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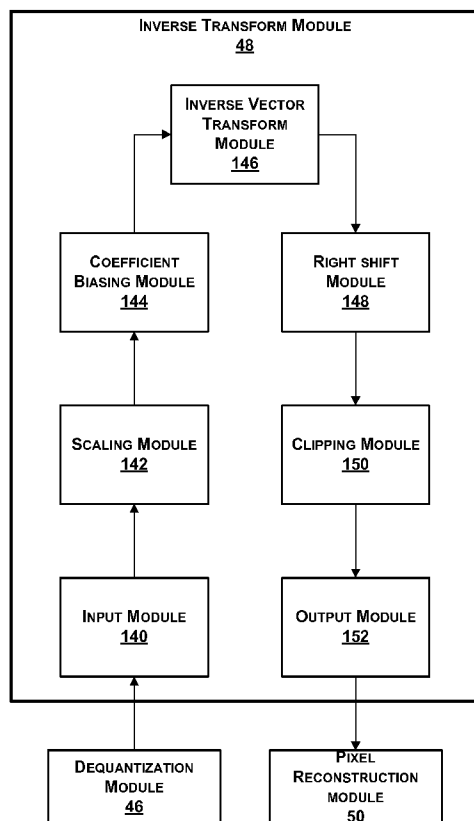
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(54) Title: REDUCTION OF ERRORS DURING COMPUTATION OF INVERSE DISCRETE COSINE TRANSFORM



(57) Abstract: Techniques are described to reduce rounding errors during computation of discrete cosine transform using fixed-point calculations. According to these techniques, a discrete cosine transform a matrix of scaled coefficients is calculated by multiplying coefficients in a matrix of coefficients by scale factors. Next, a midpoint bias value and a supplemental bias value are added to a DC coefficient of the matrix of scaled coefficients. Next, an inverse discrete cosine transform is applied to the resulting matrix of scaled coefficients. Values in the resulting matrix are then right-shifted in order to derive a matrix of pixel component values. As described herein, the addition of the supplemental bias value to the DC coefficient reduces rounding errors attributable to this right-shifting. As a result, a final version of a digital media file decompressed using these techniques may more closely resemble an original version of a digital media file.



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