



Integration Drives Paperless Environment, Efficiency Up and Cost Out

Dispatch, routing and transportation management software applications each offer standalone capabilities that facilitate back-office functions. However, when integrated with GPS-based mobile communications, a paperless and automated environment turbo streamlines workflow, making the back office and drivers more efficient, and reduces fleet operating costs.

What is an Integrated Environment?

Before discussing specific advantages, let's take a high-level look at the mechanics of an integrated environment. Orders are automatically entered into the software application using EDI or a file feed, or they are manually entered. The software sends load assignments or route information to the driver using mobile communications with intelligent in-cab devices, such as cellular phones or onboard computers. The device can provide GPS tracking information to the back-end software, sometimes used for displaying a fleet's location to the dispatcher, plotting actual route information on a map or alerting the back-office to potential late arrivals.

Drivers can send data to back-end software—key details about pickups or deliveries such as arrival and departure times, and load details such as bill of lading number, weight or pieces. This information can be updated in real time and displayed on screens that are monitored by the back office. Mobile devices with geofencing automate and ease the driver's responsibility at pickup and delivery.

Operations managers appreciate how easy planning is with electronic driver log data integrated into their system. Integrated engine data—over and excess speed, long idle, short idle, PTO time, starting and ending odometer, and fuel consumed—is helpful in assessing driver and vehicle performance.

Bottom line is that integration creates a centralized, paperless environment that relieves drivers and the back-office of handling paper and initiating phone calls, and provides a solid foundation for efficient decision making and management by exception.

Visual Display Automates Route Revision

Working with mobile communications devices, transportation management applications can create a graphical map on which GPS tracking for a fleet or a group of vehicles is displayed. This enables dispatch to view exactly where all vehicles are at any given time.

This makes it extremely easy for dispatch to locate vehicles that are closest to an address or stop for picking up unplanned loads on the fly—agility that is a real competitive asset. When a customer has a sudden, immediate need, the nearest truck can swing by for a pickup instead of having to wait until the next day. Dispatch plugs in the new information and the routing application automatically notifies the driver about the revision. Real-time route updating is also helpful in avoiding unplanned delays caused by construction, accidents, etc.

Real-time Route Updating Keeps Customers and Dispatch Informed

Real-time route updating is extremely helpful in meeting customer service commitments by automatically adding or reassigning stops as needed. Integration with GPS data confirms arrivals and updates ETA's for the remaining stops on the driver's route. The addition of exception notification enables the system to automatically notify customers about changes that exceed programmed thresholds.

The display of planned vs. actual route on a map keeps dispatch informed about potential delivery delays so they can alert customers. An informed customer can prepare for delivery, which minimizes detention time. Customers who have direct visibility and tracking perceive this as a premium service.

Planned vs. actual route visibility alerts out-of-route situations or unplanned stops that may indicate potential threats to safety and assets being transported. When GPS-based mapping and routing are integrated, the system captures service times at each stop, alerting dispatch of detention times that exceed normal times. Contract violations may warrant additional billing.

Obviously, the more robust applications provide additional valuable information. Some routing applications provide satellite maps, traffic information, and the ability to highlight speeding violations in conjunction with a mapped view of a route.

Messaging Promotes Easier Communication and Shorter Accounting Cycle

Transportation management systems with messaging functionality create an environment of efficient communication for dispatch and drivers. Drivers are able to retrieve their load instructions or routes via their in-cab mobile communication devices, rather than relying on printed



instructions picked up at the terminal before starting their day. Dispatch-to-driver calls are minimized throughout the day with instructions sent to the driver for viewing upon arrival at pick-up and delivery locations.

In addition, drivers can skip the paperwork and key billing information, like the bill of lading, into a custom form in the mobile communications device and send it to the back office before leaving their stop. This real-time update immediately initiates the billing process before the driver even reaches the terminal. The back-office sees all updated information on designated screens in the system.

Geofencing Automates, Simplifies In-Cab Data Entry

Mobile communications devices with geofencing collect and report information about vehicle status and location, associating latitude and longitude with each stop throughout the route. A geofence is essentially the radius (or “fence”) around a designated point that triggers certain events from a mobile communications device, which are reported to the system. Automating the relay of arrival and departure date/time provides accurate, timely information to the back-office system without data-entry by the driver.

Without automated information flow, load status must be updated manually—either by the driver calling in and the dispatcher updating the software or by the driver filling out a form message and keying in the arrival and departure information at each stop. This manual system is vulnerable to driver and dispatch errors.

Centralized Electronic Driver Log Information Ensures Planning Accuracy and HOS Compliance

Integration of electronic driver log data with the transportation management system provides dispatchers and load planners the information they need without having to reference multiple systems. Dispatchers can see a driver’s available hours right in the dispatch application, along with other critical load and driver information. Therefore, loads can be assigned based on accurate driver availability information, which leads to better on-time performance as well as HOS compliance.

“With CSA 2010 coming down the pike and our over-the-road fleet works in the U.S., an electronic log system is the best way to comply with HOS regulations.”

- Rick Miller, Senior VP Operations, MacKinnon Transport

Engine and Driver Performance Data Integrated with a Scorecard or Dashboard System Drives Predictive Analysis

When engine and driver performance data are integrated with a driver dashboard or scorecard, managers can more easily determine a driver’s current and future driving

behavior. Over speed, RPM, excess speed, fuel consumption, long and short idle are valuable in identifying potential unsafe drivers that could burden the company with a costly accident. The new, more stringent Safety Measurement System that is part of CSA 2010 makes it even more important for trucking firms to have this information in order to stay off of FMCSA’s expanding radar for investigations.

Engine and driver performance data is also critical for identifying opportunities to gain greater ROI by increasing MPG. Information reported by a mobile communications device enables the system to calculate and report MPG. Management can provide incentives for performance that exceeds objectives for idle times and MPG. For underperformance, managers can work with drivers by creating and monitoring development plans.

Automated Fuel Tax Reporting Saves Time, Ensures Compliance

Fuel tax reporting (FTR) software integrated with electronic card-based fuel purchasing and GPS data provides exponentially more timesavings and accuracy over a standalone application. Essentially, this arrangement replaces several time-consuming manual processes.

FTR software contains the fuel tax rate for each state, which varies. Integration means that drivers don’t have to fill out a trip report. Actual-route GPS data for each vehicle plus odometer readings provided by an engine control module (ECM) provide the basis for determining the number of miles driven in each state.

In fact, this is not only the most streamline method, but also the most accurate. It’s not uncommon for drivers to forget to log odometer readings because they’re concentrating on their driving; it stands to reason that relying on memory will most likely be less accurate. The GPS and ECM data are automatically downloaded into the FTR system, which calculates the fuel tax and credits for each vehicle based on the miles driven and the fuel purchased in each state.

Accuracy is important for satisfying state regulatory standards. Some states may require an odometer reading with GPS breadcrumb data in fuel tax reports. Who knows when they might require ECM data?

Beyond the regulatory issue, accuracy optimizes tax credits and provides a practical way to optimize fuel usage. For carriers that prefer to outsource the actual completion of fuel tax report forms, actual vs. planned route data enables a preparer to identify the additional fuel tax for the number of out-of-route miles, as well as where fuel was purchased at the best rates. At \$.06 per gallon, a couple of hundred out of route miles each week per vehicle can add up to avoidable costs for an entire fleet.

“Our integrated fuel tax reporting application delivered a 100% ROI by diverting our fulltime fuel tax person into a billing role. That move alone sped up our receivables processing and helps us get paid faster. In essence, that person no longer works for the government.”

- Steve Teeples, President, Pollywog Transfer

Summary

The route to a paperless environment that drives greater efficiency and minimizes cost is through integration of transportation management and reporting systems and a GPS-based communications system. The integration of these applications automates and speeds up workflow to close the accounting cycle faster and improve cash flow. In addition, there is an electronic trail that provides back up information to support actual driver activity.

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