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Cox et al.

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- (54) **APPARATUS AND METHOD FOR PROVIDING T1/E1 TELECOMMUNICATIONS TRUNKS OVER IP NETWORKS**
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- (73) Assignee: **Toledo Communications, Inc.**, Austin, TX (US)
- (*) 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 **H04J 3/02**; H04L 12/66
- (52) **U.S. Cl.** **370/537**; 370/463; 370/465; 370/466
- (58) **Field of Search** 370/352, 353, 370/389, 390, 392, 401, 412, 420, 422, 463, 465, 466, 467, 470, 471, 474, 537

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(57) **ABSTRACT**

An apparatus and method are provided that enable T1 (or E1) telecommunications frames to be transmitted between T1 (or E1) telecommunications switches over a high bandwidth packet-switched network. The apparatus includes trunk interface logic and network translation logic. The trunk interface logic is coupled a central office switch via a central office switch trunk, and receives the telecommunications frames from the central office switch. The network translation logic is coupled to the trunk interface logic. The network translation logic translates the telecommunications frames into network packets that the telecommunications frame data may be transferred over the high bandwidth packet-switched network.

40 Claims, 8 Drawing Sheets

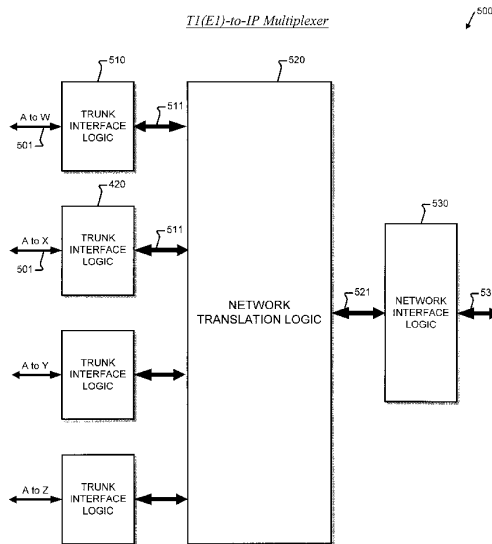


FIG. 1 (Related Art)

Public Switched Telephone Network (PSTN) Interconnectivity

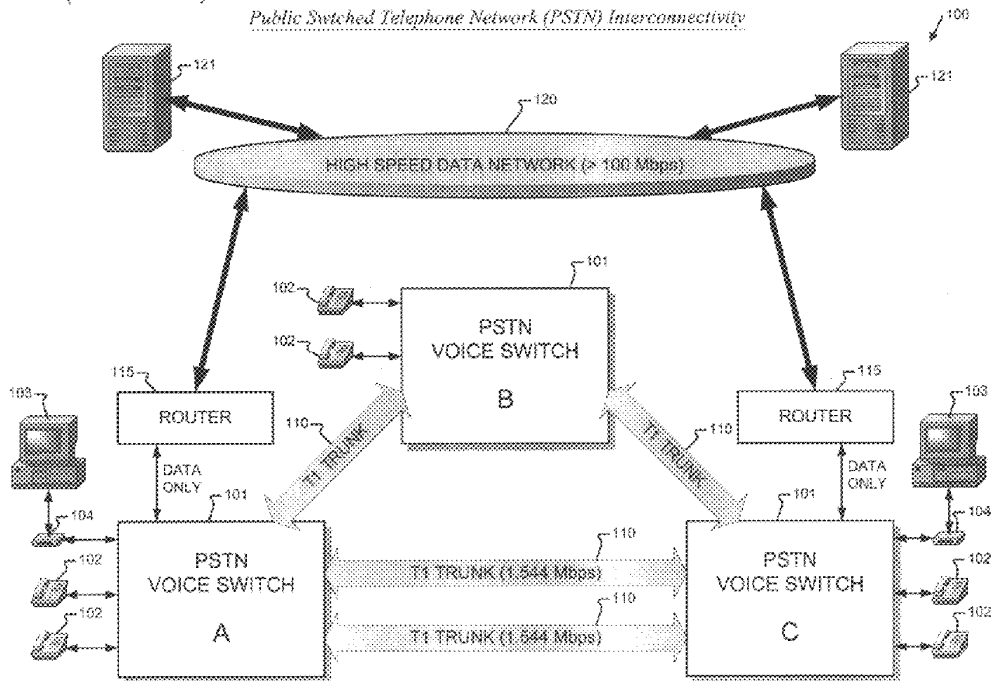


FIG. 2 (Related Art)

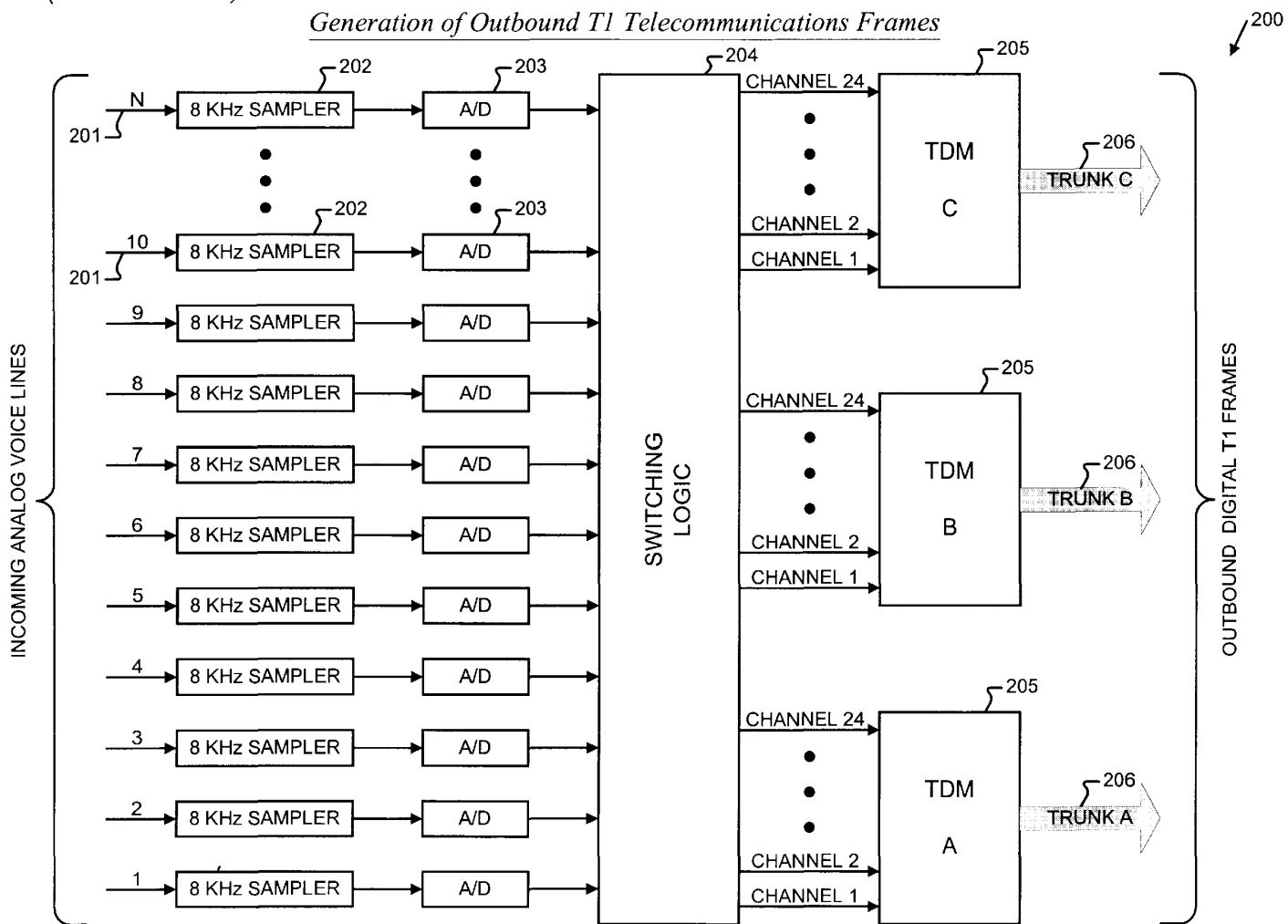


FIG. 3

E1 Continuous Carrier Transmission versus Packet-Switched Network Transmissions

300

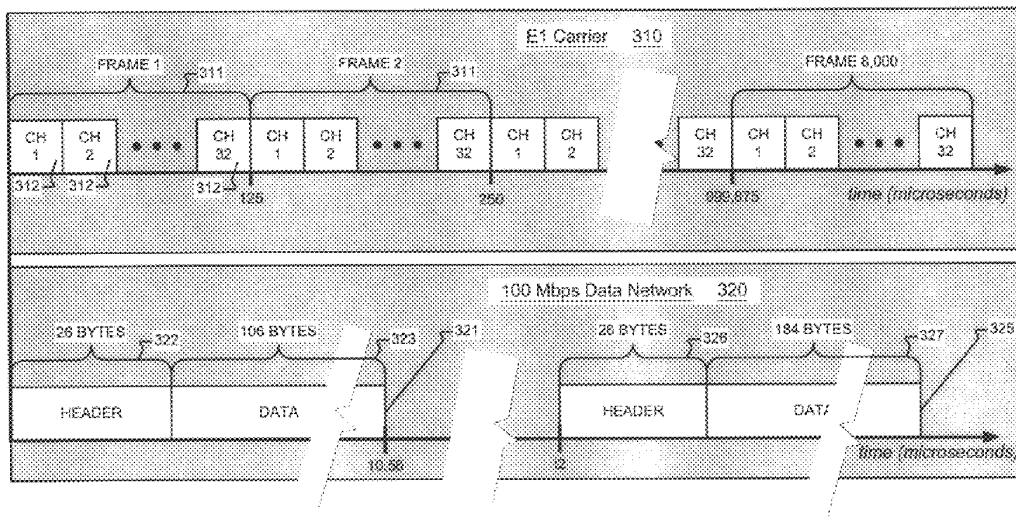
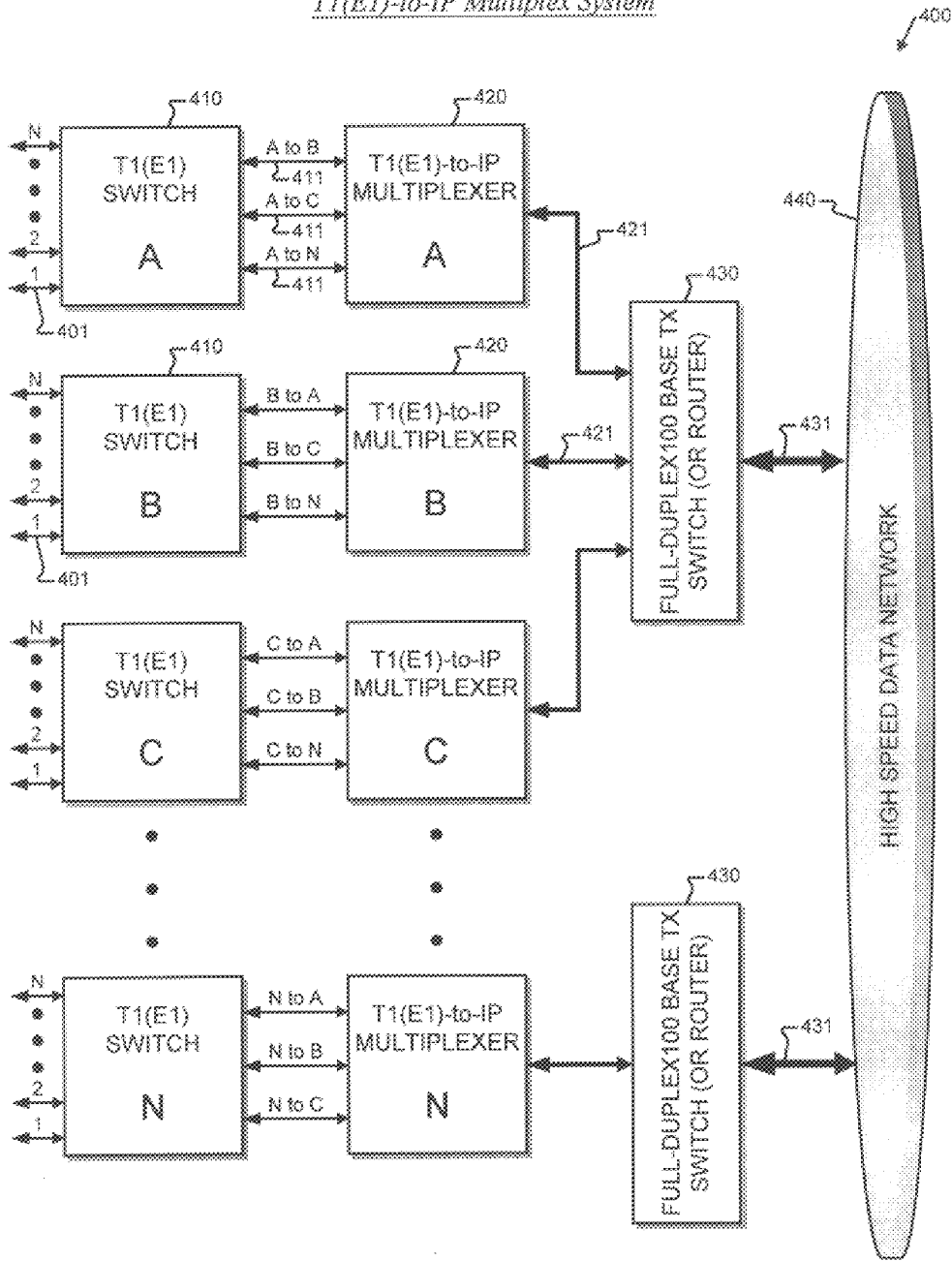


FIG. 4

T1(E1)-to-IP Multiplex System



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