F.8.5.2.1.5 Derivation process for luma motion vector prediction

Inputs to this process are:

– a luma location ( xP, yP ) specifying the top-left luma sample of the current prediction unit relative to the top-left sample of the current picture,

– the variables nPSW and nPSH specifying the width and the height, respectively, of the current prediction unit.

– the reference index refIdxLX (with X being equal to 0 or 1) specifying a reference picture in the reference picture list RefPicListLX.

Output of this process is the motion vector predictor mvpLX (with X being equal to 0 or 1).

The reference view identifier refViewId is set equal to 0.

The motion vector predictor mvpLX is derived as specified as the follows:

If multi\_view\_mv\_pred\_flag is equal to 1 and mvp\_lX\_flag[ xP, yP ] is 0, the following applies,

– The derivation process for the inter-view motion vector candidate as specified in subclause F.8.5.2.1.10 is invoked with the luma location ( xP, yP ), the variables nPSW and nPSH, and the reference index refIdxLX as the inputs and the outputs are the flag availableFlagLXInterView and the motion vector candidate mvpLX. If availableFlagLXInterView is equal to 0, thefollowing applies;

mvpLX[ 0 ] = 0

mvpLX[ 1 ] = 0

Otherwise (multi\_view\_mv\_pred\_flag is equal to 0 or mvp\_lX\_flag[ xP, yP ] is more than 0), the following orderd steps applies.

1. The derivation process for motion vector predictor candidates from neighbouring prediction unit partitions as specified in subclause is invoked with the luma location ( xP, yP ), the width and the height of the prediction unit nPSW and nPSH, and the reference refIdxLX (with X being 0 or 1, respectively) as the inputs and the outputs are the availability flags availableFlagLXN and the motion vectors mvLXN with N being replaced by A and B.The variable numAvail is set equal to availableFlagLXA + availableFlagLXB
2. Depending on the value of numAvail and the motion vectors mvLXA and mvLXB, the following applies:

– If numAvail is equal to 2 and mvLXA is not equal to mvLXB, availableFlagLXCol is set equal to 0.

– Otherwise (numAvail is less than2 or mvLXA is equal to mvLXB), the derivation process for temporal luma motion vector prediction as specified in subclause 8.5.2.1.7 is invoked with the luma location ( xP, yP ), the width and the height of the prediction unit nPSW and nPSH, and the reference index refIdxLX (with X being 0 or 1, respectively) as the inputs and the outputs are the availability flag availableFlagLXCol and the temporal motion vector predictor mvLXCol.

1. The motion vector predictor candidate list, mvpListLX, is constructed as specified by the following ordered steps:
   1. The variable numMVPCandLX is set equal to multi\_view\_mv\_pred\_flag. When availableFlagLXA is equal to 1 and availableFlagLXB is equal to 1 and mvLXA is equal to mvLXB, availableFlagLXB is set equal to 0.
   2. When availableFlagLXA is equal to 1, mvpListLX[ numMVPCandLX ] is set equal to mvLXA and numMVPCandLX is incremented by 1.
   3. When availableFlagLXB is equal to 1, mvpListLX[ numMVPCandLX ] is set equal to mvLXB and numMVPCandLX is incremented by 1.
   4. When availableFlagLXInterView is equal to 1, mvpListLX[ numMVPCandLX ] is set equal to mvLXInterView and numMVPCandLX is incremented by 1.
   5. When availableFlagLXCol is equal to 1, mvpListLX[ numMVPCandLX ] is set equal to mvLXCol and numMVPCandLX is incremented by 1.
2. The motion vector predictor mvpLX is derived as follows:
   * + If mvp\_lX\_flag[ xP, yP ] is less than numMVPCandLX, the motion vector predictor mvpLX is set equal to mvpListLX[ mvp\_lX\_flag[ xP, yP ] ].
     + Otherwise (mvp\_lX\_flag[ xP, yP ] is greater than or equal to numMVPCandLX), both components of mvpLX are set equal to 0.