# Text of scheme 1 - version 1 (JCTVC-H326 style)

**7.3.7** **Prediction unit syntax**

|  |  |
| --- | --- |
|  |  |
|  |  |
| **intra\_chroma\_DM\_flag[ x0 ][ y0 ]** | ae(v) |
| intra\_chroma\_LM\_flag[ x0 ][ y0 ] = 0 |  |
| if( chroma\_pred\_from\_luma\_enabled\_flag && !intra\_chroma\_DM\_flag[ x0 ][ y0 ] ) |  |
| **intra\_chroma\_LM\_flag[ x0 ][ y0 ]** | ae(v) |
| if(chroma\_pred\_from\_luma\_enabled\_flag && !intra\_chroma\_LM\_flag[ x0 ][ y0 ] ) |  |
| **intra\_chroma\_rem\_mode[ x0 ][ y0 ]** | ae(v) |
| } |  |

**7.4.7** **Prediction unit semantics**

**intra\_chroma\_DM\_flag[ x0 ][ y0 ]** specifies whether the intra prediction mode for chroma samples is direct mode (DM) or not. The array indices x0, y0 specify the location ( x0,  y0 ) of the top-left luma sample of the considered prediction block relative to the top-left luma sample of the picture. The detailed intra prediction mode for chroma samples is specified in 8.3.2.

**intra\_chroma\_LM\_flag[ x0 ][ y0 ]** specifies whether the intra prediction mode for chroma samples is linear mode (LM) or not. The array indices x0, y0 specify the location ( x0,  y0 ) of the top-left luma sample of the considered prediction block relative to the top-left luma sample of the picture. The detailed intra prediction mode for chroma samples is specified in 8.3.2.

**intra\_chroma\_rem\_mode[ x0 ][ y0 ]** specifies remaining intra prediction modes for chroma samples. The array indices x0, y0 specify the location ( x0,  y0 ) of the top-left luma sample of the considered prediction block relative to the top-left luma sample of the picture. The detailed intra prediction mode for chroma samples is specified in 8.3.2.

**8.3.2** **Derivation process for chroma intra prediction mode**

The chroma intra prediction mode IntraPredModeC is derived as specifed below with intra\_chroma\_DM\_flag[ xB ][ yB ], intra\_chroma\_LM\_flag[ xB ][ yB ], intra\_chroma\_rem\_mode[ xB ][ yB ], IntraPredMode[ xB ][ yB ] and chroma\_pred\_from\_luma\_enabled\_flag as inputs.

* If intra\_chroma\_DM\_flag[ xB ][ yB ] is equal to 1, IntraPredModeC[ xB ][ yB ] is set to IntraPredMode[ xB ][ yB ].
* Else if intra\_chroma\_DM\_flag[ xB ][ yB ] is equal to 0, and intra\_chroma\_LM\_flag[ xB ][ yB ] is equal to 1, IntraPredModeC[ xB ][ yB ] is set to LM.
* Otherwise (both intra\_chroma\_DM\_flag[ xB ][ yB ] and intra\_chroma\_LM\_flag[ xB ][ yB ] are equal to 0). IntraPredModeC[ xB ][ yB ] is derived as specified in Table 8-4 with intra\_chroma\_rem\_mode[ xB ][ yB ] and IntraPredMode[ xB ][ yB ] as inputs.







Table 8‑4 – Specification of IntraPredModeC according to the values of intra\_chroma\_rem\_mode[ xB ][ yB ] and IntraPredMode[ xB ][ yB ]

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **intra\_chroma\_rem\_mode[ xB ][ yB ]** | **IntraPredMode[ xB ][ yB ]** | | | | |
| **0** | **1** | **2** | **3** | **X ( 0 <= X < 35 )** |
| 0 | 34 | 0 | 0 | 0 | 0 |
| 1 | 26 | 34 | 26 | 26 | 1 |
| 2 | 10 | 10 | 34 | 10 | 2 |
| 3 | 1 | 1 | 1 | 34 | 3 |

**9.2.1.1** **Initialisation process for context variables**

Table 9-7

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| prediction\_unit() |  |  |  |  |  |
| intra\_chroma\_DM\_flag | Table 9‑14 | 0 | 2 | 4 |
| intra\_chroma\_LM\_flag | Table 9‑14 | 1 | 3 | 5 |
| intra\_chroma\_rem\_mode | Na | na | na | na |

Table 9-12



Table 9‑14 – Values of variable intra\_chroma\_DM\_flag and intra\_chroma\_LM\_flag ctxIdx

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Initialisation variables** | **intra\_chroma\_DM\_flag and intra\_chroma\_LM\_flag ctxIdx** | | | | | |
| **0** | **1** | **2** | **3** | **4** | **5** |
| **value** | 185 | 135 | 153 | 151 | 137 | 151 |

**9.2.2** **Binarization process**

**Table 9-31** – **Syntax elements and associated types of binarization, maxBinIdxCtx, ctxIdxTable, and ctxIdxOffset**

| **Syntax element** |  | **Type of binarization** | **maxBinIdxCtx** | **ctxIdxTable** | **ctxIdxOffset** |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| intra\_chroma\_DM\_flag | I | FL, cMax = 1 | 0 | Table 9‑14 | 0 |
| P | 0 | Table 9‑14 | 2 |
| B | 0 | Table 9‑14 | 4 |
| intra\_chroma\_LM\_flag | I | FL, cMax = 1 | 0 | Table 9‑14 | 1 |
| P | 0 | Table 9‑14 | 3 |
| B | 0 | Table 9‑14 | 5 |
| intra\_chroma\_rem\_mode | All | FL, cMax = 3 | na | na | na, (use Decode Bypass) |

**9.2.3** **Decoding process flow**

**Table 9-37 – Assignment of ctxIdxInc to binIdx for all ctxIdxTable and ctxIdxOffset values**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Syntax element** | **ctxIdxTable,  ctxIdxOffset** | | **binIdx** | | | | |
| **0** | **1** | **2** | **3** | **>=4** |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| intra\_chroma\_DM\_flag | Table 9‑14 | 0 | 0 | na | na | na | na |
| 2 | 0 | na | na | na | na |
| 4 | 0 | na | na | na | na |
| intra\_chroma\_LM\_flag | Table 9‑14 | 1 | 0 | na | na | na | na |
| 3 | 0 | na | na | na | na |
| 5 | 0 | na | na | na | na |

Note that the number of tables for description is reduced. Specifically, the two confusing table 8-3 and 8-4 are merged to one table that is also easier for understanding.

# Text of scheme1 - version 2 (JCTVC-H475 style)

### 9.2.2 Binarization process

| Table 9‑31 – Syntax elements and associated types of binarization, maxBinIdxCtx, ctxIdxTable, and ctxIdxOffset | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Syntax element** |  | **Type of binarization** | **maxBinIdxCtx** | **ctxIdxTable** | **ctxIdxOffset** |
|  |  |  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| intra\_chroma\_pred\_mode | I | as specified in subclause 9 | 1 | Table 9‑14 | 0 |
| P | 1 | Table 9‑14 | 2 |
| B | 1 | Table 9‑14 | 4 |



#### 9.2.2.9 Binarization process for intra\_chroma\_pred\_mode

Input to this process is a request for a binarization for the syntax element intra\_luma\_pred\_mode and chroma\_pred\_from\_luma\_enabled\_flag.

Output of this process is the binarization of the syntax element.

The binarization for intra\_chroma\_pred\_mode is given by Table 9‑35.

Table 9‑35 – Binarization for intra\_chroma\_pred\_mode

|  |  |  |
| --- | --- | --- |
| **intra\_chroma\_pred\_mode** | **chroma\_pred\_from\_luma\_enabled\_flag= true** | **chroma\_pred\_from\_luma\_enabled\_flag= false** |
| 0 | 1 | 1 |
| 1 | 01 |  |
| 2 | 00 00 | 0 00 |
| 3 | 00 01 | 0 01 |
| 4 | 00 10 | 0 10 |
| 5 | 00 11 | 0 11 |

| Table 9‑37 – Assignment of ctxIdxInc to binIdx for all ctxIdxTable and ctxIdxOffset values | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Syntax element** | **ctxIdxTable,  ctxIdxOffset** | | **binIdx** | | | | |
| **0** | **1** | **2** | **3** | **>=4** |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| intra\_chroma\_pred\_mode  chroma\_pred\_from\_luma\_enabled\_flag==true | Table 9‑14 | 0 | 0 | 1 | na | na | na |
| 2 | 0 | 1 | na | na | na |
| 4 | 0 | 1 | na | na | na |
| intra\_chroma\_pred\_mode  chroma\_pred\_from\_luma\_enabled\_flag==false | Table 9‑14 | 0 | 0 | na | na | na | na |
| 2 | 0 | na | na | na | na |
| 4 | 0 | na | na | na | na |

One table describing the binarization for the syntax intra\_chroma\_pred\_mode is added.