

# RFIDnordic.se

INFORMATION CONCERNING RFID IN SCANDINAVIA March 2010



## THE EUROPEAN AUTOMOTIVE INDUSTRY APPROVES ITS FIRST RFID STANDARD

**The long awaited Odette LR01, the recommendation for the use of RFID on returnable transport items (RTIs) in the European automotive industry, is in place at last.**

It all began in 2006 when the members of Odette International, an organisation formed by the European automotive industry with a mandate to set the its standards for e-business communications, engineering data exchange and logistics management, came to the conclusion that the emerging EPCGlobal UHF RFID standards were insufficient for the majority of its members. The main reasons being that the EPCGlobal GRAI and SGTIN tag data fields, intended for article numbers (the Asset Type and Item Reference respectively), are limited to 7 decimal digits. In the automotive industry, article number schemes are typically very well structured, albeit not using the allocated number space very efficiently, i.e. long. Secondly, article numbers based on combinations of digits and letters are more common than not and finally - it was deemed extremely important to be able to store information beyond

manufacturer, article number and serial number. Hence a scheme had to be developed for managing data not only in memory bank 01B, but also in memory bank 11B of the selected UHF RFID tags. All this of course assumed standardized, low cost, tags compliant with ISO/IEC 18000-6C, a.k.a UHF Class 1 Gen 2.

In summary - the members of the automotive industry were not prepared to change their article number schemes, partly for cost reasons, and therefore decided to produce a set of standards fulfilling the auto industry's specific needs.

Odette Sweden was given a spearhead role for the development of new standard proposals, in the beginning of 2008. In March one such proposal was accepted as the basis for a scaled up effort. The task was initially to come up with a standard for RTIs, but possible to extend to other areas, based on the following assumptions:

- It shall be easy to guarantee that all tags programmed in different locations will be globally unique.
- It shall be able to co-exist with the EPCGlobal standards, and not be as complex as some ISO standards.

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*Returnable dunnage that protects and sorts parts*

**Steel Transport Racks and Flow Racks:**



*Steel Transport rack for moving large components*

**Hand Held Containers**



*Hand held containers used to move products weighing less than 35lbs*

**Pallets:**



*Automotive pallets used for palletizing containers and components in a trailer. Pallets are costly part with high potential with RFID.*



*Bulk Containers come in various sizes ranging from 32x30 to 45x48 up to 90x48. As a high dollar item, bulk containers ship various parts ranging from metal stampings to steering wheels.*

**OTHER REQUIREMENTS WERE:**

- Very fast reading of the most important data.
- A tag should contain enough information such that one does not have to rely on a factory network that may break, in order to run production based on tag data.
- It must be possible to use commercially available "standard" tags
- It must be possible to implement reader/programming systems with C.O.T.S equipment.
- The new standard should build on used existing ones, and particularly on the framework from VDA (Verband der Automobilindustrie).
- Backward user data compatibility with existing barcode schemes must be guaranteed.
- Minimum reading distances were initially discussed, but later dropped.

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In order to verify the very crude initial proposal, VW checked it with some of their subcontractors which gave a go ahead. In April 2008 a core team constituting Sten Lindgren, Managing Director of Odette Sweden, Bob Van Broeckhoven, ICT-manager at Volvo Logistics and Olle Hydbom, at that time with RFID Constructors, currently at AutoIDExpert Scandinavia, was activated. A larger reference group consisting of some of the most influential companies in the European automotive industry (such as VW, Volvo, Daimler, Ford, PSA, Renault, Geodis, etc.) was also put in place.

A demonstrator system was built to verify our ideas. This system was also used to exemplify our ideas on the global scale for the American and Japanese auto industry.

Suffice to say that the first standard in a set of three is now approved and published. A standard for Vehicle Identification Numbers (VINs) was recently approved but has not yet been published, and a standard for parts marking is in the final formatting stage.

All in all - this means that the automotive industry now has an almost complete set of standards for putting RFID to use for the purpose of improving the logistics as well as providing traceability of cars and its constituent components. The latter is assumed to be able to reduce cost for repairs, particularly in conjunction with recalls.

At the time of this writing, work is going on to further assure harmonization with the JAIF (Joint Auto Industry Forum) proposals for the use of RFID on RTIs. JAIF is a global automotive industry organization.

For more information on the actual content of the standard(s) - please contact Odette International or your local Odette office.

#### **CREDITS;**

To RFID Nordic for providing funds for my travelling to the initial meeting in March 2008;

To NGIL (The Next Generation Innovative Logistics centre of excellence

at Lund University) for providing the funds for developing a fully fledged demonstrator for programming and reading tags, using one of the early proposed tag data schemes.

The contents and impact of this new standard will be one of the topics at the conference "The use of RFID in industry and logistics". This event is organized by Odette, and takes place 22nd of April in Gothenburg. For more information contact Odette Sweden AB.

Lund, February 2010



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# THE NOMINATED TO THE EUROPEAN GOLDEN TAG AWARD

**France:**

RFID system to be integrated into a new type of portable precision drilling machine. At Cooper Power Tools SAS, Jerome Galand Cooper Power Tools SAS/Recoules and Bob Forslund AMC

**UK:**

Landinglights for Airports, Alan Jones

**Sweden:**

RFID system to facilitate the sorting of various steel supports after they have been returned from customers. Ronny Gustavsson Volvo IT AB and Bob Forslund AMC

**Germany:**

RFID system to monitor the preparation of various silicon recipes in order to avoid mix-ups in the production line. At Lufenberg. Jörg Soding B. Laufenberg Papierveredlung and Bob Forslund AMC

**Sweden:**

24 HOURS SELF PAYMENT MOBILE SYSTEM, Christer Eriksson ESCS

**UK:**

U-Track Underground Asset revolution, Alan Jones

**The Winner of The European Golden Tag Award will be presented  
at 26 of May in Malmö, Sweden  
at The Distribution, Logistic and Support Chain Exhibition.**

# A CASE FOR BOOKS AND RFID

**Centraal Boekhuis in Culemborg, The Netherlands, has been the logistics partner in the Dutch book trade for more than 135 years, assuming a key position by bridging the publisher with book stores. Currently, during stocking at Centraal Boekhuis, the books are identified with a label printed and applied by Logopak 906 II TB labelling systems. This lift-label contains a bar code for the sorter, the price and additional information for use by the customer and the book stores.**

Logopak was approached by Centraal Boekhuis to meet their requirement of accurately printing and applying a label with an EPC Class 1 Generation 2 RFID tag, at a rate of 60 books per minute, inclusive of data verification. Additional requirements included a special data format, as well as an in-machine logfile creation.

After a visit of an engineering team on-site, Logopak came up with a solution and with the help of Centraal Boekhuis built a mock-up of the production line at the headquarters outside Hamburg. "It was a very interesting experience", says Lars Thuring, Managing Director of Logopak Systems AB, Sweden, "as all involved were working close together to specify and test the system.". About 7000 RFID Tags later the system was successfully demonstrated and a decision for the next step, a field-test in the Netherlands was made.

Labels are printed in real-time and applied at a rate of 60 books per minute. Labels are accurately applied utilising

a telescoping applicator with blow-on technology without slowing the books through the sorting process. Accommodation for varying book heights of up to 80mm is incorporated into the

of SELEXYZ stores. From the onset it has been apparent that automated print and apply RFID labelling would ultimately need to be implemented in order to satisfy the growing number of



Logopak labelling solution. Centraal Boekhuis has successfully run its six sorter lines utilising the reliable and robust Logopak 906-II TB print and apply labelling system since 2003. In addition to the six Logopak machines, five other Logopak systems are in use at Centraal Boekhuis for mail order labelling. One of Centraal Boekhuis' most important customers is the book trade group BGN (Boek Handelsgroep Nederland), which is comprised of 42 stores including SELEXYZ stores. In 2006 BGN opened its first store utilising RFID-based technology in their logistics supply chain. Smartstore Selexyz Scheltema is located in Almere, The Netherlands. The RFID labels are manually applied to the books, which proves to be very labour-intensive and is only feasible in a small number

books requiring the RFID tag. The field-test was held early in the 2008 with the RFID-enabled prototype replacing one of the Logopak 906-II labellers used normally. Two complete production runs were defined and executed, involving personnel, IT-systems, several thousand books and detailed test and verification process. "The results were above expectations and the next full-time RFID print-and-apply systems from Logopak have been installed with more to follow."

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# NORDIC ID MORPHIC RFID - AN ITEM LEVEL REVOLUTION IN A SMALL PACKAGE

- Nordic ID – one of the manufacturers of handheld computers and terminals for professional use - presents a Morphic with an UHF RFID reader. Nordic ID Morphic is a mobile computer for data collection and voice communication purposes, which offers a full range of functionalities in a small and ergonomic package.

*“ With the addition of the Morphic RFID the retail environment has a champion performer that optimizes intuitive use and small size while providing robust features offering fast track to productivity and quick ROI.. Until now the smart RFID readers have been bulky, large, heavy and expensive devices., says Jorma Lalla, CEO of Nordic ID*

Nordic ID Morphic RFID offers EPC G2 UHF RFID reader in a compact and cost efficient form. The RFID reader offers an output power of a 100mW enabling it to read tags from a distance up to 70cm.

Nordic ID Morphic is a Windows™ CE 6.0 based computer with 256Mb RAM and 128MB Flash memory and SD card slot. It offers a full range of wireless communication options such as CCX4 approved WLAN/WWAN, Bluetooth and GPRS/Edge. In addition

to RFID, a laser scanner or 2D imager is available. Furthermore Nordic ID Morphic offers GSM phone option. The offered functionalities make Nordic ID Morphic UHF RFID an all-around tool for professional use inside and out from four walls.

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# TNT EXPRESS DEPLOYS AEROSCOUT'S LOGISTICS VISIBILITY SOLUTION TO IMPROVE OPERATIONS ACROSS 200 DEPOTS IN 29 COUNTRIES

**AeroScout, a provider of Unified Asset Visibility for improving operational efficiency, today announced the deployment of its Logistics Visibility solution at TNT Express, the European market leader in express delivery. TNT Express leveraged its existing wireless network to implement AeroScout's Wi-Fi RFID (radio-frequency identification) solution for automating inventory management, without needing to add a proprietary RFID network.**

The solution improves operations and prevents delivery delays by optimizing the inventory management of 16,000 assets across 200 depots in 29 European countries. TNT Express, a division of TNT N.V., is among the four largest express integrators in the world, providing businesses and consumers with an extensive range of express delivery services. Based in the Netherlands, TNT N.V. employs more than 150,000 people and operates over 40 aircraft and 30,000 vehicles. The company delivers value to its clients by providing the most reliable and efficient solutions through delivery networks, and it continually works to optimize its network performance.

TNT Express deployed AeroScout's Logistics RTLS (real-time location system) to automate the inventory management of its roll cages, which are metal carriers used to transport parcels between depots across the company's extensive European road network. AeroScout's Wi-Fi Tags are attached to each roll cage, and AeroScout's MobileView software enables the tracking and management of the carriers and parcels.

The solution eliminates the need to manually track and scan each roll cage to determine the inventory of cages at each depot. This drives improved asset utilization, decreases cage replacement costs and reduces delivery delays.

"With real-time visibility of our assets we're able to maximize efficiencies across the board," said Ben Klaassen, Managing Director at TNT Express Worldwide Networks.

"The AeroScout solution eliminates almost completely the manual inventory scanning of roll cages and empowers us to make quicker and better decisions."

TNT Express uses AeroScout's MobileView software to centrally manage 16,000 roll cages across the continent. Using the sophisticated searching, alerting and reporting capabilities of MobileView, users are able to determine the real-time location of assets

and optimize their use. MobileView also generates alerts for surpluses and shortages of cages at depots. With the AeroScout solution, TNT Express has complete control of its roll cage inventory and a full audit trail of activity. The solution includes AeroScout's T2-EB Industrial Tags, which are designed specifically for use in harsh, high-vibration environments. In addition, since AeroScout's solution leverages the customer's existing Cisco Unified Wireless Network, TNT Express eliminated the need to deploy and maintain additional wireless networks at its offices and depots.

"The AeroScout implementation fits in well with our overall RFID strategy and our desire to maximize existing technology investments where possible," said Dennis Beard, Chief Technology Officer at TNT Express ICS. "With no additional reader or network infrastructure required, we were able to minimize the time to market."

"TNT Express was able to leverage its existing, standard Wi-Fi network to reduce operational costs, increase productivity and prevent delivery delays," said Gabi Daniely, Vice President of Marketing and Product Strategy at AeroScout. "The deployment is also a perfect example of the scalability of our solutions for our logistics customers that manage a large amount of assets and inventory across numerous distributed locations."

# TAGMASTER SUPPLIES EQUIPMENT TO HIGH-SPEED METRO IN INDIA

TagMaster, the leading producer of advanced RFID solutions for rail applications, has supplied RFID equipment to Delhi Airport Metro Express in India. SIMEC, TagMaster's distributor in Spain and Portugal, has supplied the RFID system to a Spanish train manufacturer, who is delivering the trains to India

In this project, the TagMaster HD Readers will be mounted onboard the trains and provide signals to the onboard system which controls the power switching functions on the train at key points along the line. The new 22.7 km of high speed metro rail line will connect New Delhi Railway Station and New Delhi International Airport.



*Richard Holt,  
Director Transportation  
at TagMaster AB*

"This is our first installation of Transportation products in India and an important step in our ambitions for the Indian market.



*TagMaster Heavy Duty Reader*

"We have a number of ongoing discussions with system integrators in India and we believe this strategic project in Delhi will be one of many more to come." says Richard Holt, Director Transportation at TagMaster AB.

"For many years, SIMEC has been supplying both Access and Transportation business with solutions based on TagMaster's high frequency RFID system. This highly skilled, long-term partner based in Spain has now enabled TagMaster to win a prestige project in India. I believe this is an excellent

example of the strength of TagMaster's global, well-established partner network." says Christopher Grahm, President & CEO, TagMaster AB

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#### **About TagMaster**

*TagMaster is a Swedish technology company founded 1994 with headquarters in Kista (Stockholm), Sweden. TagMaster designs and markets advanced long-range radio frequency identification (RFID) systems and information services associated with automatic vehicle identification, rail bound transportations and people access, in order to increase efficiency, security, convenience and to decrease environmental impact. TagMaster exports mainly to Europe, Asia and North America via global network of partners, systems integrators and distributors. TagMaster shares are traded on First North in Stockholm, Sweden. TagMaster's Certified Adviser is Remium AB. [www.tagmaster.com](http://www.tagmaster.com)*



# RFID IMPLEMENTATION DELIVERS MAJOR SAVINGS FOR LEADING STAINLESS STEEL PROFILE MANUFACTURER VIRAJ PROFILES LTD

**India based Viraj Profiles Ltd., a globally leading manufacturer of stainless steel profiles, has successfully streamlined its logistical operations with an RFID technology implementation. With exports to more than 80 countries from multiple manufacturing facilities and warehouses, logistic efficiency is crucial.**

Viraj Profiles Ltd. set several goals for its RFID implementation. These included gaining precise real-time location data for all steel profile bundles, fast and accurate bundle retrieval, preventing expensive erroneous shipments, faster inventory and reduced labour costs. By implementing an RFID solution from Vicinity RFID Solutions into its operations – with UPM Raflatac ShortDipole UHF tags and Psion Teklogix UHF Handheld Readers – the company achieved all its objectives as well as a return on investment in just six months.

The large steel profiles are packed in heavy bundles weighing some half a tonne each. The bundles were previously marked with a hand-written code and randomly placed in stacks in the warehouse surroundings, depending on the available space. Finding the right bundles for each shipment took a lot of time and effort and was logistically challenging.

As the first step to resolve the issue, Viraj Profiles Ltd. divided each of its locations into individually tagged zones. Next they started tagging each bundle with UPM Raflatac RFID tags with a serial number printed on the surface for visual identification. Data concerning the bundle and location tags is now easily readable with Psion Teklogix's Workabout Pro handheld RFID readers.

For a quick inventory of the whole warehouse, location tag data from each zone is combined with data from the bundle tags in that zone. The data is then stored on a server when the handheld readers are docked to a computer, minimizing the chance of human error and providing a 99%

*In fact, Viraj Profiles Ltd. reports a respectable 20% increase in dispatches.*

inventory visibility. All this takes about an hour instead of the 12 hours it used to take before the RFID implementation.

Packing lists provided by the company's SAP system now also include up-to-date location details and serial

numbers for the bundles, accelerating accurate shipments and providing electronic proof of dispatch. In fact, Viraj Profiles Ltd. reports a respectable 20% increase in dispatches.

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# MAPPING OUT THE ROUTE TO AN INTERNET OF THINGS : EUROPE SHOULD LEAD DRIVE FOR INTERNATIONAL CO-OPERATION, SAYS CASAGRAS REPORT

**A massive increase in international co-operation and significant investment in awareness-building and training are essential if the concept of an Internet of Things (IoT) is to be turned into a meaningful reality, says a European Union-funded project in its final report, "RFID and the Inclusive Model for the Internet of Things."**

Partners in the Framework 7 CASAGRAS project also urge that European Centres for the IoT and automatic identification and data capture should be established to help business grasp the opportunities they offer.

Delegates from 19 countries attended the project's final conference in London where eight key recommendations were made. These, it was said, would help ensure an ordered development of the IoT on a global basis with maximum business and social benefits.

Ian G. Smith of AIM UK, co-ordinator of CASAGRAS, said : "Our project work has proved without doubt that there is the need and will for international co-operation. China, Japan, Korea and the USA are on board. Europe has taken the lead and now needs to drive the initiative as a truly global partnership."

In addition, said Smith, it had also been shown that governments, industry and business lacked awareness of the IoT and of what it offered. "Awareness and education programmes are key requirements in creating a better understanding of the potential and

benefits and these programmes should be especially directed at the SME community."

## THE REPORT'S EIGHT MAIN RECOMMENDATIONS ARE:

1. The establishment of an overarching, internationally-partnered organisational platform to help steer the IoT development. These partners should represent a cross section of interest including governmental and standards agencies, industry, business and academe.
2. The development and delivery of a strategic migration plan for developing an IoT from a minimalist model to a more inclusive model, including identity management and resolver techniques.
3. The development of a universal or federated data capture appliance protocol to accommodate migratory inclusion of object-connectable technologies.
4. The development of an architectural platform for supporting and demonstrating IoT application and services, and for addressing problems associated with IoT development, possibly based upon the establishment of a generic top-level Internet domain.
5. The development of the rules of governance of the IoT with attention to social and economic issues including privacy and security.
6. The initiation of application and service pilot studies and demonstrators, particularly with respect to pathway process applications exploiting extended process functionality and scalable sensor-network applications.
7. International co-operation on pilot developments and promotional initiatives directed at enhancing

inclusion of national bodies in co-operative developments.

8. The establishment and pursuance of a strategic research and development roadmap for IoT development, drawing upon the findings of the CERP-IoT group report, Internet of Things Strategic Research Roadmap (2009).

## IN ADDITION, THE CASAGRAS PARTNERS ALSO IDENTIFIED A NEED TO :

- Agree a definition of the Internet of Things that can be used as a popular point of reference.
- Reduce the number of overlapping and potentially conflicting projects.
- Undertake major education, training and awareness programmes to explain the IoT.
- Set up key European centres or academies for AIDC and the IoT.

Ian Smith added: "Extending the number of international partners and gaining agreement on the structural, governance and foundational features will help to better define and accommodate the developments on the IoT."

Printed copies of the CASAGRAS Project Report are available free by emailing [andrewc@aimuk.org](mailto:andrewc@aimuk.org) or download the pdf at [www.rfidglobal.eu](http://www.rfidglobal.eu)

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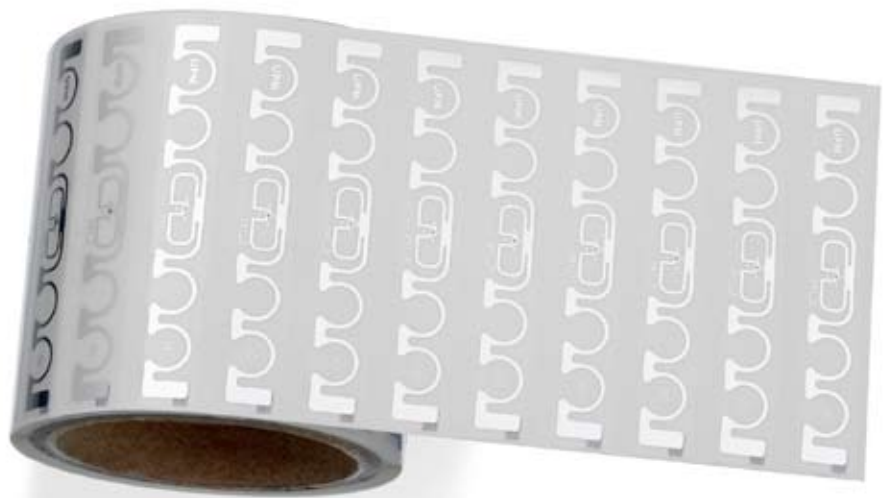
# UPM RAFLATAC SHORTDIPOLE MEETS REQUIREMENTS SET BY IATA

**UPM Raflatac is among three RFID inlay suppliers to meet the operational requirements of an airline baggage tagging tender by the International Air Transport Association (IATA).**

IATA has tested an extensive number of RFID inlays to identify products with optimal performance. UPM Raflatac's ShortDipole inlay carrying an Impinj Monza 3 chip was put through processes typical to the airline industry including baggage sorting, reconciliation and check-in. All tests were carried out at real sites using existing RFID infrastructure including readers and printers. UPM Raflatac's ShortDipole inlay delivered excellent performance in all tested areas.

The ShortDipole inlay is already successfully deployed as part of a new RFID-based baggage handling system (BHS) at Portugal's Lisbon Airport. The Airport reports that the RFID system reduces the average time to process a transfer bag by at least 66% and baggage-handling errors by as much as 50%. The system used at Lisbon Airport is among the world's first to totally abandon the bar-code system and rely on RFID technology to track transfer bags.

RFID technology offers significant benefits not only to airports and airlines but for passengers as well. RFID technology enables real-time tracking to enhance luggage security and reduces the time spent locating any misplaced luggage. RFID also improves customer loyalty by minimizing the number of customers suffering any inconvenience.



Unlike bar-coded labels which require a direct line of sight, RFID tags can be read from a distance and at an angle. They carry more information and provide better accuracy. RFID tags yield read rates of up to 97% while the average bar code read-rate stands at just 80%.

"IATA's qualification is yet another result born from our long-term commitment to the baggage tagging segment. UPM Raflatac is dedicated to this business area through its converting partners and in close cooperation with major RFID infrastructure providers and systems integrators," says Mikko Nikkanen, Business Development Director, UPM Raflatac, RFID.

"We're currently finalizing our partner alliance – a winning team capable of responding to the airline industry's market requirements with high performance solutions at an affordable level."

UPM Raflatac's ShortDipole inlay has been widely adopted by end-users in logistics applications. Delivered in high volumes since its release, the Short Dipole is a short pitch based standard RFID inlay which enables cost-effective baggage tags for airline companies.

UPM Raflatac's RFID Business Area has factories on three continents (Europe, North America, Asia). This makes UPM Raflatac's products available in large volumes for all airlines globally.

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# KOREAN APPAREL COMPANY THE BASIC HOUSE HARNESSES RFID TO ACHIEVE VISIBILITY THROUGH THE SUPPLY CHAIN

**Korean apparel company The Basic House has implemented an RFID solution using UPM Raflatac DogBone RFID tags to gain visibility into its supply chain management and to overcome a number of problems typical of the apparel industry. Convinced of the advantages of RFID, the company is strongly committed to the technology: since implementing RFID in its operations almost a year ago, The Basic House has developed equipment in-house to directly resolve their logistic challenges.**

Communication with the reader is via In the first phase, The Basic House developed equipment capable of encoding high volumes of RFID tags suitable for their needs. Automatic inspection and removal of tags with possible encoding faults has enabled The Basic House to substantially speed up its processes and introduced a new level of accuracy.

As individually tagged garments are often transported in boxes containing multiple items, The Basic House developed a shielded gate to ensure accurate readings at the warehousing and delivery stages. Since identifica-

*“The Basic House is an excellent example of how an innovatively designed RFID solution in the apparel industry can bring near 100% reliability in a challenging logistics environment,” says Edward Lu.*

tion is not dependent on the tags' orientation inside the boxes, the solution is fast and reliable. Furthermore, the shielded gate is not confused by tags in other boxes nearby, a typical problem in warehouse surroundings.

By combining the performance and reliability of UPM Raflatac DogBone RFID tags with tailor-made solutions and equipment, The Basic House has achieved easy access to real-time, reliable product data. The results include reduced labour costs in warehousing, distribution and at the point-of-sale, opportunities for fast inventory, major improvements in forecasting and planning, reduced out-of-stock situations and improved customer service. Crucial to the apparel industry, the Basic House now also has the ability to react quickly to customers' needs and forthcoming trends.

“The Basic House is an excellent example of how an innovatively designed RFID solution in the apparel industry can bring near 100% reliability in a challenging logistics environment,” says Edward Lu, Sales and Marketing Director, Asia, RFID, UPM Raflatac

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# UPM RAFLATAC AND MARNLEN RFID CREATE CUSTOMIZED RFID INVENTORY INSPECTION AND VALIDATION TAGGING SOLUTION FOR BAIRSTOW LIFTING PRODUCTS

**Bairstow Lifting Products Co., Inc., a leader in fabricating and distributing custom rigging supplies and fall protection solutions, has implemented an innovative RFID inventory inspection and certification tagging solution designed by UPM Raflatac and Marnlen RFID. The solution equips Bairstow with two cost-effective, durable RFID applications for metal and non-metal products that can be integrated into the company's existing tagging system, reducing the cost and complexity of offering RFID-tagged goods as a value-added service to its customers.**

Plandent's system is based on RFID tagged consumable boxes used in the supply store rooms of dental practices. Nurses show emptied boxes to an RFID reader that immediately sends replenishment orders for that material to Plandent. Vilant System's RFID software forwards the order information to Plandent's ERP system. The software monitors the read points and takes care that no orders are lost or delayed.

The fast and accurate replenishment rhythm avoids over stocking and thus improves inventory cycle times. Order automation helps in preventing

material shortages. The orders are sent immediately and there is no possibility of entering wrong material codes or quantities. What is even more important, the system reduces staff's time used in the administrative work and thus releases more time for the essential clinical work.

*"The implementation was fast and the system is reliable and easy to use. The system's benefits in reducing administrative work show instantly. Customer feedback has been excellent and we are continuing the system roll out."*

Vilant has previously implemented similar systems to industrial supply chains and material handling processes. This is the first time UHF RFID technology is implemented in this manner for managing customer supply stock in the health sector. The efficiency benefits introduced by automation and the decrease of manual errors in the replenishment process are equal for both application areas.

Markus Kühn, Director at Plandent, is satisfied with the system implemented by Vilant Systems: "The implementation was fast and the system is reliable and easy to use. The system's benefits in reducing administrative work show

instantly. Customer feedback has been excellent and we are continuing the system roll out."

The Plandent system is based on Vilant Server 5 –RFID software products and Vilant RFID eKanban readers. UHF inlays are supplied by UPM Raflatac.

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# ADAGE DELIVERS RFID SYSTEMS TO ELMERS AND MOTALA MUNICIPALITY

**The system is both RFID readers and software that integrates with EDP-mobile.**

**The system will be used for waste collection in Motala Municipality and will be delivered gradually during spring 2010.**

Elmers is responsible for mobile PC and mounting.

Adage is responsible for the RFID reader and the integrated software that communicates with the RFID readers on the truck and also with the EDP-mobile.

Adage are very happy for this order, and this means that anyone with EDP-mobile and wants to replace their RFID readers to Adage unique RFID readers can now do so in a cost effective manner.

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**RFID**

# BJÖRN KVARNSTRÖM

## FROM LULEÅ UNIVERSITY OF TECHNOLOGY

# WON THE RFID NORDIC

# SCHOLARSHIP 2009

The Prize ( 20 000 SEK ) was handed over at the Technical Fair in Stockholm at the RFID EXPO by the Chairman of the jury Olle Hydbom from RFID-Expert.



#### HERE FOLLOWS THE MOTIVATION:

" Björn Kvarnström, Ph.D. student at the Luleå Technical University, has managed show in theory as well as in real life, that RFID technology may be used to create virtual batch labels (using standard tags in a special casing) for continuous production processes of iron ore pellets. These virtual batch labels are primarily used for batch traceability, which significantly increases the possibility to control the production process and thereby obtaining potentially very large cost reductions.

He has furthermore managed to do this with COTS RFID system components in an environment that until now has been viewed as extremely hostile to RFID due to high physical pressures, high temperatures and the very high iron content in the labeled ore pellets flow. "

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# BORN ORIGINALS, HOW COMES IT TO PASS, THAT WE DIE COPIERS?

EDWARD YOUNG, CONJUNCTURES ON ORIGINAL COMPOSITION, 1759

## In the RFID world there is no original know-how that can be used by the average man!

We copy what we have heard from those how dont know, because we do not have knowledge enough to critically examine the context!

The solution is a superior and easy to understand educational program that:

1. In web based performance give the basic outlines of things – not by technical skilled engineers – rather in popular films showing the good and the bad outcome of RFID usage.
2. The next level of education is to lift up the average man to a basic level of understanding the nature of RFID. To the high needed to support and use the beneficial part of the RFID capability.
3. The next level is the internet of things – something that will give beneficial and well being possibility – when RFID is in practical use, this is something positive and easy to apply – in different environmental areas.
4. The next level is for the SME;s that need to move forward to a better understanding of the RFID technology that will give them – better logistic and security systems in there current business.
5. Next level – on the road to top RFID implementation and usage – this will give all users, and the developers, a common language and a practical level for middle-ware's that helps both sides to benefit from RFID, in practical system integration.
6. Top Level - the expertise will learn how to cope with the regulation and the interactive feedback of installations - anything needed presented on a website / interactive exhibition, this among others guidelines is always at hand, when users and system integrators needs information and guidelines.
7. A certificate of well done – and good contribution to the continuation of RFID.

*For furthet information and views  
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## EXAMPLE

| Group                 | Project How | Project Who | Project Fear | Project Good | All for XX        |
|-----------------------|-------------|-------------|--------------|--------------|-------------------|
| Management            | 1           | 1           | 1            | X            | About 10 weeks    |
| Economy               | 2           | 2           | 2            | X            | About 15 weeks    |
| Market                | 5           | 3           | 10           | X            | About 20 weeks    |
| Production            | 7           | 4           | 2            | X            | When needed       |
| <b>Basic know-how</b> | 15          | 10          | 15           | X            | Know-how in Total |

*Note that the time is the interactive average usage of the education system!*



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