

## **Congratulations to Institute of Cybernetics on Occasion of its Birthday**

The history of V.M. Glushkov Institute of Cybernetics of Ukrainian Academy of Sciences begins in 1955 when on the base of a laboratory of computational mathematics and engineering in the Institute of Mathematics of UkrSSR AS there was created Computing center of UkrSSR AS which was transformed in 23.12.1961 into Institute of Cybernetics of UkrSSR AS. It is this laboratory that being the part of the Institute of Electrical Engineering of UkrSSR AS developed in 1950 under the leadership of Academician S.A. Lebedev the first in USSR and continental Europe Small electronic computing machine (Russian MESM). Such research Institute was the first in the Soviet Union. Later this name was given to other institutes, faculties and departments at universities.

V.M. Glushkov was elected the director of Institute, later he became Academician of Academy of Sciences of the Soviet Union. V.M. Glushkov created Institute of Cybernetics as multidisciplinary complex enabling not only to make basic research on designing fundamentally new computer models and their software systems, but also to conduct basic studies on development of a wide class of optimization problems of different nature of large and super large dimension, algorithms for dynamical systems control, to conduct investigations in the field of artificial intelligence (pattern and human speech recognition), complex biological and physiological objects.

It is impossible even briefly enumerate the most significant results obtained by the staff of Institute over the past years. So we will point out only some of them.

Essential contribution to creating a computer with high level of machine intelligence was the development and industrial production of machines of Mir series which became the first professional ones. At that time Mir-1 was the only machine bought by highly developed western countries. Computers Mir ("Promin", Mir-1, Mir-2, Mir-3, SM 1410, ES 2680) until mid 70-s of the last century were the most mass-produced machines of this class in the country. To do this the structure of Institute had special design office and pilot plant.

Recognition of the new direction did not come immediately. The life showed that it was the breakthrough into the future. As a matter of fact computers of Mir series were prototypes of modern personal computers, first machines in which a programmer could work in conditions of personal contact with a machine using a language of mathematical problems.

The next great achievement of Institute was the creation of series of computers “Dnepr” designed for solving a wide range of problems of technological processes control. The creation of the first domestic machine “Dnepr” initiated the development of industrial production of controlling machines. By late 60-s machines created by the Institute designs accounted for 30% of computers park in USSR. Some time later initially substantially based on computer “Dnepr”, and afterwards based on more advanced computers there were developed series of computer control systems of both individual technological processes and shops of chemical, oil refining, metallurgical and shipbuilding industries as well as enterprises in radiotechnological, electronic, instrument-making industries including the entire series of special purpose control systems.

An important aspect of Institute of Cybernetics work was publishing activity: monographs, collections of scientific papers on cybernetics and computer engineering were issued, scientific journals established. In 1965 the Institute created our country’s first journal “Cybernetics” (later came to be called “Cybernetics and Systems Analysis”) which quickly gained prestige and recognition. The journal “Automatics” (later called “Problems of Control and Informatics”) and afterwards “International scientific-and-engineering journal “Problems of Control and Informatics” (established in 1956) also came to be issued in Institute of Cybernetics. Both journals came to be translated into English to be republished in USA. In 1972 the journal “Control Systems and Machines” was set up.

A significant event in a life of Institute and a wide circle of specialists was the publication in 1975 of “Encyclopedia of Cybernetics” (in Russian and Ukrainian languages) whose preparation for publication involved major specialists of the Institute, Moscow, Leningrad, Novosibirsk and other scientific centers of Soviet Union. All this contributed to the growth of scientific prestige of Institute.

In conditions of economic crisis in Ukraine in early 90-s of the past century it was necessary to transform SDO (special design office) and Special design-technological office of Institute and its scientific subdivisions into some independent institutes of NAS of Ukraine united into Cybcenter by Informatics department of Ukrainian NAS.

Summing up what has been just said we can state that Institute of Cybernetics has the right to be proud of its achievements, and we congratulate the staff of Institute with jubilee and wish everybody strong health and success regardless of all hardships that suffer the entire country and National Academy of Sciences of Ukraine.

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