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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**  3rd Meeting: Geneva, CH, 17–23 Jan. 2013 | Document: JCT3V-C0089 |

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| *Title:* | **CE6.h related: Crosscheck of Hisilicon's proposal on simplification of SDC (JCT3V-C0155)** | | |
| *Status:* | Input Document | | |
| *Purpose:* | Proposal | | |
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| *Source:* | LG Electronics | | |

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# Abstract

This contribution reports the crosscheck results on JCT2-C0155 proposed by Hisilicon. Simulation is conducted under the common test condition (CTC) and all intra case. Both coding and synthesis results match with that provided by Hisilicon. The source code is also reviewed, it is correctly implemented. It is also reported that Hisilicon’s proposal reduces the encoding time by 2.1% and 16.5% in CTC case and all intra case respectively.

# Introduction

This document reports the cross-verification of JCT3V-C0155.

# Results

Simulation is conducted under the common test condition [2], and results are shown in Table 1 and Table 2.

Table 1: performance comparison with HTM-5.0.1 (CTC)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | video 0 | video 1 | video 2 | video only | synthesized only | coded & synthesized | enc time | dec time |
| Balloons | 0.0% | 0.1% | 0.0% | 0.0% | 0.06% | 0.06% | 96.2% | 99.8% |
| Kendo | 0.0% | 0.0% | 0.0% | 0.0% | -0.03% | -0.02% | 95.2% | 100.0% |
| Newspapercc | 0.0% | 0.0% | 0.0% | 0.0% | 0.09% | 0.06% | 98.1% | 100.5% |
| GhostTownFly | 0.0% | 0.0% | 0.0% | 0.0% | -0.06% | -0.03% | 99.1% | 100.4% |
| PoznanHall2 | 0.0% | 0.0% | 0.0% | 0.0% | -0.05% | -0.04% | 100.4% | 100.1% |
| PoznanStreet | 0.0% | 0.0% | 0.0% | 0.0% | 0.02% | 0.02% | 99.4% | 100.2% |
| UndoDancer | 0.0% | 0.0% | 0.0% | 0.0% | -0.17% | -0.12% | 96.8% | 99.0% |
| 1024x768 | 0.0% | 0.0% | 0.0% | 0.0% | 0.04% | 0.04% | 96.5% | 100.1% |
| 1920x1088 | 0.0% | 0.0% | 0.0% | 0.0% | -0.06% | -0.04% | 98.9% | 99.9% |
| **average** | **0.0%** | **0.0%** | **0.0%** | **0.0%** | **-0.02%** | **-0.01%** | **97.9%** | **100.0%** |

Table 2: performance comparison with HTM-5.0.1 (all intra)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | video 0 | video 1 | video 2 | video only | synthesized only | coded & synthesized | enc time | dec time |
| Balloons | 0.0% | 0.1% | 0.0% | 0.0% | 0.5% | 0.4% | 84.5% | 96.4% |
| Kendo | 0.0% | 0.0% | 0.0% | 0.0% | 0.7% | 0.5% | 85.0% | 96.4% |
| Newspapercc | 0.0% | 0.0% | 0.0% | 0.0% | 0.5% | 0.4% | 81.7% | 98.4% |
| GhostTownFly | 0.0% | 0.0% | 0.0% | 0.0% | 0.3% | 0.2% | 83.8% | 97.8% |
| PoznanHall2 | 0.0% | 0.0% | 0.0% | 0.0% | 0.4% | 0.3% | 85.0% | 95.3% |
| PoznanStreet | 0.0% | 0.0% | 0.0% | 0.0% | 0.2% | 0.2% | 81.6% | 99.7% |
| UndoDancer | 0.0% | 0.0% | 0.0% | 0.0% | 0.1% | 0.1% | 82.9% | 98.3% |
| 1024x768 | 0.0% | 0.0% | 0.0% | 0.0% | 0.6% | 0.4% | 83.7% | 97.1% |
| 1920x1088 | 0.0% | 0.0% | 0.0% | 0.0% | 0.3% | 0.2% | 83.3% | 97.8% |
| **average** | **0.0%** | **0.0%** | **0.0%** | **0.0%** | **0.4%** | **0.3%** | **83.5%** | **97.5%** |

# Conclusion

Results from the cross verification match results that provided by the proponents. Meanwhile, the source code provided by the proponents also matches the description document.

# Reference

[1] X. Zheng, Y. Lin, J. Zheng, “CE6.H related: Simplification of SDC signalling”, Doc. JCT3V-C0155, Geneva, Switzerland, Jan. 2013.

[2] D. Rusanovskyy, K. Müller, A. Vetro, “Common Test Conditions of 3DV Core Experiments”, Doc. JCT3V-B1100, Shanghai, China, Oct. 2012.