCV.

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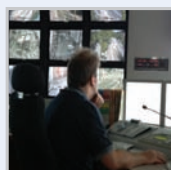


Benefits:

- ▶ Seamless, direct communications
- ▶ Uses existing radios
- ▶ Improved interagency coordination
- ▶ Fast and easy to deploy

Features:

- ▶ Includes traditional, VoIP, and mobile phones in all talk groups
- ▶ Inbound and outbound Public Switched Telephone Network (PSTN) access
- ▶ Satellite broadband access
- ▶ Emergency alert system
- ▶ Surveillance video support
- ▶ Video conferencing support
- ▶ Standards based



Dispatchers within the MCV use a simple graphical user interface (GUI) to configure interoperability among various radio users. A drag and drop console is used to configure conference or “talk group” calls. Multiple conferences can occur simultaneously so each group can talk independently and focus on their specific task, whether it’s perimeter security or an evacuation.

AWINS powers each workstation in the MCV with a VoIP phone and ruggedized laptop capable of interoperating with all other users. Only one mouse click is required to talk with any radio connected to the MCV. WiFi-enabled VoIP phones provide mobility and communications in and around the MCV for those users without radios or workstations.

By dialing a pre-configured phone number, mobile phone and land line users from any remote location can be included in talk groups, enabling anyone to communicate and interact with the response teams on the scene. Organizations with an internal Private Branch eXchange (PBX) can access AWINS remotely, and use local extension dialing plans from within the MCV just like they were in their office.

The MCV is also equipped with a broadband satellite link for access to both the Internet and private networks at broadband speeds. Direct access to internal applications allows users to function as if they were at their own desks. WiFi access to the data network enables users in and around the vehicle to take advantage of the network as well.

AWINS brings video capability to the MCV as well, enabling commanders to see what is happening without leaving their seats. Multiple cameras attached to the MCV antenna mast provide a live video feed that can also be sent to remote locations, such as an emergency management center via the satellite link. Video is also received via microwave from remote cameras, including those on helicopters.



AWINS-enabled Mobile Command Vehicle supports Katrina relief efforts.

Staff in the MCV have the option of using video conferencing to communicate with headquarters or emergency centers. The video is sent via Internet Protocol (IP) over the satellite link to the remote site. This can significantly increase coordination efforts with a central operations center.

An MCV provides mobile office space for on-scene commanders and emergency services personnel, giving them a comfortable and convenient place to coordinate activities. When powered by AWINS, an MCV truly becomes a mobile office, capable of greatly extending the capability of each organization participating in a major event.

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