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

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(45) **Date of Patent:** Jul. 6, 2004

(54) **FIXED FREQUENCY INTERFERENCE
AVOIDANCE ENHANCEMENT**

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(57) **ABSTRACT**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 707 days.

A system and method is provided for removing channels in a frequency hopping scheme having strong interference or interferers in a wireless communication system. The present invention employs signal strength measurements on N number channels of the frequency hopping scheme to determine M number of channels to be avoided. The system and/or method then modifies the frequency hopping scheme to avoid transmission over the M channels. The M channels to avoid can be communicated to wireless units involved in the communication system, so that the members of the wireless communication system can frequency hop together over the modified frequency hopping scheme.

(21) Appl. No.: **09/610,022**

(22) Filed: **Jul. 5, 2000**

(51) **Int. Cl.**⁷ **H04J 13/06**

(52) **U.S. Cl.** **370/335; 370/342; 370/441;**
375/132

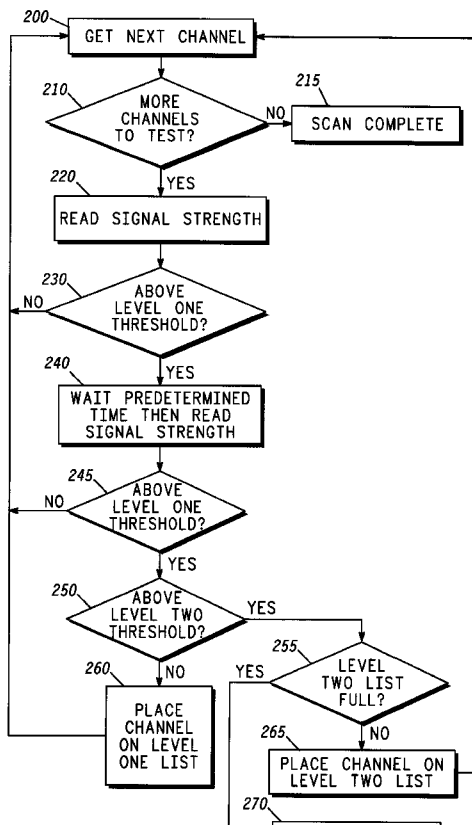
(58) **Field of Search** 370/320, 329,
370/332, 335, 441; 375/132

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7 Claims, 8 Drawing Sheets



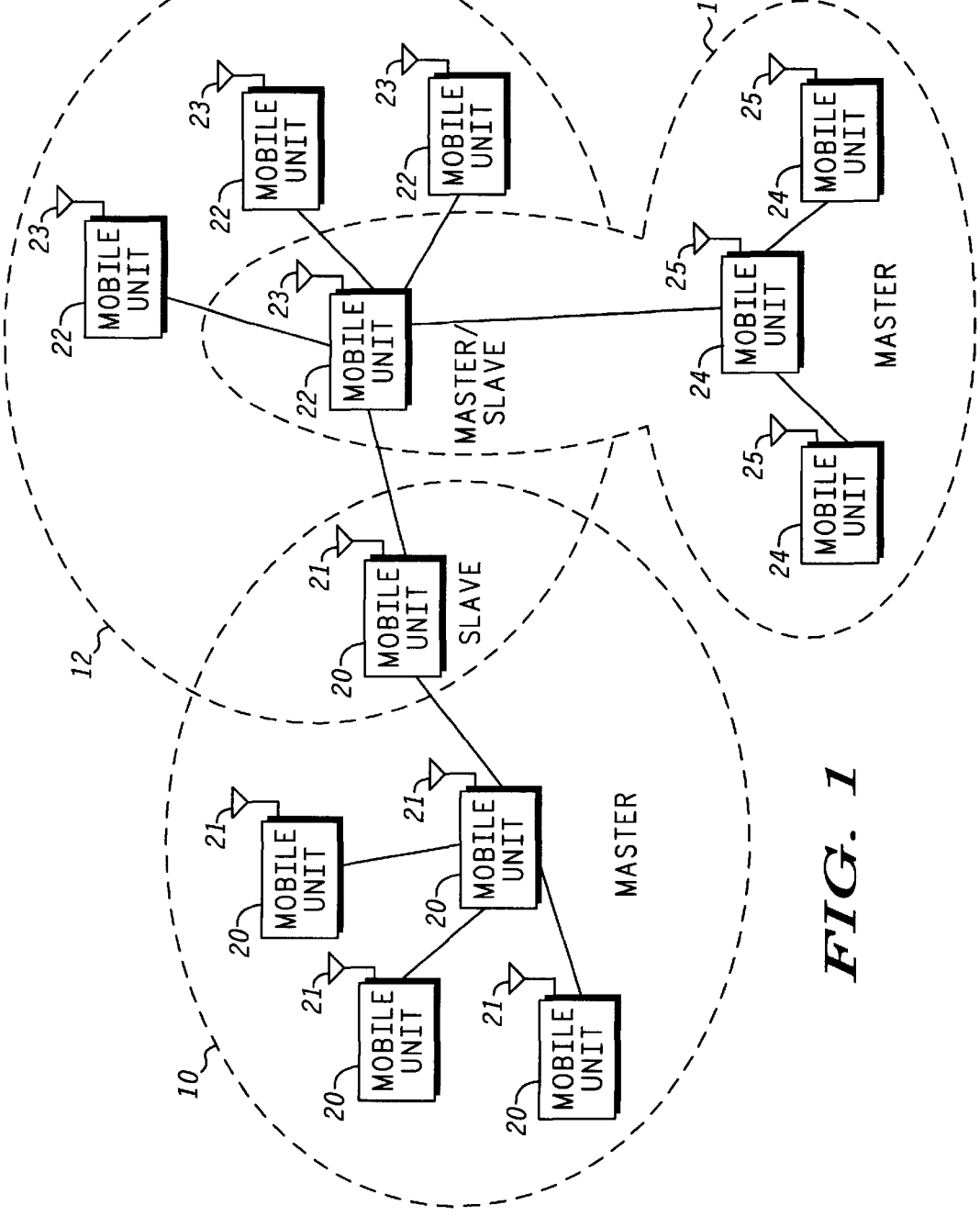


FIG. 1

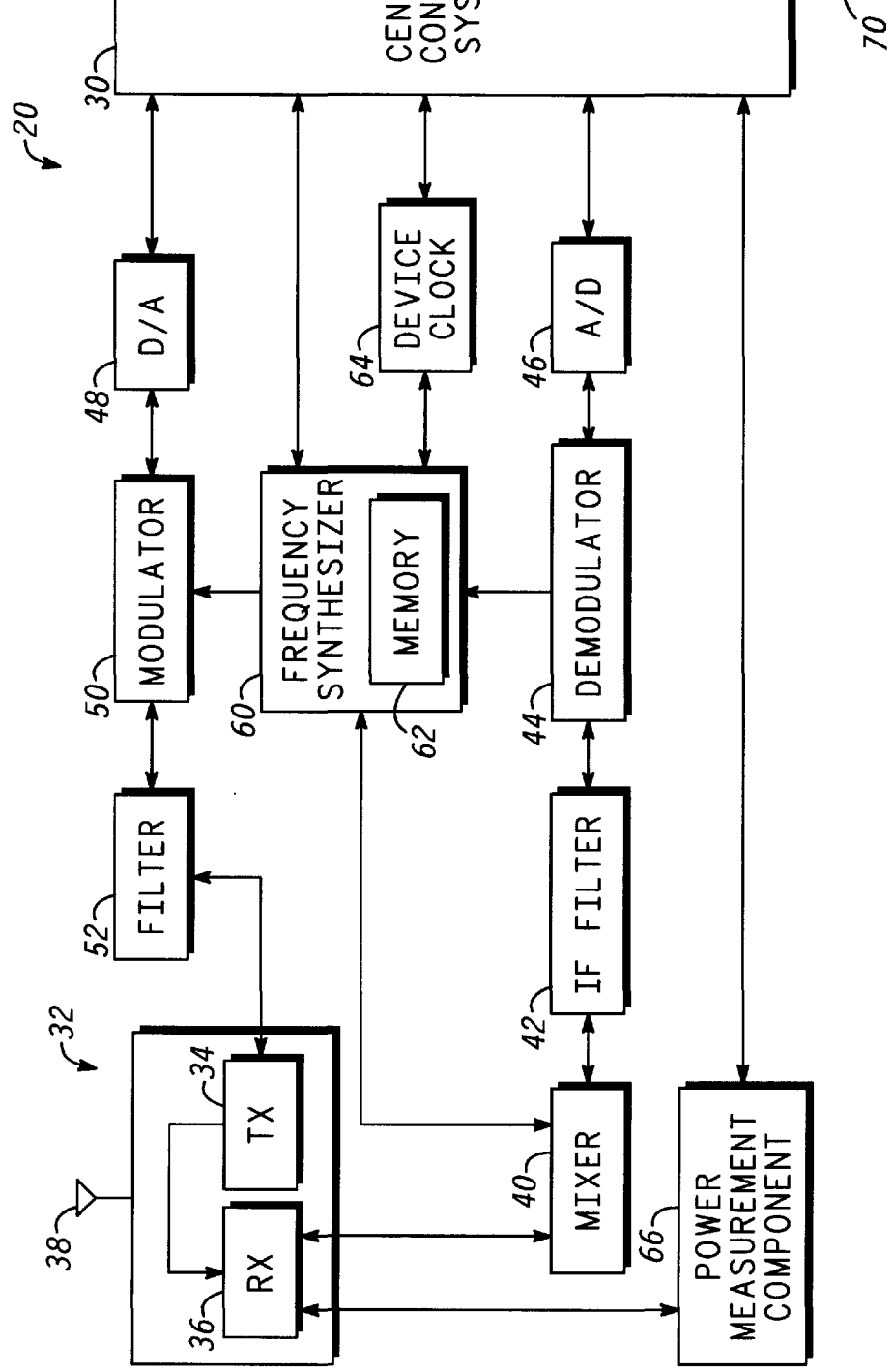


FIG. 2

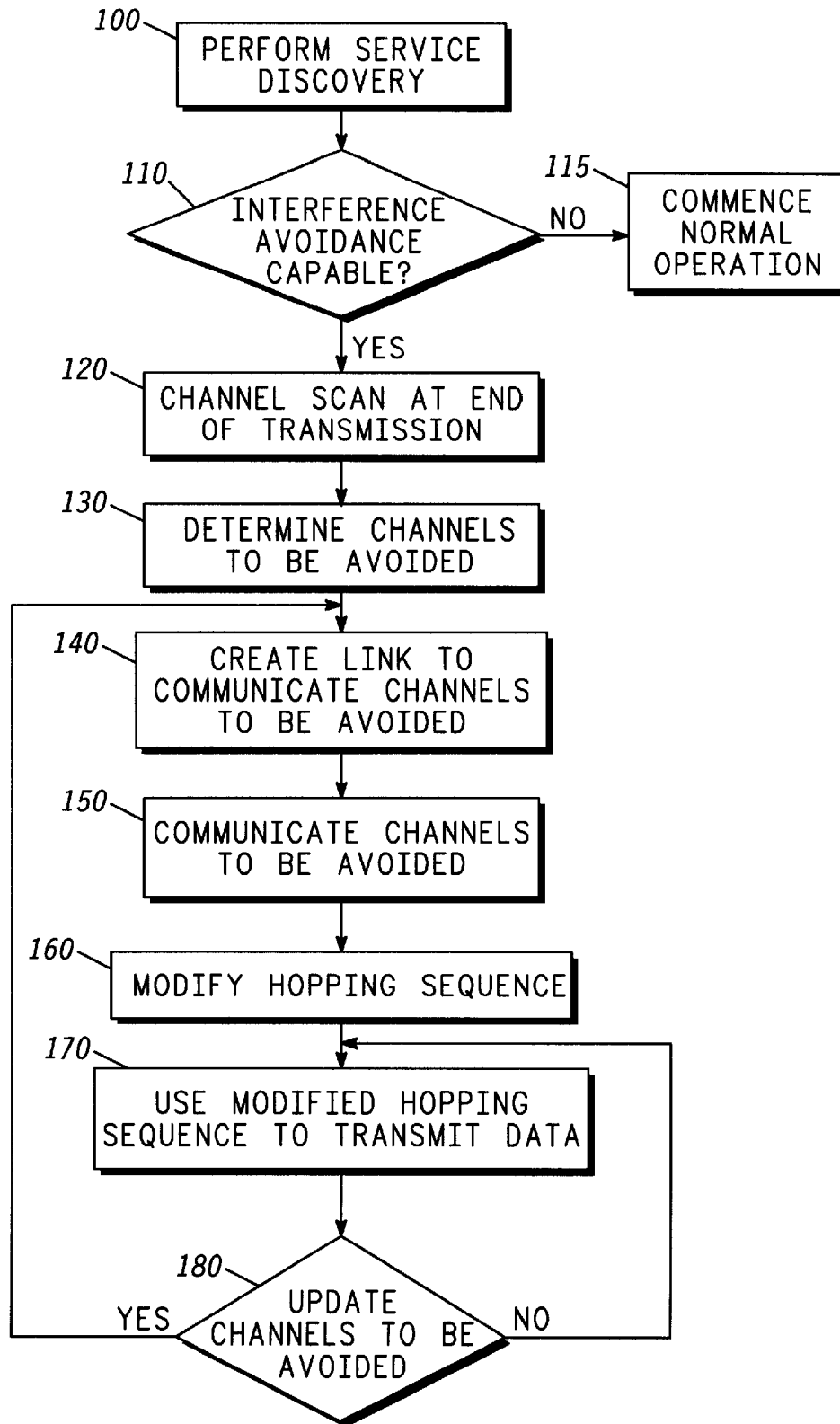


FIG. 3

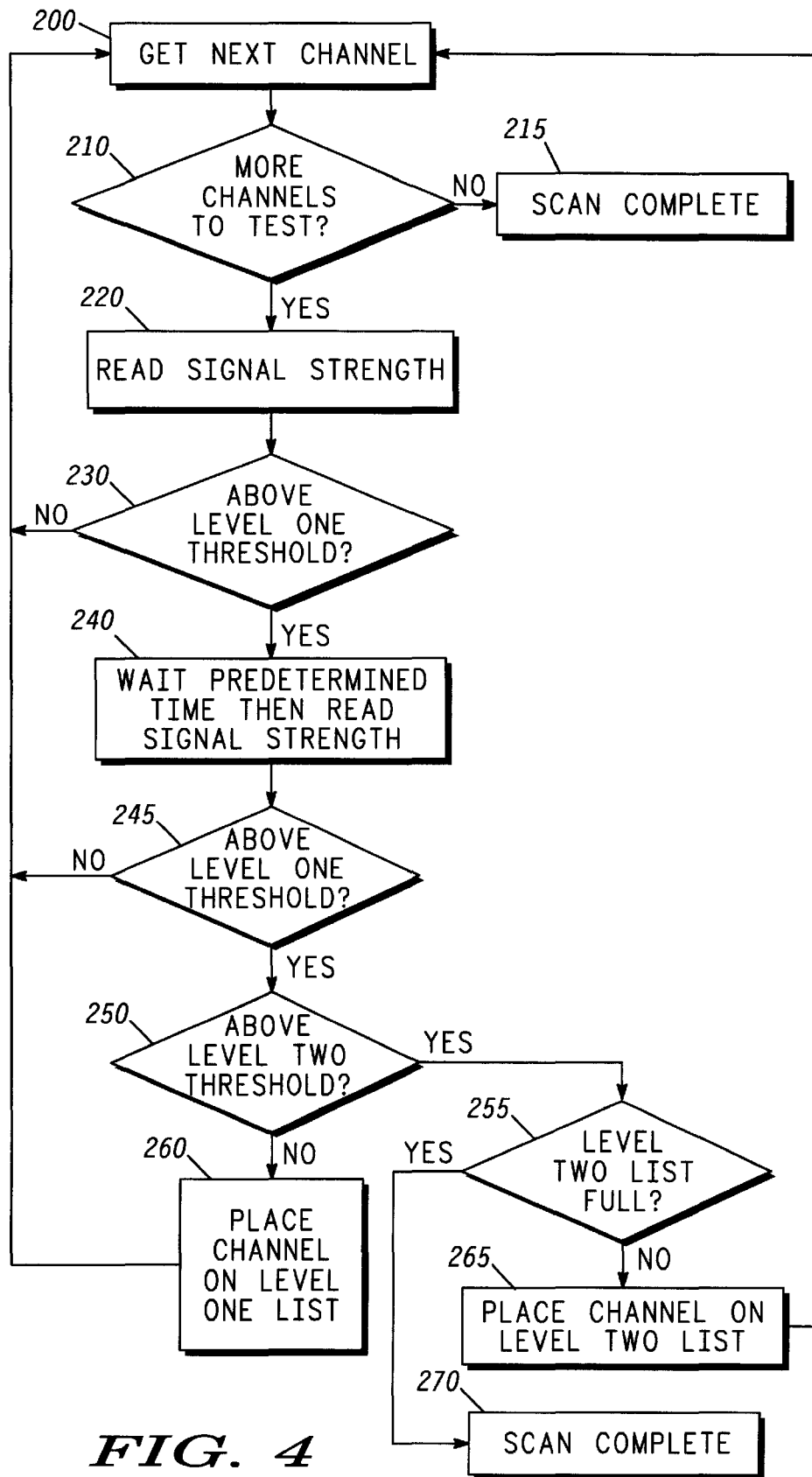


FIG. 4

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