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In search of future-proof RFID



By Tom Dziersk (President & CEO of ClearOrbit)
Published by [UsingRFID.com](#) in January 2004.

RFID is following the same adoption path its predecessor - the bar code - followed thirty years ago, with retail giants fuelling an explosion of its usage. Tom Dziersk of ClearOrbit looks at using platform-independent systems for future-proofing...

The benefits of RFID multiply with its deployment, and Wal-Mart is proving as inventive with its use of RFID as it has been with other supply chain automation technology.

Retailers' driving interest is not limited to awareness of pallet- and item-level inventory disposition for an optimised supply chain; a percentage of sales are also commonly lost to out-of-stock (OOS) situations. Inventory systems often acknowledge that certain stock items are in the store but they are simply not yet on the shelves. RFID can greatly reduce replenishment cycle times by alerting staff to the physical location of product, down to a specific square foot area.

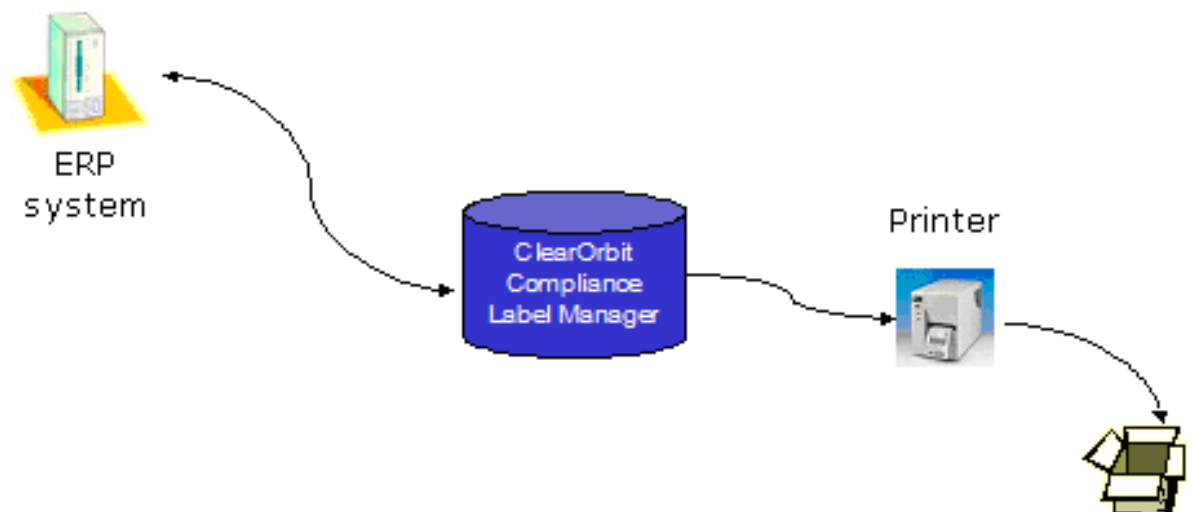
Today, Wal-Mart is using its market power to help define standards and encourage lower hardware and tag costs. Other retailers and industries will capitalise on these initiatives, and general demand for RFID capability will expand dramatically over the next few years. Suppliers will not be as profitable without RFID, and it will eventually be as ubiquitous as bar codes.

This puts suppliers of all sizes in a quandary, as they may want to install RFID systems today but they also worry that the RFID will be too platform-specific for future requirements. For this reason, there's a lot of interest in *Platform-independent RFID* systems, and with good reason. RFID systems need to talk to disparate ERP (enterprise resource planning) systems, and act as universal translators, without demanding that the supplier perform all of the

costly custom coding to map data among these disparate systems. Many are worried that investing in an ERP-specific RFID system could be a narrow and expensive path to take, particularly if that ERP system falls out of favour in the industry or the RFID system has to talk with other ERP systems and isn't programmed to accordingly.

RFID isn't a simple feature to install. Increasingly stringent label-compliance demands have already carried over to RFID tag burning compliance, even as tag types proliferate and differ across continents (e.g. ROM, WORM, Read/Write; 125 Khz, 13.56 MHz flexible inductive, 13.56 MHz inductive, and so on). Consequently, investing in an ERP platform-specific RFID system is something that must be compared with the cost of a future-ready, platform-independent RFID system that has the same features and benefits.

There are platform-independent RFID systems available now - for both burning and reading RFID tags - and many of these, such as ClearOrbit's *Compliance Label Manager* system, can be installed quickly and easily. These systems are not tied to any specific ERP system, instead being able to interface with any ERP system, via sets of customer-specified business rules that link various data fields across disparate systems. Platform-independent RFID mediates between the supplier's ERP system and the RFID tag burner (printer) and reader (*see illustration, below*). Data isn't moved from the existing ERP systems to an independent data model - instead, it is simply referred to while remaining in its original ERP data source.



RFID tag creation - a simple example

A platform-independent RFID system should mediate between various ERP systems and their RFID tag burner / label printers, using XML, web

services, or SOAP (Simple Object Access Protocol)

ClearOrbit's own system offers a flexible labelling environment that allows users to define and manage their own label and tag formats and rules. Users can configure rules to define the content and type of RFID tag formats, allowing dynamic selection based on customer, ship-to location, material types, etc. The system also creates embedded smart tags for RFID shipments. For specific suppliers requiring RFID tags, output is directed to an RFID printer. For customers who do not require such tags, output can be directed to a standard bar code printer.

In being platform independent, the system accepts data from any application using a variety of data collection methods, and supports XML input, meaning it is compatible with a variety of supply chain execution systems, including WMS (warehouse management systems) and TMS (transportation management systems).

ClearOrbit's *RFID Tracker* system uses a 'direct integration' approach to add RFID support. Drivers for leading tag burning hardware are provided, and the internet architecture and web-based management console help reduce administrative support costs. An internet-based architecture can allow suppliers to burn tags across sites at any distance - even between continents.

The future of RFID development is hard enough to predict, meaning that platform-independent systems do at least offer a relatively future-safe path for those starting out with RFID technology.

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About the author...

Tom Dziersk is President & CEO of ClearOrbit, which provides real-time supply chain execution (SCE) software solutions. ClearOrbit

was founded in 1994 and currently serves more than 250 leading manufacturing and distribution companies including Cisco Systems, Texas Instruments and Applied Materials.

The firm extends enterprise systems value with Supply Chain Execution (SCE) and Collaborative Supply Management (CSM) software solutions. It's clients can enhance the functionality of their procurement, manufacturing and warehousing/distribution systems through the automation of internal business processes, and by incorporating their trading partners into extended supply chain execution processes.

ClearOrbit products work in conjunction with clients' existing enterprise applications to expand rather than duplicate functionality, eliminating inefficiencies in the supply chain.

For further information, visit ClearOrbit at <http://www.clearorbit.com>

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