

At a manufacturing facility in Texas, the company is deploying a system provided by Fluensee to track the locations of trailers filled with material, and to expedite the unloading of their contents.

By Claire Swedberg

Sept. 22, 2009—[Penske Logistics](#), a division of transportation and distribution services provider [Penske](#), is installing a passive RFID and GPS system to track the locations and movements of trailers in the yard of a customer's manufacturing facility in Texas.

The manufacturer employs Penske Logistics' services to manage freight movement around the facility yard, thus ensuring that the average 100 trailers arriving daily, filled with materials for the products the firm makes, can be located and unloaded at the appropriate time. The wireless tracking system, provided by [Fluensee](#), is slated to go live in November 2009, according to Chuck Papa, Penske Logistics' VP of strategic value. If it is found to be successful after several months, he says, the company may offer the service at some of its other customer locations throughout the country.

Initially, Penske Logistics is deploying this first system to test the effectiveness of tracking hundreds of trailers with RFID tags, rather than manually.

The challenge related to manual tracking of trailers is time. After trailers arrive and are manually checked in by a gate guard, they are often parked somewhere in the yard—which includes 250 trailer parking spaces and 30 dock doors. As such, the warehouse managers often do not know when or if a particular trailer has arrived until several hours or a day later, and employees may need to drive around the site in order to locate it. Valuable time can be lost if the material needed can not be accessed immediately. In addition, a trailer's owner may charge the manufacturer a retention fee for the time that trailer sits in the yard. Manufacturers—or their third-party-logistics providers—typically track the locations of trailers and the freight they contain with spreadsheets alone.

"The business problem, when managing hundreds of trailers received each day, is the challenge of knowing what is in the yard, where and what is in the truck," says Chris Brumett, Fluensee's COO. Fluensee is providing a solution with a system that deploys RFID interrogators at the gate, as well as on switchers—trucks that pick up and move trailers around the facility.

Once the system is in place, a fixed [Motorola](#) reader installed at the gate will capture the ultrahigh-frequency (UHF) Gen 2 RFID tag ID number on a tag attached to the trailer. In the case of dedicated trailers, which continually come from the same supplier and carry the same supplies, a tag will be permanently attached to the trailer. For other suppliers delivering for the first time, or that deliver in a multitude of trailers, a tag will be supplied to the driver when he enters, and the gate guard will input data about the shipment into the Fluensee software system residing on Penske's management database.

That information will include such details as the ID number written on the trailer, the trailer's contents and the name of the contents' supplier, all of which is then linked to the tag's unique ID number. The driver will then attach the tag to the trailer and park the trailer in the yard. On a typical day, as many as 100 or more trailers are brought to the site and parked.

To record the trailers' locations, the two switchers will drive up and down the yard's aisles every day, equipped with a Motorola reader, GPS unit and a tablet PC. The interrogators will capture the ID numbers on the trailer tags as they pass, transmitting each trailer's tag ID number and GPS coordinates to the Fluensee system, where that trailer's location will then be recorded.

Later, when material needs to be delivered to a particular dock door, a switcher driver will receive an order on his tablet PC. Fluensee's Shunt Buddy software, running on the PC, will indicate which trailer to pick up, where it is located and which dock door it needs to be delivered to. When the driver backs up his truck to retrieve the requested trailer, the vehicle's RFID interrogator will read the ID number on the trailer's tag, and the GPS unit will determine the trailer's yard location.

The reader will then send the tag's ID number, as well as the vehicle's location, to the back-end system via a GPRS or Wi-Fi connection, Papa explains, confirming not only that the correct trailer is being picked up, but also its exact location. If it is the wrong trailer, he says, an alert is sent to the Fluensee software in the back-end system, as well as to the tablet PC for the driver to see.

After the trailer is delivered, the onboard system will determine its location, verifying that it has been delivered to the proper dock door. If the location is incorrect, an alert is sent to both the driver and the back-end system.

The system provides business analytics as well, Papa says, including data regarding how productive either of the two switcher units are, the number of miles they covered and the number of trailers they moved. "We are expecting the system to help improve workflow," Papa states. "Productivity and visibility are the key elements we will be looking at."