INTERNET OF THINGS AS SOCIAL-HUMANITARIAN TECHNOLOGY

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Abstract

With the appearance of new information technologies and the development of computer techniques, new social-humanitarian technologies appear. In the framework of this paper, we consider the Internet of Things- the computer web of objects- "things", such technology. Internet of Things as a social-humanitarian technology contains manipulative component, which can influence on the consciousness of the masses and thus "programmed" them to obtain certain information. We can see find this modern advertisements, dedicated to Internet of Things, and in Internet of Things itself, because it select the information what person should get.

We also can attribute the Internet of Things to futurological humanitarian technologies. It can make a "forecast" of the future in various fields: social, cultural, economic, demographic, etc. Thanks to this technology has become possible to carry out the forecast for the development of the state of society or of the collective or the development of the industry.

Keywords: Internet of Things, Social technology, Humanitarian, Information technologies

1. INTRODUCTION

Currently, due to the development of science and technologies and to the rapid development of all spheres of human life, increasingly began to use a combination of words – "humanitarian technologies". If a few years ago it seemed impossible to combine technologies and the humanities, now we can see that the situation is changing. The conferences on humanitarian technologies are held, open special faculties and departments. New centers of humanitarian technologies appear (in Moscow State University and the RNU, in Astrakhan and many others) in large cities.

Although this phrase has become popular only in the 20th century, according to some scientists it can be affirmed that humanitarian technologies have always existed.

Modern research has proven that the "humanitarian technologies" can not only deal with one science, their problems and their solutions have become interdisciplinary. Depending on the aspect of humanitarian technologies, their problems have being studied by philosophers, sociologists, cultural researches and political scientists. In this regard, among researches there is no consensus about the fact that there are humanitarian technologies. Depending on aspect of humanitarian of technology and science to study it,

come to the fore a variety of problems and objects.

The term “humanitarian technologies”, unfortunately is not always appropriate to use in the scientific literature. The experience of many generations of scientists argues that the definition of a term needs to be worked on the agreement on its definition. At the moment, there are a whole lot of different definitions of what is considered “humanitarian technologies”.

According to some scientists humanitarian technologies should be directed to the development of personality. Kuznetsov N.A. in his article in “Eidos” magazine notes that humanitarian technologies “are means of improving the moral and ethical norms, ways to develop intellectual capacity and physical condition” [1].

Other researchers define it as a new type of process management, which should be based on “soft” management, without “direct” pressure. So, Martyanova O.S. characterizes humanitarian technologies as a special way to influence specific social groups, such as PR - is the impact on the target groups [2].

The third type of scientists defines “humanitarian technologies” as a set of techniques and methods for making management decisions.

The fourth type of researchers believes that the humanitarian technologies aimed at education and to change the rules of communication between people. As noted by Mamardashvili M.K. “technologies in the humanitarian sphere – are at first and foremost, mind control techniques of the individual in the process of communication in the process of interpersonal interaction, aimed at updating and development of" human in man”.

Bukalov A.V. considers humanitarian technologies as teaching methods, systemic organization of education, psycho-informational compatibility, psychotherapy, psychoanalysis depth. Thus, the first two authors limit the definition of humanitarian technologies to communicative and psychological aspects.

The fifth type, which is shared by the majority of scientists, reduces the humanitarian technologies to manipulative component that allows to influence on the consciousness of the masses and thus “to program” them to obtain certain information. For example, E. Ostrovsky in its definition of humanitarian technology comes from the fact that they should be presented in the form of scientific methods and techniques which use humanitarian technologists to control social behavior, thereby affecting on the society [3].

Humanitarian Technologies, according to our opinion, is the technologies that increase efficiency, and consequently they are applied to other types of technologies.

Thus, we found that at the moment there is a need for a strict definition of what humanitarian technologies is. Having considered all of the provisions, we decided to determine the humanitarian technologies as followed: “humanitarian technologies are kind of social technologies, based on the use of “soft” methods - beliefs and psychological manipulation”.

2. INTERNET OF THINGS AS SOCIAL-HUMANITARIAN TECHNOLOGY

As we have noted, the development of modern technologies has now reached unprecedented speed and level. At the moment, we can speak not only about the individual cases of computerization or automatization, but about the widespread use of information and computer technologies in almost all spheres of modern life. Modern computers, sensors, hardware and software systems are now connected to specialized network, covering a vast area. With the advent of the Internet private networks merged together in a global network that currently covers more than 70% of the Earth.

With the creation of the Internet and modern computers, it became possible to combine objects or “things” in one network. On the basis of this principle, appears a new phenomenon of our time - the Internet of Things. One of Citrix's leaders in Russia Khalyapin S. defines this phenomenon as “a network of physical devices, machines, buildings and other elements combined with electronic components, software, sensors, actuators, interacting with each other without human intervention and allow these objects collect and share data”. At the moment, along with the Internet of Things (IoT) become increasingly popular Industrial Internet of Things (IIoT), which is in principle different from the first, only a narrow scope of application, the number of sensors and in the volume of processed information.

With his appearance, many scientists began to talk about a new scientific and technological revolution 4.0., however, we consider that the appearance of these phenomena, rather, a consequence of the gradual modernization and computerization. If before the creation of the first conveyor changed paradigm existed at that time, the emergence of Internet of Things, is a consequence of the appearance of the first computers

and sensors, so it is, the systematic development of information and computer field.

A. Anufrienko (the head of the “Internet of things. Electronics” in Skolkovo notes that currently the use of Internet of Things can be segmented in the following areas:

1) Handheld Device

2) Smart Home

3) Smart cities

4) Health and telemedicine

5) Smart cars

6) Industrial Internet of Things

7) Agrotechnologies [4, P. 21]

Foreign experts in the field of Internet of Things, Shawn DuBravac also notes that a definition of the Internet of things isn’t an easy task. In the report for the Consumer Electronics Association, he writes: “The Internet of Things is composed of a plurality of segments and markets. For the consumer - it is wearable technology and “smart” devices, such as thermostats and televisions. In the industrial sector- is a stand-alone machines and equipment with sensors. In the business space – is the large amount of data and marketing analytics. In other words, the Internet of Things is as diverse as the global economy itself: from production to consumption of products "[5, P. 9].

Influence of the modern Internet of things is not so large. However, in Asia and the United States have already shoved the first network of “things”, as well as billions of dollars are allocated for the creation of “smart” cities. In Russia, the Internet of Things is developing in the industrial sector, and is less developed in the private.

Scientists believe that the Internet of things will help to solve a number of economic problems. This approach can be analyzed from the standpoint techno optimism. As Bell wrote in the future, information will become a strategic resource in post-industrial society [6, P. 342].

Internet of Things is developing humanitarian technology, which can be analyzed from several positions.

The first position is the position of humanitarian technologies focus on personal development. In this case, there are two types:

1) education technology;

2) self-improvement technology.

QR-codes can be assigned to the learning technologies (within the framework of humanitarian technologies). This code binds the physical object with a special tag and with web servers. QR-Code the term itself comes from the English phrase “quick response” – “quick response” and is a two-dimensional bar code that allows you to encode a small amount of information. Initially QR-code used in the production, logistics, trade and helps to optimize a particular process.

With the development of information and computer technologies QR-code have been applied in tourism (tagging a variety of attractions and urban projects), in advertising (the organization of advertising campaigns, promotions, etc.), in architecture, etc.

Due to the development of information technologies and the Internet a man pays less attention to the books, preferring to get information through the virtual world. The modern pace of life is so fast, there is no time for reading books. In this regard, QR-code is a link between the man and the information that can be obtained in a small volume, and in a short time. For example, while a man is on a trip, for him cannot be always convenient to take a guide. More over the man himself can’t often learn previously information about the culture of a country. Currently, many cultural monuments, objects of fine art, etc. are equipped with QR-codes.

The use of QR-codes and smartphones allow a person to save space and time, while receiving minimal information for self-education.

Moreover, with the advent of the Internet of Things special significance receive the virtual museums. Now the man from the comfort of his own apartment, with a computer and access to Internet can enjoy the

masterpieces of the Louvre Museum and Madame Tussauds. “Virtual Travels” became possible thanks to the use of the Internet and the installation of a large number of cameras that can transmit information “in real time” at almost any computer.

Use of the Internet of things leads to the appearance of the mass effect: a media, availability of information etc. On the one hand, the abundance of new information allows a person to transform it into knowledge, but on the other hand, it implies a stronger information noise. Find the necessary information takes longer time and requires more effort.

Futurological humanitarian technologies provide “forecast” of the future in various fields: social, cultural, economic, demographic, etc. Internet of Things as a humanitarian futurological technology saves resources; warning of breakings thereby helps to save money, as well as the human and other resources. For example airlines connecting aircraft and spare theirs parts to the Internet of things get information about the possible breaking of this or that detail, long before that. The Internet of Things is widely used in the industrial sector, for example in the energy sector (the use of “smart” counters); using a remote pipeline monitoring in the oil and gas spheres. The Internet of Things technology is used in logistics: tracking of goods, electronic calculation of the cost of transportation, etc..

It begins to apply the Internet of Things and in the medicine. With the appearance of “smart” bracelets, doctors have become more successful in controlling the state of health of their patients. The sensors also warn doctors about any changes in health status, which help to reduced risk of diseases and their timely prevention.

Situational humanitarian technologies are created and applied to solve specific problems in certain circumstances. For example, of “smart city” system allows to fight pollution, regulate the traffic in the city and monitor the cleanliness of roads and streets. Such systems have only one goal - to make life in the city more comfortable and safer. Moreover, “smart city” system has the ability to respond to a particular situation and take a decision on its own. For example, if there is a traffic jam on a particular stretch of road, the system will redirect the machines on roundabout ways, until the traffic jam will resorb. At the moment, the “smart city” system is aimed to solve some specific tasks within just one city. The “communication” between such systems doesn’t exist nowadays.

Everyday humanitarian technologies are universal. To them can be attributed electronic devices that improve people's everyday lives. For example, “smart” bracelets which send to doctors information about the state of the health; sensors in special medical equipment allow dispensing a particular medicine, and also watching out for well-being. Moreover, often to the elderly people implant the sensor to know their location and monitor the state of health, to help them in an emergency situation. Process of computerization is affected on the human body. Now you can find not only clothes and accessories, which are equipped with a QR-code, but even tattoos, in which people scramble the information they need: information about yourself, your favorite quote, etc.

3. CONCLUSIONS

Thus, the Internet of Things as a humanitarian technology helps to improve the quality of life of modern man. This can be applied both to everyday issues, as well as to the issues related to the broader socio-economic context.

Economic and cultural spheres which are traditionally associated with the social dimension of life are undergoing significant changes due to the development of the Internet of Things technology. It helps not only to increase the efficiency of existing social and economic technologies and institutions, but also focuses on the human dimension of these technologies. Finally, the Internet of Things allows to create medium-term and situational predictions development of various spheres of social life and social change. It is very important in the humanitarian aspect for a modern society and for the well-being of each individual to learn how to manage and control social development, the most important socio-cultural and socio-economic innovation.

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