

Tropos – Helping Communities Improve Water Systems and Save Money

An Intelligent Water Infrastructure Improves Water Conservation

GREENER, SAFER, SMARTER

Investment in our country's water infrastructure is one of the key elements of the American Recovery and Reinvestment Act of 2009 addresses. As a limited natural resource it is vital that we conserve and protect water supplies in our communities for current and future generations.

To improve the efficiencies of our water infrastructure, a bidirectional end-to-end communications infrastructure is needed that enables real-time monitoring, management and control of water (drinking water, potable water and wastewater). Today, utilities typically experience water losses of 10-30% from day-to-day operations; such unaccounted-for water directly translates to not only waste but lost revenue. The ability to identify and pinpoint the location of leaks and unauthorized connections can decrease cost and reduce the amount of water that must be pumped to meet demand. Metering is a first step with monitoring occurring at both the source (plant operations, water distribution systems, pump stations, etc.) and service connections (industrial, commercial, residential).

A second step towards improving water conservation is enabling remote control of Supervisory Control And Data Acquisition (SCADA) systems, reducing reaction time to react to changes and further improving conservation efforts. Many SCADA applications today allow for remote monitoring but not remote control.

WATER COMMUNICATIONS INFRASTRUCTURE APPLICATIONS AND BENEFITS

❖ Automated Meter Reading (AMR)

- Reduces water loss, operational costs and carbon footprint
- Encourages conservation
- Reduction in energy used for heating water (32% of California's natural gas)*

❖ SCADA

- Visibility and control of SCADA systems
- Centralized video security
- Mobile worker communications
- Reduction in energy used to process, treat, collect, and distribute water (19% of California's electric energy load)*

❖ Greener

- Reduces water pollution
- Improves wildlife habitat

*California Energy Commission (Integrated Policy Report)

About Tropos

Tropos is the market leader in wireless IP broadband mesh networks used by cities to create greener, safer, smarter communities. Our solution provides a single, secure, resilient, standards-based network infrastructure upon which to run hundreds of municipal services and applications that increase efficiencies while reducing costs. The network is controlled by a single, carrier-class management system and can scale to cover from tens to hundreds of square miles. Tropos has more than 38,000 routers installed today at 500 customer locations in over 30 countries, and holds 14 patents with an additional 50 pending.



Examples of cities Using a Tropos Infrastructure for Water and Other Municipal Services

❖ Rock Hill Utilities (Rock Hill, South Carolina)

- Centralized water and electric meter reading; payback period: 7-8 years
- Increased utility billing accuracy across 4,000 meters
- Provides communication for mobile utility workers – real time updates, reports, scheduling, ...
- Wireless broadband network securely used by other municipal departments including: police, fire

❖ Corpus Christi, Texas

- Real-time water and gas meter reading - \$1.5M cost savings over 5 years
- Mobile utility workers use for communications, improving efficiencies
- Improved customer service
- Wireless broadband network securely used by other municipal departments including: city ops, schools, public safety



Why should I consider a wireless mesh when customer meters are read manually today?

Real-time monitoring of customers' water meters provides benefits not possible with manual meter reading.

- Fast identification and pinpointing the location of water leaks or other potential water loss problems enabling faster response.
- Usage-based fees, for example during a drought, the water utility may mandate no watering outdoors on certain days – such usage can be monitored centrally.
- Centralized monitoring reduces operational costs and emissions with fewer people required in the field

What is the Return on Investment (ROI) of this type of network?

The ROI on a Tropos mesh is dependant on the overall network architecture chosen and the value created by the applications running over the network. For a single application, the breakeven can be in the 5-7 year range, but the ROI can be 1-3 years by adding multiple applications over time.

What additional benefits can a Tropos wireless broadband mesh network provide?

- Single standards-based IP-based wireless broadband infrastructure securely leveraged for use by all city departments reducing capital and operational costs
- Scalable as a community evolves and needs change, nodes are easily added to expand coverage area and capacity
- Multi-layered security and support for some of the strongest security standards including IEEE 802.11i and FIPS 140-2 in addition to user authentication, access control, encryption and data confidentiality and physical security
- A single central carrier-class management and monitoring system
- Enables delivery of improved services and new applications increasing quality of municipal services provided to the community
- Proven ROI, proven solution for modernizing the communication infrastructure of cities across America

CONTACT US TODAY TO FIND OUT ABOUT BUILDING AN INTELLIGENT WATER INFRASTRUCTURE AND CREATING A GREENER, SAFER, SMARTER COMMUNITY



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