

4. HIGMAN, B., and GOODMAN, R. H. (1963). *The Language of Computing: A Programmed Introduction to ALGOL*, London: English Universities Press (in press).
5. MCCracken, D. D. (1962). *A Guide to ALGOL Programming*, London and New York: Wiley.
6. DIJKSTRA, E. W. (1962). "Operating Experience with ALGOL 60," *The Computer Journal*, Vol. 5, p. 125.
7. DUNCAN, F. G. (1962). "Implementation of ALGOL 60 for the English Electric KDF9," *The Computer Journal*, Vol. 5, p. 130.
8. DUNCAN, F. G. (1963). "Input and Output for ALGOL 60 on KDF9," *The Computer Journal*, Vol. 5, p. 341.
9. HOARE, C. A. R. (1962). "Report on the Elliott ALGOL Translator," *The Computer Journal*, Vol. 5, p. 127.
10. HOARE, C. A. R. (1963). "The Elliott ALGOL Input/Output System," *The Computer Journal*, Vol. 5, p. 345.
11. HOCKNEY, R. W. (1962). "ABS12 ALGOL: an Extension to ALGOL 60 for Industrial Use," *The Computer Journal*, Vol. 4, p. 292.
12. WOODGER, M. (1960). "An Introduction to ALGOL 60," *The Computer Journal*, Vol. 3, p. 67.
13. KNUTH, D. E., and MERNER, J. N. (1961). "ALGOL 60 Confidential," *Communications of the A.C.M.*, Vol. 4, p. 268.

Correspondence

To the Editor,
The Computer Journal.

A Hardware Representation for ALGOL 60 using Creed Teleprinter Equipment

Sir,

In your January issue, you published a paper by J. M. Gerard and A. Sambles describing the ALGOL 60 hardware representation for 5-hole Ferranti coded Creed teleprinter equipment. The paper contains many references to the KDF 9 character set, and, in view of the authors' conclusions, could be mistakenly taken to be the representation adopted by KDF 9 users. This is in fact not the case; a Working Party set up to consider the matter by our KDF 9 Users Group has recently agreed a 5-hole representation for ALGOL 60 which differs from the published proposals in the following instances:

	REFERENCE LANGUAGE	KDF 9 FLEXOWRITER	GERARD AND SAMBLES	EECUA KDF 9 5-hole CREED
(1)	↑	↑	*POW	**
(2)]])	*)
(3)	⌈	[£	*Q
(4)	⌋]	?	*U
(5)	;	;	·,	*,
(6)	:=	:=	.=	*=

The reasons for the choice of the above 5-hole representation of ALGOL for use on KDF 9 were briefly as follows:

- (1) ** was adopted in preference to *POW as it is desirable to have a non-alphabetic representation. It was, of course, suggested by the equivalent representation in FORTRAN.
- (2) The use of) for] is directly opposed in philosophy to that adopted by E.E. Co. in writing their Compilers, namely that all basic symbols must have a context-free representation. Further, the representation adopted removed an implied restriction on the use of] within strings.
- (3) and (4) *Q and *U (quote and unquote) were adopted for string quotes ⌈ as they are a more natural representation than £ and ?. Further, the use of ? (5-hole binary 29) is inconvenient on KDF 9 due to the hardware restriction that 5 channel binary 29 is the "End of message" character.

(5) and (6) *, and *= were adopted in preference to ., and .= on the grounds of consistency, and follow De Havillands' approach in implementing ALGOL on Pegasus.

Yours faithfully,

J. M. R. WATSON (Chairman, Working Party
on 5-hole Working)
G. M. DAVIS (Secretary, EECUA).

English Electric Computer Users Association,
London Computer Centre,
Queens House, Kingsway, W.C.2.
18 March 1963

To the Editor,
The Computer Journal.

Sir,

The arguments used by Gerard and Sambles (1963) to support their choice of a hardware representation for ALGOL 60 in terms of Ferranti Pegasus five-track paper-tape code are not ideally consistent or convincing, as the following comments indicate.

1. While \rightarrow for $:$ may be thought suggestive when used in array declarations, it can hardly be considered so when used as the separator between a label and a statement. The alternative $..$ would appear to be suitable (and perhaps suggestive ?) in both cases. The argument that this is too similar to the symbol $..$, would, of course, apply equally to the symbols $:$ and $;$.

2. It seems a pity that the symbol $**$ was not adopted for \uparrow , in conformity with FORTRAN and the Elliott 803 Telecode, instead of the clumsy *POW.

3. Since a single asterisk is elsewhere used to denote underlining of basic symbols, the choice of $* \geq$ and $* >$ to represent $<$ and \leq respectively seems particularly unfortunate. If suggestiveness is a desideratum, why not $n \geq$ and $n >$?

4. If the above changes were made, \rightarrow would remain as an escape symbol.

Yours faithfully,

91 Kingston Road,
Earlsdon, Coventry.
21 March 1963

G. H. L. BUXTON.

Reference

GERARD and SAMBLES (1963). "A hardware representation for ALGOL 60 using Creed Teleprinter equipment," *The Computer Journal*, Vol. 5, p. 338.