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(57) Abstract :

In order to reduce the prediction error energy in motion compensation inter screen prediction and improve encoding efficiency this video image encoding method employing motion compensation with decimal accuracy involves: a step of creating from a plurality of interpolation filter sets a plurality of weighted filter coefficients by using weighting parameters that designate respective weighting values of interpolation filter coefficients; a step of selecting from among said weighted filter coefficients a weighted filter coefficient that minimizes the prediction error energy in said motion compensation with decimal accuracy; a step of interpolating into a reference image pixels having decimal accuracy through the application of an interpolation filter by employing the selected weighted filter coefficient and encoding an input image by said motion compensation with decimal accuracy; and a step of encoding the interpolation filter coefficient and the weighting parameter used for creating the selected weighted filter coefficient and adding the encoded weighting parameter and the encoded interpolation filter coefficient to the encoded bit stream.

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