J.8.3.1.4 Derivation process for the disparity vector and the inter-view reference

Inputs to this process are depth reference view component depthPic, the location of a top-left sample ( dbx1, dby1 ) of a partition and the listSuffixFlag.

Outputs of this process are a picture InterViewPic, an offset vector dv and a variable InterViewAvailable. [Ed. rename “dv” as a proper variable name should include camelCasing.] [Ed.(MH): As InterViewAvailable starts with an upper case letter, it can be used in other sub-clauses too. However, there are two other subclauses where a variable with the same name is specified. It may therefore be unclear which specification of InterViewAvailable is in effect.]

Set InterViewAvailable equal to 0.

The following applies to derive an inter-view reference picture or inter-view only reference picture, InterViewPic~~, with X set to 1 when listFuffixFlag is 1 or 0 otherwise~~:

for( cIdx = 0;cIdx<=num\_ref\_idx\_l0\_active\_minus1 && !InterViewAvailable; cIdx ++)  
 if ( view order index of RefPicList0[ cIdx ] is equal to 0) {  
 InterViewPic = RefPicList0[ cIdx ]  
 InterViewAvailable = 1  
 }

When InterViewAvailable is equal to 1, the following steps apply in order.

– The process specified in subclause  is invoked with mbPartIdx set equal to 0, subMbPartIdx set equal to 0, currSubMbType set equal to "na", and listSuffixFlag set equal to 0 as input and with reference indices refIdxCandL0[ i ] and the motion vectors mvCandL0[ i ] as outputs with i equal to 0, 1, and 2 corresponding to neighbouring partition A, B, and C, respectively.

– The process specified in subclause  is invoked with mbPartIdx set equal to 0, subMbPartIdx set equal to 0, currSubMbType set equal to "na", and listSuffixFlag set equal to 1 as input and with reference indices refIdxCandL1[ i ] and the motion vectors mvCandL1[ i ] as outputs with i equal to 0, 1, and 2 corresponding to neighbouring partition A, B, and C, respectively.

– The variable dv is derived as specified by the following ordered steps:

– Set DvAvailable[ i ] and mvCand[i] with i equal to 0, 1, and 2 corresponding to neighbouring partitions A, B, and C, respectively, as follows

for( i = 0; i < 3; i++ )  
 if (view order index of RefPicList0[ refIdxCandL0[ i ] ] is equal to 0 )  
 DvAvailable[ i ] = 1

mvCand[i] = mvCandL0[i]

if (view order index of RefPicList0[ refIdxCandL1[ i ] ] is equal to 0 )  
 DvAvailable[ i ] = 1

mvCand[i] = mvCandL1[i]  
 else  
 DvAvailable[ i ] = 0

– If DvAvailable[ 0 ] + DvAvailable[ 1 ] + DvAvailable[ 2 ] is equal to 1, the following applies:

– dv[ 0 ] = mvCand~~L~~~~X~~[ i ][ 0 ]

– dv[ 1 ] = mvCand~~LX~~[ i ][ 1 ]

– Otherwise, the following steps apply in order:

– The variable maxDepth is specified as follows:

maxDepth = INT\_MIN   
for( j = 0; j < partHeight; j += ( partHeight – 1 ) )  
 for( i = 0; i < partWidth; i += ( partWidth – 1 ) )  
 if( depthPic[ dbx1 + i, dby1 + j ] > maxDepth )  
 maxDepth = depthPic[ dbx1 + i, dby1 + j ]

– The variable dispVector is specified as follows:

currIndex = ViewIdTo3DVAcquisitionParamIndex( view\_id of the current view )  
refIndex = ViewIdTo3DVAcquisitionParamIndex( view\_id of the InterViewPic )

dispVector[ 0 ] = Disparity( maxDepth, currIndex, refIndex )  
dispVector[ 1 ] = 0

– For each value of i equal to 0, 1, and 2, when DvAvailable[ i ] is equal to 0, mvCand~~LX~~[ i ] is set to dispVactor.

– Each component of the variable dv is derived as follows:

dv[ 0 ] = Median( mvCand~~LX~~[ 0 ][ 0 ], mvCand~~LX~~[ 1 ][ 0 ], mvCand~~LX~~[ 2 ][ 0 ] )

dv[ 1 ] = Median( mvCand~~LX~~[ 0 ][ 1 ], mvCand~~LX~~[ 1 ][ 1 ], mvCand~~LX~~[ 2 ][ 1 ] )