

Correspondence

Sorting a Random Access File in situ

Dear Sir,

In the introduction to this article by H. W. Six and L. Wegner,¹ it is stated that merging is the 'generally accepted standard' for external sorting and that the use of Quicksort 'seems not to have found its way into an actual implementation'.

Whatever there may be in the published literature, these assertions would certainly be disputed by practical programmers.

It so happens that the very first implementation of Quicksort for business d.p. was carried out by me, soon after Tony Hoare had explained his new method (probably before publication of the algorithm). This was applied to files on the disc of an Elliott 405 computer, a machine which had secondary

store on magnetic film. But the disc was also an external store, since program and data occupied a main store comprising acoustic delay lines.

As an example in everyday use, the ADAM mini-computer operating system has a built-in function to sort a complete file on disc. At A.I.A. Ltd about 12 years ago, Quicksort was chosen to be the method. A deciding factor was that the two moving 'windows' into the file give good locality of reference. We map on to the real store 'slots', not only all the virtual pages currently resident for running tasks, but also anything read from or to be written into disc files.

Since 1960, I have implemented Quicksort for external sorting, along with other methods, on machines big and small and with all types of language. Many other people must surely

have done the same, as soon as large, inexpensive discs overtook magnetic tape as the medium for business files.

As an example with micro-computers, Quicksort was used for files on floppy disc in the generalised sort facility of a database package for Understanding Ltd several years ago.

Yours faithfully

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Reference

1. H. W. Six and L. Wegner, Sorting a random access file in situ. *The Computer Journal* 27 (3), 270-275 (1984).

Announcement

AFCET. The 8th International Conference on Pattern Recognition will be held in Palais des Congrès, Paris, France, from 28 to 31 October 1986. The Conference will be of interest to anyone involved in the field of pattern recognition.

Program

The program will consist of long and short presentations and poster sessions. Subjects to be discussed include: data classification; clustering algorithms;

signal and image processing; pattern analysis; feature recognition; pattern directed inference; inductive learning; modelling of human perception; image understanding and recognition; speech understanding and recognition; computer vision; expert-systems in P.R.; specialized architectures; VLSI for P.R.; industrial applications; robotics; biomedical P.R.; remote sensing; office automation P.R.; text understanding and verification.

The official language of the Conference is English.

Call for papers

Papers are invited on the above subjects of interest, as well as abstracts for poster sessions. Prospective authors should submit four copies of a draft of a full length paper or a 250-word abstract for poster sessions to the address below. Submissions should be made in English. Deadline: 2 December 1985.

The 8th ICPR will be organized by AFCET and sponsored by IAPR and Governmental and Industrial Sponsors.

Further information:

AFCET/ICPR Secretariat, 156, Boulevard Péreire, F. 75017 Paris.