



Case Study—Wireless Warehouse Inventory Solution

Customer: Lawler Manufacturing, Indianapolis, Indiana

Date: Initial development Fall 2001—Ongoing enhancements continuing

Technology Profile

- ◆ MS Windows 2000 Server
- ◆ MS SQL Server 2000
- ◆ MS Internet Info. Server
- ◆ Active Server Pages
- ◆ Visual Basic 6.0 (label printing control)
- ◆ Casio RT-700RF Pocket PC
- ◆ Wireless LAN Handheld Device
- ◆ Socket Communications Barcode Scanner
- ◆ Dymo Label Printers
- ◆ MAS 90 Accounting

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Executive Summary

Computer Renditions designed and created a wireless handheld physical inventory capture solution that enables Lawler Manufacturing to efficiently and accurately perform bi-annual physical inventory counts. All inventory parts are scanned by location into a physical item count database in SQL Server which is later compared with the MAS 90 physical inventory for conflict resolution and eventually imported as the physical inventory.

Project Goals

1. Reduce the number of mistakes inherent in the existing manual inventory process employed by Lawler Manufacturing by:
 - ◆ Eliminating the potential for misinterpreted hand written inventory slips (product code, quantity and location code) through the use of bar codes and wireless Pocket PC handheld computers.
 - ◆ Controlling the inventory process by tracking progress and label based tracking documents applied to inventory bins.
 - ◆ Implementing an inventory audit mode used to verify initial inventory counts within a pre-determined percentage (1% is typical).
2. Generate reports comparing physical inventory to MAS 90's physical inventory to find inventory/receiving/work order problems.
3. Import physical inventory into MAS 90 as the current physical inventory (what was counted is what they have.)

Implementation Description

Implementing this project for the initial roll-out required a substantial amount of pre-planning, including defining warehouse location codes by area, rack and row; printing racking labels based on the analysis; integrating with the MAS 90 item master data table to print barcode labels for each item bin in the warehouse; optimizing travel patterns to label printers for inventory personnel within defined areas; designing a full site coverage, secure 802.11b wireless network for the Pocket PC scanning devices.

The inventory application was designed to be a web-based application running on a Microsoft Internet Information Server. This approach allowed for the utilization of existing server resources and cost savings on the software development through the centralized application administration inherent in web application development. The Casio RT-700RF devices run the Microsoft Pocket PC operating system which includes the Pocket PC version of Internet Explorer used to access the web application.

