

RFID



Dear readers,

The opening of the real- Future Store on May 28, 2008, represents yet another milestone on the road to the retail world of tomorrow. In Toenisvorst, Germany, we are for the first time linking innovative technologies with new concepts for the hypermarket of the future. Our goal is to create a more convenient, more informative and richer shopping experience for the customer while at the same time boosting the efficiency of our own processes. The lead article and interview in this RFID Newsletter provide insights into how we are achieving this.



The real- Future Store is the central innovation platform of the METRO Group Future Store Initiative. Launched in 2002, this alliance has now grown to include more than 80 companies and organizations. Together, they are working to push forward the modernization of the retail sector. Our Platinum Partners SAP, Intel, IBM, T-Systems, Cisco and – as of May 2008 – a consortium comprising Fujitsu Services, Siemens and Fujitsu Siemens Computers deserve special mention for their valuable ongoing contributions.

If you would like to learn more about our partners and their activities, visit our website www.future-store.org. It has been completely redesigned and updated to coincide with the opening of the real- Future Store and, much like the store itself, now offers a more convenient and richer user experience.

I hope you find this edition of the RFID Newsletter interesting and informative.

With best regards

Zygmunt Mierdorf
Member of the Management Board of METRO Group

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METRO Group
Future Store Initiative



SUCCESSFUL PREMIERE FOR THE REAL,- FUTURE STORE

THE HYPERMARKET OF TOMORROW OPENS ITS DOORS. With its new real,- Future Store, METRO Group is opening up new avenues for product presentation and interaction with customers. At the new store in Toenisvorst near Krefeld in Germany, the retailing company is also testing innovative technologies such as the Mobile Shopping Assistant, the Smart Freezer and the Pay by Fingerprint payment system. These and many other technological advances support the new retail concepts that the real,- sales brand makes available to consumers. Since May 28, 2008, the hypermarket's customers and visitors have been able to get a taste of what shopping will be like in the future.

Leveraging the store as a real-life testing ground for its Future Store Initiative, METRO Group is aiming to realize its goal of being a driver of modernization in the retail industry. The group plans to successively roll out the retail innovations its customers find helpful to its other stores and outlets. "This will put us in a position to increase consumer loyalty to our sales brands and at the same time win new customers," explained Dr. Eckhard Cordes, Chairman of the Management Board of METRO Group at the opening ceremony. "In this way, the real,- Future Store is making a significant contribution to the future success of the entire METRO Group."

Mobile shopping

The hypermarket of tomorrow provides customers with an information offer and range of services precisely tailored to their personal needs. It all adds up to much more convenience and an enhanced shopping experience. One example is the world's first Mobile Shopping Assistant (MSA), which METRO Group is currently testing in Toenisvorst. The MSA is an application for mobile phones that assists customers at all stages of a shopping trip, from planning to payment. Customers can use it to quickly and easily put together weekly shopping lists. Two options are available for creating such lists: they can either enter items manually using the phone's keypad, or use the integrated auto-focus camera to scan product barcodes.

Redesigned Web presence: www.future-store.org



To mark the opening of the real,- Future Store, the METRO Group Future Store Initiative has completely redesigned its Internet presence. At www.future-store.org visitors can find a wide range of information about the initiative, its partners and projects. The site has four main sections: the first, 'For Newcomers,' provides the most important information at a glance. 'For Explorers' provides extensive details about the innovations offered at the real,- Future Store. The 'For Adventurers' section is a gateway to a virtual guided tour of Galeria Kaufhof in Essen, while 'For Customers & Visitors' contains a wealth of interesting and practical information.



Page 02: Dr. Eckhard Cordes (middle), Prof. Dr. Henning Kagermann, CEO of SAP AG (left), and René Obermann, CEO of Deutsche Telekom AG, open the real,- Future Store in Toenisvorst. They are assisted by the innovation guide 'Roger,' a robot who explains the new concepts and technologies in the store. One of the key innovations is the Mobile Shopping Assistant (MSA), which Zygmunt Mierdorf, Member of the Management Board of METRO Group, demonstrates to presenter Christine Westermann. Page 03: Dr. Eckhard Cordes demonstrates the paystation. Joël Saveuse, Member of the Management Board of METRO Group and CEO of real,-, with the MSA in the real,- Future Store.

After entering the real,- Future Store, the MSA is a major help to customers while shopping and paying. All they have to do is use their mobile phones' camera to scan the products before placing them in their trolleys. The application displays the price and provides customers with a continuous running total, so that they never lose sight of the total cost of their purchases. With private-label products, the MSA is also able to provide useful additional information – it even reads it aloud, if required. When a customer reaches the checkout, there is no need to place each item on the conveyor belt. Instead, customers simply take the MSA to a separate paystation to settle the bill. "With the phone-based MSA we made a conscious decision for a platform that most consumers know from everyday life," explains Zygmunt Mierdorf, Member of the Management Board of METRO Group.

"Mobile phones have long become a commodity that everyone uses all the time. One day, the same will hold for the MSA."

Broader approach

As opposed to the former Future Store in Rheinberg, the focus in Toenisvorst is not exclusively on technology. "When we were planning the real,- Future Store, we put the same amount of work into developing new retail concepts," says Joël Saveuse, Member of the Management Board of METRO Group and CEO of real,-. "The store's new fresh food departments, for instance, have been developed with the goal of improving our profile toward the customer. At the same time, another important objective was to create innovations that could be introduced at other real,- hypermarkets in the medium term."

RFID at the real,- Future Store



At the new real,- Future Store, Radio Frequency Identification (RFID) continues to play a central role. One example is the use of the automated product recognition technology for inventory control and quality assurance of self-service meat products. For this purpose, the Smart Freezer at The Master Butcher have been equipped with RFID readers that continuously monitor the Smart Chips attached to the product packaging. The chips contain an Electronic Product Code (EPC) which enables staff to uniquely identify every single meat item in the Smart Freezer. The EPC also includes a reference to the product's best-before date stored in the hypermarket's merchandise management system. When the date is approaching the minimum durability, a Master Butcher employee can systematically remove all affected articles. In addition to this, the inventory level in the Smart Freezer is also controlled automatically. Before any items run out, The Master Butcher staff are able to ensure that enough fresh items are produced to restock the Smart Freezer. This kind of demand-driven production means a significant cost reduction as the store has to write off fewer unsold items. At the same time, customers can rest assured that the products they intend to buy are always in stock.

One good example of this is the fish market: seafood specialties are delivered daily and displayed in an open cabinet on a bed of ice. In addition to this, customers can buy fresh and smoked fish products, fillets and shellfish at a classic serving counter. The range also includes fish from sustainable catches as well as bone-free products. Here, too, innovative technologies turn the fish market into a shopping experience for all the senses: ambient sound provides customers with an appealing background soundscape of ocean waves, while ambient scenting contributes a light aroma of herbs of Provence with a touch of lime. A true eyecatcher is the department's Interactive Floor. The schools of fish projected onto the floor react to the movements of passing customers.

Tradition meets technology

But the fish market is just one example of how innovative concepts and technologies at the real,- Future Store support hypermarket operations of tomorrow. The Master Butcher, for example, combines a traditional 'boutique' approach with an RFID-based quality assurance system for self-service meat and sliced meats produced in-house (see box on page 3). Another novelty in this department is transparent production. A large-format window allows customers a unique insight into The Master Butcher's working environment. A curing oven, in which around 20 different types of sausages are prepared, and a hot food counter with tasty take-out snacks round off the range on offer at The Master Butcher.



The opening event included a panel discussion on the importance of innovative technologies in retail. From left to right: Michael Ganser, Vice President and Managing Director Cisco Deutschland; Alain Benichou, General Manager Global Distribution Sector, IBM Sales & Distributions; Prof. Dr. Henning Kagermann, CEO of SAP AG; René Obermann, CEO of Deutsche Telekom AG; Dr. Eckhard Cordes, Chairman of the Management Board of METRO Group. The discussion was presented by Christine Westermann, well-known journalist from the Westdeutscher Rundfunk television network.



About 300 invited guests attended the official opening ceremony to find out more about the new technologies and retail concepts at the real,- Future Store. The store opened for customers at 2 p.m.

Another department that has undergone full remodeling is the wines & spirits world. Its products are presented in a pleasant, rustic atmosphere, and stored in a professional wine cooling cabinet. Customers who have obtained a tasting card from the service center can present this at the wine tasting counter, where they have the opportunity to select from a range of 16 different wines and taste them before buying. This extra service makes mispurchases a thing of the past. Other innovative forms of customer advice can be found in the beauty & more department, which sells a wide range of cosmetics, drug store products and oral hygiene products. The skin care Information Terminal, for example, identifies a customer's skin type and recommends suitable skin care products. Similar services are available at the Beauty Terminal and the hair color assistant.

Choice of payment methods

Once they reach the checkout, customers at the real,- Future Store can choose between various checkout and payment procedures. Alongside the checkout desks, the store offers convenient Self-Checkouts that allow customers to scan in their purchases themselves. And the store's Express Self-Checkouts separate the scanning from the payment process. After customers have scanned in their purchases, they receive a receipt with a barcode which is then scanned at a separate paystation. The tangible benefit of this system is that it allows customers to pay at their own pace. There are never any queues, as the number of paystations exceeds that of Express Self-Checkouts. At the paystation, as at all other checkouts, customers have the choice of paying in cash or by debit or credit card. One groundbreaking innovation, however, is Pay by Fingerprint. The service is available after one-time registration and provision of bank details to a service provider. After this, customers simply place their finger on a special fingerprint scanner in order to pay for their purchases. "Pay by Fingerprint makes shopping faster, more efficient and better than ever before," says Dr. Eckhard Cordes describing the benefits of the new technology.

RFID COMPACT



>> Making life safer for cyclists

In the Danish town of Grenå, an RFID system known as 'See-mi' is currently being piloted. Designed to make motorists more aware of cyclists, the system involves fitting bicycles with transponders. When these bicycles approach dangerous road junctions, they trigger an alarm signal via an RFID reader installed in the traffic lights. The pilot project is part of the Danish government's pledge to make life safer for cyclists on Denmark's roads. Other towns are also planning to install the 'See-mi' system.

>> Medicine on the move

In a recently completed pilot project, the pharmaceuticals company Gehe Pharma used RFID to document the status of sensitive pharmaceutical products on their way through the supply chain. To this end, drugs that are sensitive to light, humidity, and high or low temperatures were shipped in containers equipped with RFID transponders, special sensors and a radio transmitter. If, for example, the temperature in transit rose above a critical level, the system automatically alerted the central computer. Staff equipped with RFID readers were also able to collect and analyze container temperatures. Thanks to RFID, Gehe Pharma now has instant access to real-time information on the status of consignments.

>> US state legislation on data misuse

Washington is the first US state to pass its own RFID legislation. Valid as of July 2008, the law makes it illegal to collect data stored on transponders without prior permission from the data owner. The offence is punishable by a prison sentence of up to ten years. In the state of Washington, RFID is used in connection with personal data, e.g. on electronic driver's licenses. The use of personal data by RFID technologies in Germany is controlled by the Federal Data Protection Act. There is currently no comparable legislation anywhere else in the USA.

>> Value added for SMEs

The Informationsforum RFID (RFID Information Forum) and Oracle Deutschland are resuming their successful series of events entitled 'RFID for small and medium-sized enterprises.' The program, designed to illustrate how companies with less than 500 employees can implement and benefit from Radio Frequency Identification, attracted some 1,600 participants last year. Events are held regionally. For dates and locations in 2008, visit www.info-rfid.de.

>> Joint project for printed transponders

'MaDriX' is the name of a joint project launched by Siemens, BASF, Evonik Industries, PolyIC and Elantas Beck. The aim of this cooperative venture is to develop low-cost RFID transponders built round plastic conductors and semiconductors. In contrast to conventional Smart Chips, which contain silicon, this new generation of transponders would be produced using printing technologies. Due to the lower cost, these so-called polymer transponders are ideal for tagging individual items. The project is scheduled to last three years, and is being funded by the German Federal Ministry of Education and Research.

>> New dimension in children's books

In March 2008, the CeBIT trade fair in Hanover, Germany, saw the launch of an electronic toy rabbit called 'Nabaztag.' Presented by its developers, Violet, the plastic device uses data stored on its transponders to access texts on the Internet and them read out. Its wireless LAN technology also enables Nabaztag to receive and read out other Web-based information, e.g. stock prices, weather forecasts and even e-mails. A range of children's books just launched by the French publisher Gallimard Jeunesse also comes equipped with RFID transponders. Children can use Nabaztag's ears to skip backwards and forwards through the chapters.

>> Stadium safety

The biggest single RFID project worldwide is set to prove its potential from August 8 to 24, 2008. During this period, China is hosting the next Olympic Games. More than 12 million tickets are expected to be sold for the various competitions, each one equipped with an RFID transponder. As at the last Soccer World Cup in Germany, RFID will thus help ensure safety at the various venues, while also preventing problems with the ticket black market and forged tickets. The contract for production of the transponders went to the Sino-French joint venture ASK-TongFang.

CUSTOMER FOCUS

> Interview with Zygmunt Mierdorf, Member of the Management Board of METRO Group, CEO MGBI METRO Group Buying International

Zygmunt Mierdorf was appointed to the Management Board of METRO Group in 1999, where he has since been responsible for e-business, IT, logistics, buying and personnel, as well as social aspects and the environment. In this interview he talks about the real,- Future Store, the importance of innovation in the retail industry, and the future of the hypermarket format.



Mister Mierdorf, which of the technological innovations being piloted at the real,- Future Store would you like to see rolled out at the other real,- stores?

The Mobile Shopping Assistant (MSA), without a doubt. As a retailing company, we are continually seeking to strengthen our customer focus. In future, the MSA could be installed on virtually every mobile phone. Since most consumers own mobile phones, this would be a major step forward. The MSA offers customers who own a high-performance mobile phone with an integrated autofocus camera a whole host of practical functions that make shopping easier. For instance, you can use the MSA to draw up your shopping list at home or to scan in products in the store itself. Thus, it also helps to significantly reduce waiting times at the checkout.

The real,- Future Store is also testing new retail concepts. Which of these would you rather see implemented in real,- hypermarkets right away?

As not every concept automatically lends itself to every location, we need to review the capabilities of each individual store. You have to remember that some of our hypermarkets in Germany are smaller than the real,- Future Store, and might not have the selling space needed for a sports department, for instance. Our greatest priority, however, is the new and improved real,- freshness concept. This will really allow us to demonstrate our expertise in this area to our customers.

Speaking of freshness, you are using RFID in Toenisvorst for the quality assurance of meat products sourced in-house.

What does this entail?

Meat and sliced meats are high-profile product groups at real,-. We already have a comprehensive range of control mechanisms in place to ensure maximum quality. RFID readers in the Smart Freezer and Smart Chips on the packaging now make it possible to register every single item removed by customers. This, in turn, enables the store to produce meat in line with demand. It also allows staff to check information such as best-before dates at item level and precisely identify and remove items when necessary.

Are you planning to use RFID nationwide in this way?

The idea behind the tests in the real,- Future Store is that the innovations that prove successful in Toenisvorst will then be introduced step by step at the other stores of our sales brands. On the one hand, this means that concepts and technologies must offer concrete customer benefits. On the other, they must also be financially viable. As far as RFID is concerned, I think it could be several years before use at the consumer-goods level in hypermarkets is a realistic option.

How important are innovations for the real,- sales brand?

METRO Group is an innovation leader within the retailing sector. We believe in integrating technological innovations that enhance our interaction with customers into our concepts. That's why we are quick to adopt cutting-edge technologies that we believe have great potential. At the real,- Future Store, we are testing all our innovations for the first time together under one roof. No other retail company has a comparable future workshop.



YOU ASK, WE ANSWER

Are guided tours of the real,- Future Store available?

Yes. Free guided tours take place from Monday to Thursday between 10 a.m. and 6 p.m., and on Fridays between 10 a.m. and 2 p.m. Each tour lasts approximately 90 minutes. We recommend you book your place on the tour well in advance, especially in the first few weeks after the store opening. You can do this online at www.future-store.org.

Where can I find detailed information about the services offered by the METRO Group Future Store Initiative partners?

Our publication 'The partners of the METRO Group Future Store Initiative' provides extensive information about the knowledge and expertise of the more than 80 companies from the IT, consumer goods and service industries involved in the initiative. This publication was entirely revised in spring 2008 and includes company portraits and detailed descriptions of selected products and services offered by our partners. The publication is available on CD in German or English and can be ordered from Dieter Licht, Head of ECR of METRO Group: +49 (0)2 11.68 86-37 25 or by e-mail: licht@metro.de.

Can you guarantee that data protection laws will be observed at the real,- Future Store?

Yes. All handling of personal data at METRO Group is carried out in accordance with European data protection guidelines and the Federal Data Protection Act of the Federal Republic of Germany. This means that RFID may not be used to collect or process personal data. Customers wishing to use the Pay by Fingerprint

payment method must first register at the Future Store Information counter. During this process, they must provide the information required for authorizing direct debits from their account, for instance their name, date of birth, and address. They also need to leave their bank details and sign a data protection agreement. Finally, they must provide an example fingerprint, which is used to generate a unique numerical code. This information is then encrypted and transmitted to Easycash, our external service provider. Easycash guarantees that all data are kept in a secure environment, safe from external access. Neither these data nor the customers' fingerprints are stored in the real,- Future Store itself.

How can a small or medium-sized company test the deployment of RFID in a real-life environment?

The European EPC Competence Center (EECC) has developed a concept specifically for this target group. During a five-hour, practical seminar, experts from the EECC demonstrate RFID applications on site in the incoming goods areas of the companies themselves. Using a mobile RFID portal for incoming and outgoing goods, they show how pallets and boxes can be automatically registered – and what employees should bear in mind when attaching transponders to products. In the concluding workshop, company staff can practice using the technology themselves. More information about the RFID road show can be found at www.eecc.info.

CEBIT 2008: RFID ACCEPTANCE INCREASING IN ALL SECTORS

> Practical exhibition concept for radio technology

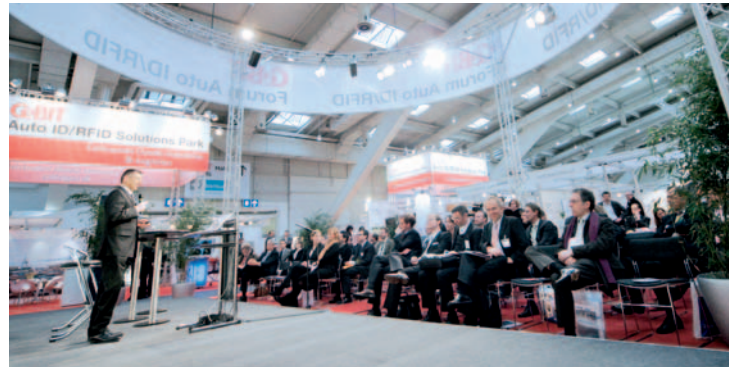
This year's CeBIT in Hanover, Germany, demonstrated yet again that RFID is playing an important role for more and more industry sectors. For the first time, the world's largest trade fair for information and communications technology dedicated an entire exhibition hall to Radio Frequency Identification. This year, the 'CeBIT Forum Auto ID/RFID' once again served as the focal point for all specialist discussions on this topic.

From March 4 to 9, 2008, providers, manufacturers and sales firms presented themselves on some 5,000 square meters of exhibition space in the Auto ID/RFID area. Trade visitors from industry and SMEs came to find out about the latest trends and developments in Radio Frequency Identification. A highlight once again this year was the 'Solutions Park,' which offered sector-specific exhibits for the automotive, aerospace, retail, consumer applications and logistics sectors. Trade visitors were particularly enthusiastic about the hands-on exhibition concept, which, for instance, allowed visitors to observe a forklift with integrated RFID readers in action.

The 'CeBIT Forum Auto ID/RFID' took place under the aegis of 'RFID im Blick,' the trade magazine for contactless data transfer. A total of 40 experts from the fields of industry, business and research gave presentations on the latest uses of radio technology. As the main sponsor of this forum, the METRO Group Future Store Initiative presented an event on the topic of 'Optimizing processes through the use of RFID.' This too concentrated on specific application examples. Wolfgang Menzel, IDS Manager Global CBD at Procter & Gamble, discussed the potential of RFID utilization in the consumer goods

sector. His presentation offered insights into the application potential of this technology in global supply chains. Kurt Rindle, who is in charge of RFID at IBM Deutschland, reported on the speed with which RFID projects can pay for themselves.

"The acceptance of Radio Frequency Identification is growing – and not only in the retail sector," commented Dr. Gerd Wolfram, Managing Director of MGI METRO Group Information Technology. He cited the



CeBIT continues to be a hit

5,500 exhibitors from 75 countries, more than 1,000 conferences and events, and nearly half a million visitors: figures that confirm the importance of CeBIT and the continuing interest in information and communications technologies. The number one topic at this year's event was 'Green IT,' with a focus on the energy-saving utilization of information and communications technology and the use of electricity-saving solutions.



VOICES FROM THE INDUSTRY

healthcare sector as an example, an area where this technology is now being used for goods transport in places such as the Klinikum Duisburg. In Saarbruecken, hospital personnel identify units of stored blood using transponders to help them assign transfusions to individual patients.

Mandatory deactivation not necessary

Representatives from the fields of business, politics and consumer protection took part in the subsequent discussion on the topic of 'RFID in the context of political regulation.' The participants were Dr. Andrea Huber, Managing Director of the Informationsforum RFID (RFID Information Forum), Bernd Weismann, Head of the Information Society Commission at the Federal Ministry of Economics and Technology, and Cornelia Tausch, Head of the Economic Issues department at the Federation of German Consumer Organizations. During their discussion, which dealt with questions on data protection issues related to RFID, Antonia Voerste, Head of Communications & Public Affairs, MGI METRO Group Information Technology, refuted accusations that radio technology could lead to consumer data being passed on for commercial purposes. "The numerical code that is stored on the RFID transponders refers solely to product- and process-specific data. These are stored in a protected database that can only be accessed



Bernd Weismann, Dr. Andrea Huber with host Corinna Lampadius (from left to right)

by authorized users." This means that there is no need for mandatory deactivation. Antonia Voerste also referred to the voluntary commitment made by METRO Group as a member of the EPCglobal standardization organization: "We provide information, indicate that this technology is being used and offer the option of rendering the transponders permanently inoperable. This ensures maximum transparency."

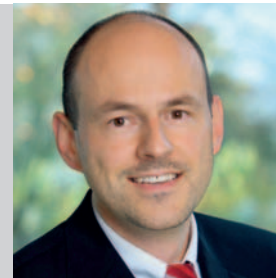


ETH

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich



Universität St.Gallen



Dr. Frédéric Thiesse

Associate Director Auto-ID Lab St. Gallen/Zurich

What is the Auto-ID Lab St. Gallen/Zurich currently working on?

The Auto-ID Lab is a joint initiative by the University of St. Gallen and the Swiss Federal Institute of Technology in Zurich. In cooperation with EPCglobal and six other research facilities, we are working at an international level on further developing RFID technology and setting global standards.

What made you become involved as an Academic Partner in the METRO Group Future Store Initiative?

METRO Group is one of the very few companies worldwide that have realized that the implementation of RFID is primarily a business issue. The potential of the technology will only be fully realized when users redesign their processes, make use of the enhanced data quality and develop new services. The opportunity to develop practical concepts in these areas together with METRO Group and its partners is quite exciting. Especially because, from an academic point of view, we are also entering uncharted waters.

Can you give us an example of a practically oriented project that you are currently working on for a commercial enterprise?

Right now, we are working together with Galeria Kaufhof on a study of the trial implementation of RFID at the store in Essen. With the help of RFID, we can analyze the correlation between customers trying on clothes and actually buying them – this works for entire product groups as well as for individual items. We can draw valuable conclusions from this information that can help improve in-store logistics and assortment policies. Ultimately, we are also improving the quality of service for customers.

Are the concepts and prototypes you develop also suitable for small and medium-sized companies?

The results of our work are interesting for companies of all sizes. But especially for small and medium-sized companies, as they do not have the financial flexibility to carry out long-term testing themselves. So they need reliable standards which can help them to clearly assess the economic benefits of a new technology.

TRADE FAIRS AND CONVENTIONS

Upcoming events

9th ECR Day

September 4 and 5, 2008_Zurich (Switzerland)

More than 100 experts from major companies including Nestlé, Iglo and Coca-Cola are expected at the annual trade congress of the German-speaking consumer goods industry. On the theme 'Chances without Borders,' the participants from Germany, Austria and Switzerland will discuss how effective customer relationship management can give rise to increased value added and what this means in terms of sustainability. Participants will be able to catch up with old contacts and also make new ones in the ECR Village.

GS1 Germany GmbH
www.ecrtag.gs1-germany.de

RFID World 2008

September 8-10, 2008_Las Vegas (USA)

RFID World is one of the biggest international meetings in the sector. This year more than 200 exhibitors from around 40 countries will be gathering to present their latest developments in the fields of sensor and identification technology. A highlight of the fair will be the presentation of the 'Excellence in RFID' award for the most outstanding application of the technology.

RFID World
www.cmp-egevents.com/web/rfid/home

26th Dortmund Talks

September 9 and 10, 2008_Dortmund (Germany)

The theme of Germany's longest-running logistics conference this year is 'From Process to Service.' Economists and research experts will be reporting on collaborations between IT and logistics, for example in cross-company processes. The Dortmund Talks are being co-hosted for the second time by the Fraunhofer-Institut für Materialfluss und Logistik (Fraunhofer Institute for Material Flow and Logistics) and the Bundesvereinigung Logistik (German Logistics Association).

Fraunhofer Institute for Material Flow and Logistics (IML)
German Logistics Association (BVL)

www.iml.fraunhofer.de/2388.html
www.bvl.de/do-ge

25th German Logistics Congress

October 22-24, 2008_Berlin (Germany)

True to the main focus of the congress, 'Creating Values - Connecting Cultures,' industry representatives from all over the world have been invited to Germany's most important logistics event in Berlin. The program includes field reports from Brazil, Russia, India and China. One important topic of discussion will be RFID as the logistics technology of the 21st century. METRO Group is a premium partner of the logistics congress.

German Logistics Association (BVL)
www.bvl.de/5278_2

Recent events

EuroShop 2008

Over 100,000 industry experts and around 1,900 exhibitors took part in the world's biggest retail trade fair. EuroShop provided an overview of the most important trends in retail architecture, store design, sales floor marketing and information and safety technology. The organizers expect brisk post-fair trade as exhibitors believe that numerous guests will want to invest in forward-looking concepts.

Messe Düsseldorf
www.euroshop.de

PLENUM

EU recommendation on RFID expected by summer 2008

The Information Society and Media Directorate-General of the EU Commission is currently preparing a recommendation for the member states on how to regulate the use of RFID. By the end of April 2008, around 600 companies, institutions and individuals had made use of the opportunity to voice their objections to a preliminary draft. One aspect that industry representatives are criticizing is the call for mandatory deactivation of transponders in retail outlets. They fear that overregulation of RFID could hamper its widespread introduction and that the European economy will fall behind the USA and Asia. The European



Commission is currently examining the position papers that have been submitted and will present a revised recommendation by summer 2008. During the same period, a number of conferences and symposia will be taking place to examine RFID use at a European level. At the beginning of October, experts will be meeting in Nice to discuss the chances and risks associated with the Internet of Things. The theme of the two-day event being held under the French EU Council Presidency is 'Internet of Things - Internet of the Future. Building tomorrow's Internet together.'

FOCUS ON USERS

> RFID Report 2008 - business process optimization in Germany

RFID, an industry-wide success story – such is the key finding of the RFID Report 2008. For this nationwide user-oriented survey, the Institute of Computer Science and Social Studies at the University of Freiburg, Germany, interviewed 283 senior management staff from large and medium-sized German companies in various fields. The aim was to assess how widely RFID is used, which applications are most common, and which factors are perceived as being relevant to the success of RFID projects.

High success rates

The participants in the study were chosen by random selection. Of those who responded, some 40 percent had implemented RFID in their companies. Project success rates, moreover, were high, with a clear majority stating that the technology had achieved the desired objectives, e.g. reduction of stocks or throughput time. In financial terms, the assessment was also predominantly positive. In fact, more than 70 percent of respondents were expecting to recoup their investment in hard- and software within four years, an unusually short time for this kind of high-tech investment.

Wide range of uses

The 102 respondents who had already deployed RFID were using a total of 493 applications, i.e. RFID was installed in various processes within their companies. This is in line with a trend described by RFID systems suppliers, which sees companies beginning with one RFID-supported function, and then successively progressing to other applications. Such developments are driven – as the survey confirms – by the versatility of transponders, which can be used to tag or mark a whole host of objects, from product components through to vehicles or buildings. However, the most commonly tagged items are logistic units and returnable packaging, with a focus on high- and ultrahigh-frequency rewritable transponders. Interestingly in view of data protection legislation, only very few users have data-on-tag applications, i.e. the storing of actual data, rather than codes, on their transponders.

More than just automation

For most users, the real economic benefit of RFID is not the automation of data collection, a task that was previously carried out manually. This finding was surprising. After all, experts to date have widely believed that companies benefit mainly from the cost-cutting effect that comes hand in hand with the virtually instant collection of data with RFID. By contrast, participants in the Freiburg study rated the higher quality of data generated by RFID, as well as other potential uses of such data, as far more relevant to the success of their businesses.



The study 'RFID Report 2008 - business process optimization in Germany' (in German only) can be called up at:
www.rfid-report-2008.de

Critical success factors

An effective quantification of the cost-benefit ratio is, according to the RFID Report 2008, another factor of decisive importance for the success of an investment in RFID technologies. Thus, companies whose introduction of RFID applications achieved the desired objectives were significantly more likely to have calculated the cost-effectiveness of the investment than companies who fell short of their goals. At the same time, however, the study also makes it clear that adapting existing investment appraisal processes to evaluate RFID applications is time-consuming and expensive. For smaller companies, in particular, this can be a significant obstacle to investing in the technology. An even trickier problem for users is the integration of RFID in existing processes and IT infrastructures. Against this, possible problems in connection with data protection or privacy are regarded as less relevant.

Helpful hands-on info

One special feature of the RFID Report 2008 is that it provides users and potential users with all kinds of valuable details on practical aspects of the technology. As a result, they can recognize potential obstacles in good time and plan accordingly. As such, the Freiburg survey is certain to help advance this technology of the future.

READ MORE

> The Internet of Things

From March 26 to 28, 2008, Zurich played host to the first international RFID conference: 'Internet of Things.' The Swiss Federal Institute of Technology (ETH), Zurich, organized this event in cooperation with the Auto-ID Lab of the University of St. Gallen and the Massachusetts Institute of Technology in the USA. The theme of this event was the linking of real objects in a virtual world, as made possible by technologies such as RFID.

Leading researchers, visionaries and application experts from the fields of science and industry used this conference as a platform for discussing the future of RFID and sensor networks. The eponymous publication 'The Internet of Things,' which is published by Springer-Verlag and aimed primarily at scientists, compiles the presentations given at this conference. This conference publication, which is available in English, is divided into six chapters: EPC Network, Middleware, Business Aspects, RFID Technology and Regulatory Issues, Applications, and Sensing Systems. The 23 articles deal with the benefits and opportunities offered by 'The Internet of Things.'



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> RFID in Manufacturing



Oliver Günther, Wolfhard Kletti,
Uwe Kubach

Springer-Verlag, Berlin and Heidelberg,
Germany, 2008

What benefits does RFID offer the manufacturing industry? What needs to be taken into account when implementing the technology? And how can all of the companies involved in the manufacturing process benefit equally? These are the questions looked at by Professor Oliver Günther, Director of the Institute of Information Systems at Humboldt University in Berlin, and his coauthors from the fields of research and IT development in this 150-page work.

The book is divided into three main sections. The introductory chapters explain how RFID increases the transparency and efficiency of production processes. The authors analyze the main functions of modern production software and conclude with a discussion on how Radio Frequency Identification can be integrated into existing IT infrastructures. The second part contains detailed presentations of six case studies. In the final section, Oliver Günther and his team of IT specialists use these case studies as their basis for deriving concrete recommendations for small and medium-sized companies.

'RFID in Manufacturing' is a practically oriented work based on firsthand experiences. This book contains useful information for companies implementing RFID, particularly those that use SAP resource planning software to control their production processes.