

**By July, the automaker's Oakville assembly plant will use active tags to track nearly 1,000 parts-filled trucks.**

By Beth Bacheldor

June 5, 2006—Later this month, workers at [Ford Motor Co. of Canada's](#) 5.4-million-square-foot assembly complex in Oakville, Ontario, will begin tracking the whereabouts of about 50 trucks. This will be accomplished with tiny RFID transponders that will emit a signal every four minutes so workers can find the auto parts they need.

The signals will be picked up by Ford's new real-time locating system (RTLS), provided by [WhereNet](#). The deployment uses active tags based on the ISO 24730 RTLS standard and has been in development since February. By late July, it will track nearly 1,000 trucks each day. By then, the system will consist of 14 WherePort excitors, positioned at the facility's entrance and exit gates. These excitors will activate dormant tags and 68 wireless WhereLAN access points that collect location information as tags come into their purview.



Gary Latham

Ford has installed the system to streamline assembly processes and electronically manage the flow of parts for the production of the new 2007 Ford Edge and Lincoln MKX crossover utility vehicles, the automaker says, as well as the existing Ford Freestar and Mercury Monterey models. Location-based data can be used to ensure parts and components are staged at the final assembly areas—at the precise moment they are needed, and in the proper sequence. According to Ford spokesman John Arnone, the RTLS is part of an approximately C\$1 billion (US\$910 million) investment to revitalize the Oakville Assembly Complex into a leading flexible manufacturing facility.

"Manufacturers like Ford are dealing with existing brick-and-mortar facilities that were set up years ago," says Gary Latham, director of industry marketing in WhereNet's automotive division. "Now they are trying to create a more flexible environment."

Instead of bringing in massive amounts of parts and storing them at the complex, for example, Ford would like to run what's referred to as just-in-time manufacturing, whereby parts arrive on the day they are to be used for assembly. "That requires flexible processes to move materials, and a fast, accurate system that tells them where every trailer is, what is in it and what needs to be done with it," Latham says.

Each tag will contain unique identifiers encompassing a conveyance carrier code, trailer number, route code and unique transponder number—in short, all the information required to link each trailer with Ford's receiving schedule. The access points convey the ID number to the RTLS, which coordinates the

## Ford Canada Adopts RFID System to Keep Parts Flowing

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location and correlates the number to a matching number and associated data, such as the trailer contents and estimated time of arrival. All this information is stored in a back-end database. WhereNet has designed interfaces that pull that associated information out of Ford's material systems and supply chain systems, says Latham.

Armed with location and associated data, Ford employees can use handheld computers to receive instructions as to where trailers are located, and when and where to move the trailers' contents. In addition, employees can query the system about a trailer's whereabouts, and even pull up physical maps of the facilities and their 170-plus docks.

The system can also alert Ford when a trailer has stayed on-site for too long—an event that can end up costing Ford money. "The system can alert drivers to pick up the oldest trailers first, to prevent Ford from having to pay demurrage charges," says Latham. Demurrage charges are tariffs assessed for detaining freight carriers beyond their specified time limits.

Although the RFID system is just now starting to go live, Ford is already seeing benefits. "System uptime has been 100 percent and provided critical data to our test supplier," Arnone says. "Even during the June pilot launch, we can count several thousand dollars saved in manufacturing costs by using this real-time information for production-planning purposes."

Other Ford facilities are implementing RFID-enabled systems, including the automaker's F150 truck assembly plant in Dearborn, Mich. (see [Adding RFID to Ford's Supply Chain](#)).