



Web-to-wireless remote control.

Case Study on Lat-Lon

"On-Track"

Perishable has a broad definition in the context of rail shipping. Literally perishable are fruits and vegetable, both of which are highly susceptible to temperature fluctuation. Figuratively "perishable" are inorganic items such as cars, chemistry and even rolls of paper. Autos often get badly dinged when transported over long distances, chemistry is heat and time sensitive and paper rolls can get skewed off center when banged around in a railcar.

Back in 2000 the Union Pacific (UP) and CSX Railroads introduced a guaranteed perishable goods service called "Express Lane." The service ran between major U.S. cities, and substantially increased the perishable freight business for both companies. Faced with burgeoning demand, UP decided to purchase 500 new refrigerator cars (reefers), and refurbish more than 1000 in its existing fleet. The rest of the reefer fleet, consisting of some 3000 cars built in the 1960s and 1970s, would be incrementally renovated or replaced over a period of two to five years.

This presented UP with a problem. The older cars lacked remote monitoring capability which the company desired in order to provide the upgraded product intended for the Express Lane service. Some method was needed to keep an eye on the freight in the older cars until they could be transitioned, specifically a technology that would monitor temperature variations potentially damaging to traveling produce. The right solution would also track refrigerator functionality, and provide real time alarm information in the event of shutdown. The solution was "RailRider".

"Union Pacific installed 2400 RailRider monitors the latter part of 2002, and early in 2003 in a company-wide effort to reduce claims for refrigerated freight shipments and improve customer satisfaction," says UP Damage Prevention Engineer, Don Nelson. "The technology enabled us to react promptly when a malfunction occurred. This has been instrumental in helping us achieve

the mission of Express Lane. Claims have gone down, and customer satisfaction has improved. Our customers want the technology.”

RailRider is the brainchild of Lat-Lon, LLC, a provider of hardened, weather-proof industrial wireless monitoring equipment in Sheridan, Colorado. Small and largely, self-contained, RailRider is attached directly to the railcar where it measures everything from temperature fluctuation to excessive vibration and mechanical malfunction. The data collected is transmitted wirelessly via Aeris MicroBurst, which broadcasts over the cellular network. The information arrives at Lat-Lon’s fleet management system for decoding, and is then forwarded to UP’s IT department.

“MicroBurst is an essential component of RailRider,” says Lat-Lon national sales manager, John Feltz. “UP needed ubiquity across the entire North American continent. It also needed good connectivity because valuable freight was at stake, and long delays not an option. Finally, the technology had to be economical since railroads are almost always under budgetary constraint. MicroBurst provided all of that.”

Thanks to mobile wireless monitoring technology more freight is arriving at its destination none the worse for wear despite journeys encompassing thousands of miles. For UP that was just what the doctor ordered.