

**ABSTRACT**

**SLOPE, DRIFT AND OFFSET COMPENSATION IN ZERO-IF RECEIVERS**

A method for processing a signal modulated with information symbols to account for an additive offset and slope is disclosed. First, an initial estimate of offset and slope is made and hypotheses of all possible values of a sequence of one or more information symbols are then made. For each of said hypotheses, the associated data symbol sequence is used to make an improved estimate of offset and slope and the improved estimate of offset and slope are stored against each of the hypotheses. For each hypothesis, the improved estimate of offset and slope is used in calculating an expected signal value and a mismatch between a sample of the modulated signal and the expected value is computed. The hypotheses are then sequentially extended by one symbol, the slope and offset estimates are updated and the mismatches are accumulated to form a path metric value for each extended hypothesis, and resolving between said hypotheses based on said path metric values using a Viterbi Sequential Maximum Likelihood Sequence Estimation process to produce a most likely hypothesis of said modulated information symbols substantially unimpaired by said additive slope and offset.

Figure 3