Mesh Solutions

for Law Enforcement Agencies

A Mesh Enabled Architecture (MEA) solution is a complete, IP-based, communications system designed to provide officers with an instant and reliable mobile broadband network.

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.

Broadband data rates, with burst speeds of up to 6 Mbps, support multimedia communications and bandwidth-intensive applications. High data rates also save time. File transfers, field reports, and database inquiries happen at desktop-like speeds. Unlike solutions based on sharing the public cellular network, this capacity is dedicated to public safety users.

MEA networks are self-forming and self-healing, making them quicker and less expensive to deploy than many other wireless solutions. Personnel can instantly form wireless broadband networks among themselves at an incident. No network infrastructure is needed.

Public safety agencies must look beyond today's cellular data limitations. Motorola has created a high performance and robust wireless solution to help these agencies fulfill their expanding roles.

Wide Area Data Connectivity
A MEA network is the perfect solution for agencies looking for a replacement for an aging network. It offers up to 50 times the data rate of cellular solutions, so it can support today's new data-intensive dispatch and incident reporting applications.

Incident Communications
MEA technology enables broadband networks to form instantly, without requiring existing infrastructure. User devices actually become the network, forming a mesh of wireless broadband coverage on-site.

Asset Tracking and Position Location
Mesh enabled law enforcement vehicles can provide continuous updates on location, route taken to incident sites, distance from a location and estimated time of arrival. Other assets and personnel, such as bomb disposal robots or K-9 units, can also be tracked in real-time.

In-Field Report Submission
Officers can submit reports wirelessly, without being anchored to tiny "hot spots" as with Wi-Fi based approaches. Wide area and high-bandwidth connectivity gives access where it's needed most – on the way to, or at the scene of an incident.

Video Monitoring
Video can be streamed to and from officers in the field, including video feeds from helicopters. Mesh enabled video cameras can be deployed quickly to monitor highways, public buildings and other at-risk targets.

Desktop Applications In the Field
Emails with attachments, database look-ups, instant messaging and high-speed file transfer are a few of the applications that become practical with MEA broadband data throughput rates.

WIDE AREA BROADBAND NETWORKING

BROADBAND INCIDENT COMMUNICATIONS
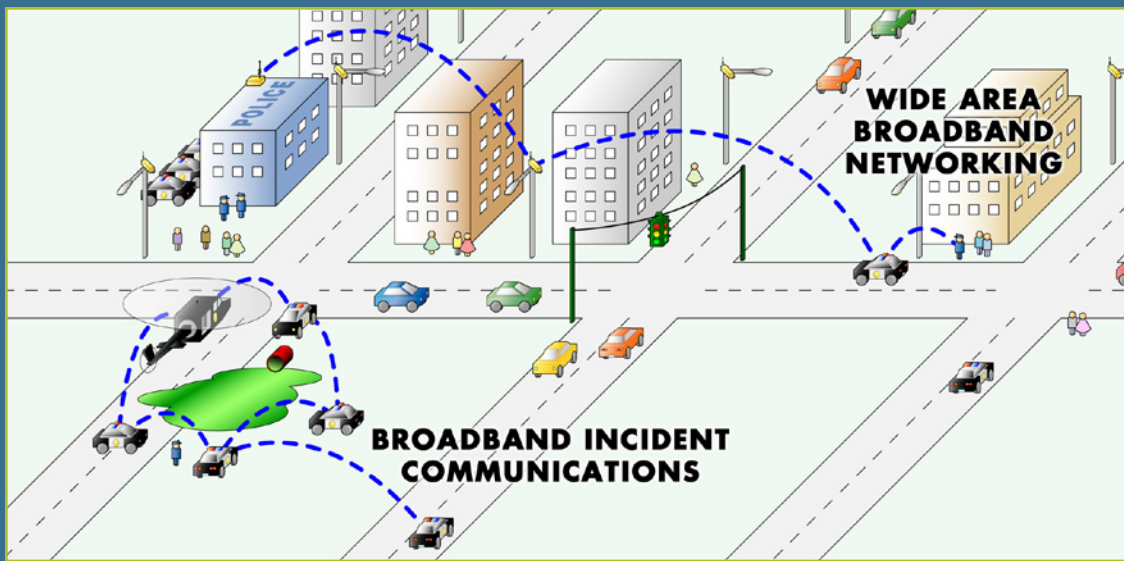
MEA Benefits for Law Enforcement

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 law enforcement personnel. 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.

Instant Tactical Networking
MEA technology provides SWAT and other specialized units with an instantly deployable tactical communications network. Video from surveillance cameras and helicopters can be sent to active ground units to improve situational awareness. These units can also communicate with remote command centers through the wide area MEA network, if available.

Supports Agency & Application Interoperability
Self-forming technology with 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...

Local and Federal Law Enforcement
Protecting the public on a local and federal level requires dependable, effective and immediate communications. Today's cellular networks limit the amount and richness of information that can be transmitted to critical assets. A MEA network's high data rate ensures that split-second decisions can be made accurately and reliably by keeping personnel well informed.

Homeland Security
Defending our country from attack is a top priority today. The loss of communications that may accompany such an event can delay or cripple an effective response. MEA technology provides immediate and reliable mobile broadband networks where infrastructure has been destroyed or never existed. Inherent position location capabilities allow for real-time tracking of assets and personnel in these situations. It also helps increase safety and efficiency for those tasked with responding to such threats.