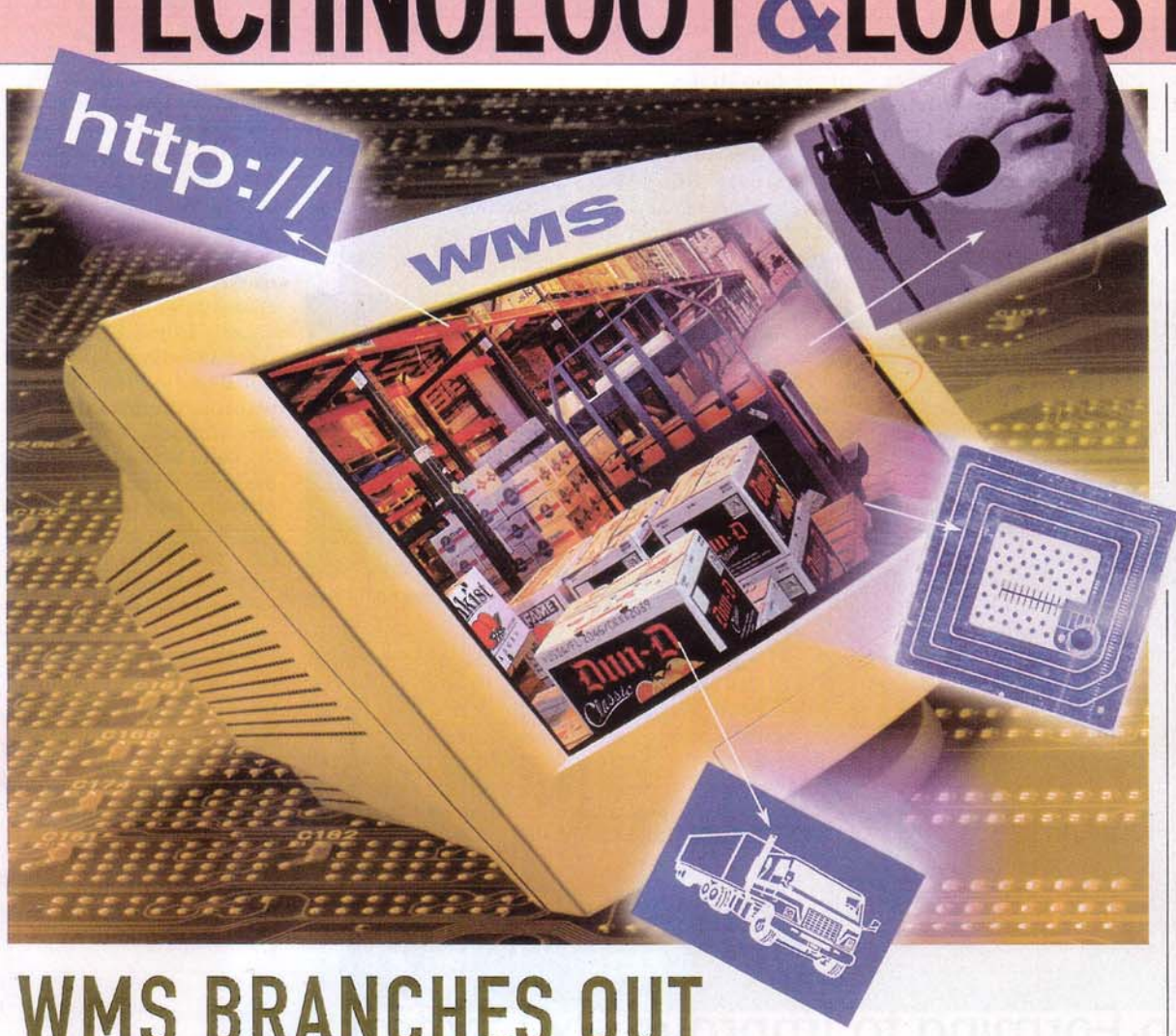
TECHNOLOGY & LOGISTICS



WMS BRANCHES OUT

Warehouse management systems are being dusted off to accommodate the food industry's stampede of new technologies and regulations

By MICHAEL GARRY

It's not your father's WMS anymore.

For many years now most retail distribution warehouses have seen fit to automate the movement of inventory into, inside and out of the facility through the use of warehouse management systems. Indeed, the traditional WMS, available from a variety of vendors, can help food distributors cut warehouse expenses like inventory and labor costs by 10% to 35%, according to Marc Wulfraat, managing partner, Kom International, Montreal.

But the WMS is changing to reflect a multitude of developments coursing through the food industry. For example, on the technology side, new RFID (radio frequency identification) systems that can track the flow of goods through the supply chain, while in the early stages of development, are expected to have a major impact on distribution centers. For one thing, Wal-Mart is requiring its top 100 suppliers to equip their pallets and cases with RFID tags, and food retailers will undoubtedly follow suit to keep pace with the retail giant. Warehouse management systems will need to accommodate the flow of RFID data.

"In the food industry, Y2K was an earth-shaking event that made people rethink how they did business, and RFID will do the same," said Rik Schrader, vice president, strategy and services, AquiTec, a WMS vendor based in Rosemont, Ill.

Warehouse systems have already undergone adjustments to handle the burgeoning interest in voice-recognition applications, used primarily in the product selection process. Any warehouse application worth its salt has to seamlessly interface with voice systems from such vendors as Vocollect and Voxware.

And now other additions to WMS are taking root in

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RFID Group Forming To Improve Rx Control

By MICHAEL GARRY

BOSTON — A new group of retailers, distributors and manufacturers is being formed to develop ways to improve distribution efficiencies for prescription pharmacy products through the application of RFID technology, SN has learned.

The effort is being led by Accenture, according to James Hintlian, a partner, based here, in Accenture's health and life sciences practice.

The program would employ RFID (radio frequency identification) technology based on the EPC (electronic product code), a new digital identification standard developed at MIT and now under the direction of EPCglobal, a division of the Uniform Code Council. If implemented, the program would represent one of the first multiple-company projects devoted to applying EPC-based RFID technology since version 1.0 was formally released in September.

The companies forming the group include two drug chain retailers, three pharmaceutical manufacturers and two distributors. One of the retailers, CVS, is on record as supporting the effort. Accenture declined to confirm the names of the other participating companies.

Hintlian said food retailers with in-store pharmacies are encouraged to join the group, but would need to do so by the end of 2003 in order to participate in decisions regarding technology

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WMS Branches Out

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the form of yard management systems that manage the movement of trailers in the warehouse yard (see story, this page) and transportation systems that translate orders into carrier assignments. Moreover, WMS is increasingly connecting to the Internet to facilitate communications to suppliers and, in the case of wholesalers, with retail customers.

On top of the technology changes, a whole host of new governmental rules are impacting the distribution center and WMS. These include bioterrorism regulations on product tracking and rules on country-of-origin labeling, revised hours-of-service for truck drivers and Sarbanes-Oxley audit requirements.

Giant Eagle, based in Pittsburgh, is an example of a chain that is taking a forward-looking view of WMS, particularly as it concerns RFID. The chain plans to install the next version of WMS from Manhattan Associates, Atlanta, in June 2004, following its release in March, said Larry Baldauf, the chain's senior vice president, distribution and logistics. Running on an IBM RS/6000 machine, the system will replace an OMI system in two distribution centers and an EXE system in three DCs.

Though it is Manhattan's first supermarket chain customer for WMS in the U.S., Giant Eagle was attracted to the vendor in part by its aggressive stance on RFID, said Baldauf. "I'm a believer in RFID, even though it's not where it needs to be yet," he said. "I hear the naysayers, but they're probably the same ones who said the bar code wouldn't work." While item-level implementation of RFID may not happen for a while, "it's going to get to the case level [sooner] and be pretty effective, with significant savings in the supply chain," he added.

Manhattan, one of the first supply chain execution vendors to join the MIT Auto-ID Center, where development of EPC (electronic product code)-based RFID took place, is putting RFID receiving and shipping functionality in its next WMS release (and it will be available for existing releases), said Nick Adams, sales manager, food industry, for Manhattan. In addition, the vendor currently sells RFID middleware to support its WMS or any other system, channeling data from RFID tag readers into the WMS or other systems. "Their [Manhattan's] vision of RFID is where mine is," said Baldauf.

RFID technology based on the EPC is going through standards development that will ultimately bring the cost of tags and readers down. Until it is ready to implement RFID, Giant Eagle is going to use another feature of the Manhattan system, called Trading Partner Management, which allows vendors to use the Web to get information necessary to generate UCC-128 bar code labels and ASNs (advanced shipping notices) containing pallet information. Vendors will then print those labels and apply them to pallets or cases headed for Giant Eagle DCs, in concert with an EDI transmission of an ASN to the chain. The TPM system can accommodate RFID as well, noted Adams.

When pallets labeled in this way arrive at the DCs, warehouse employees will be able to readily scan and prepare them for put-away or cross docking. Currently, they need to apply bar code labels themselves, a more time-consuming process. Baldauf said Giant Eagle has reduced its unloading time to less than two hours, but the new process will cut that by another 15 to 30 minutes.

To leverage Trade Partner Management, "all vendors need is access to the Web and a printer," said Baldauf. Adams said this process will especially help smaller vendors not already equipped to produce UCC-128 bar codes and ASNs. Giant Eagle plans to require all vendors to apply UCC-128 labels to its pallets.

Baldauf also sees the Trade Partner Management capability helping Giant Eagle deal with the U.S. Department of Transportation's new revised hours-of-service rule governing truck drivers' work schedules. The rules, which will begin to be enforced Jan. 4, will reduce the amount of time drivers can work. Many observers fear this will drive up delivery costs, but Baldauf believes that greater efficiencies achieved through the new technology will keep the chain's costs from rising, and may even reduce them.

New DC and System

Another company planning a WMS installation is Wild Oats Markets, Boulder, Colo. The natural foods retailer, which operates 104 stores under several banners, plans to install the Triceps WMS from OMI International, Dallas, as well as OMI's Biceps procurement application and its order management system, and voice-based picking from Vocollect, Pittsburgh, said Jonathan Kates, director of logistics and distribution, Wild Oats.

The new systems will go live in February, coinciding with the opening of a new 241,000-square-foot DC in Riverside, Calif., which will replace two smaller California DCs. "We're moving from a home-grown, mostly manual world into solid grocery technology," Kates said.

Kates said that Wild Oats has invested in WMS principally for product quality management and productivity advantages, such as in managing the multiple temperature zones it needs to handle its organic perishable products. But the company also sees the system helping it to comply with new government regulations, such as bioterrorism rules, country-of-origin labeling and Sarbanes-Oxley.

For audits, he said the system will give the company "a better way to understand our costs and product information at the time of receiving." Today, he added, audits and fact finding are too labor intensive. "We want to understand facts and resolve issues in minutes rather than hours."

Food Lion, Salisbury, N.C., is a long-time user of a WMS from AquiTec. Most recently, the chain upgraded to the current version and added store ordering functionality from AquiTec that helps with rack replenishment, splitting of orders and routing, said Dennis McCoy, the chain's vice president, distribution.

Food Lion is another chain that has decided to leverage the added efficiencies that voice technology gives to the selection process, supplementing the traditional WMS reliance on bar code scanning and RF communication via handhelds to facilitate the flow of goods through the warehouse.

McCoy said that Food Lion has installed a voice system from Vocollect in the grocery section of a DC in Dunn, N.C., about a month ago, and plans to put the system in the perishables area by February, completing that DC. Voice will be installed in two to three more DCs (out of seven in total) next year. The system interfaces with the AquiTec WMS. Voice, said McCoy, "improves the WMS—it improves the accuracy of the selection process and enhances productivity to some degree."

McCoy also believes WMS will help Food Lion comply with the Bioterrorism Act of 2002, parts of which take effect Dec. 12. The system, he noted, will track lot numbers of products, though Food Lion has not yet tested that function yet. Retailers will need to document a product's movement, including where it was obtained and where it was sent, among other provisions.

Bashas' Goes Yard

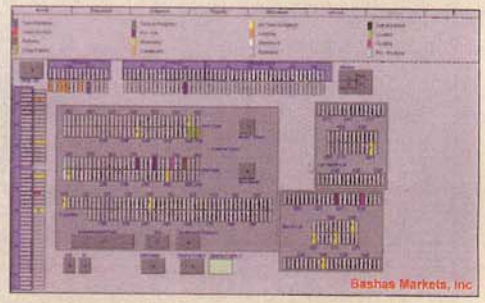
CHANDLER, Ariz. — Bashas' Supermarkets, a longtime user of automation inside its warehouse here, plans to bring automation outside to the yard next year.

The privately held company is hoping to have a yard management system, from LogisticsID Systems, Dallas, up and running by next March, said Mike Basha, vice president of logistics for the chain.

The system will tell warehouse operators the location of trailers in the yard "down to the physical parking space" or dock door, said Basha. Trailer positions are depicted on a computer screen (see graphic). A trailer's content and purchase orders can also be identified. Currently, tracking trailers is a manual process requiring employees to report on trailer availability in the yard.

The system, called UltraYard, places "minions," which are Wi-Fi tracking devices that use RF (radio frequency) technology, on individual trailers in the yard. The mobile minions communicate to fixed minions and gateway devices, which in turn communicate back to the central system inside the warehouse.

In the initial phase of the project, the system will use its own SQL server database and not interface with Bashas' AquiTec warehouse management, said Basha, adding that the chain is "looking at" eventually linking the yard system directly into the WMS.



Jim Reeves, president, LogisticsID, said the system, which is Java-based and database-independent, can be used to track trailers at store locations through a wide area network.