



Case Study

Rock Solid

JMTC teams with Intermec wireless mobile computing to virtually wipe out inventory errors

At a Glance

Industry:

Government

Market:

Defense

Application:

Work Order Management

Inventory Management

Distribution Management

Products:

750 Mobile Computer

CT60 Rugged Tablet PC

MobileLAN™ WA21

3400 Printers

Partner:

iLevy & Associates, Inc.



ROCK ISLAND ARSENAL

Rock Island Arsenal is the site of the largest government-owned-and-operated arsenal in the United States. Building 299 is its distribution center, roughly the size of 17 American football fields and measuring 770,000 square feet. Building 299 sits on a 946-acre island in the Mississippi River and is the pride of the Joint Manufacturing and Technology Center (JMTC) on Rock Island Arsenal in Illinois.

The U.S. Army depends on the JMTC to manufacture spare/repair parts and end items as well as to assemble the tool sets, kits and outfits that support soldiers' equipment in the field.

Workers at the JMTC in turn depend on a new, automated tracking system to help them monitor work in process. The system is designed around wireless mobile computers and networking from Intermec Technologies Corp.

The advancements have virtually eliminated inventory errors and cut cycle time for the entire production process. No longer tied to batch data processing and manual data entry, managers now have real-time production visibility.

Among the potential vendors for the mobile computing aspect of the system,

Intermec stood out for the can-do attitude of its representatives. It was a quality those at the arsenal knew well.

"Intermec got it the first time. They knew how to approach it and understood what was needed," said Tom German, financial and logistics specialist with the Joint Manufacturing and Technology Center. "Intermec was the only one to come and say, 'We can do that.' And they did."

Two missions go on simultaneously in Building 299. One is a distribution mission, which accounts for 80 percent of the building's inventory. These are items stored long-term, sometimes for three or four years, and include things like spare and repair parts. The other mission is the production of tool sets in all their various forms. These range from seven-piece tool kits to room-sized mobile enclosures stocked with 3,000 tools.

Prior to implementation of the new tracking system, both missions were managed with the existing mainframe base system. Hundreds of thousands of parts were stored inside the vast building, parts for one mission mixed on shelves with those for another. The mainframe system that kept track of them all was growing older.



Undeniable benefits

The mainframe legacy system is 30 years old. Replacing it in its entirety would be an expensive, time-consuming process, so it isn't going anywhere soon. Any new system had to be reliable, easy to use and SAP-compatible – SAP being the enterprise resource planning system that the Army Material Command (AMC), the JMTC's overseer, will eventually install at all AMC sites including the JMTC. While the legacy system is adequate for supporting the long-term storage mission, something had to be done in the near term to support material tracking in the high-velocity production mission.

The JMTC put together a plan to modernize the support to the set assembly mission. Workers now take an Intermec 750 mobile computer with them for put-away duties. As tool kit components arrive for verification, the worker scans each box's bar code label with the 750's integrated scanner and enters the actual quantity. For jobs that require work carts, employees use an Intermec CT60 rugged tablet PC strategically mounted on the work cart.

Scanned information travels via radio frequency through an Intermec MobileLAN™ WA21 access point. Naturally, the military is highly protective of its information. Data traveling over radio signals must be encrypted and the computing devices must be authenticated for use on a FIPS-140-certified wireless. FIPS-140 is one of the Federal Information Protection Standards. The Intermec network installed at the JMTC is secured by Air Fortress encryption and authentication software. The access

points relay the encrypted radio signal to and from the server, allowing the worker to securely roam throughout the building with the mobile computer.

iLevy and Associates Inc. installs and integrates customized software from HighJump Software's Warehouse Advantage. The software is customized by iLevy and forms the middleware component of the system. The handheld and cart-mounted computers access the middleware server through a built-in Web browser.

End users access the middleware server in a real-time environment. The use of scanners built into the handheld computers enhances the accuracy and speed of data entry and retrieval. The worker on the floor gets a message on the mobile computer screen identifying the destination for each scanned item. Any hard-copy printing of bar code labels or packing slips is performed by Intermec 3400 printers.

With the help of such safeguards, the JMTC has cut its inventory error rate to less than half of 1 percent from a previous rate of 7 percent. Accuracy is no longer a problem. And because the system is real time, information accessibility has never been better.

"We're not accumulating things that are sitting and waiting for the paperwork that has to be logged into the system so that the next step can be taken," German said. "Previously, we'd complete a process



one day, paperwork would be marked up and data entry would happen the next day. It would be another 24 hours until the system updated so somebody could say, 'Oh, they're finished. We can move it to the next step.'"

From the picking process, to the staging area, to the final assembly, the system checks the tool-set components against the on-line bill of material to search for discrepancies. If everything is as it should be, the system generates a finished packing list.

"This new system allows us to see on-line where the items are through the whole process, which is a big benefit. Before, we had to call all the different areas to see where everything was and what the status was," said Susan L. Newsome, director of the JMTC's Distribution Directorate.

Getting the job done is the bedrock of the arsenal, its people and its missions. Building on such a foundation with the help of a solid partner like Intermec has given employees of the JMTC a better way to work.

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