Success Stories in Fleet Tracking

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Vehicle tracking software lets Lowitt management put a "geo-fence" around an employee's driveway, creating an alarm condition if the employee uses a company vehicle for personal use. PHOTO COURTESY OF LOWITT ALARMS

One of the most cutting-edge areas in security technology today is vehicle and fleet tracking. Advances in global positioning systems (GPS) have brought costs down to where companies wanting better control of their service trucks â€" or consumers who want to keep close track of their vehicles â€" can afford to use GPS for that purpose.

In this article, SDM profiles three security companies that have used vehicle tracking systems on their trucks â€" and have experienced productivity gains and cost savings as a result. All three companies were so pleased with the technology that they have begun to offer (or soon plan to offer) similar capability to their customers.

Lowitt Alarm trucks are equipped with a global positioning system that tracks the truck's position every 10 minutes.

Reports Help Metrodial/Lowitt Alarm Save Money

When Lowitt Alarm of Hicksville, N.Y., installed tracking devices in its truck fleet, its goals were twofold.

"We wanted increased productivity and decreased unauthorized use," notes Andy Lowitt, vice president of dealer relations for Metrodial, a wholesale central station operator, and its sister company, Lowitt Alarm.

The company selected a vehicle tracking system from Guardian Mobile Monitoring Systems, which uses transmitters installed in each truck to communicate with either Sprint or Verizon Wireless cellular networks. Information about each truck's location is communicated every 10 minutes to a database maintained by Guardian, which can be accessed by authorized Lowitt Alarm users over the Internet.

The system also can detect how fast a vehicle is traveling and is programmed to send automatic e-mail notification to Lowitt management if any driver exceeds 75 miles per hour.

"We set it at 75," Lowitt explains, adding that speed is one of numerous parameters that can be determined by the company using the service. "If someone goes over 75, the service manager can call him up and tell him to slow down." Management also receives automatic notification if a truck moves after 8:00 p.m. or before 6:00 a.m., indicating that an employee may be using the vehicle for personal use. This capability is made possible by creating a "geo-fence" around the employee's driveway.

Other data, such as where each vehicle is throughout the day, is stored in the Guardian database. Authorized users can generate reports summarizing that information by logging in on the Internet. "I go in and say, 'Run a report that shows me where each guy was that day and tell me the duration of his stops,'" Lowitt says. Lowitt also finds it helpful to look at a report that uses color to highlight any point where a driver stopped for more than an hour, with shorter stops (5-15 minutes or 16-60 minutes) highlighted in different colors. The service, which costs about $50 per month per vehicle, can easily pay for itself, Lowitt says: "You can save more than $50 in overtime, gas and unauthorized use."

Metrodial recently began to offer vehicle tracking as a service to its wholesale alarm monitoring customers, and several of them have begun to offer it to their customers. Lowitt expects the vehicle

emergency response capability. â€œIf the driver has a panic button, the central station will get a signal and will have the correct 911 answering point to contact,â€ notes Lowitt.

How GPS Vehicle Tracking Works
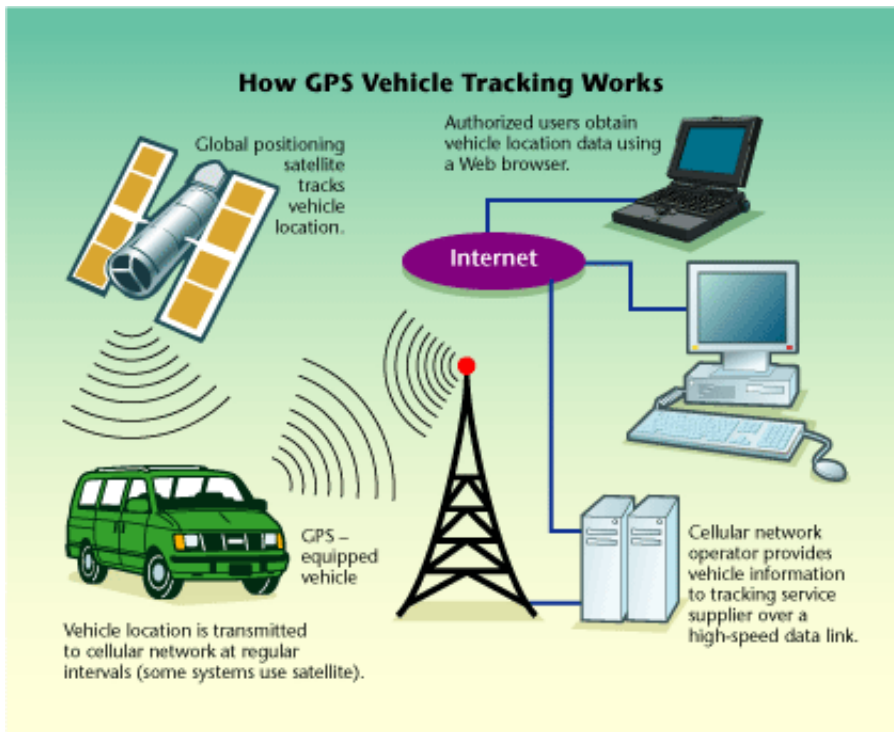
How vehicle tracking systems work

Although vehicle tracking systems contain several distinct elements, the one that is most visible to the end-user is a two-way radio that is typically mounted under the vehicleâ€™s dashboard. Such devices can be as small as a package of cigarettes, but most are two or three times that size. Two-way radio vendors that supply products (either directly or through third parties) to the alarm industry include Guardian Mobile Monitoring Systems; GPSi LLC, which makes the Guidepoint system; Fleet Management Solutions; Chapman Location Systems; and others.

The two-way radios communicate with a satellite that can provide latitude and longitude coordinates for the vehicle. Depending on how the system is configured, latitude and longitude information is sent to a central database at regular intervals, typically every 10 minutes. The two-way radio uses a mixture of wireless and wire line communications to deliver vehicle location data to the central database. A number of wireless technologies can be used for the first leg of this connection, but security companies usually use either a satellite or cellular-based system.

Several cellular operators, including Verizon Wireless and Sprint, have begun to deliver GPS information to providers of vehicle tracking services over their networks. The first leg of the link â€" between the vehicle and the cellular network operatorâ€™s fiber backbone â€" uses cellular communications. Beyond the first leg, data travels on a high-speed wire-line link to the central

database. Satellite-based systems work in a similar manner, with the first leg using wireless communication from the vehicle to the satellite and back down to a satellite earth station, where the data moves onto a fiber link for communication to the central database.

The central database is typically operated by the two-way radio vendor or by a third-party company with whom the two-way radio vendor has a business arrangement. With most systems, authorized end-users can access vehicle information stored in the database over the Internet using a Web browser that interfaces with software maintained by the database operator. That interface enables end-users to view data in a wide range of formats. For example, users may be able to obtain maps that plot the route each vehicle took during the day, indicating any spot where the driver stopped for more than a certain number of minutes. The system software also may be able to provide automatic e-mail notification to specific managers when certain conditions occur â€“ such as when a truck exceeds the speed limit or a truck moves after regular business hours.

Recognizing that the security industry is a logical sales channel, some vehicle tracking service suppliers have begun to partner with wholesale central stations. Central stations such as Metrodial, COPS and others have begun to sell the service to their alarm dealer customers, who may use the service themselves or may, in turn, sell it to their business and residential customers, typically installing the radios in the vehicles and charging a monthly service fee. Some such services may include browser interfaces branded with the alarm dealerâ€™s name and logo â€“ and the alarm dealer is the end userâ€™s only point of contact on the service. Often the central station involved in the supply chain provides little, if any, monitoring of the vehicle tracking system unless emergency services are offered â€“ in which case, central station operators become involved in providing emergency assistance to drivers who press a panic button.

Fire Alarm Maintenance Co. Resells Vehicle Tracking Services

When Fire Alarm Maintenance Company, Aspen, Pa., installed GPS systems in its service vehicles, its main goal was to â€œimprove service response time by knowing who was in what area at what time,â€ says Bill Pederson, general manager. The system met that goal and provided other benefits, as well. â€œIt helps us know where the men are and when theyâ€™re quitting and starting,â€ Pederson says. â€œWe also get route reports every day â€“ where they were and how they got there. Itâ€™s like a bread crumb trail.â€

The company, also known as Famco, plans to use the system to keep track of vehicle maintenance, too. Because the system can tell how many miles a vehicle has traveled, it soon will be able to alert management when itâ€™s time for oil changes or other maintenance work.

Famco uses cellular-based devices from Guardian Mobile Monitoring Systems in each vehicle. System monitoring is provided by wholesale central station operator COPS. Famco has begun to offer the same capability, using the same equipment and monitoring service, to its business customers â€" and at press time, expected to close a deal with a sprinkler company. That company was particularly attracted by the maintenance tracking capability, Pederson says. Famco customers using the service will access their vehicle information through the Internet using a Famco-branded browser interface.

Pederson expects to sell the vehicle transmitters for close to their $500 cost. â€œI want to make the money on the monitoring,â€ he says, adding that he anticipates charging customers $300 to $400 per vehicle per year for monitoring and netting about $100.â€™

The GPS devices installed in the Hawk Security trucks, dubbed Guidepoint, cost about $500 each. PHOTO COURTESY OF HAWK SECURITY

Hawk Security Keeps Tabs, Routes Better Using GPS Tracking

â€œIf you have hourly employees in your truck, you canâ€™t afford not to have it,â€ says Michael Shirley, director of Hawk Security Services of Fort Worth, Texas, about the vehicle tracking system his company uses. â€œWe had guys leaving job sites early or getting there late and never telling us. We want to make sure our trucks are productive.â€

Currently Hawk Security has GPS systems installed only on trucks operated by hourly workers, but the company soon plans to install them on all 30 of its trucks. Employees paid by the piece-rate are allowed to drive trucks home â€" and having GPS in those trucks should help ensure that the trucks are not being driven except on company business. â€œEven for piece-rate people, it will pay for itself,â€ predicts Shirley, who notes that the ability to review the route that a driver takes between jobs will be useful. â€œWe donâ€™t want them stopping by their house on the way. Even though piece-rate people are doing it on their own time, theyâ€™re using our gas.â€

The GPS devices installed in the Hawk Security trucks, dubbed Guidepoint, cost about $500 each and were provided by GPSi, LLC. The devices use a cellular network to communicate with a monitoring facility operated by Teletouch Communications, which charges a fee of about $40 per month per vehicle. As with the setup that Lovitt Alarm uses, automatic e-mail notification can be

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