

EXHIBIT 1019



US005159592A

United States Patent [19]

[11] Patent Number: **5,159,592**

Perkins

[45] Date of Patent: **Oct. 27, 1992**

- [54] NETWORK ADDRESS MANAGEMENT FOR A WIRED NETWORK SUPPORTING WIRELESS COMMUNICATION TO A PLURALITY OF MOBILE USERS
- [75] Inventor: Charles E. Perkins, Peekskill, N.Y.
- [73] Assignee: International Business Machines Corporation, Armonk, N.Y.
- [21] Appl. No.: 605,592
- [22] Filed: Oct. 29, 1990
- [51] Int. Cl.⁵ H04J 3/24; H04B 7/00
- [52] U.S. Cl. 370/85.7; 370/85.13; 370/94.1; 370/95.1
- [58] Field of Search 370/60, 85.1, 85.2, 370/85.3, 85.7, 85.13, 94.1, 94.3, 95.1; 340/825.5, 825.51; 455/39, 68, 53.1, 54.1, 54.2, 55.1, 56.1

"Implementation Of A Dynamic Address Assignment Protocol In A Local Area Network". Data Communications, vol. 16, No. 12, Nov. 1987, New York US, pp. 209-225; D. Retz: "TCP/IP: DOD suite marches into the business world". "Internet Protocol DARPA Internet Program Protocol Specification", Sep. 1981, Information Sciences Institute, University of Southern CA, Marina del Rey, Calif. 90291. "Infrared Microbroadcasting Network For In-House Data Communication", F. Gfeller, *IBM Technical Disclosure Bulletin*, vol. 24, No. 8, Jan. 1982.

Primary Examiner—Douglas W. Olms
 Assistant Examiner—Alpus H. Hsu
 Attorney, Agent, or Firm—Perman & Green

[56] **References Cited**
U.S. PATENT DOCUMENTS

4,644,461	2/1987	Jennings	364/200
4,665,519	5/1987	Kirchner et al.	370/94.1
4,706,081	11/1987	Hart et al.	340/825.03
4,750,109	6/1988	Kita	364/200
4,807,222	2/1989	Amitay	370/85.12
4,809,257	2/1989	Gantenbein et al.	370/4
4,893,307	1/1990	McKay et al.	370/94.1
4,914,652	4/1990	Nguyen	370/85.5
5,014,345	5/1991	Comroe et al.	455/34
5,029,183	7/1991	Tymes	375/1
5,040,175	8/1991	Tuch et al.	370/94.1
5,068,916	11/1991	Harrison et al.	455/39

FOREIGN PATENT DOCUMENTS

0182417	5/1986	European Pat. Off.	
0328100	8/1989	European Pat. Off.	
WO88/07794	10/1988	PCT Int'l Appl.	

OTHER PUBLICATIONS

IEEE Transactions On Communications, vol. 38, No. 8, Aug. 1990, New York, pp. 1272-1280; D. J. Goodwin: "Cellular Packet Communications". 10th Conference On Local Computer Networks, Oct. 1985, New York, US pp. 149-157 W. M. Loucks et al.:

[57] **ABSTRACT**

Apparatus and method for managing bidirectional transmission of information between a wired network and at least one mobile communication unit (10) in wireless communication with the wired network. The wired network is of the type wherein users of the network are each assigned a unique network address such as in, for example, a TCP/IP network. In accordance with the invention there is provided a local gateway (16) coupled between a wireless LAN and the wired network for communication with a mobile communication unit. There is also provided a global gateway (18) coupled to the local gateway and to remote users of the network. The global gateway functions to maintain a plurality of network addresses and, in response to a request for an assignment of a network address from the mobile communication unit, assigns one of the plurality of network addresses to the requesting mobile communication unit. The global gateway also buffers and routes data received from a remote user, the data being directed to an address corresponding to the assigned network address, to the mobile communication unit having the assigned address.

20 Claims, 5 Drawing Sheets

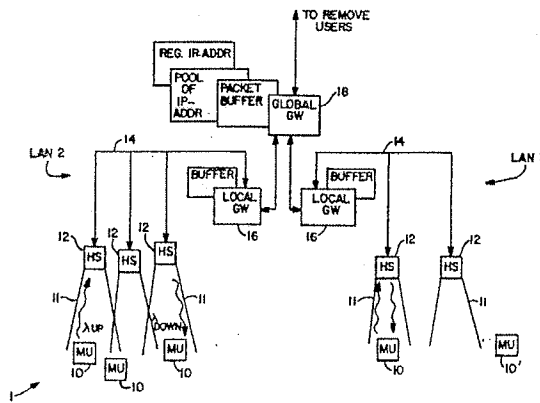
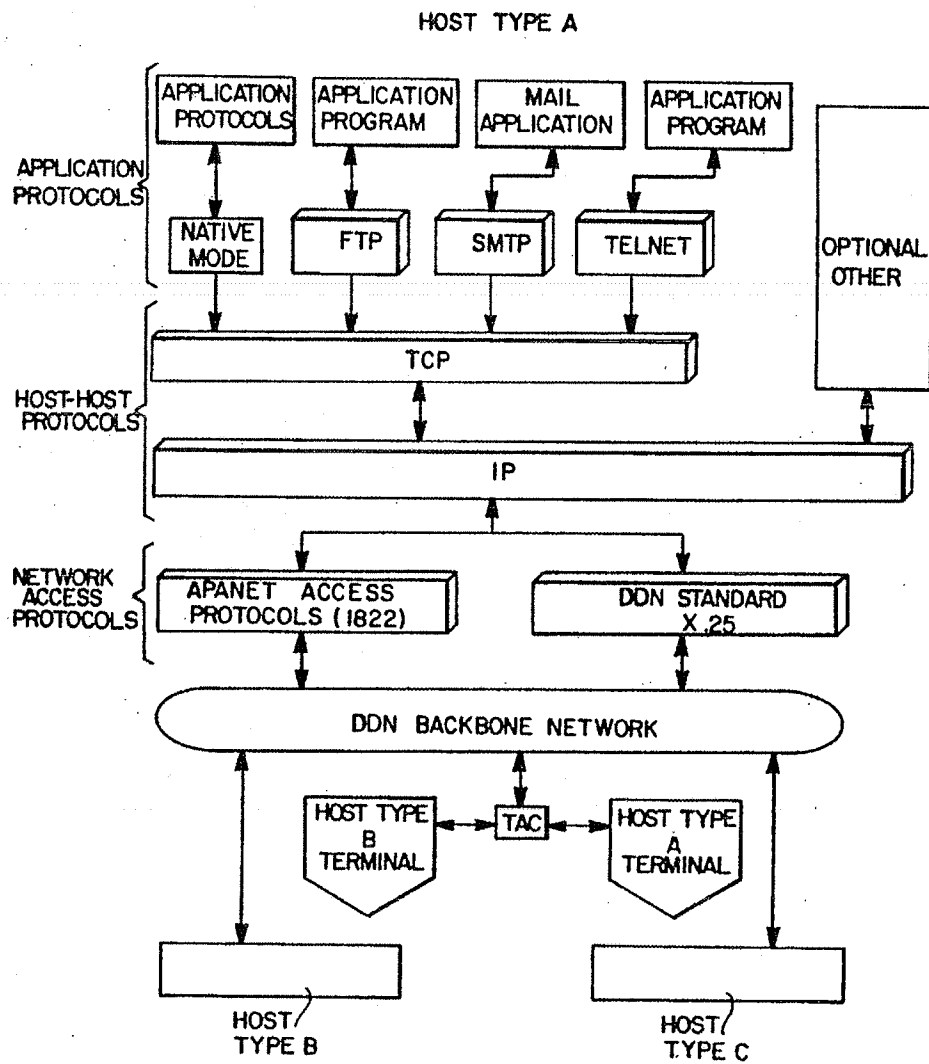


FIG. 1
(PRIOR ART)



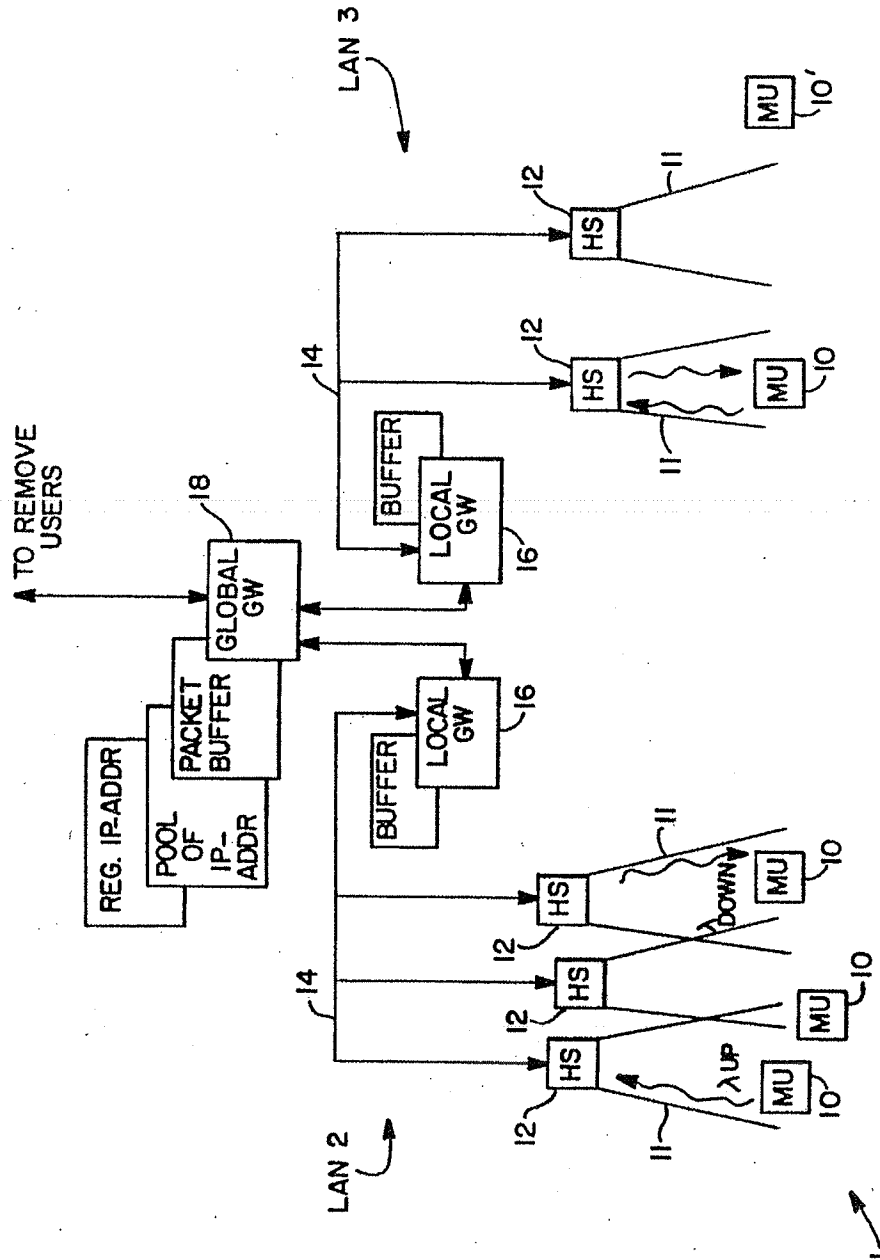
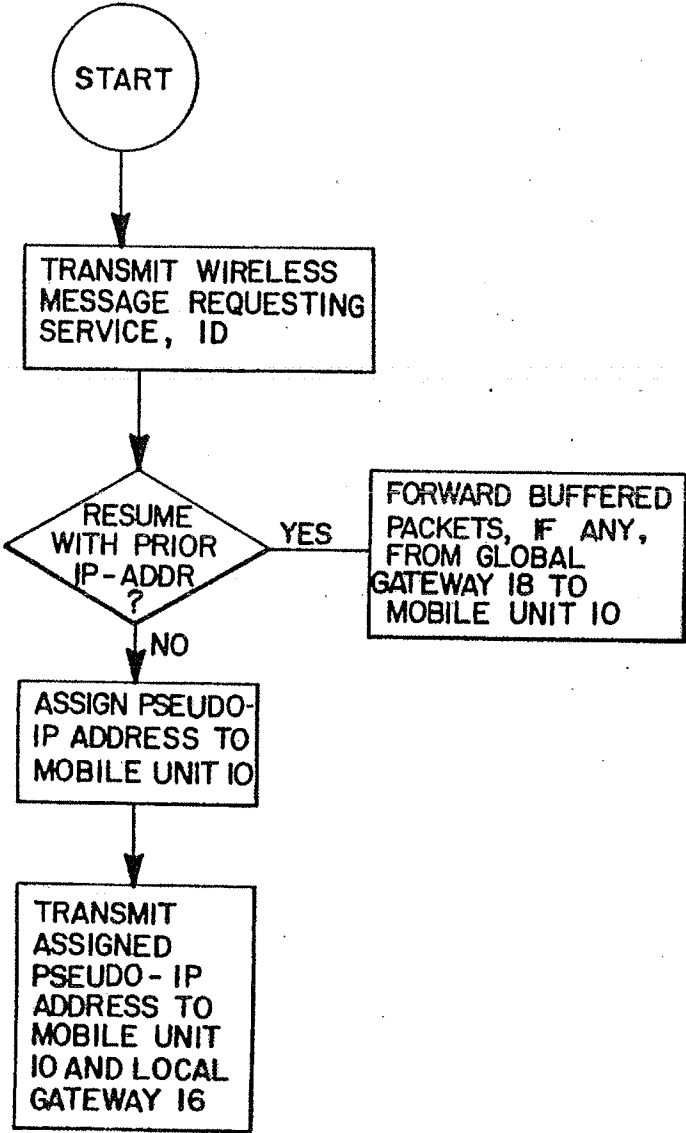


FIG. 2

FIG. 3



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.