INFORMATICS:

ON THE AGENDA OF INTERNATIONAL SCIENTIFIC EVENTS

The second half of the twentieth century is characterized by an increasing diversification of human activities and by an unprecedented technical and scientific development, this peculiar aspect being subject to a continuous strengthening.

It is obvious that on this background, the suitable organization and coordination of the various human activities is to be achieved only based on the knowledge and effective communication of all existing phenomena in economy, of contemporary society needs and resources.

At the general economic level and especially in the sphere of material production, the momentous significance of information is indisputable. The management of an organization cannot be achieved without a thorough knowledge of its tasks (orders), resources and requirements. However, the prerequisite of the management function, hence of knowledge, is the creation of the most suitable information system, in its broad consensus, that is a system made up of abstract and material means of collecting, transmitting, processing and storing information.

It is to be noted that an information system is not limited to the above-specified operations; instead, data processing is to constitute the basis of decision making, viewed as a sound choice made among a number of possible alternatives. The objectives and contents of these decisions must be communicated to the whole staff which is to bring them into life. All these aspects and activities, making up an information system, can be accomplished through the utilization of various concepts and methods, whose proper choice and application aim at increasing work efficiency in the service of developing economic policy and social progress decisions. The proper handling of these concepts and methods belongs to *informatics*, a modern science, placed at the boundary of some disciplines of physics, mathematics and economics.

While the classical theory of information deals chiefly with data transmission, with the speed and quality of the transmission, informatics comprises

a much larger range, by including a number of fields such as: data collection, their primary processing, data transmission and centralization, their processing at a higher level in view of decision making, data classification and storage, including their updating, the retransmission of information concerning the decisions already made, as well as the elaboration of an efficient system of data quality control, checking and correcting errors.

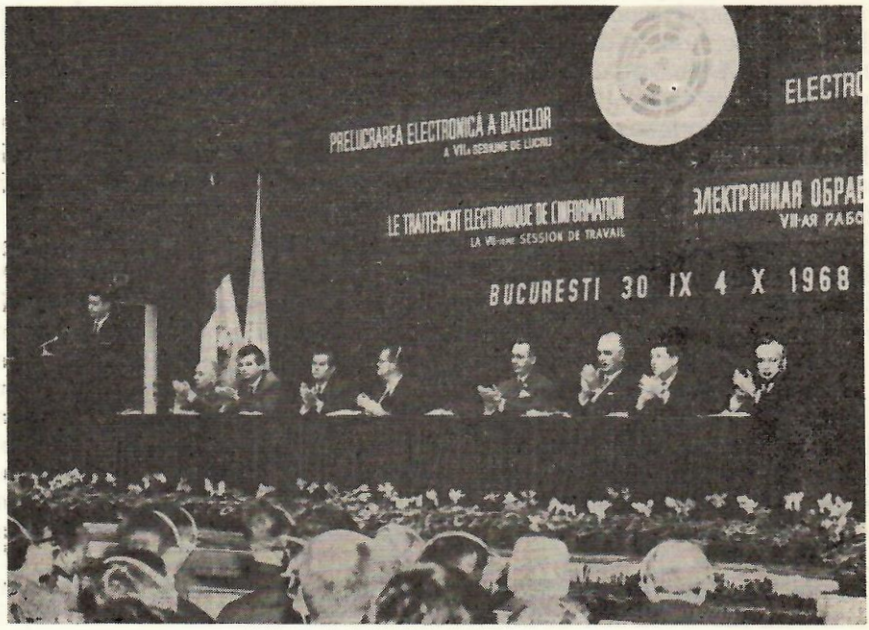
By contributing to marking the limits of informatics as a science, electronic computers have introduced new elements by making it operative through the possibility of approaching a broader and more complex range of solutions.

At present, informatics aims at devising information systems capable of responding in due time to a specific information demand and studies problems such as the way of supplying information and their form, the economic efficiency of information received with respect to the cost of collection and processing.

The entire range of scientific aspects and activities and the technical and economic implications included by informatics, have constituted the subject matter of two international scientific meetings which have recently taken place in the Socialist Republic of Romania.

Chronologically, the first of these meetings was organized by the Central Statistical Board, under the sponsorship of the United Nations Organization and its objective was *electronic data processing*. This international session was attended by scientists and experts from a number of 22 countries, as well as by members of the staffs of some international bodies.

The debates during this session had a scientifical working character and were chiefly based on documents prepared by the Central Statistical Board



of the Socialist Republic of Romania; the reports of participating countries were further discussed, as well as a paper on the joint use of data banks, by Mr. Christer Arvas, Sweden, consultant to the E.C.E. Secretariat.

The documents *prepared by the Romanian delegation*, which are integrally published in the present issue of this journal, have not only shown a practical experience, as young as it is advanced in matters of electronic processing, but have also approached a number of problems of particular present concern, by discussing the rational use of computers. Among these problems we can quote the development of international programming languages, the problem of programming automation, its automatic control, as well as the devising of an efficient checking system coupled with error correction; these are important contributions to software development which, as it is well known, has remained all over the world behind the progress achieved in hardware.

Moreover, the setting up of *central data banks*, the organization of their management, securing access to the various information files and their updating — i.e. their renewal — are some of the subjects discussed in other reports submitted at this international scientific session.

The reports elaborated by the experts of the Romanian Central Statistical Board have roused a high interest and received a unanimous appreciation on the part of all attendants to the meeting. Concerning the report headed "Electronic Data Processing of the Population and Housing Census in Romania", Mr. Barrie Davies, Director of the Statistical Division of the United Nations' Economic Commission for Europe, stated that "it is the most advanced experience accomplished in census matters".

Referring to programming standard methods, to the automatic error correction system, a.s.f., Mr. Naum Shvartser, Assistant Director at the U.S.S.R. Central Statistical Board, pointed out that the experience of his Romanian colleagues is very interesting and highly useful to his country, where a general population census is being prepared.

Moreover, Mr. J.W.W.A. Wit, delegate of Holland, stated that the merit of Romanian specialists consists of providing the Conference with a number of basic and detailed reports, experiences and solutions on electronic data processing of a population and housing census, with the study of information systems, generating the program for the logical control of statistical data and the development of statistical tables, all accomplished by the Romanian Central Statistical Board.

The papers submitted by experts and specialists from the Central Statistical Board of the Socialist Republic of Romania are quoted at a prominent place in the concluding report prepared by the Economic Commission for Europe of the United Nations Organization.

In appreciating the results of this Conference and comparing them with achievements accomplished in his country, Mr. Max Richardson, delegate of Great Britain, stated: "This Romanian experience is all the more valuable for us as your specialists worked with a computer similar to that we will also have by the end of this year and which will be used for processing the census which is being prepared. I would like to particularly emphasize the successes obtained in achieving well developed programs as well as in creating efficient and simple languages. Romanian experts devised a particularly adequate

language for compiling tables. We have also tested similar languages, but the Romanian system is much more developed. At the same time, I admire your organizational system, which I consider as being very good."

Commendations on the organization of the electronic data processing in Romania, as well as on the session organization, have been expressed by all participants in the International Session on Electronic Data Processing.

The second scientific meeting has been the Symposium headed "Applications of the Information System in Economy", organized by the Association of Scientists in the Socialist Republic of Romania.

The proceedings of this Symposium took place during a number of plenary sessions, as well as in the following special sections:

Ist Section: "Operations research in economy and economic processes algorithmation."

IInd Section: "Applications of the information system to planning."

IIIrd Section: "Applications of the information system to the scientific management of enterprises."

IVth Section: "Applications of the information system to the banking and financial system, in the supply and sales system, a.s.f."

Vth Section: "Organizational and structural problems of data processing systems."

Moreover, three round-table discussions have been organized during the Symposium, on the following subjects:

1 — The utilization efficiency of computers in the management of large organizations.

2 — Present problems of operations research in economy.

3 — Organizational and structural problems of data processing systems.

The international character of this scientific meeting was bestowed through the structure of the attendance and of the reports. Indeed, out of 88 reports delivered, 26 belonged to various foreign scientists and specialists. A number of foreign guests participated in the round-table discussions, by expressing their opinions, which also included frequent appreciations of results accomplished in our country.

The appreciations referred both to the reports delivered by Romanian scientists and to the objectives visited by foreign guests in agreement with the Symposium programme.

In concluding, we may state that both scientific meetings focused on modern as well as useful objectives, thus fully contributing to the development of informatics. By speaking of usefulness, we envisage the value of these manifestations in conveying an advanced experience, in the exchange of ideas, a prerequisite for a truly fruitful scientific activity, and last but not least, the practical side — having immediate application — of the subject-matter under debate.

The fact that Bucharest has been chosen as the site for the proceedings of the International Session on Electronic Data Processing and that the Symposium on "The Applica'ions of the Information System in Economy" enjoyed large attendance on the part of foreign scientists, confirms the interest expressed by specialists all over the world in the achievements and prospects of our country in the field of informatics.



This interest has not been fortuitous; on the contrary, it represents the natural result of the policy followed in our country in the sphere of economic and social development, of science promotion, of setting up a climate of mutual understanding among peoples, for the strengthening of peace all over the world, according to the ideals aimed at by humanity.