

VOICE TECHNOLOGY

in the

Distribution Center:

A BETTER WAY TO ACHIEVE ACCURACY

PART 3

by Allan Kohl

THIS IS THE THIRD ARTICLE IN A THREE-PART SERIES ON VOICE TECHNOLOGY IN THE DISTRIBUTION CENTER BY ALLAN KOHL, PRESIDENT AND CEO OF KOM INTERNATIONAL IN MONTREAL, CANADA.

Voice technology systems could be described as part rocket science combined with a little black magic. These systems must consistently identify a large number of individual voices using different accents and, occasionally, different languages. They must do this in a noisy environment with the constant hum of freezer fans and honking forklift trucks in the background.

A common misconception about voice technology systems is that, unlike RF scanning, voice technology solutions include the software that can direct operators like a warehouse management system (WMS) or a subsystem to a WMS. Therefore, a dedicated WMS may not be necessary.

TYING VOICE TECHNOLOGY TO YOUR WMS

In most—but not all—warehousing situations, voice technology is relatively easy to integrate with existing WMS solutions supporting radio frequency tasks. At the same time, however, some WMS suppliers may claim an alliance partnership that does not really exist.

Using computer simulation to “test drive” integration capability is recommended. The key question is whether or not the WMS solution can take full advantage of all the features of voice technology.

For example, will it provide real-time information transfer on each pick transaction? If so, will the replenishment timing be synchronized with the order-picking operation? How will a short pick be dealt with? When a picker indicates a shortage situation, the system should do three things: (1) replenish the pick location; (2) order a new pick task; and (3) direct a cycle count to discover why the discrepancy occurred.

Voice-enabled applications can quickly become unmanageably complex when applied to tasks for which they are ill-suited. Application features not suitable for voice interfaces are:

- Data collection tasks requiring large, specialized vocabularies
- Tasks requiring complex or lengthy instructions
- Tasks with complex flow options

To date, companies that have invested in speech technology include, but are not limited to, the following industries and tasks:

- Retail and wholesale grocery
- Foodservice
- Food manufacturing
- General merchandise, health, and beauty care
- Convenience stores
- Apparel and garment
- Automobile manufacturing
- Package sorting

Voice technology has been deployed and is well-suited in functional operations that include, but is not limited to:

- Full-case order picking
- Split-case order picking
- Flat garment order picking
- Manufacturing quality assurance processes
- Pallet receiving and breakdown operations
- Put-away and replenishment lift truck operations
- Cycle counting
- Package sorting operations that require human intervention for non-labeled packages

In distribution operations where outbound lot- or serial-number tracking or other extraneous information must be captured, it is too time consuming to expect operators to verbally read and speak long character strings. To accommodate this business requirement, a bar code scanner can be plugged into an operator's wireless computer to permit scanning bar coded lot- or serial-number information.



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THE BENEFITS OF VOICE

The big benefit of voice recognition systems is improved worker accuracy. No matter what level of error rate a distributor has, installing voice technology will reduce the number of worker errors. We consistently see reductions of 60% to 75% in error rates following voice recognition system installation. On the customer side of the equation, this means improved service.

Productivity improvement depends on the application. We've seen improvements of as much as 200 cases per hour, starting at 100 cases per hour and increasing to 300 cases per hour. One big variable in productivity improvement depends on whether or not labels are eliminated from the order selection process.

Yet voice systems offer internal advantages as well. In many cases, distributors can eliminate the use of picking labels, which at least reduces the cost of printing them. Worker ergonomics are improved because selectors have their hands free to do the job. When the job is easier, productivity increases. In addition, voice systems can alert other warehouse workers when selection slots need to be replenished. Another big advantage rests on worker training. The learning cycle is much shorter than training to use hardware that must be manipulated by hand.

To sum it up, the benefits of using voice technology in the distribution center are:

- Enables tracking by individual
- Reduces inventory errors
- Reduces warehouse outs, lost sales, and shipment errors
- Reduces chase labor
- Improves efficiency of selection and audit/checking effort
- Shortens sales order cycle window ■