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When Considering Multi-Modal Wireless Technology in Distribution, Analyze Each Task and Step

One Size Fits All Approach Will Not Optimize DC Performance; Flexible Wireless Platform is Key

SCDigest Editorial Staff

So-called "multi-modal" wireless technologies have started to gain widespread attention in distribution, but in general the market's understanding of how the options can be best deployed is just beginning to evolve.

Multi-modal refers to the concept of combining different types of wireless and data capture devices and technologies in a single unit or system. The most common example might be to use both voice and bar code scanning for order picking: voice for task direction and some pick confirmation steps, scanning to capture the serial number required for that SKU.

There are many other total combinations: hand held and wearable terminals; voice, scanning, "talk," and RFID.

The obvious answer is to "match the technology to the application." Sounds simple in concept, but how do you really do that analysis in practice.

According to **Mark Wheeler**, Director, Warehouse Solutions Industry Solutions Group at Motorola, a smart way to tackle the problem is to set up a matrix of tasks, processes steps, and input/output types.

For example, according to Wheeler, each step in a task, such as order picking, can be thought of as being one of the following"

- **System direction:** What work or information is required to be performed
- **Task confirmation:** Updating the system as to

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the work done

- **Data capture:** Capturing additional information required for the application

By looking at each task (picking, replenishment, loading, etc), breaking down those tasks into discrete steps, and then identifying the type and characteristics of each interaction with the system (direction, confirmation, data capture), companies can better understand what types of form factors and technologies are best suited to each task.

The most obvious implication, says Wheeler, is that it usually becomes apparent that a "one size fits all" approach to wireless in distribution, where every worker in the DC uses the same equipment, or there is just a simple breakdown between hand helds and vehicle mount terminals for fork trucks, may not really optimize productivity. Wheeler made his comments on a recent Supply Chain Videocast on **Using Multi-Modal Wireless to Drive Productivity Gains in Distribution**, now available on-demand: **Multi-Modal Wireless Videocast**.

In the same broadcast, SCDigest editor Dan Gilmore noted that "You can't even think about pick-

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	Full Case Picking: Pallet Flow			Full Case Picking: Reserve			Piece Picking: Carton Flow			Piece Picking: Carousels		
	Direction	Confirmation	Data Capture	Direction	Confirmation	Data Capture	Direction	Confirmation	Data Capture	Direction	Confirmation	Data Capture
Step 1												
Step 2												
Step 3												
Step 4												
Step 5												
etc												
Source: Supply Chain Digest												

ing as one task type – you may have case picking, piece picking, etc, and even sub-types within each of those." While it could be the same wireless technology mix will be optimal for each type, there may also be different needs.

A sample approach to this analysis is illustrated in the matrix above.

While such an analysis can take some time, the benefits will be worth the effort, Gilmore says.

"Doing this work will really help companies see the big picture about all the requirements they really have, which will often be more specific by task type than they realize," he observes.

By putting this kind of analysis together, companies can better understand what would be optimal for each task, then as makes sense aggregate some of that intelligence to determine a manageable set of technology options.

Mark Wheeler
Motorola

In today's environment, however, users should start by focusing on crafting a highly flexible platform, Wheeler notes.

"Today, you might not have to capture a lot of data, but next year maybe you do," he said, noting coming requirements for intense traceability data capture in the produce and health care sectors.