

Ex. 1011

US Patent No. 5,615,367 (“Bennett”)

- [54] SYSTEM AND METHODS INCLUDING AUTOMATIC LINKING OF TABLES FOR IMPROVED RELATIONAL DATABASE MODELING WITH INTERFACE
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- [73] Assignee: **Borland International, Inc.**, Scotts Valley, Calif.
- [21] Appl. No.: **67,202**
- [22] Filed: **May 25, 1993**
- [51] Int. Cl.⁶ **G06F 17/30**
- [52] U.S. Cl. **395/613; 395/326**
- [58] Field of Search **395/600, 155, 395/156, 157, 160, 161, 148**

Burns, L.M. et al., "A Graphical Entity-Relationship Database Browser," System Sciences, 1988 Annual Hawaii Int'l Conference, vol. 2., pp. 694-704.
 Siau, K.L. et al., "Visual Database Interface for End User Computing," Computing and Information, 1992 Int'l Conference, pp. 393-396.
 Küspert, K., et al., "Design Issues and First Experiences with a Visual Database Editor for the Extended NF² Data Model," System Sciences, 1990 Annual Hawaii Int'l Conf., pp. 308-317.
 "Borland Paradox for Windows—Guide to Object PAL," 1992 by Borland International Inc., pp. 1-521.
 Bachman, C., *Data Structure Diagrams*, Data Base, a quarterly newsletter of SIGBDP, vol. 1, No. 2, Summer 1969, pp. 4-10.

Primary Examiner—Paul V. Kulik
 Attorney, Agent, or Firm—John A. Smart

[57] **ABSTRACT**

A system includes a relational database management system (RDBMS) having a data modeling component. A "data model" is a graphical representation of the relationship between tables one may use in a design document. "Design documents" allow a user to customize how his or her data are presented, including presenting information in formats which are not tabular and including formats which link together different tables (so that information stored in separate tables appears to the user to come from one place). Methods are described for automatically linking tables to be placed in a data model by comparing unique keys (e.g., primary key or other unique identifier) of one table with indexes (or indexable fields) of another table. Based upon the comparison, the system automatically suggests an appropriate link (if any) for the tables.

[56] **References Cited**

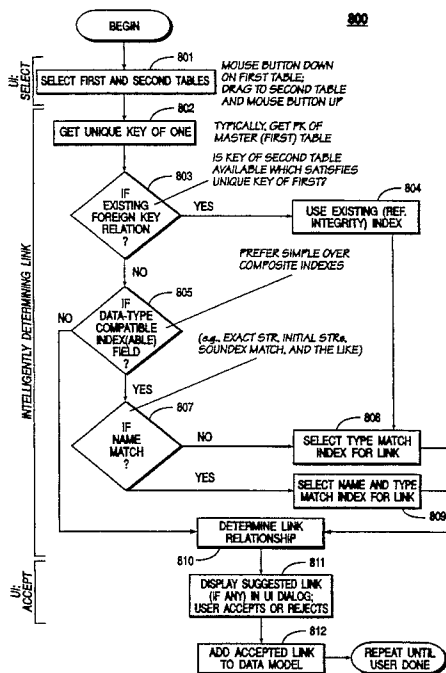
U.S. PATENT DOCUMENTS

4,791,561	12/1988	Huber	395/600
5,195,178	3/1993	Krieger et al.	395/157
5,301,313	4/1994	Terada et al.	395/600
5,367,619	11/1994	Dipaolo et al.	395/149
5,553,218	9/1996	Li et al.	395/148

OTHER PUBLICATIONS

Demaria et al., "Working with dBase Mac," 1988, pp. 16-17, 115-118, 408-409.
 Microsoft Access User's Guide, Microsoft Corporation, 1992.
 Hartzband, David, J. et al., "Enhancing Knowledge Representation in Engineering Database," Computer, Sep. 1985, pp. 39-48.

35 Claims, 29 Drawing Sheets



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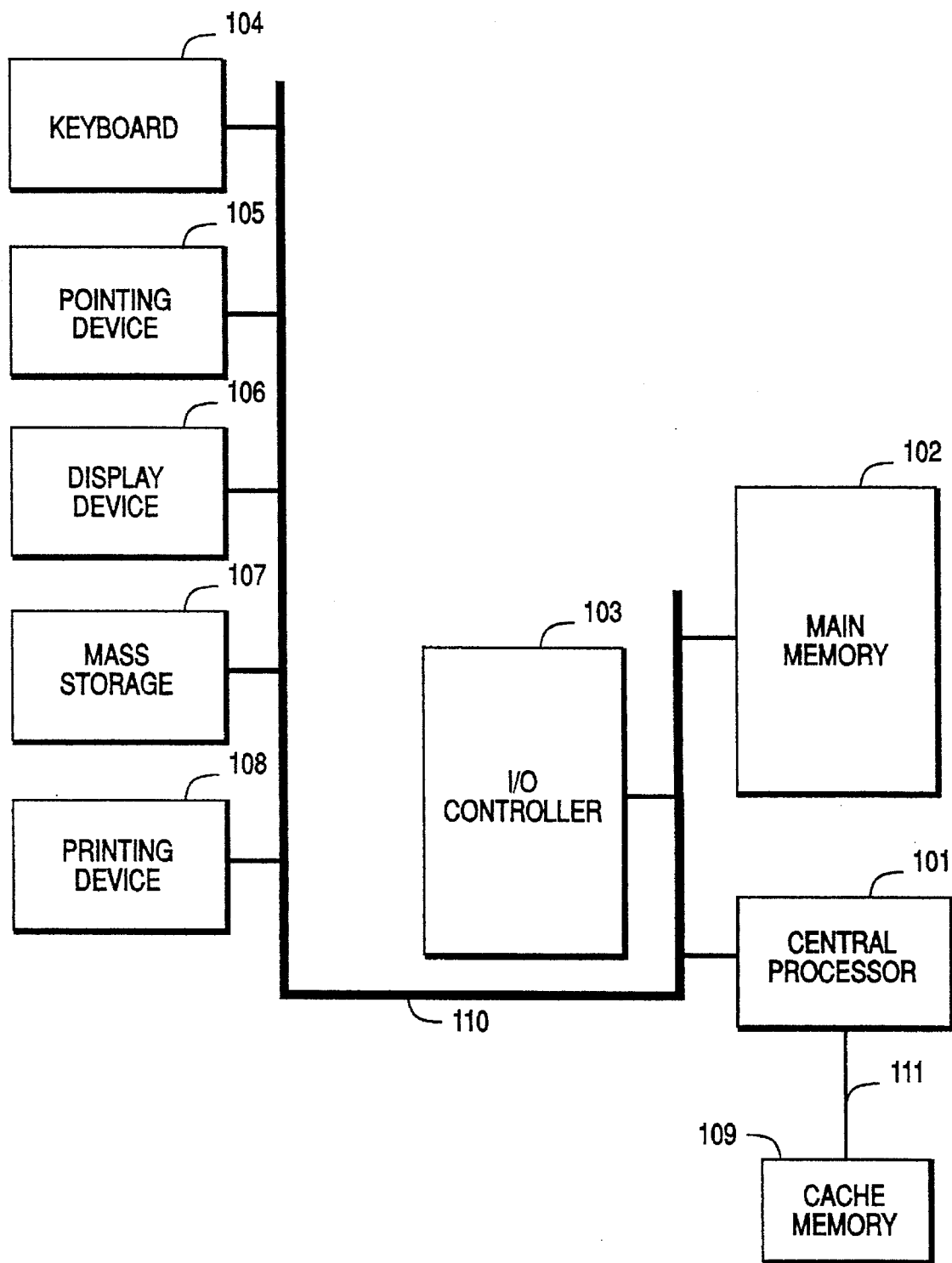


FIG. 1A

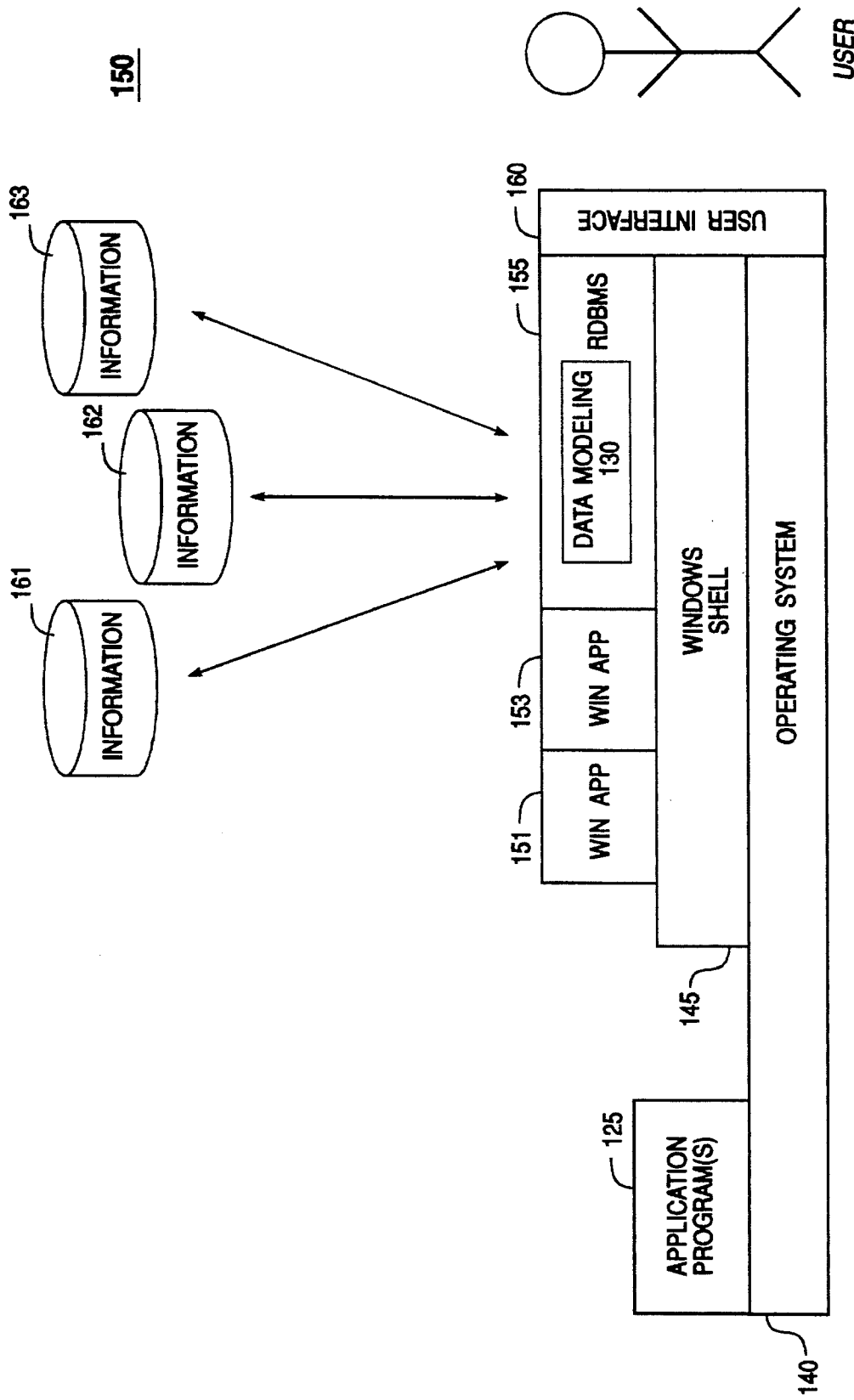


FIG. 1B

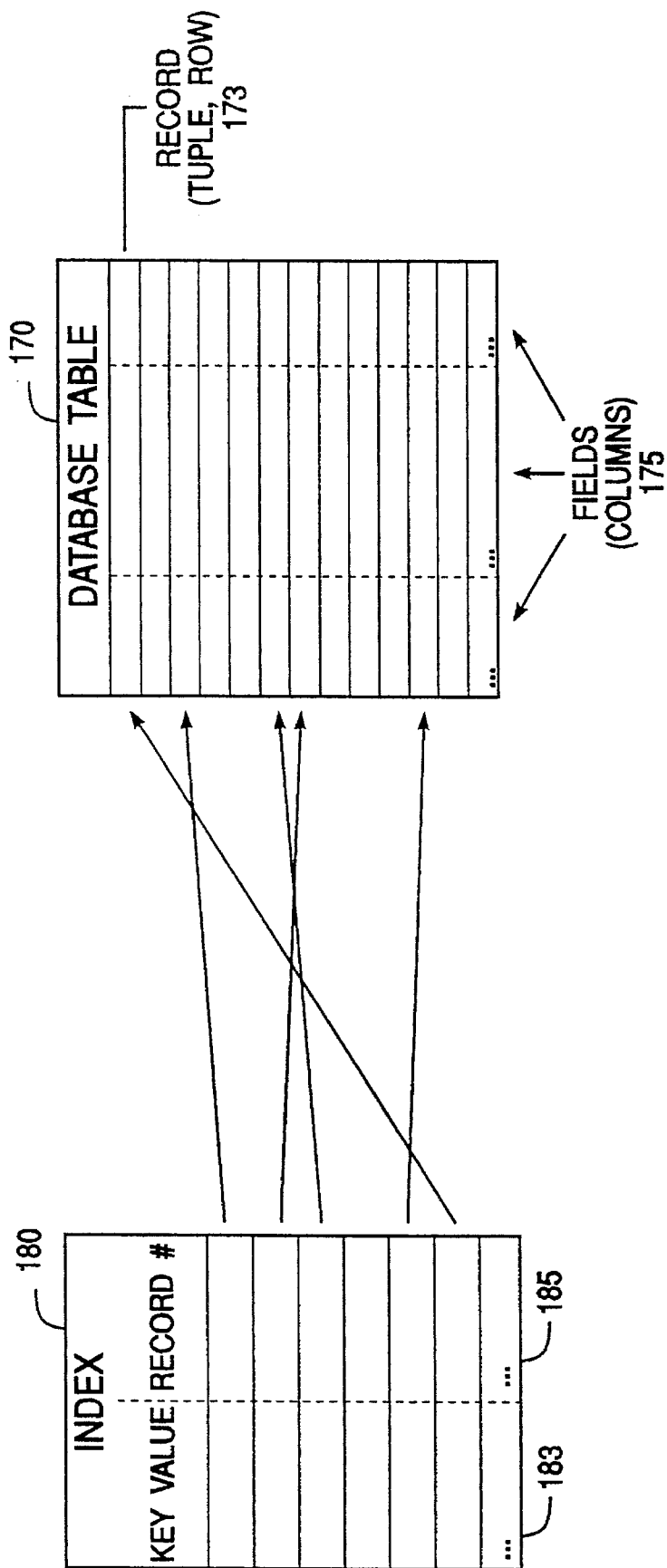


FIG. 1C

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