



Management Overview of the Issues in Interfacing BellHawk to your ERP or Accounting System

To quote a good old American expression: "There is no free lunch!"

Many prospective users of material tracking software would like to use BellHawk because it is very cost effective and has extensive material tracking capabilities. Also customization to an organization's specific needs is supported through the availability of source code and customization services. But most purchasers of material tracking systems are confronted with the issue of interfacing a product like BellHawk to their Enterprise Resource Planning (ERP) or accounting system.

In an ideal world, either:

1. BellHawk would provide an interface, pre-built and fully tested, to your make, model and version of your ERP system.
2. Your ERP or accounting system would come with a full set of material tracking capabilities built-in that will meet your exact needs.

Unfortunately, neither of these is supported by economic reality. Some facts:

1. There are over 300 ERP systems currently in use in the USA and the market is highly fragmented between them.
2. The ERP market is now stagnant, with most companies locked into their current ERP systems. Many of these systems exist in older versions, which are retained because the organizations using them have made extensive customizations to their existing systems.
3. The total number of new or replacement material tracking system purchased in the USA each year is well under 10,000 or around 30 per ERP system.
4. At an average software license price of under \$10,000 per material tracking system, it is not economical:
 - a. For BellHawk Systems to implement a custom interface to all the ERP systems that are out there, let alone all the prior versions of these that still exist.
 - b. For most ERP vendors to invest in the team of specialists necessary to support all the changes in barcode tracking and RFID and mobile computer standards and equipment that are currently going on.
5. There are some ERP vendors who have invested in implementing inventory and production tracking modules but these vendors are finding an unfortunate reality:
 - a. Unlike accounting modules, material tracking modules often need extensive customization to meet the individual needs of clients. This customization then precludes the purchasing of upgrades to the ERP system, which cuts off the

economic lifeblood of the ERP vendors who make most of their money these days from selling maintenance contracts and upgrades.

- b. Without significant on-going investment in continual upgrades to their ERP material tracking capabilities to keep up with advances in technology, these modules quickly stagnate into limited capability modules that do not satisfy most users' requirements.

So what we are seeing in the material tracking marketplace is:

1. ERP Vendors withdrawing from actively pursuing the material tracking marketplace. What offerings they have are largely being allowed to stagnate.
2. Material tracking software being supplied by smaller, specialized vendors such as BellHawk Systems, whose economic basis is appropriate to the size and scope of the marketplace and who are able to offer customization services.
3. Vendors, such as BellHawk, offering tools that facilitate the building of interfaces but not offering standard interfaces.
4. Independent ERP specialist consultants, who have developed an interface to BellHawk, offering to re-sell the expertise and the code they have developed.

Even if you could replace your current ERP system with a new ERP system that had all the material tracking capabilities already built in:

1. You would still be faced with a major cost for systems changeover in terms of re-doing your accounting system and in retraining your people in how to use the new system. Such changeovers are a major business risk if they fail or falter (as they often do) as opposed to the incremental addition of material tracking capability which is much lower risk.
2. Despite what the sales people present, your new ERP system is unlikely to support all the material tracking and control capabilities needed for participation in today's supply chain driven economy at any economical price.

As an alternative to purchasing a material tracking system, you could customize your existing ERP system to add material tracking capabilities. Many organizations have done this, but it can be a very expensive way to go because:

1. While it may seem simple to hook up a barcode scanner to a computer and write some code to store the resultant data in a database, recognize that several million dollars has been invested in the development of the BellHawk material tracking software and that we currently have a team of 12 programmers continually upgrading and maintaining this software. Many organizations have customized their ERP system only to find that the expenditures of time and cost quickly slow the project to a crawl or cause its abandonment before completion. Even those who do complete their projects have an on-going maintenance and support cost that may be economically unacceptable. Even worse, they are locked-in to the employee(s) that developed all the customizations
2. The customizations you make lock you in to an old version of an ERP system or you have an enormous expense bring your changes forward to a new version of the ERP

system every time they issue an upgrade. While sticking with an older version of an ERP system may seem attractive, the problems of hardware obsolescence and the security risks with legacy operating systems, represent major business challenges.

If your organization has got itself into the trap of living with an older version of your ERP system because of material tracking customizations, then a very attractive way to go is to upgrade to the latest ERP system (standard) and use BellHawk to provide the material tracking capabilities. This can be done incrementally by changing over the material tracking to BellHawk with an interface to the old version and then switching to the new version of the ERP system (behind the scenes) when everyone is using BellHawk for their material tracking needs.

Many people are of the opinion that there is no such thing as a "Standard" interface. All interfaces are a function of the versions of the software being interfaced and of the customizations made to the software on either side of the interface. They are also a product of the way that the ERP or accounting system is set up. Questions such as: "Are standard costs used or are cost tiers used to value inventory?" can have a major impact on how data is handled when exchanged between the two systems.

So what we do at BellHawk is to provide tools such as DEX to make the job of the people implementing the interface much easier by isolating them from a lot of the details of the BellHawk table structures. We provide standard mechanisms for importing and exporting data over remote ODBC data link connections, including checking for and correctly handling updates to existing records from the ERP or accounting system. We also provide a mechanism for importing and exporting data through Excel data sheets.

This does not take away all the work of importing and exporting the data between the two systems. It will typically take between a couple of days and a couple of weeks of work by a programmer who is familiar with the inner workings of the ERP system to develop the interface. These people will probably need between one to three days of consulting support from a member of the BellHawk Systems technical staff to help plan and implement the interface.

The amount of time taken to develop the interface will depend on the complexity and real-time nature of the interface. Setting up an interface that exchanges data through the export and import of comma delimited files can often be accomplished within a day. Setting up an interface that will import and export data whenever a button is pressed typically takes about a week. To set up an interface that will automatically exchange data whenever there is a change in data in either system can take two weeks of work or more.

Many implementers compromise and exchange setup data that is essentially static by Excel spread sheets and then focus their development efforts, at least initially, on importing and exporting items that change frequently, such as sales orders and purchase orders. This enables interfaces to be implemented in a few days. These interfaces are then steadily automated further as time permits.

So we come to the conclusion that, while interfacing a material tracking system like BellHawk to your existing ERP or accounting system is neither quick nor easy, it is probably the lowest cost option and certainly the lowest business risk option for adding needed material tracking capabilities to your organization.