

[54] **FILE ACCESS SYSTEM**

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 [58] **Field of Search**.....**340/172.5**

[56] **References Cited**

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[57] **ABSTRACT**

A system is shown wherein, provided with an appropriate file organization, a data file can be read from a disk master file, given the file name, by performing one seek and one read operation. The system employs hash coding to compress a data file name to a disk file address. The disk file is positioned into fixed length blocks where each hashed file address points to a block, the block being as large as one cylinder or as small as one sector. Each block is organized such that it includes a directory for the files contained in the block and also contains the data files. Each entry in the directory contains the data file name and the address of that data file in the block. The process of locating and reading a data file entails the hash coding of a file name to yield a block address, the moving of the read head to the disk area having the block address and the reading of the directory and the remainder of the block to read out the data file. In the directory reading, the data file names are compared in real time, as they are read from the disk, with the name of the desired data file. When a name match occurs, the address of the data file in the block and the address of the next file address are read and stored. As the disk rotates, the desired data file address just read is constantly compared with the active disk address. When a match occurs, the file has been located and is read out. The reading is terminated at the address of the beginning of the next file. If the file name is not found in the directory of the block indicated by the hash coding of the file's name, then the file is not present therein.

**10 Claims, 13 Drawing Figures**

