Mobile Data Capture: Key to Running Your Warehouse in Real Time

The goal of any well-functioning supply chain is getting the right material to the right location at the right time.

Wireless mobile data capture systems using radio frequency (RF) technology are enabling warehouse managers to defeat their age-old enemy: warehouse inventory data that doesn't jibe with the physical status of parts or products in the warehouse bins. Warehouse managers increasingly are learning that coupling RF mobile data capture with their SAP warehouse management (WM) or inventory management (IM) system can work to eliminate confusion while speeding up order flow, cutting operating costs, and reducing inventory balances.

How could a technology solution possibly deliver on such a huge promise? Anyone who has experienced the frustrations of a paper-based process will understand the vast potential for improvement. Most warehouse systems utilize seven basic processes:

1. Products or parts are received from suppliers or internal plants.
2. The products or parts are inspected and entered in the warehouse system.
3. The products or parts then move to storage.
4. Often, they are then transferred to the appropriate warehouse bins.
5. Parts are moved into production and back into the finished goods inventory.
6. When an order is received, a user initiates the picking process to fill the order.
7. Finally, once all of the items are assembled, the order is shipped.

PAPER CHASE

At each step, a worker records the item, quantity, and location on paper. These paper records documenting the movement of parts and products into, within, and out of the warehouse are recorded and entered by a data operator into SAP WM or IM. This is where the rub often occurs. Invariably, there is a lag between the time materials are received, moved, or shipped and the time that each step is entered into the database.

Connie Green, SAP product director at PEAK Technologies, explains: "In a manual system, the individual in receiving writes the quantity coming in on the packing slip. The packing slip then goes to the office where it is entered into SAP WM or IM. However, it can be as long as eight hours before the data is put into the system. In the meantime, the materials in the warehouse are part of a dynamic system and are moving. This creates problems, for instance, when a worker goes to fill an order and finds an insufficient quantity on hand because the bin has been consolidated with another one.

So what does the picker do? "His job is to get product to the loading dock for shipment. So, he goes to another bin where he knows there is sufficient product, picks the quantity he needs, and jots down on his clipboard the bin where he just took the product from. Now that piece of paper needs to go to the office for input into the system. Again, it will be hours before that data is in the system," Greed adds. With the delays of data input using a paper-based system, the confusion on the exact inventory levels or location of a product or part can snowball in a hurry.

REAL TIME CUTS CONFUSION

When the data and what's in the bins don't agree, the paperwork goes into a problem pile for resolution later, thereby adding to costs.

All of these reconciliation problems between SAP WM or IM and the physical inventory vanish with RF-enabled mobile data capture. That's because data is posted to SAP WM or IM in *real time*, not hours later when a worker delivers his clipboard to the office and a data entry operator finds time to key in the data.

RF mobile data capture systems follow the same processes as a manual system. This means that well-functioning warehouse processes need not be redesigned to accommodate RF mobile data capture. The RF system links the SAP application server with the workers on the warehouse floor using mobile terminals (hand-held or mounted on forklifts) that transmit product data scanned or hand-keyed via radio signals to antennas located around the warehouse. The antennas then relay the data back to the server via access points.

The RF system gives feedback in real time, which allows problems to be addressed on the spot. For instance, if a supplier ships too much product—in other words, the product quantity is not part of an open purchase order—the worker on the receiving dock discovers it when he scans or keys the items received. SAP immediately informs the worker that this is an invalid purchase order, and the items are set aside for research. This saves the time and labor that would have been required to store the items in a bin and then retrieve them. "Our clients' experience has shown that they are able to drop and process deliveries at a much faster rate using RF mobile data capture," says Green.

Further savings accrue when an RF mobile data capture system is combined with a bar code label printer. This combination dramatically reduces the incidence of data entry errors and allows the paperless movement of product and data in real time around a warehouse.

Clearly, RF mobile data capture systems offer warehouse and logistics managers a valuable method for managing inventories more effectively and speeding deliveries, all while reducing costs.

RF BENEFITS ADD UP

The benefits of RF mobile data capture start piling up quickly:

- ✓ Reduced operating costs;
- ✓ Shorter order turnaround times;
- ✓ Lower inventory balances;
- ✓ Fewer customer returns;
- ✓ Greater flexibility and responsiveness; and
- ✓Better integration within the supply chain.

To learn more about SAP integration and solutions, **click here**.
For further Wireless RF services, **click here**.