



# What's Working In WMS

October 2004

The Newsletter for Warehouse Management & Control Systems Users

## Tying voice technology to your WMS

Warehouse management systems are a central part of the distribution center's technology infrastructure, but a WMS doesn't stand alone. There often are many other software applications tied to a WMS.

One of the applications that has received a lot of attention in recent years is voice technology. (In fact, at this year's Warehousing Education and Research Council annual conference, several attendees this editor spoke with expressed interest in learning more about voice technology.)

Marc Wulfraat, managing partner of consulting firm Kom International Inc. in Montreal, provides his insight on issues surrounding voice, especially as it relates to the WMS.

### WMS vs. ERP interface

To begin with, a voice application does not stand on its own. A voice application needs to interface with another system that feeds it the order information. This system can be a WMS, an enterprise resource planning (ERP) system, or another application that creates a pick list and transmits it to the voice system.

But connecting to a WMS instead of an ERP or other system does have some advantages, notes Wulfraat. The main benefit is the real-time response of the voice interface to the WMS.

"Say you are picking from a flow rack, and an operator is told to pick 10 units but the location is empty," says Wulfraat. In the past, you usually needed a "chaser" to find inventory in the warehouse and bring it to the packing station to be combined with the balance of the order.

"But if you are using voice, the operator can say, 'Out of stock,' and that will invoke a real-time hot replenishment task. A replenishment operator should immediately get the task to restock the location. It becomes their

number one priority. So you can see the advantage," says Wulfraat.

If the operator can replenish that location within the next few minutes, the order picker can cycle back around and select the item. On the other hand, ERP systems tend to work in more of a batch-type cycle so there's not as much real-time response to these types of emergency situations.

"Voice solutions are designed to update transactions in real time regardless of the host system's capabilities," says Wulfraat, "but it's the underpinnings of how the systems are interfaced that determines whether you get to real-time or near real-time results." If the interface between voice and the ERP system is designed as a batch update, then there is no real-time benefit.

### Integration "surprisingly easy"

Voice has been a "surprisingly easy" technology to set up, says Wulfraat. "Typically, the issues you bump into are lightweight ones that can be dealt with. I don't see people spending hundreds of thousands of dollars integrating these systems."

A lot of it gets back to testing. For example, does the RF network have dead zones? Do the voice templates work? How do you deal with eliminating paper or labels?

One of the keys to easy implementation is the fact that voice systems tend to use an open-ended interface, meaning there is no need to create a custom interface every time. "Generally, if there is a problem, it's that the host system may not be set up to delegate this work to a subsystem," says Wulfraat. If you are using a WMS that is used to handing off work tasks to an RF device, there should be little difficulty in interfacing with voice.

But, Wulfraat continues, if you are using a closed ERP

This article was reprinted from the October issue of *What's Working In Wms*.

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or proprietary host system “that controls everything, such as the pick/pack/ship process or the receiving process, and you are asking it to delegate all of this work off to a subsystem, and it has never been designed to do that, then the plumbing in the host system can become an issue.”

That doesn't mean every WMS is equal when it comes to voice. “Some vendors are leaps and bounds ahead of others,” says Wulfraat, who mentions OMI, Manhattan, RedPrairie, IDS, and EXE specifically, although there are others as well. Some of these vendors have built extra functionality into the WMS so that voice is more than just a bolt-on application. This functionality centers around how the WMS handles exceptions such as shorts or hot replenishments.

### Using check digits

So what information does the host system need to provide the voice application? Not much, actually. The item, quantity, unit of measure, storage location, and location check digit are the main requirements. In most voice-based picking operations, employees typically verify they are at the right location by speaking a location-specific check digit (typically a randomly assigned two-digit identifier) back to the voice system. Employees can also verify location by speaking several digits from the item number, UPC code, or other item-specific data.

It is important to keep in mind that if operators need to read off product-specific data to confirm that they are picking the right item, then they will spend more time trying to find the data, such as the UPC number, on the product — if it has a UPC label at all.

With either approach, improving picking accuracy is the desired outcome, so you may have to accept a trade-off in the productivity promised by voice if you use product-specific data. Again, the WMS may offer an advantage here because

### Associated Grocers uses voice in split- and full-case orders

Voice picking has proven very successful in full-case picking, and voice suppliers are looking to expand the use of the technology into other areas, such as split-case picking applications, says Marc Wulfraat, managing partner at consulting firm Kom International.

For example, Associated Grocers of New England, a co-op/wholesaler, recently streamlined its operations with a voice-directed system from Vocollect that integrates directly with its WMS, IDS Power Warehouse. Within three months of deployment, the company went from paper-based picking to voice-directed operations for all split- and full-case orders throughout the facility. The voice system helped reduce mispicks from 3.5 per thousand to 1.0 per thousand, increased throughput, and cut training time by 50 percent.

“Customers [are] looking to extend the benefits of IDS Power Warehouse and IDS Power Voice into new voice-directed applications beyond selection, such as replenishment, putaway, and line loading,” says Todd Michaud, president of IDS.

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location master files usually provide for alias identifiers such as check digits, whereas some ERP systems may require modifications for this.

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