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Lamb et al.

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(54) **METHODS AND APPARATUS FOR PROVIDING COMMUNICATIONS SERVICES BETWEEN CONNECTIONLESS AND CONNECTION-ORIENTED NETWORKS**

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Related U.S. Application Data

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(51) **Int. Cl.**[7] **H04L 12/66**; H04L 12/28; H04J 3/22

(52) **U.S. Cl.** **370/352**; 370/401; 370/466

(58) **Field of Search** 370/352, 353, 370/466, 467, 401, 389; 379/142.15, 265.01, 265.09

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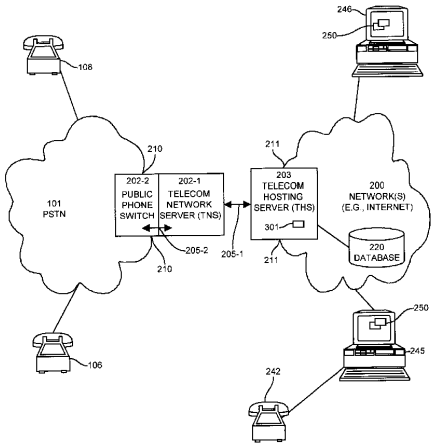
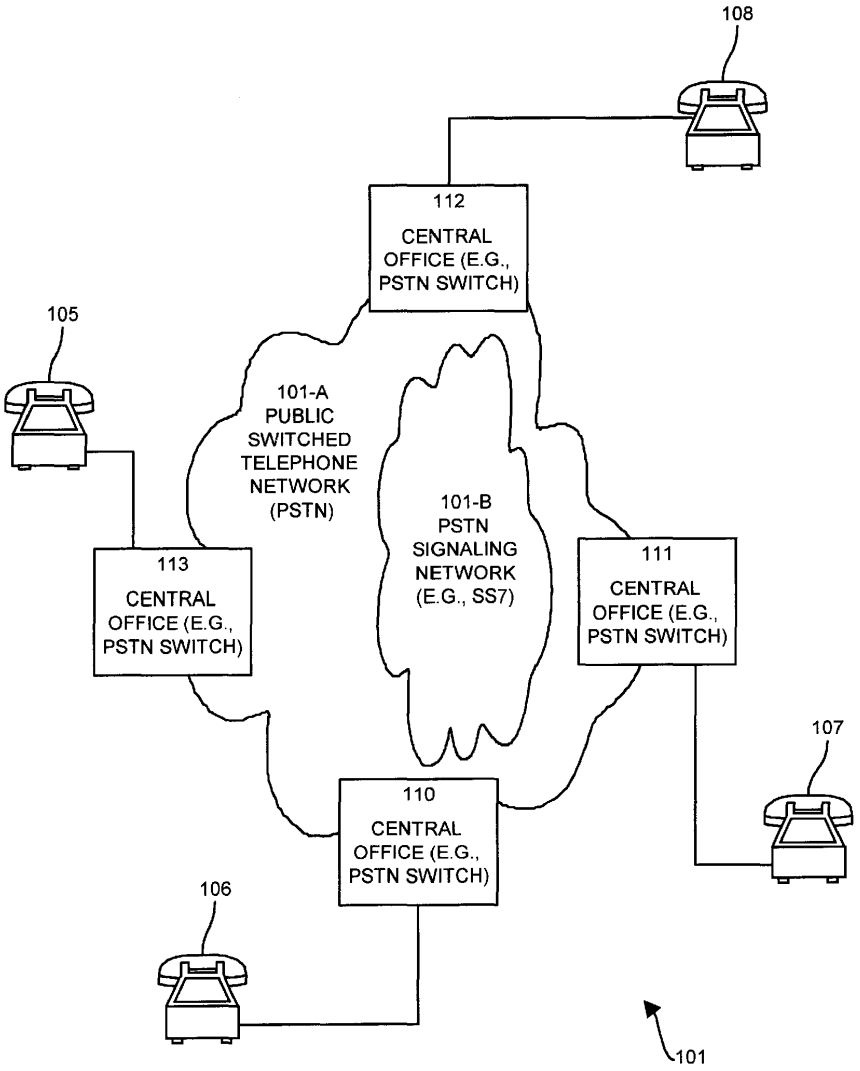
(57) **ABSTRACT**

A telecommunications system uses software applications called user agents, that are preferably Internet-based and that operate on behalf of users in a telecommunications hosting server to control call connections under control of a telecommunications network server that interfaces with the telecommunications hosting server as well as a connection-based public-telephone network. The telecommunications hosting server operates on a computer network on behalf of the user agents to provide call signaling in support of many advanced calling and telecommunications services. The functionality and, performance (e.g., execution) of the user agent(s) preferably takes place primarily within the telecommunications hosting server, though user client computers can provide some and possibly all of the user agent functionality, depending upon the particular implementation chosen.

30 Claims, 11 Drawing Sheets

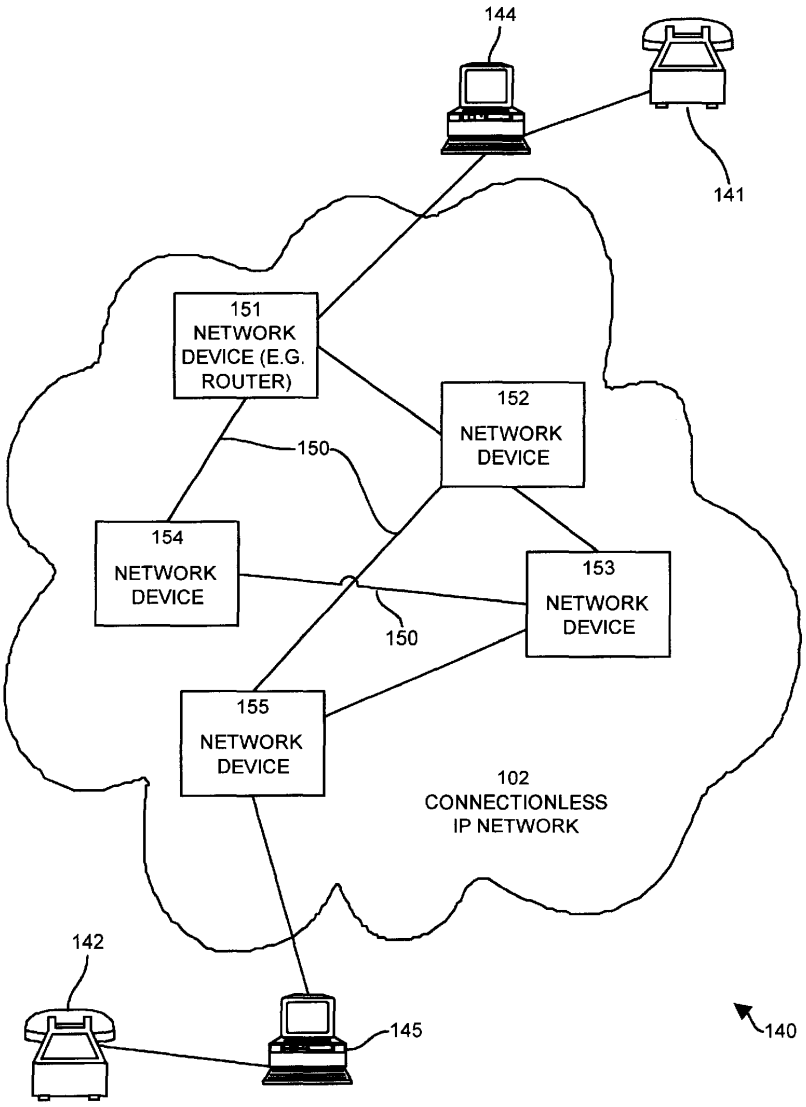




CONVENTIONAL CIRCUIT SWITCHED TELEPHONE NETWORK

PRIOR ART

FIG. 1



CONVENTIONAL INTERNET PROTOCOL (IP) NETWORK (E.G. INTERNET)
EMPLOYING VOICE OVER IP (VOIP) TECHNOLOGY

PRIOR ART
FIG. 2

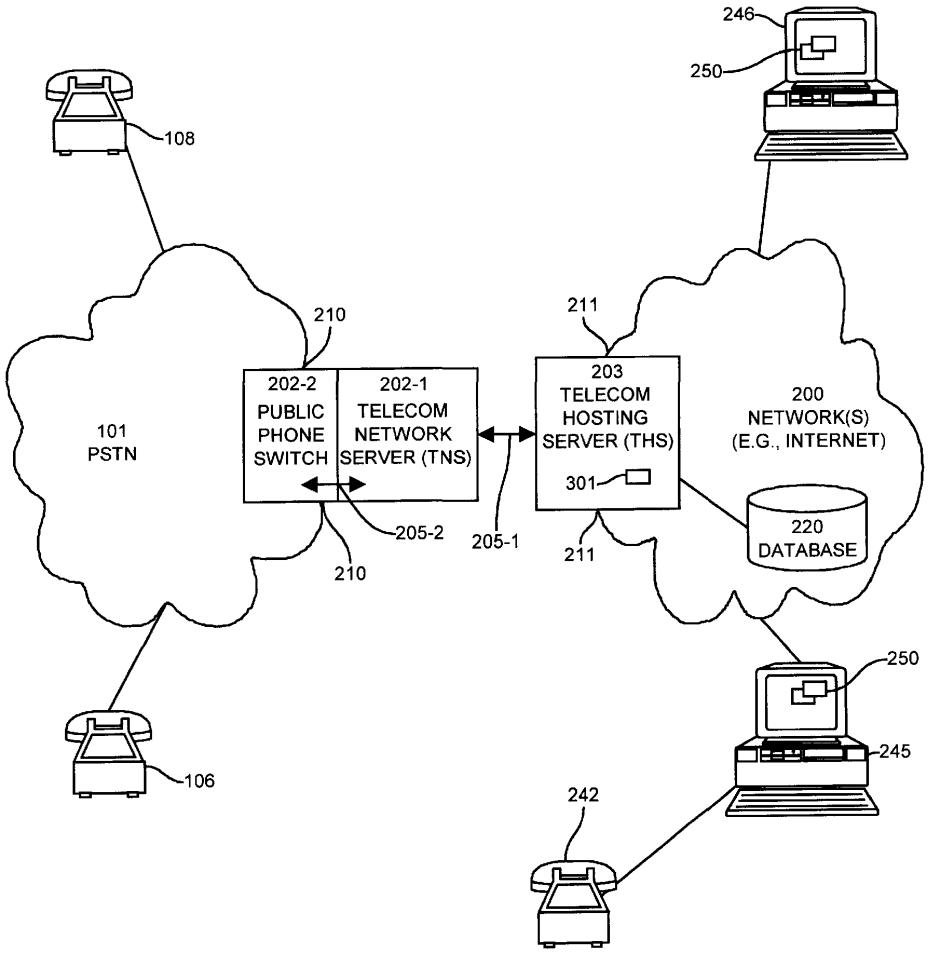


FIG. 3

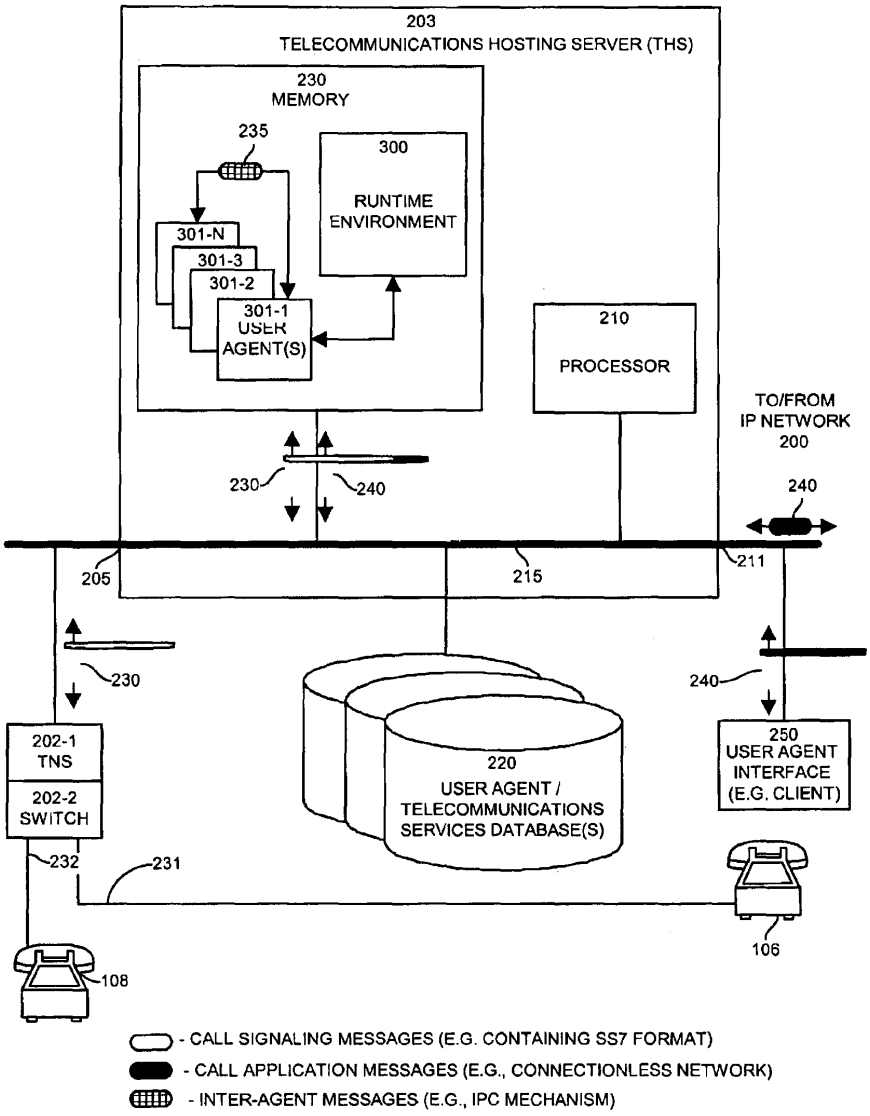


FIG. 4

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