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(72) Inventor; and

(75) Inventor/Applicant (for US only): **REZNIK, Yuriy**
[UA/US]; 8775 Costa Verde Blvd. #319, San Diego,
California 92122 (US).

(74) Agent: **BACHAND, Richard, A.**; 5775 Morehouse Drive,
San Diego, California 92121 (US).

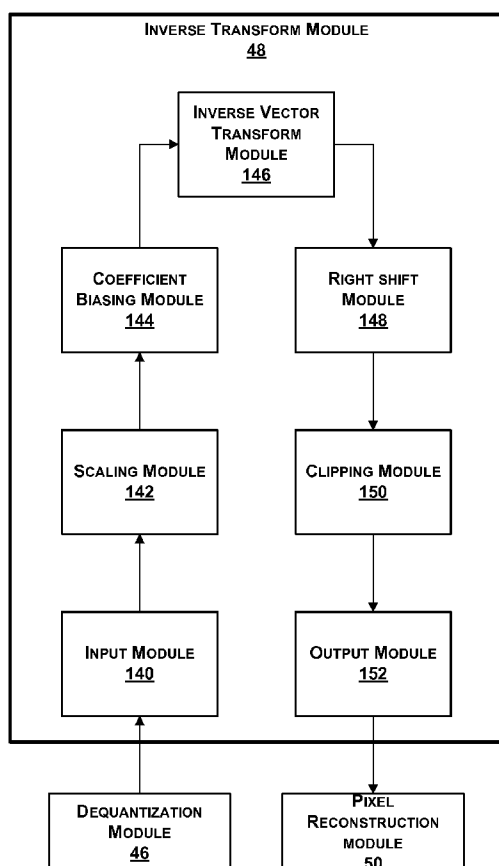
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(71) Applicant (for all designated States except US): **QUAL-
COMM Incorporated** [US/US]; Attn: International IP
Administration, 5775 Morehouse Drive, San Diego, Cal-
ifornia 92121 (US).

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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, an inverse discrete cosine transform a vector of coefficients is calculated using a series of butterfly structure operations on fixed-point numbers. Next, a mid-point 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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