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| **Joint Collaborative Team on Video Coding (JCT-VC)**  **of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC 29/WG 11**  14th Meeting: Vienna, AT, 25 July – 2 Aug. 2013 | Document: JCTVC-N0318 |

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| --- | --- | --- | --- |
| *Title:* | **Cross check JCTVC-N0111 Sample position mapping with already defined scaling factor** | | |
| *Status:* | Input Document | | |
| *Purpose:* | Information | | |
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# Abstract

JCTVC-N0111 contribution software is verified and the results are cross check. It has been confirmed that the JCTVC-N0111 proposal is implemented correctly in the source code and our test results match to those provided by the proponents.

# Introduction

JCTVC-N0111 proposes to use only scaling factors for the resampling process, and remove current and reference layer picture sizes from the formula when calculating additional rounding offset addY in SHVC WD2 G.6.2, derivation process for reference layer sample location used in resampling.

The cross check results included in the enclosed datasheet, and Table 1 shows the results summary. All results match those provided by the proponents and are identical to SHM2.0 anchor results.

1. Cross check results summary

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **AI HEVC 2x** | | | **AI HEVC 1.5x** | | |  |  |  |
|  | Y | U | V | Y | U | V |  |  |  |
| Class A | 0.0% | 0.0% | 0.0% |  |  |  |  |  |  |
| Class B | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |  |  |  |
| **Overall (Test vs Ref)** | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |  |  |  |
| **Overall (Test vs single layer)** | 12.8% | 14.9% | 14.6% | 10.5% | 9.8% | 9.3% |  |  |  |
| **Overall (Ref vs single layer)** | 12.8% | 14.9% | 14.6% | 10.5% | 9.8% | 9.3% |  |  |  |
| **EL only (Test vs Ref)** | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |  |  |  |
| Enc Time[%] | 106.5% | | | 93.8% | | |  |  |  |
| Dec Time[%] | 104.8% | | | 98.1% | | |  |  |  |
| Enc Mem[%] | #VALUE! | | | #VALUE! | | |  |  |  |
| BL Match | Matched | | | Matched | | |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  | **RA HEVC 2x** | | | **RA HEVC 1.5x** | | | **RA HEVC SNR** | | |
|  | Y | U | V | Y | U | V | Y | U | V |
| Class A | 0.0% | 0.0% | 0.0% |  |  |  | 0.0% | 0.0% | 0.0% |
| Class B | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| **Overall (Test vs Ref)** | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| **Overall (Test vs single layer)** | 19.2% | 33.3% | 32.0% | 16.2% | 28.8% | 29.1% | 14.4% | 32.1% | 34.1% |
| **Overall (Ref vs single layer)** | 19.2% | 33.3% | 32.0% | 16.2% | 28.8% | 29.1% | 14.4% | 32.1% | 34.1% |
| **EL only (Test vs Ref)** | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Enc Time[%] | 107.5% | | | 112.9% | | | 119.5% | | |
| Dec Time[%] | 106.2% | | | 109.0% | | | 114.1% | | |
| Enc Mem[%] | #VALUE! | | | #VALUE! | | | #VALUE! | | |
| BL Match | Matched | | | Matched | | | Matched | | |
|  |  |  |  |  |  |  |  |  |  |
|  | **LD-B HEVC 2x** | | | **LD-B HEVC 1.5x** | | | **LD-B HEVC SNR** | | |
|  | Y | U | V | Y | U | V | Y | U | V |
| Class A | 0.0% | 0.0% | 0.0% |  |  |  | 0.0% | 0.0% | 0.0% |
| Class B | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| **Overall (Test vs Ref)** | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| **Overall (Test vs single layer)** | 28.5% | 39.0% | 39.7% | 24.8% | 33.0% | 35.9% | 24.3% | 34.7% | 39.5% |
| **Overall (Ref vs single layer)** | 28.5% | 39.0% | 39.7% | 24.8% | 33.0% | 35.9% | 24.3% | 34.7% | 39.5% |
| **EL only (Test vs Ref)** | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Enc Time[%] | 93.9% | | | 97.4% | | | 94.6% | | |
| Dec Time[%] | 94.0% | | | 93.7% | | | 91.1% | | |
| Enc Mem[%] | #VALUE! | | | #VALUE! | | | #VALUE! | | |
| BL Match | Matched | | | Matched | | | Matched | | |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| **Optional Tests** | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |
|  | **LD-P HEVC 2x** | | | **LD-P HEVC 1.5x** | | | **LD-P HEVC SNR** | | |
|  | Y | U | V | Y | U | V | Y | U | V |
| Class A | 0.0% | 0.0% | 0.0% |  |  |  | 0.0% | 0.0% | 0.0% |
| Class B | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| **Overall (Test vs Ref)** | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| **Overall (Test vs single layer)** | 26.6% | 38.0% | 39.1% | 22.8% | 32.8% | 35.6% | 23.4% | 34.6% | 39.4% |
| **Overall (Ref vs single layer)** | 26.6% | 38.0% | 39.1% | 22.8% | 32.8% | 35.6% | 23.4% | 34.6% | 39.4% |
| **EL only (Test vs Ref)** | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Enc Time[%] | 95.1% | | | 97.2% | | | 96.8% | | |
| Dec Time[%] | 95.1% | | | 91.9% | | | 97.4% | | |
| Enc Mem[%] | #VALUE! | | | #VALUE! | | | #VALUE! | | |
| BL Match | Matched | | | Matched | | | Matched | | |

# Patent rights declaration(s)

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