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(54) METHOD AND APPARATUS FOR ESTABLISHMENT AND MANAGEMENT OF VOICE-OVER IP VIRTUAL PRIVATE NETWORKS IN IP-BASED COMMUNICATION SYSTEMS

(75) Inventors: Thomas P. Chu, Englishtown, NJ (US);
Martin Joel Glapa, Golden, CO (US);
Francis Robert Magee, Lincroft, NJ
(US); Steven H. Richman, Highland
Park, NJ (US)

(73) Assignee: Alcatel-Lucent USA Inc., Murray Hill, NJ (US)

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H04J 1/16 (2006.01)

(52) **U.S. Cl.** **370/401**; 370/352; 379/88.17

(58) Field of Classification Search 370/352–356, 370/400, 401, 466, 467, 230, 389, 392; 709/231; 379/88.17

See application file for complete search history.

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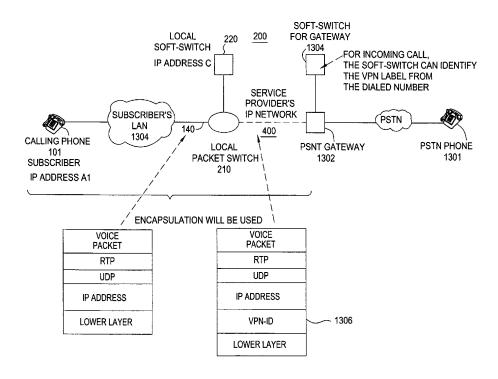
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Primary Examiner—John Pezzlo

(57) ABSTRACT

Establishing voice calls in an IP based VPN includes determining the relative location of a terminating point with respect to an originating point of a new communication containing the voice data, determining one or more IP addresses to egress the communication from the originating point to the terminating point, creating a VPN identifier in the new communication, passing the new communication to the terminating point and removing the VPN identifier from the new communication. The VPN identifier can be an extra field added to an encapsulation coding scheme of the voice data.

16 Claims, 16 Drawing Sheets





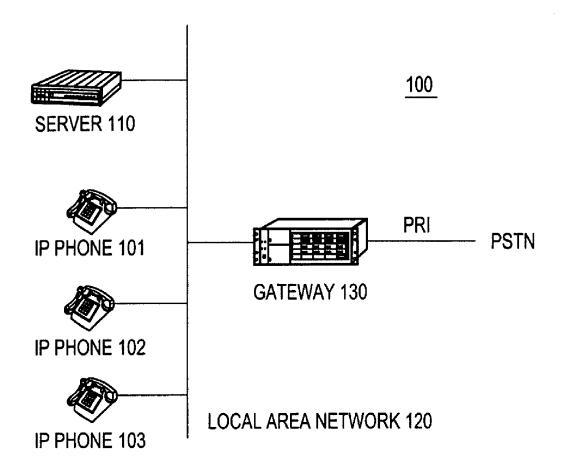


FIG. 1 (PRIOR ART)



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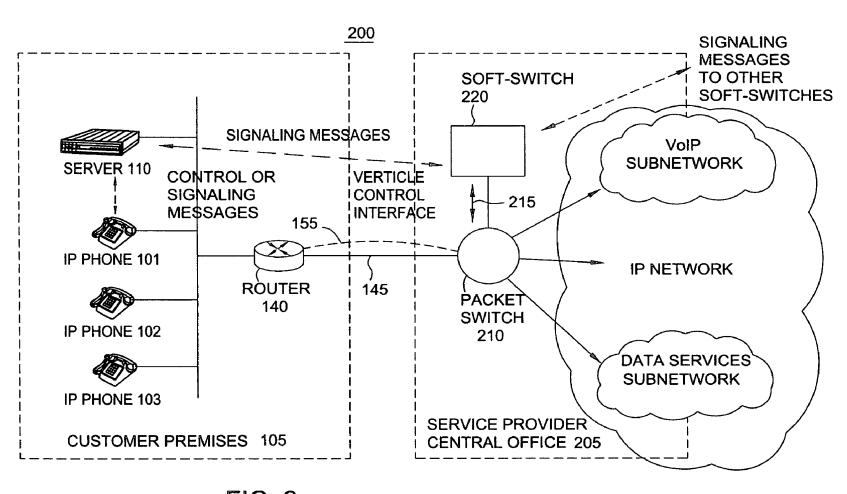
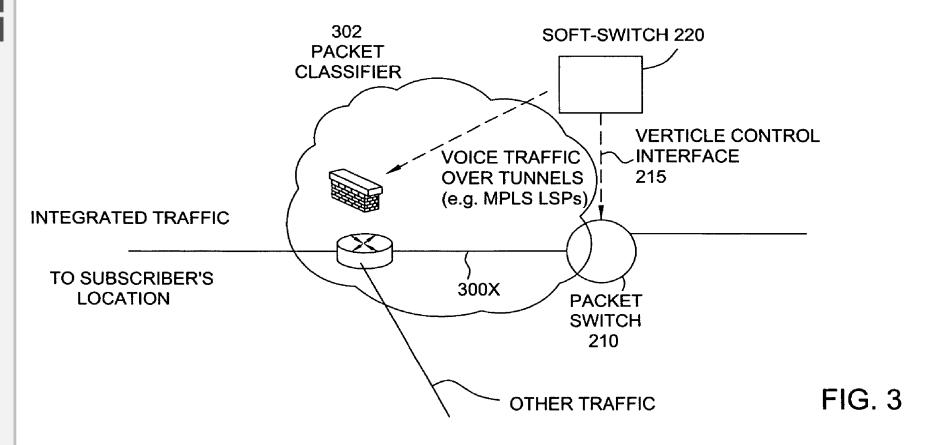


FIG. 2

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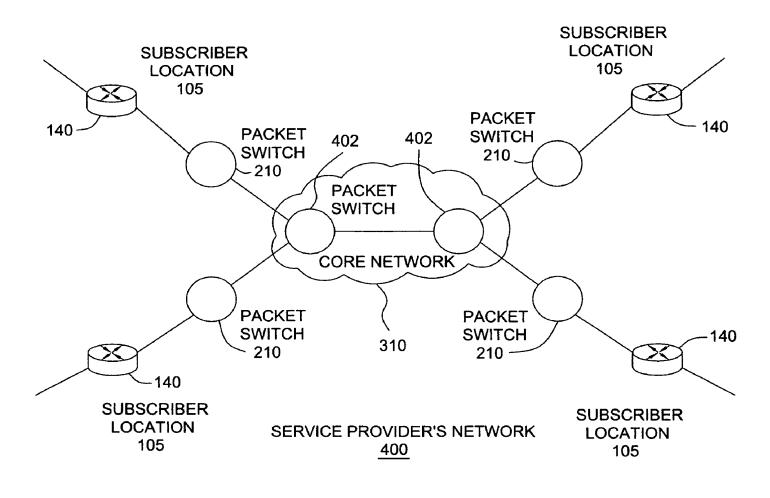


FIG. 4

DOCKET

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