



United States Patent [19]

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Ishii et al.

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- [54] **FILE COMPRESSION PROCESSOR MONITORING CURRENT AVAILABLE CAPACITY AND THRESHOLD VALUE**
- [75] Inventors: **Masanori Ishii; Masashi Omuro**, both of Tokyo, Japan
- [73] Assignee: **NEC Corporation**, Tokyo, Japan
- [21] Appl. No.: **669,847**
- [22] Filed: **Jun. 26, 1996**

OTHER PUBLICATIONS

Israel et al, "Evolutionary Path to Network Storage Management", *USENIX*, 1991 (Winter) p. 185-198.
 Alsberg, "Space and Time Savings Through Large Path Base Compression and Dynamic Restructuring". Aug. 1975 pp. 1114-1122, Proceedings of the IEEE, vol. 63 No. 8.
 Lelewer, D. A. et al., "Data Compression", *ACM Computing Surveys*, vol. 19, No. 3, pp. 261-296, (Sep. 1987).

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Attorney, Agent, or Firm—Foley & Lardner

Related U.S. Application Data

[63] Continuation of Ser. No. 139,030, Oct. 21, 1993, abandoned.

Foreign Application Priority Data

Oct. 22, 1992 [JP] Japan 4-308173

- [51] **Int. Cl.⁶** **G06F 17/30**
- [52] **U.S. Cl.** **395/620; 364/715.02**
- [58] **Field of Search** **395/620, 444, 395/445, 463, 460, 612, 616; 364/715.02**

References Cited

U.S. PATENT DOCUMENTS

4,888,681	12/1989	Barms et al.	395/600
5,109,433	4/1992	Notemboom	382/40
5,128,776	7/1992	Scorse et al.	358/426
5,276,898	1/1994	Keil et al.	395/800
5,313,631	5/1994	Kao	395/600
5,317,728	5/1994	Truis et al.	395/600
5,367,698	11/1994	Webber et al.	395/800
5,374,916	12/1994	Chu	340/146.2
5,403,639	4/1995	Belsan et al.	395/620
5,579,507	11/1996	Hosooouchi et al.	395/497.02

[57] ABSTRACT

A file compression processor of the present invention comprises a file status monitor which compares the current available capacity on the file unit to record files and the threshold value predetermined as the upper limit of the available capacity and a file compression portion which compresses a file on said file unit when the file status monitor judges that the current available capacity is smaller than the threshold. It further comprises a file attribute controller which stores the control information for the files recorded on the file unit including the last access date, the number of accesses, whether the file is already compressed or not and a search portion which searches for files not yet compressed with low access frequency based on the control information so as to select files to be compressed for compression by said compression portion and a compression method selector which determines the data type and the access frequency of the file for compression by said compression portion based on the control information, selects the file compression method suitable for said data type and the access frequency and instructs said compression portion to execute processing by the selected compression method.

15 Claims, 9 Drawing Sheets

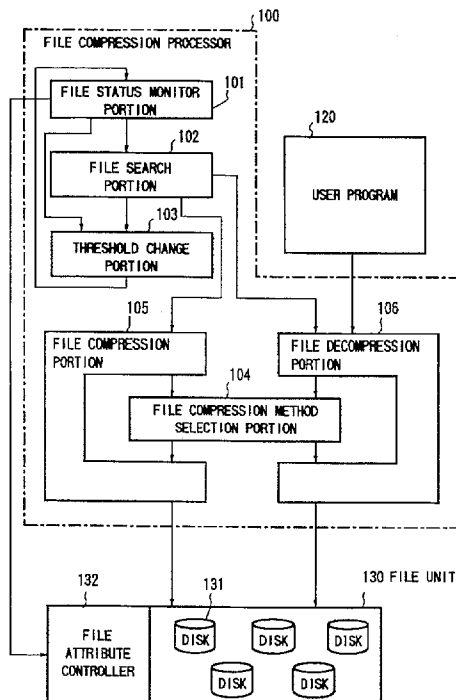


FIG. 1

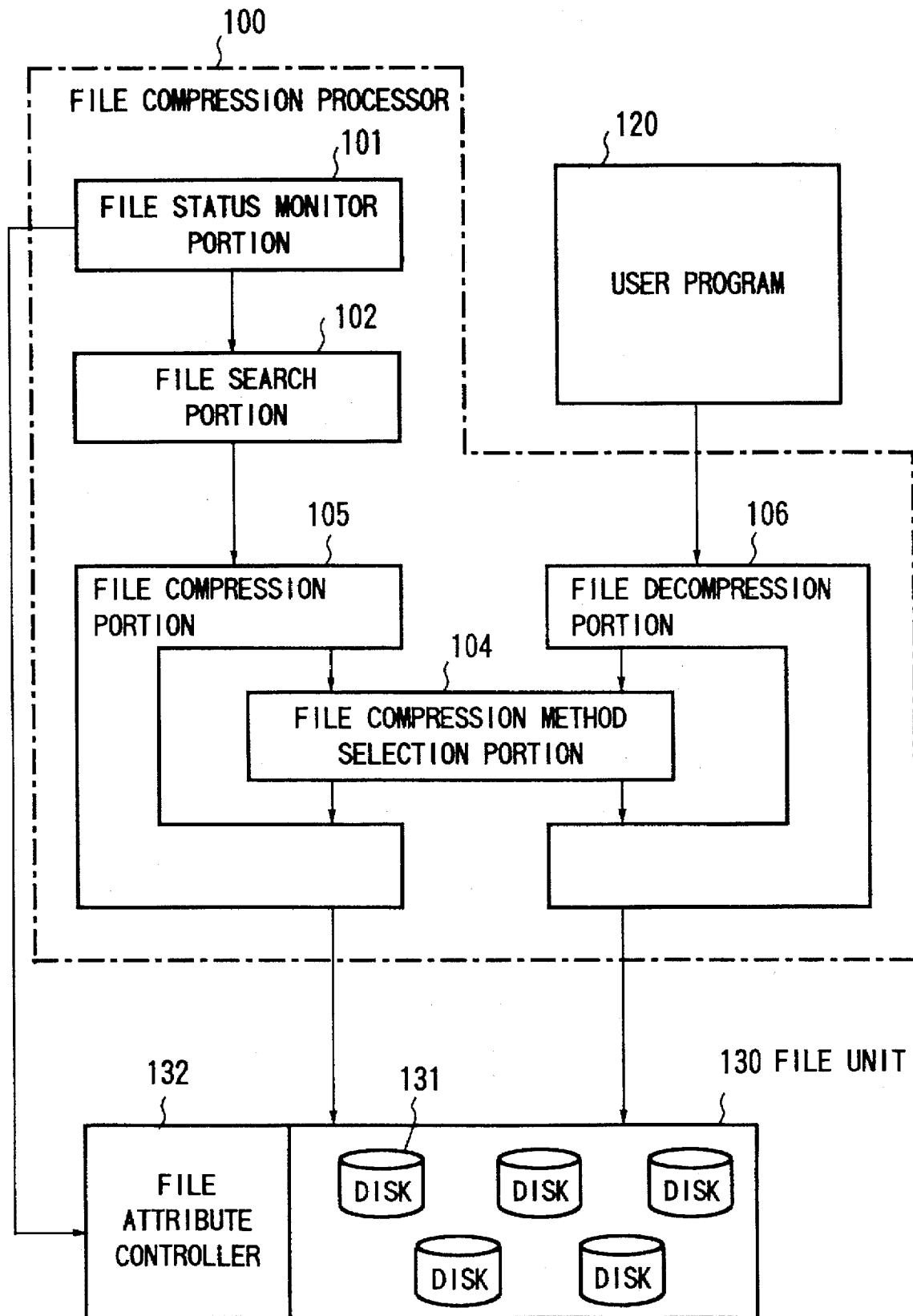


FIG.2

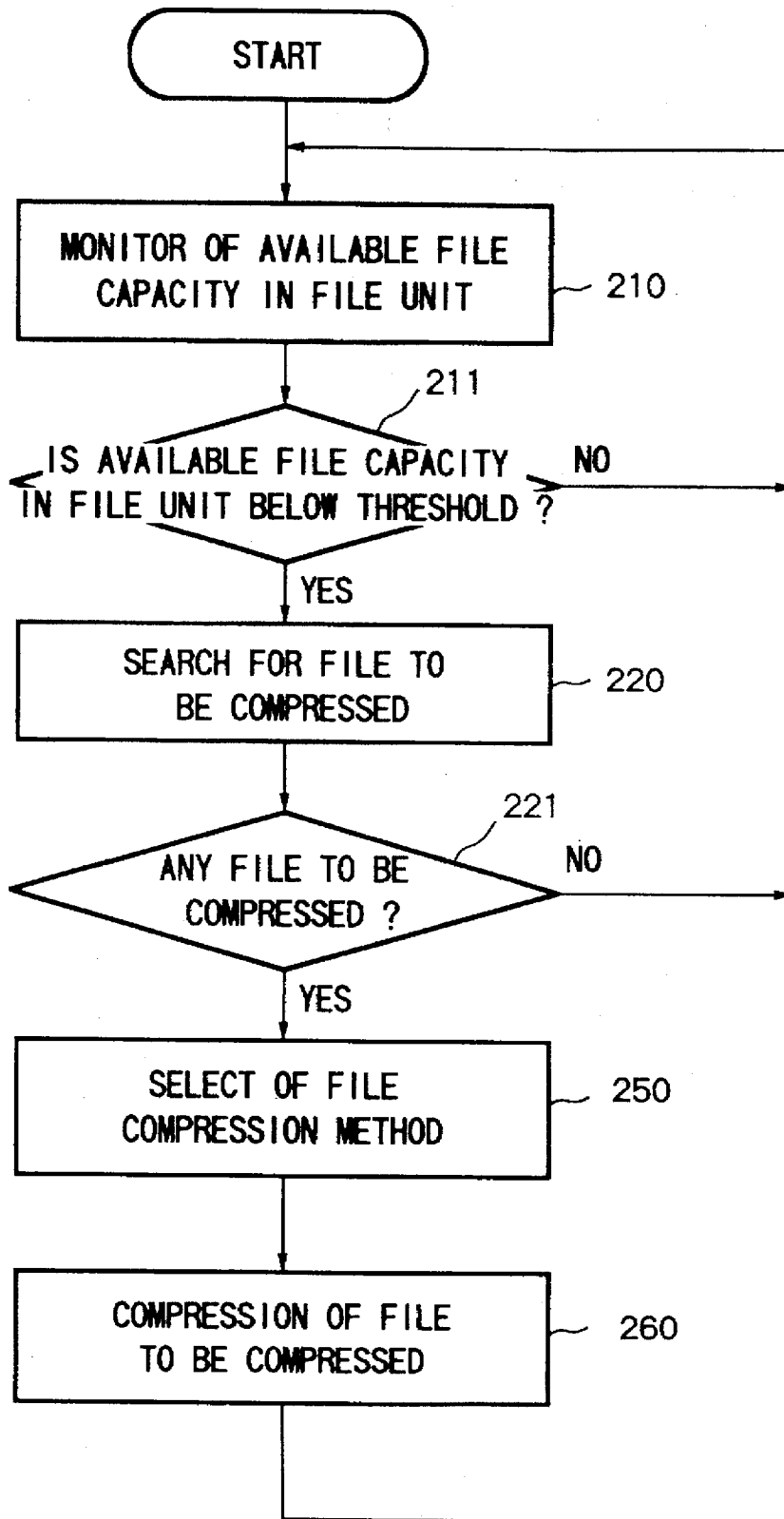


FIG.3

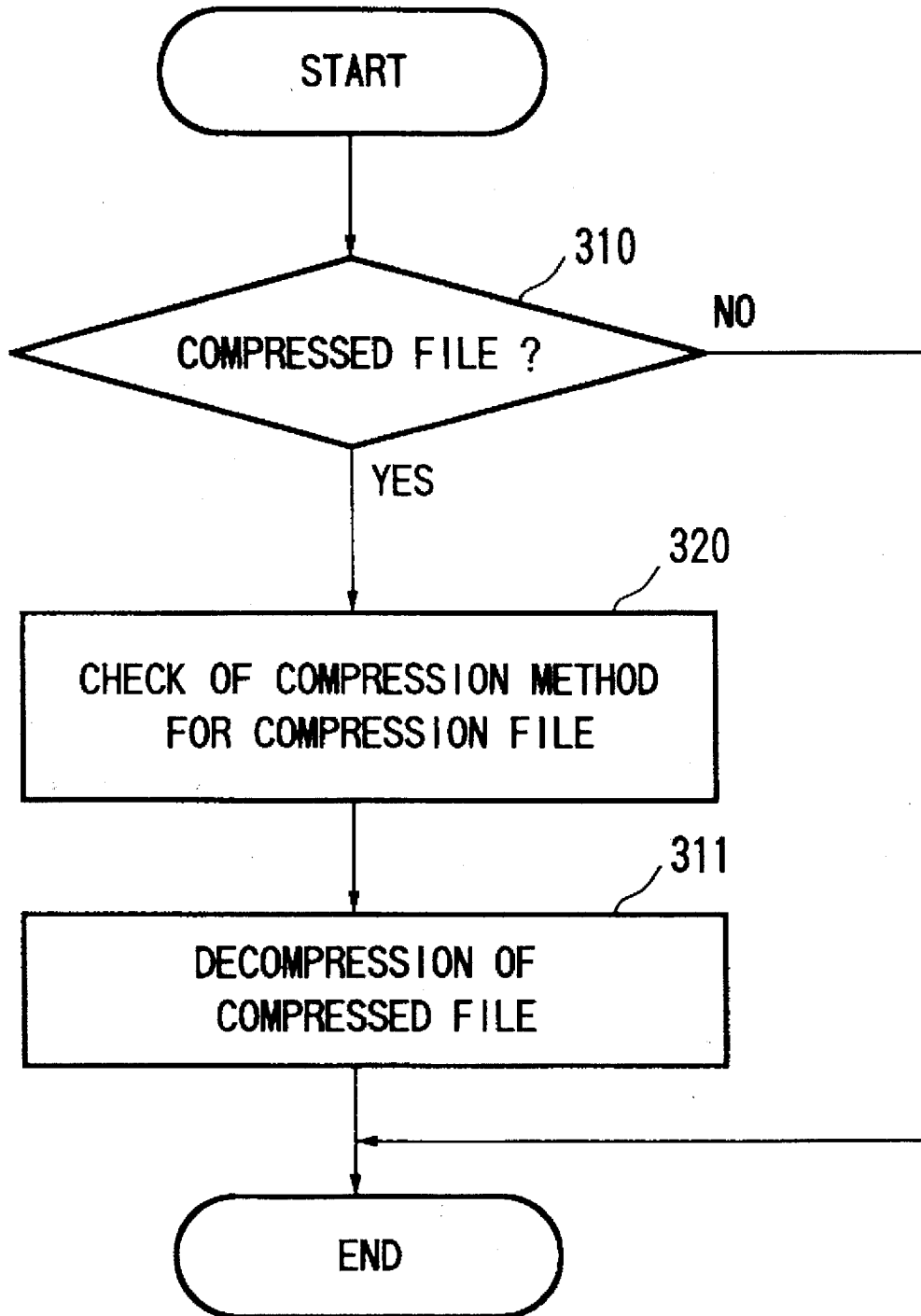
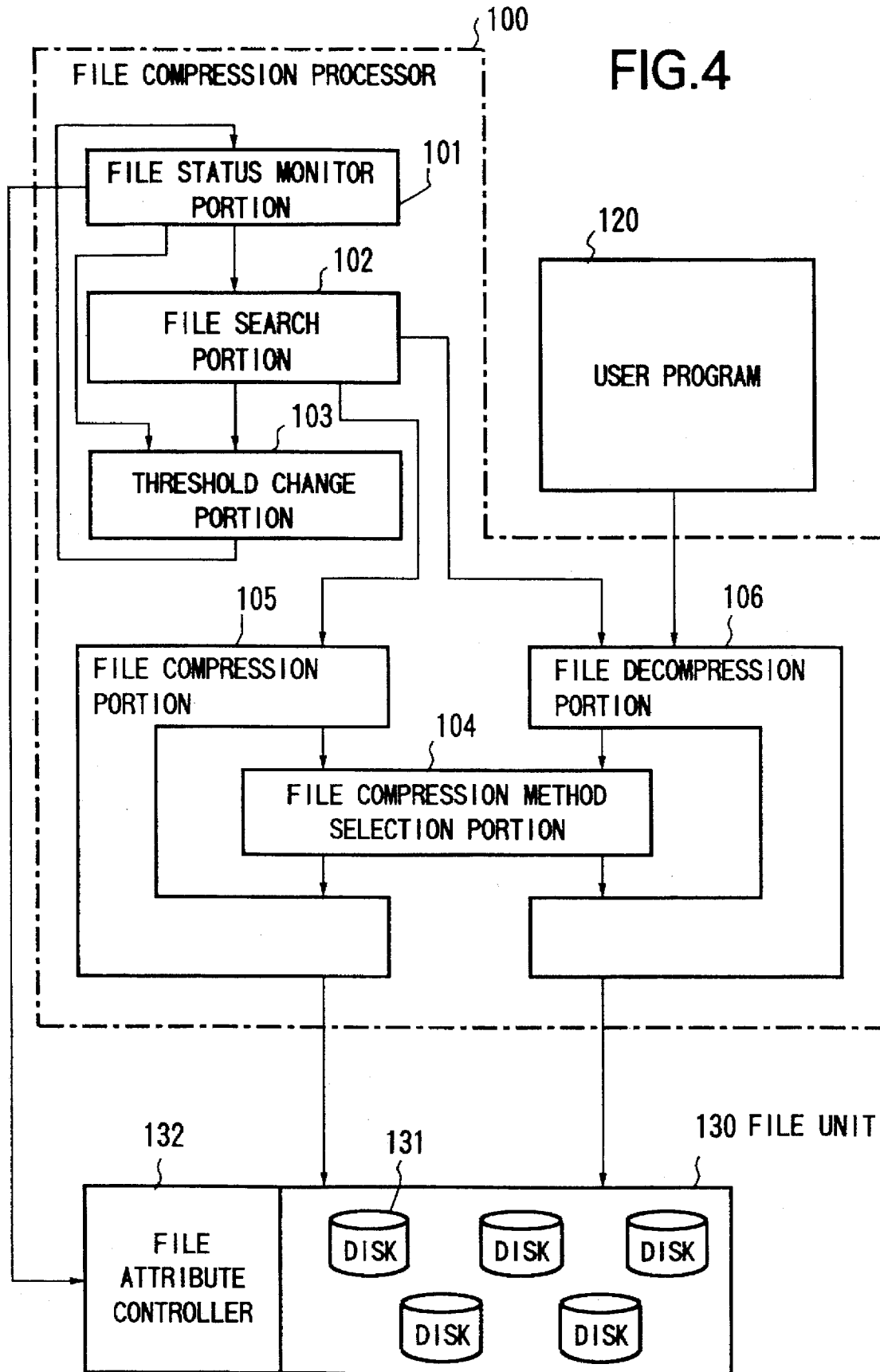


FIG. 4



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