LogDynamics News

Automotive Industry Gains a New Transparency

Quelle: LHLK

Information transparency in all processes – the automotive industry approaches this aim. This is due to the fact that the RAN project (RFID-based Automotive Network) started in 2010 is now coming into the phase when the success becomes visible. The objective of the collaborative project is to make the complex cross-company processes of the automotive industry transparent and to be able to control them optimally using RFID technology. RAN is being funded as part of the Federal Ministry of Economics and Technology's AUTONOMIK technology programme "Autonomous, simulation-based systems for small and medium-sized enterprises".

At the 6th National IT Summit in Munich, the RAN project demonstrated the usage scenario of "completed-vehicle distribution". This model represents part of the project – the completed-vehicle distribution scenario. Modern RFID technology is used to control processes such as unloading completed vehicles from the ship, washing the vehicles, the quality check and the subsequent loading of the vehicles onto a truck for transport to a dealer. The technology also makes the processes transparent. Partners such as the automobile manufacturer and the dealer also receive the necessary process information via the info broker (the data exchange platform). In the event of any disruptions, all partners are provided with the necessary information in near real time.

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Autonomously Controlled Disposal of Hire Equipment

The management of hire equipment within the event industry focusses on the dynamic disposal and control of event related orders in closed logistic systems. At this, heterogeneous loads of equipment, reaching from chairs up to complex stage machinery, circulate between central warehouses and one or more venues. Disposal and handling both underlie a large time pressure. Customer requirements, such as a strict adherence to schedules, a high degree of flexibility and an attractive price-performance ratio additionally increase the complexity and dynamics. Thefts, technical problems and the requirements of possible subsequent orders further complicate the order picking and often result in reduced and inefficient transport volumes.

Methods of autonomous control are suitable to handle conflicting goals in a dynamic logistic environment. Since January 2012, the project T6 “Autonomously Controlled Disposal of Hire Equipment“ addresses the design and evaluation of an autonomously controlled disposition system with integrated route planning for hire equipment. The project takes place in cooperation with the Joke Event AG, a full-service agency for event marketing and management with headquarters in Bremen.

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New Technologies for Efficient Global Logistic Networks

Global logistic networks become more complex and dynamic and logistic companies, suppliers and technology integrators have to cope with challenges to optimize handling and information processes, such as to implement flexible, innovative and easy-to-use automation solutions.

From March until July 2012 the new online survey “RoboScan’12” will be conducted to provide new findings for research and development of new technologies for more efficient global logistics networks. The main fields of interest cover: automation in logistics; robot technologies in logistics processes; intuitive teaching/programming devices; and future directions. The four main target groups involve logistic companies, technology suppliers and integrators, consulting companies, and research institutions. Each participant will receive a study report and main findings will be presented at the 29th German Logistics Congress in Berlin:

- Status quo in automation and robotic logistics
- Innovation and research agenda "automation in logistics"
- Areas for improvement in robotic logistics

RoboScan’12 will be conducted by scientists at BIBA GmbH at the University of Bremen in collaboration with Ms. Dr. Nicole Pfeffermann, NP Pfeffermann Consulting. This survey is sponsored by Kieserling Stiftung (www.kieserling-stiftung.de).

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First Version of the Logistics for Life Roadmap on ICT for Sustainable Freight Transport and Logistics Released

At the 4th ECITL the L4L consortium organized a plenary session on the Roadmap "ICT for Sustainable Freight Transport and Logistics". The intention was to present the identified challenges to be overcome by ICT for freight transport and logistics to increase the sustainability of the sector as well as to present first ideas on how these challenges will be practically overcome until 2030, in terms of research, development and pre-competitive deployment expected in key technological areas. The work presented was based on the input from the working group having contributed to the roadmap. The representatives being experts in different fields, formed a panel, constituted of Jens Schumacher, FHV; Nils Meyer-Larsen, ISL; Kostas Kalaboukas,SingularLogic; Margherita Forcolin, Insiel and Hans Westerheim, SINTEF. Moderator was Jannicke Baalsrud Hauge, BIBA.

The conclusions were that there is a need for a long term well known strategy from the Commission and the Member States, so that it is possible to invest. Also the legal aspects need to be solved, but not as a part of the roadmap. Finally, it is necessary to prioritize the challenges and only focus on a few ICT challenges, esp. on those where there are no legal issues. In order to ensure the success, there needs to be real business interests behind, otherwise the penetration rate across the sector will not increase.

The Roadmap will contribute to the Horizon 2020. The Roadmap is available on: www.intelligentcargo.eu/content/public-documents. Comments are very welcome. For this you can use the Intelligent Cargo Forum: www.intelligentcargo.eu or the LinkedIn Group. A major task in Logistic for Life is to collect relevant solution from other projects. These are to be found in our Knowledgebase, accessible at www.logistics-knowledgebase.com. L4L does also offer a more practical approach, showing the benefit of different of these projects. Our Sustainable Solution Collection can be accessed at: www.intelligentcargo.eu/sustainability-solutions-collection.

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Weitere Details: www.logistics4life.eu

Events

Call for Participation LDIC 2012 & ImViReLL'12

Date: **27th of February – 1st of March 2012**
Venue: **BIBA, Bremen**

The **3rd International Conference on Dynamics in Logistics (LDIC 2012)** will be held in Bremen from 27th of February to 1st of March 2012. The conference, which was established in 2007 by the Bremen Research Cluster for Dynamics in Logistics (Log*Dynamics*) of the University of Bremen, is concerned with the identification, analysis, and description of the dynamics of logistic processes and networks. The spectrum reaches from the modeling and planning of processes over innovative methods like autonomous control and knowledge management to the new technologies provided by radio frequency identification (RFID), mobile communication, and networking.

Parallel to LDIC 2012, the ImViReLL 2012 – **ImViReLL 2012 – Conference on Impact of Virtual, Remote and Real Logistics Labs** will be held for the first time. The conference addresses lab based logistics research and education, evaluates the significance of the labs for science and analyzes specific needs, possibilities and challenges in the areas of engineering, information technology, distributed education and collaborative research.

LDIC 2012 and ImViReLL 2012 provide a platform for scientific exchange concerning the latest technological developments.

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ImViReLL 2012: Dr.-Ing. Dieter Uckelmann conference@imvirell.org

Program: http://www.ldic-conference.org/185.html
Registration:: https://www.conftool.net/ldic/register.php

Visit us at CeBIT!

Date: **6th – 10th of March 2012**
Venue: **CeBIT, Hannover**

University of Bremen Joint Booth
Hall 9, Booth B50

The Bremen Research Cluster for Dynamics in Logistics – Log*Dynamics* and the BIBA – Bremer Institut für Produktion und Logistik are exhibiting at the CeBIT fair. There will be a joint booth of the University of Bremen together with the DFKI Bremen – Robotics Innovation Center and The Working Group Computer Architecture. The scientists are presenting innovative ICT solutions from the Bremen research and showing the newest demonstrations.

The Log*Dynamics* will present a model of the Intelligent Container which has been developed in the CRC 637 to autonomously monitor transports from the area of perishable or sensitive cargo. It stands for novel transport systems with the ability to measure, analyze and to intervene during transports by truck, rail, ship or plane. Diverse technologies like RFID, sensor networks and software agents are connected in the system. This assures a continuous and specific control of the cargo. When a risk is assessed the transport, coordinator receives an automatic message. The model visualizes and explains those functionalities.

In the development of highly complex systems, it is essential to pay attention to changing circumstances and the integration of respective information into the technical systems. At the joint booth, scientists of the BIBA present their projects from the field of Computer Vision. The EMOSES simulation tool can be applied to evaluate different 3D-sensor technologies based on digitized images of the reality. It enables the user to analyze the feasibility of different 3D-sensor technologies with regard to specific scopes without spending money on buying these technologies. Furthermore, a method to detect component defects on a micro-level is being presented at the joint booth.

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RAN – RFID-based Automotive Network
Hall 9, Booth G50

Since the demonstration of the RAN model "Finished Vehicle Distribution", which was developed by BIBA, appealed the Federal Ministry of Economics and Technology (BMWi) as well as Federal Chancellor Angela Merkel at the 6th National IT Summit, it is now on display for a broader audience at CeBIT. The model developed within the RFID-based Automotive Network (RAN) project illustrates the RFID-based vehicle handling in a port. The beholder can watch the whole logistics processes in the port, by tracking a model car. The model is completed by a parallel animation showing how the information generated by RFID in the port is passed on to partners within the supply chain, by a so called Infobroker developed in the RAN project. See the RAN model "Finished Vehicle Distribution" sponsored by the BMWi within the Autonomik technology program at the booth of the BMWi in the exhibition hall 9/G50.

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Conference „The World of Identification: AIDC/RFID" at CeBIT

Date: **8th of March 2012**
Venue: **CeBIT, Hannover**

Without the application of identification technologies, many innovative process optimizations are unimaginable. But process optimization is not only a matter of technology – it also contains a complex and strategic decisiveness. Those companies, which continuously evaluate and develop their processes, remain vital and competitive.

The trade magazine "RFID im Blick" will present the annual international conference "The World of Identification: AIDC/RFID" on March 8th, 2012, in Hanover. At the Convention Center at CeBIT, the key themes on the program are aviation, industrial automation, logistics and transportation, and personal identification. No less than 14 speakers will be attending the conference with presentations and selected application reports. All experts are highly specialized in their respective issue. They are global acting specialists of AIDC/RFID technologies. The language of all presentations is English. Partners of the conference are Assion Electronic, Balluff, Feig Electronic, Harting Technology Group, Psion, Schreiner Logidata, Sick and Siemens. The BIBA Institute participates in the framework of a scientific partnership.

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EURIDICE Training at Two Major Logistic Events: 4th ECITL and 28th German Logistics Congress

An accompanying activity during the 4th European Conference on ICT for Transport Logistics (ECITL) and at the EURIDICE booth at the BVL Congress, has been training on different topics related to Intelligent Cargo and the EURIDICE project.

At the 4th ECITL in Thessaloniki, Greece, three different trainings within four main areas were offered: Intelligent Cargo Concepts, Technologies, Applications, and Business Models. This was accompanied by additional sessions at the conference as well as by an on-site demonstrator of the Greek pilot case, showing the EURIDICE solution in use. The first training was presented by the leading specialists in this field from Josef Stefan Institute, Ljubljana, Slovenia. The experts explain, how the cargo gets intelligent and which information they need for the calculation. The second training was offered by the technical coordinator Margherita Forcolin on “How to make Intelligent Cargo technically work in practice - EURIDICE Platform Integration”. This gave a short introduction to the technical aspects of the EURIDICE platform and explain more technical how the solution work. The last session was held by Ingo Westphal on “How to identify Performance Indicators to assess the potential Value of Intelligent Cargo”. Here he explained how the indicators in use have been defined as well as what they can tell us.

At the 28th German Logistics Congress in Berlin, EURIDICE had a booth co-organised with the Logistics for Life project. The representatives from the EURIDICE consortium at the BVL were Frank Habekuß from Fachhochschule Vorarlberg, Austria and Jannicke Baalsrud Hauge from Bremer Institut für Produktion und Logistik, Germany. At the booth, we offered regularly trainings on the Intelligent Cargo concepts, Cargo intelligence platform integration, as well as showing two pilots explaining the advantages for the pilots and challenges to overcome in the implementation process.

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Details: http://euridice-project.eu

Calls for Papers

1st Joint Symposium on System Integrated Intelligence: New Challenges for Product and Production Engineering

Date: **June 27th – 29th 2012**
Location: **Hannover, Germany**
www.sysint-conference.org

Submission deadline extended to February 17th, 2012

The CIRP sponsored 1st Joint Symposium on System-integrated Intelligence: New Challenges for Product and Production Engineering (http://www.sysint-conference.org) provides a forum for academia and industrialists to disseminate their latest innovations and practices. It focuses on the integration of functions into systems, parts or products which will enable future technologies with enhanced capabilities. The development of new sensor technologies, self-optimizing systems, sensorial materials and self-controlled processes for production or logistic applications within the scope of the Symposium. The conference addresses research in logistics and product engineering from a wide range of fields, e.g. computer science and operations research.

Topics of interest include, but are not limited to:
• Methods and Algorithms: Agent-based systems, machine learning and biologically-inspired methods for optimization and planning
• Advanced Applications of Autonomous Objects and Systems
• Self-Optimization and Autonomous Control: Design, reliability, modeling and validation
• Human-Machine-Interaction: Visualization and transparency
• Enabling Technologies: Sensorial materials and systems
• Advanced sensor integration technology
• Systems Engineering
• Advanced sensor integration and embedded systems

The Symposium will be accompanied by the following sessions and workshops which are currently open for submissions. These events consist of a defined number of papers in order to address a topic with the right depth allowing sufficient time for discussion and networking. The organizer of special sessions will recruit any speakers and papers and should successfully manage the session.

* 1st German-Malaysian Workshop "Advances in Mechatronics and Engineering Technology"
* Special Session: Enabling Technologies for Sensorial Materials - Taking sensor integration

Submission Procedure
Researchers and practitioners are invited to submit their extended abstracts electronically at the conference webpage until February 17th, 2012. The authors will be notified of the review process results by March 31st, 2012. Post proceedings will be published for the conference. Selected Authors will be asked to submit an extended manuscript in a Special Issue of one of the following journals:
* CIRP: Journal of Manufacturing Science and Technology
* WGP: Production Engineering - Research and Development

Important Dates
Deadline for extended abstract submission: **February 17th, 2012**
Notification of acceptance: March 31st, 2012
Final Program: May 1st, 2012
May 1st, 2012: Final Program
Conference in Hannover, Germany: June 27th - 29th 2012

Please visit the conference website for submission details and autor information: www.sysint-conference.org/submissions.html

Organisation

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Helge Henning: Institut für Fertigungstechnik und Werkzeugmaschinen (IFW), Leibniz Universität Hannover

For online registration please visit www.sysint-conference.org

Sustainable Material Life Cycles for Wind Energy – Is Wind Energy Really Sustainable?

Date: **June 19th - 20th, 2012**
Venue: Hanse-Wissenschaftskolleg, Lehmkuhlenbusch 4, 27753 **Delmenhorst**
www.h-w-k.de/index.php?id=1777

The provision and availability of resources is one of the most important issues concerning industrial processes and has also an effect on wind energy. Is the renewable energy source “wind “ in fact usable unrestricted? It is questionable, whether the access to essential resources for wind energy turbines will be still guaranteed in 30 years. Nevertheless, also the dismantling and disposal of wind turbines have to be planned in time.

The provision of resources for offshore-wind turbines still owes a subsidiary position in scientific discourse. For this reason the conference focuses on the following issues:

- Material flow in context of wind turbines
- Electronic components (metal and substitutes)
- Tower construction resp. construction of foundation
- Periphery (connection to electrical networks, cable pipes to offshore-units
- Legal and / or organizational preconditions for the recycling of plant components

Important Dates
Submission of abstract (max. 2 pages): until **February, 15th 2012**
Confirmation about accepted abstracts: March, 31st 2012
Provision of official program: April, 4th 2012
Registration for conference: April, 4th 2012

Scientific Commitee
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