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(12) **United States Patent**  
**Vargo et al.**

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(54) **SYSTEM AND METHOD FOR REAL-TIME DATA AND VOICE TRANSMISSION OVER AN INTERNET NETWORK**

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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.

(57) **ABSTRACT**

A system and method is disclosed for real-time data and voice transmission over an internet network. A PSTN voice packet is received and digitized at a network gateway. A destination gateway and destination transmux is identified and a destination gateway address and a destination transmux address are appended to the digitized voice packet. The voice packet is received at an originating transmux and broken into gateway subpackets. The gateway subpackets are aggregated and the destination transmux address is removed from the gateway subpackets. The transmux voice packets are then transmitted over the network to a destination transmux, where they are broken into transmux subpackets. The subpackets are sorted and aggregated by a destination gateway address, and the destination gateway addresses are then removed. Voice packets are received from the destination transmux by a destination gateway and converted to analog voice packets and transmitted to a destination PSTN.

(21) Appl. No.: **09/130,896**

(22) Filed: **Aug. 7, 1998**

**Related U.S. Application Data**

(60) Provisional application No. 60/079,659, filed on Mar. 27, 1998.

(51) **Int. Cl.**<sup>7</sup> ..... **H04L 12/66**; H04L 12/28; H04J 3/24

(52) **U.S. Cl.** ..... **370/356**; 370/474; 370/401; 370/389

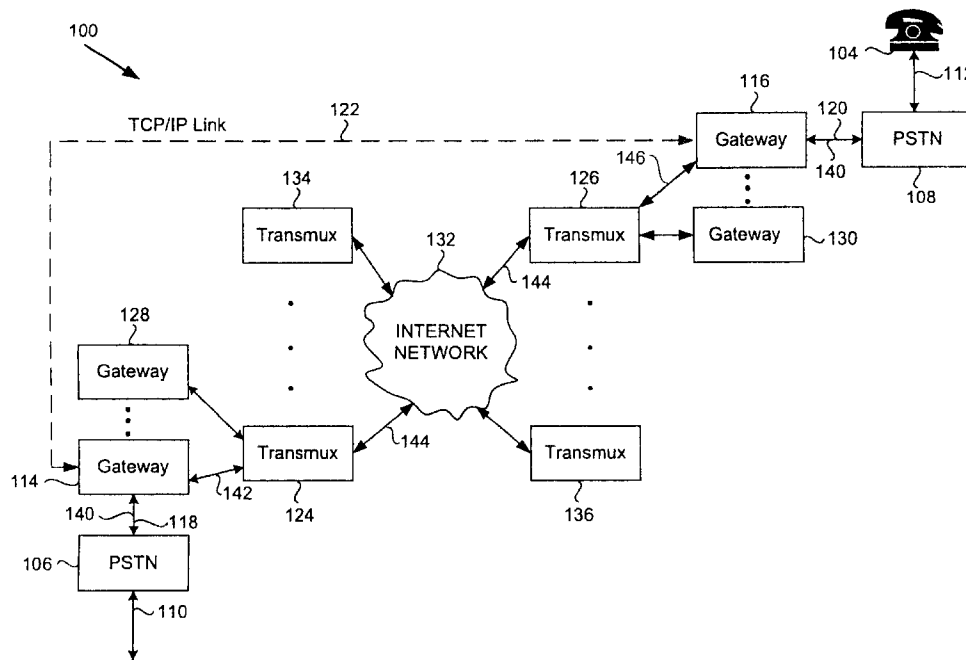
(58) **Field of Search** ..... 370/352, 353, 370/354, 355, 356, 473, 474, 475, 476, 477, 401, 402, 400, 389, 428, 429, 471, 393

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**18 Claims, 7 Drawing Sheets**



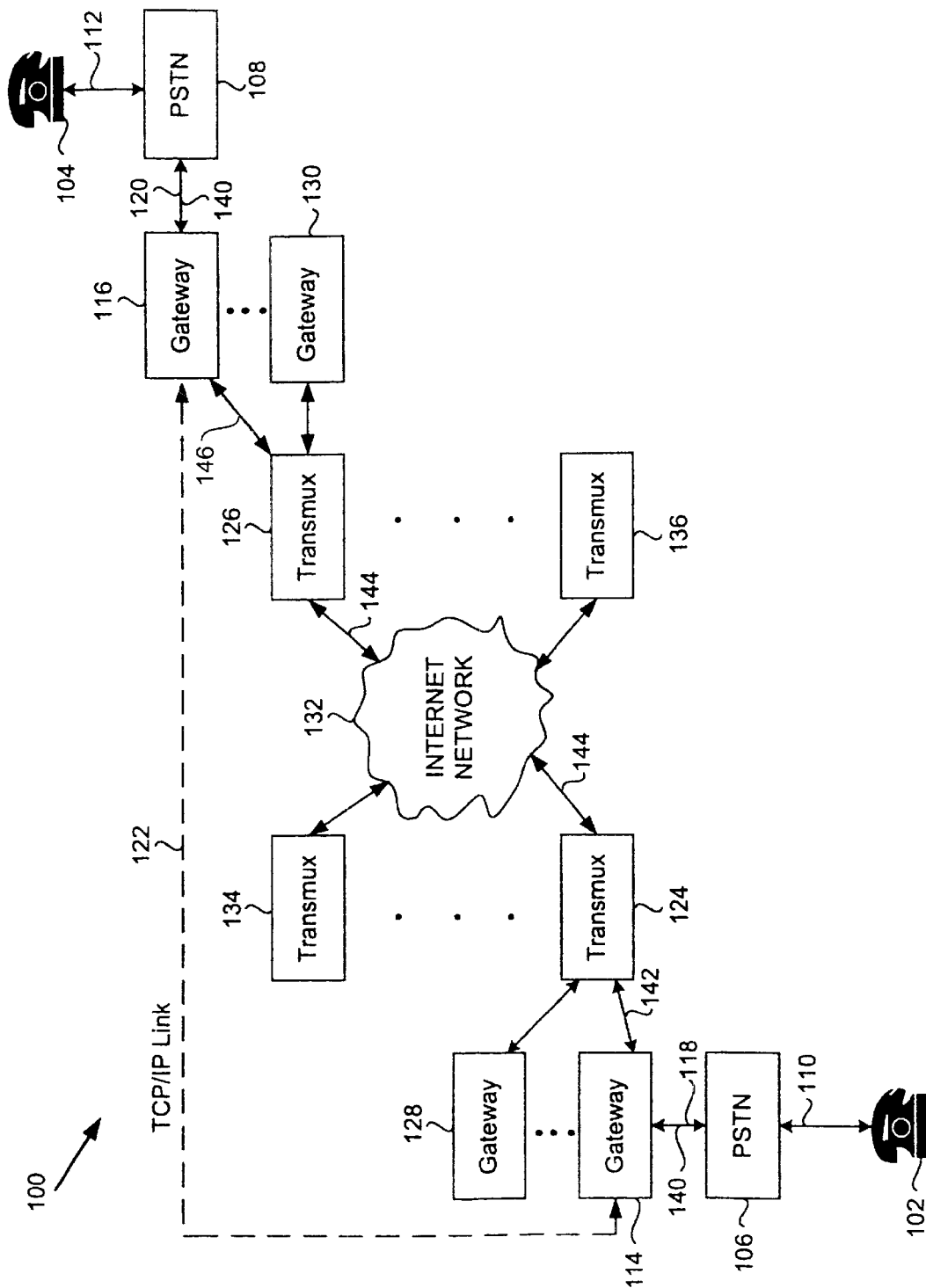


FIG. 1

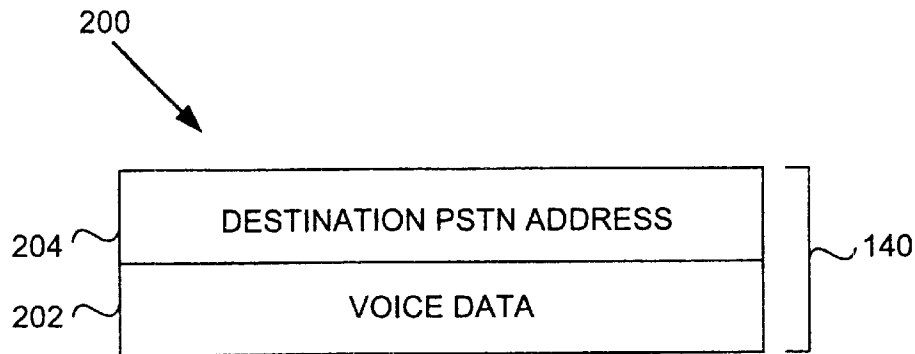


FIG. 2

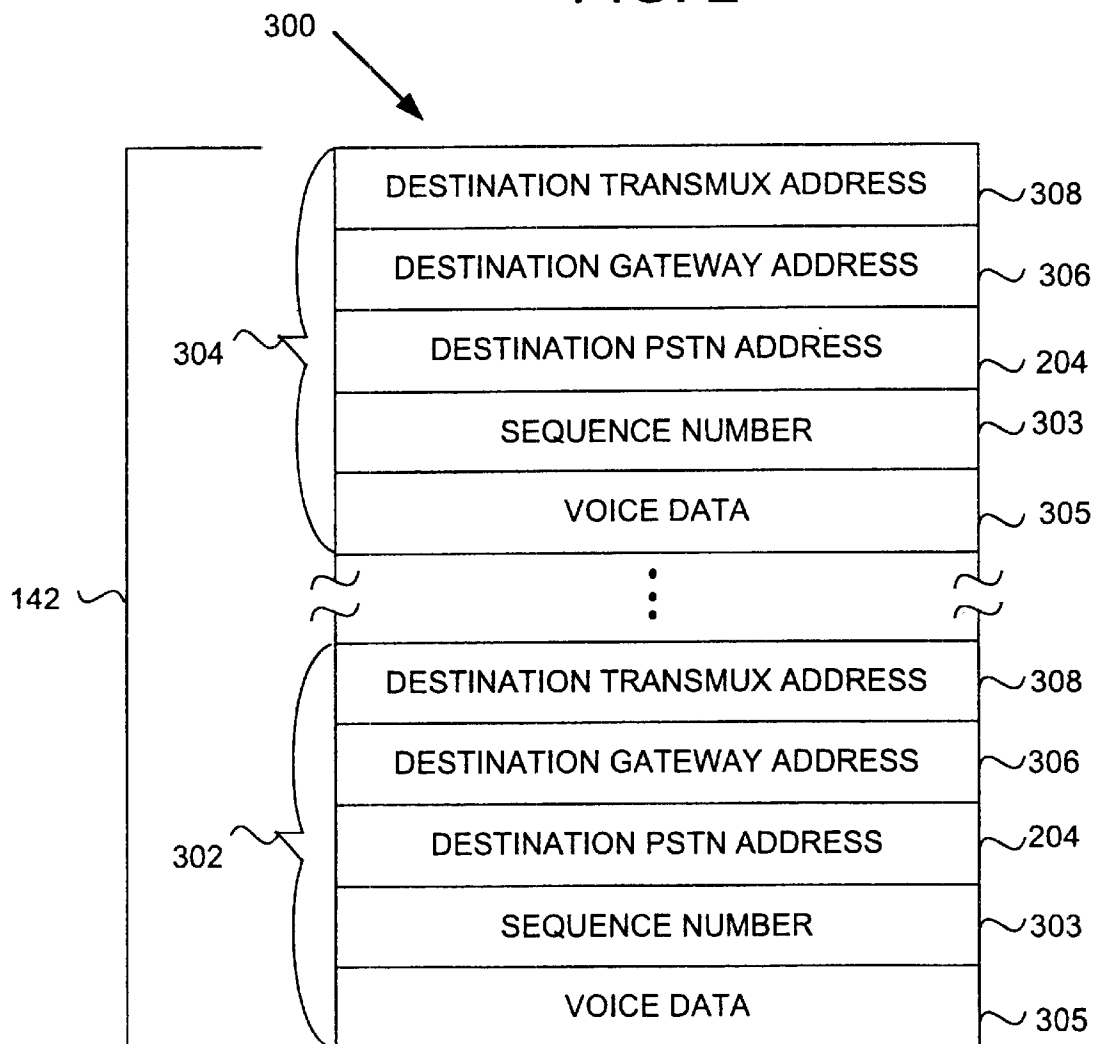


FIG. 3

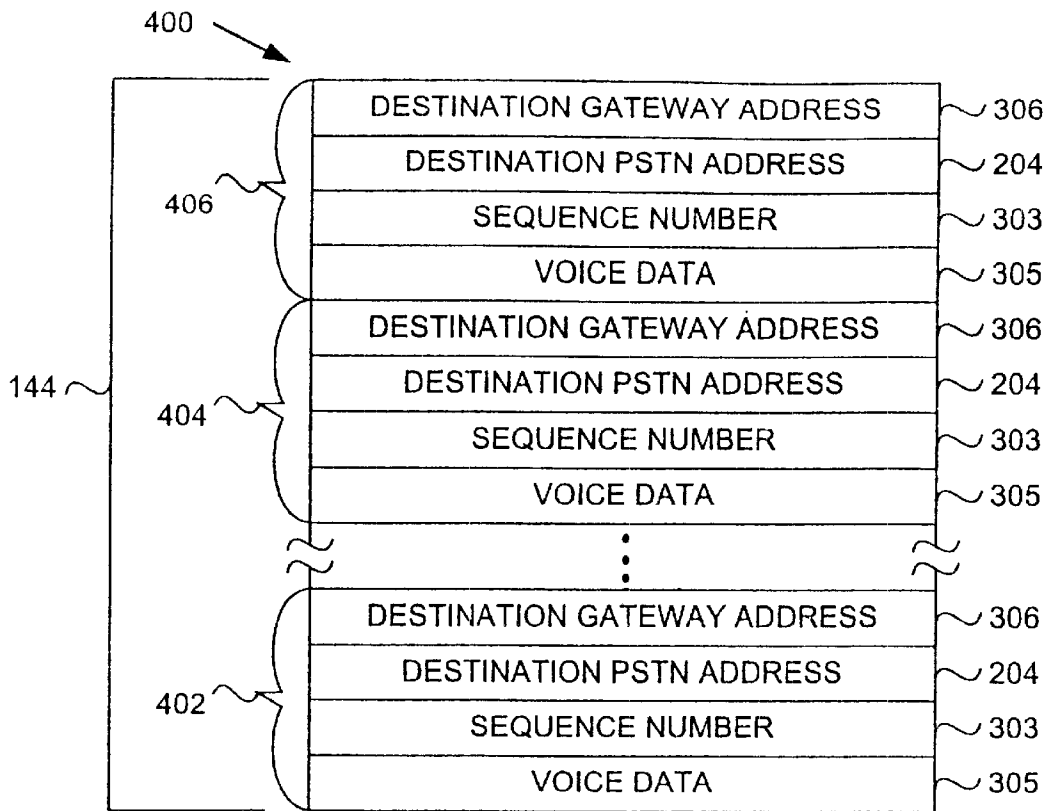


FIG. 4

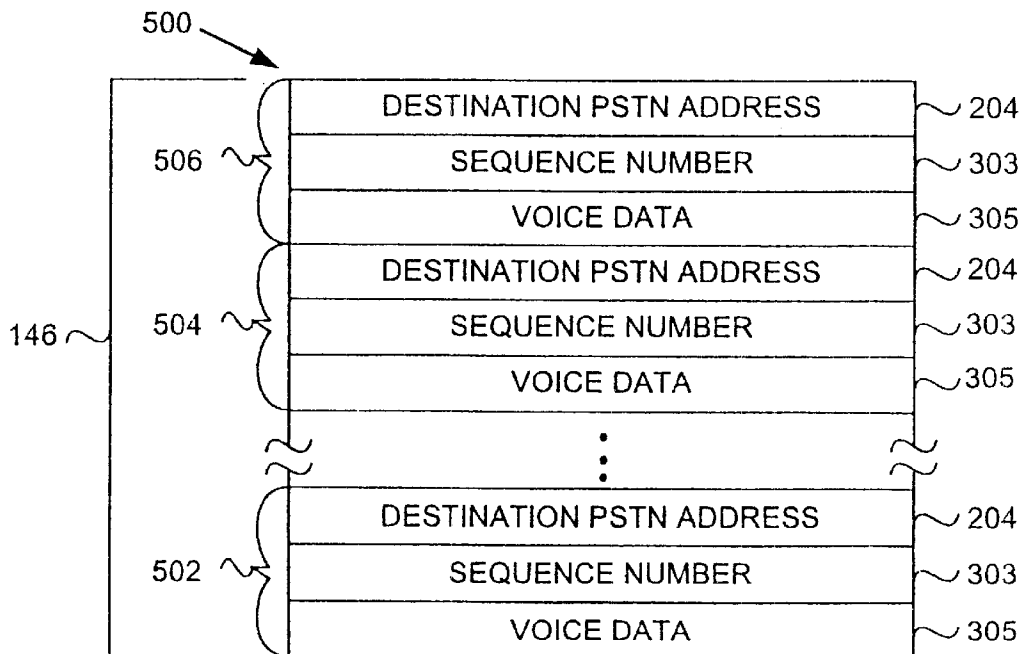


FIG. 5

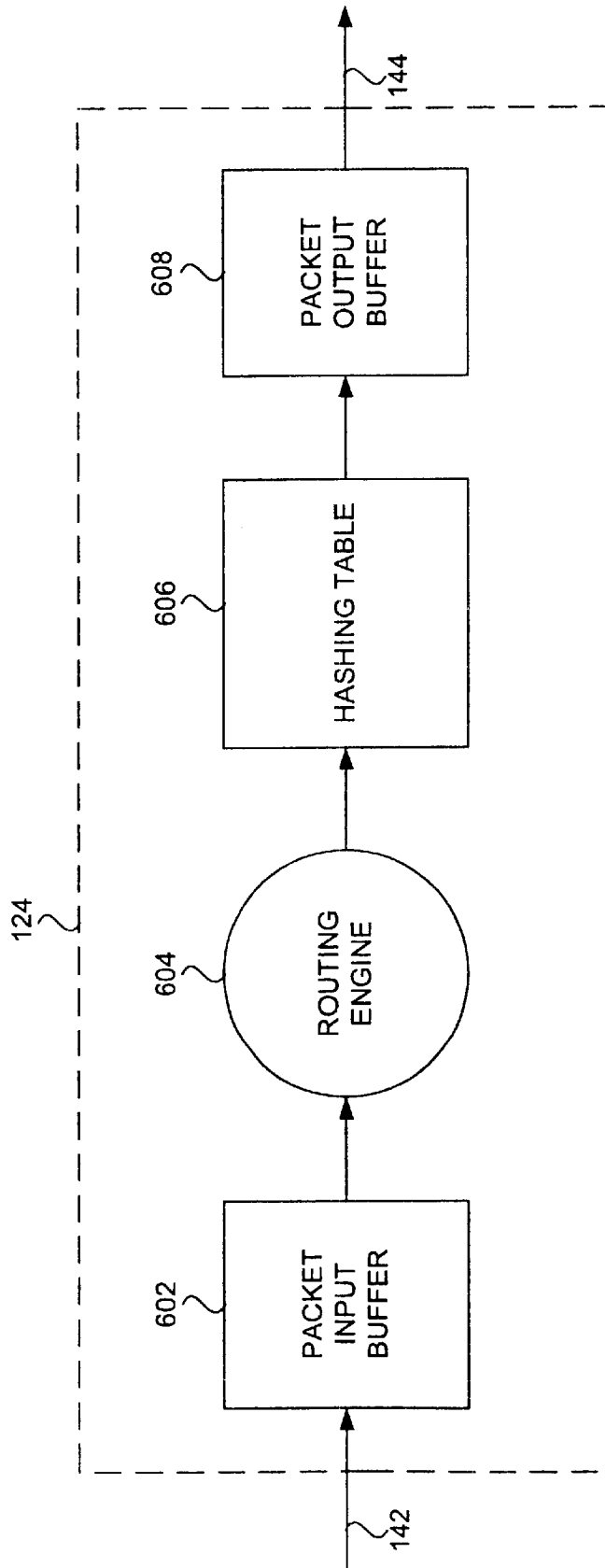


FIG. 6

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