

SIGNAL PROCESSING METHOD AND APPARATUS THEREOF

ABSTRACT OF THE DISCLOSURE

N-bit digital signals are transformed into M-bit digital signals ($M > N$), the N-bit signals being obtained by converting an analog signal into digital signals. Detected are transition points on a time axis and intervals between the transition points at which successive digital signals of the N-bit signals vary. (M-N) bit additional signals are generated which correct errors of the N-bit signals within a range of ± 0.5 least significant bit of the N-bit signals in response to the transition points and the intervals. The additional signals are delayed so as to correspond to least significant bit of the N-bit signals. The delayed additional signals are combined with the N-bit signals to generate the M-bit signals. Instead of the transition points and intervals, detected are transition patterns of successive digital signals of the N-bit signals over transition points. (M-N) bit additional signals are generated which correct errors of the N-bit signals within a range of ± 0.5 least significant bit of the N-bit signals based on the transition patterns. The additional signals are combined with the N-bit signals so that the additional signals correspond to the least significant bit of the N-bit signals, to generate the M-bit signals.

Figure 7

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