

CLAIMS

1. A method of video encoding using IntraBC mode (Intra-block copy mode) coding for a current picture, comprising:

receiving a current block in the current picture;

deriving a block vector pointing from the current block to a reference block within a reconstructed pixel area of the current picture, wherein if fractional-pel resolution is enabled for the current block and the block vector is at the fractional-pel resolution, said deriving a block vector comprising restricting the block vector to cause neighboring pixels at integer-pel locations around fractional-pel reference pixels of the reference block for generating the fractional-pel reference pixels of the reference block to be all available within the reconstructed pixel area, wherein the fractional-pel reference pixels of the reference block are generated from the neighboring pixels at integer-pel locations using an interpolation filter with $2L$ filter tap length, wherein L is a positive integer, and wherein whether the neighboring pixels at integer-pel locations around fractional-pel reference pixels of the reference block for generating the fractional-pel reference pixels of the reference block are all available within the reconstructed pixel area are determined according to if one or more conditions associated with the block vector and one or more coding parameters are satisfied, and wherein the current block corresponds to a PU (prediction unit), and said one or more coding parameters comprise PU width represented by $nPbSw$, PU height represented by $nPbSh$, location of a top-left pixel of the PU relative to the current picture represented by (xPb, yPb) , location of a top-left pixel of a current CU (coding unit) relative to the current picture represented by (xCb, yCb) , size of a CTU (coding tree unit) represented by $CtbSize$, and wherein the PU is within the current CU, and wherein said one or more conditions comprise

$$BV_x + nPbSw + xPb - xCb + (L-1)*2*(subWidthC-1) \leq 0 \text{ or}$$

$$BV_y + nPbSh + yPb - yCb + (L-1)*2*(subHeightC-1) \leq 0;$$

and

encoding the current block according to IntraBC mode using the reference block as a

predictor.

2. The method of Claim 1, wherein L is equal to 4 for a luma block and L is equal to 2 for a chroma block.

3. The method of Claim 2, wherein said restricting the block vector shifts boundaries of the neighboring pixels at integer-pel locations available for generating the fractional-pel reference pixels of the reference block upward by at least (L-1) pixels and leftward by at least (L-1) pixels from boundaries of the reconstructed pixel area.

4. The method of Claim 1, wherein said one or more conditions further comprise

$$\begin{aligned} & (x_{Pb} + BV_x + n_{PbSw} - 1 + (L-1)*2*(subWidthC-1)) / CtbSize - x_{Cb} / CtbSize \leq \\ & y_{Cb}/CtbSize - (y_{Pb} + BV_y + n_{PbSh} - 1 + (L-1)*2*(subHeightC-1)) / CtbSize. \end{aligned}$$

5. The method of Claim 1, wherein the current block comprises a luma block and a chroma block for non-4:4:4 color video data, a luma block vector associated with the luma block is always at integer-pel resolution and a chroma block vector associated with the chroma block is scaled from the luma block vector, and said restricting the block vector is applied to the chroma block vector if the chroma block vector is at the fractional-pel resolution.