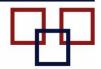


## Real-Time Inventory Tracking and Operations Management Software



www.BellHawk.com

## **BellHawk Software Introduction**



The BellHawk<sup>®</sup> software provides an integrated real-time inventory tracking and operations management solution for manufacturers and other industrial organizations. It is based on the use of Microsoft<sup>®</sup> database and web-server technology.

The web-server version of the BellHawk software was originally developed in 2008 and 2009 by Dr. Peter Green, the Technical Director of Milramco LLC, to provide a simple-to-use inventory and operations tracking solution for use by small to mid-sized industrial organizations.

This development was in response to the limitations of prior client-server-based systems, which required a substantial IT staff presence on-site for their support. This IT support was expensive and precluded the use of these systems by many smaller organizations. This development was also in response to the movement to Cloud computing, with all its attendant cost saving benefits.

The initial goal of BellHawk was to replace the use of paper forms and manual keyboard data entry to track inventory and manufacturing operations with the use of technologies such as barcode scanning and mobile computers.

This initial development was focused on the needs of the several hundred thousand small and medium size short-run, quick-turn, make-to-order manufacturing plants in the USA, of which 80% were (and many still are) using paper forms and manual keyboard data entry (primarily into Excel spreadsheets) to track their inventory and operations

Since then, the capabilities of BellHawk have been expanded in over a decade of application, in collaboration with a number of partners, to become a comprehensive real-time inventory tracking and operations management solution for a wide range of industrial organizations. Users of BellHawk have included a wide range of manufacturers and industrial distributors, food and pharmaceutical processors, engineering, repair, defense, and construction organizations.

BellHawk is currently available on a software-as-a-service basis, in the Cloud, at affordable prices. This is ideal for smaller organizations, as it requires minimal IT support. BellHawk is also available for rental or purchase by the IT departments of larger organizations for installation in their own data centers.

Early on, in the development of this software, a decision was made not to integrate Accounting or CRM (Customer Relations Management) capabilities into BellHawk but instead to provide interfaces to enable BellHawk to exchange data with a wide range of Accounting, ERP (Enterprise Resource Planning), and CRM systems. This has enabled BellHawk to be tailored to meet the specific needs of materials and production managers, and their staff, without turning BellHawk into "Bloatware" with so many features that it became very difficult to use.

BellHawk is based on the use of rules that integrate best manufacturing and materials tracking and traceability practices. BellHawk, at its core, is a real-time expert system that uses Artificial Intelligence (AI) to make it easy to use. Users can configure these rules to meet their specific needs for a wide range of different applications, without needing to customize the software.

At the same time, the BellHawk DEX (Data Exchange) interface provides the capability for users to integrate their own custom reports into BellHawk, as well as to automate the exchange of data with a wide range of other systems, without needing to understand the internal architecture of BellHawk.

BellHawk uses a web-browser interface for all its user interaction. This enables BellHawk to be used on a wide-range of different computing devices such as PCs, Android based mobile computers, and smart phones, anywhere there is an Internet connection, without needing to load any special BellHawk software onto each device.

As a result, BellHawk can be used to track materials and operations at multiple different manufacturing plants, warehouses and other geographically distributed facilities. It can also be used to track materials in yards, at field-service sites, and at construction sites, as well as tracking materials in transit between facilities.

BellHawk also integrates a rules-based capability for automatically printing custom labels on high-speed barcode label printers. The user defined rules enable situation specific labels to be automatically printed without manually entering data. Instead the data is automatically retrieved from BellHawk on-demand and the label is formatted according the needs of the situation.

BellHawk typically quickly pays for itself in labor savings, by eliminating the use of paper forms and manual keyboard data entry, and by preventing operational mistakes. It can also help prevent expensive loss of unhappy customers by assisting managers to make sure that orders get shipped on-time, without product defects.

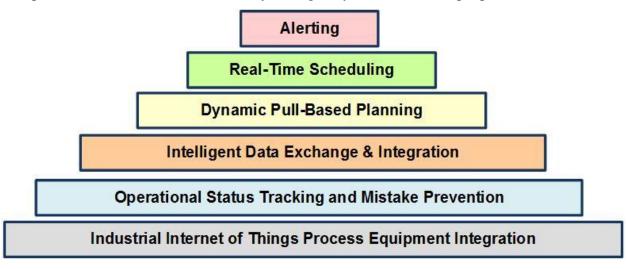
In addition, BellHawk now integrates capabilities for real-time scheduling and materials planning, as well as electronic integration with customer and supplier supply chains. It also captures materials traceability data, where needed for FDA and other compliance requirements, as well as integrating job cost estimating and tracking capabilities.

Features such as these have transitioned BellHawk from being a simple materials and operations tracking system for make-to-order manufacturers to a fully integrated operations management solution for a wide-range of industrial organizations.

The web-server version of BellHawk was the result of Dr. Peter Green's Tau-Adaptor project, back in 2008, which also resulted in what has become the MilramX<sup>TM</sup> software platform for enterprise and supply chain information exchange. MilramX uses an intelligent-agent-approach to examine data in real-time as it is collected or generated by a variety of systems and to send alerts by Email or Text Message to people about events or issues that they need to be aware of. MilramX is also used to automatically exchange appropriate information between systems to make sure that everyone has the information they need to do their job, when they need it.

In simple applications, MilramX is used as the basis of the BellHawk DEX interface which enables users to create their own custom reports and to exchange data with a wide-variety of other systems.

In more advanced applications, BellHawk can be used in conjunction with MilramX to provide an integrated real-time operations management solution, for mid-sized industrial organizations. Such applications typically have a significant level of embedded Artificial Intelligence to enable each plant and warehouse to be efficiently managed by a small team of people.



MilramX can also be used to integrate BellHawk with simple accounting systems, such as QuickBooks, and open-source CRM systems, such as Suite CRM, to provide an inexpensive alternative, with superior performance for smaller industrial organizations, to ERP systems costing hundreds of thousands or millions of dollars.

The intellectual property rights to both BellHawk and MilramX are owned by Milramco LLC. From 2010 to 2019 sales, support and distribution rights were licensed to the BellHawk Systems Corporation. In 2019, KnarrTek Inc., under license from Milramco, offered the BellHawk Online service on a subscription basis and then in 2020 became the primary distribution and support organization for both BellHawk and MilramX.

For more details about the BellHawk software, please see the BellHawk Overview data sheet, which can be downloaded from the Data Sheets link at the bottom of the <a href="www.BellHawk.com">www.BellHawk.com</a> website

Also please see www.KnarrTek.com, www.Milramco.com, and www.MilramX.com.