This text includes the latest HEVC specification text (I1003-D6) + (I0296) + (I0373). The changes for J0354 are highlighted in yellow on top of this version.

**9.3.3.1.4 Derivation process of ctxIdxInc for the syntax element significant\_coeff\_flag**

Inputs to this process are the colour component index cIdx, the current coefficient scan position ( xC , yC ), the previously decoded bins of the syntax element significant\_coeff\_group\_flag, the transform block width log2TrafoWidth and the transform block height log2TrafoHeight.

Output of this process is ctxIdxInc.

The variable sigCtx depends on the current position ( xC, yC ), the colour component index cIdx, the transform block size and previously decoded bins of the syntax element significant\_coeff\_group\_flag. For the derivation of sigCtx, the following applies.

* If xC + yC is equal to 0, sigCtx is derived as follows.

sigCtx = 0 (9‑19)

* Otherwise if log2TrafoWidth is equal to log2TrafoHeight and log2TrafoWidth is equal to 2, sigCtx is derived using ctxIdxMap [ ] specified in Table 9‑42 as follows.

sigCtx = ctxIdxMap [ (yC << 2) + xC ] (9‑20)

* Otherwise if log2TrafoWidth is equal to log2TrafoHeight and log2TrafoWidth is equal to 3, sigCtx is derived as follows.

sigCtx = 9 + ctxIdxMap[ ((yC >> 1 ) << 2) + (xC >> 1) ] (9‑21)

* Otherwise, sigCtx is derived using previously decoded bins of the syntax element significant\_coeff\_group\_flag as follows.
* The variable xCG is derived as follows.

xCG = xC >> 2 (9‑22)

* The variable yCG is derived as follows.

yCG = yC >> 2 (9‑23)

* The variable cntCG is initialized as follows.

cntCG = 0 (9‑24)

* When xC is less than ( 1 << log2TrafoWidth ) − 1, the following applies.

cntCG = cntCG + significant\_coeff\_group\_flag[ xCG + 1 ][ yCG ] (9‑25)

* When yC is less than ( 1 << log2TrafoHeight ) − 1, the following applies.

cntCG = cntCG + ( significant\_coeff\_group\_flag[ xCG ][ yCG + 1 ] << 1 ) (9‑26)

* If cntCG is equal to 0, the following applies.
  + sigCtx = ( xC - (xCG << 2) ) + ( yC - (yCG << 2) ) <= 2 ? 1 :

( xC - (xCG << 2) ) + ( yC - (yCG << 2) ) <=3 ? 2: 3 (9‑27)

~~sigCtx = ( xC - (xCG << 2) ) + ( yC - (yCG << 2) ) <= 2 ? 1 : 0 (9‑27)~~

* Otherwise, if cntCG is equal to 1, the following applies.

sigCtx = ( yC - (yCG << 2) ) (9‑28)

~~sigCtx = ( yC - (yCG << 2) ) <= 1 ? 1 : 0 (9‑28)~~

* Otherwise, if cntCG is equal to 2, the following applies.

sigCtx = ( xC - (xCG << 2) ) (9‑29)

~~sigCtx = ( xC - (xCG << 2) ) <= 1 ? 1 : 0 (9‑29)~~

* Otherwise ( cntCG is equal to 3 ), the following applies.

sigCtx = 0 (9‑30)

~~sigCtx = ( xC - (xCG << 2) ) + ( yC - (yCG << 2) ) <= 4 ? 2 : 1 (9‑30)~~

* The variable sigCtx is modified as follows.
  + If cIdx is equal to 0 and (xC>>2) + (yC>>2) are greater than 0, the following applies.

sigCtx = sigCtx + ~~21~~22 (9‑31)

* + Otherwise, the following applies.

sigCtx = sigCtx + 18 (9‑32)

The context index increment ctxIdxInc is derived using the colour component index cIdx and sigCtx as follows.

* If cIdx is equal to 0, ctxIdxInc is derived as follows.

ctxIdxInc = sigCtx (9‑33)

* Otherwise (cIdx is greater than 0), ctxIdxInc is derived as follows.

ctxIdxInc = ~~24~~26 + sigCtx (9‑34)

Table 9‑42 – Specifcation of ctxIdxMap [ i ]

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **i** | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** |
| **ctxIdxMap[ i ]** | 0 | 1 | 4 | 5 | 2 | 3 | 4 | 5 | 6 | 6 | 8 | 8 | 7 | 7 | 8 |