#### Reference picture list modification syntax

|  |  |
| --- | --- |
| ref\_pic\_list\_modification( ) { | Descriptor |
| if( slice\_type = = P | | slice\_type = = B ) { |  |
| **ref\_pic\_list\_modification\_flag\_l0** | u(1) |
| if( ref\_pic\_list\_modification\_flag\_l0 ) |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| for ( i = 0; i <= num\_ref\_idx\_l0\_active\_minus1; i++ ) { |  |
| if ( NumRpsCurrTempList0 > 1 ) |  |
| **ref\_pic\_set\_idx** | u(v) |
| } |  |
| } |  |
| if( slice\_type = = B ) { |  |
| **ref\_pic\_list\_modification\_flag\_l1** | u(1) |
| if( ref\_pic\_list\_modification\_flag\_l1 ) |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| for ( i = 0; i <= num\_ref\_idx\_l1\_active\_minus1; i++ ) { |  |
| if ( NumRpsCurrTempList1 > 1 ) |  |
| **ref\_pic\_set\_idx** | u(v) |
| } |  |
| } |  |
| } |  |

#### Reference picture list modification semantics

The syntax element ref\_pic\_set\_idx specifies the change from the initial reference picture lists to the reference picture lists to be used for decoding the slice.

**ref\_pic\_list\_modification\_flag\_l0** equal to 1 specifies that the syntax element ref\_pic\_set\_idx is present for specifying reference picture list 0. ref\_pic\_list\_modification\_flag\_l0 equal to 0 specifies that this syntax element is not present.

**ref\_pic\_list\_modification\_flag\_l1** equal to 1 specifies that the syntax element ref\_pic\_set\_idx is present for specifying reference picture list 1. ref\_pic\_list\_modification\_flag\_l1 equal to 0 specifies that this syntax element is not present.



**ref\_pic\_set\_idx** specifies the index of the reference picture in RefPicSetCurrTempListX to be placed at the current position of reference picture list LX (with X being 0 or 1). The value of ref\_pic\_set\_idx shall be in the range of 0 toNumRpsCurrTempListX, inclusive. If the syntax element ref\_pic\_set\_idx is not present, it is set to 0.

#### Initialisation process for reference picture lists

This initialisation process is invoked when decoding a P or B slice header.

When decoding a P or B slice, there shall be at least one reference picture in RefPicSetStCurr0, RefPicSetStCurr1 or RefPicSetLtCurr.

The following procedure is conducted to construct the RefPicSetCurrTempList0:

cIdx = 0  
if ( ref\_pic\_list\_modification\_flag\_l0 = = 0 )

NumRpsCurrTempList0 = num\_ref\_idx\_l0\_active\_minus1+1

else {

NumRpsCurrTempList0 = NumRpsStCurr0 + NumRpsStCurr1 + NumRpsLtCurr

if ( NumRpsCurrTempList0 <= num\_ref\_idx\_l0\_active\_minus1 )

NumRpsCurrTempList0 = num\_ref\_idx\_l0\_active\_minus1+1

}

while( cIdx < NumRpsCurrTempList0)  
{  
 for( i=0; i < NumPocStCurr0 && cIdx < NumRpsCurrTempList0; cIdx++, i++ )  
 RefPicSetCurrTempList0 [ cIdx ] = RefPicSetStCurr0[ i ]  
 for( i=0; i < NumPocStCurr1 && cIdx < NumRpsCurrTempList0; cIdx++, i++ ) (8‑9)  
 RefPicSetCurrTempList0 [ cIdx ] = RefPicSetStCurr1[ i ]  
 for( i=0; i < NumPocLtCurr && cIdx < NumRpsCurrTempList0; cIdx++, i++ )  
 RefPicSetCurrTempList0 [ cIdx ] = RefPicSetLtCurr[ i ]  
}

If ref\_pic\_list\_modification\_flag\_l0 is 0, the initial RefPicList0 is equivalent to RefPicSetCurrTempList0. If ref\_pic\_list\_modification\_flag\_l0 is 1, the process in 0.1.1.4 is invoked with RefPicSetCurrTempList0 and num\_ref\_idx\_l0\_active\_minus1 as input, and RefPicList0 as output.

The following procedure is conducted to construct the RefPicSetCurrTempList1:

cIdx = 0  
if ( ref\_pic\_list\_modification\_flag\_l1 = = 0 )

NumRpsCurrTempList1 = num\_ref\_idx\_l1\_active\_minus1+1

else {

NumRpsCurrTempList1 = NumRpsStCurr1 + NumRpsStCurr0 + NumRpsLtCurr

if ( NumRpsCurrTempList1 <= num\_ref\_idx\_l1\_active\_minus1 )

NumRpsCurrTempList1 = num\_ref\_idx\_l1\_active\_minus1+1

}

while( cIdx < NumRpsCurrTempList1 ) {  
 for( i=0; i < NumPocStCurr1 && cIdx < NumRpsCurrTempList1; cIdx++, i++ )  
 RefPicSetCurrTempList1 [ cIdx ] = RefPicSetStCurr1[ i ]   
 for( i=0; i < NumPocStCurr0 && cIdx < NumRpsCurrTempList1; cIdx++, i++ ) (8‑9)  
 RefPicSetCurrTempList1 [ cIdx ] = RefPicSetStCurr0[ i ]  
 for( i=0; i < NumPocLtCurr && cIdx < NumRpsCurrTempList1; cIdx++, i++ )  
 RefPicSetCurrTempList1 [ cIdx ] = RefPicSetLtCurr[ i ]  
}

If ref\_pic\_list\_modification\_flag\_l1 is 0, the initial RefPicList1 is equivalent to RefPicSetCurrTempList1. If ref\_pic\_list\_modification\_flag\_l1 is 1, the process in 0.1.1.4 is invoked with RefPicSetCurrTempList1 and num\_ref\_idx\_l0\_active\_minus1 as input, and RefPicList1 as output.

#### Modification process for reference picture lists

Input to this process is an array of reference picture RefPicSetCurrTempLX, and the size of the reference picture list num\_ref\_idx\_lX\_active\_minus1 (with X being 0 or 1).

Output of this process is an array containing the modified reference picture list RefPicListX.

Let refIdxLX be an index into the reference picture list RefPicListLX. It is initially set equal to 0.

The following process is repeated until refIdxLX is greater than num\_ref\_idx\_lX\_active\_minus1+1.

– RefPicListX [ refIdxLX++ ] = RefPicSetCurrTempLX [ ref\_pic\_set\_idx ]