

Chapter 2

The Main Historical Stages of the Development of Cyber Space

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ABSTRACT

Technologies and the threat of harmful activities using them are developing in international politics. The age we live in is a daily routine of technological revolutions, and with new technologies are born powerful and more flexible both defensive and offensive mechanisms. Cyber attacks have become an inseparable part of our lives, accompanying all military wars. Today, wars are fought using hybrid components. Cyberwar as an event began with the invention of the computer and the Internet.

INTRODUCTION

Internet space and related processes in the last decade Rapid development, as well as the number of users in a short period Colossal growth led to the creation of new state entities The need for development. All countries are trying to be as efficient and flexible as possible and the establishment of a sophisticated organizational structure that Provides critical information infrastructure as much as possible protection, will take effective measures aimed at cyber security on provision, will also protect the person's personal as much as possible information and existing databases. First of all, in all countries, The government considers this issue as a matter of national security one of the important constituent parts, and therefore similar subjects A large part is present in the Ministries of Defense and Internal Affairs, or Under the supervision of intelligence, security or other special services.

Such entities have a short history of existence. Actually, no There was no experience and every country developed individually the given issue. It can be said that the state in the field of cyber security If the creation of private entities and their future development is based on the precedents that arose in the Internet space and are generally related to the need to protect cyberspace. Therefore, parallel to the

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given field State or private sector entities are constantly being conducted in the process of organizational structure development.

How was the computer created?

This did not happen with one stroke of the hand - it is based on the development of computing technologies. In the 20th century, the effective work of science led to a technological revolution. For example, paper, magazines, newspapers, books, cinema, and television have become available like never before. This was followed by computers and the Internet. It may seem unbelievable, but the first computer occupied a large room and could only calculate numbers. This is the period when the calculator does not exist. At the beginning of the 20th century, scientists invented an electronic lamp, which was used to amplify the signal of a radio receiver. In the 1940s, the idea to use electronic lamps to make a computer came up. During the Second World War, scientists tried to develop technologies. However, scientists have been thinking about creating a calculating machine for centuries - for example, in the 19th century, the question arose of making such a device that would not only calculate numbers but also solve the entire mathematical problem. The first attempt was made by Cambridge University professor, Charles Babbage, in 1791-1871. The attempt was unsuccessful. The failure gave Charles Babbage more incentive, in 1834 he began work on a calculating machine called the Analytical Engine. This machine was supposed to solve all the problems that mathematicians and engineers solved. The machine was equipped with a central processing unit, memory, and punch cards. Significantly, Charles Babbage's machine could handle twenty-digit numbers. The machine had to work without human intervention. That punch cards were used to control calculating machines was a prophetic idea. This idea was developed in 1804 by the French inventor Joseph Marie Jacquard by automating the loom (HC, 2023).

Scientists faced a new task - creation and development of programming. July 19, 1843 is recognized as the date of creation of the first program. Ada Augusta, the daughter of the famous English poet George Gordon Byron, who was Grad Lovelace's wife, made a big contribution to the creation of the program. On July 19, 1843, Augusta created the first program for calculating Greek numbers. At that time, the machine could perform not only arithmetic calculation, but also logical operations. This became possible after (in 1847) the English mathematician George Boole created the theory of logical expressions and called it "Boolean Algebra" (EU-Startup, 2019).

The contribution of the Georgian scientist Giorgi Nikoladze (1888-1931) is worth noting. Before Nikoladze's invention, all arithmometers that existed were mechanical, and during his stay in France, he studied the existing arithmometers and invented a new electronic calculator, which was called "direct multiplication electronic arithmometer". It differed from other calculators with an electronic distributor. American and European companies were immediately interested in this invention, but he refused to cooperate with them and left for his homeland, made a model of an arithmometer in Georgia, which was then sent to an exhibition in Moscow. Unfortunately, Giorgi Nikoladze did not hesitate to clarify the documentation of the entire construction of the arithmometer, he died suddenly in 1931 (RMI, 2019).

It has long been recognized that the first computer was created in 1945 by American physicists John Eckhart and John Mouch, whose name was ENIAK (Electronic Numerical Integrator and Computer). However, this story turned out to be wrong - although "Enyak" is the first computer in the world, the designers of which are Eckert and Mouch, they made a great contribution to the development of computing techniques, but they did not think of the working principles of the first computer. These principles were established in 1937, and the first attempt at a computer by John Atanasovis, a Bulgarian physicist working in Ames, Iowa, and his assistant Clifford Bettis, nicknamed "ABC", was completed in 1942. At this time, only the peripheral part remained. However, due to World War II, it could not be put into

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