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| **Joint Collaborative Team on 3D Video Coding Extension Development**  **of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC 29/WG 11**  2nd Meeting: Shanghai, CN, 13–19 Oct. 2012 | Document: JCT3V-B0046\_proposed text |

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| *Title:* | **Proposed text for JCT3V-B0046 based on MV-HEVC Working Draft** | | |
| *Status:* | Input Document | | |
| *Purpose:* | Proposal | | |
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# Abstract

This document provides text for the reference picture list construction aspect of JCT3V-B0046 based on MV-HEVC working draft. Changes are highlighted.

## General slice header syntax

|  |  |
| --- | --- |
| slice\_header( ) { | Descriptor |
| **first\_slice\_in\_pic\_flag** | u(1) |
| … |  |
| if( slice\_type = = P | | slice\_type = = B ) { |  |
| if( sps\_temporal\_mvp\_enable\_flag ) |  |
| **slice\_temporal\_mvp\_enable\_flag** | u(1) |
| **num\_ref\_idx\_active\_override\_flag** | u(1) |
| if( num\_ref\_idx\_active\_override\_flag ) { |  |
| **num\_ref\_idx\_l0\_active\_minus1** | ue(v) |
| if( slice\_type = = B ) |  |
| **num\_ref\_idx\_l1\_active\_minus1** | ue(v) |
| } |  |
| if (layer\_id**)** |  |
| **inter\_view\_ref\_start\_position** | u(v) |
| if( lists\_modification\_present\_flag ) |  |
| ref\_pic\_list\_modification( ) |  |
| **…** |  |
| byte\_alignment( ) |  |
| } |  |

## General slice header semantics

**inter\_view\_ref\_start\_position** specifies the starting position of the inter-view reference pictures in reference picture list 0 after reference picture list initialization. inter\_view\_ref\_start\_position is in the range of 0 to min (num\_ref\_idx\_l0\_active\_minus1, NumPocStCurrBefore + NumPocStCurrAfter + NumPocLtCurr), inclusive. When not present, inter\_view\_ref\_start\_position is inferred to be equal to -1.

The proposed syntax element can be alternatively added as part of the slice header extension, as discussed and reported in the 3DV HLS BoG and planery discussions.

## Decoding process

**F.8.3.4.2 Initialization process for reference picture lists**

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

rIdx = 0  
while( rIdx < NumRpsCurrTempList0 ) {  
 for( i = 0; i < NumPocStCurrBefore && cIdx < NumRpsCurrTempList0; rIdx++, i++ )  
 RefPicListTemp0[ rIdx ] = RefPicSetStCurrBefore[ i ]   
 for( i = 0; i < NumPocStCurrAfter && rIdx < NumRpsCurrTempList0; rIdx++, i++ ) (8‑8)  
 RefPicListTemp0[ rIdx ] = RefPicSetStCurrAfter[ i ]  
 for( i = 0; i < NumPocLtCurr && rIdx < NumRpsCurrTempList0; rIdx++, i++ )  
 RefPicListTemp0[ rIdx ] = RefPicSetLtCurr[ i ]  
 for( i = 0; i < NumIvCurr && rIdx < NumRpsCurrTempList0; rIdx++, i++ )  
 RefPicListTemp0[ rIdx ] = RefPicSetIvCurr[ i ]  
}

a list of positions of the changed index is defined as idxPosList and derived as follows:

iNumTemp = NumPocStCurrBefore + NumPocStCurrAfter +NumPocLtCurr;  
if (inter\_view\_ref\_start\_position>=0) {

for ( i = 0; i < inter\_view\_ref\_start\_position; i ++)   
 idxPosList [ i ] = i;

for ( ; i < (inter\_view\_ref\_start\_position + NumPocIvCurr); i ++)   
 idxPosList[ i ] = iNumTemp + (i - inter\_view\_ref\_start\_position);  
 for ( ; i <= num\_ref\_idx\_l0\_active\_minus1; i ++)   
 idxPosList[ i ] = i - NumPocIvCurr;  
}  
else   
 for (i=0; i< iNumTemp+ NumIvCurr ; i++)  
 idxPosList [ i ] = i;

The list RefPicList0 is constructed as follows:

for( rIdx = 0; rIdx <= num\_ref\_idx\_l0\_active\_minus1; rIdx++) (8‑9)  
 RefPicList0[ rIdx ] = ref\_pic\_list\_modification\_flag\_l0 ? RefPicListTemp0[ list\_entry\_l0[ rIdx ] ] :  
 RefPicListTemp0[idxPosList[ rIdx ] ]