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ERROR REDUCTION IN TRANSFORMED DIGITAL DATA

ABSTRACT

This invention solves problems due to employing error degraded data in digital processing. It particularly solves multi-generation problems wherein transform data degrade during each inverse transform (120) and forward transform cycle even without any processing due to the rounding and clipping errors. It provides methods, systems and devices for reduced-error processing of transform-coded data (110). After inverse transformation of transform data (110), high-precision numbers are converted to integers and clipped to an allowed range forming converted data. High-precision differences are obtained by subtracting the high-precision output (130) of the inverse transform from the converted data. The converted data can be manipulated and sent to output devices (160) which expect integer data. Processed high-precision numbers are formed by adding the high-precision differences to the processed converted data. Thus, the rounding and clipping errors are greatly reduced in the processed high-precision numbers.

Fig.1(a)



