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**Hoefst et al.**

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(54) **PLATFORM-INDEPENDENT DATA  
DICTIONARY**

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U.S.C. 154(b) by 509 days.

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(51) **Int. Cl.**  
**G06F 15/18** (2006.01)

(52) **U.S. Cl.** ..... **706/12**; 706/45; 706/46;  
707/100

(58) **Field of Classification Search** ..... 707/1,  
707/100, 102, 103; 706/45, 46, 12  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

5,418,957 A \* 5/1995 Narayan ..... 717/113

5,991,771 A \* 11/1999 Falls et al. .... 707/202  
6,377,953 B1 \* 4/2002 Gawlick et al. .... 707/102  
6,636,845 B2 \* 10/2003 Chau et al. .... 707/1  
7,051,041 B1 \* 5/2006 Miller ..... 707/102  
7,058,645 B2 \* 6/2006 Seto et al. .... 707/101  
7,080,384 B2 \* 7/2006 Wall et al. .... 719/316  
7,117,215 B1 \* 10/2006 Kanchwalla et al. .... 707/100

**OTHER PUBLICATIONS**

Tim Bray et al., Extensible markup Language (XML) 1.0 (Second  
Edition) W3C Recommendation Oct. 6, 2000, [http://www.w3.org/  
TR/REC-xml](http://www.w3.org/TR/REC-xml).\*

Henry S. Thompson et al., XML Schema Part 1: Structures, W3C  
Recommendation May 2, 2001, Sections 3.4, 3.14 [http://www.w3.  
org/TR/2001/REC-xmlschema-1-20010502/](http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/).\*

\* cited by examiner

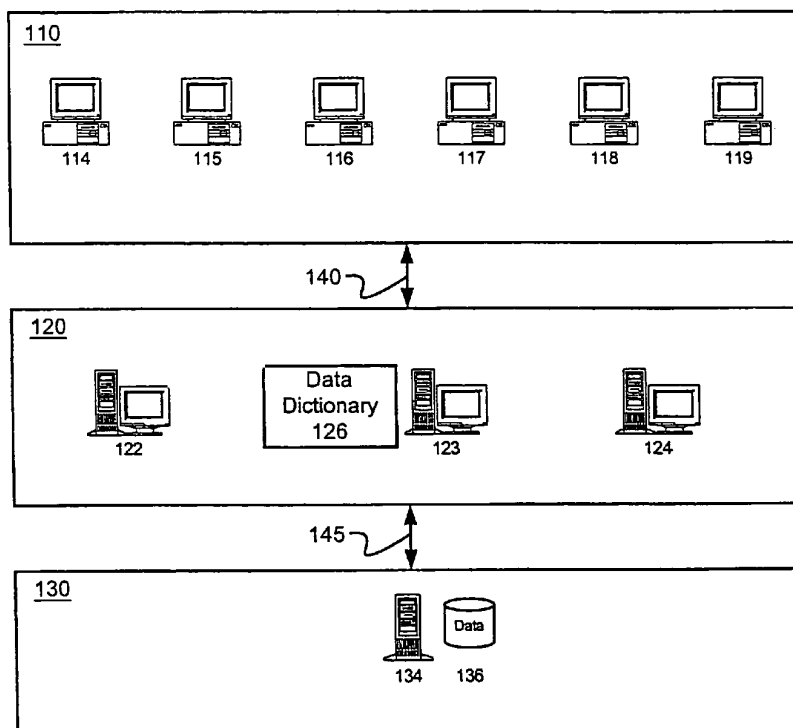
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Zafman LLP

(57) **ABSTRACT**

A server system may include a data dictionary to store  
platform-independent data types. A development client may  
access and modify a platform-independent data type stored  
in the data dictionary. The server system may notify other  
development clients using the data type that the data type has  
been modified.

**20 Claims, 9 Drawing Sheets**



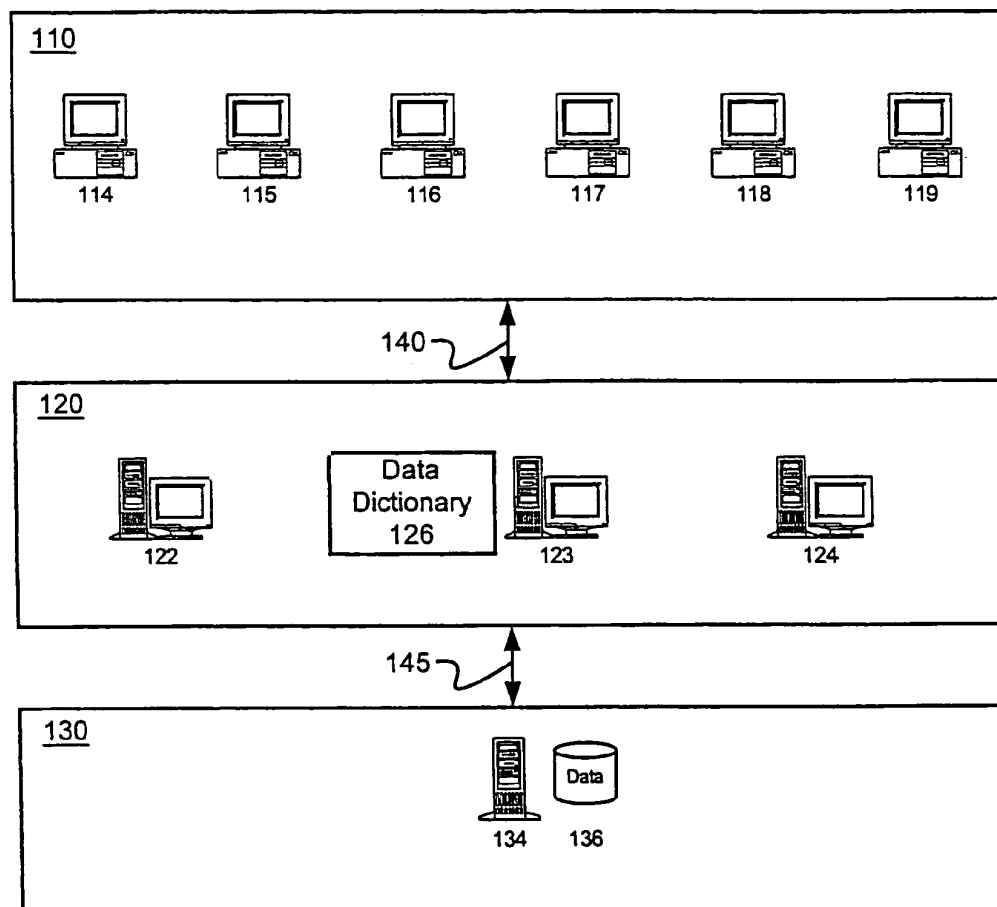
100

FIG. 1

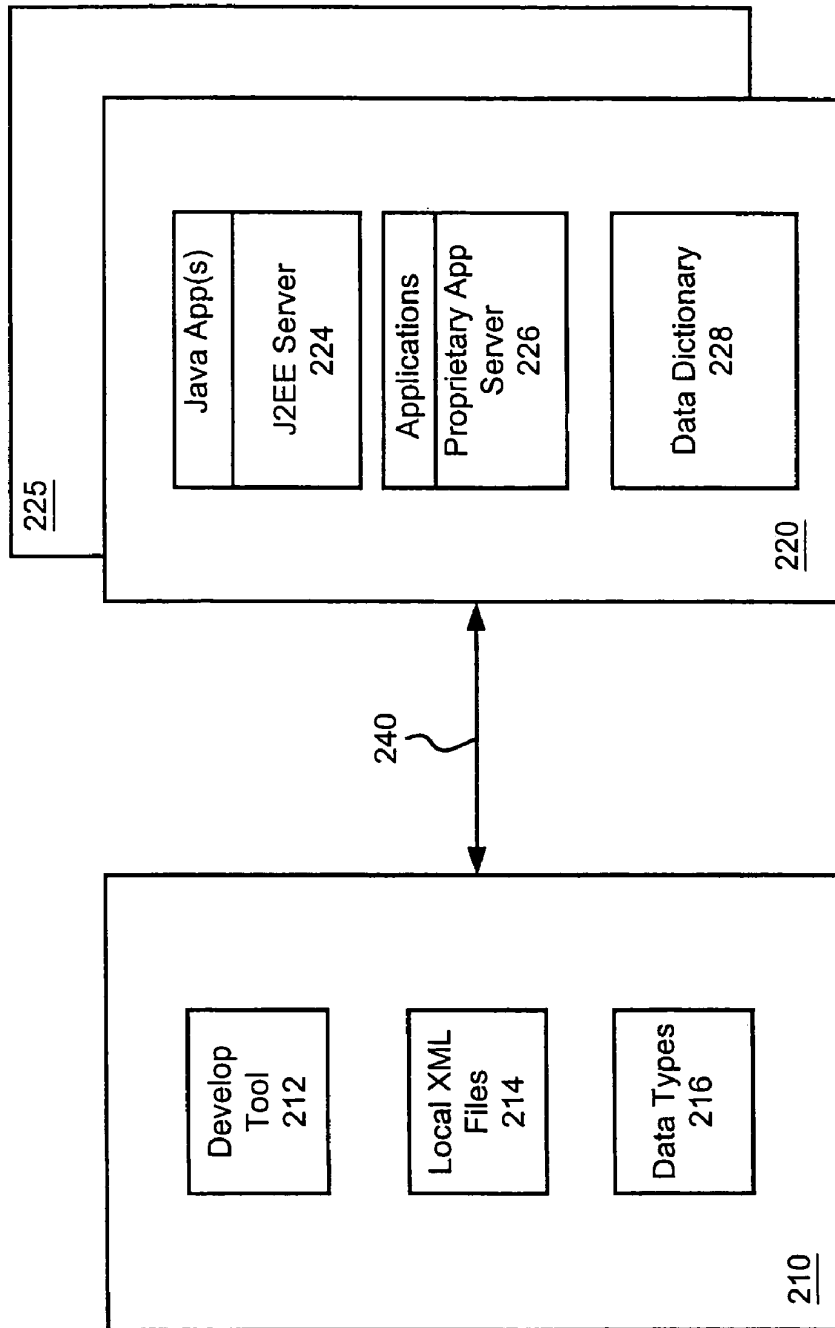
200

FIG. 2

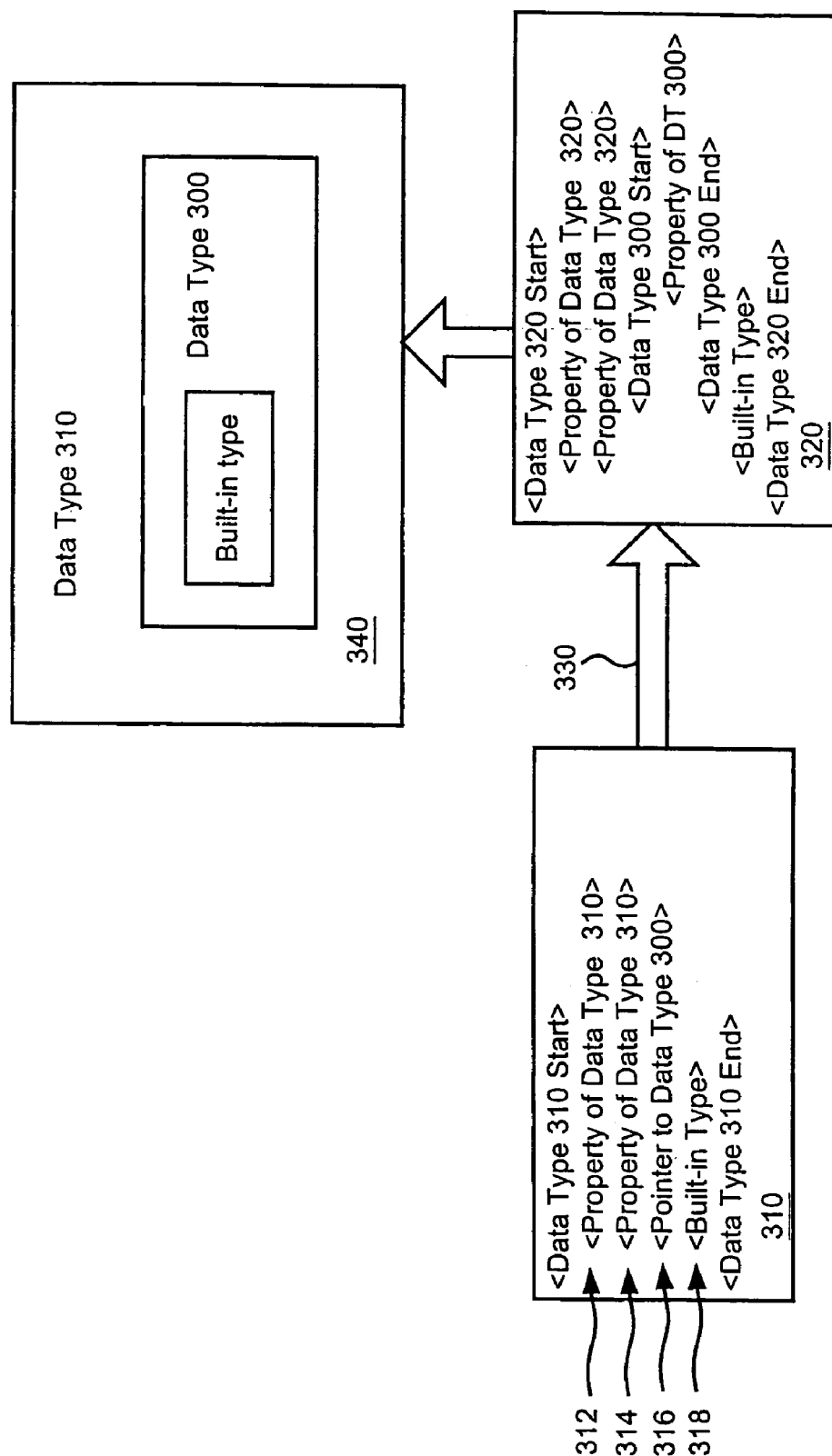


FIG. 3

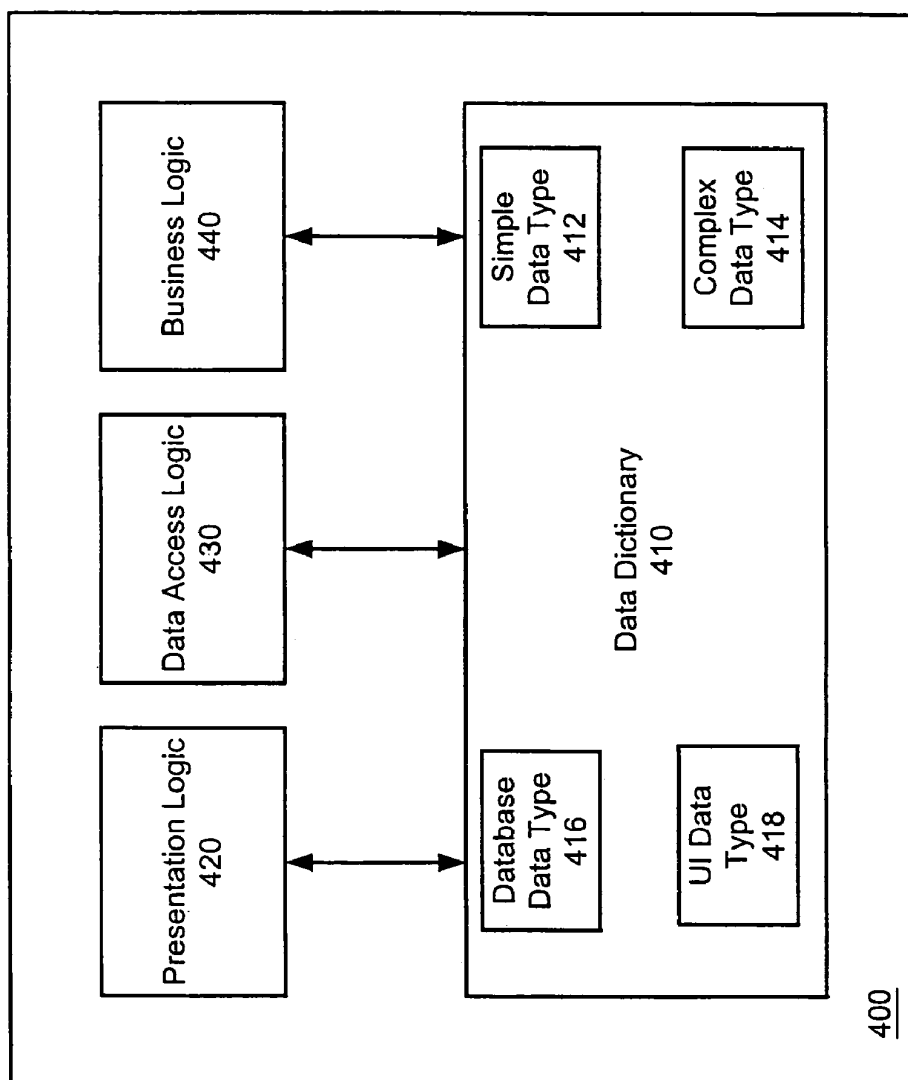


FIG. 4

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