

Manufacturing Traceability



Freedom Technologies Your One Stop Traceability Solution

Traceability answers all of the manufacturing information data requirements needed in today's global marketplace: From Manufacturing to Distribution, Freedom's Error Proof can supply the following information and more;

- When each part was made (date/time stamp)
- Who made the part (which machine or individual operator)
- What type of materials make up the part (specific material components)
- What process was used (including verify testing and quality checks)
- Part Data Retention (retaining data on each piece)
- Data Retention through product distribution

Freedom Technologies is your one source for all of your traceability needs – from software and hardware to implementation . Freedom has a proven track record of installing traceability systems with companies all over the North America and Europe.

- Error Proof Software
- Direct Part Mark Readers
- Ink Jet and Laser Marking Equipment
- Dot Peen
- 2D Bar Code Label
- 2D Perishable Tooling
- RFID



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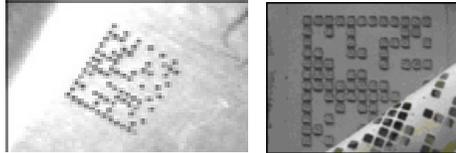
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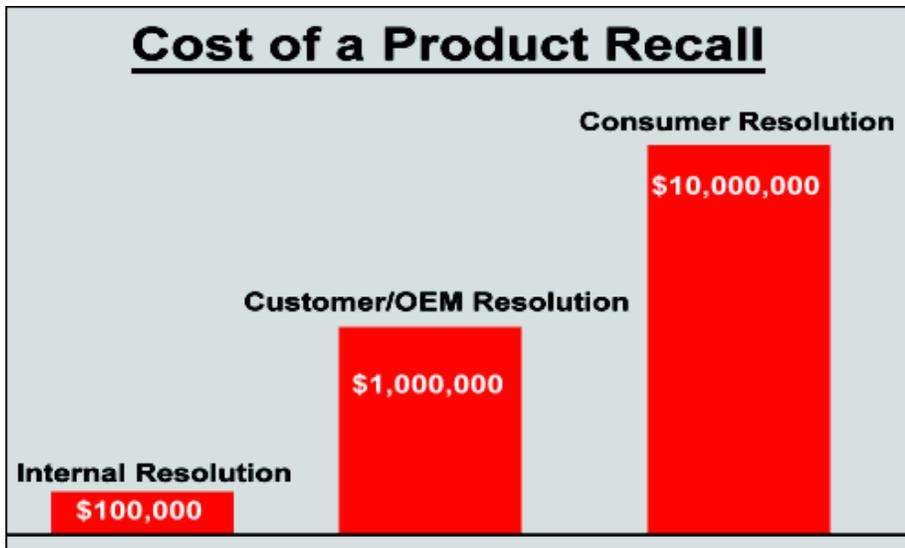
Traceability is one of the most critical aspects of manufacturing today impacting the company's bottom line and their reputation. Manufacturers are turning to traceability solutions to help close some of the information gaps that exist in disparate supply chains, track warranty data and meet customer safety and demand requirements.

The ability to identify each part or assembly at the work cell ensures proper production and provides validation to the manufacturer. This also demonstrates that the correct test procedures and quality checks have been completed in the proper sequence. A typical 1D bar code cannot hold enough data to properly ensure that each part has its own serial number. That's where today's new marking techniques come into play:

- Direct Part Mark
- 2D Bar Code Label
- 2D Perishable Tooling
- RFID



However, marking the part is only a portion of the traceability equation, retaining this data is the key. That's where Freedom Technologies' Error Proof® system delivers. Error Proof is designed to handle this critical part information and marry it with its own serial number, date/time stamp or other information such as operator, shift or work cell. This information, in itself, creates a traceability log allowing you to keep track of each and every part you produce. In the event of a product recall or a defect, the information needed to determine which specific pieces, produced on certain dates or shifts need to be recalled, rather than entire product run is seamlessly retained.



Freedom Technologies offers numerous applications to help customers with their traceability needs ; from Error Proof WIP Tracking, Error Proof Disposable Kanban, Error Proof Shop Floor Scheduling, Error Proof Sequence (shipping only) and to Error Proof Sequence (shipping and scheduling) just to name a few.

Error Proof WIP Tracking: Enables the users to monitor Work In Process (WIP) at each defined work cell throughout the production process. Or, monitoring numerous work cells

independently with EP WIP Tracking, you'll see which products are entering specific phases of production on your shop floor. By scanning WIP labels or serial numbers at each work cell, product traceability and tracking information is generated. Monitoring these processes in the entire work flow, real-time information is provided on WIP inventory, lots on hold, reworks and scrap.

Error Proof Disposable Kanban: Supports Kanban and bin movements along with serialized tracking. Also, stores Kanban's electronically to prevent lost cards and prints them on demand.

Error Proof Shop Floor Scheduling: Supports discrete and repetitive schedule environments along with monitoring and displaying work center loads. EP Shop Floor Scheduling also enables rescheduling and electronic dispatching of work.

Error Proof Sequence (Shipping Only): Provide sequential functionality from the retrieval and processing of customer build and sequential shipping data to the sequential shipping of customer sequence data based on customer sequence order and customer rack size/quantity.

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UID Marking Systems

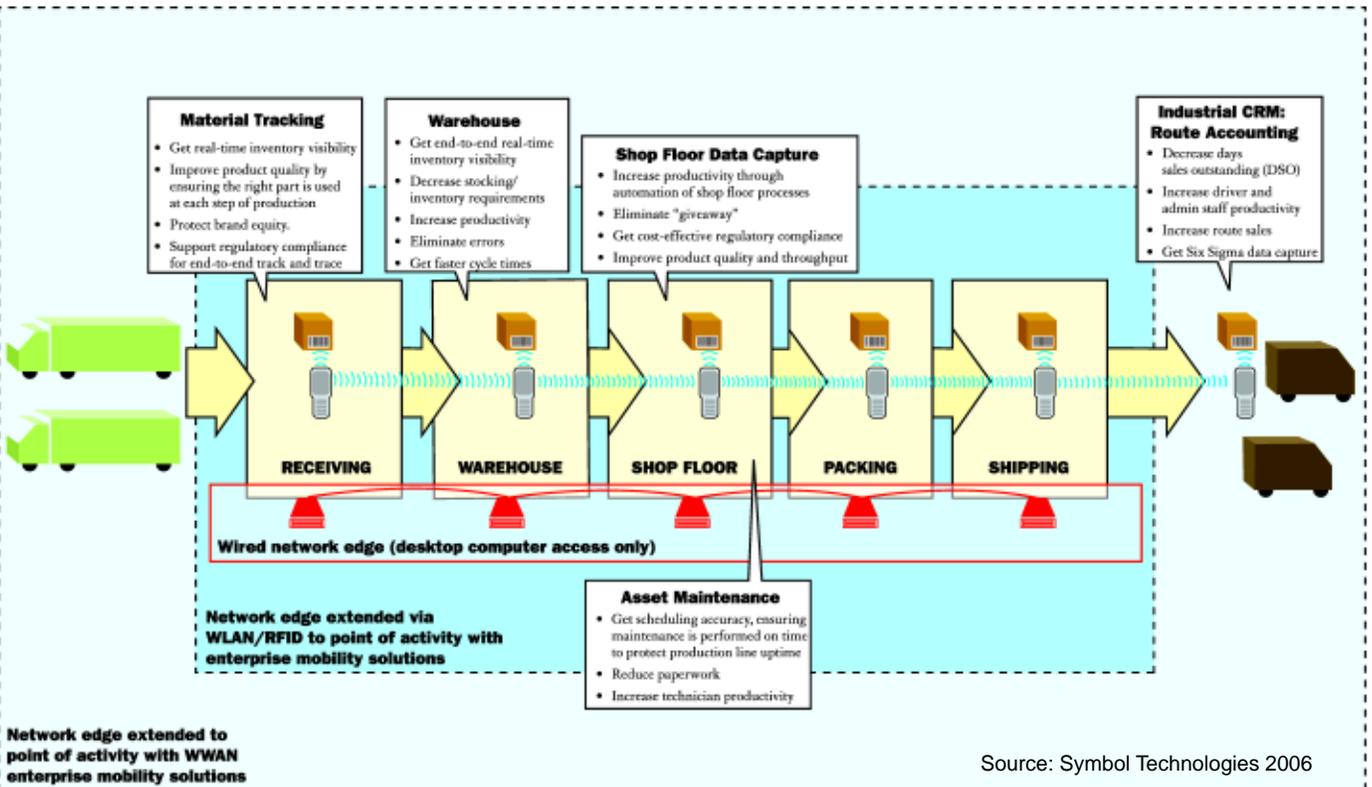
Freedom Technologies sells and installs UID Direct Part Marking solutions for your UID marking needs. We sell and install major brands of PIN Marking, Ink Jet and Laser Marking equipment.

RFID/UID Data Collection Software

Freedom Technologies' Error Proof software offers full integration into your host system for UID marking equipment, UID and RFID reading devices. In addition, our Error Proof software offers a database repository for full traceability for UID marked products as well as Error Proofing the data collection process.

UID and RFID Readers

Freedom Technologies is your source for the new Symbol UID and RFID readers. The Symbol Readers are the lowest cost and highest performing readers on the market today. Both are handheld and full wireless mobile UID and RFID readers that connect seamlessly to our Error Proof software for real-time connectivity to your host system!



Source: Symbol Technologies 2006

Manufacturing Traceability

The following four shop floor functions are areas that require high degrees of human touch and elevated risks for creating errors. Error Proof® is designed to seamlessly integrate with your shipping, labeling, production and quality processes.

Shipping

Error Proof® ensures that parts are shipped correctly and the quantity of parts placed in each container is correct. Properly labeled (Earn-a-Label™) containers ensure that placement on the correct truck with the correct paperwork (Earn-a-Shipper™). Error Proof® verifies that the correct compliance label is being placed on each container as required by the customer.

Labeling

Error Proof® provides functionality to serialize all production parts. It supports most direct part marking methodologies such as labeling, dot peen, laser etching, ink jet, and many others. Each serial label is typically scanned to produce a container label (Earn-a-Label™) with genealogy retention. This assures only correct parts are being packaged and eliminates scrap and foreign parts from finding their way into shipping containers.

Error Proof® also contains a sophisticated WIP label to track work-in-process. The WIP label can be produced at the part or at the container level, thus providing a tracking mechanism throughout the production process. This label is unique in that it combines the bill and router with the label to be used for additional error proofing processes.

Error Proof® has the capability to serialize all incoming shipments of components during the receiving process via scanning or the incoming ASN process. To automate inspection, Error Proof® has an automated "Skip Lot" receiving inspection process, that tells the operator when to inspect the part, what parts to inspect, how to inspect the parts and records the history of the inspection process.

Production

Production error proofing validates the manufacturing process contained in the routing and product structure, including any bill of material component, correct container, attributes and features of products, and it retains validated production information.

Quality

Error Proof® provides complete genealogy tracking from components utilized to process/characteristics retention. When utilizing direct parts marking or part serialization, this information can be retained to the part level. Testing, measurement data, production date, time stamp, machine and employee information can also be easily retained with Error Proof®.