

## **RFID – TECHNOLOGY: ITS ADVANTAGES AND DISADVANTAGES**

RFID (Radio Frequency Identification, RFID) - a method of automatic identification of objects in which, by radio read or write data stored in the so -called transponders or RFID- tags.

Any RFID- system comprises a reading device (reader, the reader or interrogator) and a transponder (also known as RFID- label sometimes uses the term RFID- tag).

Most RFID- label consists of two parts. First - Integrated circuit (IC) for storing and processing information, modulating and demodulating radio (RF) signal, and other functions . The second - an antenna for receiving and transmitting the signal.

With the introduction of RFID-tags in everyday life associated with a number of problems. For example, users who do not have a reader, can not always detect the label affixed to the product during manufacturing and packaging, and to get rid of them. Although during sale, as a rule, these marks are destroyed, the very fact of their presence causes concern among human rights groups and religious organizations.

Already known applications RFID (contactless smart card systems, access control and payment systems) provide further popularity with the development of Internet services.

During the application of these technologies in various companies identified the following benefits of RFID- technology:

- The ability to overwrite (RFID- tag data can be rewritten and expanded many times, while data on the bar code can not be changed - they are recorded immediately in the press);
- No need for line of sight (RFID- reader does not require line of sight labels to consider its data);
- Greater reading distance (several hundred meters);
- Resistance to the environment;
- A high degree of safety ( number of unique and immutable identifier assigned to the label in the production, ensures a high degree of protection against counterfeiting labels ).

Also in the analysis were identified and some disadvantages of this technology:

- The cost of higher cost accounting system based on bar codes;
- The complexity of the independent production (bar code can be printed on any printer );
- Susceptibility to interference of electromagnetic fields;
- Distrust of users, the possibility of using it to gather information about people;
- The established technical basis for reading bar codes significantly superior in terms of solutions based on RFID;
- Lack of transparency developed standards.

Thus, we can conclude that for the RFID- technology - the future. The only factors that still hinder widespread adoption of these systems remains their high cost and the existing level of distrust. Although the benefits of using RFID, in trade - are obvious. On the one hand, this technology will help streamline the movement of goods from the warehouse to the store shelves, on the other hand - will be antitheft protection. And third, in the RFID- tags can contain all necessary and buyer and seller information on a particular pair of shoes.

However, the use of such technology would be justified only in the larger stores, characterized by rapid trade flows, but also include a large retail space.