The development trend of RFID technology

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Abstract - The matter of material or individual values’ protection nowadays is an important issue to be discussed and resolved throughout the world. In order to solve the issue, the proximity identification technology RFID was discovered. This article includes the description of development and implementation of the technology into the world and Ukraine.

Key words - RFID technologies, development, development trends, predictions regarding the development, world market.

I. The modern Technology

The development of variety of new programs for information protection is stimulated by the rapid world trends market development and globalization that, in turn, have led to the creation of new chips which have started to spread and be used in new spheres.

Nowadays, any enterprise is in need of the accurate data registration in its own information system at the minimal level of the human factor. RFID (RadioFrequency IDentification), which was tested and developed to help this process is ready to be used.

RFID has become widely spread on the global market, more and more companies have started to pay attention to the producing and usage possibilities of this program.

II. The prediction of development and implementation

The global trend market which is used by RFID technologies was finally formed in 2003, when the total turnover reached more than $ 1bn, and the number of companies that suggest resolving in this sphere approached to 400. A crucial moment, which was caused by producing new standards, defining the structure of the market and direction of further technology development, happened a year after.

In 2004 it became also possible to forecast the trend on the base of statistic of previous years.

RFID technologies have been considered as the most perspective ones so far.

The number of sold RFID chips was estimated at 15 $15, 1bn in 2012 (20 % was sold out in 2012).

The rate of sales growth is expected to happen and will work out 10 - 20 % yearly.

The increase of chips usage from 50bn pcs in 2014 to 650bn pcs in 2018 is predicted by IDTech. This statistic is based on the fact that to 2014 the price will be 0.05$. The vast majority (95%) of sold chips will consist of passive ones. The prediction of cheapening is proved by the abovementioned fact: passive chips do not have power supply source and are much cheaper in producing than active ones, which in turn, will be used in economically sound spheres. To 2018 the sale of passive chips is going to increase by 320 times, whereas the number of active chips is going to increase just by 17 times.

According to IDTech prediction, the technology development and its usage will reach $ 7880bn at the end of 2014 and $ 9,2bn in 2014 (in 2012 it was equal to $ 6980bn).

The analysis includes network services, software, BAP chip services etc.

The development prediction is shown on the pattern №2. [3-5]

The method is perspective enough in producing and usage, as it is more protected than UPC code. RFID market has started to expel UPC codes which has given an impulse to further researches. A great number of companies began publishing forecasts for this technology implementation. The usage of this technology has a lot of advantages. In the process of cooperation with foreign partners a lot of companies face with the same problems as their colleagues from any other company throughout the world.

A great interest in RFID technologies can be noticed now. The supplying leader is the USA. Taking into consideration the fact of world market experience, it can be said that RFID technologies in Ukraine can have three ways of development. The first way suggests that the situation is going to change gradually. UPC code
identification will dominate and RFID prices will remain high which will not let the penetration happen on the mass market. The second way suggests 10-20% growth. It is possible to happen with the new leader available. The third way suggests the rapid development. This variant encourages UPC codes to disappear completely and be replaced by RFID technologies. [6]

According to the analysis of the company Halileo Nanotech it can be claimed that RFID identification is relevant subject to be discussed. Its rapid implementation is going to penetrate into different spheres of our lives. [7] It can be seen from the pattern №3-5 that global market of passive chips is growing and developing.

Conclusion

Taking into the consideration the growth of RFID technologies, the forecast for the European market will not be different from the world tendencies, but it will be more traditional. RFID technologies will be developing for next decade, furthermore, the process of development will become more intensive yearly.

In conclusion, we can definitely claim that the usage of RFID is quite perspective.

A number of projects which will be implemented by the help of this technology will increase. This fact proves that this technology will be used in projects of state importance and encourage to estimate the development of it to the full extent.

References


