

## Anniversaries in the Development of Information Technologies at Bulgarian Academy of Sciences

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This year we are celebrating several anniversaries in the development of information technologies and of automation and informatics in particular within the Bulgarian Academy of Sciences (BAS):

- 45 years since the formation of an independent section of Automation and Telemechanics in the Technical Sciences Department of BAS;
- 40 years since the founding of the Institute of Engineering Cybernetics (IEC) at BAS;
- 26 years since the founding of the Institute of Engineering Cybernetics and Robotics (IECR) at BAS;
- 10 years since the founding of the Institute of Information Technologies (IIT) at BAS.

These anniversaries make it a good moment to look back on the development of information technologies at BAS.

The study of information science in BAS has followed the progress of Bulgarian and international research, fully exploring the potential of modern technologies. New methods and hardware-software tools have been making work even more exciting.

About four and a half decades ago it has become clear that computers and computer technologies will define the direction of science and research techniques for a long time to come. That is why departments, working on automatic control and regulation, on systems for centralized telemechanic control and bionics, were established in IEC at BAS. The work of those departments brought results in the outstanding implementation of computers in industry. An automated system for control of complex water navigation objects was designed and a system for industrial traffic control (ASTRA-71) with a specialized control machine was implemented. The research projects were mainly concentrated on the theory of automatic control, operational research, automata and others. Many qualified specialists were and are still working to solve significant problems of the national industry.

In 1978 IEC was transformed into Institute of Engineering Cybernetics and Robotics (IECR). It was specialized in solving challenging tasks in the implementation of information technologies in the economy of Bulgaria. IECR-BAS had strong support for its research and a developed industrial experimental basis. Work included conducting tests of industrial samples and completion of construction documentation. The active research at the institute featured studies in industrial robots, personal computers, artificial intelligence, image recognition and decision support systems. IECR at BAS coordinated and was responsible for the realization of the National Programs in Robotics and Personal Computers. These programs resulted in the production of various industrial series.

After 1989 the transition from centralized to market economy meant changes in BAS structure and activities. In 1990 several new scientific-research institutes were founded to succeed the basis of IECR-BAS. One of them was the Institute of Informatics, in 1994 it was renamed Institute of Information Technologies at BAS.

Research was concentrated on the fastest developing fields of information science – image recognition, decision support systems, information processes and systems, artificial intelligence, intelligent systems, soft computing. IIT at BAS aims to best integrate its work in the European exploration society. This trend also reflects the Bulgarian transformation into an economically strong member of the European Union.

The most significant achievements of the Institute result in the realization of many international projects as part of TEMPUS, 4-th, 5-th and 6-th Frame programs of the European Union. Bilateral and multilateral cooperation with many foreign academic institutions has also been successfully developed.

Looking backward, we feel obliged to name and remember for their contribution some of the leaders of the scientific departments, which were predecessors of the present Institute of Information Technologies, and namely – Denjo Belchev, Nikolay Naplatanov, Angel Angelov, Vassil Sgurev, Vassil Vassilev.

Looking into the future, the role of information technologies seems set to grow. Hence the prospects of IIT at BAS with respect to the theoretic and applied research will also grow. It could not be otherwise since Bulgaria has set a goal to increase the share of information technologies in its economy, thus completing the transition to innovation-oriented knowledge-based economy.