

# 7 Places Retailers Can Benefit from RFID Without Item-level Tagging

## Radio frequency identification (RFID) offers more than item-level tracking. Much more.

Retail analysts say RFID is poised to revolutionize retail operations, even if merchandise is never read at the point of sale. While standards and privacy policies for item-level retail RFID systems are sorted out, savvy retailers are launching RFID initiatives to test-drive the technology in proven areas of their supply chains. Mature RFID solutions for improving back-end processes are available today and are proving their value every day in a variety of business environments. While recent demonstrations of item level tagging grabbed national attention, case, carton and pallet tagging applications are already getting results.

Here are seven places retailers can use tags – other than at the item level – to reduce labor, provide inventory visibility and improve profits.



### In the Yard

Automated yard management systems use RFID tags on trucks and trailers to track their movement in real time and can use the information for efficient, automated routing and workforce management. For example, logistics operator Old Dominion Freight Lines, an Intermec customer, automatically identifies incoming trailers when they drive through the gates at its service centers. The identification information is transferred by wireless LAN from an Intermec® Intellitag® RFID gate reader to the yard management system on a host computer inside the center. The yard management system automatically dispatches personnel to receive the incoming shipment and updates the company's shipment tracking system. Outgoing trucks are automatically identified and logged out of the yard with the RFID gate readers. Productivity has improved significantly since the system was implemented, and some centers have been able to reduce the amount of equipment and personnel required to process shipments.



## 2

### On the Pallet

Pallet tracking offers a powerful RFID starting point, one that can provide a lifetime of asset management benefits and set the foundation for many future internal and supply chain operations. Permanently identifying pallets and other returnable logistics containers with RFID tags facilitates automated tracking systems that reduce manual handling and dwell times. Application software can take advantage of the accurate, automatic identification to improve asset visibility and issue management alerts when items are missing or returns are overdue. The net result is improved asset utilization that lets you run your business with less safety stock – and more capital. A study by the MIT Auto-ID Center and Accenture found companies could reduce their fixed assets one percent to five percent by taking advantage of RFID.



A wise way to future-proof a pallet tracking application is to use read-write RFID tags for pallet identification. The pallet ID can be permanently encoded in one portion of the tag memory, with other blocks left open for future applications and information. Rewritable blocks can be updated, erased and rewritten thousands of times with variable data for specific shipments or orders.

## 3

### At the Receiving Dock

While gate readers can identify an incoming shipment, other RFID systems can track individual pallets, cartons and cases, as they are unloaded. RFID readers at the dock door can expedite the identification of pallets in an entire shipment and log them into warehouse management or inventory control systems in seconds. Handheld or stationary RFID readers can save valuable time in cross docking by instantly locating needed items and accurately recording their transfer to outbound shipments.

The benefits of RFID-assisted receiving at distribution centers can be replicated at individual store locations. Time savings and accuracy improvements can be even greater if stores commonly receive mixed pallet and less-than-full pallet shipments. In fact, a study by Accenture found retailers could reduce in-store receiving expenses by 65 percent with RFID.



## 4

### In the Warehouse

RFID can be read through concrete, so some warehouse operators bury tags in the floor to guide and track RFID-enabled forklifts. The application provides a real-time view of vehicle locations, a data point which software applications use to improve asset utilization and measure productivity.

RFID readers also can be mounted on forklifts or at key storage area entry/exit points to monitor inventory movements. Continual, unattended monitoring can be used to supplement bar code-based inventory control procedures to provide an added degree of visibility to high-value goods. The practice can produce near 100 percent inventory accuracy and eliminate the need for cycle counts and reduce out-of-stock emergencies.

Improved product availability translates directly into increased sales, as much as seven percent according to a report by AMR Research. Accenture and Forrester Research also studied RFID's impact on inventory accuracy and visibility and predicted retail revenue gains of between one percent and three percent.



## 5

### At the Shipping Area

RFID can error-proof shipping operations by ensuring all the items needed to fulfill an order are present and packed before the order is dispatched. Bar coding is effective for shipment verification, but is still prone to errors because the application relies on operators to manually scan each item.

European retailing giant METRO Group, the fifth-largest retail group in the world, is using Intermec Intellitag® RFID technology to build manifest pallet loads as part of its Future Store initiative. Individual cases are tagged with a unique serial number and a Global Trade Item Number (GTIN), which many businesses already use in their bar code shipping labels. The item data is written to the pallet tag to create a master record. Intellitag readers record the information as pallets pass various locations and the data is transferred to an SAP enterprise resource planning system to record inventory levels and status. Systems like these produce timely information that improves visibility and provides the flexibility to utilize the pallet tags for other tracking, shipping and receiving operations.



## 6

### In Transit

Using RFID, logistics providers can create shipment manifests and ASN files by reading pallet tags during the loading process. Tagged pallets facilitate accurate and efficient cargo transfers, especially in break-bulk operations. This can drive excess inventory out of the supply chain by making it easier to get the right product to the right store at the right time. Applying RFID tags to tractors and trailers creates possibilities for numerous other fleet and yard management applications.

The amount of spoilage and non-saleable perishables can be greatly reduced by recording a "use by" date to the write portion of the tag thus enabling software systems to easily identify those products that need to be moved more quickly or removed or removed from distribution.



# 7

## Within the Infrastructure

The examples presented here have all described RFID use with warehouse management, inventory control and other enterprise software applications. Flexible, standards-based RFID equipment can integrate with current information system infrastructures to enhance and extend the benefits of successful applications. Getting started with RFID doesn't have to mean starting over with supply chain applications.



Intermec offers numerous resources to help you determine how best to integrate RFID into your operations. The Intellitag RFID Online Assessment Tool, at <http://www.intermec.com/rfidassessment/>, leads you through a targeted assessment to determine if RFID-based technology is a good fit for your company. Intellitag Ready-To-Go Retail RFID is an integrated package of hardware, software and professional services designed to give companies everything they need to develop a pilot application for RFID pallet and case tracking. Intermec also offers complete consulting and integration services and a full range of RFID, mobile computing, wireless networking, bar coding and related systems. Visit the Intermec Web site, [www.intermec.com](http://www.intermec.com) to learn more and to download valuable white papers on RFID.



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611492-02A 12/03

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