**Press Release research project "Ecologistics":**

**"Why Product Codes can be Eco-friendly"**

Luxembourg/Mons (B)/Saarbrücken (D)
December10th, 2013

Business and industry want to face up to their social responsibility to protect the environment, but must improve their competitiveness at the same time. For transport and supply chains in the range of small and medium-sized enterprises (SMEs), the transfer project Ecologistics now provides an interesting solution for both: the answer is transparency and visibility in the flow of goods through Auto-ID technology.

Transparency can be obtained through a detailed and continuous data acquisition in real-time across all process steps of a supply chain. The tracking should happen automatically without additional manual effort to avoid cost. Transparency in a supply chain through a reliable and convenient tracking of an object in real time reduces transport costs and traffic, thereby improving both the cost and the environmental balance:

- Transparency and visibility in the flow of goods facilitate the formation of efficient multi-modal supply chains through standardized and efficient information sharing as well as decentralized storage of important information for the shipped object
- Transparency and visibility avoid the waste of resources and equipment through timely supply with valid and current information for all business partners (e.g.avoid extra toursdue to regional bottlenecks by precisedataabout stocks in a distribution network)
- Transparency and visibility allow the cross-company collaborativegrouping of logistics services with the goal of getting optimal use of the cargo space

Transparency also leads to further synergies within the company through tighter control of inventory levels, faster or more efficient order picking. To track and captureautomatic data about an object in real time, the Ecologistics project uses the Electronic Product Code (EPC) of the GS1 EPC Global Networks in combination with RFID tags on transported objects that can be read automaticallyeven when they are piled on pallets. The Electronic Product Code and the related EPC Global Network stand for the standardized use of RFID technology along the entire supply chain. It is a holistic solution which includes both the unique identification of objects using EPC as well as the cross-companysupply of product and event information via the EPC Information Network.The EPC is the next generation of product identification. It is a simple, global industry standard, a compact "license plate" that uniquely identifies objects (items, cases, pallets, locations, etc.) in the supply chain. The EPC is built around a basic hierarchical idea that can be used to express a wide variety of existing numbering systems, like the GS1 identification Keys. The EPC is stored on an RFID tag, which combines a silicon chip and an antenna. Once the EPC is retrieved from the tag, it can be associated with dynamic data such as from where an item originated or the date of its production. Much like a Global Trade Item Number (GTIN), the EPC is the key that unlocks the power of the information systems that are part of the GS1 EPC Global Network.

The GS1 EPC Global Network is a framework that enables immediate, automatic identification and sharing of information on items in the supply chain. In that way, the EPC Global Network will make organizations more effective and greener by enabling true visibility of information about items in the supply chain. Using several technologies and harnessing the power of current information systems, the GS1 EPC Global Network will provide a framework for discovering information about any EPC-tagged item in the supply chain and a mechanism for trading partners to share information about EPC-tagged items. The network files the real-time data of all Electronic Product Codes in a system for Information Services called EPCIS. EPCIS data comprises a series of "events". Each event documents at business-level something that happened in the physical supply chain. The Core Business Vocabulary is a GS1 Standard that defines specific data values to populate the EPCIS data model. This ensures that all parties who exchange EPCIS data have a common and consistent understanding of the semantic meaning of that information.

Each EPCIS event has four dimensions of information:

- WHAT (object identified by a GS1 Key)
- WHERE (event location identified by an SGLN)
- WHEN (date & time of event)
- WHY (business context and object status)

Thanks to this, EPCIS events are designed to be understood by any business application, without the application needing to know how the process took place or how the data was captured. Besides defining the structure and meaning of physical visibility data, the EPCIS standard defines interfaces for the secure sharing of EPCIS events between business applications and between trading partners.

EPCIS is data carrier neutral and can be used with GS1 barcodes and EPC/RFID tags alike. The EPCIS standard has been developed to meet the requirements of multiple industries, from Consumer Goods & Retail, Transport & Logistics or Healthcare. The EPCIS framework is extensible and therefore allows industry-specific requirements to co-exist alongside the core components of the standard. This extensibility allows for experimentation and new requirements development while still safeguarding interoperability.

The project "Ecologistics" is a cooperation of 12 institutions and companies from Belgium, Germany, France, Great Britain, Luxembourg and the Netherlands to demonstrate the benefits of increased transparency in supply chains for the companies involved by consistent use of existing international and cross-industry standards. Co-funded by the EU (Interreg IV B NWE) the transfer project specifically aims at providing concepts, methods and solutions for small and medium-sized enterprises (SMEs). Lead partner is the University of Mons (Belgium).

**Contact**

University of Mons (B)
Project Coordination
Bertrand Tiberghien
Tel: +32 65 34 28 39
Fax: +32 65 34 27 98
bertrand.tiberghien@umons.ac.be
Languages: French, Dutch, English

Centre de Recherche Public Henri Tudor (Lux)
Project Communication Manager
Romain Gaasch
Tel:  +352 42 59 91 -6 336
romain.gaasch@tudor.lu
Languages: French, German, English

IPL - Institut für Produktions- und Logistiksysteme Prof. Schmidt GmbH (D)
General Manager
Jörg Bernarding
Tel: +49 - (0) 6 81-9 54 31 12
Fax: +49 - (0) 6 81-9 54 31 99
joerg.bernarding@iplnet.de
Languages: German, English