United States Patent [19]

Bhatia et al.

[54] **APPARATUS AND METHODS FOR USE THEREIN FOR AN ISDN LAN MODEM UTILIZING INTERNAL DNS AND DHCP SERVERS FOR TRANSPARENT TRANSLATION OF LOCAL HOST NAMES TO IP ADDRESSES**

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U.S. application No. 08/938,370, Bhatia et al., filed Sep. 26, 1997.
U.S. application No. 08/938,369, Bhatia et al., filed Sep. 26, 1997.
U.S. application No. 08/938,852, Bhatia et al., filed Sep. 26, 1997.
U.S. application No. 08/938,851, Bhatia et al., filed Sep. 26, 1997.
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K. Egevang et al., "The IP Network Address Translator (NAT)", *Internic Network Working Group*, Request for Comments No. 1631, May 1994, pp. 1–9.

Primary Examiner—Melvin Marcelo
Attorney, Agent, or Firm—Michaelson & Wallace

[57] ABSTRACT

Apparatus, and accompanying methods for use therein, for an ISDN LAN modem (**300**) (and various aspects thereof) that is particularly, though not exclusively, suited for small user environments and which contains an internal ISDN router (**305**) having a self-contained network hub (**340**) for inter-connecting multiple network devices, such as workstations (**10**), to each other through a local area network (LAN) and for permitting each of those devices to each gain access through the router to any one of a number of different remote networks. Advantageously, to facilitate and simplify its configuration, the LAN modem automatically adapts itself to a current network environment of a workstation connected thereto, via the LAN, and then communicates with that workstation through a browser executing thereat to obtain configuration information from a user situated at the workstation. Additionally, the LAN modem, through use of a multi-tiered routing hierarchy including both destination- and source-based routing, accommodates several modalities of network communication not heretofore possible in a conventional router. Specifically, several different workstations can simultaneously communicate through the LAN modem with a common remote network (**60**) and share a single user account at a corresponding network service provider.

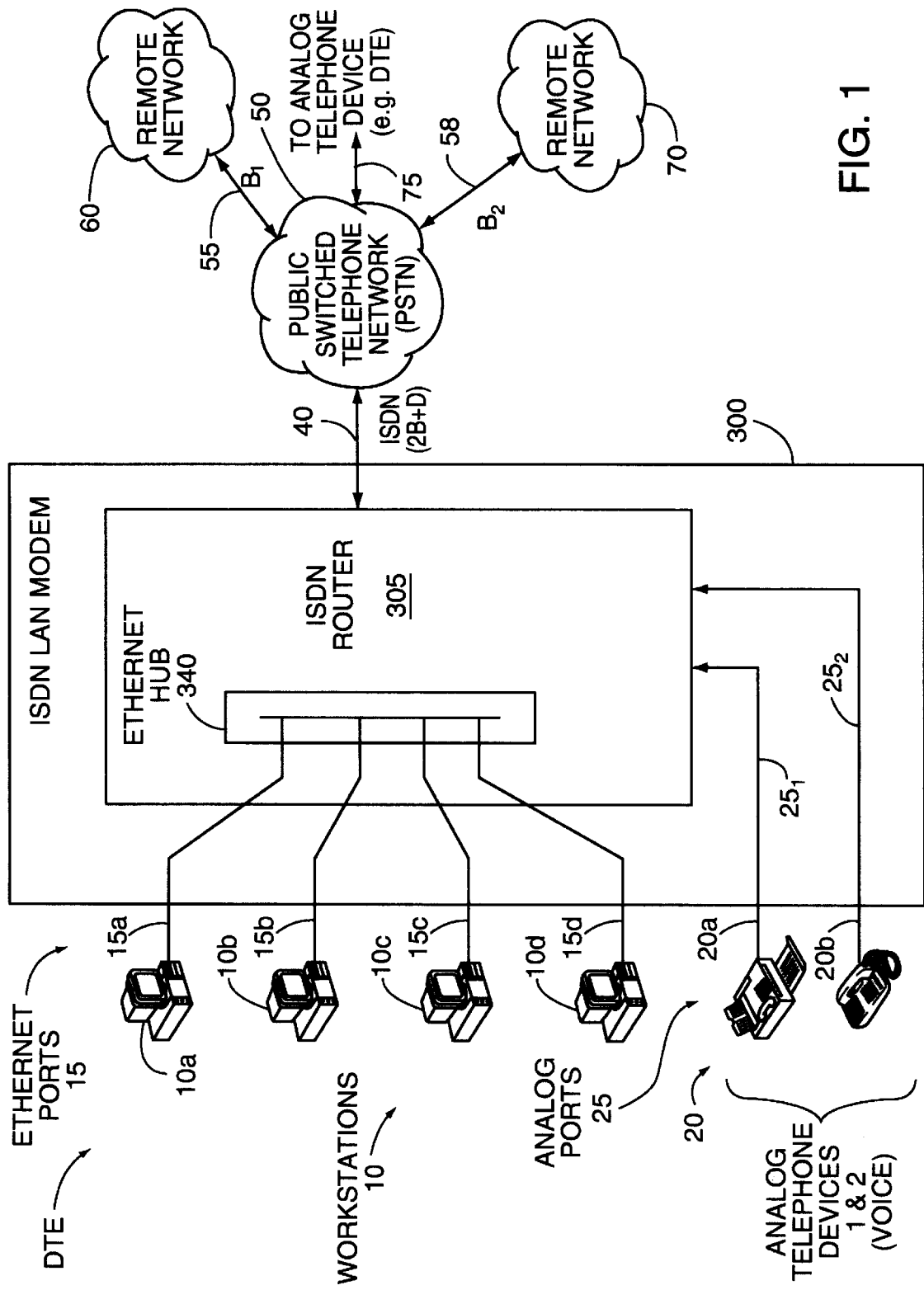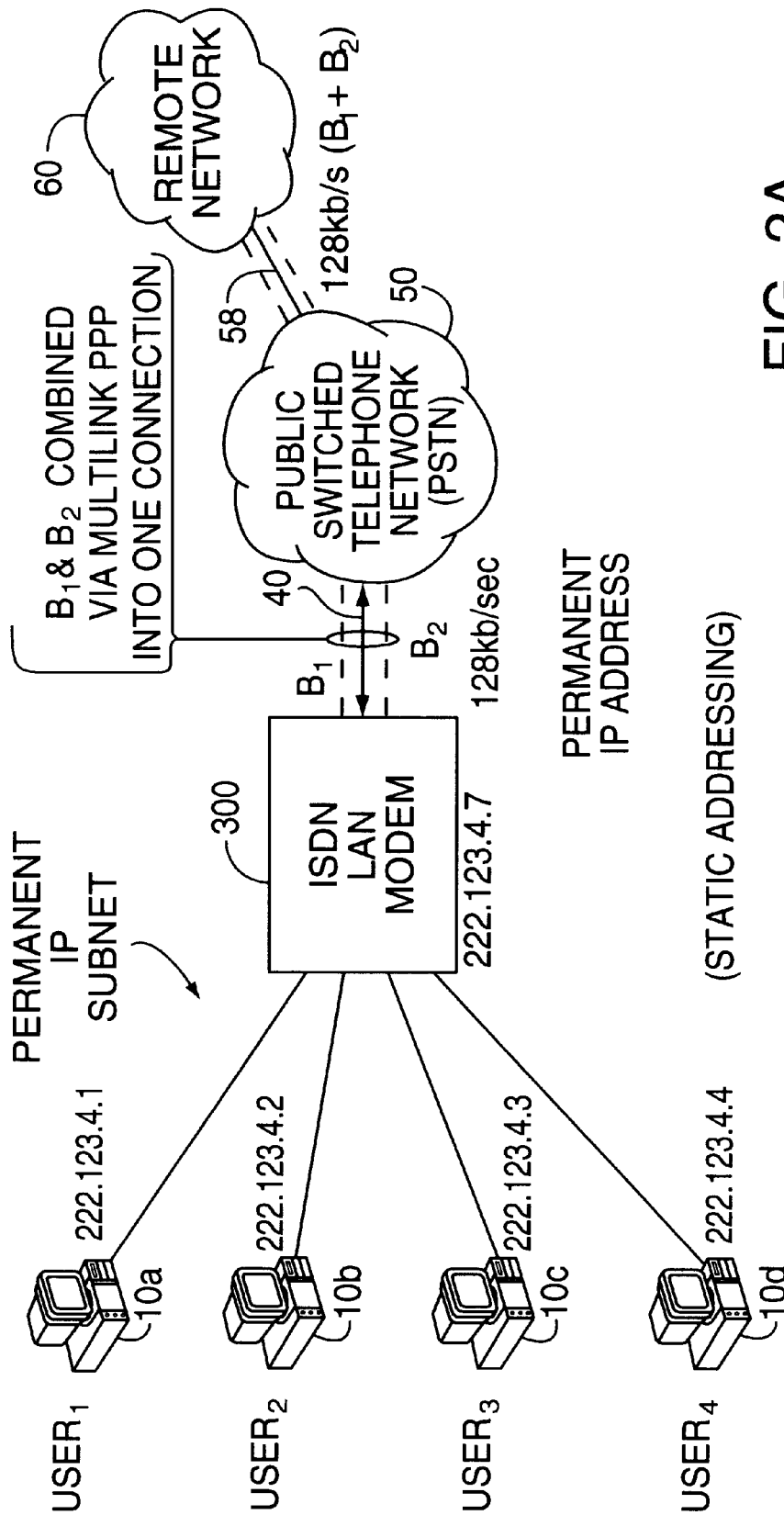**28 Claims, 41 Drawing Sheets**

FIG. 1

FIG. 2A

TRUE ROUTING MODE
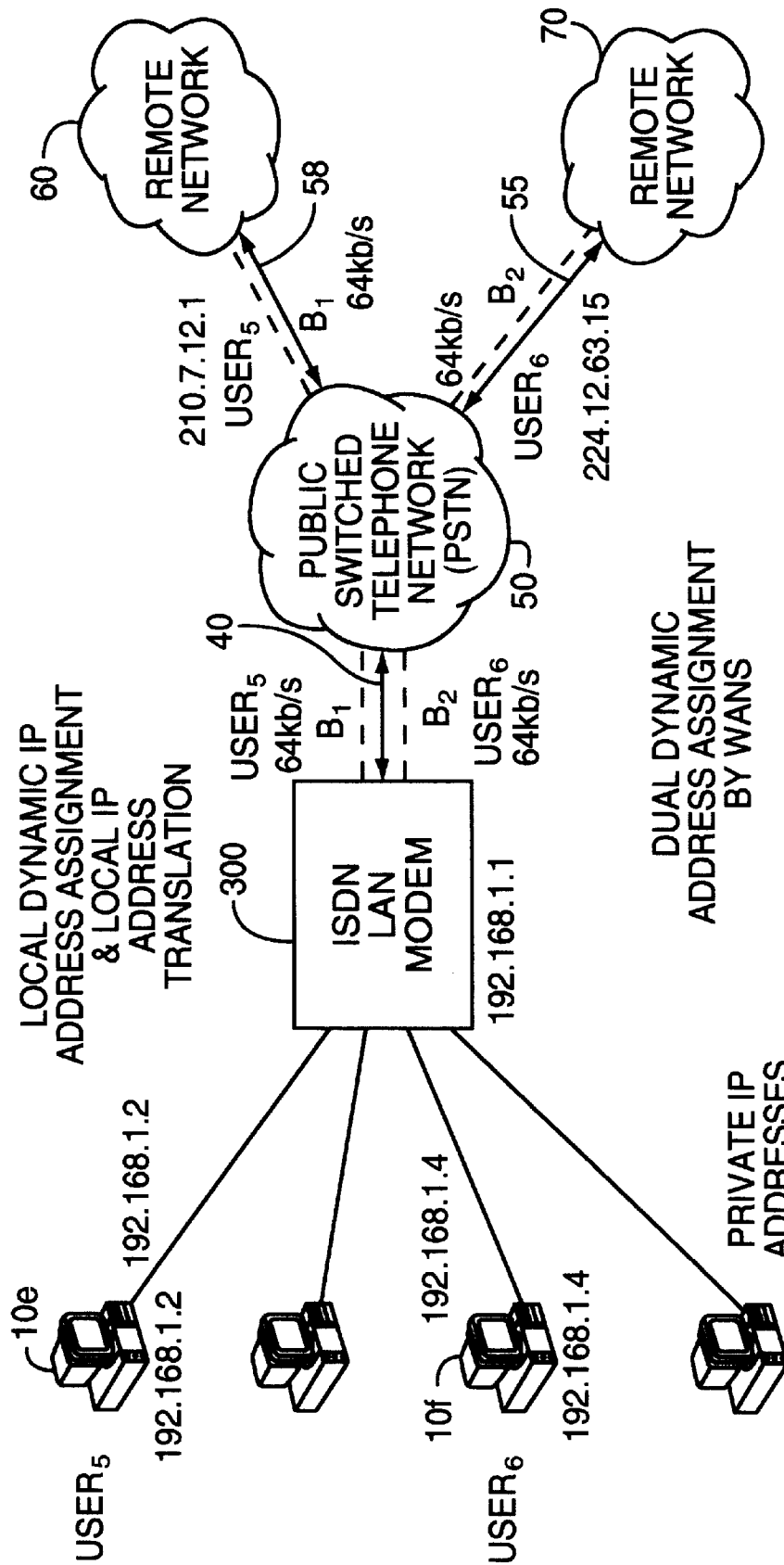
FIG. 2B

TWO SIMULTANEOUS
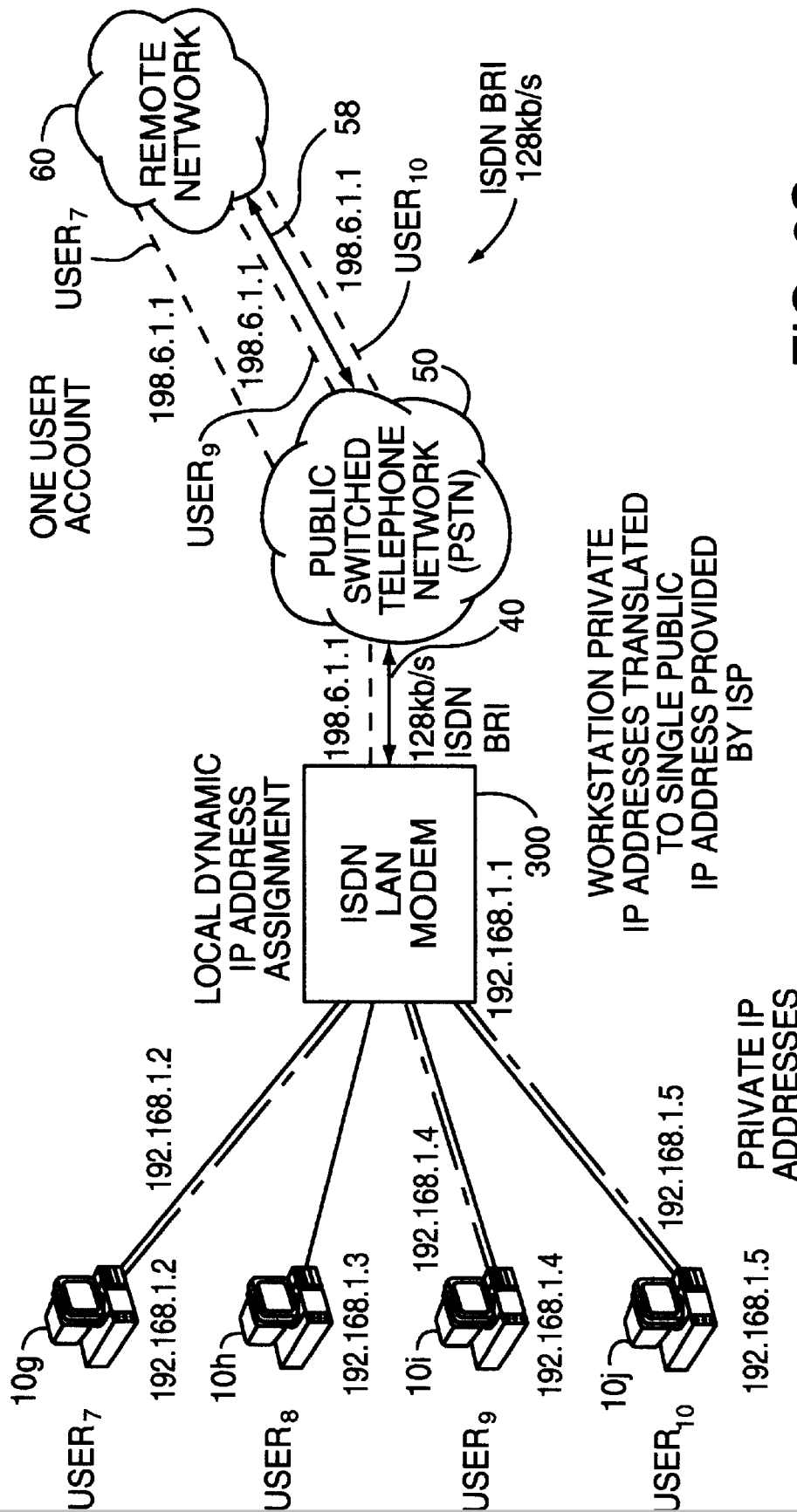REMOTE CONNECTIONS
TO DIFFERENT DESTINATIONS

FIG. 2C

SIMULTANEOUS CONNECTIONS
THROUGH SHARED ACCOUNT

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