

APICS®

THE PERFORMANCE ADVANTAGE

SEPTEMBER 2003

2003
APS SOFTWARE
SCORECARD
Page 79

Open Road?

What's ahead for the automotive supply chain

ALSO IN THIS ISSUE:

Shop Talk on the Shop Floor

A sheet metal manufacturer replaces
An aging labor-collection system

Taking Stock

A matter of time

Virtual Machinists

One answer to the shortage

Six Sigma and Lean

Smooth blend

SHOP TALK ON THE SHOP FLOOR

A sheet metal manufacturer replaces an aging labor-collection system.

BY EDWARD MUEHLBAUER

Gardner Manufacturing Company, located in Horicon, Wisconsin, has been in the sheet metal custom manufacturing business for 75 years. The company serves such major industries as defense and aerospace, electronics, machine tool, transportation, pollution abatement and environmental control, printing, processing, construction, and material handling. It is known for custom high-quality precision products produced in small to moderate volumes with lead times of less than four weeks. Short lead time and quality products provide the company with a competitive advantage.

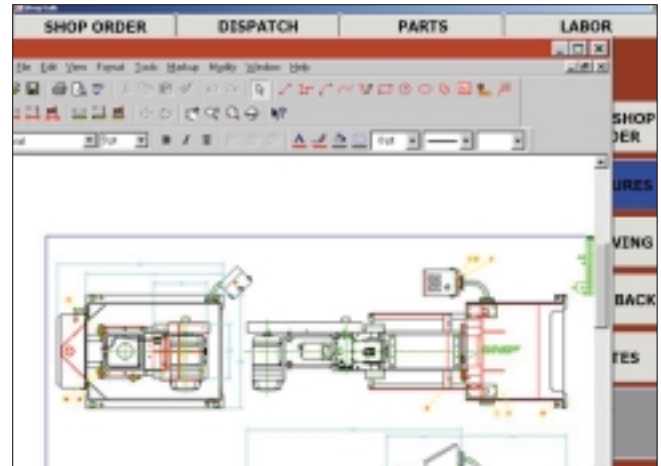
The key to successfully serving these industries is an experienced design engineering team coupled with a modern and completely equipped sheet metal fabrication shop, weld shop, and paint facility. Equipment and design expertise enable the company to produce satisfactory products that meet specification.

In 2000, Gardner was looking to replace an aging labor-collection system that the original software or hardware providers no longer supported. The company also wanted to expand its capabilities and improve its labor-reporting practices. The old software, for example, did not do any online verification, so errors were found after the fact and were rarely corrected.

Gardner had worked with software developer and integrator Guardian Business Solutions, Inc., for several years. Guardian's president suggested the Shop Talk solution to meet Gardner's immediate needs and address additional areas of its shop floor processes. Gardner believed Shop Talk would enable the company to cut lead times, reduce rework, increase employee satisfaction, and make it more competitive.



The easy-to-use screen format, with images and large buttons for touch-screen control, greatly reduces labor-reporting errors.



CAD drawings can be accessed through the Shop Talk system.

Gardner trained 100 employees in two shifts on Shop Talk. Labor-reporting errors were eliminated the first day of implementation.

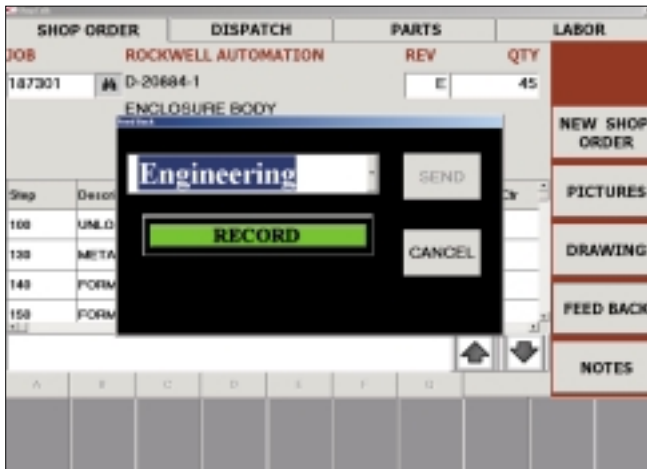
USING SHOP TALK

Shop Talk is a labor-collection system that provides a great deal of flexibility and functionality. Gardner uses it both to record activity on the shop floor concerning order fulfillment and production requirements and to provide feedback to other departments.

The Shop Talk system is tied directly to Gardner's enterprise resources planning (ERP) system. Orders entered in the ERP system are available to shop floor personnel almost immediately. Labor is reported using a touch screen with bar code scanning and is fed back to the ERP system for use in costing, scheduling, and payroll. To choose tasks for the day, workers on the floor pull up the dispatch screen at a terminal and view all orders that need to be worked on. They then scan the correct order and begin work. When work is completed, workers scan out of the shop order and into the next one.

If packaging or other instructions are needed, Shop Talk provides linkages to images for packaging instructions, product photographs, and other visual information. These digital images are proving quite useful to shop personnel, so Gardner is currently in the process of expanding its image library. In addition, workers can access computer-aided design (CAD) drawings. When accessing these documents, Shop Talk helps ensure workers are looking at the latest revision.

One feature Gardner is currently implementing is called



Recorded information can be forwarded directly to the necessary personnel.

“feedback.” This feature enables a worker to record a message at the terminal and then forward the recorded message to engineering or another department. This will enable workers to immediately record comments and concerns about the order without having to stop and write them down. This will save time and improve communication between the production floor and other departments, especially engineering.

PROGRAM ENVIRONMENT

Installing the system was easy. It was installed on a Microsoft Windows 2000 server and linked to the company’s ERP, scheduling, and payroll systems by personnel from Guardian. Guardian did a system study to determine where data were stored and the best way to interface with Shop Talk. The company then set up all the required switches and links. Shop Talk was also configured to CAD and picture databases.

In terms of hardware, Gardner needed to run cables to the locations on its shop floor where it wanted the units mounted. The hardware arrived with the software already installed. Software was subsequently installed at the cable terminations.

Gardner tested the interface to its ERP system by paralleling with manual time cards. The testing cycle was successful and quick. Data entered at the Shop Talk workstations were accurate and were being updated to the necessary places on the ERP system.

EASE OF USE AND LEARNING

Shop Talk is easy to use. The screens are large so they can be easily read on the shop floor. Employees do not need to squint to see the screen, which can be read from some distance from the terminal. The information can be input via touch screen or wand so no real keyboarding knowledge is needed. Large tabs, buttons, and user-defined queries facilitate the interface. There is a search option by part number, but no drilldowns are required—all required information is available within the screen. The schedule is color coded for shop orders in progress.

The screen layout was so intuitive workers literally picked up the system within minutes. Extensive training simply wasn’t needed. Shop floor supervisors were given additional training, and system administrators were shown all the Shop Talk functions so the company could grow into the software as needed.

BEST FEATURES

The software has improved the way Gardner does business real time. Employees can enter data without the errors associated with calling in the information or after-the-fact reporting. In addition, employees more fully understand work instructions because photographs are available and instructions provided through an easy interface available at the touch of a finger. This has helped the company achieve greater efficiencies.

The software alerts employees whenever they attempt to

Vendor Comments

Guardian Business Solutions, Inc. (GBSI) is a software developer and systems integrator established in 1997 in Brookfield, Wisconsin. At Guardian, the goal is to provide practical solutions for manufacturers and distributors using best-of-breed voice, touch-screen, and wireless technologies. Guardian differs from traditional ERP and data collection providers in its philosophy and approach. The focus is on improving productivity and efficiency on the shop floor and giving workers on the front line the tools to build better products more economically.

The Shop Talk system enables the worker to access, interact, and communicate important job information to people

and systems by integrating with a company’s existing ERP system, CAD system, and various other databases. Instead of proprietary data collection devices with small screens or terminals that emulate the ERP software with complicated screens and limited capabilities, Shop Talk uses large-screen mobile workstations that can display job information, CAD drawings, and digital pictures. Shop Talk employs an easy-to-understand and flexible user interface that uses speech recognition and touch screens to navigate, communicate, and enter information. Our APICS-certified staff installs and implements every system to ensure customer satisfaction.

Recently, GBSI released version 3.1 of Shop Talk, which incorporates full voice recognition capabilities for entering information and navigation. It performs well in high noise environments with excellent recognition accuracy. Version 3.1 also includes a time synchronization tool, i.e., an automated Java utility, that periodically synchronizes the time on the Shop Talk workstations with the time on the Shop Talk server.

Shop Talk version 3.1 was recently installed at Industries for the Blind in Milwaukee, Wisconsin. Most of the visually challenged shop workers are using voice recognition and voice prompts for time and labor data collection.

enter information against a closed shop order or step. This warning has helped improve the accuracy of labor reporting by ensuring data are accurate upon entry.

Perhaps the most impressive feature is that the software has grown as Gardner has grown. The company can continually add features as it improves its processes. Gardner has made easy-to-implement changes to respond to customer corrective action requests. In addition, Shop Talk has enabled the company to comply more easily with ISO 9001 requirements.

SHORTCOMINGS

Gardner would like to see the addition of some type of automatic clock validation that would go out and reset the terminals clock once daily. This is not a critical shortcoming but rather a nice-to-have feature that would add more value to the software.

OVERALL EVALUATION

Gardner has been pleased with Shop Talk. It is easy for workers to use, easy for administrators to monitor, and it has positively affected the accuracy level within all areas of the labor data collection. We are also pleased with the package's scalability. ♦

Edward Muehlbauer is president of the Gardner Manufacturing Company.

Product Summary

PRODUCT NAME: Shop Talk

TYPE OF PROGRAM: Shop floor data collection and communication system

SOFTWARE VENDOR:

Guardian Business Solutions, Inc.

210 Regency Court, Suite 103

Brookfield, WI 53045

Phone: (262) 827-3000

Fax: (262) 827-3005

Web site: www.gbsvoice.com

Recommended Operating Environment (PC)

Windows 2000 and Windows XP

Runs on Conventional PCs as well as touch screens

System is 2.4 GHz 802.11b RF-compatible to enable mobile implementation into wireless LAN environments

Recommended Operating Environment (server environment)

Windows 2000 (peer-to-peer), Windows 2000 Server, and

Windows 2000 Advanced Server

Can communicate directly to a variety of host platforms, including Windows, UNIX or AS/400



Guardian Business Solutions, Inc.

THE VOICE IN MANUFACTURING ®

210 Regency Court, Suite 103 * Brookfield, WI 53045-6160

Voice (262) 827-3000 * Fax (262) 827-3005

www.gbsvoice.com