

# RFID



DEAR READERS,

Setting sail for new territory requires thorough preparation. To reach their goal, the great explorers first recruited a strong crew. In addition, they anticipated potential obstacles and searched for ways to overcome them.

The introduction of a new technology in the retail sector can be compared to an expedition. Our departure date has already been chosen. On November 1, 2004, we will set out and gradually begin to use radio frequency identification together with our partners along the entire process chain.



We are prepared. We have already assembled the right crew of international pioneers. The pilot projects in our sales divisions and cross-divisional service companies have confirmed the potential of RFID. In addition, we created an internationally unique working platform in July 2004: the METRO Group RFID Innovation Center in Neuss. There, we will provide the companies participating in the RFID roll-out with the opportunity to prepare for the immediately upcoming, initial steps. At the same time, this forum provides information on this important key technology for the general public and in expert circles. In this issue of the RFID Newsletter, we will report on the much noted opening event and several of the installations shown there.

In addition, you will read an interview with security expert Rainer Fahs as well as some industry news and background information.

I hope you will enjoy your reading.

Yours truly,

Zygmunt Mierdorf  
Member of the  
Management Board of METRO Group

MAIN TOPIC > In shape for the future of retail > METRO Group RFID Innovation Center begins operation [p. 02](#)  
INTERVIEW > Rainer Fahs, EICAR [p. 05](#) | OPINIONS > Voices from the industry [p. 06](#) | NEWS [p. 07](#) + [p. 10](#)  
BACKGROUND > International retailers push ahead with RFID [p. 08](#) | QUESTIONS AND ANSWERS [p. 09](#)  
EVENTS [p. 10](#) | LITERATURE [p. 11](#) + [p. 12](#) | IMPRINT [p. 12](#)



**METRO Group**  
Future Store Initiative



## IN SHAPE FOR THE FUTURE OF RETAIL

**METRO GROUP RFID INNOVATION CENTER BEGINS OPERATION.** "This is a great day for the METRO Group, its partners and the state of North Rhine-Westphalia." Wolfram Kuschke, minister and head of the state chancellery of North Rhine-Westphalia, was full of praise during the inauguration of the METRO Group RFID Innovation Center on July 7, 2004. In addition to the member of the state government, representatives from industry, the IT sector, the Metro sales divisions and cross-divisional service companies, Metro Cash & Carry, Kaufhof, Real, METRO Group Buying, METRO Group Logistics, METRO Group Distribution Logistics and METRO Group Information Technology also joined the celebration at the Kaufhof warehouse in Neuss. With the RFID Innovation Center, the METRO Group has created a work platform for everybody participating in the RFID roll-out beginning November 2004.

"North Rhine-Westphalia, formerly the land of coal and steel, is on its way to become the number one location for innovative technologies," Minister Wolfram Kuschke said. "The RFID Innovation Center provides an impressive example of this development." In a remodeled part of the Kaufhof warehouse in Neuss, the RFID Innovation Center houses more than 30 installations that show retail processes based on RFID along the supply chain. Under realistic conditions, suppliers, IT partners and the representatives of the Metro sales divisions can get to know and test the professional application of RFID in five different areas: RFID during order-picking and warehouse management, at department stores, at hypermarkets and at home. "The opening of the RFID Innovation Center is a key step on the way toward the large-scale introduction of RFID in the retail sector. It is our way of honoring our promise to provide intensive support to our partners during the implementation of the roll-out," Zygmunt Mierdorf, Member of the Management Board and Chief Information Officer of the METRO Group, said during the inauguration.

### RFID ROLL-OUT IN NOVEMBER

As one of the first retailers, the METRO Group introduces RFID technology step by step along the entire process chain. The roll-out starts in November 2004, initially involving about 20 suppliers as well as

selected warehouses and stores of the sales divisions Metro Cash & Carry, Real and Kaufhof. Additional suppliers and stores in Germany will be added successively. The RFID roll-out will focus on the automation of processes for incoming and outgoing merchandise and on warehouse management. Initially, logistical units – pallets, packages and shipments of hanging merchandise – and retail units (cartons and subcartons) will be equipped with RFID transponders. The entire restocking process in the warehouses, stores and outlets of the METRO Group can be controlled by means of RFID technology. In 2006 the roll-out will be expanded to include further suppliers, warehouses and stores of the METRO Group.

### CLOSE COOPERATION WITH ALL PARTNERS

"Without our technology and industry partners, we wouldn't have been able to establish this center," says Dr. Gerd Wolfram, Project Manager of the METRO Group Future Store Initiative. "And without them, a dynamic evolution of RFID technology would be unthinkable." At the METRO Group RFID Innovation Center, an experimental environment has been created in which suppliers, together with the sales divisions participating in the roll-out, have the opportunity to test their labels, reading devices and software for their suitability for everyday use.

### KEEPING TRACK OF ALL DELIVERIES – RFID ACCELERATES THE PROCESS CHAIN

Take for example order-picking and warehouse management: in these test areas, the visitors of the RFID Innovation Center can experience in person how the technology accelerates incoming and outgoing merchandise processes at the warehouse. If pallets are picked at the supplier's warehouse for delivery to department stores or hypermarkets today, the staff still scans the labels of each individual box. They print the corresponding outgoing merchandise labels that include the serial shipping container code (SSCC), affix it to the pallets and



Picture on far left: Dr. Gerd Wolfram, Wolfram Kuschke, Petra Rob and Zygmunt Mierdorf during the opening ceremony Pictures on page 2 and 3: experts of the METRO Group in conversation with experts of partner companies

manually scan the data again at Outgoing Goods. The SSCC is an internationally applicable code for shipping units. It allows the exact identification of pallets and boxes and is represented as a bar code.

Using RFID technology, this process can be significantly simplified and accelerated. At various stations of the sorting and order-picking process, RFID reading devices read the Electronic Product Code (EPC) stored in the RFID transponder. With the help of the EPC, process-

related information such as the place of origin or the shipping date can be assigned to the pallets and boxes. This information is transmitted to the central logistics and merchandize management system, where order and order-picking lists are synchronized in a fully automated fashion. For example, an RFID-based conveyor system is installed at the Innovation Center that recognizes, based on the RFID transponders affixed to the incoming packages, for which store or branch the products are designated.

#### SELECT INSTALLATIONS AT THE METRO GROUP RFID INNOVATION CENTER



##### HIGH-BAY SHELVING WITH RFID

Forklifts and high shelves equipped with RFID technology will make the correct placement of goods at the warehouse easier and significantly reduce the error rate. RFID reading devices scan the Electronic Product Code stored in the RFID transponder and indicate to the driver the designated storage place for the pallets or boxes. If the employee has placed the merchandize correctly, the logistics and merchandize management system confirms this via the forklift's touch screen monitor. If he selected the wrong location, he receives an error signal.

##### GATE FOR INCOMING MERCHANDIZE

Up until now, employees at the central warehouse or store had to count incoming pallets or boxes individually at the loading dock, compare them to the delivery note and enter them manually into a computer system. RFID reading devices at the gate for incoming merchandize accelerate this process: using the RFID transponders, they register the incoming shipping containers and automatically transmit the registered information to the merchandize management system, which verifies within just a few minutes whether the delivered merchandize corresponds to the original order.

Warehouse management processes are also rendered significantly more efficient with RFID. At the warehouse gate RFID reading devices enable the automated, touch-free registration of the shipment. As soon

plus in economic efficiency. Zygmunt Mierdorf summarized the advantages of the RFID Innovation Center as follows: "The Innovation Center is our investment in knowledge-sharing and experience transfer between our suppliers, technology partners and sales divisions. It provides an ideal basis for the introduction of RFID."



as a pallet equipped with RFID transponders passes the gate, the stacked boxes are identified via radio signal and immediately registered in the merchandise management system. A reading device can register 60 RFID transponders in a single second. For each truck, this means time savings of 10 minutes and therefore a

>> To better respond to all questions concerning the RFID Innovation Center and to give partners taking part in the RFID roll-out a convenient place to register for tests, training and guided tours, the METRO Group has established a contact and information center: the METRO Group RFID hotline at +49 (0)2 11.68 86-20 04. The hotline staff will arrange visits or meetings with experts of the METRO Group or its partner companies and mail out information materials upon request.

## SELECT INSTALLATIONS AT THE METRO GROUP RFID INNOVATION CENTER



### VIRTUAL CATWALK

The agony of indecision is over: RFID can make purchasing decisions easier for customers. As soon as customers approach the mirrors in the sales area with items of clothing to which Smart Chips have been attached, they pass two columns that are equipped with RFID reading devices. They recognize the selected clothing items based on Smart Chips. The system will display on monitors how a certain blouse can be combined with various skirts or pants.

### INTELLIGENT REFRIGERATOR

Expired milk and not enough eggs for Sunday's coffee cake? A thing of the past thanks to the Intelligent Refrigerator. Based on RFID, it can recognize when a certain product needs to be replaced and when the expiration date of individual items approaches. The consumer determines the selection of goods and the amount to be stocked. Before placing the products in the refrigerator, he affixes Smart Chips to them. If the quantity of a food item falls below the preprogrammed level, the system will automatically store the item in question on an electronic shopping list. Over the Internet, this shopping list can be automatically sent to the grocery store and accessed there any time via the Personal Shopping Assistant.

# RFID NEEDS AN OBJECTIVE PLATFORM

Interview with Rainer Fahs, Chairman of EICAR and Branch Chief of the NATO Air Command and Control System Management Agency

As a registered organization, the European Institute for Computer Anti-Virus Research (EICAR) was established in Germany in 1991. It serves as a platform for the exchange of information between all security experts active in the fields of research and development, implementation and management, with the goal of promoting international cooperation in computer security. Recently, the institute established an RFID task force, of which the METRO Group is a member. In an interview with the editorial department of the METRO Group RFID Newsletter, Rainer Fahs describes why he believes that a neutral institution is important to enable an objective discussion of this technology.

## MR. FAHS, WHAT ARE YOUR VIEWS ON RFID TECHNOLOGY?

RFID will be used in many areas. This technology will revolutionize supply chain management in particular. RFID automates and accelerates processes for incoming and outgoing merchandise; RFID significantly simplifies certain processes; and both industrial and trading companies can save numerous work stages. In the future, consumers like you and me could also benefit from this technology during shopping or at home. Intelligent Shelves would stock our preferred products at all times and would always be able to provide information on the origin of products. Or our refrigerator would remind us of the expiration dates for our milk and cheese.

## IS THE CONSUMER'S PRIVACY IN JEOPARDY?

Well, I believe that this discussion is not objective. History has proven that humankind continuously evolves from a technological standpoint. Not all technological advances we take for granted today were accepted without controversy. There has always been a certain amount of criticism. However, technological progress is meaningful and can not be stopped. This also applies to RFID. On the other hand, I am an absolute privacy advocate. As a result, security in transferring personal information is essential. It is important that we discuss this issue on a factual basis. Criticism based on scenarios that do not live up to reality may garner a lot of media attention but ultimately do not serve the cause. We must take into account that we already have legal regulations in place that will protect us. Only time will tell whether these regulations are sufficient. Other than that, the technology will be developed continuously.

## WHY DID EICAR ESTABLISH A TASK FORCE TO DEAL WITH THIS ISSUE?

As a neutral institution, we would like to bring objectivity into the discussion. We expect all protagonists to entertain a differentiated debate about the subject and provide the appropriate setting. In doing so, we will interact with international bodies and organizations. It is our philosophy to provide impulses. Our initial objective was defined as providing neutral information to the public and the media. Of course, we will also support managers in their decision-making process. In the medium and long term, we would like to develop a best practice approach as a



structural framework that takes into account the four aspects of technology, organization, psychology and legal affairs. We offer a high degree of expertise contributed to the task force by specialized companies, experts and institutions. In short, we would like to create guidelines for the secure and lawful use of RFID as quickly as possible.

## WHO ARE THE MEMBERS SUPPORTING YOUR WORK?

During just a brief period of time, we were able to win support from renowned partner companies such as Microsoft, IBM, SUN, Texas Instruments, Airbus, RSA Security and the METRO Group. The German Federal Officer for Data Privacy, Peter Schaar, is also a member of this task force, which goes to show that we take the issue of consumer protection very seriously.

## HOW IS THE SUBJECT OF RFID BEING DISCUSSED AT NATO?

I am not at liberty to discuss NATO's security-related issues. It is in the nature of things that NATO intensively deals with all the latest technologies. For the same reasons that are relevant to the business community, the use of RFID is also interesting to NATO: the requirements include process optimization, cost savings and increased efficiency.

# VOICES FROM THE INDUSTRY



George Off

[Chairman, President and CEO, Checkpoint Systems]

**YOU ARE A PARTNER OF THE METRO GROUP FUTURE STORE INITIATIVE. WHY ARE YOU BECOMING INVOLVED IN THE RFID INNOVATION CENTER?**

We are convinced that we will benefit from this collaboration in two ways: on the one hand, it gives us an opportunity of being very close to our customers' needs. On the other hand, we can gather ideas for our own research and development work. In addition, the recently opened METRO Group RFID Innovation Center serves as a unique platform for advancing the technology. It provides detailed information on RFID. At the current development stage, this is particularly important.

**KEYWORD STANDARDIZATION: WHAT CAN RFID CONTRIBUTE IN THIS RESPECT?**

The Electronic Product Code stored in the RFID transponder offers both the retail sector and industry the opportunity to establish a worldwide applicable standard – once and for all. The key advantage is that all participating parties are involved at an early stage. Together we can turn RFID into the key technology that will be decisive for an efficient supply chain in the 21st century. The greatest challenge will lie in defining standardized frequencies and to make optimal use of both the high and the ultra-high frequency range.

**DO YOU COLLABORATE WITH OTHER COMPANIES AS PART OF RFID PILOT PROJECTS?**

We cooperate with manufacturers and retail companies in Europe and the United States. For more than 10 years, we have been the leading provider of merchandize security systems based on radio frequency technology. We will now make this expertise available for the further development of RFID. After all, we have learned one thing from our long-standing experience: The key to the success of RFID is the collaboration between retailers and industry.



Albert Hesse

[Executive Director Organisation, Esprit]

**WHICH INSTALLATIONS AT THE METRO GROUP RFID INNOVATION CENTER DO YOU FIND INTERESTING?**

Several staff members from our RFID project team already went there and were very impressed. For example, for us as manufacturers of brand name clothing items, the hangergoods sorter in the order-picking area is of particular interest. By the way, we provided our current collection for demonstration purposes in this area. In addition, the visions of the future presented in the department store area also point to exciting prospects. Intelligent Fitting Rooms could soon promote additional sales. Clothing racks that automatically control their inventory will indicate impending shortfalls early on. As we know, the industry misses out on a considerable number of sales every year, just because customers stand in front of empty shelves.

**WHAT ARE YOUR HOPES FOR THE INTRODUCTION OF RFID TECHNOLOGY AT YOUR COMPANY?**

We expect that RFID as the technology that carries the Electronic Product Code and which will eventually replace the barcode, will bring about improvements in all processes along the supply chain. The path of the merchandize can be traced without gaps with the help of RFID. In addition, we will have better control of our deliveries. We can check which goods have already arrived at the retailer's place of business and which ones he is still waiting for. We are currently checking on the possibility of also using RFID for merchandize security. By doing so, we could realize potential savings in this area.

**AT ESPRIT, WHAT ARE THE FIRST STEPS?**

Based on the introduction of RFID at the METRO Group, Esprit will begin to equip all shipments of hanger goods and stackable goods for Galeria Kaufhof department stores with RFID transponders starting November 1, 2004. We will continue our involvement in the Centrale für Coorganisation (CCG) that develops recommendations for reusable RFID transponders.

# NEWS



## >> Otto mail order company tests Smart Chips on high-quality products

In August 2004 the Otto mail order company started a practical RFID evaluation. With the help of Smart Chips, the mail order supplier wants to make the path of the merchandise from order-picking at the Hamburg-based central warehouse to various distribution centers of the group more transparent, thereby reducing losses of high-quality items. During this pilot project, which is restricted to three months, products such as laptop computers, digital cameras or mobile telephones will be equipped with Smart Chips. At a total of four stations within the supply chain, the Smart Chips are used to verify whether the electronic products are still in their packages: directly during order-picking, at the transition between the order-picking and the packaging department at the central warehouse, right before they are loaded onto a truck and at select locations of the 65 delivery depots of Otto's subsidiary Hermes. Together with the merchandise, the customer is provided with brief information about the pilot project and the specially created telephone hotline for any additional questions.

## >> Change in leadership at EPCglobal

British-born Chris Adcock will be the new president of the standardization organization EPCglobal. The former Gillette manager takes over the position from New Zealander Margaret Fitzgerald, who stepped down for personal reasons in April of 2004. Adcock, who had been working for Gillette in Europe since 1989, will start his new position on September 1, 2004.

## >> RFID at T-Punkt

In two of its retail branches, so-called "T-Punkt" stores, Deutsche Telekom is currently evaluating RFID technology. At the Frankfurt/Main and Lüdenscheid T-Punkt stores, customers can now access touch screens to obtain information on new products. To do so, all they need to do is to pick up one of the mobile phones, which have been equipped with Smart Chips, from the display table. A built-in reading device registers the removal and automatically displays the corresponding product details on the screen. Furthermore, customers can access additional information.

## >> Europe supports RFID research

The European Commission supports the further development and implementation of modern technologies that enable companies to make their processes faster and more efficient. The Commission summarized the research objective under the title "Integrating Technologies for the Fast and Flexible Manufacturing Enterprise" and made 60 million euros available for this purpose. The use of wireless radio technology in logistics is also among the projects to be sponsored. The research projects involve innovative approaches through which companies can better react to customer requirements – e.g. with the help of RFID technology. In its call for tenders, the Commission expressly emphasized that industry participation was desired.

Including the above-mentioned funds, a total of 180 million euros is available for projects created at the interface of the areas of "Information Society Technologies" (IST) and "Nanotechnology and Nanosciences, Knowledge-based Multifunctional Materials, and New Production Processes and Devices" (NMP).

Until October 14, 2004, the EU Commission will accept applications for research grants. For additional information and instructions on how to apply, the Commission has prepared a special Internet site:

[http://fp6.cordis.lu/fp6/call\\_details.cfm?CALL\\_ID=136#](http://fp6.cordis.lu/fp6/call_details.cfm?CALL_ID=136#)

# BACKGROUND

## > International retailers push ahead with RFID

The big players in the retail sector are well beyond pilot projects involving this key technology

The METRO Group will be the first retail group worldwide to use RFID along its entire process chain. However, the company is not the only one to entertain such plans. Other international retail companies such as Wal-Mart, Albertsons or Tesco have also recognized the potential behind this technology. By using radio frequency identification, they want to make their value chain more efficient and improve the availability of goods for their customers.

### HIGH BENCHMARK FOR RETAIL GIANTS

Globally leading food retailer Wal-Mart is also among the RFID pioneers. Last November, the retail giant announced that from 2006 onward it would limit its collaboration to those business partners using RFID technology. Beginning January 1, 2005, the 100 largest suppliers are supposed to affix transponders to all pallets and boxes and convert their systems accordingly. Among others, Wal-Mart's requirements include a 100% reading rate for chips, even if the boxes tagged with RFID transponders are transported over fast conveyor belts.

The suppliers who must meet Wal-Mart's requirements by 2005 include Kraft Foods and Procter & Gamble (P&G). P&G manufactures brand name articles such as Pampers, Bounty and Pantene and sells almost one-fifth of its products through Wal-Mart stores. Apart from the first 100 manufacturers, another 37 companies have volunteered to join the project from the start, according to information by the U.S. retailer.



### ALBERTSONS FOLLOWS SUIT

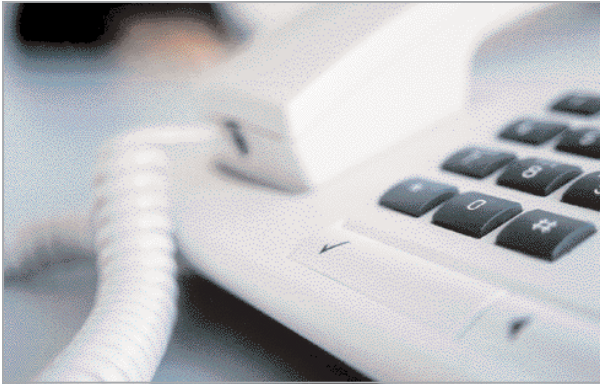
U.S. food retailer Albertsons has also started a pilot project this year in which pallets and boxes are tagged with Smart Chips, but the company did not announce any further details on the test. According to industry insiders, the roll-out schedule resembles that of Wal-Mart but plans for a later start: the group expects its 100 largest suppliers to convert to RFID technology by April 2005. Other U.S. retailers such as Target also plan to make use of the possibilities of RFID within the process chain together with its partners from the consumer goods industry.



Since April 2004 the first practical test with RFID transponders in which the Electronic Product Code (EPC) was stored has been running at a Texas-based Wal-Mart central warehouse. From here, Wal-Mart supplies seven stores with pallets and boxes that have been equipped with Smart Chips. Up until now, the retailer track the path of 21 products along the process chain. Until January 2005, more products will be added gradually. The number of partners involved in the tests – currently eight – will also be increased successively.

### TESCO TAKES ITS TIME

Apart from the METRO Group, leading British retailer Tesco has also gained practical experience with RFID in Europe. Since April 2004, the retail company has been equipping boxes with Smart Chips at its distribution centers, which enables Tesco to trace their way along the process chain. It is planned that individual manufacturers begin to affix Smart Chips to their deliveries to Tesco starting in September 2004.



## YOU ASK, WE ANSWER

### WHICH TRANSPONDERS ARE AUTHORIZED FOR THE RFID ROLL-OUT OF THE METRO GROUP AND WHAT ARE THEIR DIFFERENCES?

Only transponders in compliance with the EPCglobal standard EPC Class 1/Version 2 will be used for the RFID roll-out. They are called passive transponders, since they have no power supply of their own. As soon as an RFID reading device sends out an electromagnetic field, the transponder receives this signal and transmits the Electronic Product Code stored in the chip in return. However, until Generation 2 is available, the industry partners should use version EPC 1.19 transponders. In Europe, they are known as standard ISO 18000/6b. Their storage capacity is 96 bits. Version 2 adds another 32 bits that allows overwriting of the Electronic Product Code, thereby rendering it unusable. RFID transponders are available with three different storage capacities: initially, transponders were developed with 64 bits, followed by those with 96 bits, and the last development stage will probably be a transponder able to store 256 bits. All versions are compatible, which means that each user will be able to upgrade to a higher version without having to exchange the entire hardware.

### WHAT IS A DUAL-FREQUENCY SYSTEM?

It is a system that works on the basis of radio frequency waves (RF) both with common frequencies for RFID and with Electronic Article Surveillance (EAS). Various technology companies offer it as a solution for department stores: hard tags for RFID that retailers can use e.g. for high-quality brand name clothing are equipped with special dual-frequency antennas. These transponders serve not only to clearly identify the merchandise along the entire process chain. With their help, products can also be secured at the same time. If a customer leaves the store, the security locks at the exit automatically verify whether the RFID transponder was deactivated or removed. The dual-frequency hard tags for RFID and Electronic Article Surveillance can be reused, so that the investment pays off in the long term. The Future Store of the METRO Group in Rheinberg is already using the dual-frequency system. Partner companies can test it at the RFID Innovation Center.

### CAN ALL SHIPPING CONTAINERS BE EQUIPPED WITH TRANSPONDERS?

While there are physical limitations, most merchandise categories will not be affected by them. Dry goods are particularly easy to tag. This includes paper tissues or powder detergents, for instance. Tagging goods with a high share of metal or liquid is a bit more difficult. However, since the RFID transponders are not directly affixed to the products but to the logistical shipping units, the data can be read. The following applies to all product groups that are stored in boxes or on pallets: with goods containing liquids, for instance, spaces of just a few millimeters between products and packing are enough to allow the radio waves to pass through.

### WHICH RFID READING DEVICES ARE APPROPRIATE FOR THE RFID ROLL-OUT OF THE METRO GROUP?

There are portal readers for the gates at Incoming or Outgoing Goods, reading devices on forklifts and mobile handheld reading devices. All devices should have at least the following technical properties:

- Ethernet network connection (LAN)
- Wireless connection (WLAN)
- Registration of bulk information
- Optional use of several frequency ranges
- Recognition of bar codes and transponders
- Support of software updates
- Compliance with general safety standards (GS – Geprüfte Sicherheit)

**EVENT INFORMATION****5TH ECR DAY: "ECR - SUCCEEDING WITH COLLABORATIVE STRATEGIES"****September 9/10, 2004 \_ Berlin, Estrel Convention Center**

For the 5th ECR Day, the organizers expect more than 1,300 participants from the consumer goods industry. The METRO Group is represented by a presentation of its Future Store Initiative as well as a joint stand with Kaufhof and Gerry Weber.

ECR D-A-CH, ECR initiatives of Germany, Austria and Switzerland  
[www.ecr.de](http://www.ecr.de)

**7TH ANNUAL HANDELSBLATT CONFERENCE. FUTURE FORUM IT. INFORMATION AND COMMUNICATION TECHNOLOGY AS A DRIVER OF INNOVATION****October 5/6, 2004 \_ Berlin, The Ritz-Carlton**

The trends and prospects of IT are the subject of the 7th Annual Handelsblatt Conference. The innovations of the industry will be presented and discussed in Berlin - among them also application scenarios for RFID.

Euroforum, with the support of A. T. Kearny and T-Systems  
[partner.vhb.de/euroforum/21614/vision\\_01\\_ankuendigung.htm](http://partner.vhb.de/euroforum/21614/vision_01_ankuendigung.htm)

**21ST GERMAN LOGISTICS CONFERENCE  
INNOVATIVE THOUGHT - SYSTEMATIC ACTIONS****October 20/22, 2004 \_ Berlin, Hotel InterContinental/Schweizer Hof**

The organizers expect about 2,400 participants and 240 exhibitors for the International German Logistics Conference. The agenda of this professional convention includes lectures on the topics of strategic solutions, networks and research. The METRO Group is represented with a presentation of its Future Store Initiative.

Bundesvereinigung Logistik e. V.  
[www.bvl.de](http://www.bvl.de)

**GERMAN RETAIL CONVENTION AND  
CONVENTION FAIR "RETAIL WORLD 2004"****October 26/27, 2004 \_ Berlin, Estrel Convention Center**

The German Retail Convention is the most important industry forum for the retail sector and the consumer goods industry. This year, the event is marked by the question "How can retail sector and manufacturers jointly achieve an economic upswing?" Participants will hear lectures and panel discussions on important retail trends. The highlight of the event is the award ceremony for the 2004 German Retail Prize. One of the topics that take center stage at Retail World will be retail technology, with a presentation by the METRO Group Future Store Initiative.

HDE Hauptverband des Deutschen Einzelhandels e. V.  
[www.handelskongress.de](http://www.handelskongress.de)

**NEWS****Selecting the right transponders**

At the METRO Group, the introduction of RFID technology is constantly moving closer. To guarantee a 100% reading rate of the RFID transponders on the pallet level, they are being tested by the METRO Group.

During the first phase, the retail group examined the reading quality of the RFID transponders on selected pallets. Based on this, reference transponders are determined for the various product groups. The second testing phase will begin in early September and will last approximately two months. During this time, the industry partners can send their self-labeled and printed RFID tags to the RFID Innovation Center, where the performance of the transponders will be compared with the idealized results from phase one. Two weeks after the conclusion of the tests, each industry partner will be provided with a report including an assessment whether the transponders they submitted are appropriate for the roll-out.

Additional information on the technical requirements is available in the brochure „Guidelines for the RFID roll-out of the METRO Group.“



# LITERATURE

## > High strategic importance of RFID

Dynamic market promotes implementation of the technology

Two out of three logistics or automotive companies rate RFID as strategically important for their business. This is the result of a joint survey by Booz Allen Hamilton (BAH) and the University of St. Gallen with the title "RFID Technology: a New Innovation Engine for the Logistics and Automotive Industry?" Established in Chicago in 1914 and operating subsidiaries on six continents, Booz Allen Hamilton is among the leading international management and technology consulting firms. According to the survey, most companies invest comparatively small amounts of money to test the technology and such tests rarely extend beyond smaller pilot projects. Only 18 percent of the polled companies will spend 500,000 euros or more on RFID this year. More than one-third of the survey participants have not yet decided how much they will invest in the implementation of the technology in 2004.

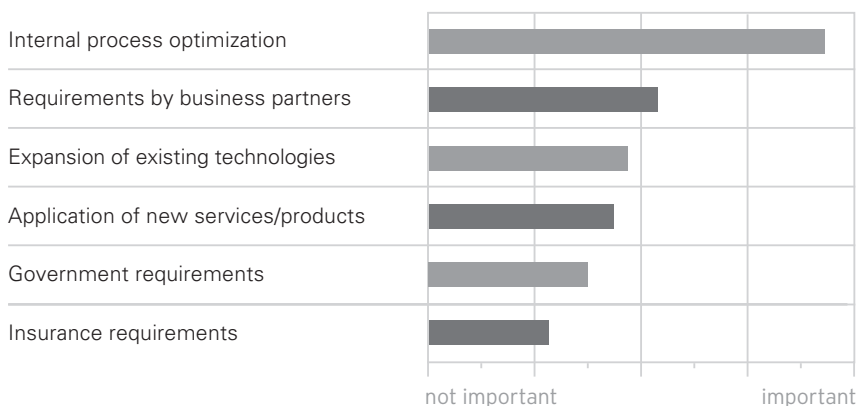
### FOCUS ON EFFICIENCY

As shown by the survey, most companies would like to use RFID to optimize existing internal processes. In the field of logistics, most of the companies polled are already extremely effective, but such effectiveness comes at considerable expense. RFID technology offers them an opportunity to significantly reduce costs. The requirements of business partners who demand the use of the technology are also viewed as important.

### OPEN VS. CLOSED CYCLES

Currently, sectors such as the automotive industry will be the primary benefactors of RFID technology, according to BAH. This industry depends on optimized processes that are exactly regulated. Both suppliers and manufacturers work in a closed supply cycle in which the Smart Chips are reused. "On the other hand, for systems with open cycles, such as the consumer goods industry, it remains to be seen if the high initial investment in chips, reading devices, IT infrastructure and integration into existing systems will pay off," said Stefan Stroh, vice-president of

### "WHAT ARE THE REASONS FOR USING RFID?"



Source: M-Lab University St. Gallen, Switzerland



FOR FURTHER INFORMATION:

[www.boozallenhamilton.com](http://www.boozallenhamilton.com)

BAH. Nevertheless, the use of RFID in these areas will also be expanded during the next two to four years. Based on an estimate by the consulting firm, unit prices for transponders will decrease to less than 10 cents. And, more than ever, both manufacturers and logistics experts will depend on precision data to render their process chains even more efficient. RFID technology can help them in this effort: based on the EPC network, companies all over the world can manage and allocate significantly more product and process data than with conventional bar codes.

### STANDARDIZATION DESPITE COMPETITION

To facilitate a global introduction of RFID, international guidelines must be created. In doing so, existing standards such as ISO or the Electronic Product Code (EPC) must be taken into account along with the needs of industrial and logistics companies. The survey revealed that only 17 percent of the companies polled will advance the standardization process themselves or incorporate it in their strategies. "Since many companies are in direct competition with each other, both politicians and the industry need to step in," said Stefan Stroh.

## LITERATURE

## &gt; METRO Group RFID Innovation Center

Testing RFID under real-life conditions: at the RFID Innovation Center in Neuss, the METRO Group offers such an opportunity to its sales divisions as well as its industry and IT partners. An informative brochure presents the five central areas in which this key technology for the future of the retail sector is used. Their categorization corresponds to the classification at the METRO Group RFID Innovation Center: order-picking, warehouse management, department store, hypermarket and household. The brochure describes more than 30 installations simulating processes along the entire value chain. Among other aspects it outlines the possibilities that RFID already offers today for incoming and outgoing merchandise and inventory management.

The brochure is published in English and German and can be ordered through the RFID hotline.

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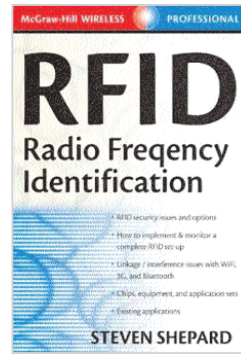
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## &gt; RFID - Radio Frequency Identification



Steven Shepard (eds.)

McGraw-Hill Professional

August 2004

This 350 plus pages volume offers a basic yet thorough introduction to the world of radio frequency identification. Author Steven Shepard, who specializes in telecommunications with focus on convergence, optical networking and wireless solutions, leads the reader through the complete process of implementing and monitoring RFID in business applications. The book is divided into thirteen chapters, covering a wide range of topics: starting with the technology's staggering capabilities and potential, through issues from vendors up to possible technical problems and roadblocks along the way. Shepard also highlights possible future RFID applications and provides the reader with short and long term market forecasts. A separate chapter within the book addresses RFID security concerns. Shepard's RFID offers advice for retailers and technicians alike.