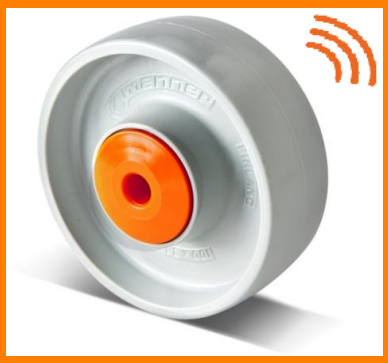

Roll Cage Management

with

RFID enabled Roll Cage Wheels

01.10.2012

Radio Frequency Identification (RFID) embedded in Wheels and Castors

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RFIDexplained

Radio Frequency Identification (RFID) is a contactless communication technology, that requires no line of sight for the identification of objects.

Information is stored on a chip, which is embedded in the trolley wheel. Data can be read or re-written to the chip. The wheel can be read from a distance of 16 feet (5 meters)

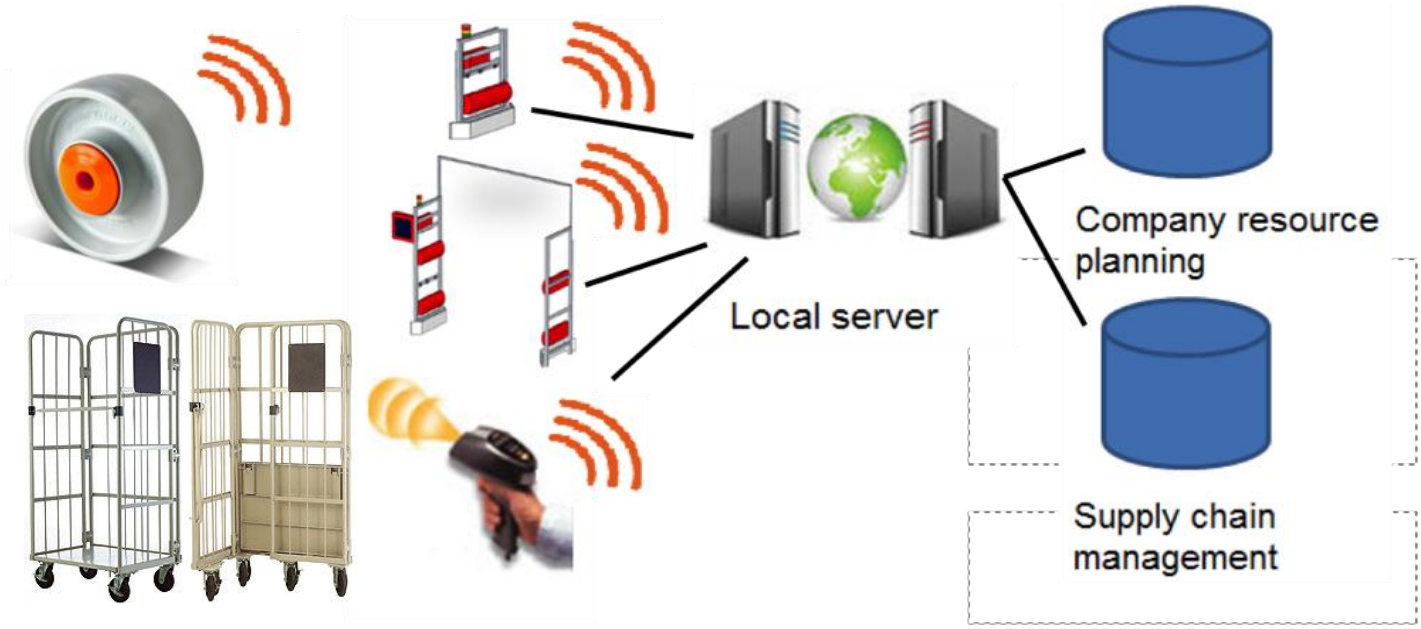
Intelligent RFID wheel reduces costs and improves availability of Roll Cages in the supply chain

A (standard) trolley wheel can be effortlessly exchanged for an intelligent (RFID-UHF) wheel; only one step to integrate a simple but versatile technology for the management, tracking and monitoring of roll container movements.

Benefits:

- Improved visibility
- Reduced need to purchase new roll cages
- Reduced claims on shipments
- Prevents shortages at peak periods
- Reduced mis-shipments
- Additional identification of existing roll cages

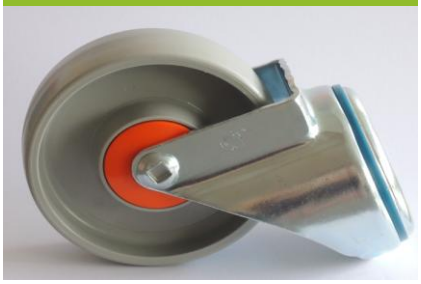
RFID Infrastructure



Technology

Communication

Simplicity



Process
A roll cage fixed with an RFID enabled wheel can either be read with a hand held device, or e.g. pushed past a reader, which automatically reads the information on the chip (e.g. unique trolley identification number).

Technology
The solution is a wireless application, whereby a reader and antenna device creates a weak electro-magnetic field and sends a message to the environment, requesting feedback – 'is there a roll cage in the vicinity'. The roll cage (RFIDenabled wheel) responds to the signal, and the information is sent via the reader to the supply chain management system.

The roll cage can be read up to a distance of 16 feet (5 meters) and requires no own energy source (battery), as it receives its power from the electro-magnetic field.

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