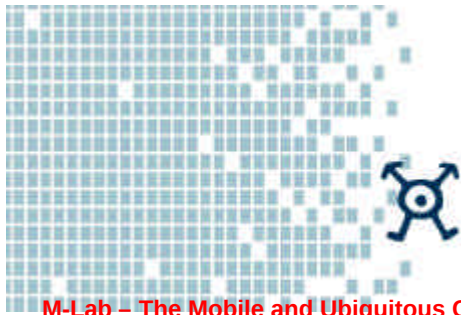




M-Lab – The Mobile and Ubiquitous Computing Lab

Martin Strassner,
Elgar Fleisch

Report No. 15

Version 1

01.12.2002



Martin Strassner is PhD student at the University of St. Gallen, research assistant for the Institute of Technology Management and for the M-Lab.



Elgar Fleisch is professor for technology and information management at the University of St. Gallen, director of the Institute of Technology Management at the university of St. Gallen, research director of the M-Lab, and director designate of the Auto-ID Center at MIT.

Contact

University of St. Gallen
Tel.: +41 71 228 2468
martin.strassner@unisg.ch

Segment Evaluation Automotive – Applications of RFID technology

ABSTRACT

RFID (Radio Frequency Identification) is the next evolutionary step in automatic identification (Auto-ID) technology. It makes it possible to synchronize the physical flow of goods and the related information flow without the need for human intervention. Managing physical resources will be as efficient as moving bits in the digital world of information systems. Efficiency gains arise from the avoidance of errors, from automation and from the ability to manage all kind of things individually. Such technologies provide benefits for a variety of applications across the automotive value chain. This paper evaluates the most promising applications for Auto-ID technology in the automotive industry. The paper considers:

- Current RFID applications and their costs and benefits;
- The business need for advanced Auto-ID technology in various areas of the automotive value chain;
- Likely scenarios for the adoption of Auto-ID technology;
- Drivers and challenges on the adoption path.

We find that there are many beneficial applications, with a focus on the supply chain, the product itself and the area of after-sales services. Today most applications are not based on standards or even a common infrastructure like that proposed by the Auto-ID Center. Although automotive makers expect significant benefits from RFID technology, they face three main challenges that need to be addressed for a breakthrough: the availability of industry-wide standards, a drop in price and a model for solving the distribution of costs and benefits across the automotive value chain. These three challenges can be addressed by the work at the Auto-ID Center as further discussed in this paper.