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(54) CENTRAL MULTIPLE ACCESS CONTROL FOR FREQUENCY HOPPING RADIO NETWORKS

(75) Inventors: **Jacobus Haartsen**, Borne (NL);

Johannes Elg, Malmö (SE)

(73) Assignee: Telefonaktiebolaget L M Ericsson,

Stockholm (SE)

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Related U.S. Application Data

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- (51) Int. Cl.⁷ H04J 3/24

321, 323

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Primary Examiner—Melvin Marcelo Assistant Examiner—Inder Pal Mehra

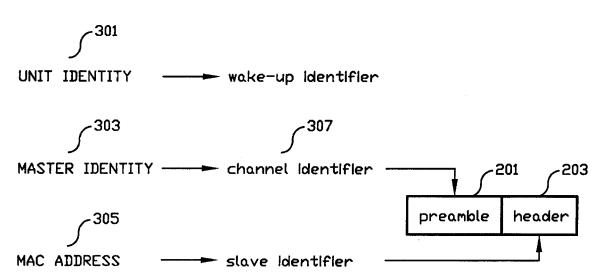
(74) Attorney, Agent, or Firm—Burns, Doane, Swecker &

Mathis, L.L.P

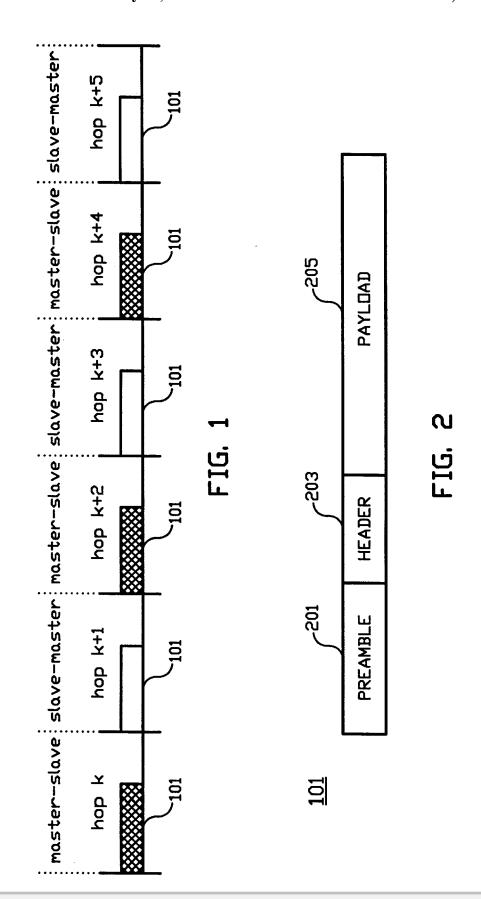
(57) ABSTRACT

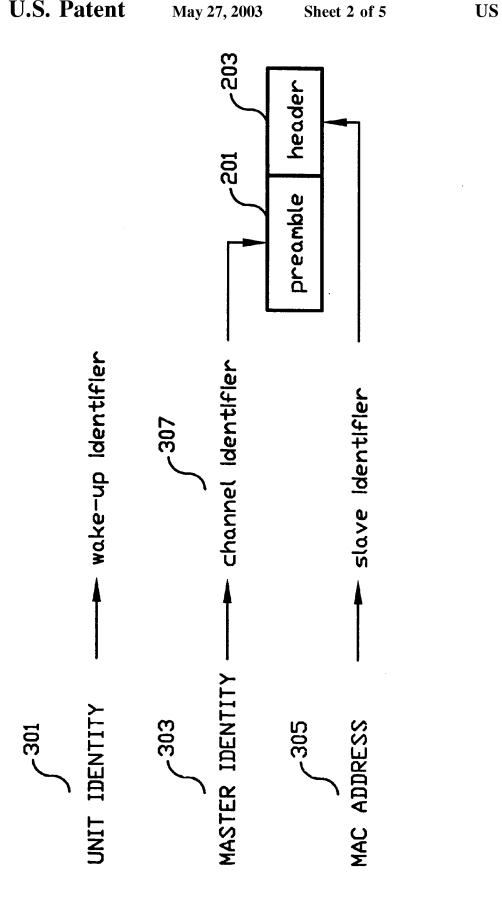
A system comprises a wireless master unit and one or more wireless slave units, each having a unique identifier. When a wireless slave unit is active, it is addressed by one of a limited number of temporary addresses. A PARK mode enables a wireless slave unit to be in an idle state during which its temporary address is deallocated, enabling that address to be assigned to another wireless slave unit. To page a parked slave, a paging beacon packet is broadcast to, and received by, each of the wireless slave units at fixed intervals during a master-to-slave time slot. Each wireless slave unit determines whether the received paging beacon packet includes its unique identifier. If so, the wireless slave units retrieves a temporary address from the paging beacon packet. The wireless unit transmits a response to the wireless master unit during a subsequent slave-to-master time slot if the received paging beacon packet included the unique identifier belonging to the wireless slave unit. Parked wireless slave units are also assigned a unique response number by the master. The master broadcasts a polling beacon packet during a master-to-slave time slot. If the parked slave unit desires access to the channel, it transmits a response in an N:th slave-to-master time slot following the polling beacon packet, where N is a function of the slave's unique response number.

24 Claims, 5 Drawing Sheets



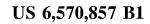


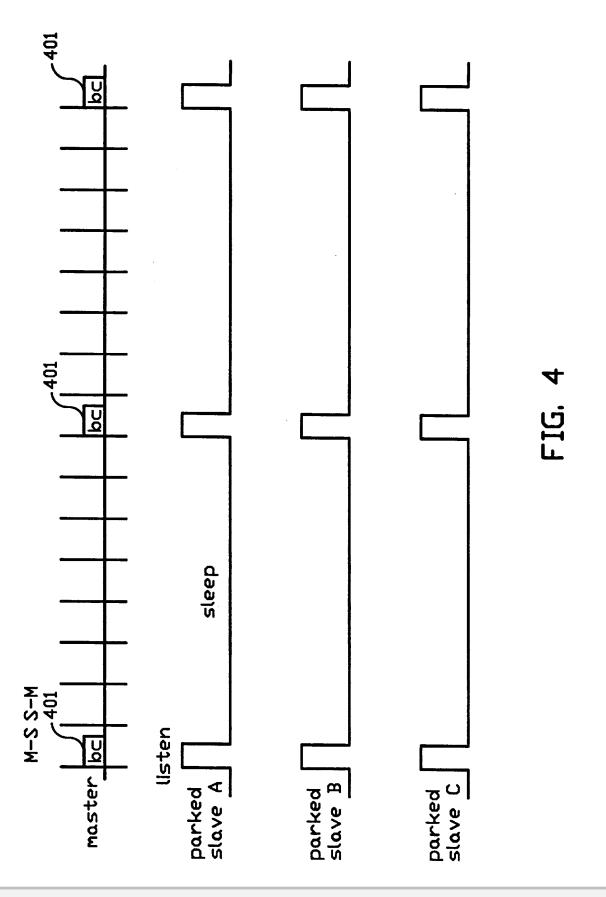


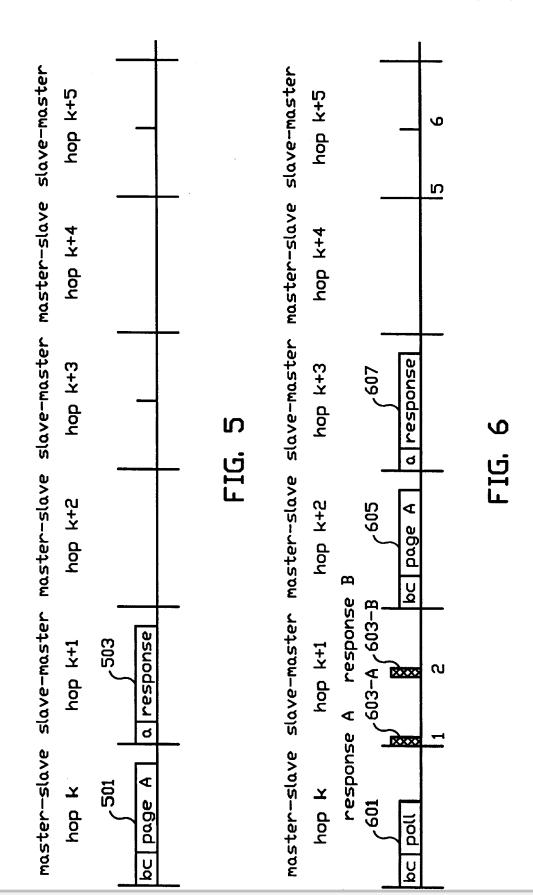




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