United States Patent [19]

Shimaoka et al.

[11] Patent Number:

4,893,232

[45] Date of Patent:

Jan. 9, 1990

[54] DATA MANAGEMENT SYSTEM FOR EFFICIENTLY SEARCHING DATA ELEMENTS AND HAVING A FLEXIBLE REGISTRATION ORDER OF DATA ELEMENTS

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[73] Assignee: Kabushiki Kaisha Toshiba, Kawasaki,

Japan

[21] Appl. No.: 235,617

[22] Filed: Aug. 19, 1988

Related U.S. Application Data

[63] Continuation of Ser. No. 932,677, Nov. 20, 1986, aban-

doned.

[30] Foreign Application Priority Data

Nov. 30, 1985 [JP] Japan 60-269633

[56] References Cited

U.S. PATENT DOCUMENTS

 4,627,019
 12/1986
 Ng
 364/900

 4,774,661
 9/1988
 Kumpati
 364/300

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Attorney, Agent, or Firm—Finnegan, Henderson,

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[57] ABSTRACT

In a data management system of this invention, data elements to be registered are managed by item information records each comprising a name of the data element, an item code corresponding to an item to which the data element belongs, and a serial number. The relation between item information records is managed by a relation information record expressed by a source item ID, an object item ID, an item code associated with a source corresponding to an item, and a relation ID indicating the relation between the source and object items. The relation ID is given by a relation table. When a search instruction is input, the item information record, the relation information record, and the relation table are referred to, thus obtaining item information to be searched. The item formation record and relation information record can be registered as needed.

24 Claims, 8 Drawing Sheets

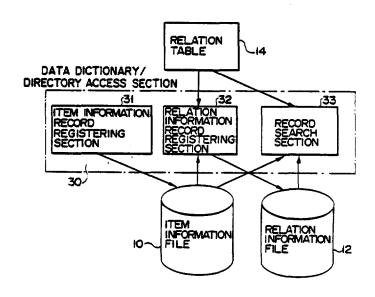
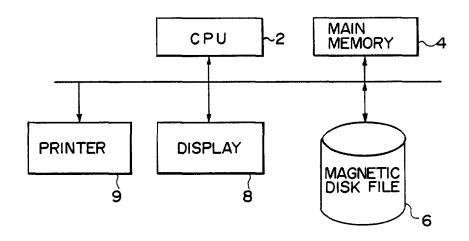
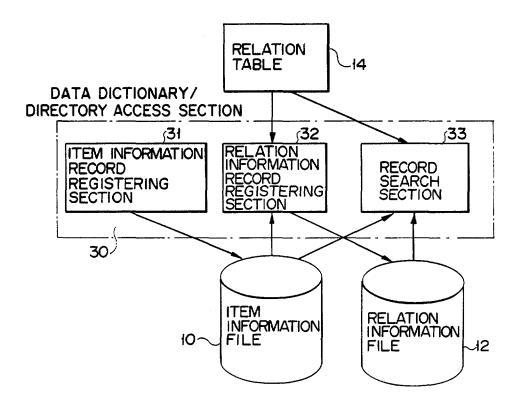




FIG. 1



F I G. 2



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4,893,232

ITEM
DETAILED INFORMATION RELATION DETAILED INFORMATION - SOURCE ITEM CODE SECONDARY ITEM INDEX SERIAL NO. SECONDARY RELATION INDEX TÉM CODE OBJECT ITEM ID ITEM ID PRIMARY RELATION INDEX ITEM CODE PRIMARY ITEM INDEX **3B** RELATION ID **ELEMENT NAME** Н Э SOURCE ITEM ID F G DATA

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DD: DATA ITEM

10:1/0 INFORM.

WS: WORK STATION INFORM.

PR: PRINT OUTPUT INFORM.

PU: PHYSICAL PATH BETWEEN NODES

LU: LOGICAL PATH BETWEEN NODES

FL: FILE

DB: DATA BASE

DA: DB AREA

RD: RECORD

JK: JOB FUNCTION

JB: JOB

PG: PROGRAM

AR: AREA

ND: NODE

GS: GRAPHIC DISP

LC: LINK SPECIFIC.

JC: JOB STEP SEQ.

AC: ACCESS SPECIFIC.

SEQ.

LN: LINE SPECIFIC.

VI: TRANSACTION VOLUME

RR:ITEM CORRELATION V2:FILE VOLUME

TI : RECORD ITEM CORRELATION

T2: TREE CORRELATION

OP : PROCESSING OPERATION



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