

White paper

Case Study - Compliance Labeling in Warehouse Receiving

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A fortune 100 company wanted to develop recommendations regarding Vendor Compliance Bar Code Label Standards. The customer had a large warehouse operation and would eventually be implementing a SAP CRM solution. The findings of the study and subsequent recommendations are included in this document and serve as a practical analysis of a real world situation and the resulting recommendations.

This document was prepared after a review of the customer's facilities and business processes, specifically the receiving methods. Information is from interviews conducted with selected vendors via telephone. Recommendations relative to compliance labeling are based on the experience of the author, a specialist in bar code and data collection technology.

Vendor Compliance Label Standards are constantly evolving. There are at least two main standards competing for broader recognition, and multiple secondary standards regarding individual bar code symbologies and their applications. Some of the standards, although comprehensive and promising, have not been adopted by all regulatory bodies. The Retail Industry (Sears, K-Mart etc.) have implemented proprietary shipping label requirements and imposed them on their trading partners. Vertical industries, in most cases, do not have specific standards. The EDI (Electronic Data Interchange) compliance trend adds to the complexity of the labeling standardization process.

Objectives of the Study

The Customers main objectives for implementing compliance labeling were:

- Improve the Bar Code / RF Warehouse System Receiving Functionality by providing more data in bar coded format.
- In the proposed label design, follow existing and / or emerging standards as closely as practically possible and choose the standards with the biggest potential to become the de facto industry standards.
- Provide for easy integration with the EDI protocol. EDI is an integral part of the SAP R/3 business application.
- Consider the practical aspects of the vendors compliance with the imposed standards and envision ramifications to the vendor shipping processes and their computerized business applications.
- The label design will likely be adopted by the vendors and used to comply with their other customers' requirements.

- Format design should take under consideration any future requirements imposed as a vendor of goods. This is important in view of the SAP implementation and the worldwide trend towards electronic commerce based on EDI.

The Customers Business Practices

Customers benefit from a vendor shipping label compliance program if they can achieve a high compliance rate from their vendors. In order to design a label which will satisfy The Customer's receiving goods process requirements and be relatively easy for vendors to comply with, both: The Customer requirements regarding purchased goods receiving practices and vendors shipping and distribution practices and infrastructure should be taken under consideration.

The Customer had insisted that their vendors ship goods, relevant to separate PO Line Items, in separate containers. The Consultant learned, from discussions with selected vendors, this requirement is not always possible to comply with. Many vendors ship small quantities of miscellaneous items on a single purchase order. In many cases, the cost of packaging small quantities (1, 2 or 3) in separate boxes would exceed the cost of the goods being shipped. This finding had significant influence on the proposed label design, dictating whether PO Line Item # or Quantity could be placed on the shipping label.

Study Methodology

Ten vendors were chosen as an initial group asked to participate in the vendor compliance shipping labels initiative. This group of vendors, formed a representative sample in terms of size and location, type of goods shipped, distribution and shipping practices, computing infrastructure, and level of implementation of bar code and EDI technology.

The Consultant spoke or met with all ten vendors in an attempt to gather information which could influence shipping label design and subsequent implementation of the compliance program. In many cases discussions were held with more than one representative from a given organization, representing management, sales or the computer systems aspects of their business. The following aspects of their operations were explored:

- Their distribution and shipping practices
- Their computing infrastructure
- Their bar code systems awareness

Findings

Primary conclusions were formed based on these interviews:

- Shipping and distribution infrastructures and practices differ significantly from vendor to vendor. Most of the vendors from the group were nation wide distributors of different products and some are only manufacturers of products. Some ship directly from multiple manufacturing sites, some maintain a local sales office but ship goods from their central warehouse and still others ship most of their products from their local distribution branch.
- Most of the vendors try to comply with The Customer's requirement to ship items relevant to one PO Line Item in a separate container; however, almost all of them would admit that they ship a certain percentage of small items, relevant to different PO Line Items, of one or even several POs combined into one container.
- There is a wide range of computing infrastructures and resources within these vendors. These resources rang from companies who have a system person designated to EDI and bar code projects management, to companies which do not employ their own computer / system specialists and rely on consultants and third party providers. Computer hardware ranged from IBM main frames, throughout minicomputers (HP, NCR) to RISC / UNIX based machines. In many cases, business applications (Sales Orders / Warehousing / Distribution) have been custom written for a given vendor. In some cases, off-the-shelf business packages are used. In a few cases, MIS personnel maintain their applications and are able to modify them.
- Bar code technology awareness was high although its implementation is, in most cases, in the initial stages. EDI is more advanced than bar coding. Some companies had already implemented bar code systems for their internal application of tracking parts and components or for internal tracking of shipments. Some vendors have shipping labels with some information bar coded which they scan when shipping for shipping confirmation purposes.
- All vendors were receptive to the compliance-labeling program and ready to comply with the Customer requirements.

Compliance Label Recommendations

To improve the speed and accuracy of the warehouse receiving operation all data entry fields, that are crucial to the receiving function, would need to be bar coded. This meant that vendors would need to ship their goods with information about the shipment in a bar code format. Two options for data portion of the shipping label were proposed:

1 - Minimum Compliance Label - This label, in its most basic format, should consist of:

- A Vendor Address (“From Address”) and the Customer Address in human readable form. A bar coded and human readable Postal Zip Code
- A bar coded and human readable Customer PO#

This label allowed the vendors to easily comply and simplify the interface to their existing business practices and business applications. The label design would still follow selected standards and should be a subset of the Enhanced Compliance Label.

2 - Enhanced Compliance Label - This label design provides for future compliance with EDI and Advanced Shipping Notice practices of “electronic commerce”.

In its most basic format, it should consist of:

- A Vendor Address (“From Address”) and the Customer Address in a human readable (text) format
- A bar coded and human readable Postal Zip Code
- A bar coded and human readable The Customer PO#
- A bar coded and human readable, vendor controlled, Serial Shipping Container Code

More elaborate versions of this label could also include more human readable fields, which are not represented as bar codes, such as Vendor Part#, Part Description, UOM, Qty, No Of Boxes etc. Part # and Vendor Code.

Conclusion

This customer study is very typical of business who want to gain the benefits of Auto ID technologies. The biggest problem is to find a way to implement the bar code label into the system. Warehouse productivity is reliant on the ability of vendors shipping goods to label their items in a usable format.

In the case of this customer the consultant was able to create a minimum label requirement that was easy for the vendors to adopt and thus the benefits of bar code (Auto ID) automation were realized. For more information on bar code and shipping standards refer to the additional material in the Real ID Systems website or follow the link to the organizations that provide standards.

If you would like to take advantage of Auto ID technologies or if you would like to contact the author of this document contact jacek_lipowski@realidsystems.com