Honeywell Bull, J. D Warnier, B. M. Flanagan

INSTRUIRE IN PROGRAMARE

(A Romanian Translation from French)

Editura Tehnică, București

I think that there are many works of cybernetics and informatics devoted to computer use techniques, but rather few deal with systems and programs organization. Therefore, the coming out of print of this book throws a new light on the technique of programs organization. The authors do not go beyond a research of the logical programs organization, since they have set themselves the task of laying bare the stages of a reasoning meant to lead from stating the problem up to the logical organization of the program through which the computer takes over the stated problem. This method is based on the use of the language of the sets theory. As the authors make clear, this method was reached starting from a method of program organization for machines, having a connection board based on Boole's algebra. At that stage a differentiation was made between the problem to be worked out and the computer.

The basis of this method is the treatment of a problem starting from the "system" set, that is to say from the general to the particular, reaching the instruction to be performed by the "machine". For the logical decomposition of a problem (treated as a set), the authors state decomposition rules and define notions involved in the decomposition; all this is necessary for the investigation of any problem. However, a strict application may seem heavy for the users of some advanced programming languages. To this end, the authors suggest the following solution: on describing the problem it is necessary to apply exactly these rules, after which programs are being prepared taking into account the language to be used for writing the program. Thus, the suggested method is not stiff, enabling a rigorous reasoning that leads to diverse solutions for organizing the same program.

The second part of the book describes the logical organization of the input and output data and the manner of loading the treatment stages, the use of truth tables and Veitch diagrams for this purpose, the optimization of tree-shaped structures and, based on the above, the program organization as an ordered set of instructions.

The practical use of this method shows that very large programs are performed in short delays and their updating and alteration is very easy. Likewise, the method gives rise to a common language between the computer experts and their substitutes, and proves once more that informatics as a science exists independently of the computer, this latter being in fact a means of information treatment.

I. LUNGU