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Correspondence

To the Editor
The Computer Journal
Sir,

Corrigendum

Further to my letter of 19th September, (*Comp. J.* **24**(1)95; February 1981), please note that the A.C.M. article—which I stated was due to appear in 1980—was delayed in publication, and eventually appeared in A.C.M. *Sigplan Notices* **16**(4)64–67, April 1981.

Yours faithfully
J. G. HUNT

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19 May 1981

To the Editor
The Computer Journal
Sir,

MU5 descriptors

I was surprised to learn from reading *The Computer Journal* that the descriptors in MU5 have recently been altered to resemble those of the ICL 2900 ('Principles of descriptors', Bishop & Barron, Vol. 24, No. 3, p. 215). I commissioned that part of the processor which deals with descriptors in 1972, and neither I nor anyone else has changed it since. There was indeed a convergence exercise with ICL in early 1970, during which various changes were made to both the MU5 specification and that of ICL's 'New Range', long before it was called 2900, or even announced. The descriptor formats in the two systems have been virtually identical ever since. Either the authors have omitted to read the literature for the past decade (for example, J. Standeven, D. B. G. Edwards and S. H. B. Lanyado, 'The MU5 secondary operand unit', *IERE Conf. Proc.* No. 25, pp. 429–440, (1972)), or the facts do not happen to fit in with their theories.

Yours faithfully,
Dr R. N. IBBETT
Senior Lecturer in Computer Science
Department of Computer Science
The University
Manchester M13 9PL
24 August 1981

To the Editor
The Computer Journal

Sir,

Os, Zeros, Thetas and Phis

I entirely agree with A. A. Croxford that it is time we sorted this problem out once and for all, and I for one would accept almost any practicable solution rather than the present chaos. His particular solution, however, that letter O should be abolished and all circular characters should represent zero, would cause substantial difficulties for programming languages.

The identifier O, by itself, would have to be illegal as completely ambiguous otherwise, but is of course very little used. But are we really willing to do without identifiers beginning with O, such as OXYGEN, OCTAL, OVERTIME and OODLES? We could, I suppose, redefine an identifier as any collection of letters and digits as long as there was a (non-O) letter there somewhere, but this would still leave ambiguities in some languages.

Fortran, for example, would need to distinguish between D0 10 J=1,5 and D0 1 0J=1,5. Furthermore, it would lose the ability to discover an error in an expression like 3K—instead of faulting the absence of the intended multiplication sign it would probably give a new variable called 3K and carry on.

Mr Croxford says that 'for centuries we have been able to accept the fact that Os and zeros look alike'. Indeed they do in most handwriting and on most typewriters, but they are different characters to the printing trade as well as to computers. If, in the column where his letter appears, the printers had set 1980 or PERFORM (in the following letters) using the wrong characters they would look absurd to most people's eyes.

He can see 'absolutely no reason' against his proposal. My own view is that it *might* be worth adopting his suggestion, but the arguments against are so substantial that the standardisation of theta or phi for one or the other is probably preferable, if only it could be agreed.

Yours faithfully,
I. D. HILL

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26 March 1981

To the Editor,
The Computer Journal

Sir,

Letter O and number 0

I read with interest the letter from A. A. Crøxførd concerning the confusion between O and zero in the February issue of the journal, and would like to direct him to the letter from L. Richard Turner in *Comm. ACM* Vol. 9, No. 1 (January 1966) in which he describes a system which had already been in use at NASA for some ten years previously (a mere twenty-five years ago!). It continually amazes me how often it is necessary to re-invent the wheel, only to have it subsequently ignored by system designers.

Turner's scheme involves the translation, on input, of letter Os to zeros, a job which may easily be done in a compiler scanner. The compiler can then allow the use of zero as the first character of a multi-character identifier, and prohibit leading zeros in numeric constants. As leading zeros are generally used only in non-decimal based numbers, which are normally preceded by a token indicating the radix to be used, this should not cause any problems. However, Intel use a trailing H to indicate hexadecimal constants, and require hexadecimal FF to be written as ØFFH to distinguish it from the identifier FFH, which complicates matters somewhat (not least for Intel's compiler writers!)

Anyway, what about I and 1?

Yours faithfully,
J. ENGLISH

53 Ventnor Villas,
Hove,
E. Sussex
5 March 1981

Report

A group of social scientists at Karlsruhe Nuclear Centre's Department of Applied Systems Analysis involved in research into the social effects of computer aided design (CAD), visited the UK in December 1979 to gather information and exchange views with British experts on the subject. The results of this visit have now been published in a report covering the effects of CAD on working skills, the design of man-machine interface, and participation both in the design of computer-based jobs and in the design decision-making process with the aid of computers. Copies of the report (number KfK 3065) are available at DM 15.—from the following address: Kernforschungszentrum Karlsruhe, Literaturabteilung, Frau Bruks, Postfach 3640, D-7500 Karlsruhe, FRG.