

### 3.73 File Maintenance

See also: 22,653

KARPEN, STEVEN J. (Worthington Corp., East Orange, N.J.) 22,626

Design and implementation of a real time information storage and retrieval system.

[in *Proc. ACM 1971 Annual Conf.*, ACM, New York, 37-66. See main entry CR 12, 11 (Nov. 1971), Rev. 22,084.]

Rather than the original title, this paper should be called "Design and implementation of a hashing function for an information storage and retrieval system."

Guidance is given into the design and testing of a hashing function for a volatile set of alphanumeric keys. The interrelationship between the hashing function and the Information Storage and Retrieval (IS&R) System is examined with respect to design criteria.

Finally the design of the IS&R System itself is presented in terms of an attempt to optimize the Input/Output (I/O) time versus disk and memory storage for a volatile set of records. Built into the IS&R System design is the flexibility to optimize the system's performance under both the ideal and worst case hashing function design or performance. Emphasis, in the design, is placed on the I/O time required in updating, or inquiring, the file for a matched record retrieval.

*Abstract*

*M. D. Cooper, Berkeley, Calif.*