



RFID

Dear readers,

“Green IT” will be the overriding theme of this year’s electronics exhibition CeBIT in Hanover, Germany. More and more companies are seeking to harness information technologies as a means of mastering the challenges of the future. Their goals: sustainability and reduced CO₂ emissions. Innovative solutions are the answer, and RFID is one of them. The RFID system has long become a core technology in logistics, helping industry players to optimize their capacity utilization. Companies use it to avoid empty running of trucks and reduce waiting periods for deliveries – a new approach to cutting costs that also helps protect the environment.



The potential of RFID for eco-friendly applications is considerable, and its deployment in the retail sector is just the beginning. An interview with Heinz Paul Bonn, Vice President of the trade association BITKOM, featured in this issue of the RFID Newsletter, offers more insight into “Green IT”. No less interesting is our lead story – it looks at the ongoing political debate surrounding RFID, which continues as stakeholders and lawmakers examine the current and future scope of the technology.

Also on the topic of innovative solutions: the METRO Group is writing yet another chapter in its success story this year with the opening of its new real,- Future Store in the German town of Toenisvorst. In this hypermarket of tomorrow, we are not only deploying new technologies, but also exploring new sales concepts that make shopping easier and more entertaining than ever for our customers. But we are saving that story for the next edition of the RFID Newsletter – it will be something to look forward to.

For now, I wish you informative reading.

Yours,

Zygmunt Mierdorf

Member of the Management Board of METRO Group

Main topic > Transparency in the digital age - Players in the business community and the political arena discuss RFID p. 02
News p. 05 | **Interview** > Heinz Paul Bonn, Vice President of BITKOM e. V. p. 06 | **Questions and answers** p. 07
Background > Guest article by Birgit Gottsauner, Siemens Automation & Drives p. 08 | **Opinions** p. 09
Events p. 10 | **From the political arena** p. 10 | **Study** p. 11 | **Literature** p. 12 | **Imprint** p. 12



METRO Group
Future Store Initiative



TRANSPARENCY IN THE DIGITAL AGE

PLAYERS IN THE BUSINESS COMMUNITY AND THE POLITICAL ARENA DISCUSS RFID. **Radio Frequency Identification delivers a long list of benefits for companies and their customers, like more efficient processes and new services. Yet large-scale implementation of a technology that can be used to identify and track objects also involves dialog on many levels. This means that RFID is a political topic, too. The ongoing debate looks at various aspects, such as the technology's economic potential or the data protection issues it might entail. In the meantime, a large number of enterprises have taken the initiative and made a voluntary commitment to the responsible use of RFID. As one of these companies, the METRO Group places transparency at the top of its agenda.**

RFID makes it possible to capture data via radio waves within mere seconds. In contrast to the barcode system, the technology allows scanning without optical contact. This unique capacity is the key to the great potential of RFID – but it has also raised concerns. Some consumer protection groups fear that once Radio Frequency Identification is deployed on a wide-scale basis, customers could reveal personal information without knowing it. Every container of yogurt we buy, these groups say, would provide the industry with data on our consumer behavior. However, RFID transponders like the ones used in retail do not store any personal information. The only data they contain is the Electronic Product Code (EPC), a series of digits similar to the conventional barcode. It refers to entries in a database that is accessible to authorized users exclusively. What's more, the information is related to products and retail processes only. From a data protection standpoint, RFID used in this form is absolutely harmless.

Yet conformity to legal regulations alone is not enough to dispel consumers' fears of a new technology. For this reason, numerous RFID users have made far-reaching voluntary commitments regarding its risk-free deployment. As early as 2005, members of the international standardization organization EPCglobal, including the METRO Group, took the initiative of developing a set of guidelines for RFID use. These regulations require member companies to provide their customers with comprehensive information on the technology and notify them as to where and why RFID solutions have been implemented. On request, they also remove or permanently disable transponders after the purchase of goods.

Technology under fire

A number of consumer protection groups feel that the voluntary guidelines adopted by the business community do not go far enough. They are calling for a set of mandatory regulations that require, for instance, that transponders on products be deactivated after every purchase – unless the customer makes an express wish to the contrary. "We currently use RFID on individual items only in pilot projects – one being Galeria Kaufhof in Essen. Anything that goes beyond that is still up in the air," explains Dr. Gerd Wolfram, Managing Director of MGI METRO Group Information Technology. "We have to be careful not to endanger the development of the technology and its potential with regulations that will later prove to be unnecessary."

As recently as January 2008, German parliamentary party members in the Lower House debated a bill introduced by the Green Party aimed at safeguarding data protection in the context of RFID deployment. With the exception of the Left Party, all governing and opposition parties agreed that the discussion must be advanced in order to avoid endangering the technology by arousing mistrust. All eyes were then on the German Ministry of the Interior, which was expected to issue a report stating the position of the ruling coalition on the deployment of RFID. The paper, released in February, suggests mandatory deactivation for all RFID transponders that could make their way into consumer hands. However, the Berlin government says it wants to allow the business community the opportunity to satisfy data protection demands voluntarily. Moreover, lawmakers would first have to identify precisely where the technology would come in contact with consumers in future applications before introducing legislation.



Page 2: The consumer goods industry primarily deploys RFID in its logistics operations and warehouse management. Page 3: Most customers only come into contact with the technology during the course of pilot projects. Nevertheless, companies and politicians already need to deal with issues such as consumer protection today.

The European debate

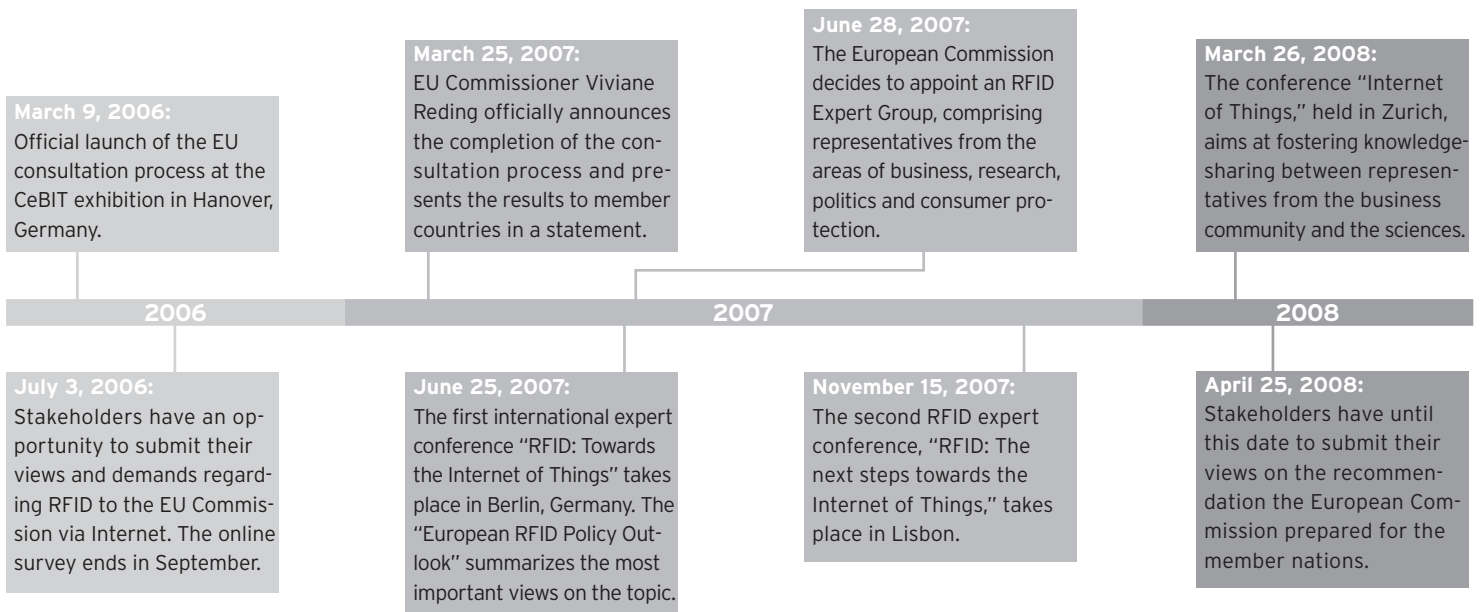
The European Commission is currently preparing a recommendation on RFID regulation for EU member states, slated for issue in the course of 2008. A preliminary draft of the paper has been available online since February, and the various stakeholders have until April 25, 2008, to form an opinion and voice their criticism. This was preceded by an extensive consultation process, initiated by EU Commissioner for Information Society and Media Viviane Reding in March 2006 at the CeBIT exhibition in Hanover, Germany. The "RFID Expert Group," which was formed as part of the consultation and involves the German RFID Information Forum, is responsible for drafting the proposal for the recommendation. It deals not only with data and consumer protection topics, but also with technological aspects related to the future vision of an "Internet of Things." In the view of the European Commission, the technology can help secure

the international competitive strength of the 27-nation bloc. Accordingly, the European Union also supports projects to determine the economic potential of RFID in the context of its Framework Program for Research and Technological Development. These include the initiative BRIDGE (Building Radio frequency IDentification solutions for the Global Environment), which is currently being implemented as part of a pilot project at Galeria Kaufhof.

Objective judgment

"The initiative of the European Commission has helped objectify the debate," says Dr. Gerd Wolfram. "Even just a few years ago, the focus was mainly on risks. Now we're also discussing the possibilities that arise from implementation. As companies, it is our duty to handle the trust we have earned responsibly." This is why the METRO Group takes part in the debate on various levels, for

Selected milestones in the European RFID debate



instance through its membership in the RFID Information Forum. The retailing company's experts give presentations for politicians and consumer protection activists, offering insight drawn from real-life experience with RFID. And the METRO Group is involved in yet another project: the CE RFID initiative (Coordinating European Efforts for Promoting the European RFID Value Chain), whose main objective is to lay an ideal foundation for the wide-scale deployment of the technology. Members of the committee work together to coordinate and align their specific requirements, for example in terms of standards and permissible frequency ranges.

"We continue to count on our mutually trusting working relationship with policymakers to get positive results," says Wolfram. "Because we need this technology to optimize our processes, remain competitive and offer our customers better services."

"The data protection issue is manageable"

German Member of Parliament Manfred Zöllmer is especially taken with the Smart Shelf at Galeria Kaufhof in Essen. Fascinated, the Social Democrat looks on as the display presents information on the available amount of a product on the shelf, as well as the colors and sizes in stock. "This is a really useful innovation, one that helps the consumer find his way around. I don't have to look through all the items anymore, and end up not finding the right size anyway," says Zöllmer.

The MP – Deputy Chairman of the Committee on Food, Agriculture and Consumer Protection in the Lower House of Parliament since 2005 – visited Galeria Kaufhof in early February. Together with Dr. Andrea Huber, Managing Director of the RFID Information Forum, he gathered information on RFID deployment on individual items. Since September 2007, when METRO Group began affixing transponders to products in the department store, approximately 80,000 items have been tagged. Its goal: to use RFID to optimize its logistics processes, while at the same time testing innovative applications on the sales floor. The two visitors received a guided tour of technologies like the Smart Mirror and Smart Dressing Room, and were able to follow the path of a garment from its delivery to the department store right up to the check-out.

"Wherever RFID is used in contact with consumers, there are concerns that protection of personal data can no longer be guaranteed," explains Zöllmer. "That's why the topic must be discussed on the political level, and that's why I demand companies to use the technology responsibly and transparently. We have to rule out misuse." Customers at Galeria Kaufhof in Essen can have the transponders removed from products after purchase, but few customers have chosen to exercise the option up to now.



"The data protection issue is manageable. The companies just have to let consumers decide for themselves whether they want to disable the transponders after purchase or not," says Zöllmer. "I don't think mandatory deactivation is necessary." The MP called on retailers to make a voluntary, binding commitment to deactivation. Should the business community be unable to make such a commitment voluntarily, he would not rule out new legislation to regulate RFID deployment.

During the visit, Dr. Andrea Huber pointed out that many of the applications demonstrated were still far from practical feasibility. "What we're talking about here are really things that won't be ready for realization for years. In that light, I'd like to see a little more patience from politicians, before they start intervening with regulations."

RFID COMPACT



>> Who's reading what?

A ground-breaking reader research project carried out by the German news weekly 'Focus' has taken the publishing world into the RFID era. During a field trial, each double-page of Focus magazine was fitted with a transponder. Six participating households were provided with an A4-sized 'magazine reading device' which measures exactly how often and for how long readers look at each page. Similar to TV rating procedures, this system allows publishers to acquire precise data on the preferred subject matter, favorite pages and reading behavior of their customers, and provides key information for marketing advertising space.

>> RFID seminar at EECC

The European EPC Competence Center (EECC) in Neuss, Germany, is now offering a two-day in-depth RFID seminar. Starting in May 2008, the seminar will provide a solid theoretical grounding on the subject of Radio Frequency Identification, illustrated by talks on real-life applications. It concludes with a guided tour in the METRO Group RFID Innovation Center in Neuss, Germany, or in the DHL Innovation Center in Troisdorf, Germany. Each participant who passes the exam will be awarded with an 'RFID Management Expert' certificate from the renowned Auto-ID Lab in St. Gallen, Switzerland.

>> Flowers go RFID

For Danish-based Container Centralen, a logistics provider for the flower-growing industry, RFID is helping business to blossom. The company has successfully tested containers equipped with transponders at its facilities in Denmark, Germany and the Netherlands. The RFID-equipped crates – used to transport and display flowers and plants – enable Container Centralen to document the entire supply chain, from the grower through to the wholesaler. As a result, company staff can identify a container's exact location at any given moment. The system also helps prevent inferior-quality flower containers from other providers from entering the Container Centralen supply chain. Other participants included Gasa Denmark, Landgard, Javado, Flora Holland and VGB.

>> RFID in hospital logistics

One of Duisburg's major hospitals, Klinikum Duisburg, is deploying RFID to boost health-care efficiency. Transponders are now being fitted to all containers used in the hospital's internal supply transport system. The system utilizes a 1.6 km underground rail network to bring items such as baby milk and disinfectant to, and medical waste away from the hospital's various departments and wards. Thanks to contactless RFID technology, the containers are always transported reliably to their destinations, and their contents can be correctly identified at any time via a simple database query. The heat-resistant transponders are even able to cope with the high temperatures in the hospital's automated container washing system.

>> Electronically taming the paper chaos

Scientists at the renowned Massachusetts Institute of Technology have developed electronic sticky notes. The notepads are fitted with a handwriting recognition device that digitizes the notes and transmits them to a central database. Each sticky note also has an integrated transponder, enabling its contents and source to be clearly identified. PC users in the system are able to search for keywords in these 'Smart Notes' on-screen. Moreover, with the help of an RFID reader, the original paper notes can be easily localized.

"A MAJOR CONTRIBUTION TO IMPROVING PROCESS EFFICIENCY"

> Interview with Heinz Paul Bonn, Vice President of BITKOM e. V.

BITKOM, the German Association for Information Technology, Telecommunications and New Media, is one of Germany's biggest trade associations. The organization's membership includes all the major players in the sector, as well as some 500 medium-sized companies. In an interview with RFID Newsletter, BITKOM Vice President Heinz Paul Bonn talks about "Green IT" and the contribution of RFID to sustainable logistics.



Mr. Bonn, as a patron of the CeBIT trade show in Hanover, BITKOM is focusing on 'green information technology' this year. How should we understand this term?

Green IT brings together strategies for achieving greater sustainability in the IT sector. In concrete terms, it is concerned with making applications more efficient in terms of energy and materials consumption. The Gartner market research institute estimates that around two percent of worldwide CO₂ emissions are generated by products in the information and communications technology (ICT) industries. Supporters of Green IT are aiming to promote a new awareness among IT users. Air conditioning in computer centers is a good example. Considerable amounts of money are spent on maintaining temperatures at 18 degrees Celsius, when in fact anything up to 26 degrees would be sufficient. The savings potential, both financial and in terms of greenhouse gas emissions, is considerable.

Would you say that this new awareness has already reached the manufacturers?

Yes, the energy efficiency of ICT products has improved dramatically over the past five years – a development we shall be demonstrating at this year's CeBIT. A key part of our exhibition will be two offices, one with IT equipment made in 2003, the other with today's cutting-edge technology. Visitors will be able to perform classical office tasks in both. A digital display will enable them to see how much energy they save, for example when printing documents using state-of-the-art equipment.

How do German companies rank internationally in terms of Green IT? Are they major players?

Definitely. The planning of energy-efficient computer centers is an international field, but German companies are clearly up among the front-runners. Another area in which German companies are already helping to reduce energy and materials consumption is the office workplace. The keyword in this context is Thin Clients. It refers to PCs which automatically outsource a large proportion of their work output to external computer centers. The energy savings, in comparison with traditional desktop operation, can be as high as 30 percent.

Another main focal point of this year's CeBIT is Radio Frequency Identification. How do you rate the potential of this technology for Germany and the German economy?

Germany is at the very hub of Europe's trading and retailing activities. We not only handle the flow of goods within our own economy, we also play a pivotal role in international goods exchange. Logistics is one of Germany's core competencies, and Radio Frequency Identification is making a major contribution to improving process efficiency.

Does RFID lead to enhanced sustainability?

RFID enhances transparency and improves efficiency in the flow of goods. It helps eliminate unnecessary journeys and ensures goods are transported from A straight to B, exactly according to customer specifications. In this way RFID clearly contributes to the Green IT idea, while also promoting sustainable logistics.

Which political signals do you think are necessary to push forward with the nationwide implementation of RFID technologies?

German Chancellor Angela Merkel has accented the importance of RFID as a milestone project for the German industry at several IT summits during 2007. Signals like these open the way for the implementation of specific projects. It's a process which should also include incentives to encourage the adoption of RFID applications by small and medium-sized enterprises. But despite the importance of these political signals, it is my fundamental belief that the business community itself should be responsible for regulating RFID. This is something Germany should push for at the EU level, too. BITKOM, as a partner to both the German government and the EU Commission, will continue to advocate a sense of proportion in any legislation governing the use of RFID.



YOU ASK, WE ANSWER

The METRO Group has now introduced RFID at around 180 locations throughout Germany. What comes next?

So far, all METRO Cash & Carry wholesale stores, around 100 Real hypermarkets and the distribution centers run by MGL METRO Group Logistics have been involved in the national RFID rollout. Over the coming months we will be successively equipping further stores of our Real sales brand – around 200 of them altogether. In 2008, the introduction of RFID will be pushed forward at a European level. The sales brand METRO Cash & Carry is currently assessing which of its European locations are ready to start deploying the radio technology at pallet level in their portals for incoming goods.

What is the METRO Group's current stance regarding the deployment of RFID at case level?

Case-level deployment of RFID is one of the METRO Group's most important RFID-related aims and various pilot projects are currently under way to test this option. The priority in terms of operational deployment, however, remains with implementation at pallet level. Nevertheless, one factor is particularly decisive in this respect, namely that both the RFID readers and the transponders being used today are future-proof, in other words that they are also suitable for use at case level. It's our aim to persuade as many industry partners as possible to equip their goods deliveries to METRO Group sales brands with RFID transponders. Initially, we will be concentrating on pallet deliveries. The first step for our suppliers is to introduce Electronic Data Interchange (EDI)

into their operations. Using our common communication standard will enable them to create electronic dispatch notes that contain a Serial Shipping Container Code (SSCC).

The METRO Group Starter Kits make it considerably easier for industry partners to introduce RFID. One important element of Starter Kit C is the EPCIS (EPC Information Services) protocol. Are there already products available that support this standard?

The EPCIS standard provides manufacturers and retailers with a common interface for recording, processing and exchanging product- and process-related data – regardless of which hardware and software the companies use. It is not a component of Starter Kit C.

Starter Kit C consists of software which enables data exchange with EPCIS-compatible systems. The first EPCIS products should be on the market this year. We are encouraging our industry partners, however, to start familiarizing themselves with RFID technology now. Starter Kits A and B are perfectly suited for this, as they are constituent parts of a modular system that can be completed later by the addition of the components from Starter Kit C.

RICH HARVEST

> Guest article by Birgit Gottsauner, Siemens Automation & Drives

In the industrialized West, the production of sugar from sugar beet is subject to significant cost pressure. One leading seed company, Syngenta Seeds, has turned to RFID to optimize its research efforts into new, more productive strains of beet. The company is now using the technology to help it keep track of the 1,000 samples it takes every day.

The yield of any particular variety of sugar beet depends both on its genetic makeup and on the parameters of the location where it is grown. In trials at some 25,500 plots across Germany, Syngenta Seeds is now looking closely at the relationship between these two factors. During the three-month harvest period, every plot forwards a sugar beet sack containing around 100 beets to the Syngenta Seeds sugar beet analysis facility located in Bad Salzufflen, Germany. The facility was fully modernized in 2007, and one of the key objectives of the process was to install a system capable of identifying and linking every single beet sample to its plot of origin. The solution proposed by PlanTec (the company responsible for modernizing the lab) was an RFID system developed by Siemens Automation & Drives. This constitutes the first time RFID technology has been used in the agricultural sector to monitor and identify bulk produce of this kind.

Every sample counts

For Jörg Hempelmann, Head Trials Technician for Syngenta Seeds' sugar beet business, this was a very special challenge. "Every sample," he says, "is in itself irreplaceable. This is because we test our seed under various conditions, with a view to obtaining statistically sound average yields. The loss of just one single sample or of any details linking it to its plot of origin can interfere significantly with our entire record." The cultivation of a new, high-yield strain with improved resistance to pests can take as much as ten years. "Every sample that proves unidentifiable," explains Jörg Hempelmann, "prolongs this period by an additional twelve months, which results in a significant increase in costs for Syngenta."

Fully automatic tracking

A specially developed tracking system at the facility ensures that the sugar beets' journey through the analysis plant is automatically tracked. 'Smart Labels' – containing RFID transponders – serve as mobile storage devices for the beets' identification data. The label is



The sturdy data capsule contains an RFID transponder on which the batch's unique identification number is stored.



RFID transponders in the data capsules enable the automatic tracing of every batch of sugar beet on its journey through the plant.

placed in a plastic tube to prevent any possible damage by water or mechanical force and attached to the inside of a beet-shaped capsule. During the harvest, one of the capsules is put into the sack selected for analysis, thereby allowing the batch to be clearly identified. For the purposes of the pilot project, PlanTec gave each transponder a unique consecutive identification number. The number is captured twice during the analysis process – the first time when the batch enters the system, and then again before the batch goes into one of two washing machines. "The central idea," says Hempelmann, "is that the RFID system recognizes only one number per batch. Batches without a number or with several data capsules automatically trigger a conveyor shutdown, thus avoiding identification errors or batch mix-ups."

VOICES FROM THE INDUSTRY

Next step - deployment during the harvest

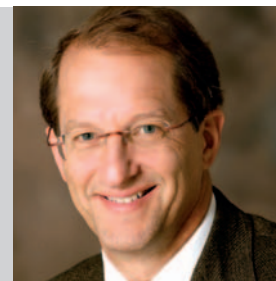
After the washing process, staff at the site separate the data capsules from the beets. The roots are then pulped into a homogeneous mass, and 1.5 ounces of sample material are taken from each batch. Every sample is labeled with a barcode which links it to the data of its plot of origin. Samples are then deep-frozen and transported to Syngenta's central laboratories in Sweden, where they are analyzed.

"We're very pleased with the results of the pilot project," says Jörg Hempelmann. "Thanks to RFID, identification of individual sugar beet batches in our analysis facility is now fully automatic. This not only improves the quality of our research, but also increases our competitive edge." In the coming year, Syngenta is planning to program a unique identification number onto each transponder during the harvest itself. "By then all harvesters will have on-board PCs and possibly also on-board GPS devices," explains Jörg Hempelmann. "This will allow us to automatically register and write plot data onto the corresponding batch label."

Birgit Gottsauner is in charge of Marketing Promotion for SIMATIC Sensors at the Automation & Drives Division of Siemens AG.



Tom Schuster



Chief Executive Officer, Reva Systems

What is your contribution to the METRO Group Future Store Initiative?

In collaboration with the initiative, we have developed network infrastructure products that facilitate the wide-scale roll-out of RFID. These have already been installed in about 180 METRO Group stores and central warehouses. In addition to this, we have been closely involved in the development of several applications which are currently being deployed in a pilot project at Galeria Kaufhof – these include Smart Mirrors and Mobile Assistants that allow rapid and convenient stocktaking. We are also working on a combination of EAS security functionality with RFID.

In 2007, Reva Systems received the coveted 'Award for Technology Innovation.' What is it that makes your products so innovative?

Our network infrastructure products, 'Tag Acquisition Processors' (TAP), enable customers to completely switch their processes over to RFID in a single roll-out. The TAPs control the RFID readers, collect the RFID tag data, and isolate relevant tags from ambient tags – for instance, at sites where several portals for incoming and outgoing goods are in operation simultaneously. Afterwards, the clean tag data is transmitted to the customer's own back-end system via standard interfaces.

What benefits do your control and management systems have to offer, particularly for companies in the retail sector?

Our network infrastructure products eliminate the need to use proprietary middleware. We offer companies a low-cost, flexible management solution which helps them achieve optimum RFID performance. Following the initial setup, further locations can be successively added to the RFID network. This is particularly beneficial to retailing companies who prefer to manage their stores and warehouses from a central location.

Are your products also suitable for smaller or less technologically oriented companies?

Absolutely. Even the most modest systems – consisting of only a handful of readers – are thoroughly capable of mapping quite complex processes. Our TAPs ensure accurate tag reads and high data quality. And because our technology isn't server-based, it requires far less in the way of IT resources. Factors such as these help to guarantee the reliability of daily operations.

TRADE FAIRS AND CONVENTIONS

Upcoming events

Internet of Things 2008

March 26-28, 2008_Zurich (Switzerland)

For the first time, representatives from the business and science communities meet in Zurich to discuss the latest RFID research and commercial applications of the technology. Speakers include Dr. Peter Zencke, Member of the Executive Board of SAP, and Zygmunt Mierdorf, Member of the Management Board of METRO Group. The conference is also offering a supporting program of tutorials and workshops on the 'Internet of Things' - the electronic networking of everyday objects.

ETH Zurich, Swiss Federal Institute of Technology
www.internet-of-things-2008.org

EURO ID 2008

May 13-15, 2008_Cologne (Germany)

How do RFID and barcode systems complement each other? EURO ID 2008 focuses on this question. The trade show for automatic identification is a combination of exhibition, science forum and knowledge-sharing platform. A total of 120 exhibitors and 3,500 visitors are expected. Special highlights of the event include the 'Tracking and Tracing Theatre,' which presents guests with a hands-on automatic identification experience. A 120-square-meter display area shows solutions in action along the entire supply chain.

IBC Euroforum
www.euro-id-tradefair.com

Recent events

EPC/RFID live! in the fashion industry

December 6, 2007_Bonn (Germany)

Around 160 participants at this symposium shared the latest news on current RFID projects in Germany and their applications in the textile industry. Exhibitors from the EPC/RFID marketplace included Galeria Kaufhof; the company presented RFID applications for the department store of the future. Talks and workshops rounded off the event.

GS1 Germany
www.gs1-germany.de

NRF 97th Annual Convention & Expo

January 13-16, 2008_New York (USA)

In January, New York City was an arena of dreams for the more than 18,500 visitors gathered there. The largest trade sector conference in the world - Retail's BIG Show 2008 - brought its slogan 'Eat, sleep and dream big' to life. 500 companies from 64 countries presented themselves in the largest exhibition space in the history of the conference. At the special Store of the Future exhibit, visitors experienced interactive technologies that enable customers to shop around the clock - using their cell phones, touch screens and other interactive solutions.

National Retail Federation, NRF
<http://events.nrf.com/annual08/public/enter.aspx>

6th Annual Global RFID ROI Summit 2008

January 29 and 30, 2008_Munich (Germany)

Top decision makers from all over Europe gathered at this annual cross-industry RFID conference. Again, the event looked into the question: at what point do investments in RFID begin to pay off for companies? Accompanying the many presentations was a series of workshops held by representatives from Siemens, Oracle, Airbus, Reva Systems and Indyon which offered insights into real-life projects.

World Trade Group
www.rfid-roi.com

PLENUM

German government appoints IT Commissioner

The German government has appointed Dr. Hans Bernhard Beus as its first ever Commissioner for Information Technology. Dr. Beus, State Secretary at the Federal Ministry of the Interior, took up office in January 2008 and will act as a central point of contact for the federal states, municipalities and business organizations. He is to play a key role in the development of federal government IT strategy. In the future, the federal government ministries will involve the Commissioner closely in all major IT projects relating to public administration, including new laws and regulations. The aim is to achieve a comprehensive modernization of administrative processes, ultimately enabling members of the public to handle official business online.



The nomination of the IT Commissioner follows a resolution made at the second national IT summit, which was held in Hanover, Germany, in December 2007. The delegates, all of them experts from the political, scientific and business communities, agreed that in the field of information and communications technology (ICT), Germany has considerable as yet untapped potential. In a statement published after the summit - the so-called Hanover Declaration - participants expressed their wish for the label 'ICT made in Germany' to become a trademark for innovative products and applications that combine worldwide competitiveness, safety and efficiency with environmental friendliness and sustainability.

SMEs SEE OPPORTUNITIES

> RFID in Berlin and Brandenburg

Efficient logistics processes and reduced inventory levels: the performance features of RFID have been given a positive verdict by companies and institutions in Berlin and Brandenburg in an online survey carried out by the Berlin University of Applied Sciences. Around 100 mainly small and medium-sized enterprises from the consumer and capital goods industries, the service and retail sectors and public institutions supplied information about awareness levels concerning RFID and existing deployments of the radio technology within their companies.

High awareness levels - low usage factor

Four out of five company representatives interviewed said they knew the term 'RFID.' The same proportion claimed to have working knowledge of the technology's technical basics and functionality. So far, however, only one in five of the participating companies is actually using RFID, the most commonly mentioned applications being warehousing, material management and media security. But demand is likely to increase: 42 percent of the respondents said they were planning to implement RFID at some time in the future. In this respect, more than a third of the participants were thinking of using RFID on individual objects or at item level. 40 percent would like to use rewritable radio tags; a third were in favor of read-only transponders.

Expectations for RFID

Given that the most important logistics processes are already highly optimized, companies have very high expectations for the new radio technology. The participants in the study were very clear about their goals for the introduction of RFID: 90 percent of respondents expect a faster flow of goods and products. Almost as many want to use the technology for process documentation. Four out of five hope to benefit from more efficient administration. So far, 92 percent of the companies give high or very high ratings to the usefulness of RFID in accurately identifying products. These results are in keeping with declarations made in previous studies.



A summary (in German only) of the results of the online survey 'RFID in Berlin/Brandenburg' can be called up at: www.nextgenerationmedia.de/Nextgenerationmedia/Navigation/root,did=232212.html

Lack of knowledge reduces willingness to invest

The Berlin study identifies not only the perspectives and potential of RFID but also the most important factors hindering investment in this radio-based technology. At the top of the list is a lack of experience among the participants. Four out of five company representatives questioned expressed a need for more information regarding RFID and two thirds of the interviewees mentioned insufficient technological maturity as a further barrier to RFID implementation. The same number felt that integrating an RFID infrastructure into existing systems would be a major problem. There were also worries about the cost-benefit ratio of introducing RFID. All the same, Frank Behr, a research assistant at the Berlin University of Applied Sciences and coauthor of the study, reaches a positive conclusion: "The results show that RFID is a subject that is no longer restricted to the realm of the specialist trade press. The participants of the survey are ready to implement this technology in their companies."

RFID - preferred areas of application

Would you implement RFID in the following areas?	No, not interested	Yes, interested	Yes, pilot project in existence	Yes, RFID in use
Warehouse management: reduction of erroneous entries	16 %	71 %	9 %	4 %
Cargo security: reducing the number of thefts	47 %	41 %	8 %	5 %
Quality control: monitoring the condition of goods	32 %	54 %	9 %	4 %

All figures rounded to the nearest whole number.

READ MORE

> RFID im Fokus des Daten- und Verbraucherschutzes. Implikationen für die Handelspraxis (RFID, Privacy and Consumer Protection. Implications for Retail Practice)

RFID opens up great opportunities for business. Yet implementation of Radio Frequency Identification entails certain responsibilities – especially when the technology is used in direct contact with consumers. In her 120-page book, Stephanie Kesten of Goettingen University explores fundamental aspects of data security and consumer protection.

The book begins with an introduction into the theoretical backgrounds of both Radio Frequency Identification and data protection. In the next section, the author details the implications for consumers of RFID deployment in retail. She examines the issue from three perspectives: general data security and consumer protection standpoints as well as the consumers' own views. Kesten concludes by deriving from her findings potential consequences for the retail sector.

Stephanie Kesten was awarded the Academic Prize 2007 by the German Association for Data Protection and Data Security (GDD) for this publication.



Stephanie Kesten

VDM Verlag Dr. Müller, Saarbrücken, Germany, 2007

IMPRINT

EDITOR

MGI METRO Group Information Technology > Antonia Voerste
Metro-Strasse 12 > 40235 Duesseldorf, Germany

CONCEPT, EDITING AND DESIGN

Pleon GmbH, Duesseldorf, Germany

PHOTOS

METRO AG, Siemens AG

> RFID in Operations and Supply Chain Management. Research and Applications



Edited by
Thorsten Blecker and George Q. Huang

Erich Schmidt Verlag, Berlin, Germany, 2008

In their 500-page anthology, Prof. Dr. Thorsten Blecker of the Institute of Business Logistics and General Management Hamburg and Prof. Dr. George Q. Huang of the University of Hong Kong present current research into radio identification and possible applications of RFID in practice.

The publication is divided into four sections. The first two chapters look at various aspects of RFID implementation as well as real-life areas of application – for example in the distribution of pharmaceuticals or in waste management. In the third chapter of their anthology, the authors detail research and survey findings on the effects of RFID deployment. The fourth chapter takes a closer look at logistics standards and also examines the legal and ethical issues of RFID.

The anthology is an excellent overview of the subject of RFID. It is aimed not only at research and development professionals but also at users who come into contact with the technology on a day-to-day basis.