The report defines the algorithmic language ALGOL 60, designed by an international committee. This language is suitable for expressing programs executed by digital computers. Describing the syntax by formulas and the semantics by prose explanations, the report defines the form and meaning of all legal programs. The emotional tensions created by the work had still not subsided in 1978 when a detailed historical study of the development of the language was made.

"A programming language is not a scientific contribution in the ordinary sense, but a conceptual construction, and the discussions leading up to ALGOL 60 were dominated by the strong, personal opinions of the contributing individuals on what should be put into it. The emotional tensions created by the work had still not subsided in 1978 when a detailed historical study of the development of the language was made."

"The reason why this report is so highly cited seems to be that it entered an accelerating activity of programming and programming language development at a fairly early stage and managed to contribute novel ideas and styles in several different areas of the work. Thus, the language ALGOL 60 is designed around a small number of very general notions, some of them original, particularly the block structure and the procedure concept. As a whole, the language combines a fair amount of expressive power with conceptual generality, economy, and elegance. In addition, in the manner the language is described in the report, a new kind of precision and completeness was achieved, partly through the use of a formal notation for describing the syntax. The report therefore became useful, not only as a description of a programming language which is useful and interesting on its own merits, but equally as a conceptual point of departure for many developments of concepts and languages in programming and, further, as a paradigm of programming language description. Thus, the notation used for describing the syntax is generally known as BNF or Backus-Naur form. Also, the terminology of the report has been quite influential."

"My work in this area was honored by the G.A. Hagemann Medal in 1963."

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