RFID in EUROPE

INFORMATION CONCERNING RFID IN EUROPE MARCH 2014

MARCH 2014

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RFID IN RAIL A CROSSBORDER PROJECT WITH HUGE IMPACT!

Conceptual picture of how EPCIS works

"RFID activities in the railway industry were very few until very recently. If we look back five – six years ago, there were some independent activities going on around Europe and in the rest of the World but there was no coordination", says Gunnar Ivansson, consultant at Learningwell in Stockholm.

After a short pre-study for the Swedish Railway aiming at identifying the potential of RFID Ivansson and his colleagues identified that approximately 60% of all railway vehicles in Sweden were coming from all over Europe, a lot of cross boarder traffic in other words. "By that we understood that a common view of RFID for the railway industry would be of great importance", Ivansson says.

"The breakthrough was when we came in contact with Alice Mukaru from GS1, a global standardization organization. She helped us with conceptual thinking of standards and to find a way forward in order to get a European common view of RFID in the Railway industry."

A visit to Finland opened up cooperation with the Finnish Transport Agency resulting in a position paper that has been

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RFID in EUROPE, Chariman Pat Doody, Pat.Doody@ittralee.ie

key in raising interest. A meeting was arranged in Stockholm 2009 by the Swedish Transport Administration in cooperation with GS1. The meeting was well attended by key railway actors from across Europe and the delegates agreed to work towards a common standard. The project "RFID in Rail" was established!

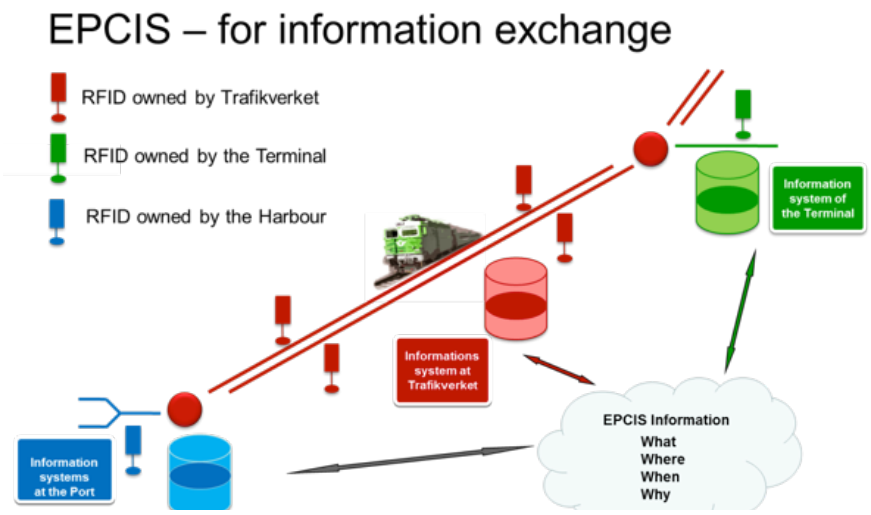
"At the same meeting, we identified the need for AIDC (Automatic Identification and Capture) to improve the Maintenance, Repair and Overhaul (MRO) processes by enabling track and trace of spare parts and components. An MRO team was later established, Ivansson says.

WHAT HAS HAPPENED SINCE THEN?

GS1 together with the rail actors has produced a guideline called, "RFID in Rail" The guideline describes how to use RFID for the railway assets, both on vehicle level as well as component level. The guideline is widely used by the actors when identifying vehicles and setting supplier requirements for parts and components.

In 2014 the rail actors worded on a guideline specifying how data can be exchanged between interest parties based on the GS1 concept EPCIS to enable vehicle visibility across Europe. The first pilots to automatically exchange RFID data between railway organizations and companies in Europe have been done and are now being extended to cover other parties and countries. The guideline will be published in 2015.

WHAT, WHERE, WHEN AND WHY!



Conceptual picture of how EPCIS works

SPREADING THE MESSAGE:

Each year GS1 arranges an RFID in Rail meeting somewhere in Europe. The meetings aim at sharing experiences on implementation, issues and solutions. Networking is also an important part of the meetings as it enables the actors to get to know each other so they can share information. GS1 with the help of the Swedish Transport Administration also exhibits at the world largest railway exhibition Innotrans that takes place in Berlin.

Since the "RFID in Rail" project started, there has been a large increase in activities across Europe as the standadisation has increased confidence and scalability of RFID implementations. Below are some examples of pilots and implementations.

- Sweden has installed hundreds of RFID read points along trackside and train operators have started tagging vehicles.
- Finland has hundreds of RFID read points as well as hand scanners and almost all goods wagons are already tagged
- Denmark are speeding up their installations
- Germany have some pilots up and running
- France have some great implementations
- Austria are testing both active and passive RFID technology
- Switzerland has started some pilots and completed some installations
- Activities are also taking place in Poland, Netherlands, Belgium, Norway, as well as in China, India, Australia etc.

Except for vehicle RFID installations there are a lot of other interesting RFID project ongoing in the railway area. Holland are using RFID in the area of track maintenance (tags in the tracks and readers on the train), Sweden are putting "mount on metal labels" on cabinets for asset management etc.

For more details about "RFID in Rail" and ongoing activities you are welcome to contact:

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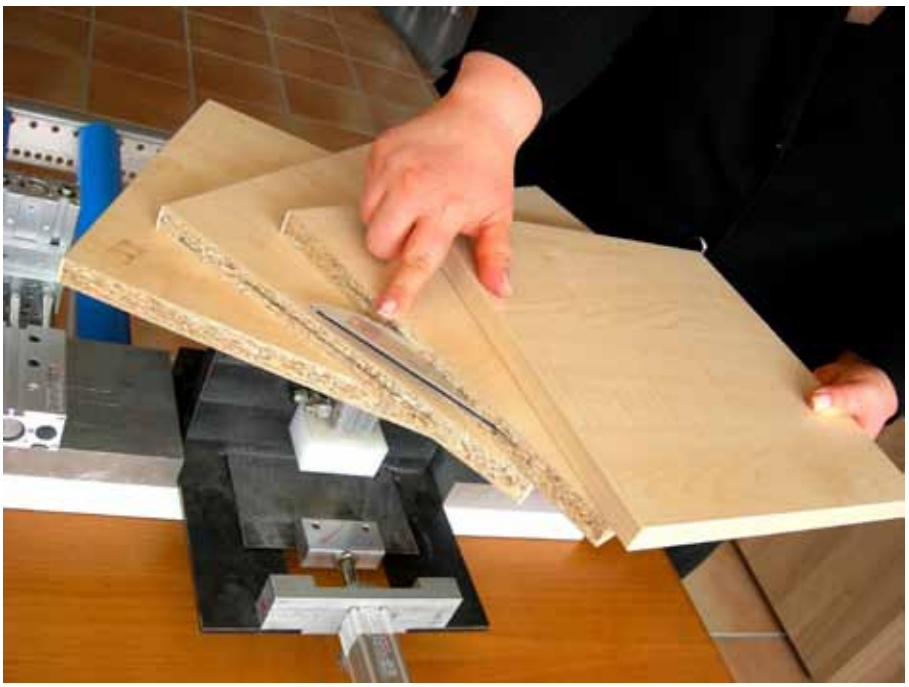
TIME AND COST OPTIMIZATION WITH INTEGRATED FURNITURE PROCESS CHAINS

RFID-FACTORY SHOWCASES WORKABLE SOLUTIONS AT LIGNA 2015

Custom products in industrial mass production and batch size one as an organizational and manufacturing goal – these visions have beckoned for some time already. The reality? Incomplete deliveries, missing parts, production downtime due to stock problems with feed materials, etc., continue to make life difficult for the woodworking and furniture industry. Real-world examples at LIGNA show that smart integrated furniture production is no longer out of reach, even for small businesses.



Ready for use over the entire supply chain: the Abatag is inserted into a special slot machined in the panel in the CNC machining center and then encapsulated. This ensures that the RFID chip is present and protected during the entire product lifetime. – Photo: abaco

Enterprise resource planning (ERP) systems promise to continuously improve the efficiency of operating processes. But they can only achieve this to the extent that their instantaneous data matches the real situation in production, inventory, order entry and delivery. Real-time traceability is thus a crucial input factor for ERP systems, and the perfect tool for meeting multi-dimensional traceability requirements along the entire networked process chain is radio-frequency identification (RFID) technology.

TRACEABILITY WITH RFID REVOLUTIONIZES FURNITURE PRODUCTION

LIGNA (11–15 May) shines the spotlight on smart, integrated manufacturing systems for the woodworking and furniture industry and gives innovative RFID technology its own stage. In the RFID-Factory (Hall 17, Stand D60), LIGNA partner abaco Informationssysteme (Löhne, Germany) and 20 other specialists are presenting traceability technology for every link in the chain, on 600 m^2 of exhibition space. Their displays will underscore the huge value-adding potential of this technology thanks to its ability to generate real-time data as input for planning systems. Abaco CEO Horst Koitka: "The more often an RFID tag is read, the more cost-effective the system and the more useful the information gathered from it." Prestigious specialists exhibiting alongside abaco in Hannover are Balluff, the Fraunhofer- Anwendungszentrum Industrial Automation (Lemgo), GS1 Germany, Franz Glane Maschinen- und Gerätebau, Hagemeier Neumöbellogistik, HOMAG Group, IBM Germany, Ims Ingenieur- und Managementbüro Sauter, Logopak Systeme, Numdata Software, Pietig Lagertechnik, RK Rose+Krieger, Tarakos Software, Venjakob Maschinenbau and Wanko Informationslogistik.

Industry professionals can expect a fascinating look at every phase of a completely integrated supply chain. The entire logistics flow for furniture production is demonstrated over nine stations using the example of a drawer front: starting with a virtual freshly cut tree, to timber sawing and processing, followed by delivery to the furniture manufacturer, furniture production including all logistics services, the sales phase and finally the finished furniture item for the customer.

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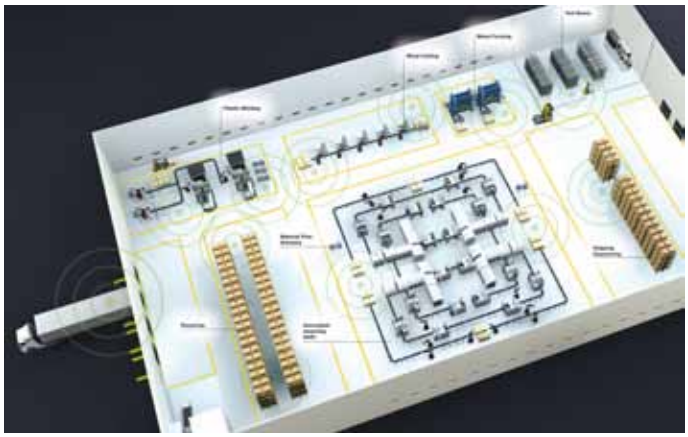

Traceability solutions from Balluff yield the greatest possible transparency and consistent manufacturing quality. – Illustration: Balluff

RK Rose-Krieger supplies high-quality connection and positioning systems, crucial for sensor gates in the RFID-Factory. – Photo: RK Rose+Krieger

Networked manufacturing technology from HOMAG: automatic, wireless identification of intelligent parts is possible at any time with RFID. – Photo: HOMAG Group

Abaco Informationssysteme (Löhne, Germany) offers efficient software modules for every phase of the furniture process chain, as well as implementation with the customer. Abaco even supplies furniture-specific RFID tags dubbed "Abatags."

They are invisibly integrated into every part in the RFID-Factory, which is identified automatically by the data stored on the tag as it passes through the various stations. The necessary sensors were developed by Balluff GmbH (Neuhausen a.d.F., Germany) – a global market leader in industrial automation. Oliver Pütz-Gerbig, Product Manager for RF systems in the Identification business unit, describes the advantages of real-time traceability: "Traceability means defining and tracking every step of a process chain. The production history of every manufactured part and all materials and equipment are also automatically documented – with time, location and process. All data is available in real time so that adjustments can be made during the actual production process. Traceability supports lean production, simplifies just-in-time (JIT) deliveries, facilitates legal compliance and ensures product quality."

The mounting gates for the sensors are made by RK Rose+Krieger – Verbindungs- und Positioniersysteme (Minden, Germany). CEO Hartmut Hoffmann: "We are a leading supplier of high-quality components and functional modules for linear, profile, joining and module equipment for general industrial automation and production applications." Several of these versatile design solutions are on display in the RFID area.

The networked manufacturing technology of the HOMAG Group (Schopfloch, Germany) comes into play in later production steps. Head of Marketing Alexander Prokisch: "Thanks to RFID, automatic wireless identification of painted smart parts is possible at any time. HOMAG Automation, HOLZMA Sägetechnik, HOMAG Holzbearbeitungssysteme and WEEKE Bohrsysteme are exhibiting smart parts in the RFID-Factory just as they might look in a smart factory – whether fully networked or not. Integrated production, universal software solutions and automation systems are the prerequisite for comprehensive networking on route to Industry 4.0."

Internationally active Logopak Systeme (Hartenholm, Germany) demonstrates how intelligent labeling systems can support the process. Strategic Development Manager Lars Thuring explains: "With rising interest in single-unit batches and just-in-time processing, individual identification of parts and materials is gaining importance. Logopak looks forward to the opportunity to present a new RFID-based solution in this field in the RFID-Factory. Our reliable and industry-capable method offers manufac-

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turers invisible labeling with all the associated advantages."

Venjakob Maschinenbau (Rheda-Wiedenbrück, Germany) is a pioneer in innovative technologies for the furniture industry. Within the simulated production and logistics processes in the RFID-Factory, Venjakob presents the benefits of an RFID-controlled, automatic spray painting system. Oliver Milde, Sales and Project Planning: "Every part can be assigned information for spray painting individually via the RFID tag: color changes, curing parameters and feed rates in modern painting systems can be set individually for each item at any time with the Ven Control Master control system. Venjakob shows how tags inserted into the parts can manage these parameters individually using a simulated spray paint feed system."

Warehouse management, transport planning and control systems are the specialty of Wanko Informationslogistik (Ainring, Germany). Sandra Gitau, Marketing and PR: "Wanko is presenting its end-to-end software for warehouse, transport and telematics in the RFID-Factory at LIGNA. The Pracar delivery planning system and Prabord telematics solution support the entire transport process, and the Pramag warehouse management system controls all movements of goods. This gives the customer streamlined, efficient and continuous control of their entire transport chain, from arrival at the warehouse to delivery to the customer. The Wanko software is demonstrated live in the RFID-Factory in the new furniture logistics area, showing how it meets the individual requirements of the furniture sector and specific customer needs."

Software supplier Numdata (Eibergen, Netherlands) is presenting "Ivenza," an innovative planning and control system for the furniture industry. Says CEO Frank Schepers: "Ivenza is a powerful, web-based 3D configurator with a reliable PPS system. It can be used to design living room, bedroom, kitchen and office furniture online in 3D, and produce it very efficiently – whether in large volumes or as one-off units. Ivenza combines the comprehensive tasks of configuration, order management and production, supplies all necessary data in real time and enables extensive data exchange, e.g. with warehouse management systems or databases such as the IBM cloud."

The RFID-Factory at LIGNA clearly demonstrates how all players can benefit from end-to-end communications enabled by RFID, which can save valuable resources and time to lower costs at every step of the furniture process chain, as well as prevent errors. To learn more, explore the RFID-Factory in Hall 17 during the five days of LIGNA and approach the specialists there with all your questions. The RFID-Factory will also be a station of the LIGNA "Integrated Manufacturing / Automation" Guided Tours for professionals.

For more information please see www.ligna.de

Logopak system with two labeling arms and integrated RFID transponder. – Photo: Logopak Systeme

Venjakob shows how RFID can optimize painting processes. – Photo: Venjakob

The entire furniture transport chain can be managed optimally and efficiently with Wanko's warehouse, transport and telematics software. – Photo and illustrations: Wanko


Verifone®

THE WINNER OF THE THE GOLDEN TAG AWARD

RADIO FREQUENCY IDENTIFICATION DEVICES APPLIED IN STORMWATER FILTERING SYSTEMS

The winner is a high-tech water purification company CamTech AB that done a lot of research and development in the area of purification!

THE COMPANY HAS CHANGE THE NAME TO SWEDEN WATER PURIFICATION AB

Why the become the winner!

Since about 3 years SwePur AB has developed a unique and close to the market solution for addressing the pollution problems related to storm water dwells.

EU has since several years enforced a so called water directive to ensure good water quality.

SwePur AB presents a product that is capable to filter all 32 of the most unwished chemical and heavy metal molecules.

On top , the filter is equipped with a totally integrated electronically communication system (RFID technology) that can collect all relevant and detailed info and have centralized so that one single operator can review the status of hundreds of filter.

The concept of using sensors and RFID communication, combined with SwePur storm water filters. There are a number of sensors that can be relevant! A master node indicates the relative position from a GPS (see slave-node in the description for each position of the wells below).

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The master node and the Slave node has sensors that indicate the area's conditions in terms of temperature (O: -40 ~ 120 ° C with an accuracy of ± 0.3 ° C at 25 ° C).

As an option, although the O2 Oxygen, Carbon Dioxide CO2 and relative humidity measured. These sensors provide an indication of the environmental conditions on the location of the plant.

The project is made up from Filter Manufacturer SwePur and the RFID Systems Integrator Retorium AB in co-operation with the iPack institute at the Royal Institute of Technology (KTH) in Kista Sweden. The technologies, which are common to most all market sectors, will be identified by the group to reflect the primary needs for technology transfer into the filtering market.

We think that the winner has an excellent future and has a innovative approach to the usage of RFID solution's!

MOBILE PAYMENTS

Mobile payments are at a frontier of a revolution. Consumers own more smart devices than ever before and PC sales have been in steady decline for years. Recent research from Gartner predicts that tablet sales alone will overtake PC sales in 2015, when there will be nearly 321 million tablets shipped, versus 317 million PCs. As consumers use smart devices for work and play, inevitably they will use them to pay too. Big businesses – banks, retailers and technology providers – as well as a host of start-up players are looking to grab a slice of this frontier economy that is set to explode.

But while everybody can agree that mobile payments will be big, defining what mobile payments are and what the market will look like is much more difficult.

In an effort to clarify, I've outlined what I believe is the best way to break down the different categories of mobile payments.

MOBILE-POINT-OF-SALE

Mobile-point-of-sale (mPOS) allows merchants and business, both large and small, to accept card payments using a smart phone or tablet, rather than a traditional 'fixed' point-of-sale (POS) terminal. There are a number of ways that MPOS can be enabled, but most often it's via a 'plug-in' card reader or a "sled" device that the mobile phone fits into. This is then combined with a mobile app that often have interfaces resembling traditional cash registers.

PROXIMITY MOBILE PAYMENTS

Probably the most hyped category of mobile payments, proximity payments let consumers use their mobile phone to pay at a venue – in-store, at a train station or even directly from advertising. The most well-known type is Near Field Communication (NFC) payments which allow consumers to tap their NFC-enabled smart device on a compliant terminal to make a purchase.

Other examples of proximity payments include QR-codes, where the user scans a QR code using the phone's camera to make a transaction, and apps, where the user checks in and orders goods or services using an app, which is then reconciled at check-out using either a special code or some form of ID.

REMOTE MOBILE PAYMENTS

This category is a bit more complex and involves two different forms of remote payments:

- Peer to Peer: This is where users are able to send money from person-to-person or person-to-business simply using a mobile phone number as a proxy, without the need to disclose their sort code and account number. The transaction usually takes place via a text, but can also be performed within a payment app.
- Mobile app/website: This type of mobile payment can be split into the following subsets:
- Card – when a user purchases an item in an app or via a mobile browser using their existing payment card
- Wallet – the same as above except the user uses a wallet which already has their payment details stored
- Carrier billing – most frequently used during digital content purchases. The user re-charges a purchase – a film or a game let's say – to their mobile phone bill or TV subscription.

While this list is by no means exhaustive, it does cover the most common forms of mobile payments in use today.

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RFID NORDIC AND KTH IPACK CENTER

PRESENTS THE RFID NETWORKING SEMINAR IN KISTA, 22 APRIL 2015 AT KTH ELECTRUM, ISAFJORDSGATAN 26/KISTAGÅNGEN 16, SAL B, KISTA STOCKHOLM

THE PROGRAM

09.30	Registration and display area open	
10.00	RFID - Welcome and background	Ove / Lucas RFID NORDIC
10.10	iPack center at KTH - Fully passive supervisor speech?	Professor Li-Rong Cheng
10.30	RFID and the future in Europe	Bob Forslund, AMD
10.50	coffee brake	Exhibition area
11.10	RFID in RAIL general status of today	Gunnar Ivansson, Learningwell
11.30	Underground construction IoT	Alan Jones Key2id Ltd England
11.50	PRIVACY IMPACT ASSESMENT	Olle Hydbom, AutoIDexpert
12.10	*Lunch break (on your own expense)*	Two Guided tours at the IPack Lab.
13.00	RFID in the security area	Zsolt Noveczki Loxtore RFID System Hungary
13.20	The RFID sensor tag project	Associated Professor Cristina Rusu A CREO Swedish ICT AB
13.40	RFID sensor interface for medical	Jürg Rehder, Delta Devices Danmark
14.00	Garment management at the Hospital – Hygiene quality and powerful management tools	Lasse Cederquist, 2trace, Danmark
14.20	Coffee brake	Exhibition area
14.40	IPhone 6 NFC for payments – where are we today and what is the outlook	Tom Conlon, Verifone England
15.00	Hospital IoT positioning	Salvador Vera Mysphera Valencia Spain
15.20	RFID systems in Health	Professor Roy Imura Richo Japan
15.40	Personal injected RFID	Hannes Sjöblad Ambassador for Sweden Singularity University
16.00	Annual meeting RFID NORDIC	All Members from RFID NORDIC

WELCOME

OVE CANEMYR CHAIRMAN, RFID NORDIC & LUCAS ÅHLSTRÖM INDUSTRIAL LIAISON, IPACK INSTITUTE KTH

YOU ARE MOST WELCOME TO CONTACT US. FREE ENTRANCE. BUT PLEASE MAKE REGISTRATION AT:

ove.canemyr@trendsetter.se +46 70 794 0987 or lucas@retorium.com +46 70 182 1500.

RFID in EUROPE

What is RFID in Europe ?

RFID in Europe AISBL is a not-for-profit organization established in 2012. RFID in Europe's principle goal is to promote the adoption of Radio Frequency Identification and related technology solutions enabling small and medium sized organizations throughout Europe to gain competitive advantage through their best use. RFID in Europe connects with European end-users, operators, solution providers, universities, research establishments, non-government and government organizations and all other European stakeholders through own initiatives and promotion of national projects via our international network. RFID in Europe is an extension of a European Commission FP7 Thematic Network called RACE networkRFID initiated in 2009. RFID in EU also supports EU National RFID Organisations and related events including: RFID Nordic, DKRFID, ID World and EC IoT Week, in addition to industry initiatives including RFID & U with Marks and Spencers.

Our mission ?

Promote the adoption of RFID and related technology solutions across European end-users, operators, solution providers, universities, research establishments, including governmental and non-governmental organizations

Main activities in 2015 ?

- RFID in Europe Magazines with exciting updates www.is.gd/rfid_mag
- Annual general assembly (see the RFID in Europe website for updates)
- Academic engagement - Call for papers / proposals
- Hosting RFID in Europe networking events
- Development of RF identification technology (RFID, NFC, IoT, etc.) roadmap documents outlining current "state of the art" and future market trends.
- Direct engagement with European Commission and EC funded research initiatives
- Conducting European wide surveys to evaluate RFID implementation, highlighting common pitfalls, outlining general recommendations including interest and perceptions.

Participate in our survey @ www.is.gd/rfid_survey

Membership is free !

www.rfidineurope.eu/join

www.RFIDinEurope.eu

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