

ABSTRACT

IMPROVING DATA DETECTION RELIABILITY

To improve data detection reliability in a coded maximum likelihood signal processing channel, two counters count the number of times actual values of linear functions of digital sample values corresponding to one and another preselected data patterns are within m units above and m units below, respectively, a preselected decision boundary used to determine whether detected data corresponding to a coded sequence of runlength limited code is a "1" or a "0". A difference count has a magnitude and sign denoting difference between counts in the two counters. After N occurrences of each preselected data pattern irrespective of how far from the boundary, the boundary is adjusted upwardly or downwardly, provided the difference count at least equals $+S$ or at most $-S$, respectively.

