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## ADAPTIVE MAXIMUM LIKELIHOOD DETECTION

### ABSTRACT

An adapter (34) and a method for adapting a programmable digital maximum likelihood detector (18) to a variable channel output and a calibration system (34) for calibrating a programmable digital maximum likelihood detector (18) from unknown data in a known code at a variable channel output, the maximum likelihood detector (18) having a number of maximum likelihood states, are disclosed . A detector (36) detects a digital sample of the recorded analog signals as corresponding to one of the maximum likelihood states. An accumulator (122) partially accumulates the detected digital sample with prior detected digital samples corresponding to the one of the maximum likelihood states. Logic coupled to the accumulator (122) employs the accumulated digital samples for the corresponding maximum likelihood state to determine at least one numerical metric coefficient matching the digital samples to the one of the maximum likelihood states, and updated or sets the numerical metric coefficient.

FIG 1