

Automating Documents for RFID

- Darren Atkinson, Chief Technology Officer, FormScape Software

Radio Frequency Identification (RFID) technologies, which use radio waves to automatically identify people or objects, have been available since the 1970s. Yet the market has only recently begun to heat up. IDTechEx (a knowledge-based company specialising in RFID smart labels, smart packaging and printed electronics) predicts that the RFID marketplace will grow from \$1.95 billion in 2005 to \$7 billion by 2008, as businesses invest in chip-based tags and related hardware as well as software and services for tracking the movement of goods across the supply chain.



One of the key drivers for this uptick in interest has been mandates from Wal-Mart and the U.S. Military that their top 100 suppliers employ RFID by January 2005 for shipping pallets and cases to their distribution centres. Wal-Mart and the U.S. Military, as well as companies such as MasterCard, American Express and many others have adopted this technology for its ability to gather data without user intervention. RFID tags on items can be read even if they are hidden from sight, unlike bar code technologies that require readers to physically point scanners at the item.

These organisations are adopting this "non-line-of-sight" technology for its ability to deliver benefits in many areas, from tracking work-in-process to speeding up throughput in a warehouse, to tracking goods in the supply chain. RFID reduces administrative error, labour costs associated with scanning bar codes, internal theft, errors in shipping goods, and the overall cost of managing inventory levels.

For example, by placing readers throughout warehouses, companies can pick up signals without a clerk having to point a scanner at the tag, enabling companies to reduce warehouse and distribution centre staff. With more accurate information about inventory, retailers can dramatically reduce out of stocks to sell more, satisfy demand, improve service, and increase inventory turns.

Eliminating Manual Document Processes

However, as companies roll out RFID tags and hardware solutions they must also consider automating the documents that surround RFID-tagged items. These documents include human readable labels associated with RFID tags as well as associated shipping documents such as bills of lading, pick lists, and so on. Without such automation, companies will continue to be plagued by manual and inefficient generation, storage, retrieval, distribution of documents despite their significant RFID investments.

Any number of documents can be associated with RFID-tagged items, including pick & pack lists, shipping notices, material handling documents, purchase orders and so on. For example, even when items are tagged with RFID companies often need to include labels with human readable information for use by employees, couriers, and so on. These labels need to be consistent with the information in the tag, and so both should be drawn from the same source - the ERP system.

Yet many tags come from outside the company in which they are used, so once organisations gather RFID data from the tagged items they receive, they need to enter this information into their ERP systems. Many organisations are opting to implement hybrid data collection infrastructures that use both RFID and bar code technologies. Such a fusion of legacy and leading-edge technology can enable companies to comply with customer requirements to implement RFID technologies without overhauling their entire data collection process.

In order for RFID to provide organisations with maximum efficiency, organisations need not only to be able to track the items themselves via RFID but also the related documents for verification. By implementing Document Process Automation (DPA) solutions, organisations can more efficiently and effectively manage all of the documents associated with the RFID-tagged items. DPA can bring together outbound communications, integrated storage, and inbound imaging and seamlessly integrates these capabilities with ERP systems. As a result, these solutions improve visibility, enhance ease of use, and increase ERP and RFID efficiency.

For example, FormScape solutions can generate labels and documents required for shipping, associate documents with data from RFID tags stored in the ERP and provide employees with self-service access to these documents. It

can also help companies load data from the tags into the database as well as image and store the associated documents that enter the company from the supply chain.

Maximising the Benefits

There is no doubt that RFID has incredible potential for increasing efficiency in the supply chain, but increased automation will not succeed if it removes information from those that need it. What is required is an integrated approach that enables suppliers to reap the benefits of RFID while maintaining the links in to human and barcode driven processes that still make up the majority of the systems in the supply chain. Document Process Automation enables a digital, automated approach that brings together the best of all worlds

Darren Atkinson joined FormScape in October 1999 as Chief Technology Officer. Previously Darren held positions as IT Director Lysander Systems, Director of Development and Customer Services K2 Systems PLC, OSI Consultant project manager. Darren has provided executive management consultancy to the G20 banking group and ABN AMRO investment banking group.

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