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Haartsen et al.

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(45) **Date of Patent:** **May 13, 2003**

(54) **METHOD AND SYSTEM FOR DETECTION OF BINARY INFORMATION IN THE PRESENCE OF SLOWLY VARYING DISTURBANCES**

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(21) Appl. No.: **09/332,955**

(22) Filed: **Jun. 15, 1999**

(51) **Int. Cl.**⁷ **H04B 1/10**

(52) **U.S. Cl.** **375/350; 375/346; 375/348**

(58) **Field of Search** 375/350, 348, 375/346, 341, 229, 230, 231, 232, 233, 234; 708/301, 319, 320, 322, 323

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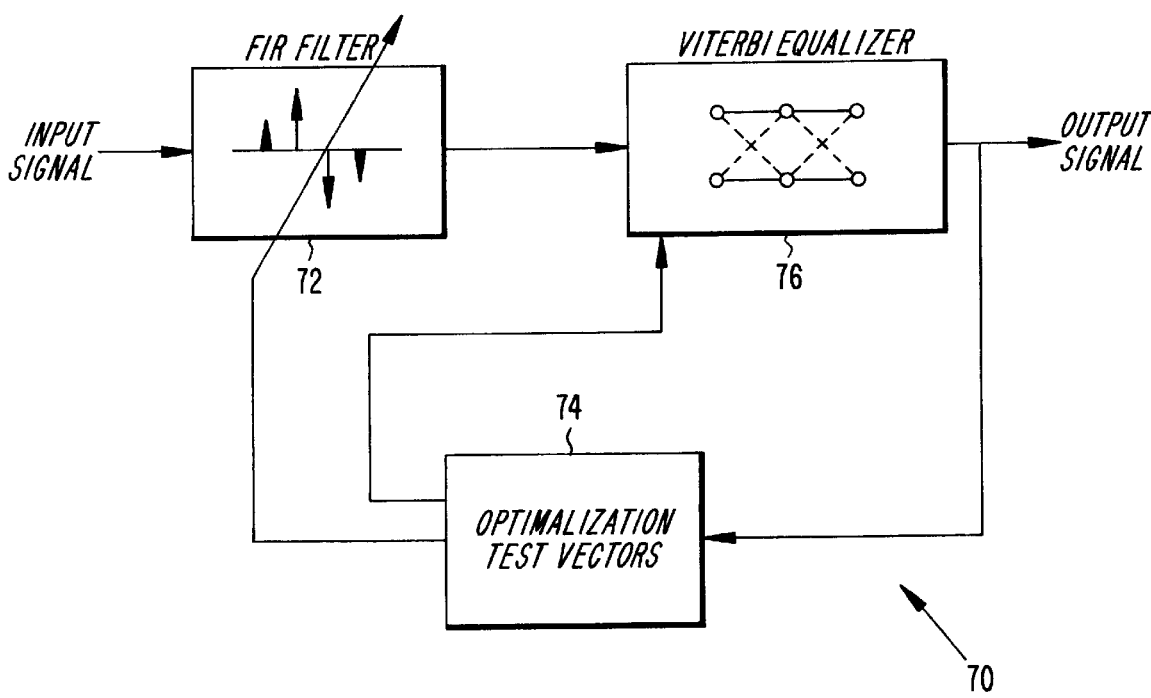
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(57) **ABSTRACT**

A radiocommunication system is described in which DC offset and other slowly varying disturbances which may impact a signal are suppressed. Exemplary embodiments of the present invention combine a difference circuit, e.g., a FIR filter, with a maximum likelihood sequence estimator, e.g., a Viterbi detector, to implement suppression techniques on binary signals.

31 Claims, 11 Drawing Sheets



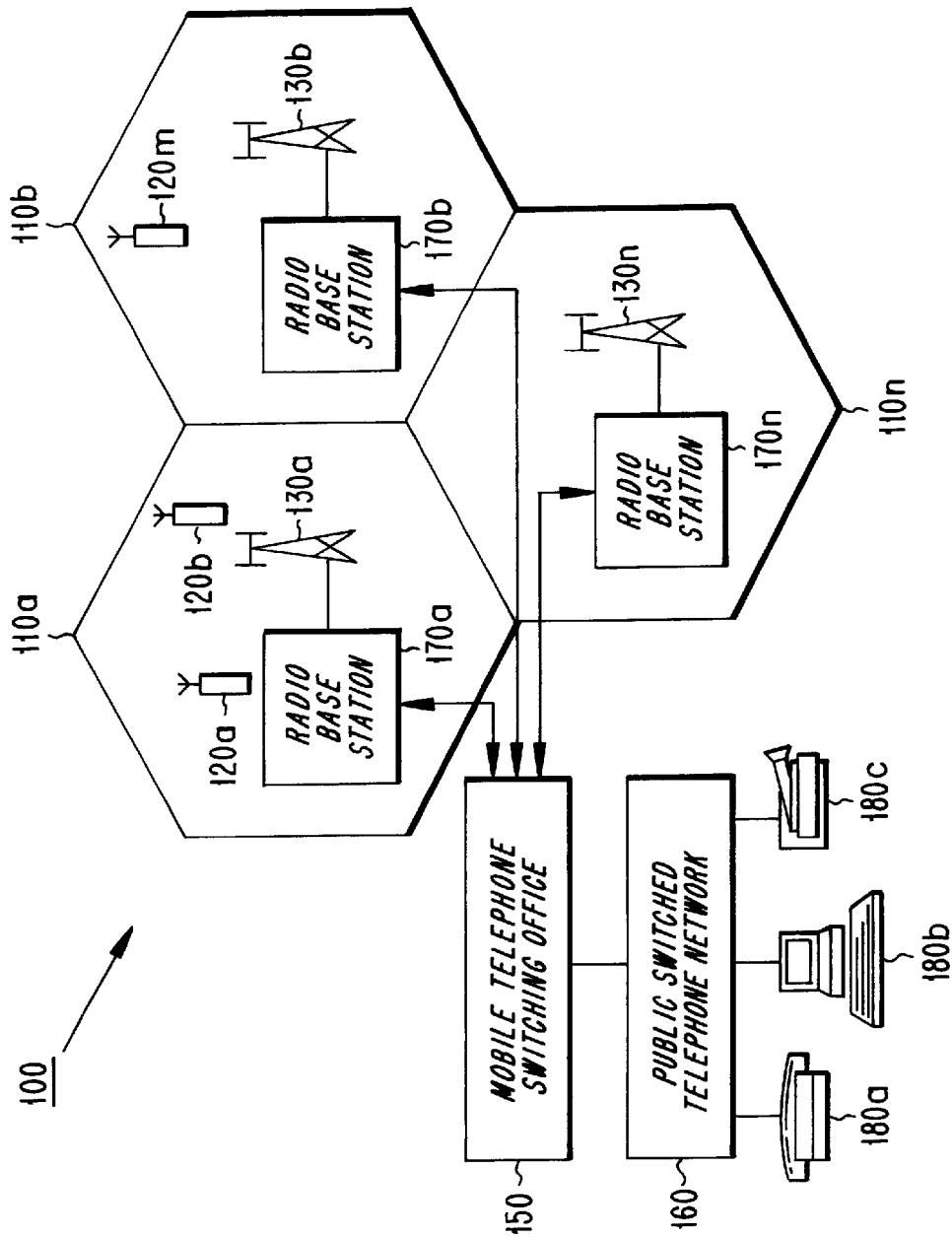


Fig. 1(a)
(PRIOR ART)

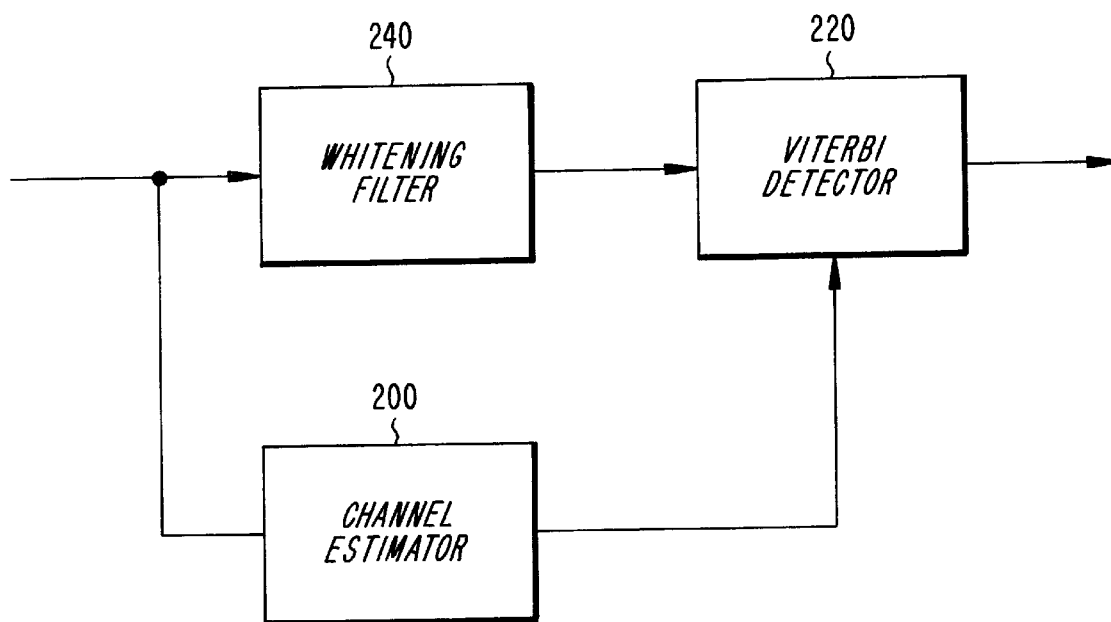
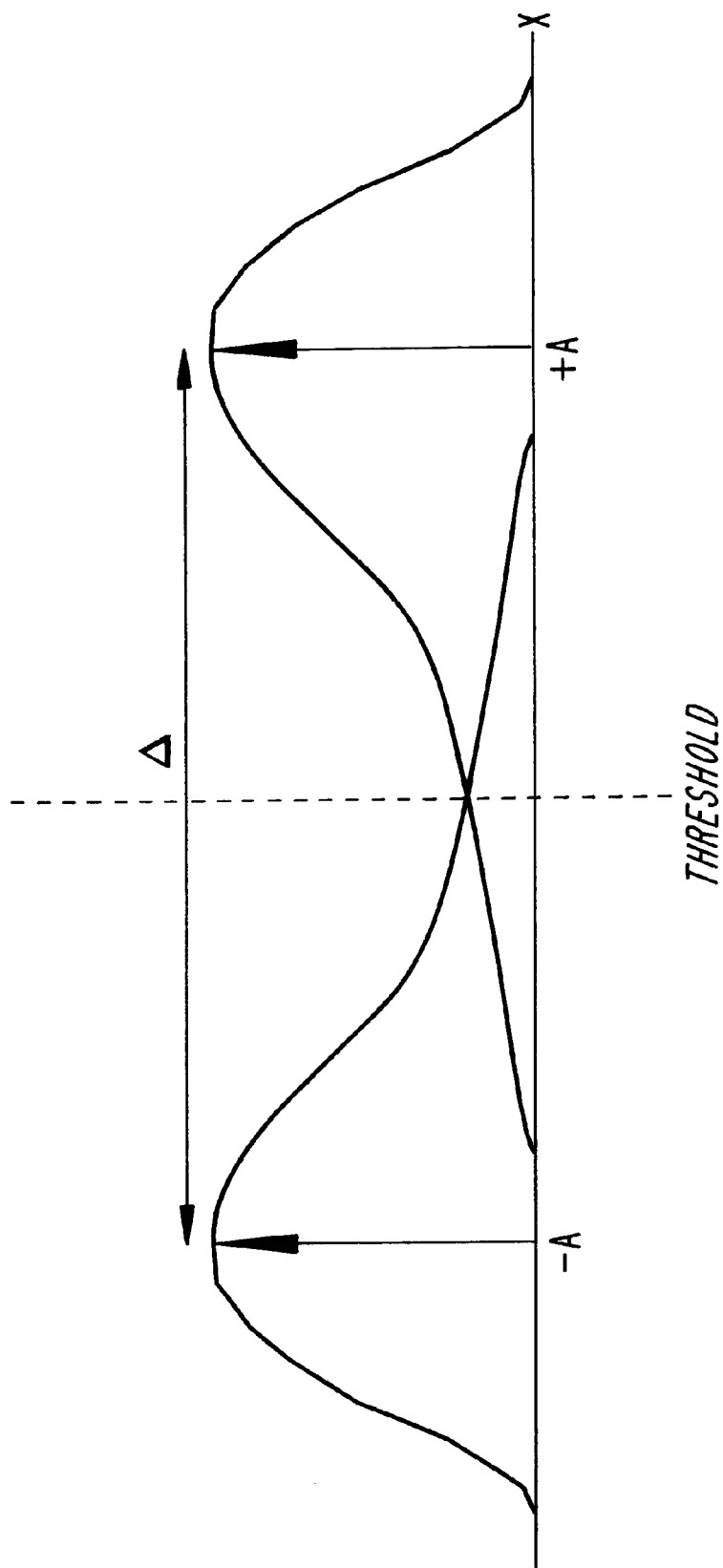


Fig. 1(b)
(PRIOR ART)

Fig. 2



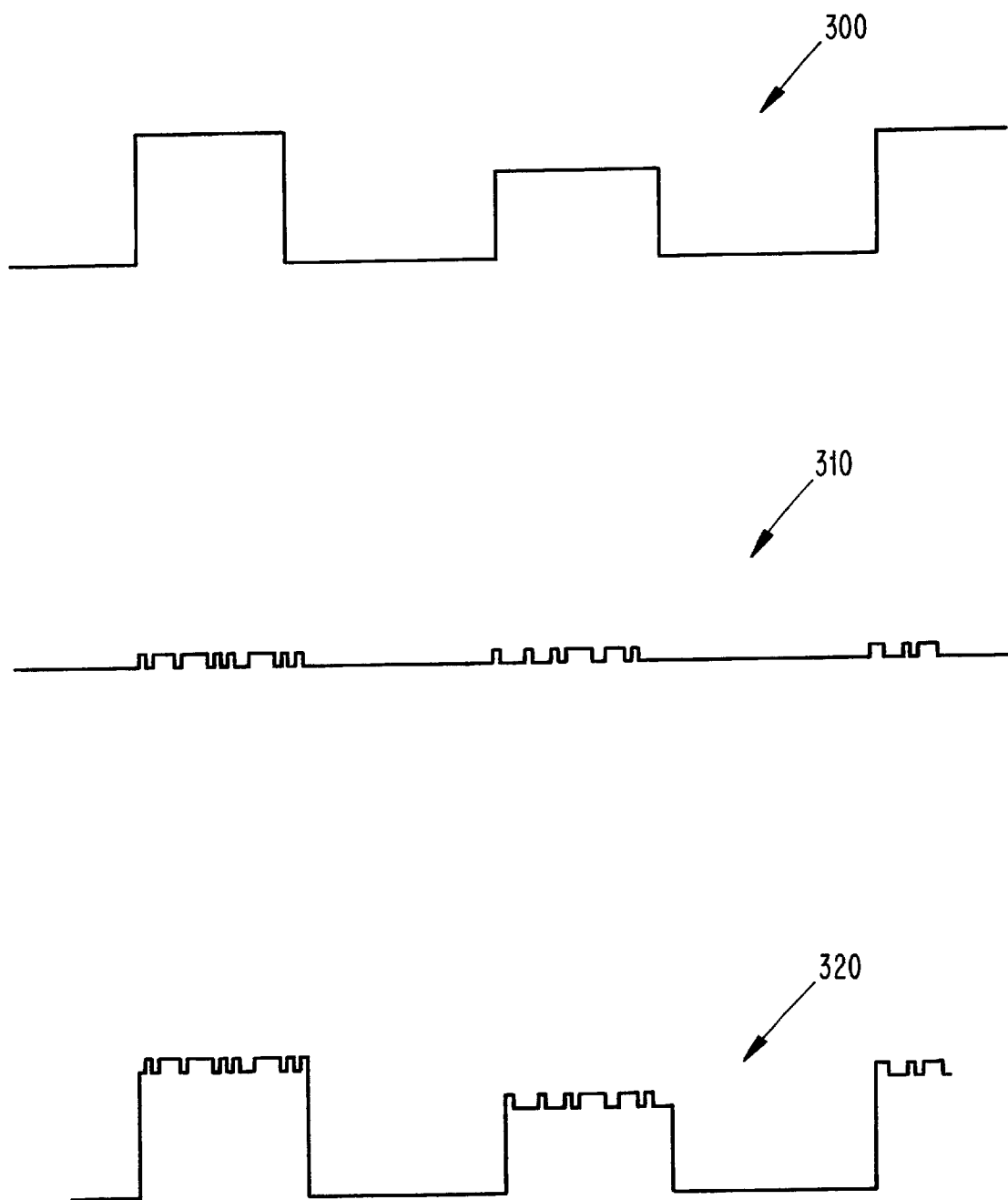


Fig. 3(a)

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