

ABSTRACT

DECISION FEEDBACK EQUALIZATION WITH COMPOSITE TRELLIS SLICER

A decision feedback equalizer is configured to equalize an input signal to generate a recovered output signal. Linear feed-forward filter circuitry is configured to provide a linearly filtered output signal based on the input signal. Composite trellis decoder circuitry configured to process a combined signal that is based on a combination of at least the linearly feed-forward filtered output signal and on output of linear or non-linear feedback filter circuitry, in accordance with state metrics generated by processing a composite trellis diagram relative to the combined signal, to provide a trellis-decoded output signal as input to the linear or non-linear feedback filter circuitry. The composite trellis decoder circuitry is further configured to provide a particular phase output of the combined signal, based on the state metrics, as the decoded output signal.

Fig. 5