

EXHIBIT 10

TO COMPLAINT

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

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(45) **Date of Patent:** **Jun. 19, 2001**

(54) **WIRELESS NETWORK GATEWAY AND METHOD FOR PROVIDING SAME**

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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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Related U.S. Application Data

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(51) **Int. Cl.⁷** **H04L 12/66**

(52) **U.S. Cl.** **370/338; 370/401**

(58) **Field of Search** 370/338, 349, 370/352, 353, 354, 355, 356, 400, 401, 466, 467, 328, 351, 241; 455/11.1

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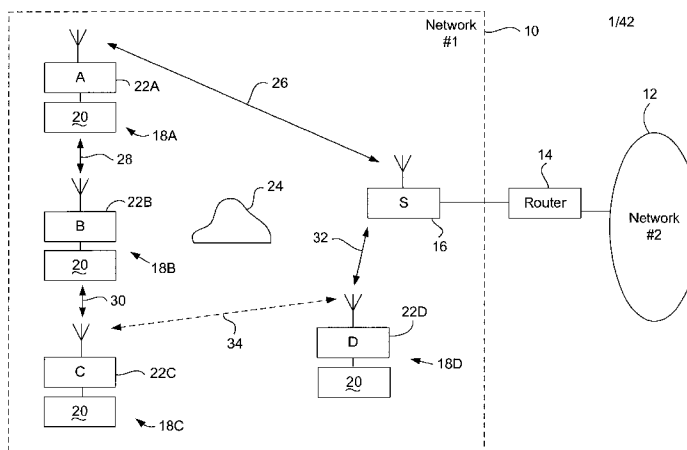
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(57) **ABSTRACT**

A wireless network system includes a server having a server controller and a server radio modem, and a number of clients each including a client controller and a client radio modem. The server controller implements a server process that includes the receipt and the transmission of data packets via the radio modem. The client controllers of each of the clients implements a client process that includes the receipt and transmission of data packets via the client radio modem. The client process of each of the clients initiates, selects, and maintains a radio transmission path to the server that is either a direct path to the server, or is an indirect path or "link" to the server through at least one of the remainder of the clients. A method for providing wireless network communication includes providing a server implementing a server process including receiving data packets via a radio modem, sending data packets via the server radio modem, communicating with the network, and performing house-keeping functions, and further includes providing a number of clients, each implementing a client process sending and receiving data packets via a client radio modem, maintaining a send/receive data buffer, and selecting a radio transmission path to the server. The radio transmission path or "link" is either a direct path to the server, or an indirect path to the server through at least one of the remainder of the clients. The process preferably optimizes the link to minimize the number of "hops" to the server.

19 Claims, 42 Drawing Sheets



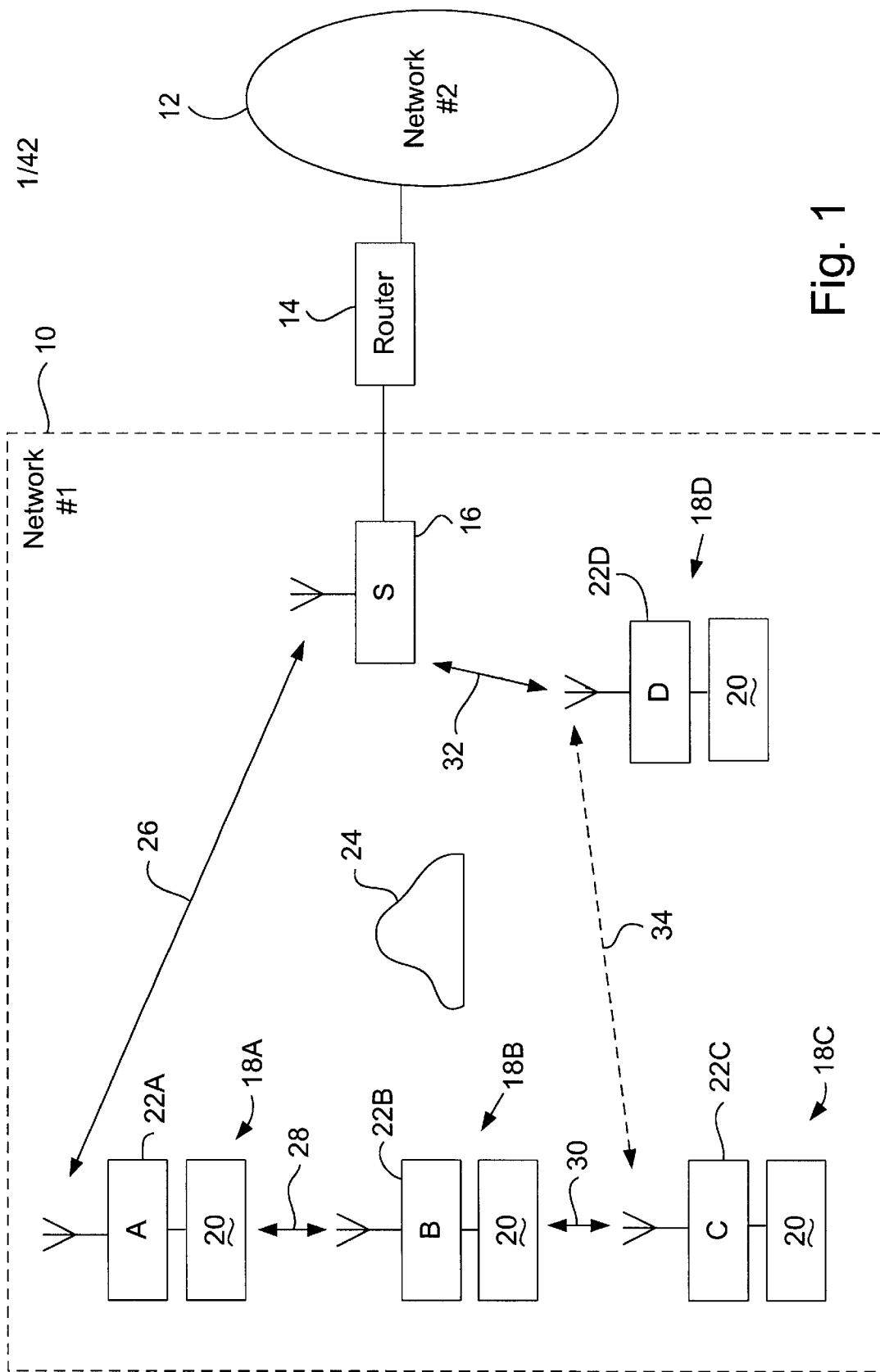


Fig. 1

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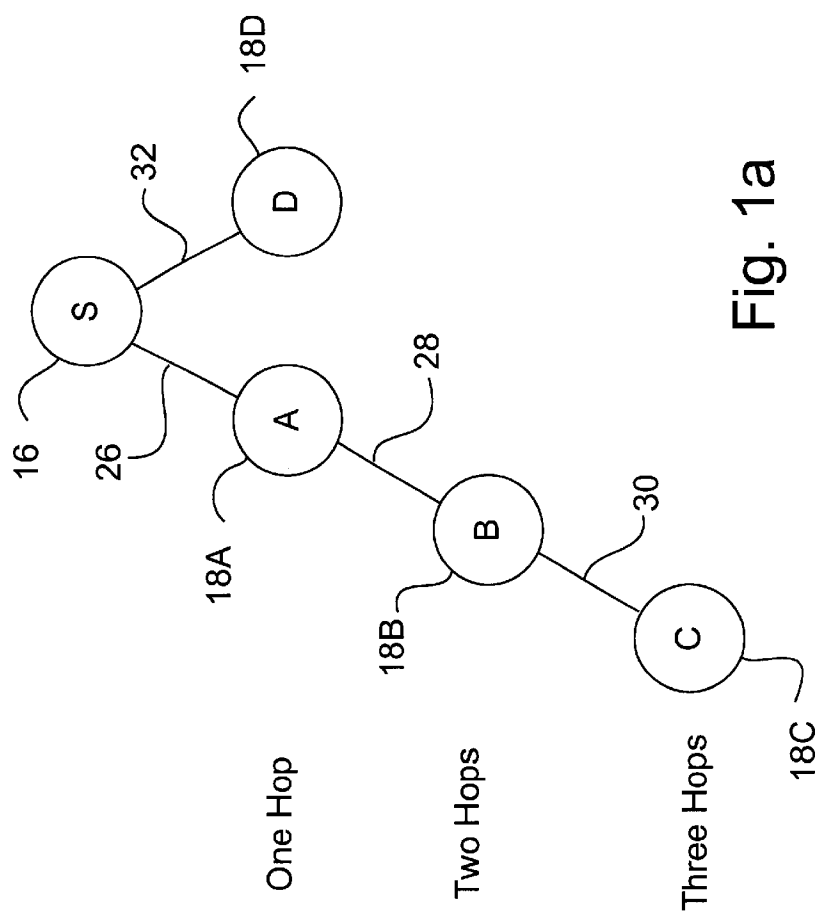


Fig. 1a

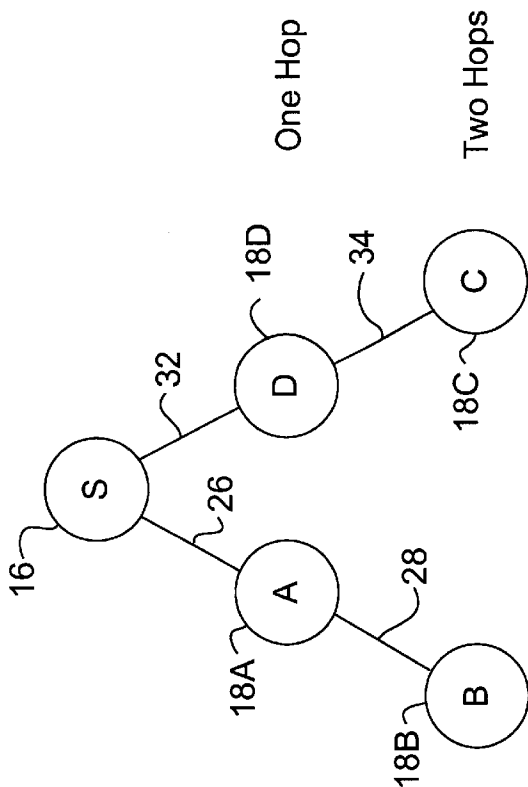


Fig. 1b

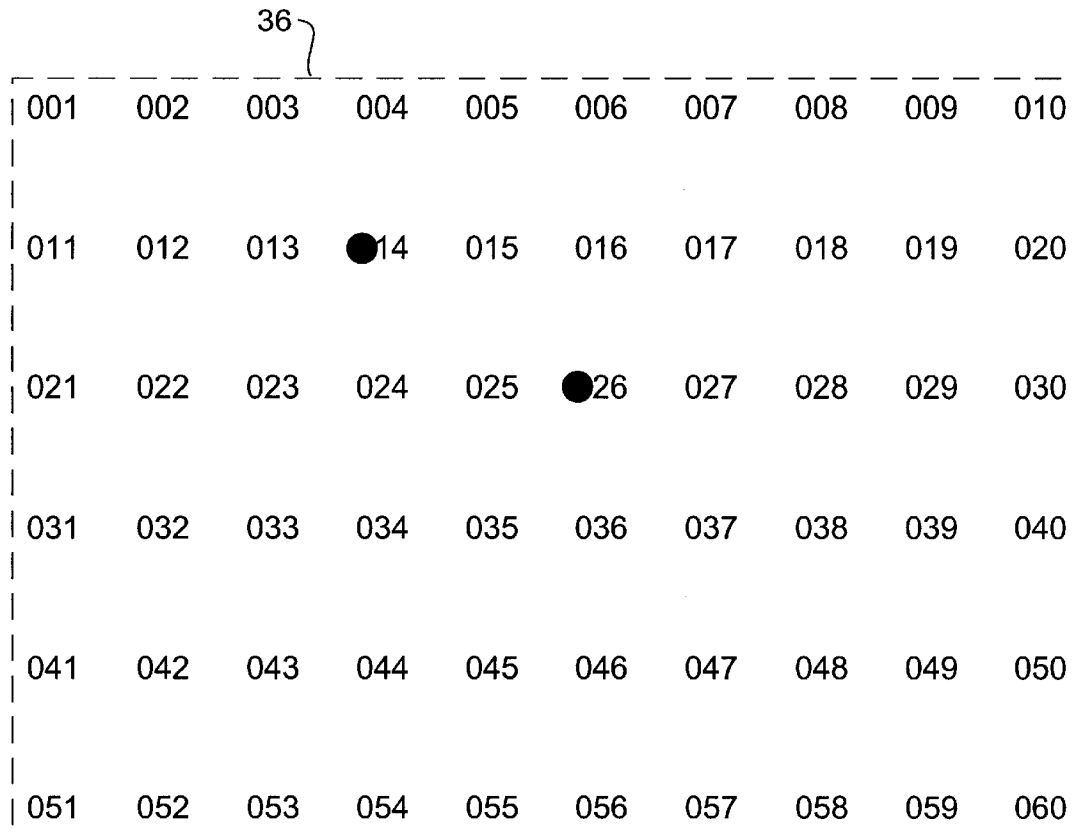


Fig. 2a

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