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| *Title:* | **3D-CE2: Residual DC quantization in intra SDC** | | |
| *Status:* | Input document | | |
| *Purpose:* | Proposal | | |
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# Proposed Text

**I.7.3.2.1.2 Video parameter set extension 2 syntax**

|  |  |
| --- | --- |
| … |  |
| if ( layerId != 0 ) { |  |
| **iv\_mv\_pred\_flag**[ layerId ] | u(1) |
| **log2\_sub\_pb\_size\_minus3**[ layerId ] | ue(v) |
| if ( !VpsDepthFlag[ layerId ] ) { |  |
| **iv\_res\_pred\_flag**[ layerId ] | u(1) |
| **depth\_refinement\_flag**[ layerId ] | u(1) |
| **view\_synthesis\_pred\_flag**[ layerId ] | u(1) |
| **depth\_based\_blk\_part\_flag**[ layerId ] | u(1) |
| } else { |  |
| **mpi\_flag**[ layerId ] | u(1) |
| **depth\_residual\_dc\_qp**[ layerId ] | ue(v) |
| **vps\_depth\_modes\_flag**[ layerId ] | u(1) |
| **lim\_qt\_pred\_flag**[ layerId ] | u(1) |
| **vps\_inter\_sdc\_flag**[ layerId ] | u(1) |
| } |  |
| … |  |

**depth\_ residual\_dc\_qp**[ layerId ] specifies the default value of the variable LesidualDcQp[ layerId ] that may be used in the decoding of prediction units coded in intra prediction mode.

I.8.3.6 Decoding process for a depth lookup table

…

The values of variables DltDerivedQp[nuh\_layer\_id ] and LesidualDcQp[nuh\_layer\_id ] are derived as specified in the follwing:

DltDerivedQp[nuh\_layer\_id ] = Floor( Log2(Idx2DepthValue[NumDepthValuesInDlt[ nuh\_layer\_id ] – 1] - Idx2DepthValue[0])/ NumDepthValuesInDlt[ nuh\_layer\_id ]) + 0.5 )

LesidualDcQp[nuh\_layer\_id ] = max(LesidualDcQp[nuh\_layer\_id ], DltDerivedQp[nuh\_layer\_id ])

I.8.4.4.3 Segmental depth intra coding process

…

Depending on DltFlag[ nuh\_layer\_id ] the reconstructed depth value samples resSamples[ x ][ y ] are derived as specified in the following:

* If predModeIntra is not equal to INTRA\_DMM\_WFULL or INTRA\_DMM\_CPREDTEX, the following applies:
  + For x, y = 0..nTbS − 1, the reconstructed depth value samples resSamples[ x ][ y ] are derived as specified in the following:
    - 1. SL[ xTb0 + x ][ yTb0 + y ] = predSamples[ x ][ y ] + (DcOffset[ xTb ][ yTb ][wedgePattern[ x ][ y ] ] << LesidualDcQp[ layerId ])
* Oterwise if DltFlag[ nuh\_layer\_id ] is equal to 0, the following applies:
  + For x, y = 0..nTbS − 1, the reconstructed depth value samples resSamples[ x ][ y ] are derived as specified in the following:
    - 1. SL[ xTb0 + x ][ yTb0 + y ] = predSamples[ x ][ y ] + DcOffset[ xTb ][ yTb ][wedgePattern[ x ][ y ] ]
* Otherwise (DltFlag[ nuh\_layer\_id ] is equal to 1),
  + 1. dcPred is set equal to DcVal.

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