

Telemedicine



Time is of the essence when a human life is on the line. Reliable mobile wireless communications can be an invaluable resource for medical workers, assuring time critical information exchange in an emergency.

BENEFITS

- ❖ Doctors can “see” patients in transit enabling the hospital to be better prepared
- ❖ In-field assessment speeds treatment of critical patients
- ❖ In-field diagnosis and service of non-emergencies improves resource utilization
- ❖ On demand access to patient records improves patient care

Saving Lives and Improving Patient Care

Emergency medical services today commonly rely on outdated communication channels to relay information to the hospital while they are en route. Telemedicine delivers a combination of critical video and telemetry data exchange between the mobile emergency staff and medical professionals in the hospital, enabling more accurate assessment of incoming trauma patients. The ability to actually “see” a patient before they arrive plus having access to other key information, saves valuable time which can make a tremendous difference in the survival and recovery of trauma patients. Telemedicine is the next evolutionary step in improving emergency medical responsiveness.

Key benefits of Telemedicine over a Tropos wireless IP broadband network

- ❖ Real time video and telemetry information shared with hospital staff while patient is en route enabling faster treatment when the patient arrives at the hospital
- ❖ Non-emergency situations can be identified in the field; doctor consultation can take place using video, negating an emergency room visit, improving efficiencies and saving costs
- ❖ Access to patient information in the field, such as drugs, allergies, patient care reports, insurance verification, improving patient care and safety
- ❖ Teleconference with multiple doctors and medical experts to help in assessment of critical patients while they are in transit saves time and expedites treatment

“With ER-Link, doctors at the Medical Center can get patient information as soon as they’re en route and assist medics, if necessary, on how to treat them. Minutes count, so any tool that sends better information, faster, to the hospital and permits evaluation of a patient’s condition is an enormous asset.”

Dave Ridings
Tucson Assistant Fire Chief

“Seeing the trauma patient en route via ER-Link allows the telemetry intermediary nurse to decide which level of trauma response is needed”

Doctor Terence Valenzuela
Emergency Physician, University Medical Center,
and Medical Director of the Tucson Fire Department



Tropos MetroMesh Solution Partners

- ❖ **Mobile Telemedicine**
General Devices

Tropos Technology Differentiators

- ❖ **Performance** – Multi-megabit capacity, low latency
- ❖ **Security** – Layered, military-grade security; VPN support
- ❖ **Mobility** – Seamless roaming across entire coverage area
- ❖ **Reliability** – Mesh architecture creates redundant paths; patented routing algorithms increase resiliency
- ❖ **Scalability** – Can be used across 10s, 100s, and 1000s of square miles
- ❖ **Management** – Most comprehensive configuration, analysis, and reporting

Multi-use Network

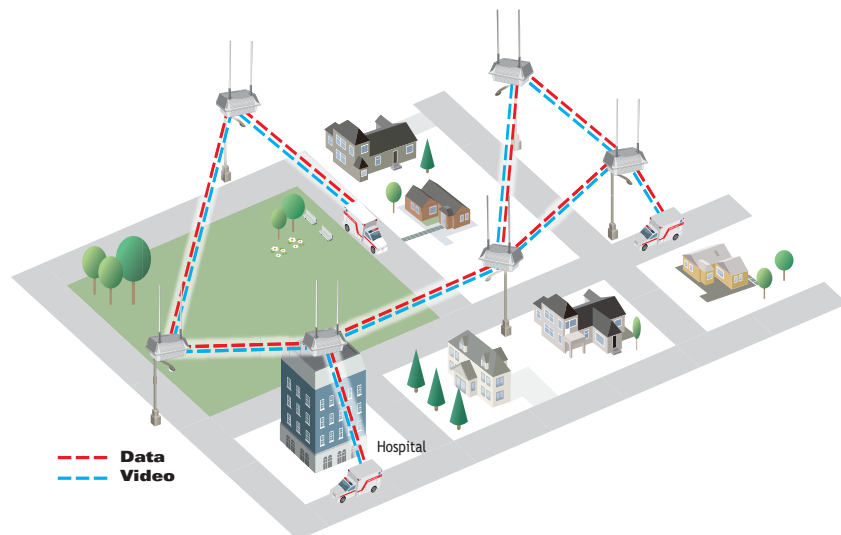
Tropos’ wireless broadband network solutions provide a reliable and secure foundation for delivery of multiple simultaneous applications on the same cost-effective infrastructure. In addition to the telemedicine application, a single network can be designed to support a range of municipal services.

- ❖ **Automated utility meter reading** — Remote monitoring of water, electrical and gas meters for fast alert to problems as well as accurate meter reading in real-time
- ❖ **Mobile workforce** — Fast, easy access to records and filing of reports from anywhere around town, improving efficiencies of utility workers, building inspectors, animal control, etc.
- ❖ **Intelligent transportation systems** — Replaces costly leased lines to traffic signals; offers the bandwidth to support signal management, video, red light runner monitoring, etc.

Telemedicine Building Blocks

The Tropos wireless mesh network is installed outdoors on street furniture such as light poles and provides Wi-Fi coverage over the desired area. Tropos mobile nodes placed in emergency vehicles connect seamlessly to the wireless network outdoors, extending the coverage area of the network. Unique software intelligence embedded in Tropos routers ensure constant connectivity even as the vehicles are in motion. A mobile telemedicine application connects the patient telemetry system and the live video in the ambulance with the wireless network, enabling remote visual analysis by medical staff in the hospital.

Tropos Metro-Scale Mobile Telemedicine Network



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GREENER, SAFER, SMARTER