

Following a winding path

Trucking company's quest for quality results in a Web-based software company serving 330 carriers

The marriage of business and technology often wanders like a winding path. Take for example, Riverside Service Corp., a fourth-generation family owned and operated steel-hauling operation with 50 trucks based in Buffalo, N.Y. In 1998, the company was eager to attain the next level of efficiency and professionalism that ISO certification offered, according to Brendan Staub, who at the time was a principal in the Riverside business.

That's when a consultant named Colin Warkentin approached the company with a business proposition to help Riverside achieve ISO certification.

With these modest goals, Staub and Warkentin embarked on a journey that came to a head in late 1999 with the incorporation of Turnpike Global Technologies, a Web-based software devel-

opment company that developed one of the earliest electronic on board recorders (EOBR) in the industry.

During the hours the two men spent evaluating internal processes and looking for areas of inefficiency, the benefits of automating the International Fuel Tax Agreement (IFTA) and hours of service (HOS) became apparent.

Warkentin, who also happened to be a software engineer, looked at all the required procedures to achieve compliance for IFTA and HOS and knew there had to be a way to apply technology to automate these largely manual processes.

"From the start we knew we had to develop something that would be easy to deploy and simple to cost justify," says Staub. "We started with a 'managed service' approach where we would deliver our applications using only an Internet browser. We wanted to make it so simple to deploy and use that our clients would be able to automate their manual processes immediately upon putting our technology in their vehicles."

Turnpike Global Technologies developed Route Tracker, an early EOBR that connects directly into the J1708 or OBDII port of medium- and heavy-duty vehicles. It also integrated a Bluetooth transceiver into Route Tracker to deliver the data back to the office without the driver having to become involved - or even be aware - and with no communication costs, Staub says.

Route Tracker connects directly to the engine diagnostic port of medium- and heavy-duty trucks to collect and report on operational statistics, GPS position and to automate regulatory/compliance information, such as IFTA, IRP and HOS.

Route Tracker is particularly well suited for the large national fleet market as it is designed to interact with various handheld or in-cab devices using Bluetooth as a wireless in-cab communication medium, Staub says. For example, Route Tracker can co-exist and share data with the client's handheld carried by drivers or fixed in-cab device. This allows one EOBR device to be deployed nationally but with region or even vehicle-specific handheld devices.

Route Tracker can transmit via Bluetooth or wide area enabled (GPRS cell, PDA etc.) handheld or through an in-cab device, depending upon business requirements and region/fleet specific requirements. This information is then made available via browser-based reporting infrastructure for views at the depot, fleet, region or country level.

"Providing the depot level manager access to the same information as the regional or corporate level manager, but with restrictions to view only his/her fleet, is a tremendous advantage to the organization," Staub says. "It allows goals and objectives to be set corporately but easily managed and acted upon at the depot level."

Simple wireless connectivity using Bluetooth to an in-cab handheld or fixed terminal that is either Windows Mobile or Java enabled allows for a flexible application infrastructure connected directly to the EOBR.

"Integrating the vehicle telematics information along with the operational/route information inputted by the driver provides a very detailed 'picture' of exactly what that vehicle and driver are doing when they are in depot or on route," Staub says. "The combination of this data also is critical and required for adherence to regulatory and compliance requirements, such as IFTA and HOS that require documentation of not only what the driver says he was doing, but what the vehicle was actually doing as well."



As an example, prior to the driver performing his pre-trip inspection, he uses his handheld to declare his driver ID and what truck he is going to be driving. His handheld device will then lock on to the Route Tracker in the cab of the truck via Bluetooth to determine the current odometer reading from the engine and to verify that it is not in motion. This data will then be logged along with the pre-trip inspection information and the driver's declaration of duty status to automate both HOS and calculate IFTA miles throughout the trip.

A running log of this information (odometer, starts, stops, duty status changes, notes, etc.) is kept automatically on the handheld and stored for delivery upon return to the depot or sent wirelessly via cellular if the information is required in real time, Staub says. If a driver is pulled over for inspection, he or she can provide his or her handheld to the roadside inspector for log verification using the on-screen display or a Bluetooth printer.

"Removing the burden of manual data collection and verification from the driver and the back-office administration personnel by automating the collection, delivery and calculation of IFTA and HOS eliminates mounds of paper and leaves virtually no room for errors," Staub says. "The benefits are obvious from a cost, accuracy and efficiency perspective, and the Route Tracker EOBR is easy to deploy and use."

The modest goal of helping a trucking company take its next ISO step resulted in a new technology company that now serves approximately 330 carriers comprising more than 20,000 vehicles. These carriers include large national fleets and small carriers with as few as two trucks. 13