idiosyncracy of Pascal concerning the identity of multiply-subscripted arrays with arrays of arrays is easily overlooked, especially, as Ian MacCallum so generously says, when reviewing a book as bad as Katzan's.[1] Nevertheless, *mea culpa*!

However, when he has by his own admission not even read the book, it is strange that Bill Findlay should spring to Katzan's defence, especially as his having done so can only serve to devalue my complimentary review[2] of his own book.[3] Had he checked Katzan's Bibliography[4] he would have found mention of the Report[5], which Findlay and his co-author David A. Watt cite[6] as 'The standard Reference on Pascal', but none of ISO/DIS 7185, which by their own admission[7] 'introduces only minor amendments to the Pascal language'. I have therefore judged Katzan by his own standards.

Regrettably, due to the long publication delays of this otherwise excellent journal, my review was written as long ago as November 1981, but BSI 6192:1982[8] (whose writ in any case does not run across the Atlantic) was not published until March 1982 and although it was in draft long before then, the British Standards Institution explicitly warn that *draft* Standards are not themselves Standards. Moreover, the definitive version of ISO/DIS 7185 is not expected to appear until October 1984.[9]

It is gratifying to learn that one was at least partly right on some points, as this means that Katzan was at least partly wrong on those points. Findlay's most surprising comment, however, is that he appears to exonerate authors from responsibility for misprints in their books. Katzan's book was intended for students and the author should therefore have been punctilious to a fault.

Yours faithfully
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Dear Sir,

Jumping to some purpose

I have been following with interest the correspondence (Hill,[1] Robinson,[2] Missala and Rudnicki,[3] Inglis[4]) generated by the paper of Arblaster, Sime and Green.[5] I wonder if some confusion could have been avoided if the original problem had been formally stated: in particular, if the role of m, and the action to be taken when A is full, had been precisely given. For instance, suppose the bounds of A and B are 1, M, and that we introduce a variable *of low* to count the occasions when we are unable to add an element to A (as A is full). Loosely following the style of Jones,[6] we might write

$$\text{pre-SEARCH}(\langle A, B, m, x, \mathit{of\ low}\rangle) \equiv 0 <= m <= M \,\&\, M\rangle = 1 \,\&\, \mathit{of\ low}\rangle = 0 \,\&\, \forall i,\ 1 <= i <= m,\ A[i] \text{ is defined and } B[i]\rangle = 1 \,\&\, \forall j,\ m\langle j <= M,\ A[j] \text{ and } B[j] \text{ are undefined}$$

$$\text{post-SEARCH}(\langle A, B, m, x, \mathit{of\ low}\rangle, \langle A', B', m', x', \mathit{of\ low}'\rangle) \equiv \textbf{let } P = \exists i,\ 1 <= i <= m \,\&\, A[i] = x \textbf{ in } P => B'[i] = B[i] + 1 \sim P \,\&\, m\langle M => A'[m+1] = x \,\&\, B'[m+1] = 1 \,\&\, m' = m + 1 \sim P \,\&\, m = M => \mathit{of\ low}' = \mathit{of\ low} + 1$$

(and all components of the state that are not explicitly mentioned on the RAS of an implication are unaltered).

As Inglis remarks, Hill's program (with a simple modification to deal with *of low*) is the only one of the three under consideration that correctly implements this specification of SEARCH. But perhaps Robinson had in mind a pre-condition of $1 <= m <= M$, and perhaps Missala and Rudnicki intended $0 <= m <= M - 1$, with $B[M]$ fulfilling the function of of low—in both cases they could argue that their (slightly modified) programs are correct with reference to their (implicit) specification.

We have now, apparently, moved completely away from the subject of gotos—but the seminal paper was concerned with the comprehension of programs, and I am simply suggesting that before analysing a program, the assumptions and aims of that program should be clearly stated.

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Book Reviews

A. WEST AND P. JANSON (EDITORS)
Local Networks for Computer Communications
North-Holland, Amsterdam, 1981. 470 pp. $53.25.

If you need a review of local network technology for planning an application these proceedings of the international conference, which brought together active researchers, engineers and systems designers, will be of value. There are a few pages on the comments and conclusions from the work sessions but most of the book consists of the 21 presented papers.

These are divided into eight headings: Routing in Meshed Star Networks; Broadcast Systems—Simple Star or Rooted Tree Multi-Star; Cambridge Ring; Performance and Comparison; Design Issues—on Znet, Front End Processor Enhancement, and linking primitive computers; Protocols—OSI Layering and the Transport Layer; Operating Systems for Distributed Environments; and Applications to Process Control and in Voice Traffic.

The papers are written assuming different levels of preknowledge, as with any conference proceedings, but they are all clear and well presented. Some of the figures are reduced to the point that good eyesight or a magnifying glass is needed. However, this does ensure that the diagram is complete on one page.

The papers each have a list of references the reader can follow up but most readers would be well advised to acquire a background knowledge of the subject before embarking on the exploration of these papers. Only a few of the papers include a general introduction before embarking on the detailed material of their design or research project. This is a valuable reference book for research, but it is not light reading for undergraduates though it could provide extra width on top of their basic bibliography.

P. GILES
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JAMES M. ORTEGA AND WILLIAM G. POOLE JR
Numerical Methods for Differential Equations
Pitman, London, 1981. 329 pp. £8.95.

This book is an excellent introduction to modern methods for the numerical solution of differential equations. It would be suitable as a text for introductory courses in numerical