### 8.4.1 General decoding process for coding units coded in intra prediction mode

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1. When cu\_act\_enabled\_flag[ xCb ][ yCb ] is equal to 1, the following applies:

* The general decoding process for intra blocks as specified in clause 8.4.5.1 is invoked with the sample location ( xTb0, yTb0 ) set equal to the luma location ( xCb, yCb ), the variable nCbW set equal to cbWidth, the variable nCbH set equal to cbHeight, the variable nTbW set equal to cbWidth, the variable nTbH set equal to cbHeight, predModeIntra, and the variable cIdx set equal to 0 and controlPara set equal to 1 as inputs, and the output is a residual sample array resSamplesL.
* The general decoding process for intra blocks as specified in clause 8.4.5.1 is invoked with the sample location ( xTb0, yTb0 ) set equal to the luma location ( xCb, yCb ), the variable nCbW set equal to cbWidth, the variable nCbH set equal to cbHeight, the variable nTbW set equal to cbWidth, the variable nTbH set equal to cbHeight, predModeIntra, and the variable cIdx set equal to 1 and controlPara set equal to 1 as inputs, and the output is a residual sample array resSamplesCb.
* The general decoding process for intra blocks as specified in clause 8.4.5.1 is invoked with the sample location ( xTb0, yTb0 ) set equal to the luma location ( xCb, yCb ), the variable nCbW set equal to cbWidth, the variable nCbH set equal to cbHeight, the variable nTbW set equal to cbWidth, the variable nTbH set equal to cbHeight, predModeIntra, and the variable cIdx set equal to 2 and controlPara set equal to 1 as inputs, and the output is a residual sample array resSamplesCr.
* The residual modification process for residual blocks using colour space conversion as specified in clause 8.7.4.6 is invoked with the variable nTbW set equal to cbWidth, the variable nTbH set equal to cbHeight, the array rY set equal to resSamplesL, the array rCb set equal to resSamplesCb, and the array rCr set equal to resSamplesCr as inputs, and the output are modified versions of the arrays resSamplesL, resSamplesCb and resSamplesCr.

1. The general decoding process for intra blocks as specified in clause 8.4.5.1 is invoked with the sample location ( xTb0, yTb0 ) set equal to the luma location ( xCb, yCb ), the variable nCbW set equal to cbWidth, the variable nCbH set equal to cbHeight, the variable nTbW set equal to cbWidth, the variable nTbH set equal to cbHeight, predModeIntra, the variable cIdx set equal to 0, and controlPara set equal to ( cu\_act\_enabled\_flag[ xCb ][ yCb ] ? 2 : 3 ) and the array resSamplesL when controlPara is equal to 2 as inputs, and the output is a modified reconstructed picture before in-loop filtering.

When treeType is equal to SINGLE\_TREE or treeType is equal to DUAL\_TREE\_CHROMA, and when sps\_chroma\_format\_idc is not equal to 0, the decoding process for chroma samples is specified as follows:

* If pred\_mode\_plt\_flag is equal to 1, the following applies:
* The general decoding process for palette blocks as specified in clause 8.4.5.3 is invoked with ( xCbComp, yCbComp ) set equal to the chroma location ( xCb / SubWidthC , yCb / SubHeightC ), the variable treeType, the variable cIdx set equal to 1, the variable nCbW set equal to ( cbWidth / SubWidthC ), the variable nCbH set equal to ( cbHeight / SubHeightC ).
* The general decoding process for palette blocks as specified in clause 8.4.5.3 is invoked with ( xCbComp, yCbComp ) set equal to the chroma location ( xCb / SubWidthC , yCb / SubHeightC ), the variable treeType, the variable cIdx set equal to 2, the variable nCbW set equal to ( cbWidth / SubWidthC ), the variable nCbH set equal to ( cbHeight / SubHeightC ).
* Otherwise (pred\_mode\_plt\_flag is equal to 0), the following applies:

1. The derivation process for the chroma intra prediction mode as specified in clause 8.4.3 is invoked with the luma location ( xCb, yCb ), the width of the current coding block in luma samples cbWidth, the height of the current coding block in luma samples cbHeight, and the tree type treeType as inputs.
2. The general decoding process for intra blocks as specified in clause 8.4.5.1 is invoked with the sample location ( xTb0, yTb0 ) set equal to the chroma location ( xCb / SubWidthC, yCb / SubHeightC ), the variable nCbW set equal to ( cbWidth / SubWidthC ), the variable nCbH set equal to ( cbHeight / SubHeightC ), the variable nTbW set equal to ( cbWidth / SubWidthC  ), the variable nTbH set equal to ( cbHeight / SubHeightC ), the variable predModeIntra set equal to IntraPredModeC[ xCb ][ yCb ], the variable cIdx set equal to 1, and controlPara set equal to ( cu\_act\_enabled\_flag[ xCb ][ yCb ] ? 2 : 3 ) and the array resSamplesCb when controlPara is equal to 2 as inputs, and the output is a modified reconstructed picture before in-loop filtering.
3. The general decoding process for intra blocks as specified in clause 8.4.5.1 is invoked with the sample location ( xTb0, yTb0 ) set equal to the chroma location ( xCb / SubWidthC, yCb / SubHeightC ), the variable nCbW set equal to ( cbWidth / SubWidthC ), the variable nCbH set equal to ( cbHeight / SubHeightC ), the variable nTbW set equal to ( cbWidth / SubWidthC  ), the variable nTbH set equal to ( cbHeight / SubHeightC ), the variable predModeIntra set equal to IntraPredModeC[ xCb ][ yCb ], the variable cIdx set equal to 2, and controlPara set equal to ( cu\_act\_enabled\_flag[ xCb ][ yCb ] ? 2 : 3 ) and the array resSamplesCr when controlPara is equal to 2 as inputs, and the output is a modified reconstructed picture before in-loop filtering.

#### 8.4.5.1 General decoding process for intra blocks

Inputs to this process are:

* a sample location ( xTb0, yTb0 ) specifying the top-left sample of the current transform block relative to the top‑left sample of the current picture,
* a variable nCbW specifying the width of the current coding block,
* a variable nCbH specifying the height of the current coding block,
* a variable nTbW specifying the width of the current transform block,
* a variable nTbH specifying the height of the current transform block,
* a variable predModeIntra specifying the intra prediction mode,
* a variable cIdx specifying the colour component of the current block,
* a variable controlPara specifying the output of the process.
* when controlPara is equal to 2, a residual sample array resSamplesRec specifying the reconstructed residual samples for the colour component of the current block.

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1. The (nW)x(nH) array resSamples, for x in the range of 0 to nW − 1, and and y in the range of 0 to nH – 1, inclusive, are derived as follows:

* When controlPara is not equal to 2, the scaling and transformation process as specified in clause 8.7.2 is invoked with the luma location ( xTbY, yTbY ) set equal to ( xTbY + nW \* xPartIdx, yTbY + nH \* yPartIdx ), the variable cIdx, the variable predMode set equal to MODE\_INTRA, nCbW, nCbH, the transform width nTbW and the transform height nTbH set equal to nW and nH as inputs, and the output is an (nW)x(nH) array resSamples.
* When controlPara is equal to 2, the (nW)x(nH) array resSamples is derived by setting resSamples[ x ][ y ] equal to resSamplesRec[ x ][ y ], for x in the range of 0 to nW − 1, and and y in the range of 0 to nH – 1, inclusive.

1. When controlPara is not equal to 1, the picture reconstruction process for a colour component as specified in clause 8.7.5 is invoked with the transform block location ( xTbComp, yTbComp ) set equal to ( xTb0 + nW \* xPartIdx, yTb0 + nH \* yPartIdx ), the transform block width nTbW, the transform block height nTbH set equal to nW and nH, the variable cIdx, the (nW)x(nH) array predSamples[ x ][ y ] with x = xPartPbIdx \* nW..( xPartPbIdx +1 ) \* nW − 1, y = 0..nH − 1, and the (nW)x(nH) array resSamples as inputs, and the output is a modified reconstructed picture before in-loop filtering.