

Transportation Technology Transformed

Utilizing GPS and RFID technology in a rental business can lead to improved order fulfillment, customer satisfaction and overall efficiency.

By Jack Shea

For more than two decades, rental software companies focused the bulk of their research and development on perfecting the rental operator's ability to capture business. As a result, inventory tracking, rate management, bidding, reservations and contract writing took center stage. Once a customer commitment was recorded in the database, the fulfillment process typically shifted into low-tech mode — a truck, a driver and cell phone communication with the store.

Now the same process is shifting into high gear. Technology has gained a solid toehold in the arena of rental transport operations over the past few years. Global positioning systems and radio frequency identification, in particular, have both earned respect with their handling of rental logistics. Rental management systems have also expanded their own capabilities and integrated with third-party software designed to optimize tasks such as routing,

GPS delivers accountability

The placement of a GPS unit in a delivery truck allows the rental business to document exactly when that truck arrives at a customer site. It also records the elapsed time before the truck moves on to the next delivery. This type of documentation can be invaluable — for example, it helps resolve customer claims of late deliveries.

GPS tracking of delivery vehicles can also be matched against dispatch plans to determine whether a driver deviated from the planned route. If a rental system uses software to map out and schedule deliveries, discrepancies between planned and actual routes can be flagged when the GPS data is imported.

In the case of service vehicles, GPS documentation can be very beneficial in proving that equipment was serviced on schedule. Often, more than one type of technology is involved. When portable toilets are pumped, for example, a GPS device can document that the pump was operated at a specific time and location. This data, combined with an RFID reading of the toilet being serviced, provides powerful evidence of compliance with service requirements.

Use of GPS technology on delivery vehicles is becoming routine in the rental industry and, in fact, is more com-

monplace than an application that gets far more press: GPS monitoring of high-value rental assets. There is a transport relationship here as well. A GPS unit, installed on an excavator, can help a driver locate the equipment for pickup on a large or unfamiliar jobsite. This also saves time when field mechanics service equipment on site during long-term rentals.

Some rental companies equip their drivers with GPS-enabled mobile phones, providing an alternate means of tracking the truck's route or, more accurately, the driver's activity and location. Furthermore, the cost is manageable ... and dropping. In March, Sprint announced that GPS would be available to customers with Power Vision data plans starting at \$20 a month (other customers will be able to add GPS service for a daily fee). A rental driver can use a GPS-enabled phone to navigate as well as access local data such as traffic updates and weather reports.

Not all of the accountability relates to employees. GPS units on rental equipment can report whether the equipment was operated after it was called off-rent. The devices also record unauthorized movement and, of course, are invaluable in recovering stolen machines. Even when the movement is authorized, the documentation can be important — for example, when a machine is transported from one jobsite to another and lien filings must be kept up to snuff.

RFID applications gather steam

RFID chips can be used to monitor the "near edge" of fleet transport, as equipment moves in and out of a rental yard. A fixed reader at the gate scans chips without the need for human participation. The scanner documents the time of each reading and communicates with the rental management system to verify that the equipment's movement is legitimate.

The versatile chips can also be placed on equipment components to document that all necessary parts have been loaded for transport, eliminating downtime during assembly at the destination. Cranes, for example, are often assembled from multiple parts that can be difficult to track; a single scan of an outbound truck can confirm that all parts are on board.

The rental industry is still discovering the full potential of RFID, but already the applications range far beyond



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transport. Some RFID vendors offer software that integrates with PDAs to document maintenance performed on rental fleet in the field. The rental industry was once ill suited to RFID, but today is addressed effectively by the technology.

Expect more technology down the road

Within the store environment, rental computer systems have already proven their mettle by bringing consistency and "collect-ability" to the delivery fee process. Some systems automatically calculate delivery charges based on mileage, equipment and type of truck required, taking into account any previously established customer agreements. The fuel component in the calculations can be adjusted to reflect any sustained price increases in the cost of fuel.

The transport process can also benefit from free-text notations on the rental contract, entered by the counter person at the time the contract is created. For example, the notation "Only Bill Sampson authorized to sign for equipment" tells the dispatcher and driver that delivery needs to be coordinated with Sampson's presence at the jobsite.

With decades of software innovations at work at the rental counter, you can expect computer vendors to expand on the recent trend of integrating with third-party suppliers to address other aspects of rental operations. The technology market in general is exploding, with new functionality being introduced at blinding speed. Who knows where the next rental application will come from?

Consider *Forbes* magazine's recent feature on "10 Great

GPS Gadgets." One of the items profiled is the Navman iCN750, a portable navigation system with one special feature that *Forbes* says, "hints at a coming revolution ... a 1.3-megapixel digital camera that 'geotags' photos as you take them, allowing you to categorize shots according to location. This type of technology should be a regular feature on digital cameras within a few years, and will change the titles of your photos from gibberish like 'PNTX439888.jpg' to something more coherent, like 'San Diego California 9-13-08.jpg.'"

Imagine a rental store driver carrying one device in the truck to handle multiple tasks: navigate effortlessly to remote jobsites, record damage to the vehicle in the event of an accident, and document pickups of rental equipment in questionable condition, complete with automatic geotag and date/time stamp. Once downloaded to a rental management system, these images provide a rental company with a complete and permanent record.

The many faces of technology in rental transportation are linked by a common motivation: efficiency. Operational efficiency is a critical business requirement in all industries today. If a rental business can shave costs and do more with the same resources, it wins. Rental owners now realize that there is more than one way to transport equipment, and more than one technology to fuel the process. **RER**

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