



BellHawk Data Sheet Job Tracking System (JTS)

Overview

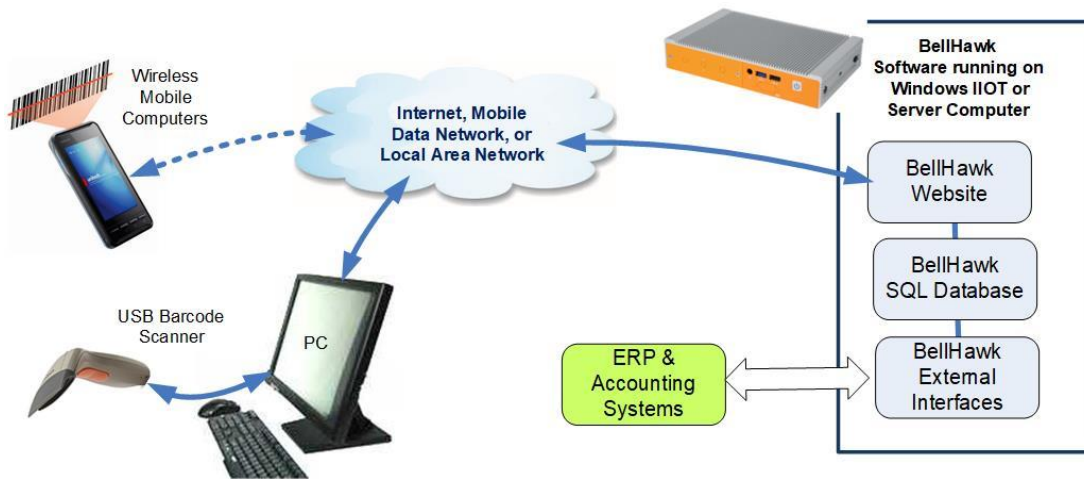
The BellHawk Job Tracking System (JTS) is a simple-to-use system that uses barcode scanning to track the progress of work orders through a sequence of operations. JTS also captures the labor expended by individual people or teams on each operation.

JTS is designed for use in manufacturing, fabrication, engineering, construction, assembly, repair and other industrial organizations as well as for tracking the progress of secondary operations in an industrial distribution warehouse.



JTS gives a real-time view of the status of work-in-progress and captures the labor expended for subsequent analysis. Management users can print out reports or download Excel exports giving the status of work-in-progress and showing how long work orders are held up between operations.

Technology



The BellHawk JTS data collection software consists of a specialized website and a SQL Server database that run on a Windows Server IIOT or Windows Server computer. All user interaction is performed using web-browser based devices thereby avoiding the need to install custom software in each data capture or viewing device.

Barcode data collection can be performed using devices such as PCs or ruggedized mobile computers, with integral barcode scanners. Data viewing, in the form of screens and reports, can also be performed over the Internet using these same devices, as well as smart-phones.

JTS can be run stand alone or can exchange data with a wide variety of ERP, accounting, and production control software.

How JTS Works

With JTS, users can set up production routes, and then use these to print barcoded travelers, as shown here, on an office printer. These travelers can be scanned to track batches of material or individual items.

Operators can then record the start and end of each operation by scanning the barcodes on these travelers. This includes recording their labor start and end times by scanning a barcode attached to their badge. They can also, optionally, record the quantity produced or processed during this time.

JTS enables organizations to easily transition from using paper forms and manual keyword data entry to having their employees directly capture work order tracking data on the shop floor. The biggest advantage of this transition is to enable managers to see the status of all their jobs in real-time so they can easily spot jobs that are in trouble or need extra attention. It also enables subsequent analysis of the labor performance of different workers.

Work Order

Importance: Standard
Date Wanted: 12/22/2015
Sales Order #: CDE Furniture Manufacturers
Customer: Make Stainless Steel Knobs
Instructions: Make Stainless Steel Knobs

WO00000101

Step #: 1
Operation: Production: Lathe
Step Instructions: Lathe

Step #: 2
Operation: Production: Drill and Tap
Step Instructions: Drill and Tap

Step #: 3
Operation: Production: Polish and Inspect
Step Instructions: Polish and Inspect



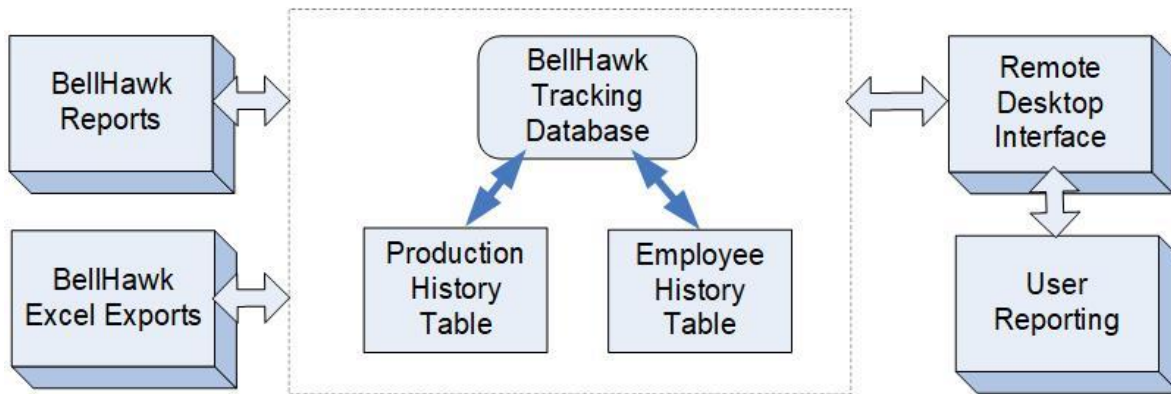
JTS is designed for use by shop-floor workers who have limited computer literacy. By using barcode scanning manual data entry is minimized. Also, JTS warns users if they make a data collection mistake and allows immediate data correction. JTS only captures the minimum data needed for each tracking situation. This minimizes training time and eases the introduction of data collection technology to the shop floor.

JTS enables the recording of time actually worked, as separate from the elapsed time to complete each operation, by enabling users to scan-out when they go on break or their shift ends. JTS can also allocate labor time when someone is working on multiple work orders at the same time.

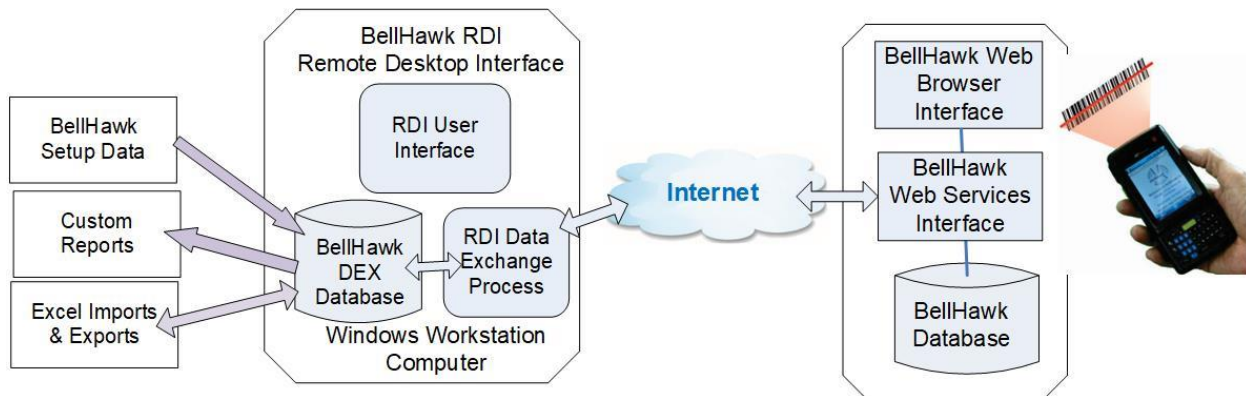
Managers, supervisors and customer support people, can then see the status of all the work orders in real-time, including how long each work order has taken or has been held-up, since completion of the last operation, waiting for the next operation to begin.

Managers are able to download Excel exports showing the progress of work orders, the elapsed time for each operation and how much labor was required. They are also able to get a labor report by work order or employee showing the amount of labor time, elapsed time, and quantity produced for each operation on the job.

JTS comes with a set of standard reports, in the form of PDF or Excel exports, which are accessible through its web-browser interface.



For those JTS users who want to create their own custom reports, the Remote Desktop Interface (RDI) is available.



The RDI software uses the free Microsoft SQL Server Express database server to create and maintain a copy of selected tables within the BellHawk database on a local data exchange database (DEX) on a user's desktop PC. Users can then use Excel to create their own exports from this database or can use third party reporting software, or programs written in a language such as Python, to generate their own custom reports from the DEX database.

With the RDI, data written into the DEX database is exported to BellHawk enabling the transfer of setup data as well as work orders into the BellHawk database from Excel spreadsheets.

Please note that the RDI transfers are run under control of a user program on the user's PC desktop. As such, the RDI is not intended for 24x7 unattended operation. For this, the MilramX-based MDEX system, which runs on a Windows Server computer, should be used.

Commentary

The JTS software is an excellent starting point for implementing an automated data collection and production control system, because it is affordable and easy to use.

Subsequently the JTS can be upgraded, with a simple license change, to become a full Manufacturing Execution System (MES). Similarly, materials tracking and traceability and Warehouse Management System (WMS) capabilities can be added, when needed, all within the same integrated system.

For more information, please see www.BellHawk.com.