Mesh Enabled Solutions for INTELLIGENT TRANSPORTATION Systems

A Mesh Enabled Architecture (MEA) solution links all the elements of an Intelligent Transportation System (ITS) into a robust wireless broadband network. MEA networks deliver high performance, low cost broadband to fixed, portable and mobile devices - something fiber can't match.

Simple to deploy, a MEA solution leverages Motorola' patented, self-forming, self-healing wireless technology. This enables each device to act as a router/repeater for every other device in the network, creating a meshed architecture without extensive infrastructure or towers.

End-to-end IP protocol support and broadband data rates create a network that can be used with Internet ready devices or applications. High bandwidth applications, like video monitoring, can now be networked wirelessly.

Motorola provides on of the only wireless broadband solutions with built-in position location (+/-10m under 1 sec). Devices and users can be located and tracked in real-time, without relying on costly GPS receivers.

Motorola gives ITS providers a robust, towerless, and cost-effective wireless broadband solution. The ITS network can also provide Internet access to field personnel on their laptops or Mobile Data Terminals.

APPLICATIONS

Variable Message Signs • Instant wireless network connectivity saves deployment time and expense. Self-forming network technology simplifies both permanent and temporary sign placement.

Adaptive Traffic Signals • No need to run fiber or wire to every location. Each mesh enabled device acts as a router/repeater to create robust wireless infrastructure.

Surveillance Video Cameras • Mesh enabled video cameras can be quickly deployed to monitor construction sites, traffic congestion points, or at risk public infrastructure assets.

Traffic & Environmental Sensors • Wireless connectivity provides the flexibility to deploy traffic counters, smoke/fog monitors and other devices where cable/fiber is too expensive or unavailable.

Emergency Call Boxes • Mesh enabled Call Boxes can provide wireless voice and data access for the public, DOT or municipal workers. Since communications hop through each station, cell towers are not needed.

Real-Time Fleet Management • Vehicles can be tracked, located and communicated with from a single wireless network. Fleet managers can call up graphical/map views of all users in the network.
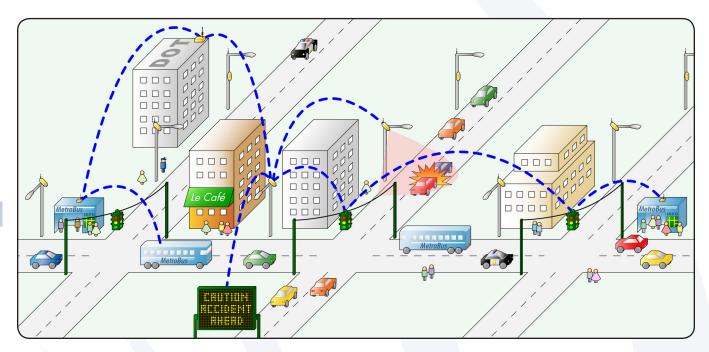
Probe Vehicles • Mesh enabled vehicles can be utilized as probes that relay real-time traffic information back to the traffic control center.

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

Field Staff Communications • Workers can send and receive reports, check databases or access other applications while still in the field.

Wirelessly Connecting the DOTs....

MOTOROLA

MESH ENABLED ARCHITECTURE

MEA BENEFITS

More Cost-Effective Than Fiber or Cellular

By leveraging low cost, high bandwidth infrastructure, a MEA wireless solution can be deployed quickly and economically. It offers high data rates, and is more cost-effective than cellular, since there are no high monthly fees for each wireless device or user.

Leverages License-Free Spectrum

MEA networks operate entirely in license-free frequency bands. Multi-Hopping® technology reuses this spectrum over and over to create robust broadband data connections - even in high-density deployments.

Integrated Solution

Support for data, video, voice and position location in a single network simplifies deployment and insures support for a wide range of devices and applications. Unlike point-to-point wireless products, MEA technology supports mobile devices and users. It offers the only complete wireless broadband solutions for today's and tomorrow's ITS networks.

Supports Telematics Applications

The same MEA network deployed to support ITS infrastructure automatically creates a wireless network able to support connectivity to mobile users. DOT and other field staff can have instant access to email, databases, position location and even video feeds from anywhere in the network.

TARGETED SOLUTIONS FOR...

DOTs

Wirelessly interconnect ITS infrastructure for a fraction of the cost of fiber. Motorola's solutions can be rapidly deployed with minimal engineering due to robust self-forming, self-healing MEA networking technology.

Transit Agencies

In-vehicle security video monitoring, high bandwidth data and voice connectivity and Automated Vehicle Location (AVL) are just a few of the applications supported. Rider services, like wireless Internet access and route/stop announcements, are also supported.

Traffic Engineers

With its wide area network coverage and built-in position location, MEA technology is the ideal tool for creating real-time views of traffic flows. Buses or other municipal vehicles can be turned into probe vehicles. The same MEA network also offers two-way mobile broadband connectivity to field staff.

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