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(54) Title: ENCODING/DECODING VIDEO PICTURE DATA

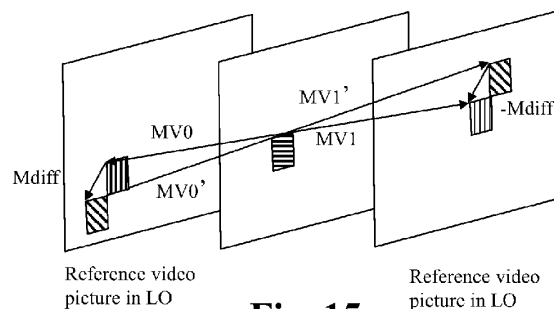


Fig. 15

(57) Abstract: The present application relates to a method of decoding a video picture by means of motion compensated temporal bi-prediction of an inter coded block using two reference video pictures in two separate reference video picture lists, and two affine motion fields defined by at least two control point motion vectors, denoted CPMVs, associated to each reference picture, refined CPMVs being obtained as output of the following first step (171) or, optionally of the second step (172) that follows the first step (171), - in said first step (171), for each CPMV, a bilateral matching being performed for a block centred on the CPMV to derive at least two refined CPMVs at an integer precision, and a set of CPMVs comprising either non-refined and/or refined CPMVs at an integer precision being selected to lead to an overall predicted block with a minimum bilateral matching cost, - in said second step (172), for each successive CPMV of the selected set of CPMVs that is associated with a block, each CPMV is refined at a sub-sample precision to minimize a bilateral matching cost of said block, wherein the second step (172) is bypassed according to a comparison between a bilateral matching cost associated with a CPMV that is performed in the first step and a threshold.

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