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(12) **United States Patent**
Farris

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(54) **TELECOMMUNICATIONS SYSTEM**

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

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(51) **Int. Cl.**⁷ **H04L 12/56; H04L 12/66**

(52) **U.S. Cl.** **370/352; 379/88.17**

(58) **Field of Search** 370/400, 401, 370/402, 352, 353, 354, 355, 356; 379/43, 209, 88.17, 88.18, 88.19, 88.21, 201, 210, 213, 214, 69, 70, 84, 260, 261, 262, 263, 264, 265, 266, 267

(57) **ABSTRACT**

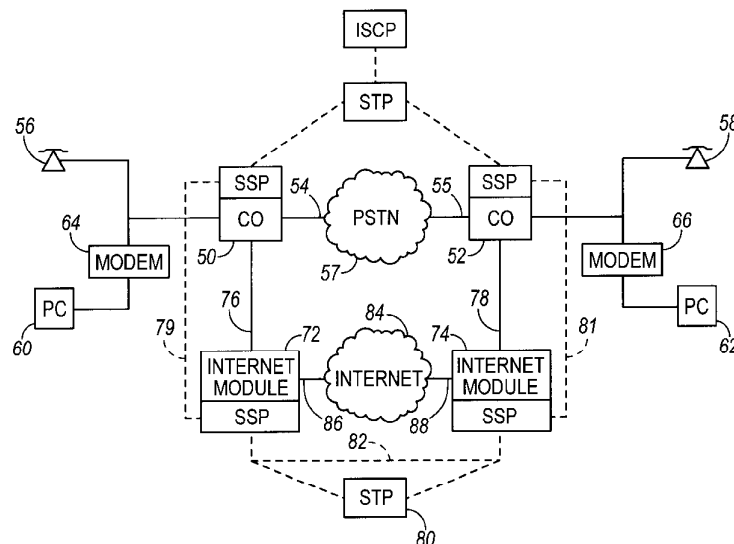
A public switched telephone network utilizing program controlled switching systems controlled by common channel interoffice signaling (CCIS) and preferably an advanced intelligent network (AIN) CCIS network is arranged in an architecture to provide a methodology for facilitating telephone use of the Internet by customers on an impromptu basis. The system permits a caller to set-up and carry out a telephone call over the Internet from telephone station to telephone station without access to computer equipment and without the necessity of maintaining a subscription to any Internet service. Billing may be accomplished on a per call basis. It is a particular feature of the invention that directory assistance is offered to callers, with or without call completion at the option of the caller. Such assistance is rendered through the use of procedures presently familiar to the caller from usage of the public switched telephone network. The system utilizes existing common channel signaling facilities along with Internet signaling and voice switching to permit the use of existing public switched telephone network plant for providing the directory assistance and call completion through a new methodology. A centralized directory number database may be provided according to one embodiment of the invention. Alternatively and preferably use is made of existing databases through interconnection or action to permit accessing of multiple databases in a hierarchical manner.

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37 Claims, 18 Drawing Sheets



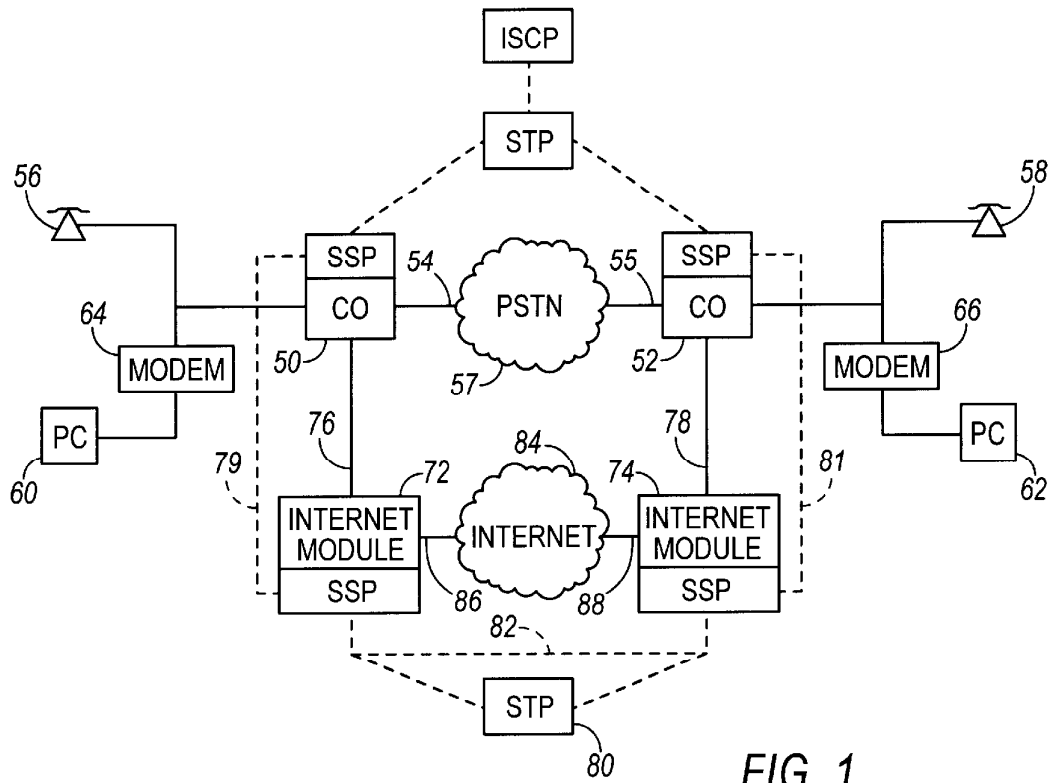


FIG. 1

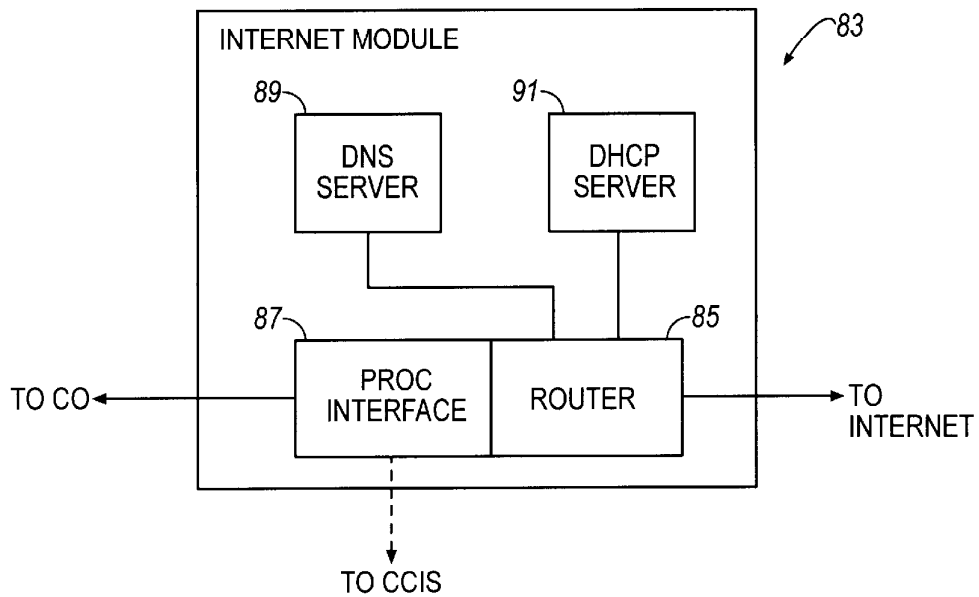
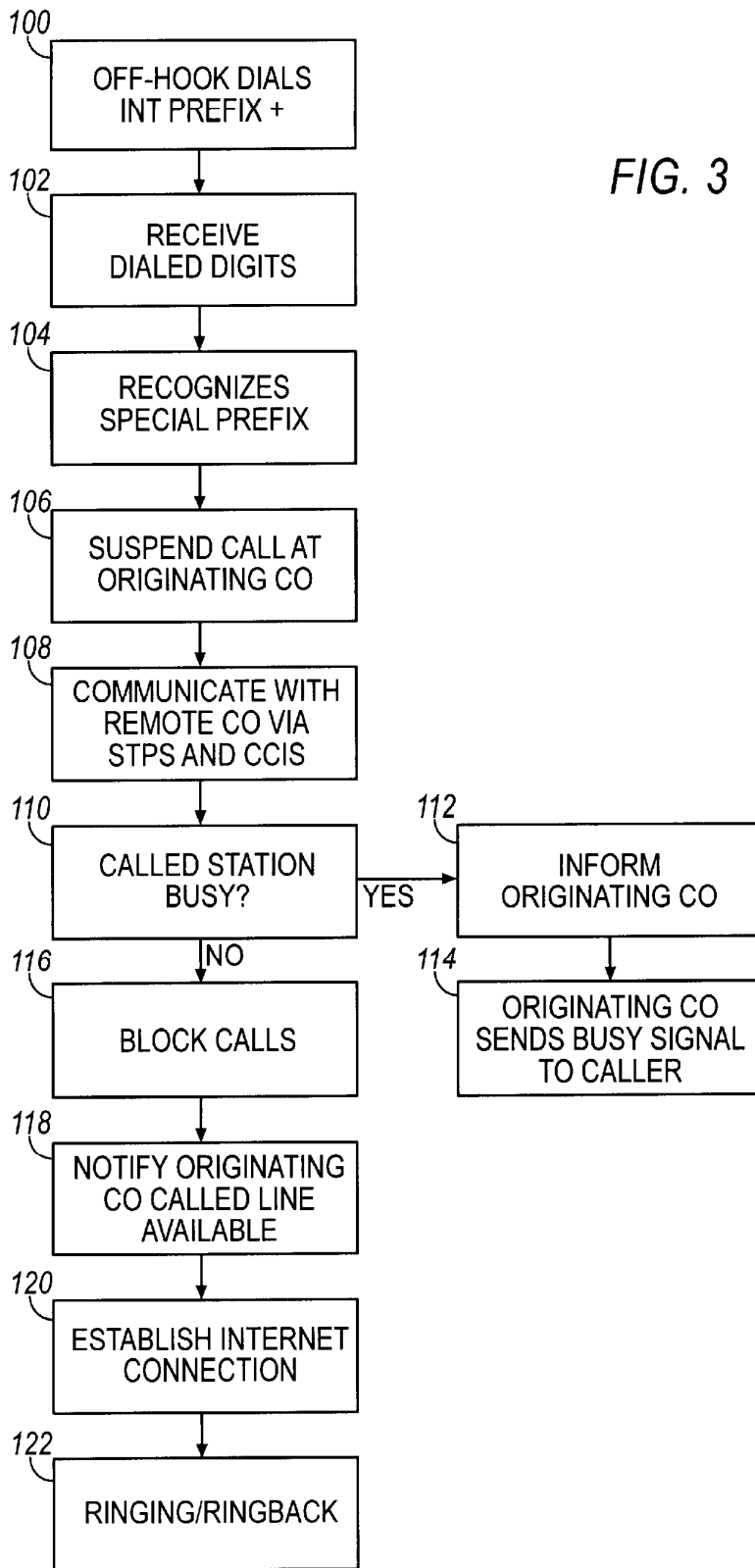


FIG. 2



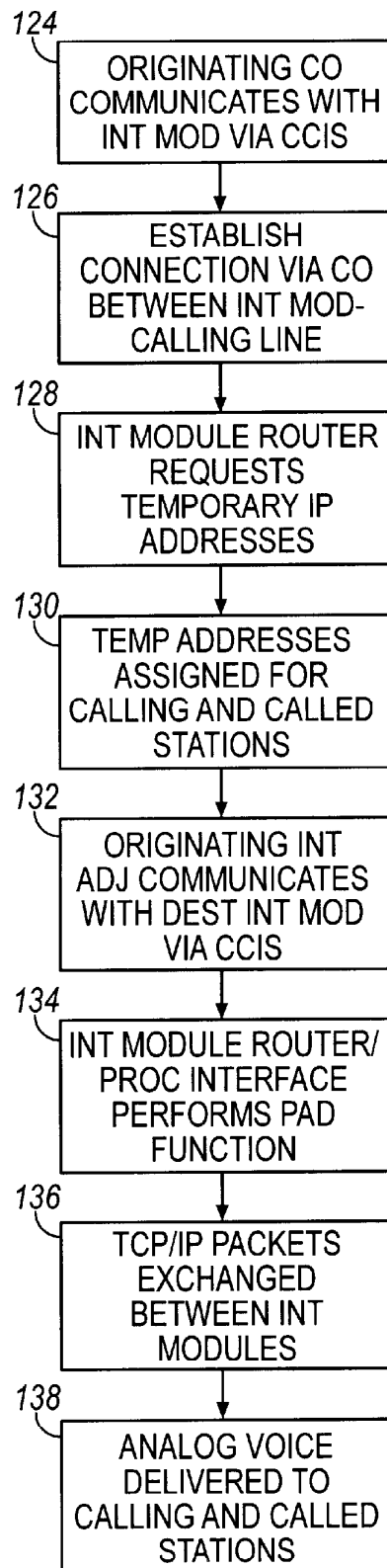


FIG. 4

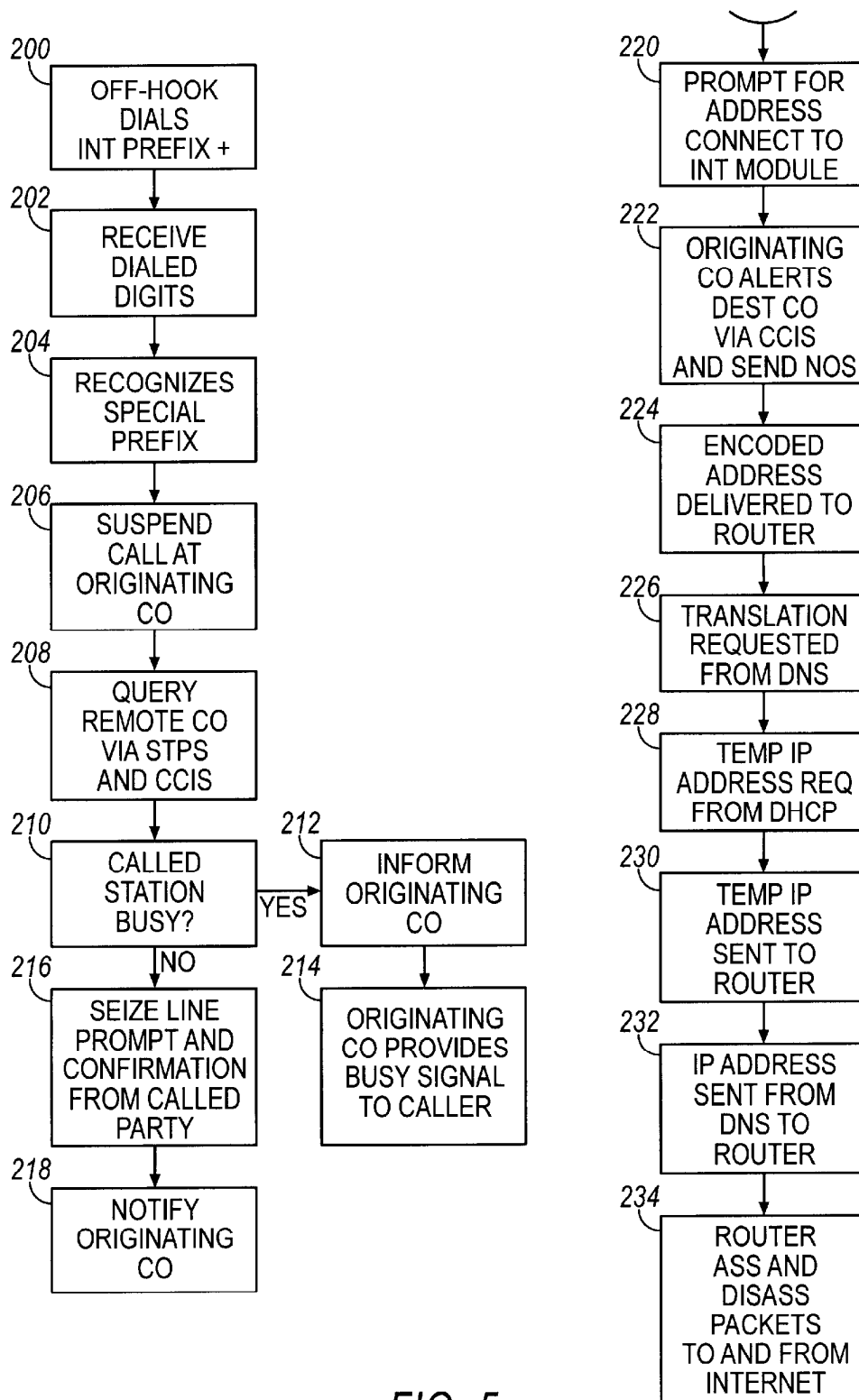


FIG. 5

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