

Научная, научно-организационная и педагогическая деятельность И. А. Мизина была по достоинству оценена нашей Родиной. Он был лауреатом Ленинской и Государственной премий, награжден орденом Трудового Красного Знамени, орденом "За заслуги перед Отечеством" четвертой степени, многими медалями.

Игорь Александрович Мизин умер в расцвете творческих сил 8 сентября 1999 г. после тяжелой болезни. Он похоронен в Москве на Востряковском кладбище.

Коллеги и ученики И. А. Мизина продолжают начатые им работы, реализуя и развивая его научные идеи в различных организациях Российской Академии наук, промышленности и в технических университетах.

Контактные телефоны: (095) 912-4614, Е. Н. Филинов; (095) 135-6117, В. Н. Захаров

Igor Alexandrovich Mizin
Academician

In modern computer science on the threshold of the XXI century one of the main directions is the research and development of information and telecommunications technologies to create a global information space that realizes the transition from industrial society to information. This space should be a collection of information and computing resources and access to those resources from users regardless of their geographic location. One of the brightest representatives of this trend in home computer was Academician IA Mizin.

Igor Alexandrovich Mizin was born April 12, 1935 in Moscow into the family of a serviceman.

Following the tradition of the family, after graduating from high school IA Mizin joined in 1952, a listener in the Air Force Engineering Academy (VVIA) them. Zhukovsky. In 1959 he graduated from VVIA in "Operation of radio equipment the Air Force." In VVIA them was carried out and published the first scholarly works on the principles of building systems, single-sideband radio.

After graduating VVIA IA Mizin was sent to work in a well-known organization of military-industrial complex - Research automated equipment (NIIAO). Here, for the period from 1959 to 1989. IA Mizin went from engineer to chief of department, deputy director for science, received the rank of major general, was the principal designer of several large-scale systems for sharing data, regional data networks and computer networks defense.

The scientific work carried out and published IA Mizin in the 60's, have been associated with the exploration and development of methods for improving the reliability of digital information transmission through communication channels of different physical nature (telephone, telegraph, radio channels), methods for error-correcting coding with error correction, construction of probabilistic models of the discrete communication channel with dependent distortions.

PhD thesis on "Development of a method of exchange of information on private telegraphic communication channels in the command control system of special purpose" was protected by IA Mizin in 1966

Dissertation for the degree of Doctor of Science on the theme "Issues of research and development of information networks of territorial control systems," IA Mizin defended in 1972 In 1975, IA Mizin was given the title of professor in the Department of Automated management system. "

In the late 60's NIIAO headed by Academician VS Semenikhina began to develop an automated control system (ASUVS) strategic forces of the USSR Ministry of Defense (Strategic Missile Forces, Navy submarine missile, the Air Force strategic bombers). The basis of the ACS was to be a global network of data (SOD), which provides sverhdostovernuyu and delivery of classified messages anywhere in the world in seconds on an unreliable communications channels of low quality, having different physical nature. SOD was established team, headed by IA Mizin and put into operation in 1980 as part of ASUVS. SOD ASUVS based not on traditional principles of circuit-switched networks and packet-data, providing a more efficient use of channels and higher reliability of data transmission. In addition, algorithms were developed to prevent transmission errors, which configures itself to the laws of probability distribution of errors specific to each type of communication channels. "The tasks requirements to developers higher than the creators of similar systems in the West: we have the initial conditions were difficult - the quality of channels is worse by several orders. It was necessary to provide a higher final level of reliability messages than, as they said, the potential enemy - so commented the development of SOD ASUVS himself IA Mizin. - All the ideology of construction and operation algorithms open networks that is today called the seven-level system of protocols for information exchange (Open Systems Interconnection) were developed by us without borrowing foreign counterparts. They are to this day confirm their quality, reliability and superior performance. "

Scientific and practical results in the creation of the USSR under the guidance of IA Mizin regional data exchange networks for the most complex types of computer networks - heterogeneous networks in which structure should be used in almost all types of machines produced in the USSR in the 60's, and later and machinery of UCS and SM computers (must be compatible with machines from IBM and DEC). In the course of this work have been resolved following major scientific and technical problems of a systemic plan:

choice of method switching. Developed a method of switching kodogramm (datagrams), which is anticipated later appeared packet switching method. Realized IA Mizin method kodogramm in conjunction with the original principles of addressing and network management and currently has a number of fundamental advantages;

choice of network structure. Was created and then continued to improve the system of algorithmic procedures for the synthesis of networks and programs that implement these procedures. In this region of the IA Mizin were at the forefront of world science, methods of analysis and synthesis of advanced network design school IA Mizin continues to develop and today;

protocols. Since the early 80's became known international recommendations on the standard seven-layer Open Systems Interconnection model. Wide application received protocols TCP / IP. In the course of a national system of data exchange procedures have been developed for information exchange, which have no analogues in the international standards protocols. Most of the procedures developed possessed the necessary completeness, flexibility and perspective;

management protocols of data. To construct efficient adaptive routing algorithms have been created new mathematical models of queuing networks;

software. To control the computational processes of switching centers packages have been developed dozens of programs with a total of several hundred kilobytes. Instead of a universal operating system has been proposed a multi-manager specialist, focused on the effective implementation of this class of problems.

Work IA Mizin to create ODS ASUVS in the 70-ies were carried out simultaneously with the organization of Experimental ARPANet defense network in the United States, the predecessor of today's global Internet network. The first four nodes in the network ARPANet were related to the beginning of 1970, and the name "Internet" was proposed by V. Cerf and R. Kahn in 1974 in an article on using TCP. It is interesting to note that originally adopted by developers ARPANet methods and routing algorithm flow of data packets under certain conditions, to reject the transfer. Therefore, after 8-10 years of finding ways to circumvent this drawback ARPANet developers have decided to radically change the algorithm, and came to the method of flow control, similar to that which was implemented in the Soviet Union, IA Mizin.

For his work to establish the theoretical foundation and a hardware-software systems for large-scale systems of data exchange in 1981, IA Mizin was awarded the Lenin Prize. In 1984, IA Mizin was elected a corresponding member of USSR Academy of Sciences in the department of computer science, computer engineering and automation (specialization in Computer Science).

In the 80 years under the guidance and direct participation of the IA Mizin as chief designer were developed and implemented the basic technical equipment for telecommunications networks, including:

high-performance problem-oriented complexes protect data from errors in communication channels;

high-performance packet switching data facilities in networks of arbitrary structure;

multifunction terminal means of access subscribers in the network with packet switching;

complexes of automation control network operation and restoration of its structure under random and intentional topological degradation.

In 1987, for a series of these works, IA Mizin was awarded the USSR State Prize.

Books written by IA Mizin, have manuals, which taught many generations of experts in the field of information systems and data transmission:

"Foundations of Information Systems. Part 1. Information transmission system of discrete messages. Characteristics of channels and data transmission systems. Part 2. Methods of transmitting digital information via communication channels." MIREA, 1970-1971 (jointly with Urinson LS and Hrameshinym GK).

"The transmission of information in circuit-switched communications." MA Communication, 1972 (together with Urinson LS and Hrameshinym GK).

"Network packet switching." M., Chapman and Hall, 1985 (together with Bogatyrev VA, and Kuleshov, AP).

"The Protocols of information networks." M., Chapman and Hall, 1990.

The results of research and experience in creating and operating various design options for large-scale regional computer networks and systems of data exchange utility, system design concepts of such systems and networks have been compiled IA Mizin in 1986 and published in a collection of articles "Cybernetics and Computer Science" (ed. Academician VA Melnikov).

Over the past ten years (1989-1999 gg.) IA Mizin head of the Institute of Informatics Problems. Since 1994, he was chief designer of an information security governance, and since 1997 it has also been entrusted with the functions of General Designer ACS Armed Forces of the Russian Federation.

During these years, IA Mizin has posed the problem of organizing a national integrated network of information transfer (OISPI) and creating the necessary conditions for the country's information society at the present stage.

Back in 1990, IA Mizin, said: "The successful implementation of development plans of large-scale data networks in our country must address a range of complex technical problems. So far we have succeeded in largely pre-empt the emergence of new and promising trends. For maintain this ability in the future must continue research in these most important areas:

develop new methods for switching, distribution and compaction of information;

creation of an advanced protocol that could be a contribution to our country in international recommendations and serve as a basis for future international standards;
widespread introduction of microprocessor technology in data transmission systems;
Site Creation and switching hubs loads that would not require service at all or could be serviced periodically.
These areas identified IA Mizin, retain their relevance in the present.

The concept of a Russian nation-wide and regional integrated networks of information was published IA Mizin in 1993 in the journal "Telecommunications", № 12 and in 1995 in a collection of IPI RAN Systems and means of informatics ", Vol. 6.

Given the current situation in Russia in the field of communication networks and data transmission, IA Mizin attached great importance to solving technical and organizational problems of integration of existing departmental data networks, and sought to raise these issues at all levels of management: companies - operators of telecommunications services in Russia, agencies and the Russian government, using his vast experience, high qualifications and credibility.

In 1997, IA Mizin was elected a member of the Academy of Sciences in the department of computer science, computer engineering and automation (specializing in Computer Science).

Considering the establishment of integrated information and telecommunication systems (ITCS), one of the most important directions in modern computer science, IA Mizin published in a collection of IPI RAN Systems and means of science "(Vol. 9, 1999), his latest work" The current state perspective integrated information and telecommunications systems and networks. "

Scientific papers IA Mizin different depth and originality of solutions, a combination of serious mathematical tools from the engineering intuition and practical orientation. He published over 190 scientific publications including 13 monographs and 12 inventor's certificates.

IA Mizin always did a lot of organizational work. He was chairman of the section "Theory of information transmission and processing of the" Scientific Council for complex problem "Cybernetics" of the USSR, a member of the Commission on the computing centers of collective use of computers and networks at the Presidium of the USSR, a member of the Council of Heads Akademseti, a member of the Soviet Working Group of the International Organization for Standardization . In recent years, IA Mizin was chairman of the Scientific Council of the Information and computer networks, a member of the Presidium of the scientific-technical council on the program "Informatization of Russia", a member of the Coordination Council for Informatization of the Russian Presidential Administration, a member of the Scientific Council at the Russian Security Council, Council of Defense, Ministry of Economy of the Russian Federation, a member of the Presidium of the NTS with the Moscow government. From 1996 until his last days IA Mizin was active as a member of the Bureau of Information, Computer and Automation of RAS.

IA Mizin paid much attention to the training of scientific and engineering staff. He was the managing of the Moscow State University of Radio Engineering, Electronics and Automation (MIREA) and at the Moscow Technical University of Communications and Informatics (MTUCI), chairman of two specialized councils for defending doctoral theses.

They were a significant number of candidates and doctors of technical sciences. IA Mizin had a remarkable ability to create in science and industry has successfully employed large teams of professionals to unite around a talented young people.

After joining the IPI RAS IA Mizin installed and maintained active contacts with foreign colleagues. He received international acclaim and won the deep respect of many scientists and business partners in USA, Germany, Italy, South-East Asia.

Scientific, scientific-organizational and pedagogical activity IA Mizin has been appreciated by our country. He was awarded the Lenin and State prizes, awarded the Order of the Red Banner, Order of Merit of the fourth degree, and many medals.

Igor Alexandrovich Mizin died in the prime of his creative powers on Sept. 8, 1999 after a long illness. He is buried in Moscow on Vostryakovskom cemetery.

Colleagues and pupils IA Mizin continue the work begun by them, implementing and developing its scientific ideas in various organizations of the Russian Academy of Sciences, industry and technical universities.

Contact phone: (095) 912-4614, E. Filinov; (095) 135-6117, VN Zakharov

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