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(12) **United States Patent**
Belcea

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(54) **TERMINAL OPERATING WITHIN AN AD-HOC, PEER-TO-PEER RADIO NETWORK**

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This patent is subject to a terminal disclaimer.

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Broch, Josh et al, A Performance Comparison of Multi-Hop Wireless Ad Hoc Network Routing Protocols, Proceedings of the 4th Annual ACM/IEEE International Conference on Mobile Computing and Networking, Oct. 25-30, 1998, 16 pages.

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(65) **Prior Publication Data**

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Related U.S. Application Data

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(63) Continuation of application No. 09/846,434, filed on May 2, 2001, now Pat. No. 7,266,104, and a continuation of application No. 09/815,157, filed on Mar. 22, 2001, now Pat. No. 6,807,165.

(57) **ABSTRACT**

(60) Provisional application No. 60/246,833, filed on Nov. 8, 2000.

A terminal for operation within an ad-hoc, peer-to-peer radio system wherein the system includes a series of radio terminals forming a service group. The terminal having a transceiver for communicating with terminals in the same service group, computer means, and memory for storing program software. Within the system, the terminal establishes a connection with one radio terminal based on time-division access; initiating an outgoing call from the radio terminal including registering with another radio terminal for serving as a node in the call connection by transmitting a registration request; and initially transmitting said registration request on a last time slot (TS) of a respective time frame (TF), said last time slot serving as a configuration channel.

(51) **Int. Cl.**
H04W 4/00 (2009.01)

(52) **U.S. Cl.** **370/338**; 370/436

(58) **Field of Classification Search** 370/338, 370/436

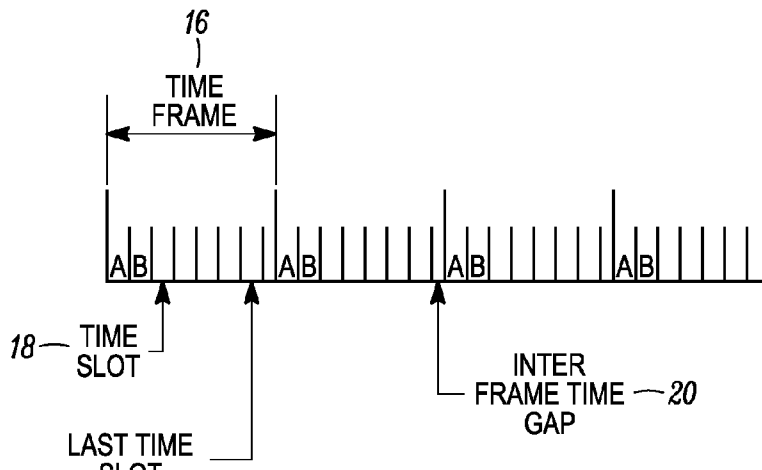
See application file for complete search history.

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14 Claims, 6 Drawing Sheets



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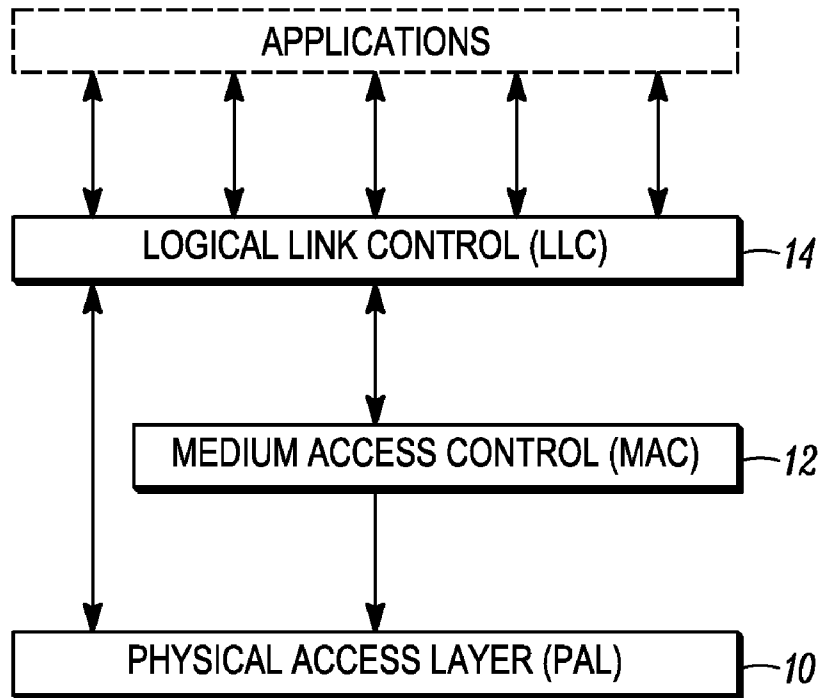


FIG. 1

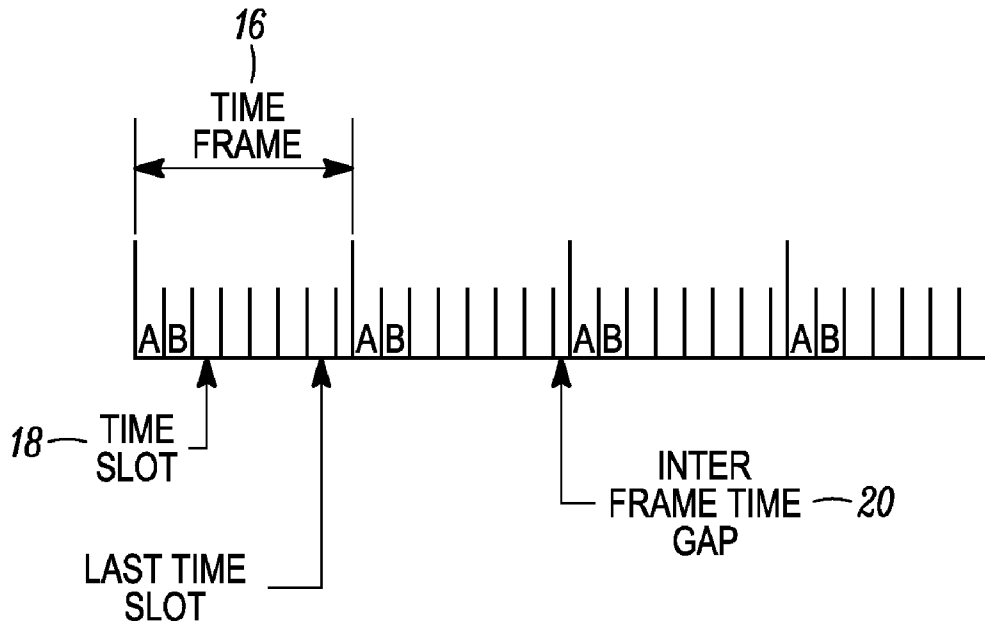


FIG. 2

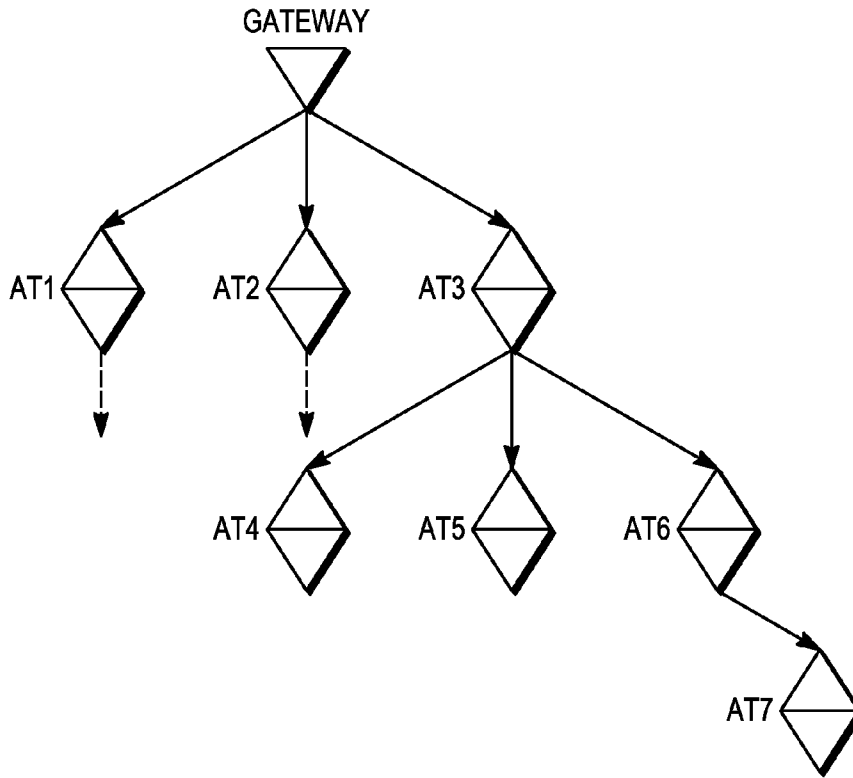


FIG. 3

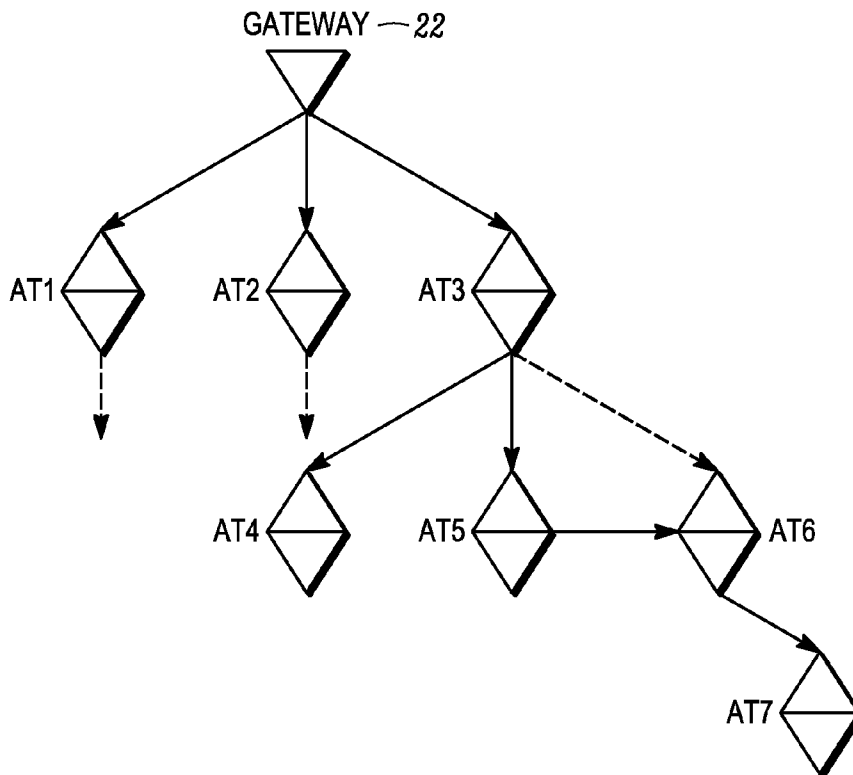


FIG. 4

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