

## INFORMATION TECHNOLOGY IN THE MODERN WORLD

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### *Анотація*

*У роботі проведено огляд сучасних наукових досліджень щодо розвитку та впливу інформаційних технологій в сучасному світі.. Проаналізовано основні перспективи використання інформаційних технологій у сучасному світі. Досліджено проблему становлення стандартів та протоколів для комп'ютерного зв'язку, організація доступу до стратегічної інформації, організація її захисту і безпеки. Виявлено, що за наявності відкритого доступу до джерел ІТ виникає можливість активного розвитку інформаційної інфраструктури, а також розвитку технологій, політики, культури та освіти, економіки. Інформаційні технології дуже швидко перетворилися на життєво важливий стимул розвитку не тільки світової економіки, а й інших сфер людської діяльності.*

**Ключові слова:** інформаційні технології, інформаційна інфраструктура, комп'ютери, сфери людської діяльності, безпека.

### **Abstract**

*The paper reviews modern scientific research on the development and impact of information technologies in the modern world. The main prospects for the use of information technologies in the modern world are analyzed. The problem of establishing standards and protocols for computer communication, organizing access to strategic information, organizing its protection and security is studied. It is revealed that the availability of open access to IT sources creates the possibility of active development of information infrastructure, as well as the development of technology, politics, culture and education, and economics. Information technologies have very quickly become a vital stimulus for the development of not only the world economy, but also other spheres of human activity.*

**Keywords:** information technologies, information infrastructure, computers, spheres of human activity, security.

### **Introduction**

The modern development of the information society is directly related to the need to collect, process and transmit huge amounts of information, to transform information into a commodity, usually of considerable value. This has caused a global transition from an industrial society to an information society. The emergence of the Internet has led to a large-scale growth of international communications in various spheres of human life. In the current socio-economic conditions, information technologies play an important role. The relevance of information technologies is primarily explained by the spread of the Internet. Since significant changes are taking place in our time, new programs and technologies are being created and developed, there is a need to expand the boundaries of working with a PC. Research in this area was carried out by A. Vasilyuk, N. Melnikova, V. Gaidarzi, R. Gurevich, A. Mazaraki, G. Kolomoys, O. Buinytska and others. Information technologies require not only complex organization and training, but also high costs and high-tech equipment. The introduction of information technologies begins first of all with the creation of a mathematical base, the organization of information flows and the training of specialists.

### **Research results**

Today, information technologies occupy a large place in our lives. The use of computers has become commonplace, although quite recently, a workplace equipped with a computer was a rarity. Information technologies have provided new opportunities for work and leisure, and have largely facilitated the work and life of every modern person. [1]. Global science is significantly affected by global access or its absence to global information sources. The availability of open access to IT sources creates the possibility of active

development of information infrastructure, as well as the development of technology, politics, culture and education, and the economy [2]. The main functions of modern information technologies include: collection, search, processing, and storage of data, which in some way affect management, the generation of new information, and the solution of management optimization problems. An important stage is not only the automation of labor-intensive routine and regularly repeated operations for processing large amounts of data. No less important is data processing in order to obtain fundamentally new information that will facilitate the adoption of effective management decisions [2].

Developed IT opens the way for the national economy to a higher level of development, since this market is an effective tool for integration into the global economic space due to its features, such as: internationality (due to its information and communication nature); attractiveness for investors due to the rapid return on investment and high profitability. The sphere of information technologies is science-intensive, and therefore, in the process of its development, the scientific potential of the country is revealed as fully as possible.

Due to the development and implementation of scientific potential, the level of information and economic security of the country increases. Modern developed countries pay great attention to the development of information and communication technologies. Unfortunately, Ukraine's share in the global IT market is extremely small, and the level of development of the infrastructure of this industry is low.

In Ukraine, at the state level, there is an awareness of the need for IT development, however, the developed plans and concepts for IT development are somewhat general in nature, and no specific algorithm of actions has been developed to eliminate Ukraine's existing lag in the IT sector from the leading countries of the world.

According to the estimates reflected in the report "World Information Technologies" of the World Economic Forum, the following factors do not contribute to, or even inhibit, the development of IT in Ukraine: the taxation system; problems in the protection of property rights, protection of intellectual property rights; imperfection of the judicial system; inefficiency of the legal system. The development of IT in Ukraine is possible only with an immediate cardinal improvement of the situation in the specified areas [3].

### Conclusion

Information technologies have very quickly become a vital stimulus for the development of not only the world economy, but also other spheres of human activity. Today, it is practically impossible to find a sphere in which they are not currently used. Along with this, there are a number of problems, among which the formation of standards and protocols for computer communication, the organization of access to strategic information, the organization of its protection and security are of great importance. Solving these problems will provide the opportunity to respond to the needs of society in the most adequate and flexible way.

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