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(54) **Title:** RESOURCE MANAGEMENT AND ROUTING IN MOBILE AD-HOC NETWORKS THAT EMPLOY MULTI-CHANNEL RECEPTION AND COOPERATIVE RELAYING

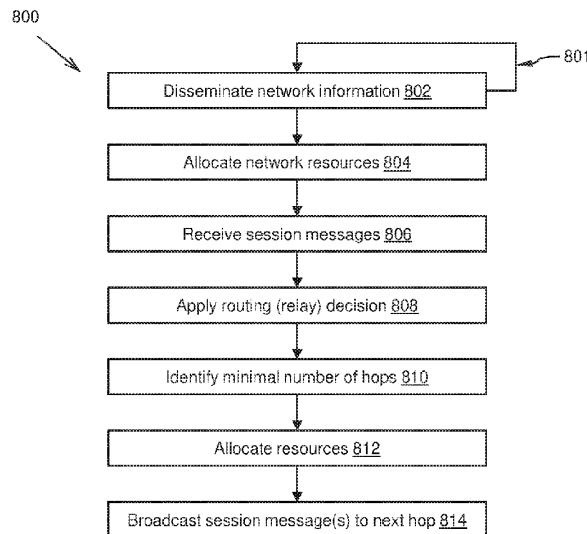


FIG. 8

(57) **Abstract:** MANET nodes have a transceiver, operative in a first plurality of frequencies, having a transmitter that selects at least one frequency for transmission and a receiver that simultaneously receives signals in a second plurality of frequencies selected from the first plurality of frequencies. A resource allocation table is generated and has time-slots and frequencies to be allocated amongst the nodes. Data is maintained in the resource allocation table that is representative of session plans, where each session plan corresponds to a message to be propagated through the MANET from a source node to a destination node. Each session plan includes time-slot and frequency allocations associated with the source node. At each time-slot, each node of one or more nodes decides which one or more messages to broadcast during the time-slot on one or more frequencies selected from the first plurality of frequencies.

[Continued on next page]

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