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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

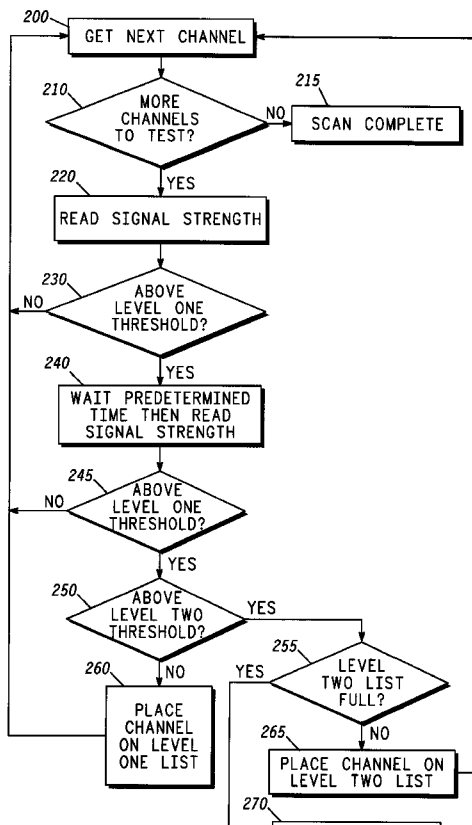
(58) **Field of Search** 370/320, 329,
370/332, 335, 441; 375/132

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7 Claims, 8 Drawing Sheets



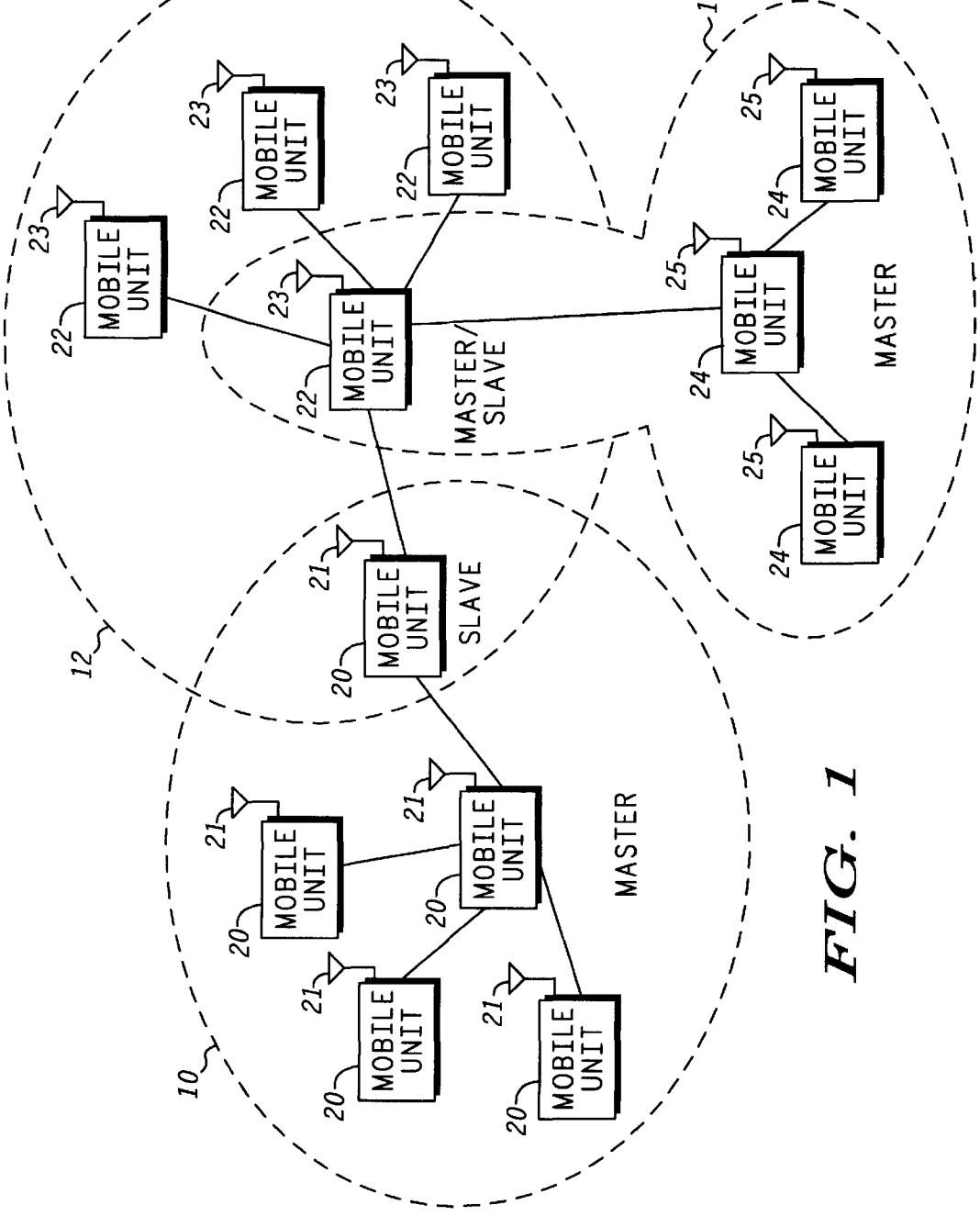


FIG. 1

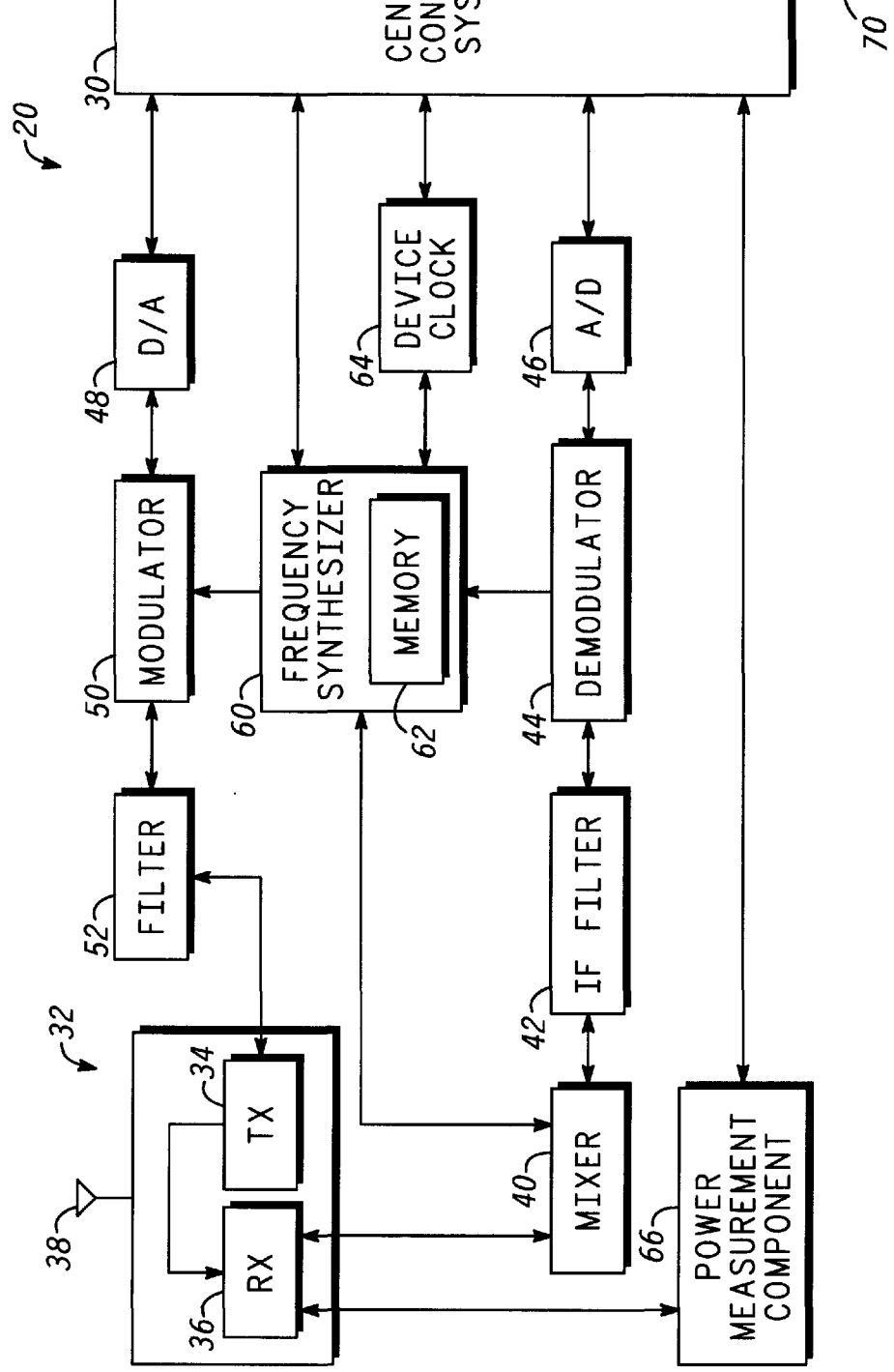


FIG. 2

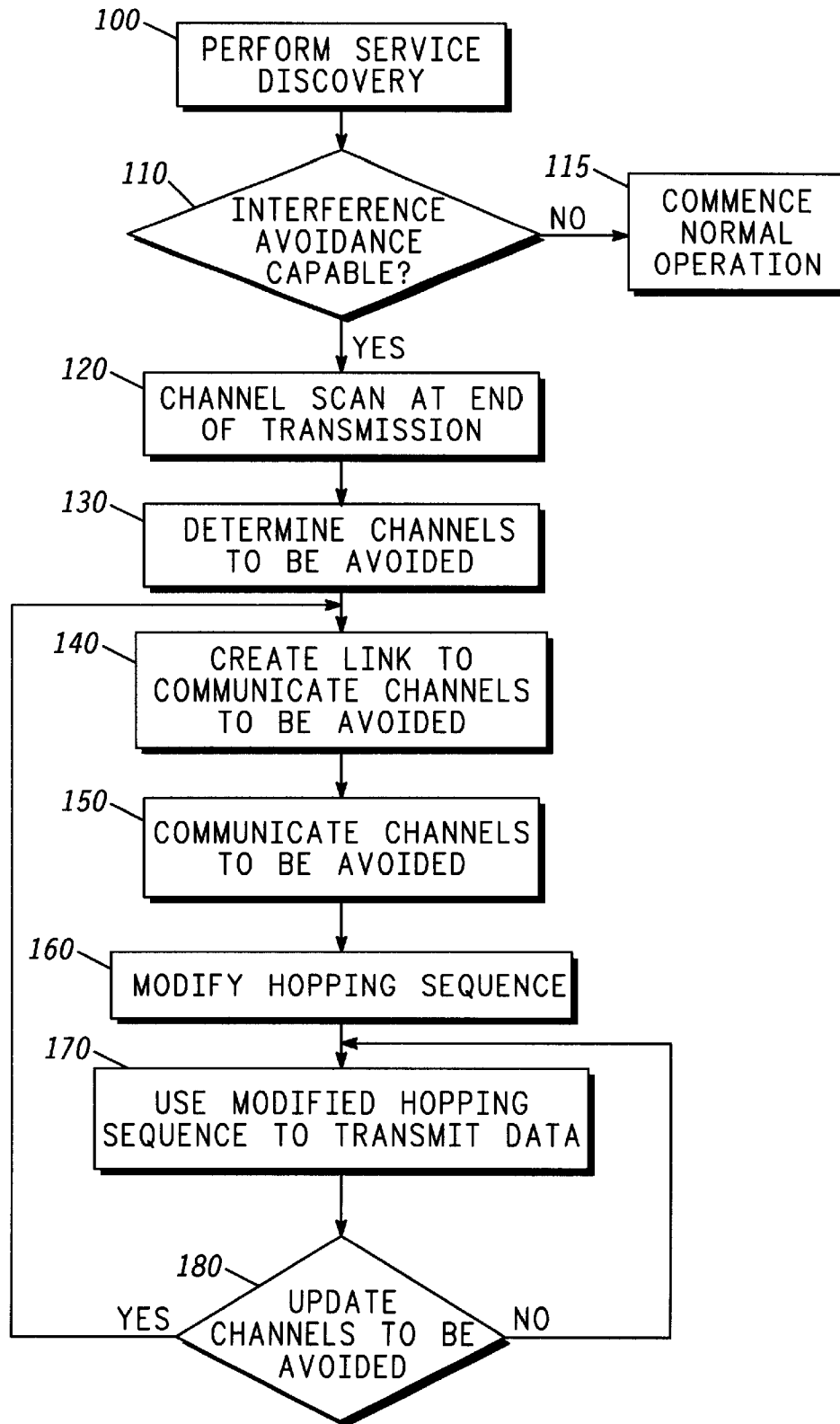


FIG. 3

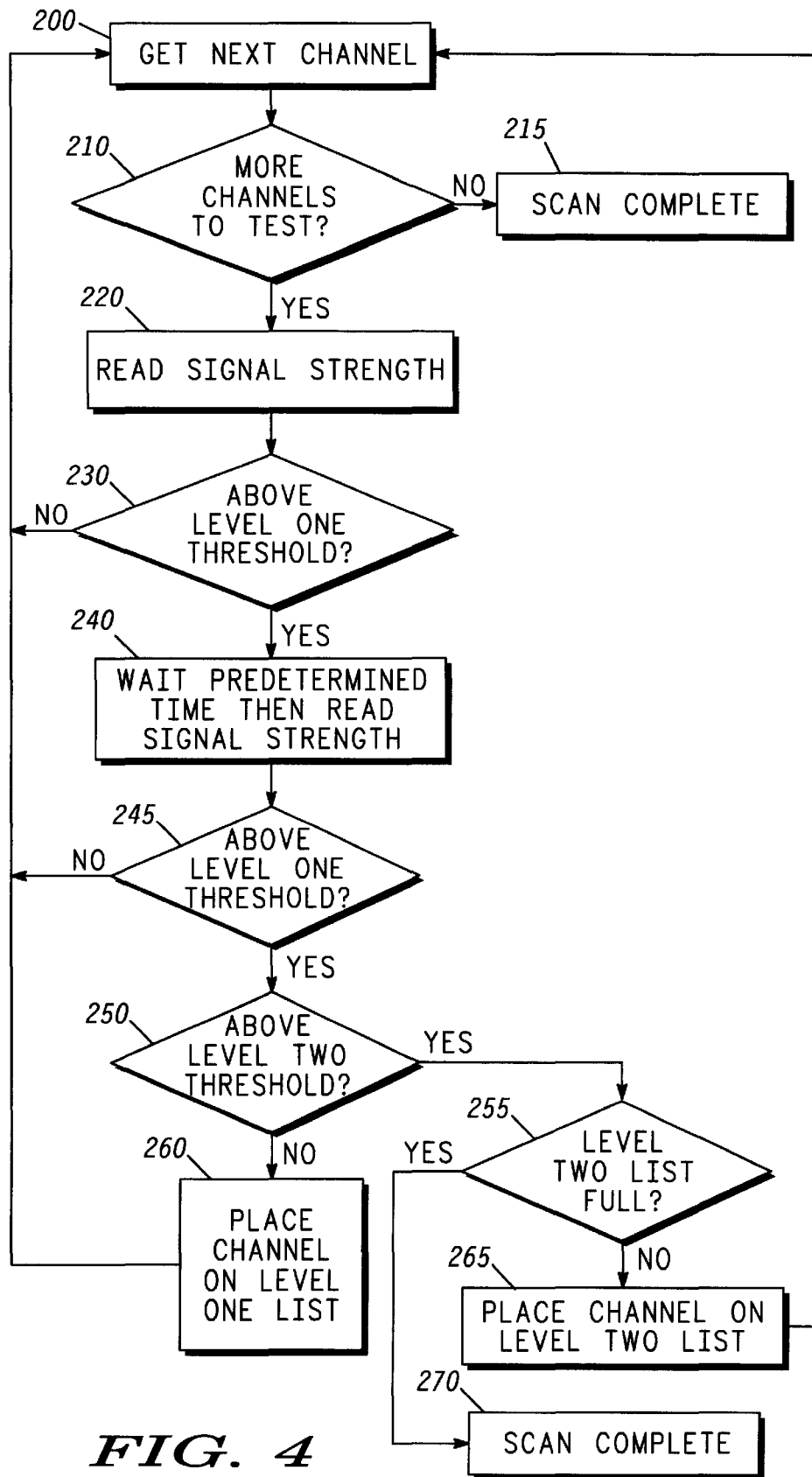


FIG. 4

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