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United States Patent [19]
de Remer et al.

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[45] **Date of Patent:** **May 2, 1995**

- [54] **GAP RECOVERY FOR OFF-SITE DATA STORAGE AND RECOVERY SYSTEMS**
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- [21] Appl. No.: **466,508**
- [22] Filed: **Jan. 17, 1990**
- [51] Int. Cl.⁶ **G06F 12/16**
- [52] U.S. Cl. **395/575; 395/600; 371/10.1; 371/29.1; 371/65; 364/DIG. 1; 364/243; 364/243.2; 364/265; 364/266.5; 364/282.1; 364/285; 364/285.1; 364/285.2**
- [58] Field of Search **395/575, 600; 371/10.1, 371/29.1, 65, 16.5,**

OTHER PUBLICATIONS

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[57] **ABSTRACT**
 A method for creating a control record for use in future machine recovery of gaps in a complete series of journal data formed by a computing machine from a complete series of transactional data. Copy is formed of the series of journal data for transmission to a remote site. A plurality of data group records are formed. Each data group record identifies a different boundary of each of a plurality of data groups in the series of journal data. The presence is detected of a gap in the copy of the journal data for transmission. One of the data group records is created for a boundary of each gap.

49 Claims, 23 Drawing Sheets

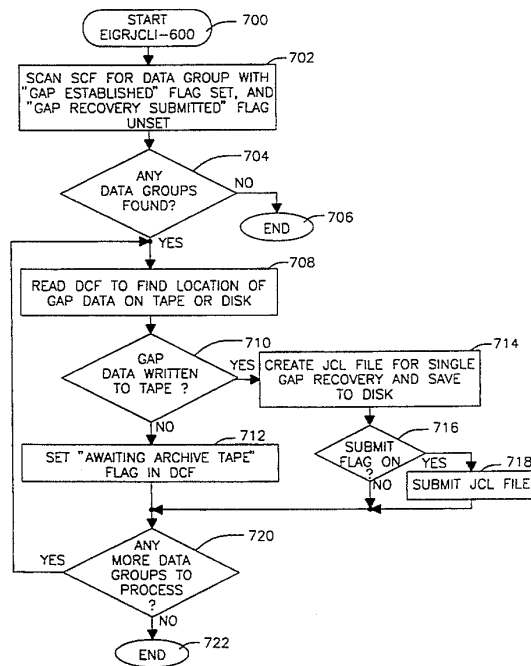
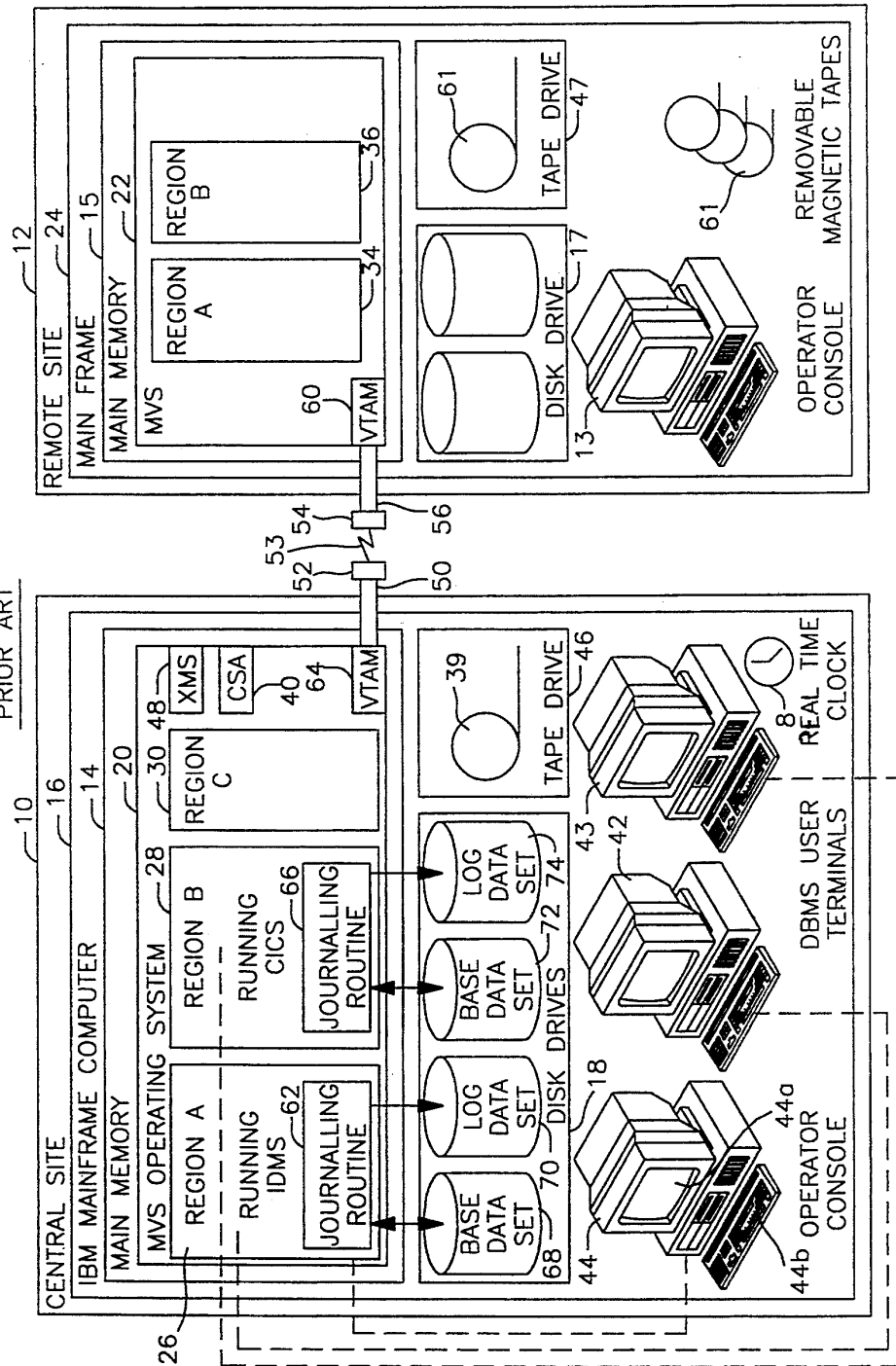
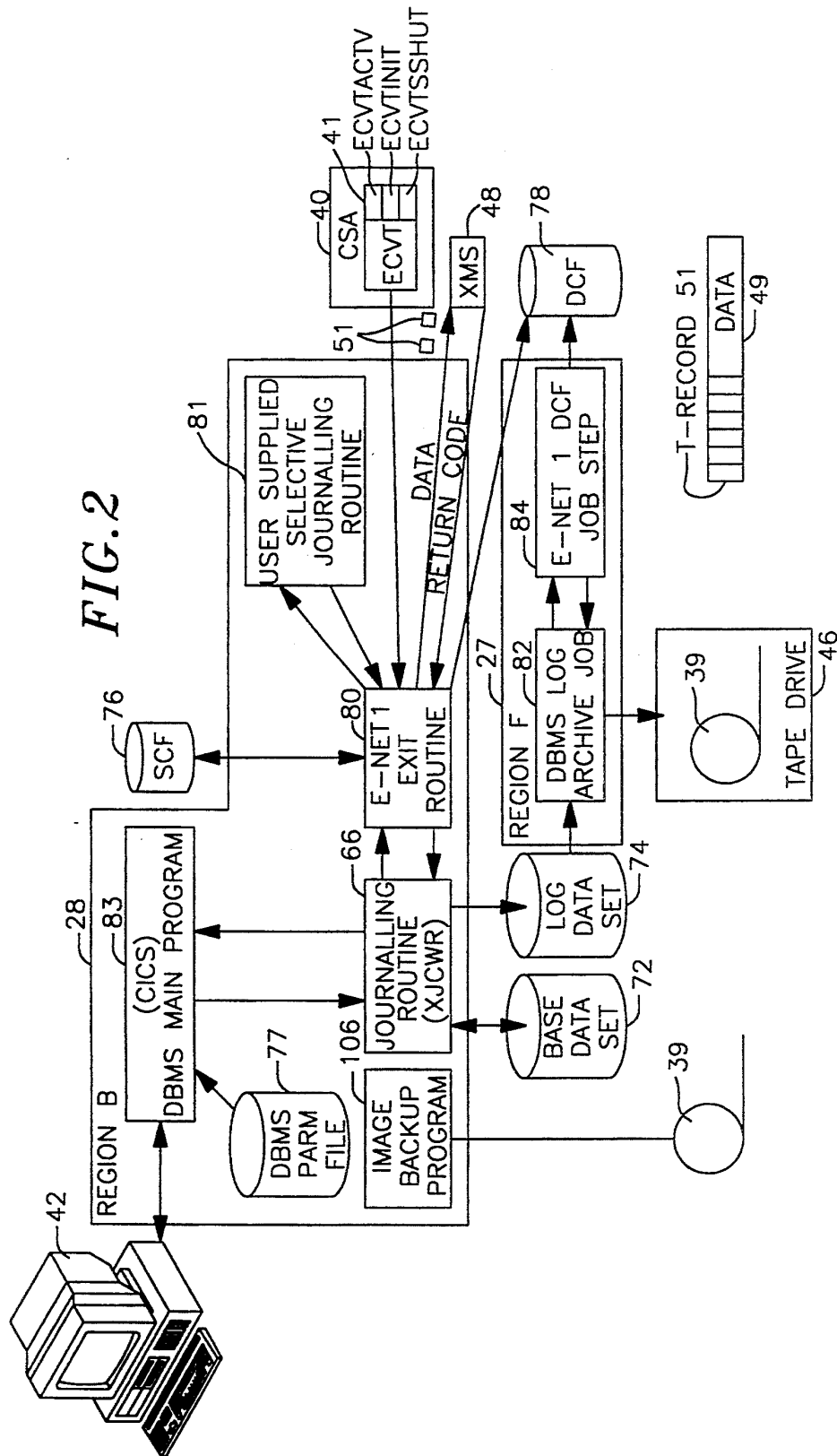


FIG. 1
PRIOR ART





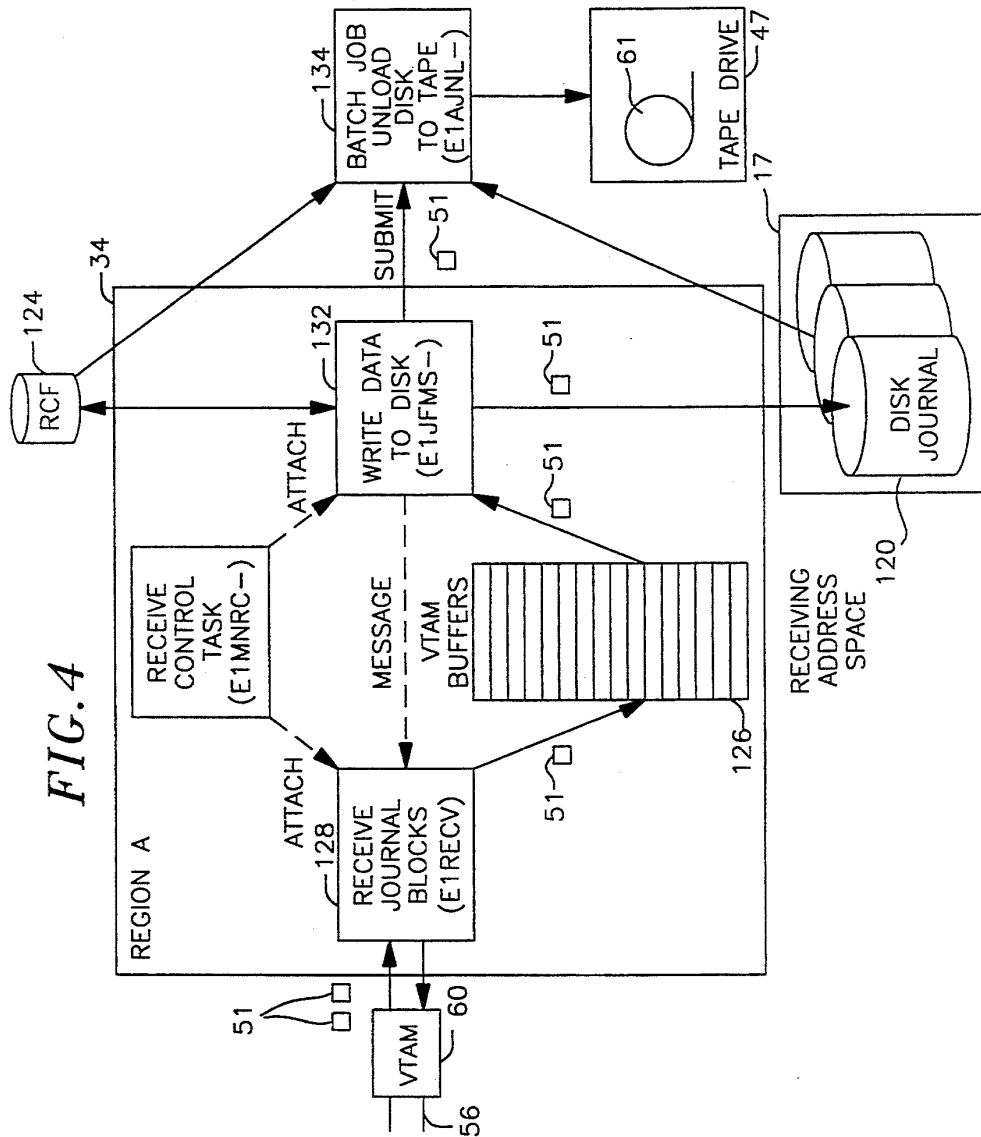


FIG. 4

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