Mesh Solutions

for Emergency Response Agencies

MOTOROLA

A Mesh Enabled Architecture (MEA) solution creates a robust, wireless broadband network with built-in location & tracking for emergency response agencies.

MEA networks deliver high performance, low cost broadband to fixed, portable and mobile devices – something fiber cannot match. Simple to deploy, a MEA solution leverages Motorola's patented, self-forming, self-healing wireless technology to support high-speed data, streaming video, voice messaging and asset tracking & location. Each device is a router/repeater for every other device in the network, creating a mesh architecture without the need for extensive infrastructure or towers.

With its patented position location technology, personnel and assets equipped with MEA devices can be tracked quickly and accurately. This is done without relying on GPS satellites, so location information can be determined in places that GPS signals cannot penetrate, like urban canyons or within buildings.

MEA networks can be rapidly deployed anywhere. This self-forming, self-healing technology enables first responders to instantly form a robust, broadband, wireless network at an incident without any network infrastructure. MEA wide area solutions also can be deployed to offer permanent mobile broadband coverage to metro, county or state-wide networks.

No other wireless solution offers the high bandwidth, self-forming, self-healing and position location capabilities that MEA technology provides to first responders.

Incident Communications

MEA technology enables broadband networks to form instantly, without any existing infrastructure. Every device actually becomes the network, forming a mesh of wireless broadband coverage at the scene of an incident.

In-Building Tracking & Location

Personnel can be tracked in real-time using built-in position location technology. Location data can be displayed automatically on any computer, eliminating voice chatter for location checks.

Replacement for Obsolete Systems

The MEA solution is the perfect replacement and upgrade for agencies still using outdated networks. It offers up to 50 times the data rate of cellular-based solutions for incident, metro and wide area deployments. This higher bandwidth is needed to support today's data intensive dispatch and incident reporting applications.

Automatic Vehicle Location (AVL)

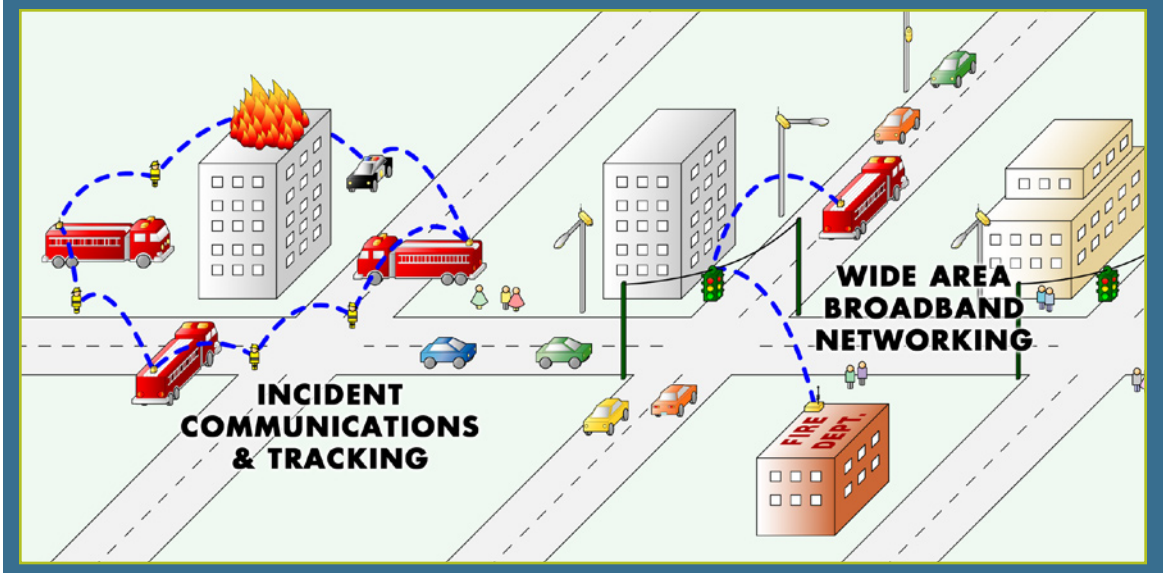
Wireless data connectivity and position location enable MEA devices to offer AVL functionality for a fraction of the cost of dedicated solutions. Two-way voice & video enhances communication and management capabilities beyond that of today's AVL platforms.

Telemetry

Sensor data from first responders can be wirelessly monitored to improve their safety and reduce injuries. Smoke, heat, gas, and other sensors can be deployed and wirelessly connected to a command center to provide an early warning of approaching danger.

Video Monitoring

Cameras can be quickly deployed to monitor the situation and progress of the response. Video from helicopters can be viewed at the incident, or remotely - increasing situational awareness and efficient resource deployment.



MEA Benefits for Emergency Response

Dedicated Network Infrastructure and Capacity
Unlike solutions that share public infrastructure and bandwidth, MEA networks can be deployed and operated solely for the use of first responders. MEA network users do not have to contend with civilians flooding the wireless system and impacting network availability or performance. Network performance is predictable and dependable, even in emergencies.

Robust and Survivable Networking
Mesh networks are inherently survivable. For this reason, the wired Internet employs a mesh topology. This architecture is highly robust because communication paths automatically route around points of failure, congestion and interference. Motorola's self-forming, self-healing technology can use portable infrastructure or end-user devices to fill in temporary coverage gaps.

Integrated Solution
Support for broadband data and position location in a single network simplifies deployment. MEA devices used by personnel in the wide area network can also form an infrastructureless incident communications system among themselves. This dual mode capability simplifies equipment provisioning and saves money.

Supports Agency & Application Interoperability
Self-forming technology and end-to-end IP protocol support enables agencies and applications to share the network – minimizing each agency's costs, while improving coverage, capacity and robustness for everyone.

Targeted Solutions for...

Fire and Emergency Medical Services
Timely and accurate information is critical when responding to an incident. A MEA network supports high bandwidth applications, including streaming video, email, and multimedia file transfers. Position location and tracking for vehicles and personnel is built-in. With support for both wide area and local, peer-to-peer networking, MEA network solutions are ideal for communicating with personnel en route to, and on-scene at an incident.

Disaster Response
When disasters strike, communications infrastructure can be damaged or destroyed when it is needed most. Motorola's self-forming, self-healing networks, coupled with distributed architecture, minimize the impact of a damaged transmitter. Disasters can also occur in remote areas, far from any communications network. MEA technology solves this dilemma by instantly forming broadband wireless networks on-site.

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