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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 Jose, USA, 1-10 February, 2012 | Document: JCTVC-H0207 |

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| *Title:* | **Non-CE3: Crosscheck of JCTVC-Hxxx : an AIF for low complexity configuration** | | |
| *Status:* | Input Document to JCT-VC | | |
| *Purpose:* | Proposal | | |
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| *Source:* | LG Electronics | | |

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# Abstract

This document provides crosscheck results for eBrisk proposal on an adaptive interpolation filter (AIF) technique for low complexity configuration. It is reported that the results provided by eBrisk are confirmed.

# Introduction

eBrisk provided HM5.0 based source code as described in JCTVC-Hxxxx, which is tested under the common conditions defined in JCTVC-G1200. In this crosscheck, we compare the results we got with eBrisk’s software and the results provided by eBrisk.

However, after experiments we found that we might have different anchor bitstreams so that the results have some mismatch in results. However, the bitrates from the bitstreams we generated from the software provided by eBrisk match with the bitrates reported by eBrisk in their contribution. Thus, while we will re-check our anchor bitstreams again, we can confirm, at this point, the result reported by eBrisk is correct.

# Experimental results

**Table 1. Result relative to eBrisk’s anchor**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Random Access HE** | | | **Random Access LC** | | |
|  | Y | U | V | Y | U | V |
| Class A (8bit) | 0.2% | -0.1% | -0.1% | -1.0% | -0.1% | 0.1% |
| Class B | 0.2% | -0.1% | 0.0% | -0.6% | -0.2% | -0.1% |
| Class C | 0.1% | -0.1% | -0.1% | -0.4% | -0.4% | -0.3% |
| Class D | 0.4% | 0.0% | 0.0% | -0.3% | -0.4% | -0.3% |
| Class E |  |  |  |  |  |  |
| **Overall** | 0.2% | -0.1% | 0.0% | -0.5% | -0.3% | -0.2% |
|  | 0.3% | -0.1% | 0.0% | -0.5% | -0.3% | -0.2% |
| Class F | 0.0% | 0.0% | 0.1% | 0.0% | -0.1% | -0.1% |
| Enc Time[%] | #NUM! | | | #NUM! | | |
| Dec Time[%] | #NUM! | | | #NUM! | | |
|  |  |  |  |  |  |  |
|  | **Low delay B HE** | | | **Low delay B LC** | | |
|  | Y | U | V | Y | U | V |
| Class A |  |  |  |  |  |  |
| Class B | 0.2% | 0.0% | 0.0% | -0.6% | -1.1% | -0.8% |
| Class C | 0.0% | -0.7% | -0.4% | -0.8% | -0.7% | -0.9% |
| Class D | 0.2% | -0.2% | -0.2% | -0.7% | -0.2% | -0.1% |
| Class E | 0.2% | -0.2% | 0.0% | -1.1% | -8.3% | -5.6% |
| **Overall** | 0.2% | -0.2% | -0.1% | -0.8% | -2.1% | -1.5% |
|  | 0.2% | -0.2% | -0.1% | -0.8% | -2.0% | -1.6% |
| Class F | -0.3% | -0.4% | -0.7% | -0.7% | -0.6% | -0.9% |
| Enc Time[%] | #NUM! | | | #NUM! | | |
| Dec Time[%] | #NUM! | | | #NUM! | | |
|  |  |  |  |  |  |  |
|  | **Low delay P HE** | | | **Low delay P LC** | | |
|  | Y | U | V | Y | U | V |
| Class A |  |  |  |  |  |  |
| Class B | -0.1% | -0.7% | -1.0% | -0.1% | -0.7% | -1.0% |
| Class C | -0.4% | -0.9% | -1.0% | -0.4% | -0.9% | -1.1% |
| Class D | -0.2% | -1.0% | -0.1% | -0.2% | -1.1% | -0.2% |
| Class E | 0.0% | -1.4% | -0.7% | 0.0% | -1.4% | -0.7% |
| **Overall** | -0.2% | -1.0% | -0.7% | -0.2% | -1.0% | -0.8% |
|  | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Class F | -0.5% | -0.3% | -0.4% | -0.5% | -0.4% | -0.5% |
| Enc Time[%] |  | | |  | | |
| Dec Time[%] |  | | |  | | |

**Table 2. Result relative to LG’s anchor**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Random Access HE** | | | **Random Access LC** | | |
|  | Y | U | V | Y | U | V |
| Class A (8bit) | 0.3% | -0.1% | -0.1% | -1.0% | -0.1% | 0.1% |
| Class B | 0.2% | 0.0% | -0.1% | -0.6% | -0.2% | -0.1% |
| Class C | 0.1% | -0.1% | -0.1% | -0.4% | -0.4% | -0.3% |
| Class D | 0.4% | 0.0% | 0.1% | -0.3% | -0.4% | -0.3% |
| Class E |  |  |  |  |  |  |
| **Overall** | 0.2% | 0.0% | 0.0% | -0.5% | -0.3% | -0.2% |
|  | 0.2% | -0.1% | 0.0% | -0.5% | -0.3% | -0.2% |
| Class F | 0.0% | 0.0% | 0.1% | 0.0% | -0.1% | -0.1% |
| Enc Time[%] | 102% | | | 103% | | |
| Dec Time[%] | #NUM! | | | #NUM! | | |
|  |  |  |  |  |  |  |
|  | **Low delay B HE** | | | **Low delay B LC** | | |
|  | Y | U | V | Y | U | V |
| Class A |  |  |  |  |  |  |
| Class B | 0.2% | 0.0% | 0.1% | -0.6% | -1.1% | -0.8% |
| Class C | 0.0% | -0.5% | -0.3% | -0.8% | -0.7% | -0.9% |
| Class D | 0.2% | -0.3% | 0.0% | -0.7% | -0.2% | -0.1% |
| Class E | 0.2% | -0.2% | 0.0% | -1.1% | -8.3% | -5.6% |
| **Overall** | 0.1% | -0.2% | -0.1% | -0.8% | -2.1% | -1.5% |
|  | 0.1% | -0.2% | -0.1% | -0.8% | -2.0% | -1.6% |
| Class F | -0.3% | -0.4% | -0.7% | -0.7% | -0.6% | -0.9% |
| Enc Time[%] | 102% | | | 103% | | |
| Dec Time[%] | #NUM! | | | #NUM! | | |
|  |  |  |  |  |  |  |
|  | **Low delay P HE** | | | **Low delay P LC** | | |
|  | Y | U | V | Y | U | V |
| Class A |  |  |  |  |  |  |
| Class B | -0.1% | -0.7% | -1.0% | -0.1% | -0.6% | -1.0% |
| Class C | -0.4% | -0.9% | -1.1% | -0.4% | -0.8% | -1.2% |
| Class D | -0.2% | -0.7% | 0.0% | -0.2% | -0.8% | -0.2% |
| Class E | 0.0% | -1.4% | -0.7% | 0.0% | -1.4% | -0.7% |
| **Overall** | -0.2% | -0.9% | -0.7% | -0.2% | -0.9% | -0.8% |
|  | -0.2% | -0.9% | -0.8% | 0.0% | 0.0% | 0.0% |
| Class F | -0.5% | -0.3% | -0.4% | -0.5% | -0.4% | -0.5% |
| Enc Time[%] |  | | |  | | |
| Dec Time[%] |  | | |  | | |

# Conclustions

We confirm the results present by eBrisk are confirmed.