

Dedicated to the

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Naur

~~1960~~ Report on the Algorithmic Language ALGOL ⁶⁰

by
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edited by
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INTRODUCTION

Background

preliminary
After the publication ^{1,2} of a report on the algorithmic language, ALGOL, as prepared at a conference at Zurich in 1958, much interest in the ALGOL language developed.

1959
As a result of an informal meeting held at Mainz in November 1958, about forty interested persons from several European countries held an ALGOL implementation conference at Copenhagen in February 1959. A "hardware group" was formed for working cooperatively right down to the level of the paper punch. This conference also led to the publication of an ALGOL Bulletin, edited by Peter Naur, which served as a forum for further discussion. During the June 1959 ICIP Conference in Paris, there was a free-for-all in which nobody understood what the others were talking about, but it was decided to hold an international meeting in January 1960 for improving the ALGOL language. At a European ALGOL Conference in Paris in November 1959 which was attended by about forty people, seven European representatives were selected to attend the January 1960 Conference, and they represent the AFCal, BCS, GAMM and NRMG organizations. A final preparatory meeting ~~was held~~ at Mainz in December 1959.

*by Regne cen-
tralen, Copenhagen*
*Association Francaise de Calcul
British Computer Society
Gesell*

*The seven representatives
held*

† One of the American representatives, William Turanski, was struck by an automobile and critically injured just prior to the January 1960 Conference and was unable to attend the conference.

Precise
1. A.J. Perlis and K. Samelson, Preliminary Report - International Algebraic Language, Comm. Assoc. Comp. Mach. 1, N° 12 (1958), 17

2. A.J. Perlis and K. Samelson, Report on the Algorithmic Language ALGOL by the ACM Committee on Programming Languages and the GAMM Committee on Programming, Numerische Mathematik Bd. 1, S. 41-60 (1959)

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Meanwhile, in the United States, anyone who wished to suggest changes or corrections to ALGOL was requested to send his comments to the ACM Communications where they were published. These comments then became the basis of consideration for changes in the ALGOL language. Both the SHARE and USE organisations established ALGOL working groups and both organizations were represented on the ACM Committee on Programming Languages. The ACM Committee met in Washington in November 1959 and considered all comments on ALGOL that had been sent to the ACM Communications. Also, seven representatives were selected to attend the January 1960 international conference. These seven representatives held a final preparatory meeting in Boston in December 1959.

January 1960 Conference

The thirteen representatives, coming from Denmark, England, France, Germany, Holland, Switzerland and the United States, conferred in Paris from January 11 to 16, 1960.

(to be filled in from Wijngaarden notes)

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As with the previous ALGOL report, three different levels of language are recognized, namely a Reference Language, a Publication Language and several Hardware Representations.

Reference Language

1. It is the working language of the committee.
2. It is the defining language.
3. It has only one unique set of characters.
4. The characters are determined by case of mutual understanding and not by any computer limitations, coders notation, or pure mathematical notation.
5. It is the basic reference and guide for compiler builders.
6. It is the guide for all hardware representations.
7. It is the guide for transliterating from publication language to any locally appropriate hardware representations.
8. The main publications of the ~~common~~ language itself will use the reference representation.

ALGOL

Publication Language

1. The description of this language is in the form of permissible variations of the reference language (e.g., subscripts, spaces, exponents, Greek letters) according to usage of printing and handwriting.
2. It is used for stating and communicating problems.
3. The characters to be used may be different in different countries but univocal correspondence with reference representation must be secured.

Hardware Representations

1. Each one of these is a condensation of the reference language enforced by the limited number of characters on standard input equipment.
2. Each one of these uses the character set of a particular computer and is the language accepted by a translator for that computer.
3. Each one of these must be accompanied by a special set of rules for transliterating from Publication language.

Reference Language Link