

RFID



Dear readers,

The barcode and its EAN standard were officially introduced in Germany on July 1, 1977. On its 30th birthday, we have some bad news for the barcode – it is going to be successfully replaced. The requirements of the consumer goods industry have changed enormously in recent years. Today's manufacturing and trade sectors need faster and, above all, much more efficient processes in logistics and warehouse management. Furthermore, the quality of the registered and processed data has to improve. All of this is possible with RFID in conjunction with the Electronic Product Code (EPC).



For the METRO Group, this is nothing new. In 2004 we introduced RFID technology throughout the entire supply chain. Just three years later, we are on the threshold of nationwide RFID deployment. You'll find more about this in our title story.

It is pleasing to see that more and more companies are planning to implement the technology. The conference "RFID: Towards the Internet of Things" showed once again how important Radio Frequency Identification is for European companies and consumers. For insights into this fascinating topic, I highly recommend the interview with Peter Hintze, Secretary of State at the German Federal Ministry of Economics and Technology, and the contribution by Dr. Andrea Huber, managing director of the RFID Information Forum.

We wish you interesting and enjoyable reading!
With best regards,

Zygmunt Mierdorf
Member of the Management Board
of METRO Group

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METRO Group
Future Store Initiative



GREEN LIGHT FOR FULL-SCALE DEPLOYMENT

SUPPLIERS RECEIVE COMPREHENSIVE INFORMATION AT THE THIRD METRO GROUP RFID CONGRESS Efficiency from manufacturer to store shelf: companies that want to secure a long-term competitive edge are implementing RFID throughout the entire supply chain. As early as 2004, the METRO Group began deploying this innovative technology – making the company an RFID pioneer in its sector. By the end of this year, the group will have installed the radio technology at some 180 German locations. The METRO Group offers its industry partners full support in the roll-out of RFID. This year’s RFID Congress provided a forum where users could share their experiences with the technology.

More than 650 representatives from around 300 companies in the consumer goods industry, the service sector and the IT industry came to Duesseldorf, Germany, on May 14, 2007, for the third METRO Group RFID Congress. The purpose was to discuss the progress of the RFID roll-out as well as opportunities for business cooperation. Zygmunt Mierdorf and Frans W. H. Muller, Members of the Management Board of METRO Group, presented an overview of current developments in the world of Radio Frequency Identification (RFID) and of the potential it offers.

Dr. Gerd Wolfram, Managing Director of MGI METRO Group Information Technology, gave details of the full-scale deployment of RFID technology at the group’s stores and warehouses. At a special convention for business partners, METRO Group suppliers were

also able to learn about the possibility of customized RFID solutions for their own companies. Experts conducted various workshops where they provided details about projects which were already up and running, e.g. use of RFID at the sales brands Real and Galeria Kaufhof. Participants also learned what technical requirements a company must fulfill to enable a successful implementation of RFID at pallet level.

Using potential, shaping the future

“The use of RFID offers numerous benefits for our suppliers,” said Zygmunt Mierdorf at the congress in Düsseldorf. “For example, transparency and efficiency throughout the entire process chain, and the optimization of goods traffic through electronic data interchange.” Interim results at the METRO Group: as part of an extensive testing program, 10,000 pallets have been fitted with RFID transponders thus far. The read rate at pallet level was raised from 90 to 98 percent on average – not least thanks to the introduction of the new generation of transponders, EPC Class1/Generation 2. By the end of the year, all German Metro Cash & Carry wholesale stores, up to 100 Real supermarkets, and nine MGL METRO Group Logistics distribution centers will have been equipped with RFID portals.

Standards for the retail industry

The advantages of this innovative technology can, however, only be fully exploited if the METRO Group’s suppliers make use of electronic data interchange, too. This includes, for example, using electronic dispatch notifications that contain an unambiguous description of the logistic unit.

Today, there are already some 50 suppliers participating in the roll-out, and many more are set to follow suit. Talks with industry partners are

Starter Kit cooperation partners

Starter Kit A

Starter Kit B

Starter Kit C



Page 2: Presenting details at the congress on the full-scale deployment of RFID within the METRO Group (from left): Thomas Storck, Dr. Gerd Wolfram, Zygmunt Mierdorf, Silvester Macho and Frans W. H. Muller. Patricia Schäfer chaired the event.

Page 3: Participants included representatives from the 50 companies who are already involved in the introduction of RFID.

progressing well: “Our suppliers are well prepared, and some have even set up their own project teams,” explains Muller. “RFID is seen as the future standard for the consumer goods industry as well as for trade and retail.” More than 80 percent of the group’s existing contacts on the supplier side have agreed to participate in the roll-out of RFID, he said.

Benefits for RFID partners

Mutual support is the key to every successful partnership. This is why suppliers who are quick to adopt RFID for their daily operations will receive preferential treatment from the METRO Group. One such supplier is games manufacturer Ravensburger. This Southern German company has been using RFID since January 2007. “We have introduced RFID at pallet level in order to meet the requirements of some of our most important customers,” says Knut Kessler, Head of Central Distribution Control at Ravensburger. “One of them is the METRO Group.”

Overview of RFID Starter Kits

	Starter Kit A	Starter Kit B	Starter Kit C
Printer	■	■	■
Transponder	■	■	■
Barcode scanner	■	■	■
Simple integration with enterprise resource planning (ERP)	■	■	■
Advice and installation	■	■	■
Incoming/outgoing goods portal		■	■
Complete integration with enterprise resource planning (ERP)			■

Suppliers are given a head start

Companies wishing to join the RFID introduction at the METRO Group don’t have to start from scratch. Both the retailing group itself, as well as the partners active in the METRO Group Future Store Initiative have gained considerable experience with the technology over the years. Now this comprehensive RFID knowledge is available to newcomers as so called RFID Starter Kits – made-to-measure compact solutions comprising hardware and software as well as a range of dedicated services. Suppliers that use the Starter Kits are of course fully compliant with the technical requirements of the METRO Group.

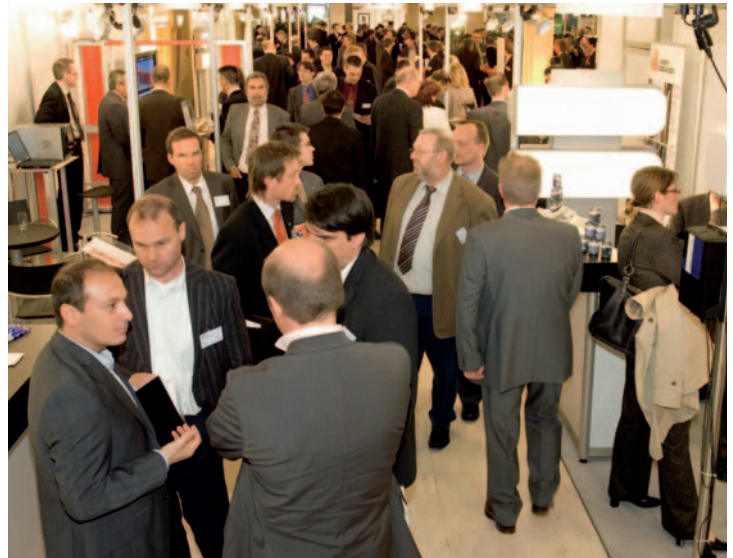
There are three packages to choose from: Starter Kit A is ideal for companies that wish to attach transponders to their shipments to trading partners, but do not plan to use the technology beyond that. Level B includes an RFID-supported portal for incoming and outgoing goods, enabling automatic reading of deliveries. Level C empowers companies to completely integrate the technology in their own logistics and warehouse management processes and reap the full benefits from streamlining their process chain.

More information on RFID Starter Kits can be obtained from the Supplier Collaboration Team at METRO Group Buying International.
 Phone: +49 (0)2 11.9 69-54 65
 Fax: +49 (0)2 11.9 69-4 90-54 65
 E-mail: info@metro-link.com
 www.metro-link.com

Even suppliers of products with a high liquid or metal content are now also able to use this high-tech system. Inter-Union, for example, has been fitting its pallets with RFID transponders since the beginning of 2006. This medium-sized company from Landau in the Palatinate region of Germany sells products such as car and bicycle accessories and electrical installation equipment. "To counteract problems with reading, we use FlagTag technology, which helps us achieve excellent read rates," explains Hans Gehrlein, Head of IT at Inter-Union Technohandel GmbH. Unlike traditional transponders, the FlagTag antennas project from the side of the pallet, like small flags. Therefore, they do not come into contact with the products. "In the long run, the introduction of RFID, especially at case level, will bring us clear advantages; namely in relation to incoming goods, warehousing and stocktaking," according to Gehrlein. Partners of the METRO Group who opt against RFID will in future have to bear the increased process costs themselves – for example the cost of recording and processing paper delivery notes. They will be required to make lump-sum payments to cover these costs.

Practical training

To make it easier for suppliers from the consumer goods industry to switch to RFID technology, the METRO Group provides support in a number of ways. The European EPC Competence Center (EECC), for example, offers training and information modules. Here, partners also have the opportunity to carry out tag performance tests on RFID transponders in the on-site laboratory. Furthermore, suppliers have access to numerous brochures and manuals. The central communications platform www.metro-link.com allows a rapid exchange of information. Besides giving suppliers a theoretical grounding in RFID, the METRO Group supports them in the practical application of this future-oriented technology as well: in cooperation with its partners, the company has developed Starter Kits in three different versions and price categories (see boxes). "Only by working together can we exploit the great potential offered by RFID," says Zygmunt Mierdorf. "That is why we are counting on successful cooperation with our suppliers."



Enough time remained between presentations for the congress participants to share their experiences with RFID, make new contacts or visit the special convention for business partners.

RFID COMPACT



>> Fish & Chips

Singapore's "Underwater World" aquarium features an RFID-assisted visitor information system: fish in the aquarium are fitted with transponders. When one of them swims within range of a reader, information on it is displayed on a screen. This makes it easy for visitors to quickly learn about the name, classification, and habits of each sea creature. A further service for guests: thanks to RFID, it's easy to identify "adopted" fish. Visitors can adopt fish and even give them names if they like. Thus far, 20 fish have been fitted with transponders.

>> Value added for medium-size companies

The Netzwerk Elektronischer Geschäftsverkehr (Electronic Business Network) hopes to promote the adoption of RFID technology by small and medium-sized companies in Germany. In a nationwide series of presentations, experts and users explain the potential of radio frequency identification using convincing application examples. This year, events are being held in Frankfurt, Passau, Berlin, Hannover and Ulm. For more information, see www.info-rfid.de.

>> Stress-free sightseeing

Whether you plan to visit the Van Gogh Museum or Madame Tussauds, or to go for a canal tour – the "I amsterdam" card is the key to the main attractions and public transportation network in the Netherlands capital. This multifunctional card with integrated transponder offers all the benefits of cashless payment along with an all-inclusive service package. The card gives visitors numerous discounts for restaurants and tourist attractions, while also saving them the trouble of showing tickets to transit staff, waiting in lineups or digging out change.

>> Smart building site

The Fraunhofer Institute in Duisburg laid the foundation for the research facility "inHaus2" in May 2007. Starting in mid-2008, applications for commercial buildings will be developed and tested here. But even during the construction phase, innovative processes are already in use – for example, research partners are putting RFID transponders on building supplies like bags of cement, insulation and cinder blocks. This means the flow of materials can be documented from arrival at the site to incorporation into the structure. In addition, Radio Frequency Identification makes quality control easier: for example, transponders in poured concrete supply information on temperature and moisture.

>> Factory of the future

At the "SmartFactory" near Kaiserslautern, research institutes and companies are examining the interplay of smart future technologies in an industrial environment. One focus of the initiative is Radio Frequency Identification. For example, this technology is used to control a demonstration plant for making liquid soap. Transponders on the labels tell the machine which fluid to fill the bottle with. The floor also has RFID technology, facilitating precise navigation of maintenance vehicles and forklifts.

>> A major attraction for visitors

There's been cause for celebration at the RFID Innovation Center: in August, the 2,000th group of visitors toured the information and development platform for the METRO Group in Neuss, near Duesseldorf. Since its opening in July 2004, nearly 18,000 interested visitors have been guided through the Innovation Center, where over 40 different exhibits show the diverse applications of RFID. Visitors have included representatives of a wide range of sectors, such as technology, retail and media. Members of the 2,000th group of visitors actually had two reasons to celebrate: they were surprised with a present, and they were the first group to be able to tour the redesigned showrooms with radio technology solutions for supermarkets and households.

“BUILD ON OUR STRONG POSITION”

> Interview with Peter Hintze, Parliamentary Secretary of State at the German Federal Ministry of Economics and Technology

“RFID: Towards the Internet of Things” was the title of an RFID conference on June 25 and 26, 2007, in Berlin. More than 400 international experts from business, science, and government gathered in the German capital for the event, by invitation of the German Economics and Research Ministries as well as the European Commission. Our editor spoke with Peter Hintze, the Parliamentary Secretary of State at the German Federal Ministry of Economics and Technology.

Mr. Hintze, what is the potential of Radio Frequency Identification for Europe in general and Germany as a high-tech country in particular?

The range of potential uses for RFID technology is huge. It offers new and forward-looking ways to boost efficiency and achieve quality advantages. This is of fundamental importance for many key industries in Germany and the whole of Europe. Especially in high-tech areas like the automotive and mechanical engineering sectors, it can help us keep our international competitive edge. It's important to continue to strengthen Europe's and Germany's lead in the research and development of RFID technology, and transform it into economically viable solutions.

Consumer protection groups have reservations with regard to data security. How will governments deal with this?

The key to success for RFID, besides business and technical issues, lies primarily in societal acceptance. Citizens need to clearly understand the benefits of RFID and have confidence in the technology. We have to take their fears of becoming “transparent customers” very seriously. On the other hand, we must avoid premature regulatory steps, in order not to stunt the growth of this young market. It's very important that all parties act responsibly at this stage, because this will determine what steps will be perceived as necessary in the future.



What role did the “RFID: Towards the Internet of Things” conference play, especially considering it took place during the German EU presidency?

The RFID conference is among the flagship projects defined during the first national IT summit. It offered a wide-ranging, comprehensive forum spanning many topics and enabling dialog among various interest groups. The primary goal was to align the agendas of business, technology, politics and society as a whole with the objective of achieving joint success. I think it was very significant that the participants overwhelmingly voted to attempt self-regulation in the form of a code of conduct, instead of demanding RFID-specific data protection legislation. However, it is important to ensure effective implementation of such agreements in business.

RFID technology is a focus of your ministry in the information and communications technologies area. What forms of official support do you offer?

RFID applications are an important part of “next generation media – networked professional and private worlds”, a technology initiative we support. Along with the innovation areas of consumer electronics and healthcare services, it focuses on testing RFID-based solutions for logistics and production control. The creation of reference models and best-practice examples will demonstrate feasibility and economic benefits and trigger imitation. The next generation media project budget totals around 80 million euros, with about half coming from federal subsidies. Any suggestions for innovative projects that further strengthen the program are always welcome.



YOU ASK, WE ANSWER

When will the METRO Group deploy RFID outside Germany, and in which countries?

The METRO Group has already initiated one project on an international scale: Advanced Logistics Asia (ALA). Its goal is to use RFID to increase the traceability of goods shipped from China to Germany and increase the transparency along this international supply chain. The experience gained from the ALA initiative will be valuable for the deployment of RFID in other countries. Currently, however, the METRO Group is concentrating its efforts on introducing RFID to its German operations – to its sales brands Metro Cash & Carry, Real, Galeria Kaufhof and to the distribution centers run by its logistics provider, MGL METRO Group Logistics.

RFID can optimize logistics processes and save costs. How do suppliers benefit from this?

The more seamlessly a company integrates RFID in its processes, the greater the potential benefits, because the technology helps optimize operations along the entire process chain. Thus suppliers can match consolidated deliveries with orders, release their shipments, post the outbound goods in their database and provide the dealer with an electronic dispatch note, all based on RFID. Processes are fully automated and take only a few seconds. What's more, numerous companies who have implemented RFID in their process chain now report that they have eliminated costly delivery errors to retail outlets. One of them is Lemmi Fashion, a medium-sized supplier of children's clothing. The company has been running RFID-based operations for several years with great success.

How do RFID readers differentiate between signals coming from single items, boxes and pallets?

The difference is determined by the Electronic Product Code (EPC), the standard coding scheme used by the METRO Group in all RFID applications. The code's numeric sequence entails a so-called 'filter value' which tells the reading device what kind of logistic unit it is handling. The decimal '2,' for instance, indicates a box. The EPC was developed by the international standardization body EPCglobal. It is now recognized as a global standard for RFID in the consumer goods industry.

Pallet-level RFID achieves read rates of 98 percent. Is that high enough for a large-scale roll-out?

Yes. Even today and with this read rate, the benefits achieved in logistics and warehouse management are substantial as compared to common warehousing practice. The detailed checking of pallets at incoming goods, for instance, is now largely automated. Previously, this lengthy process was carried out manually and allowed spot-checking only. By using RFID, the METRO Group is now much more accurate at this point in the process than when using the barcode. And in the case of unsuccessful readings – they occur in two out of one hundred pallets on average – the error is usually detected immediately.

"TAG IT EASY" IN THE FAR EAST

> METRO Group cooperates with IT specialist Checkpoint Systems to help consumer goods manufacturers implement RFID

Since the beginning of June, around 30 Chinese suppliers have been equipping their shipments to the METRO Group with RFID. They are taking part in "Tag it easy," a pilot project aimed at supporting industry partners with a low level of mechanization. Initial results are highly promising.

The pilot project is another component of the initiative Advanced Logistics Asia (ALA), in which the METRO Group is testing the implementation of RFID in worldwide logistics. "Tag it easy" was launched at end of May in Hong Kong. Around 30 Chinese suppliers now fit their logistic units for export with RFID transponders before shipping them to a distribution center in Unna, Germany. On arrival, an RFID-equipped incoming goods portal registers

the goods within seconds and determines whether the order is complete.

But what makes this project really special is that most of the approximately 30 Chinese suppliers participating are not equipped with the technology to deploy RFID. "With 'Tag it easy', we're offering them a unique opportunity to benefit from this future technology,"



Guest article: "A milestone"

The international conference "RFID: Towards the Internet of Things" was a further milestone on the way to wide-scale RFID implementation in Europe. It is to the organizers' great credit that they brought together more than 400 representatives from business, science, government and consumer protection groups at the Berlin event, and set a process of constructive dialog in motion. The conference was an opportunity to underscore Europe's leadership role in the research and implementation of RFID. And the participants made good use of that opportunity.

In Berlin, the RFID Information Forum was involved in creating the position paper "European Policy Outlook RFID" which discusses the technology's challenges and recommends actions for a joint approach involving all member states. It forms a solid basis on which to develop future parameters for widespread use of RFID in Europe.

The second birthday of the RFID Information Forum almost coincided with the conference. The association was established in July 2005, with the objective of fostering dialog between government, business, media, science and consumers, and promoting the further development of RFID. The results of the Berlin conference, and the processes that brought them about, confirm the validity of the work accomplished thus far.

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In contrast to two years ago, the discussion is no longer dominated by the topic of data protection. Instead, RFID is now perceived as an innovative technology that opens up great possibilities and is worth promoting – both the German government and EU Commissioner Viviane Reding have given it their wholehearted endorsement.

Spreading information about how the technology works and its potential, for instance in the healthcare sector, is still an important task for business and government. The METRO Group has been a great example for this in the past. The consumer portal www.rfidabc.de, which the RFID Information Forum set up last year, is making a key contribution to transparency and availability of information. At this site, users can find out in which areas of our daily lives the technology is already in use, and what advantages it offers.

Conferences like "RFID: Towards the Internet of Things" in Berlin are a good way to jointly shed more light on the benefits of RFID. The dialog with institutions and interest groups shows that they have recognized the significance of the technology. We are on the right path.

Dr. Andrea Huber is managing director of the RFID Information Forum. The association's goal is to inform the public on the prospective possibilities opened up by Radio Frequency Identification and to foster dialog on its use.

VOICES FROM THE INDUSTRY

says Dr. Gerd Wolfram, Managing Director MGI METRO Group Information Technology.

Preprogrammed transponders

In cooperation with IT specialists Checkpoint Systems, the METRO Group supplies consumer goods manufacturers with RFID transponders which are already programmed with all required information. Project participants order transponders according to their needs via the online supplier portal Metro Link. From there, the orders are automatically forwarded to Checkpoint Systems for processing. "All the manufacturer has to do is simply attach the tags. Then he registers the goods with a scanner when they leave the plant and submits the information to Metro Link, which generates a precise packing list based on the data," explains Thomas Burkhalter, Finance Director at MGBI METRO Group Buying International Hong Kong.

Both sides benefit

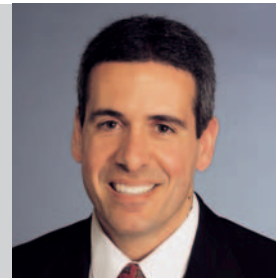
The benefits are obvious: with a handheld reader, goods can be scanned quickly and easily with 100-percent accuracy. This gives the manufacturer a reliable record of the merchandise delivered. And the retailer has a precise overview of the goods well before the order arrives. The increased transparency enables both sides to act early to avoid supply bottlenecks, thus significantly improving the availability of goods in the stores.

Initial results encouraging

Since the launch of "Tag it easy," several RFID-equipped goods shipments from Hong Kong have already reached the METRO Group distribution center in Unna. Initial results are very positive: "Our read rates are already highly satisfactory. Time-consuming counts are no longer necessary, and that means goods get to the individual stores much faster and easier," says Dr. Wolfram. The METRO Group intends to broaden the scope of the endeavor in the immediate future: other suppliers are expected to join and there are plans to expand the project to include Vietnam. Thomas Burkhalter explains: "The expansion of ALA is another step towards greater efficiency in the supply chain – and better customer service."



Chris Diorio



[Chairman, Chief Technology Officer and co-founder of Impinj, Inc.]

Impinj recently became a member of the METRO Group Future Store Initiative. What role do you intend to play in the Initiative?

Impinj focuses on developing the highest-performing UHF Gen. 2 solutions for tagging pallets, cases, and items. For the Future Store Initiative we will concentrate on item tagging using our pioneering near-field UHF technology. We believe that this technology has the potential to revolutionize retail operations from backstore to point of sale, and will allow a single RFID infrastructure, based on UHF Gen. 2, for the entirety of operations of the METRO Group.

What is so unique about the Gen. 2 transponders you produce?

Impinj's Monza transponder was, in 2005, the first UHF Gen. 2 chip on the market certified by EPCglobal. It remains the benchmark for Gen. 2 tag silicon even today. Its dual-port input allows tag antennas that are readable in any direction. Its combination of high sensitivity and excellent noise rejection ensures that it works as well in the field as in the laboratory. Monza's unique front end allows it to work exceptionally well not only with traditional tag antennae for far-field reading, but also with near-field antennae for short-range reading on liquids and metals.

Have the potential benefits of the EPC Class 1/Gen. 2 standard been fully exploited yet?

The UHF Class 1/Gen. 2 standard offers numerous opportunities that the RFID industry has only begun to explore, and the performance and utility of Gen. 2 products is improving almost on a daily basis. For example, as little as a year ago reading 180 items on a "mixed" test pallet of the METRO Group was considered a major challenge. Today, tests like that are no longer a problem. Now, the focus lies on the deployment of item-level solutions, for instance on textiles. This is being examined in a pilot project at a Galeria Kaufhof store in Essen. We've developed specialized reader antennas and software that, together with our transponder and reader technologies, make high-performance solutions possible.

TRADE FAIRS AND CONVENTIONS

Upcoming events

24th German Logistics Congress

October 17-19, 2007_Berlin, Germany

This year's German Logistics Conference will revolve around efficiency, responsibility and success. Specialists from government and industry will discuss holistic concepts that are socially and environmentally responsible as well as economically viable. Among the prominent guest speakers will be German Chancellor Angela Merkel and METRO Group CEO Dr. Hans-Joachim Körber. The "Logistics Market" exhibition will give visitors the opportunity to find out about the latest developments from over 100 exhibitors. The METRO Group Future Store Initiative and some of its partners will also be exhibiting with a stand covering about 650 square meters.

Bundesvereinigung Logistik (German Logistics Association)
www.bvl.de/361_2

RFID Journal Live! Europe

November 6-8, 2007_Amsterdam, The Netherlands

For the third time, the American trade publication RFID Journal is putting on its annual "RFID Journal Live! Europe" event. International speakers will provide a comprehensive view of Radio Frequency Identification applications. Case studies will show how RFID optimizes business processes, improves customer service, and lowers production costs.

RFID Journal
www.rfidjournalevents.com/liveeurope

On RFID: The next Step to the Internet of Things

November 15 and 16, 2007_Lisbon, Portugal

As part of the Portuguese EU presidency, European dialogue will focus on the theme of RFID. Following the "Towards the Internet of Things" conference held in Berlin, a further event is now to be held in Lisbon to discuss issues concerning the successful introduction of radio technology. The event will be supported by the Portuguese ministry of science, and the European Commission's Directorate-General "Information Society and Media".

Portuguese EU presidency
www.rfid-outlook.pt/

Recent events

Convention on Strategies for the Future – Germany 2020

At the SPD's "Germany 2020" Convention on Strategies for the Future in June, politicians met with business and civic leaders to discuss prospects for social-democratic business and consumer policy. The potential of RFID was also a central topic. Opportunities for this technology and its benefits to the consumer were part of a podium discussion in Hannover with Manfred Zöllmer, Vice Chairman of the Consumer Committee in the German Bundestag, and Antonia Voerste from METRO AG's Corporate Communications Division.

SPD (Social Democratic Party of Germany)
http://spd-bezirk-hannover.de/aktuell/termine

Meeting of the Advisory Board for Retail and Consumer Protection

The subject of RFID was the sole focus of a panel discussion of experts from the Gesellschaft zum Studium strukturpolitischer Fragen e. V. (German Association for Structural Policy Studies) in July in Berlin. Guest speaker Andreas Gleick, a finance and public sales specialist at IBM, opened the series of presentations with examples of best practices. Antonia Voerste from METRO AG's Corporate Communications Division gave a presentation on the use of RFID in retailing and future applications for the technology.

Gesellschaft zum Studium strukturpolitischer Fragen e. V.
(Society for the study of economical and social structures)
www.strukturgesellschaft.de

PUBLIC DEBATE

RFID in Europe – the next steps

The RFID Expert Group of the European Commission started its work at the beginning of June 2007. Representatives of the business community, politics and society as a whole – including members of the RFID Information Forum – are cooperating on the development of a European Commission recommendation on the subject of RFID and data protection. Portugal took over the EU Council presidency from Germany on July 1, and is continuing to keep RFID high on the European agenda. For example, a follow-up to the Berlin conference "RFID: Towards the Internet of Things" is currently planned for mid-November. The event aims to pick up the momentum gathered in Berlin, and advance the implementation of the ideas dis-



cussed there. In addition, users and researchers are called upon to submit visionary ideas for the application and development of RFID. In this manner, the Portuguese EU presidency aims to lay the foundation for subsequent projects as part of the Seventh EU Research Framework Programme. In July, the European Commission also initiated a consultation process on the IT industry in Europe – a further move to strengthen the position of the sector. One of the questions posed to company representatives, researchers and interested members of the public was: what steps need to be taken in order to help RFID and other future-oriented technologies on their way to success in Europe? The insights gained here can be used to enhance the position of European IT companies in the face of international competition.

THE CROSS-APPLICATION TECHNOLOGY OF THE 21ST CENTURY

> RFID: Prospectives for Germany

RFID will soon become firmly established as an interdisciplinary technology throughout Germany. This is revealed in this study commissioned by the Federal Ministry of Economics and Technology and published by VDI/VDE Innovation + Technik GmbH in June 2007. The authors of the study are convinced that by 2010 the new technology will influence around eight percent of gross value added in all RFID-related areas of retail, industry, transport and services. By way of comparison: in 2004, this figure was just 0.5 percent. In terms of revenues, the value added influenced by RFID is expected to soar from just 3 billion euros to 62 billion euros in the same period.

Considerable potential for retail

The comprehensive study focuses on the overall effects of the RFID roll-out on the German economy. In a first step, the authors present sector-specific assessments of areas in which RFID is especially relevant: the retail/consumer goods industry, logistics and automotive. They look at the reasons for introducing the technology and the current status of its implementation, and conclude by forecasting future developments. One of their findings is that in the medium term, RFID adoption in the retail sector will most likely be restricted to the logistics supply chain. The reasons for this reticence can be seen in the investment costs, which will only pay off in this area of application. The experts also say that item-level tagging – the use of RFID on individual products – will not become a widespread phenomenon before 2010. Until then, it will only be used in exceptional cases, for example on luxury goods or medication. The authors assume that not all retail formats will benefit from RFID to the same extent. Companies with a high turnover and complex logistics processes – such as hypermarkets, large supermarkets and discounters – will profit the most. According to the study, the technology's greatest potential lies in the cost cuts achieved by optimizing processes and increased productivity. With ever more companies adopting RFID, the effects of this productivity boost could rise from currently 0.72 billion euros to 8.64 billion euros by the year 2010.

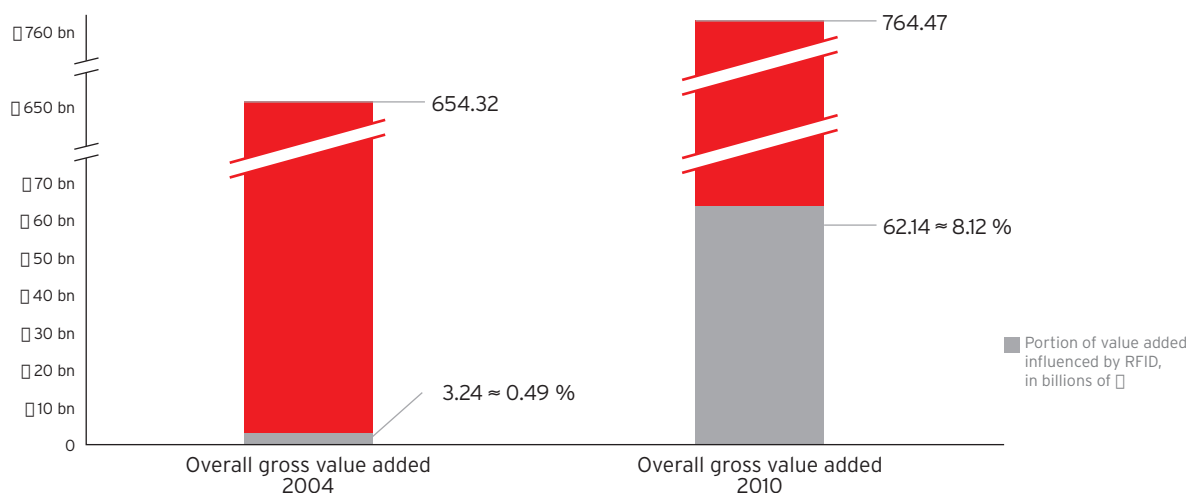


The study "RFID: Prospectives for Germany" can be downloaded in English from www.bmwi.de/BMWi/Navigation/Service/publikationen,did=207076.html free of charge.

Strengthening Germany's pioneer role

In the study's conclusion, the authors point out Germany's leading position in testing and implementing RFID applications. The technology opens up huge potential for the domestic economy to maintain and even sharpen its competitive edge. But in order to fully leverage this opportunity, politics, the economy and society in general must first tackle a number of challenges. The VDI/VDE experts name several examples: Germany should play an active role in harmonizing RFID frequencies at an international level; a greater effort should be made to help small to medium-size organizations access the technology; and the government will need to adapt its research and technology policies to fully support RFID deployment.

Development of RFID-influenced value added in Germany



Model calculation: Growth in the portion of value added influenced by RFID in the manufacturing industry, trade/transport and services sectors from 2004 to 2010

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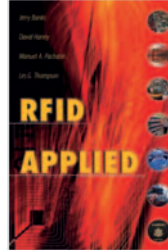
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> RFID Applied



Jerry Banks, David Hanny,
Manuel A. Pachano, Les G. Thompson

Publisher: John Wiley & Sons,
New Jersey, USA, 2007

“RFID Applied” – a deceptively simple title for a 500-page publication by four US authors. Nonetheless, the title captures the essence of the subject accurately: the guide includes basic information as well as background details on radio frequency technology for readers with or without prior knowledge of the subject. The authors’ intention is to smooth the path for anyone considering implementing RFID.

The book is divided into three sections: the first gives the reader an overview of the history and technical background of Radio Frequency Identification and depicts current developments. The second section presents application possibilities in ten selected industry sectors, including automotive, health-care, and trading and retailing. The third and final section discusses the political and technical framework for RFID in ten different countries.

The authors offer additional information and links, which they update regularly, online at www.rfidappliedbook.com.