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| **Joint Collaborative Team on Video Coding (JCT-VC)**  **of ITU-T SG16 WP3 and ISO/IEC JTC1/SC29/WG11**  8th Meeting: San José, CA, USA, 1–10 February, 2012 | Document: [JCTVC-H0346](http://phenix.int-evry.fr/jct/doc_end_user/current_document.php?id=4649) |

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| --- | --- | --- | --- |
| *Title:* | **CE6.b: crosscheck for MediaTek's proposal** | | |
| *Status:* | Input Document to JCT-VC | | |
| *Purpose:* | Information | | |
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| *Source:* | HiSilicon | | |

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# Abstract

This contribution document reports the cross verification results of CE6.b MediaTek's proposal. The source code was implemented based on the software released in CE6. We compiled, inspected, and ran the code of these cases with Intra HE configurations. The cross-check has been completed successfully and the results match those provided by proponents.

# Test description and simulation results

Totally 3 tests were crosschecked in this document, the macros are set as following.

The following setting is used to do the test for G135 only.

Case 1: G135 only

#define MTK\_G135                      1

#define MTK\_G135\_NSQT           0

#define MTK\_G135\_NSQT\_82\_28           0

Case 2: harmonization of G135 with NSQT

#define MTK\_G135                      1

#define MTK\_G135\_NSQT                1

#define MTK\_G135\_NSQT\_82\_28          0

Case3: harmonization of G135 with NSQT plus 8x2/2x8 TU for 8x4/4x8 PU

#define MTK\_G135                     1

#define MTK\_G135\_NSQT                1

#define MTK\_G135\_NSQT\_82\_28          1

In these tests, the encoder and decoder reconstructed YUV files match. All of the results match those provided by proponents. The decoding time and encoding time change are close those of proponent’s by considering of the different running machines. The results of these cases are listed in Table 1 to Table 3 respectively.

Table 1 Results of case1

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **All Intra HE** | | | **All Intra LC** | | |
|  | Y | U | V | Y | U | V |
| Class A (8bit) | -1.0% | -2.1% | -2.7% | #VALUE! | #VALUE! | #VALUE! |
| Class B | -1.4% | -2.3% | -2.4% | #VALUE! | #VALUE! | #VALUE! |
| Class C | -1.8% | -1.9% | -2.0% | #VALUE! | #VALUE! | #VALUE! |
| Class D | -1.8% | -1.6% | -1.6% | #VALUE! | #VALUE! | #VALUE! |
| Class E | -2.4% | -5.5% | -4.8% | #VALUE! | #VALUE! | #VALUE! |
| **Overall** | -1.7% | -2.5% | -2.6% | #VALUE! | #VALUE! | #VALUE! |
|  | -1.7% | -2.5% | -2.5% | #VALUE! | #VALUE! | #VALUE! |
| Class F | -5.1% | -4.4% | -4.2% | #VALUE! | #VALUE! | #VALUE! |
| Enc Time[%] | 131% | | | #NUM! | | |
| Dec Time[%] | 103% | | | #NUM! | | |

Table 2 Results of case2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **All Intra HE** | | | **All Intra LC** | | |
|  | Y | U | V | Y | U | V |
| Class A (8bit) | -0.8% | -2.0% | -2.6% | #VALUE! | #VALUE! | #VALUE! |
| Class B | -0.9% | -2.1% | -2.2% | #VALUE! | #VALUE! | #VALUE! |
| Class C | -0.9% | -1.6% | -1.7% | #VALUE! | #VALUE! | #VALUE! |
| Class D | -0.8% | -1.1% | -1.1% | #VALUE! | #VALUE! | #VALUE! |
| Class E | -1.6% | -4.6% | -4.0% | #VALUE! | #VALUE! | #VALUE! |
| **Overall** | -1.0% | -2.2% | -2.2% | #VALUE! | #VALUE! | #VALUE! |
|  | -1.0% | -2.1% | -2.2% | #VALUE! | #VALUE! | #VALUE! |
| Class F | -0.9% | -1.2% | -1.0% | #VALUE! | #VALUE! | #VALUE! |
| Enc Time[%] | 122% | | | #NUM! | | |
| Dec Time[%] | 102% | | | #NUM! | | |

Table 3 Results of case3

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **All Intra HE** | | | **All Intra LC** | | |
|  | Y | U | V | Y | U | V |
| Class A (8bit) | -0.9% | -2.0% | -2.6% | #VALUE! | #VALUE! | #VALUE! |
| Class B | -1.2% | -2.1% | -2.2% | #VALUE! | #VALUE! | #VALUE! |
| Class C | -1.7% | -1.8% | -2.0% | #VALUE! | #VALUE! | #VALUE! |
| Class D | -1.7% | -1.5% | -1.5% | #VALUE! | #VALUE! | #VALUE! |
| Class E | -1.9% | -4.8% | -4.1% | #VALUE! | #VALUE! | #VALUE! |
| **Overall** | -1.5% | -2.3% | -2.4% | #VALUE! | #VALUE! | #VALUE! |
|  | -1.5% | -2.3% | -2.3% | #VALUE! | #VALUE! | #VALUE! |
| Class F | -5.0% | -4.1% | -4.1% | #VALUE! | #VALUE! | #VALUE! |
| Enc Time[%] | 131% | | | #NUM! | | |
| Dec Time[%] | 102% | | | #NUM! | | |