

Case study

## Wood-Mode

Crafting Efficiencies



At a glance

Industry: Manufacturing/Logistics

Application: Parcel Delivery

### Automated system helps save thousands of dollars monthly by improved tracking, verification procedures

Quality has been the operative word when it comes to describing Wood-Mode cabinets for the past 60 years.

The Kreamer, Pa.-based company is the nation's largest manufacturer of custom cabinetry. Wood-Mode's high-end kitchen and bath cabinets are built to order for discerning homeowners. In 2002, Wood-Mode produced 1.4 million units. Of that, 665,000 units were shipped by the company's own drivers with third-party carriers delivering the rest.

#### Too Much Room for Error

While quality best describes the products manufactured by Wood-Mode, quality was hardly the word for its old shipping procedures. The paper-based shipping manifest system was error-prone, time consuming and did not provide the level of accuracy needed.

Because of the number of items involved in a typical shipment, it was easy for a driver to inadvertently miss an item or to drop off too many items at a delivery site, requiring the driver to

backtrack to correct the error. Drivers also experienced problems when their loads did not match shipping manifests. And when Wood-Mode drivers delivered cabinets to the company's customers, the verification procedure was to check off the delivered items on a piece of paper.

Each week, there were a significant number of units that customers claimed were never delivered. Worse yet, there was no way for Wood-Mode to check the accuracy of the claims because of the lack of documentation.

"Our supply chain was fairly inefficient," said Keith Roush, information services project manager for Wood-Mode. "We had no proof whether the customer received the cabinet. It was our word against theirs."

The discrepancies were costing Wood-Mode thousands of dollars each month in lost cabinetry and order remakes, which were placed as rush orders reducing an eight- to ten-week manufacturing process to just a few days, disrupting scheduled production.

### From manual to automated

Wood-Mode turned to Intermec and its partner, Computer Support Services Inc. (CSSI), to help find a solution. The system they developed gives every Wood-Mode driver an Intermec 6808 mobile printer and 720 Pocket PC handheld computer running customized application software from CSSI. In the factory, workers use Intermec wireless scanners running over an Intermec wireless network to follow goods through the production cycle.

For the first time, Wood-Mode has the ability to track cabinets through its entire supply chain.

With the new automated system, units ready for delivery are scanned twice. A warehouse worker performs the first scan as the cabinets are loaded onto the truck. The data is exported to a PC then onto the 720 handhelds. This gives drivers an accurate reading on how many cabinets are on their trucks. The second scan, at the final destination, is done with the 720.

The CSSI software package automatically compares the scanned information to a shipping manifest stored in the handheld and alerts the driver if there are inconsistencies.

“When a driver scans a cabinet, there is a ‘good’ beep and a ‘bad’ beep,” Roush said. “In addition, a text message [on the handheld] details the problem and gives drivers options for solving the problem.”

Once a delivery is verified as accurate, the driver captures the customer’s electronic signature and prints a delivery receipt. “Because there are two scans, we’re confident that the information is accurate,” Roush says.

When drivers return to Wood-Mode, data is uploaded from the 720 to Wood-Mode’s host system via the wireless network.

### Verification is Documented

Drivers initially were skeptical, believing the scanning process would add time to their deliveries, but quite the opposite

has occurred. Delivery times have not been affected, accuracy has increased dramatically and drivers now can document their delivery performance.

“We now have proof of what was delivered,” Roush said. “We have proof that the cabinet was scanned onto the truck and proof that it was scanned off of the truck. When a customer signs off on the load, the cabinet shows up on the receipt with a signature.”

Not only does the system improve the efficiencies of the drivers, it also improves the manufacturing process by eliminating rush re-orders that back up regular production and saves the cost of a second delivery.

“There are improvements throughout the supply chain thanks to the system,” Roush said.

Improvements that will bring quality to the Wood-Mode supply chain to match the quality of its cabinetry.

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