G.8.5.2.1.16 Derivation process for a disparity vector from temporal neighbour blocks

Inputs to this process are

* a luma location ( xP, yP ) specifying the top-left sample of the current luma prediction block relative to the top-left luma sample of the current picture,
* variables specifying the width and the height of the luma prediction block, nPbW and nPbH

Outputs of this process are

* the disparity vector mvDisp,
* the availability flag availableFlag.
* the flag availableFlagIvpMvTempX specifying whether the disparity vector used for inter-view motion vector prediction of the temporal collocated block is available.
* the disparity vector mvDispIvpTempX used for inter-view motion vector prediction of the temporal collocated block

The flag availableFlagIvpMvTempX and the components of mvDispIvpTempX are set equal to 0.

Depending on the values of slice\_type, collocated\_from\_l0\_flag, and collocated\_ref\_idx, the variable colPic, specifying the picture that contains the collocated partition, is derived as follows.

* If slice\_type is equal to B and collocated\_from\_l0\_flag is equal to 0, the variable colPic specifies the picture that contains the collocated partition as specified by RefPicList1[ collocated\_ref\_idx ].
* Otherwise (slice\_type is equal to B and collocated\_from\_l0\_flag is equal to 1 or slice\_type is equal to P), the variable colPic specifies the picture that contains the collocated partition as specified by RefPicList0[ collocated\_ref\_idx ].

The prediction block colPb and the luma location ( xPCol, yPCol ) specifing the top-left sample of the colPb are derived in the following ordered steps:

1. The vertical component of the right bottom luma location of the current luma prediction block is derived as follows.

yPRb = yP + nPbH (G‑)

* + If ( yP >> Log2CtbSizeY ) is equal to ( yPRb >> Log2CtbSizeY ), the horizontal component of the right-bottom luma location of the current luma prediction block is derived by

xPRb = xP + nPbW (G‑)

and the prediction block colPb is set as the luma prediction block covering the modified location given by ( ( xPRb >> 4 ) << 4, ( yPRb >> 4 ) << 4 ) inside the colPic.

* + Otherwise ( ( yP >> Log2CtbSizeY ) is not equal to ( yPRb >> Log2CtbSizeY ) ), colPb is marked as "unavailable".

1. When colPb is coded in an intra prediction mode or colPb is marked as "unavailable", the following applies.
   * Central luma location of the current prediction block is derived by

xPCtr = ( xP + ( nPbW >> 1 ) (G‑)

yPCtr = ( yP + ( nPbH >> 1 ) (G‑)

* + The variable colPb is set as the luma prediction block covering the modified location given by ( ( xPCtr >> 4 ) << 4, ( yPCtr >> 4 ) << 4 ) inside the colPic.

1. ( xPCol, yPCol ) is set equal to the top-left sample of the colPb relative to the top-left luma sample of the colPic.
2. The derivation process for a disparity vector in a block of a candidate picture as specified in subclause G.8.5.2.1.14 is invoked with candidate picture colPic, luma location ( xPCol, yPCol ), as inputs, and the flag availableFlag, the disparity vector mvDisp, the flag availableFlagIvpMvTempX, and a disparity vector mvDispIvpTempX as output.[Ed. (GT) It should be checked here, if colPb is intra coded before invoking this process]
3. The prediction block colLPb and the luma location ( xPLCol, yPLCol ) specifing the top-left sample of the colLPb are derived in the following ordered steps:
   * The left luma location of the current luma prediction block is derived by

xPTA1 =  xP – 1

yPTA1 = yP + nPSH − 1

* + The variable colLPb is set as the luma prediction block covering the modified location given by ( ( xPTA1 >> 4 ) << 4, ( yPTA1 >> 4 ) << 4 ) inside the colPic.

1. ( xPLCol, yPLCol ) is set equal to the top-left sample of the colLPb relative to the top-left luma sample of the colPic.
2. If availableFlag is equal to 0, the derivation process for a disparity vector in a block of a candidate picture as specified in subclause is invoked with candidate picture colPic, luma location ( xPLCol, yPLCol ), as inputs, and the flag availableFlag, the disparity vector mvDisp, the flag availableFlagIvpMvTempX, and a disparity vector mvDispIvpTempX as output.