

A tough economic climate, compounded by an enhanced need for visibility and traceability within the supply chain, has created a dire need for secure and efficient tracking systems across all industries

Anders Gustafsson
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Staying on track

The bar code is very much alive and well, with 2D dominating track and trace in the healthcare industry. Equally, RFID tagging and its associ-

ated intelligent systems are commonplace as a means of securely identifying, tracking and tracing goods from manufacturing to supply chain processing and fi-

nal delivery. In addition, in the concept of the global village, goods are moved around the world in vast quantities and this process requires significant cost

efficiencies to be in place and bear fruit for manufacturers, suppliers, importers and exporters. ID People spoke to the CEO of one of the world's leading players in this industry to discuss past present and future trends.

Zebra Technologies is a major player in the field of automatic ID, particularly in the field of specialty printing. How has product development kept pace with the growing demands of security and efficiency, as more and more industries adopt secure tracking in their processes?

Zebra is a perfect example of a company that has evolved its business model over the years to meet this type of demand. Instead of just creating the same products to meet market needs, the company now analyzes each industry to identify inefficiencies or for that matter, opportunities in tracking and labeling and takes these key learnings to design a product to address the issue to save businesses time and money.

Nowhere is this more apparent than with the introduction of Zebra's HC100™ printer. This is the first cartridge-based pa-

tient I.D. solution to make wristband printing easier and more cost-effective for healthcare organizations. Unlike laser printers, which are not designed to process large quantities of adhesive-backed wristbands and labels, the HC100 Patient I.D. Solution was developed to accommodate a high volume of wristbands. As a result, users experience fewer jams and ongoing maintenance needs are minimized. Staff productivity may be enhanced because users do not have to replace toner or ribbons.

Bar codes still remain one of the most widespread means of data collection. Do you see this trend continuing?

As a global leader in providing bar code and RFID solutions to businesses, yes, we do see this trend continuing; but it will evolve. In just

the next five years, retailers and manufacturers will be migrating from UPC and EAN to Databar and GSI. GSI DataBar symbols can carry more information and identify small items than the current EAN/UPC bar code. GSI DataBar enables Global Trade Item Number (GTIN) identification for fresh variable measure and hard-to-tag products like loose produce, jewelry

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and cosmetics. Additionally, GSI DataBar can carry GSI Application Identifiers such as serial numbers, lot numbers, and expiration dates, creating solutions to support product authenti-

Meet Anders Gustafsson

Anders Gustafsson is CEO and a director of Zebra Technologies. He was appointed to this position on September 4, 2007. In his role, he brings extensive international experience in the technology sector. Leveraging his deep technical and manufacturing expertise and sales and marketing capabilities, Anders Gustafsson has sharpened Zebra's strategic focus and concentrates on the company's long-term growth opportunities. He has improved Zebra's operating efficiency and customer focus as well as managing its financial performance and delivering innovations to the market.

Prior to joining Zebra Technologies, Anders Gustafsson served as CEO of Spirent Communications, a publicly traded telecommunications company. At Spirent, he redirected that company's growth strategy, divested non-core operations, integrated historic acquisitions and streamlined the organization to realize significant cost savings. Prior to Spirent, he was senior executive vice president, global business operations, of Tellabs.



ation and traceability for fresh food products and coupons.

With this in mind, Zebra Technologies has been updating its printers to meet new bar code standards

in advance of public release, to help manufacturers, retailers and others in the supply chain to stay ahead of these changes and developments.

HC100 Patient I.D. Solution was developed to accommodate a high volume of wristbands

In this regard, 2D bar code technology is gaining significant momentum. In which industries is this being seen the most and does the trend necessitate continued hardware research and development to support it?

P4T labeling for rugged environments



Unlike traditional bar codes, which sometimes exist only to provide simple numbers between a vendor and a manufacturer, 2D bar codes are non-linear and include a significantly greater amount of data. For example, in one 2D bar code, we can track the manufacturer, the lot number, the expiration date, information about the product, and its location. Having more data allows for increased flexibility and more visibility in a facility's supply chain. For example, recalled or expired products can be identified and pulled from the shelves or utilized prior to their expiration dates.

Specifically, 2D barcoding is becoming the standard in supply chain management within the healthcare industry primarily because of the standardizations that are coming from GSI. These standards are enabling healthcare organizations to track more information within a bar code in a smaller space. This is significant because a lot of the items used in hospital settings are extremely small. For example, if a hospital attempts to put a linear bar code on a very small vial or surgical instrument, putting more data into that linear bar code could make the bar code larger than the package. With a 2D bar code, much more informa-

tion can be captured in a very small space. And with some 2D bar codes, the label can still be read even if portions of the bar code are missing.

In terms of printing design innovations are there opportunities for new markets – particularly in the area of supply chain, where RFID seems to be taking the high-ground?

While RFID technology has been instrumental across many verticals, it has gained the most momentum in the manufacturing industry. The often harsh environments that these companies operate in require proper asset management, personnel safety and equipment maintenance – components vital to the success of their businesses. However, they face an increasing problem of human error in the tracking and management of assets, equipment and labor. More recently, advanced RFID tags have been created to survive these harsh environments such as extreme temperatures, pressures and corrosion. These advancements allow the oil and gas industry to begin to integrate new technology to monitor information and analyze it in real-time.

RFID technology brings new levels of tactical and

operational decision making to these companies through real-time visibility, ensuring quality control and saving companies millions of dollars in repair on lost productivity from inefficient, labor intensive workflow processes.

Often the installation and adoption of new processes requires a significant investment. In these times of economic uncertainty, can return on investment be guaranteed and why?

The economy is affecting all industries. Investing in automating manual and error-prone systems will provide an immediate return in labor efficiency, which is critically important with reduced staffing and increased competition. The ability to maintain a high level of service at a lower cost is paramount to increasing market share and profitability in this intensely competitive marketplace. Now is also the time to invest to make sure companies are well positioned for an economic upswing, remaining competitive and ahead of the curve.

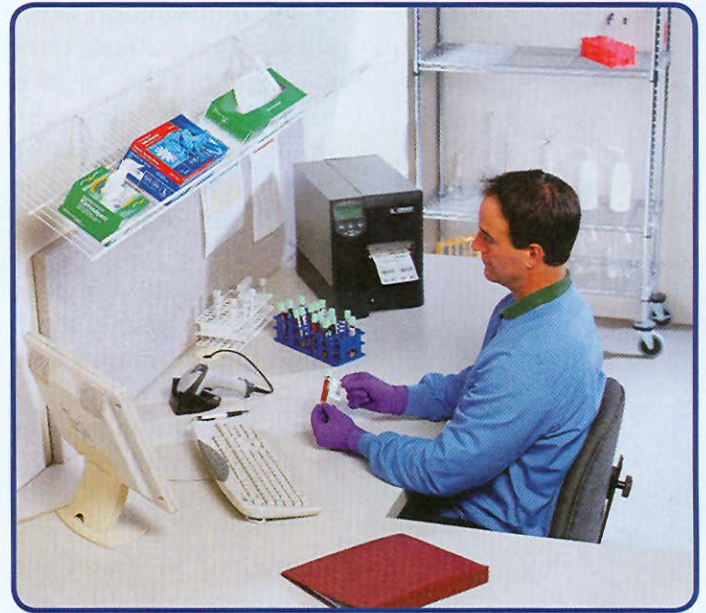
The value from a new solution implementation far outweighs the outcome of just staying complacent with current technologies. When lines shut down due

to repairs, companies lose thousands of dollars in maintenance and production. With technology and process investments, companies are better equipped to assist and identify issues before they arise, saving time and money while increasing ROI.

Now as we move deeper into the last quarter of the year, investments and projects are starting to pick back up as companies realize they need to take advantage of the opportunity to upgrade solutions and implement newer technologies in order to save money in the long term.

Following on from the last question, how, more specifically, can inter-connectivity and accessible information improve business productivity in terms of cost reduction and balanced functionality?

First and foremost, bar code technology allows for mobility and accurate tracking of documents, products and ingredients. The implementation of new solutions designed to provide visibility and track-back capabilities will provide businesses with the ability to adapt to changes. Automating previously manual processes that are fraught with error and consume valuable produc-



tion time should be the primary areas for investment. Increasing the efficiency of the mobile workforce provides clear and measurable returns and will contribute significantly to profit gains as volume increases.

In the wider field of cards and labels, there is a constant need for software to keep pace with hardware development. What factors ensure innovation in auto ID technologies is not merely change for change sake?

Innovation in Auto ID technologies helps to change and optimize the world we live in today. When bar codes first appeared, their use was actually protested, because there was a fear that

Bar coded labeling of test tubes in a clean environment

Contactless access control for authorized personnel





Infant wristbands with barcode technology

the government or other organizations could track people too easily or that bar coding and automation would replace the need for human interaction, and in some cases, jobs.

Today, almost everyone carries a cell phone, which tracks people in real-time via GPS and wireless networks, and the same goes for the food you see in the grocery store.

Innovations in track and trace technology have expanded into verticals spanning every industry. Accu-

of contaminated product more efficiently to helping nurses and doctors administer the right patient, the right dose, at the right time to combating the dangers of counterfeit products for brand and consumers.

In the near future, bar codes will be able to be laser cut onto surfaces too rough, porous or difficult to secure labels to, like turbine blades. This type of development will also be useful with weapons and Wolmanized and pressure-treated lumber that are traditionally difficult to label, working toward obtaining the capability of mass serialization.

Accuracy of information and data management is crucial in today's security and cost-conscious world. Is this need being driven by standards bodies and new regulations or by technology companies

who may provide tangible benefits?

As previously mentioned, in just the next five years, retailers and manufacturers will be migrating from UPC and EAN to Databar and GSI. This is a standards-driven change that benefits the industry overall from reputation management to real-time access to inventory numbers.

Since GSI DataBar symbols can carry more information and identify small items better than the current EAN/UPC bar code, they provide better visibility into product inventory and traceability. For the food supply chain, this is especially important as the GSI DataBar can carry GSI Application Identifiers such as serial numbers, lot numbers, and expiration dates, creating solutions to support product authentication and traceability for fresh food products and coupons.

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There were early fears that bar coding would replace the need for human interaction and jobs

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rate and timely tracking of information is critical from identifying the location

