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Tracking for

Once upon a time, vehicle tracking and communications meant expensive satellite

equipment, used mostly by long-haul, irregular route carriers who needed to know where their drivers (and loads) were.

Today there's an almost overwhelming array of lower-cost options for all sizes and types of fleets and for every budget. And simply being able to keep up with where your trucks are is just the beginning of what they can do.

"Small- to medium-sized businesses usually need a GPS fleet tracking solution to gain greater transparency into their fleet operations," says

Ashley Jones, marketing manager at tracking/fleet management provider NexTraQ (formerly Discrete Wireless). "The most profound impact for smaller fleets is the ability to reduce overhead costs – fuel, maintenance and insurance premiums – that can save small businesses on a tight budget hundreds of thousands of dollars while growing their business."

While fleet tracking originally started out as a satellite communications technology, today, most tracking systems use the same type of

Asset-tracking for small fleets is a fast-growing field.

Keeping up with your equipment is only the beginning of what it can do.

global positioning systems and cellular data networks you may use on your cell phone. Advances in technology have allowed device makers to pack a lot more power into a smaller, less expensive platform.

Perhaps even more important for smaller fleets is the advent of software as a service, or SAAS, an aspect of "cloud computing." Instead of needing a big mainframe computer, an IT staff to keep it running, and a data guru to translate the data, today you can simply log on to a website and see data presented in easy-to-use "dashboard" format with reports, charts and graphs, and the like.

"Hosting the data takes a lot of the IT burden off of the fleets," says Jim Sassen, senior product marketing manager for Qualcomm, which

recently introduced the MCP 50 platform aimed at smaller fleets. "And the user interfaces are so much more intuitive these days, everyone across the fleet can use it – not just that one smart financial analyst. The learning curve is short, and they can get a lot of data out of it quite quickly."

Or as Brendan Sullivan, vice president of global marketing for FleetMatics, puts it, "the most advanced technology that the big enterprise fleets were using 20 years ago can be used for a fleet of five to 50 vehicles for the same level of efficiency."

These systems also aren't just limited to your desktop. "Exception reporting" can send alerts to your email or cell phone if, for example, a driver strays too far out of a preset route or "geofenced" area. With the increasing use of smartphones, some companies offer apps to allow access to even more data via cell phone.

Yet many fleets are reluctant to embrace this technology, says Ken Weinberg, vice president of Carrier Logistics, which works with small pickup and delivery companies on technology needs. "They opt not to use it because they feel they can get away with manual procedures," he says. "If two small carriers are competing, and one has technology that makes them equal to a big carrier, the other small carrier has nothing."

Deborah Lockridge • Editor in Chief



smaller fleets

What tracking can do for you

There's a lot to be said for simply knowing – really knowing – where your trucks are. For one thing, many customers today want to be able to easily find out where their loads are. "Being able to have this tracking allows smaller fleets to compete on the same playing field and be able to have this visibility as to where the trucks are," says Qualcomm's Sassen.

But perhaps even more important is how this information helps you manage your business better.

"You've got a fleet of vehicles out there that are a valuable asset," says Craig Whitney, vice president of marketing for NetworkFleet. "Are they being used properly? Not on nights or weekends, for taking the boat to Mexico or side jobs?"

Bill Ashburn, vice president/general manager at Prophecy, explains how this works with Prophecy Tracker, a low-cost solution for very small fleets that uses GPS-enabled cell phones. (The process is similar for other systems, as well.) A dispatcher or small fleet owner can go to an Internet browser, type in a user name and password, and see on a map the current location of his fleet or of a single truck, as well as a "breadcrumb path"



Tracking systems like this one from NetworkFleet can give managers insight into everything from employee labor to idle time to engine fault codes.

showing where vehicles have been.

"Say he sees Joe Smith, who is supposed to be in St. Louis but is actually in Pittsburgh," Ashburn says. "He can hone in on one truck unit and find out he's been stopped for 16 hours at 123 Main Street."

Ken Kainer, owner of Kainer Electrical Services in Houston, Texas, says he thought long and hard about the additional monthly costs before installing FleetMatics on his fleet of six service trucks. But it started paying for itself the very first month.

Kainer was able to monitor when service technicians arrived at and left the jobs and make sure time sheets were filled out correctly.

"Since our techs drive the trucks

home each day, we were able to cut out all the little after-work-hours stops and errands that they felt was OK to burn my gas to do," he says. "Not to mention, since the guys know they are being monitored, I see more of an effort from them to get to the job on time each morning, instead of running 10 to

15 minutes late or leaving 10 to 15 minutes before quitting time to beat the traffic."

Accardi Foods, a specialty foods and beverage company in Medford, Mass., with 17 trucks, slashed overtime hours by 50% after implementing the NexTraq Fleet Tracking solution. Within the first few days of implementing it, fleet director Joe Russo was able to identify drivers who were padding their hours. It saved the company more than \$80,000 a year.

Beyond time cards

Tracking systems can be much more than a big-brother time card. The data can help exonerate drivers, as well. For instance, Joe Christenson, president of Plumbing Plus and Remodel Works Bath & Kitchen in Poway, Calif., explains that if a client disputes the bill and says the employee was only there for a short

Tracking for smaller fleets

period of time, with his GPS Fleet Solutions system, "I can verify this and turn around and say he was there for two hours and 15 minutes. This allows us to be on the same side as our guy now because we have proof."

It also can be very helpful to know where your vehicle was **not**. More than one business owner has been contacted about a truck that was allegedly speeding through a neighborhood, or that something fell off the back of a truck and damaged someone's car. With a tracking system, you often can prove it wasn't your truck at all.

And knowing the location of your trucks makes dispatch much more efficient. When a customer calls with an emergency load or you've picked up a great backhaul opportunity, you can know right away which truck is the best choice.

Moreover, once you have a GPS function, there's the potential to add in-cab routing and navigation. With some systems, it's part of the in-cab computer unit, as is the case with Qualcomm and PeopleNet. With others, the tracking unit may integrate with a third-party nav unit such as Garmin. Some systems also offer automatic arrival and departure notification to the home office and/or to customers.

"Today's tracking technologies are highly integrated and delivered via the Web," says Drew Hamilton, executive vice president of Teletrac. "Thus, for example, dispatchers can see every vehicle's position mapped on any PC screen along with each truck's prescribed route and even familiar landmarks such as customer sites, supply houses, fueling stations, lunch stops, any location your dispatchers and technicians consider useful."

Drivers can have similar map displays in-vehicle on a full color touch-screen that provides verbal turn-by-



Some tracking systems are developing smartphone apps that offer tracking information on the go, such as this one from FleetMatics.



NetworkFleet's main screen allows the user to hone in on a specific vehicle, including whether it's parked and the odometer reading.



Xata's Turnpike does more than track assets, and can be used on smartphones or tablet computers.

turn driving directions.

"We offer turn-by-turn navigation integrated with our products; it gets the driver to the job or delivery quicker, faster, safer," Hamilton says.

Some systems even help drivers avoid traffic and weather conditions that might slow them down.

Automated fuel tax reporting is another popular benefit of tracking systems.

Saving fuel

Once you get into units that actually deliver data from the truck itself, there are even more benefits to be had. Many tracking systems take the extra step into telematics, where the vehicle provides data

from its electronic engine, components and sensors.

One of the most immediate returns on investment is fuel savings. When you can monitor information such as each driver's average mpg, vehicle speed, time in top gear and idle time, you can give drivers incentives to get better fuel economy, or penalize or counsel drivers who need to do better.

Take idling time, for instance. At FleetMatics customer Michael Dusi Trucking, whose approximately 50 trucks serve the California wine industry, they discovered that one truck had over 47 hours of idle time in one month – 46% above the average, costing the company more than \$530 in fuel.

Umpqua Dairy in southern Oregon uses Xata Turnpike's RouteTracker to promote low idling. Transportation Manager Chuck Fuller prints out the previous week's scorecards and posts them in the drivers' room for everyone to see.

"Putting the scorecards on display helped get our idling down, because no driver wanted to be at the bottom of the list," Fuller explains.

Wait, there's more...

Tracking systems that are plugged into the vehicle can provide data that help manage both fuel savings and safety, such as top speeds, average speeds and hard braking.

"Improving fleet safety and security of equipment is emerging as a critical issue for fleets with one or two vehicles to hundreds, because of the huge financial impact on the business in terms of cost associated with accidents, litigation/liability, and insurance premiums," says Teletrac's

Hamilton. "We can show if a vehicle is running a stop sign or not. We can let a business owner know if his drivers are accelerating too quickly or stopping too quickly, if their vehicles are driving over the posted speed limit."

Another area where tracking systems that also provide vehicle information can help is maintenance. At Umpqua Dairy, engine diagnostic information helps Fuller identify which trucks need maintenance and when, through online access to odometer readings, fault codes, mpg and hard-braking data.

With the FMCSA's new CSA enforcement program putting more emphasis than ever on pre- and post-trip inspections, some, like Xata Turnpike, also offer electronic DVIRs.

Then there are electronic logs

offered by some systems. "There's more than likely going to be a mandate for EOBR technology, even for the small guys, in the next three to five years," says Brian McLaughlin, chief executive officer of PeopleNet. "The nice thing about these telematics systems is they can serve that EOBR function but also give the rich driver performance data and fuel economy data" that can help the bottom line.

"Back in the day, there were very few applications on the platform itself," says Monica Wyly, senior product marketing manager at Qualcomm. "While track and trace is definitely an important aspect of all the platforms, I think a lot of carriers are looking at things like CSA, having that ability to have insight into that driver behavior. Things like making sure they're running legal on

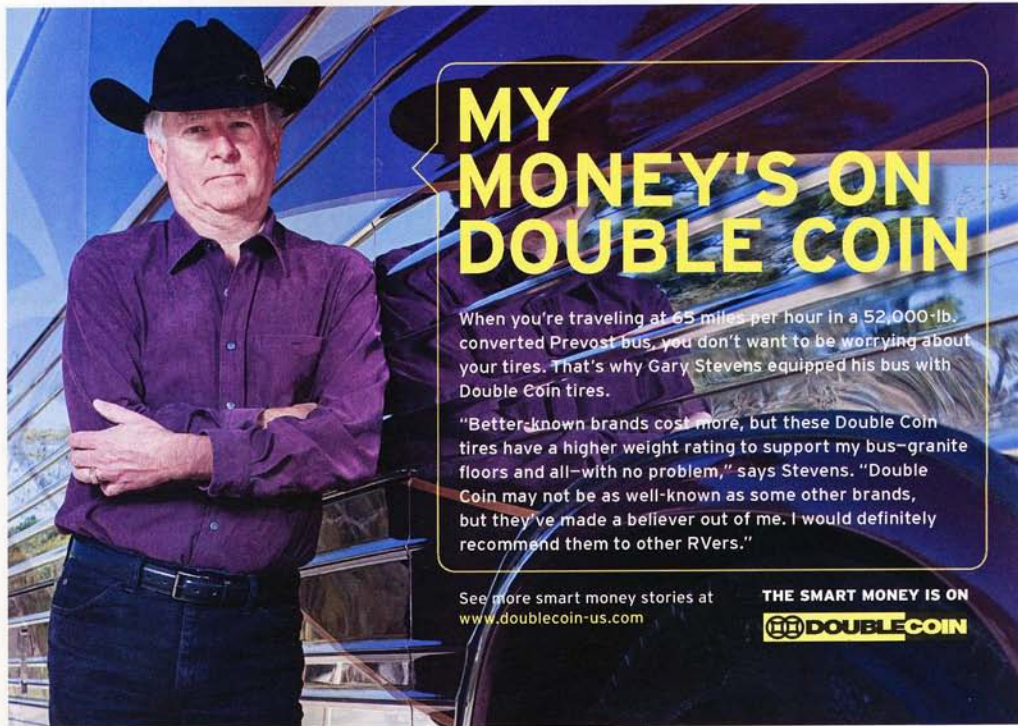
hours of service, will be the driver for the small fleet to put them over that buying edge where they're able to jump in and make that investment."

Integration

When you start integrating GPS tracking and vehicle information with back-office systems like dispatch or maintenance, the benefits start adding up even more.

"The position tracking is useful, but other features are more so," says Sean VanDyck, vice president of sales for PCS Software. For instance, their Mobile Xpresstrax system allows a dispatcher to assign a load and with one click send the driver the assignment, the address, driving directions, load information, etc.

The driver can even see weather and traffic on his iPhone, and can send the dispatcher status updates.



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Tracking for smaller fleets



The system can then automatically notify a shipper that a driver has picked up or delivered a load.

Prophesy's Ashburn says in reality, the company rarely sells only the basic tracking package; most customers, he says, want the next level, integration with the back office. "Do I just want to know where things are, or do I want to take that data and integrate it?" Ashburn asks. "A lot of fleets still operate on white boards and Excel spreadsheets. They'll never have the level of integration that lets you really take advantage of that information and make use of it."

Types of systems

There are several types of tracking units you can buy. At the top end, there are full-fledged in-cab computers that are hardwired into the truck for full telematics capability, such as PeopleNet and Qualcomm. At the lower end are simple black-box type GPS offerings; there are a plethora of these available for light-duty vehicles.

With the increasing popularity of GPS-enabled smartphones and tablets, we are seeing an increase in fleet tracking systems using these devices. Some rely solely on the phone GPS; others work in tandem with a piece of hardware that plugs into the vehicle's electronics.

In addition, some companies offer software that helps analyze and integrate data collected by in-cab tracking units such as Qualcomm and

Qualcomm's new MCP50 platform was designed with smaller fleets in mind.

This Prophesy Tracker screen is showing data about a specific vehicle, including location and how long it's been stopped.



PeopleNet, but may also offer lower-cost units that use phones. Prophesy and PCS Software are two examples.

"I think the small fleets are realizing, like the big guys did years ago," McLaughlin says. "This isn't a luxury item; this is a necessary component of our fleets."

How to decide

With a burgeoning number of tracking options for small fleets out there, how do you decide?

"It's easy to get sidetracked by the technology," says Ken Weinberg, vice president of Carrier Logistics, which works with small pickup and delivery companies. "They lose track of how they should approach any decision: What are their needs? What are their problems? The key is they need to know what they are shopping for."

Indeed, says Monica Wyly, senior product marketing manager at

Qualcomm, "No one should buy technology for technology's sake. They should be asking themselves, is this a technology I can implement? Is this a technology I really can get the value out of?"

For instance, when it comes to driver behavior, if you're not willing to work with your drivers to coax improvement out of them, just having the data is not going to help your bottom line.

What do you want it to do?

Do you just want it to track where your drivers are? Provide exception reporting? Routing and navigation? Help cut fuel costs? Identify unsafe driving behaviors? Get vehicle diagnostic information? Track driver hours of service? Get data to help drive compliance?

Real-time data.

How critical is it that you be able to tell exactly where trucks are every minute? Systems will

store the GPS data when the unit is out of range and then send a history back once the vehicle's back in range, says Prophesy's Ashburn, but "if someone's carrying blood plasma and they need to know within minutes that vehicle isn't going to arrive on time," a more expensive satellite-based system might be needed.

Is it user-friendly? A small fleet typically is not going to have a computer (or "information technology") expert on staff. That means on-vehicle technology, back-office integration, and online functions need to be simple to set up and to use.

Does it work in your fleet's application? Some providers focus on certain types of vehicles and certain markets. "There are literally hundreds of companies in the GPS tracking space, but only a handful are really suited to heavy-duty trucks," notes Charles Mohn, director of product management at Xata.

Total cost of ownership.

Consider up-front hardware costs, if applicable, as well as monthly service charges. There are products that can get you started for \$35 to \$50 per month. When you look at both monthly and up-front costs, how quickly can the system pay for itself?

Installation. How easy is it to install? What's the installation cost and how long will it have your truck down? How easy will it be to uninstall it and move it to another vehicle if you buy new trucks?

Tethered or not. Cell-phone based systems may be less expensive, but most don't offer information from the vehicle itself, such as fuel usage or hard braking. In addition, there is some concern that drivers can tamper with cell phones. They could turn the GPS function off, turn the phone off, or even leave the

phone somewhere.

On the other hand, smartphone-based systems offer portability that allows for features such as signature capture for proof of delivery.

If a phone-based system includes driver logs, make sure there's a unit that's "tethered" to the engine in order to meet federal EOBR rules. And of course with phones, there's the question of driver distraction, although special mounts and software like ZoomSafer can keep drivers from using phones while the vehicle is moving.

Scalability. You may find an inexpensive system that offers basic tracking functions that perfectly meets your needs at the moment. But find out how easy – and how expensive – it is to add additional features and functionality down the road as your business grows or as you

decide to tackle more sophisticated fleet management analyses.

Integration options. Will it integrate with your back office systems, such as dispatch, accounting, compliance, maintenance software? "Don't paint yourself into a technology corner," says Sean VanDyck, vice president of sales for PCS Software. "There are new GPS companies popping up every day."

Support. Look for a company that's likely to be around for the long haul, and find out what kind of support it offers. How long has it been around? What is the reputation of the company's customer service? "This isn't just a piece of hardware you're buying," McLaughlin says. "Who's going to answer that phone when you need something fixed at midnight, and what does it cost?" ■

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