Case Study: Lat–Lon

Wireless GPS Tracking & Security Monitoring Protects Against Hazardous Chemical Accidents & Homeland Security Threats

The Challenge

Enhancing the security of hazardous freight and ensuring compliance with Homeland Security's Transportation Security Administration mandate that all trains carrying chemicals capable of creating a toxic inhalation condition are equipped with on-board safety monitoring systems.

The Solution

Lat-Lon's GPS tracking, monitoring and image capture solution powered by the KORE network for superior coverage, data speeds and connectivity. KORE features a network architecture designed for continuous network services delivery with multiple forms of redundancy built-in, as a contingency against man-made and natural disasters.

The Results

By deploying this cellular-based GPS solution, Lat-Lon's customers achieved:

- DHS/TSA compliance for TIH shipments

- Increased community safety and reduced risk exposure in the event of an incident

- Improved fleet visibility and logistics providing more shipping capacity and efficiency

- Decreased fleet maintenance expenses associated with mishandled data from rail car accelerometer sensors

- Eliminated erroneous route charges with accurate GPS route histories

Background

Lat-Lon specializes in developing and installing both solar and electric powered GPS solutions designed to monitor and report temperature conditions, detect impact situations and optimize fleet routing. Lat-Lon delivers these solutions for trucking fleets, commercial rail fleets and barge fleets throughout North America and globally.

Solution Overview

Lat-Lon's onboard rail monitoring device is specifically designed for monitoring high capacity trains carrying Toxic Inhalation Hazard (TIH) chemicals. Installing TIH monitoring systems has been mandated by the Department of Homeland Security's Transportation Security Administration (TSA). All rail-borne vehicles transporting hazardous freight are required to have solutions in place or face steep fines of $10,000 per day, per security infraction. Lat-Lon's patented, solar-powered GPS system can provide real-time location reports of vehicles and will automatically alert shippers that the tank car has entered or exited a "high threat urban area" (HTUA) so that appropriate additional security measures can be taken. The system monitors security and the condition of the tank car with an onboard camera which can capture visual evidence related to the security of the hazardous freight. Pictures are taken and routed wirelessly whenever a hatch is opened or if an impact beyond a certain predetermined threshold is breached.

> "Partnering early on with M2M specialists KORE Wireless allowed us to get these solutions to market quickly and with the large and ubiquitous service footprint that our customers expect and demand."
>
> – Dave Baker,
> President, Lat-Lon LLC

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The information supplied by the Lat-Lon solution provides increased security and safety by monitoring numerous connection points and alerting customers of any activity related to the security of the rail car. For example, in the case of a train derailment for a car transporting chlorine gas, knowledge of the car's orientation and whether any hatches have been compromised is invaluable to first responders. If a car is being tampered with, then the system will display still images of the unauthorized intruders, allowing customers to route them immediately to law enforcement and security personnel. Images can be taken during the night as well as by day, due to the camera's infrared capabilities which allow photos to be taken in complete darkness without alerting perpetrators.

Key Results

By leveraging the KORE Network's IoT services, Lat-Lon achieved:
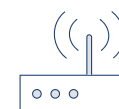
- A true wireless broadband connection to freight rail cars with the ability to send location updates every few minutes, capture and send pictures and upload complete firmware images to the units in real time

- Competitive pricing that gives Lat-Lon a decided advantage over other communication pathways

- Excellent up-time statistics with over 99.98% availability

Lat-Lon Delivers

- Proven and patented technology

- Continual innovation including new product releases and improved features

- Global reach

- Lower total cost of ownership and rapid return on investment

- Customer service expertise in supporting transportation, communications, data management and manufacturing

KORE Delivers

- IoT expertise and strong service delivery track record

- Dual VPN connections with auto failover should one go down

- Two, fully geo redundant data centers powered by Cisco with automatic failover and self-healing capabilities

- Multiple, redundant connections to the largest carriers across the globe.

100% True Global Coverage

M2M Expertise and Strong Service Delivery Track Record

Multiple, Redundant Connections

Automatic Failover and Self-Healing Capabilities

About KORE

KORE provides the people, expertise and technology to support the many visions of the IoT, from the Inspiration of Things to the Innovation of Things to the Internet of Things. Founded in 2003, KORE quickly rose to become the world's largest managed network services provider specializing in Internet of Things (IoT) and Machine to Machine (M2M) communications. Today, KORE is a global leader in software service and platforms that power the IoT, with millions of active on-network units. KORE is the brand powering other leading brands, including some of the world's largest enterprise customers. KORE's singular customer-centric focus is to identify and develop solutions that help clients realize IoT innovations and accelerate time-to-market schedules. KORE has over 350 people who serve customers in 110 countries, empowering new business models and opportunities to monetize the IoT. KORE: the people powering IoT.

About Lat Lon

Lat-Lon, a BSM Technologies company, provides wireless GPS tracking and monitoring solutions for mobile assets in many industries including rail, trucking, marine, intermodal, and direct to manufacturers. Devices are available for both powered and non-powered assets, with custom sensor options to accommodate a variety of applications. Real-time data can be viewed using Lat-Lon's web-based fleet management reporting and mapping tools. Since 1999, Lat-Lon has established itself as an innovator in monitoring technology, data analytics, and customer service.

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