

(12) **United States Patent**  
**Kelly**

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 (45) **Date of Patent:** **\*Jul. 15, 2003**

(54) **DOMAIN NAME SERVER ARCHITECTURE FOR TRANSLATING TELEPHONE NUMBER DOMAIN NAMES INTO NETWORK PROTOCOL ADDRESSES**

6,122,255 A \* 9/2000 Bartholomew et al. .... 370/237  
 6,154,445 A \* 11/2000 Farris et al. .... 370/237  
 6,226,678 B1 \* 5/2001 Mattaway et al. .... 709/230  
 6,300,863 B1 \* 10/2001 Cotichini et al. .... 340/5.8  
 6,347,085 B2 \* 2/2002 Kelly ..... 370/352

(75) Inventor: **Keith C. Kelly**, Deerfield Beach, FL (US)

**OTHER PUBLICATIONS**

C. Yang, "INETPhone: Telephone Services and Servers on Internet", Network Working Group RFC: 1789, pp. 1-6, Apr. 1995.\*

(73) Assignee: **Netspeak Corporation**, Newark, NJ (US)

"The History of TPC.INT," <http://www.tpc.int/faq/history.html>.

(\* ) Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

C. Malamud & M. Rose, "Principles of Operation for the TPC.INT Subdomain: Remote Printing -Technical Procedures," Network Working Group, Request for Comments: 1528 (Oct. 1993).

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

C. Malamud & M. Rose, "Principles of Operation for the TPC.INT Subdomain: Remote Printing -Administrative Policies," Network Working Group, Request for Comments: 1529 (Oct. 1993).

(21) Appl. No.: **08/911,519**

C. Malamud & M. Rose, "Principles of Operation for the TPC.INT Subdomain: General Principles and Policy," Network Working Group, Request for Comments: 1530 (Oct. 1993).

(22) Filed: **Aug. 14, 1997**

\* cited by examiner

**Related U.S. Application Data**

*Primary Examiner*—Hassan Kizou

(60) Provisional application No. 60/023,891, filed on Aug. 16, 1996.

*Assistant Examiner*—John Pezzlo

(51) **Int. Cl.<sup>7</sup>** ..... **H04L 12/66**

(74) *Attorney, Agent, or Firm*—Kenyon & Kenyon

(52) **U.S. Cl.** ..... **370/352; 370/389; 370/401**

(57) **ABSTRACT**

(58) **Field of Search** ..... 370/352, 354, 370/356, 389, 392, 475, 237, 401, 230; 379/88.17, 201, 210, 219, 220, 224; 709/200, 201, 203, 218, 219, 227, 202, 230; 455/415, 461; 340/5.8

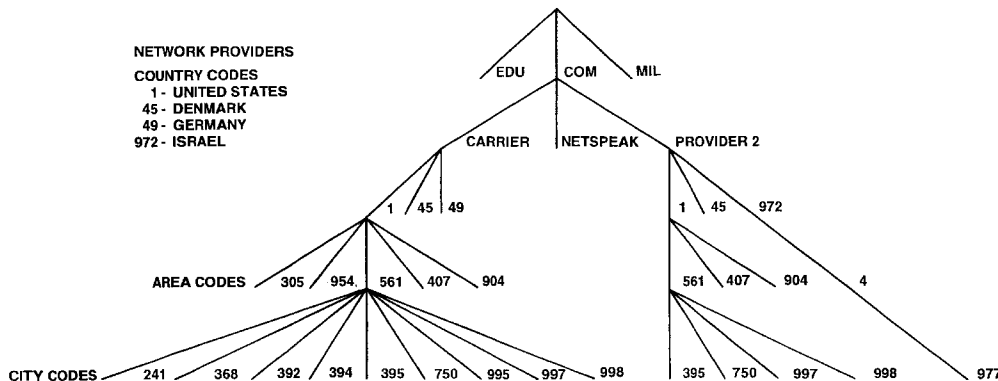
A method and apparatus for translating a domain name representing a telephone number into a network protocol address includes a domain name server architecture containing logic responsive to a telephone number domain name, the telephone number domain name representing the country code, area code, exchange, or subscriber number of a subscriber apparatus telephone number. The logic resolves the telephone number domain name into a network protocol address usable in ultimately initiating a communication with the subscriber apparatus on a circuit-switched network. In one embodiment, a hierarchical tree of domain names and subdomain names representing the country codes, area codes and exchange codes of telephone numbers is constructed to assist in the process of resolving domain names to network protocol addresses.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

5,608,786 A \* 3/1997 Gordon ..... 370/352  
 5,742,668 A \* 4/1998 Pepe et al. .... 455/415  
 5,742,762 A \* 4/1998 Scholl et al. .... 709/200  
 5,742,905 A \* 4/1998 Pepe et al. .... 455/461  
 5,799,063 A \* 8/1998 Krane ..... 379/88.17  
 6,014,379 A \* 1/2000 White et al. .... 370/389  
 6,021,126 A \* 2/2000 White et al. .... 370/352  
 6,069,890 A \* 5/2000 White et al. .... 370/352

**23 Claims, 7 Drawing Sheets**



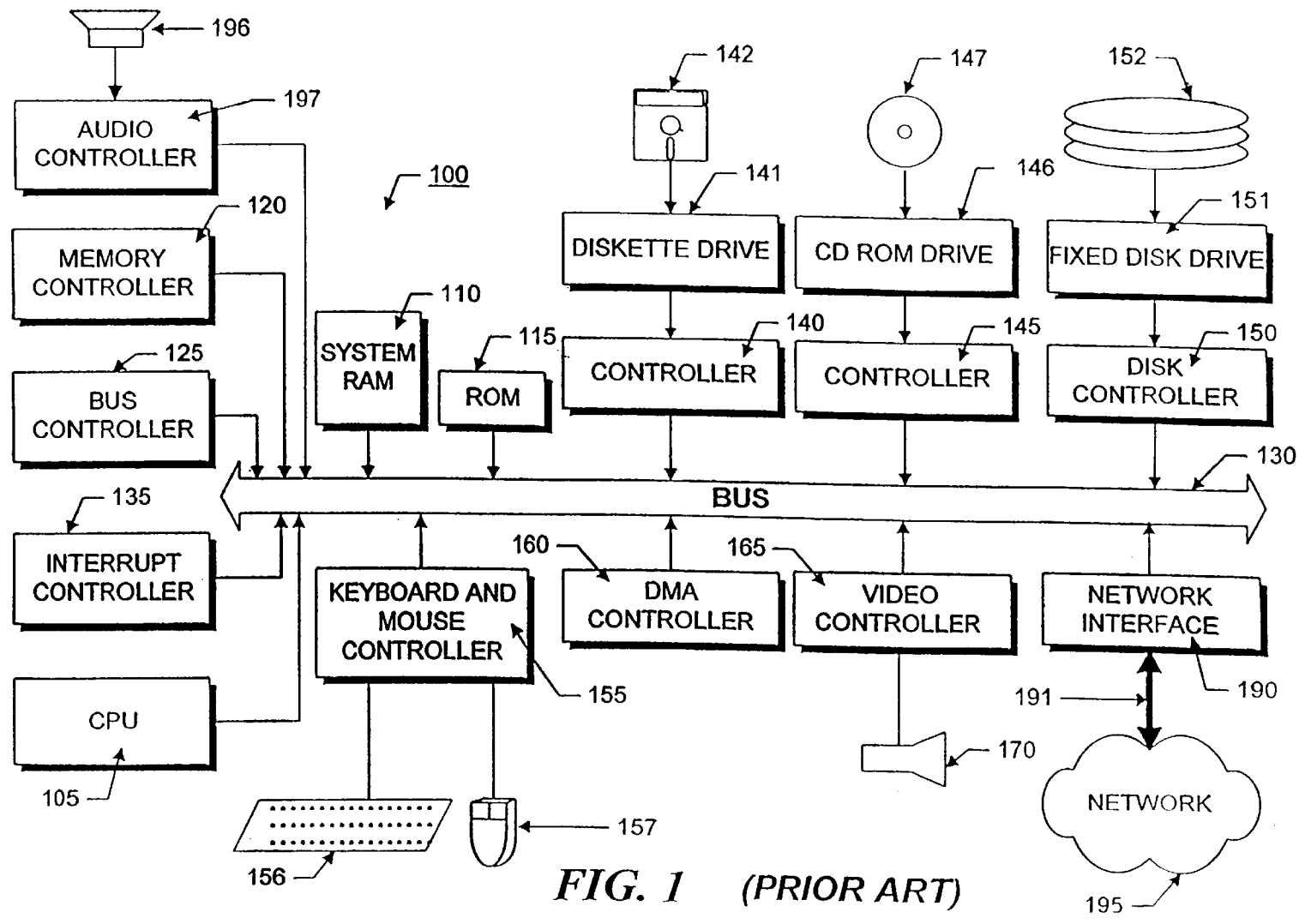


FIG. 1 (PRIOR ART)

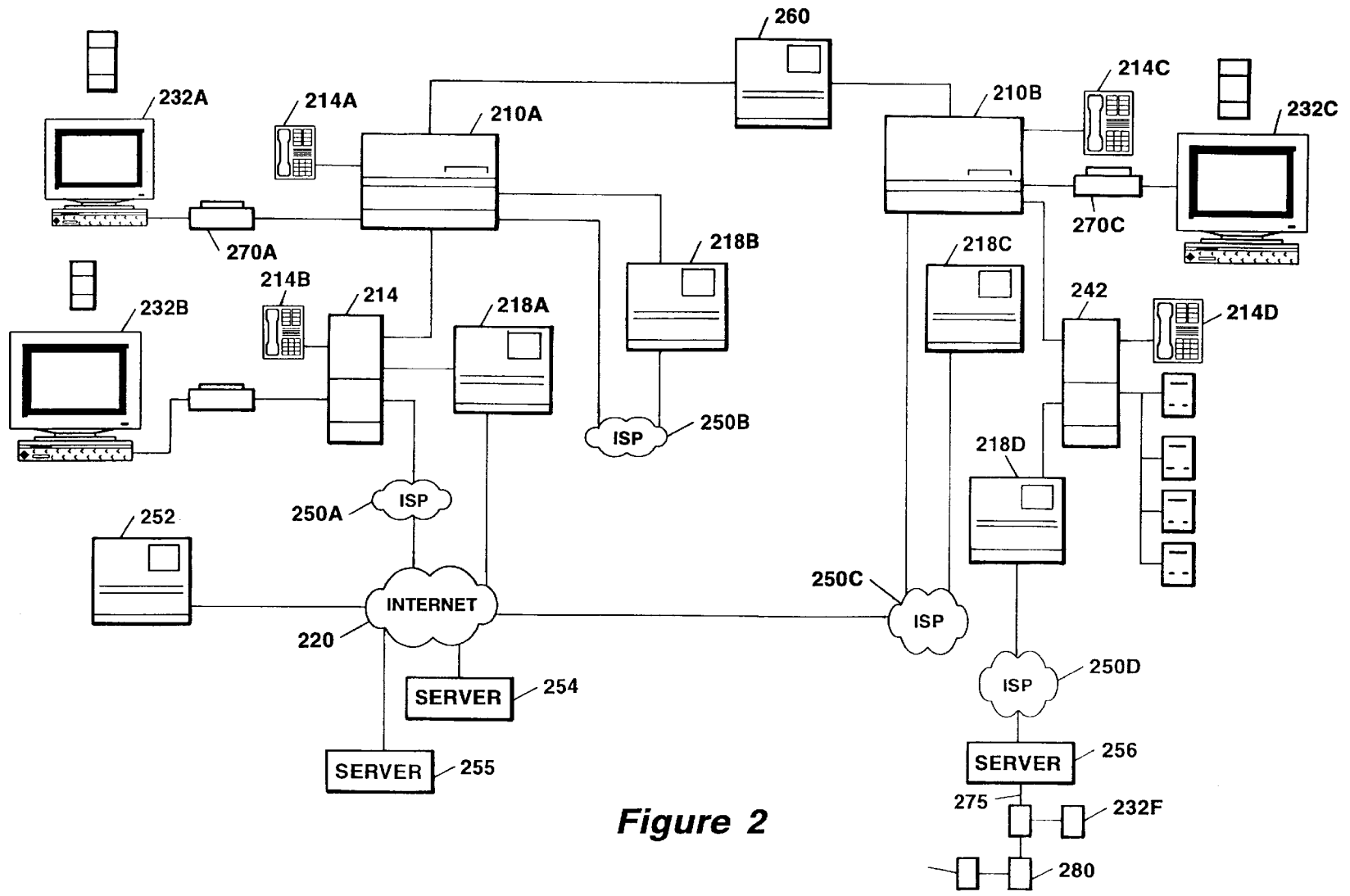


Figure 2

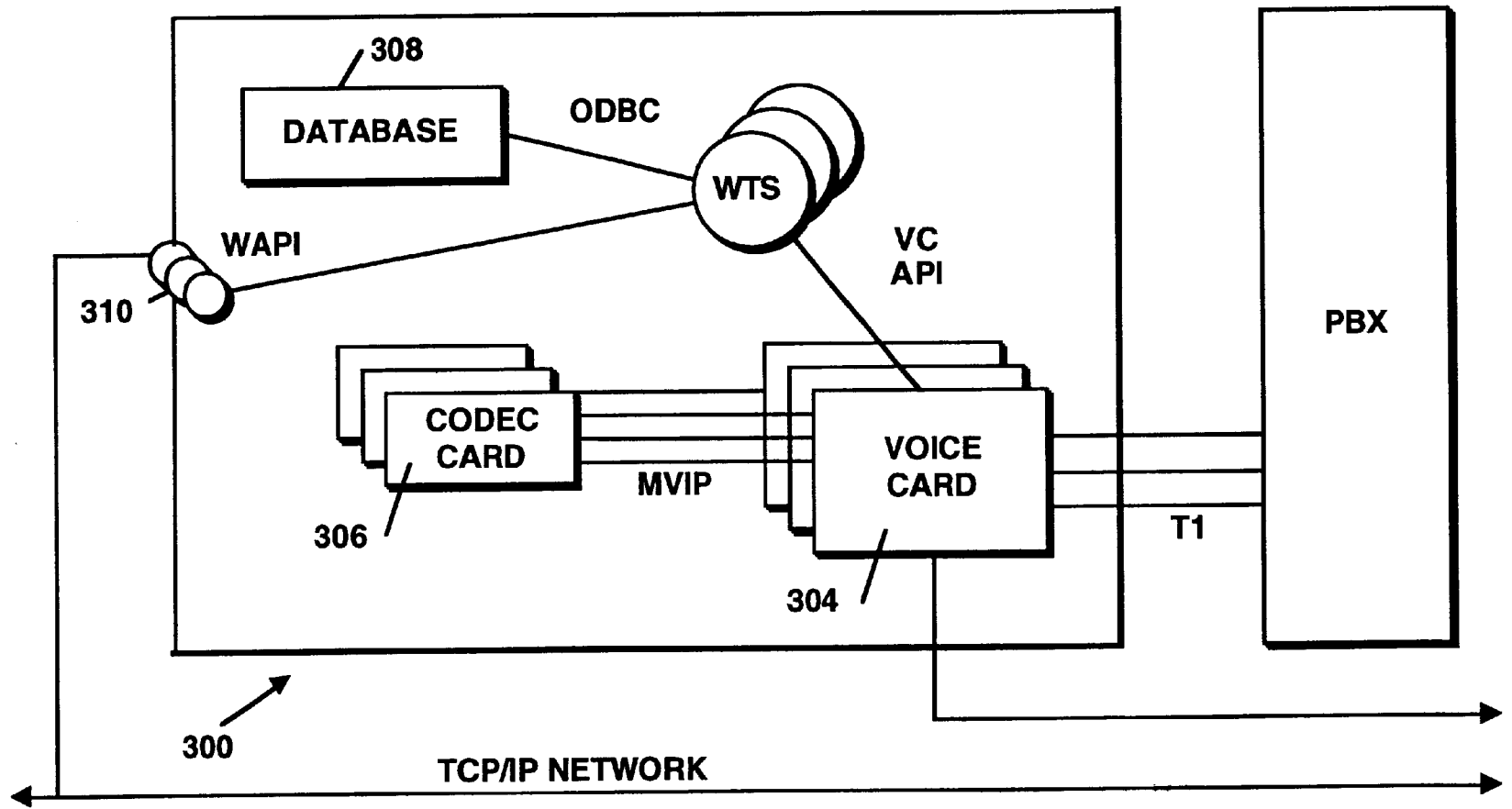


Figure 3

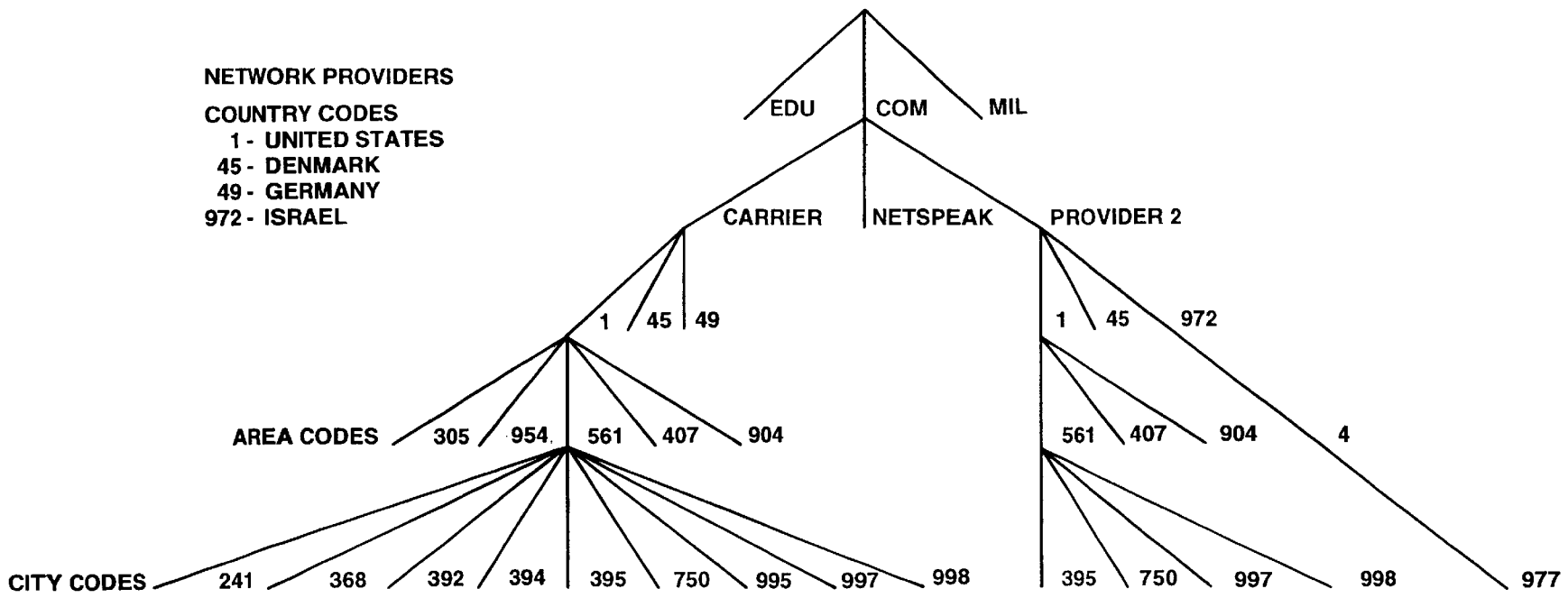


Figure 4

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