

RFID in the supply chain and the privacy concerns

By Nikita Maria, PhD Candidate, Applied Informatics, University of Macedonia

Abstract

RFID is a technology that uses electromagnetic waves to automatically identify individual items and capture data in a contactless way. It is an emerging technology that has received considerable attention and is believed that over the next years will experience wide implementation replacing the barcode technology which is still widely used today.

Among other applications, RFID is used for a wide variety of supply chain activities such as manufacturing, warehousing, asset tracking, locating objects, authentication and counterfeit protection. Its success is due to the increased visibility and real time information it provides and the improvement of efficiency, accuracy and functionality that adds to the entire supply chain. Today, RFID seems to be essential for successful supply chains since it plays a key role in order to gain a competitive advantage and differentiate from others.

While RFID offers great productivity benefits, it also addresses consumer privacy concerns which result from the lack of current data protection laws. Until now there have been some formal attempts to create RFID privacy legislation by the USA and Japan and the European Union. Moreover, the European Commission in order to provide guidance to Member States on the design and operation of RFID applications developed a recommendation on the implementation of privacy and data protection principles.

This study focuses on the use of Radio Frequency Identification (RFID) in the field of the supply chain management. Particularly it includes a short description of the technology, the way it influences the management of the supply chain, the privacy concerns that arise and relevant current legislation.