United States Patent [19]

Melen et al.

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[54] **BILLING IN THE INTERNET**

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Related U.S. Application Data

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[30] **Foreign Application Priority Data**

Feb. 9, 1996 [FI] Finland 960619

[51] **Int. Cl.⁶** **H04M 15/00**
[52] **U.S. Cl.** **379/114**; 379/111; 379/115; 379/229; 705/40
[58] **Field of Search** 379/111, 112, 379/114, 115, 118, 120, 121, 122, 127, 130, 134, 136, 201, 219, 220, 221, 229, 230, 100.04, 100.06, 100.03, 100.13, 100.15, 100.17; 370/389, 392, 352, 401; 705/25, 29, 40

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[57] **ABSTRACT**

A terminal (**1, 2**) connected to the public telephone network PSTN has access to the Internet-connecting node by dialling a service number. In the access node the server gives the terminal a temporary IP-address and sets up the connection to the area network (**15**) or to the worldwide Internet (**11**) offering chargeable services. In order to bind the A-number and the IP-address to each other and thus bill the user for the chargeable services the procedure is as follows: when setting up the connection to the service number, the telephone exchange (**4**), containing the intelligent network switching functions, informs the intelligent network Service Control Point (SCP) (**14**) of both the user's (**1** or **2**) A-number and the device location identification (C') of the telephone exchange (**4**) from which the connection has been setup to the router (**6**) entry point in the access node. The entry point is given the same identification (C') as the device location connected to the point, and a message is sent to SCP containing the temporary address given to the terminal for the connection time as well as the router (**6**) entry point identification. In SCP the billing program binds to each other the A-number and the terminal's temporary IP-address having the same device location identification and router entry point identification. The intelligent network database has the data of the providers of chargeable services, which data include at least their IP-addresses. When the terminal is connected to the chargeable service, the local area net server informs the IP-address of the service and the IP-address of the terminal to the Service Control Point (SCP).
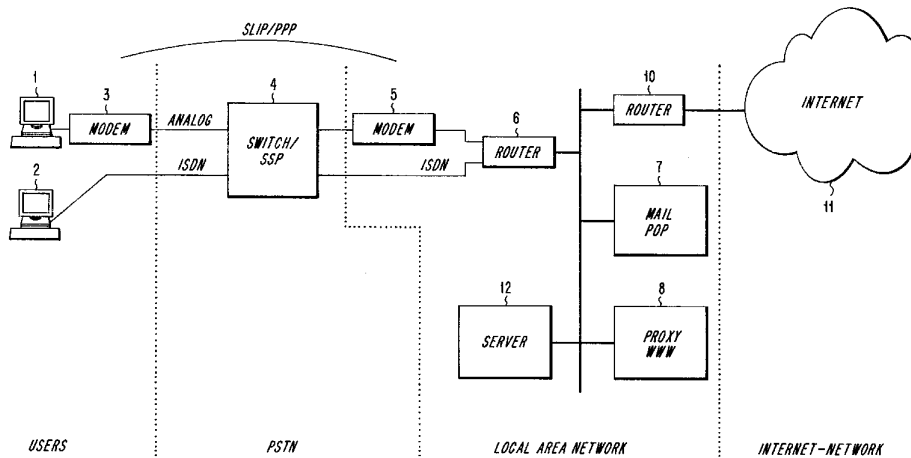
11 Claims, 4 Drawing Sheets

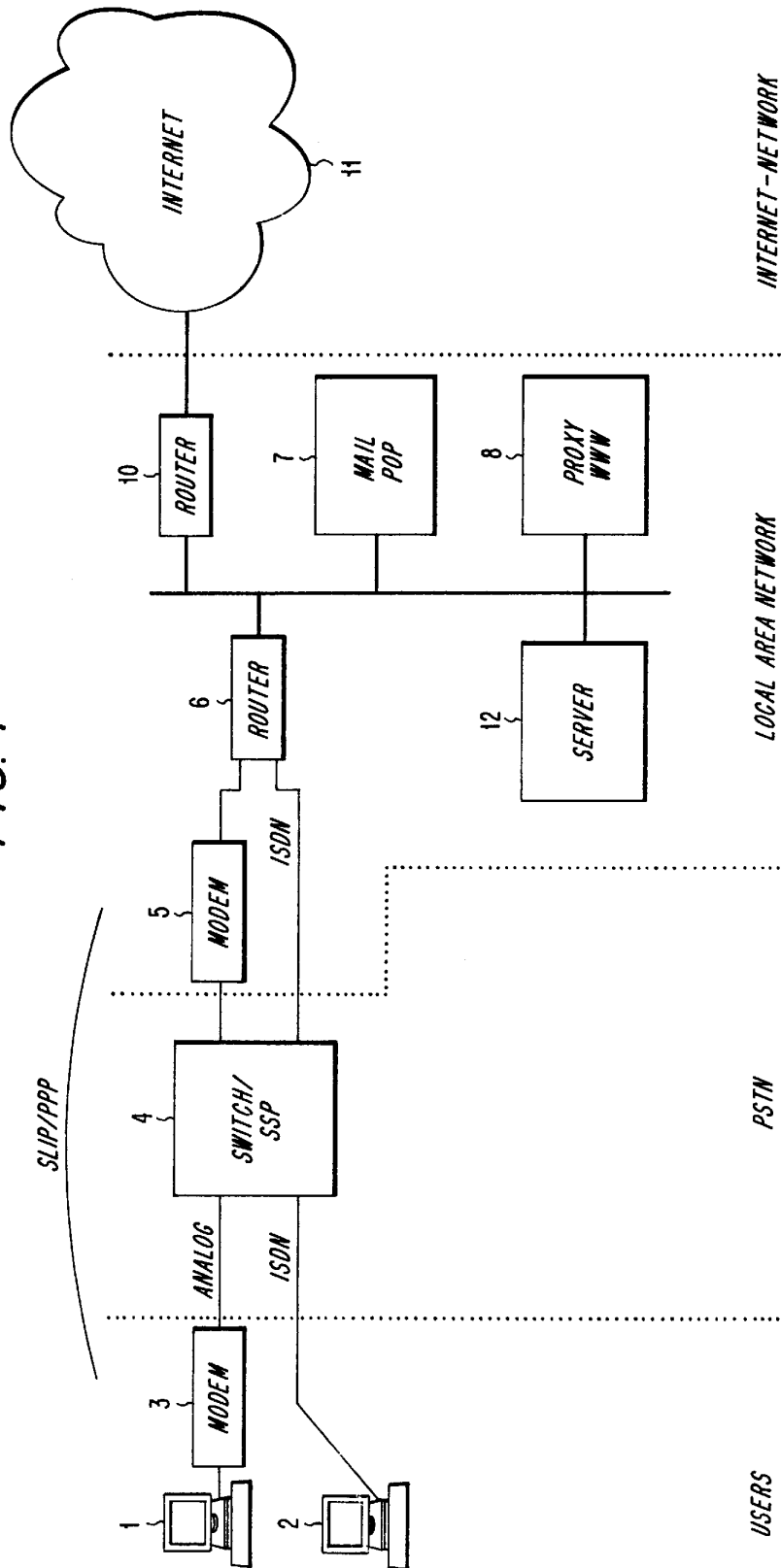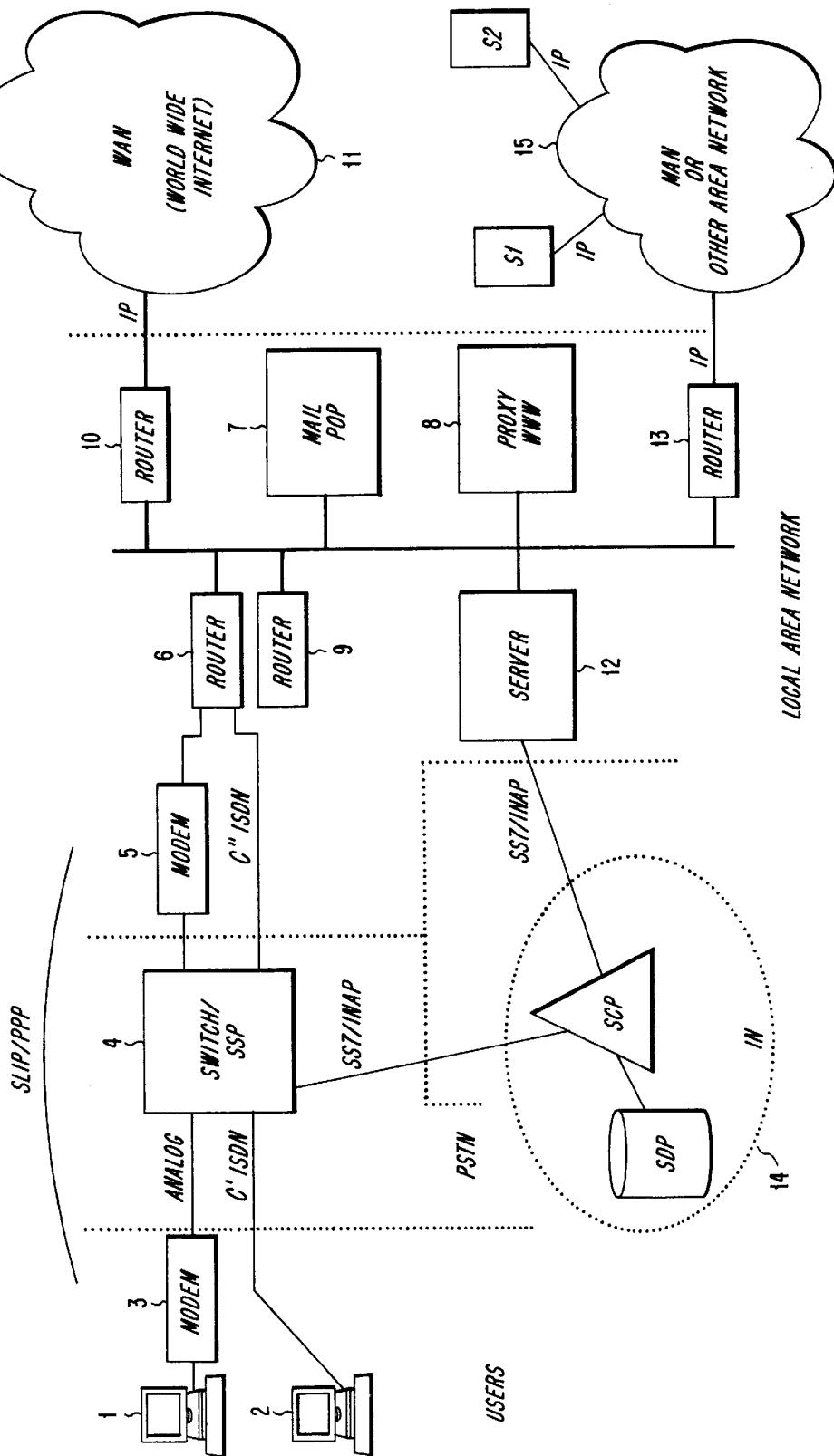*FIG. 1*

FIG. 2

FIG. 3

FIG. 4

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┌─────────────────────────────┐
│    SETTING UP CONNECTION     │
└─────────────────────────────┘
               │
               ▼
┌─────────────────────────────┐
│   IDENTIFYING THE TERMINAL   │
│     USER INTERFACE DATA      │
└─────────────────────────────┘
               │
               ▼
┌─────────────────────────────┐
│      IDENTIFYING THE         │
│        SELLERS DATA          │
└─────────────────────────────┘
               │
               ▼
┌─────────────────────────────┐
│   COMBINING THE IDENTIFIED   │
│     DATA FOR THE BILLING     │
└─────────────────────────────┘
               │
               ▼
┌─────────────────────────────┐
│  CONNECTING TO EACH OTHER    │
│   THE A-NUMBER AND THE       │
│  ADDRESS OF THE TERMINAL     │
└─────────────────────────────┘
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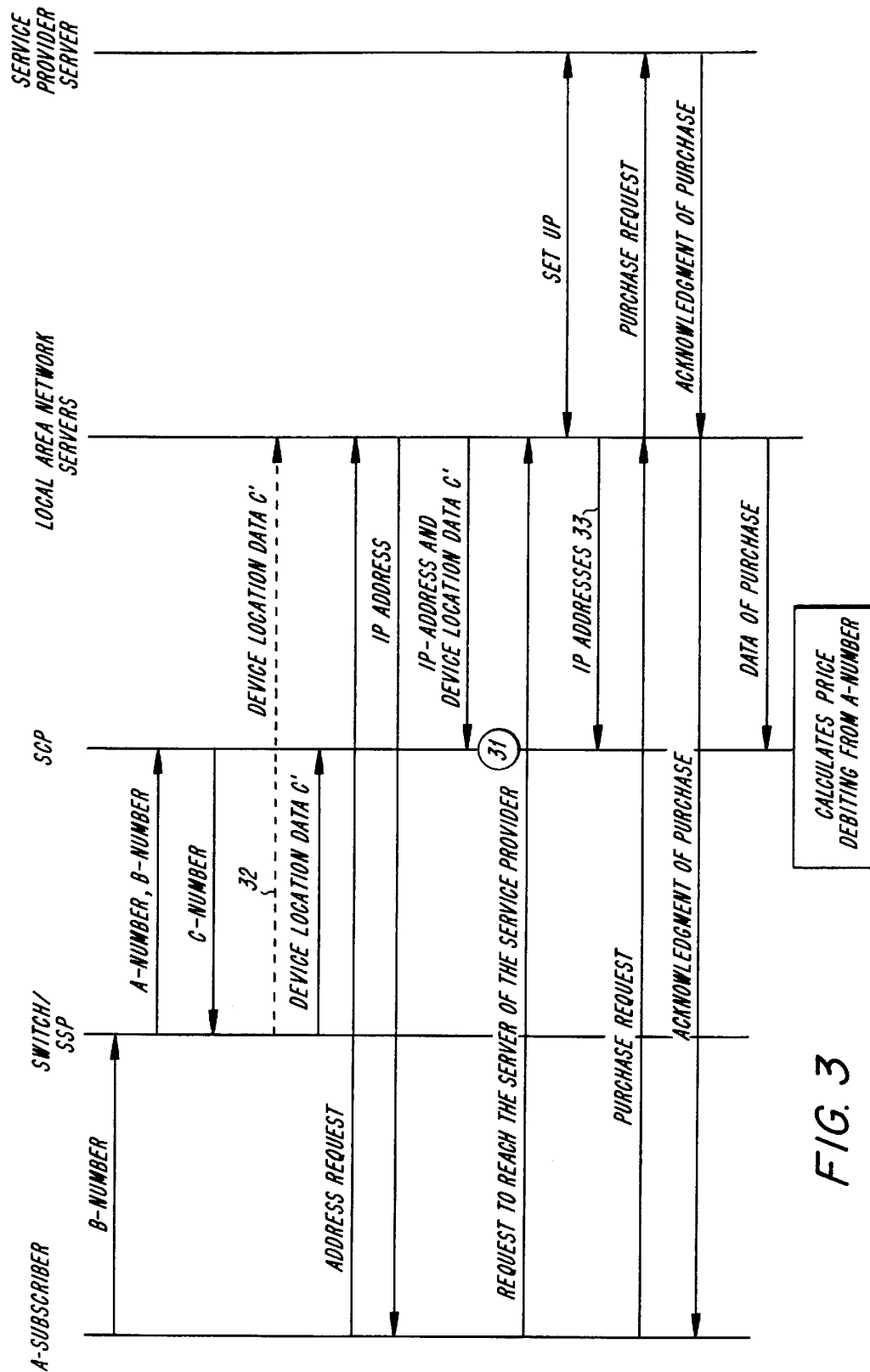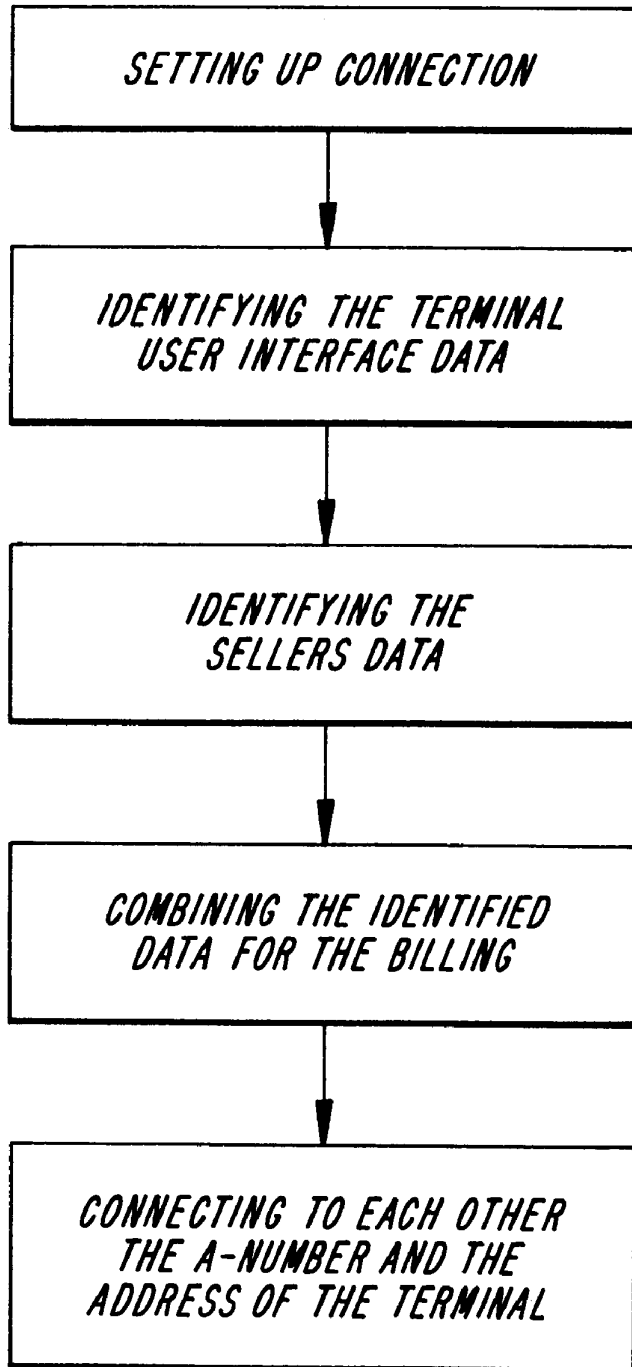
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