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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-B0166 |

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| *Title:* | **3D-CE3.h related: Cross check of JCT3V-B0083 on unconstrained motion parameter inheritance** | | |
| *Status:* | Input Document | | |
| *Purpose:* | Report | | |
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| *Source:* | Qualcomm Incorporated | | |

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# Abstract

This document reports the cross check results of MediaTek proposal JCT3V-B0083 [1] on unconstrained motion parameter inheritance. MediaTek provided their HTM-4.0.1-based software and the simulation results. Their results reported in JCT3V-B0083 are well matched in this crosscheck, only very minor differences regarding to the synthesized PSNR, which is caused by the different rounding accuracy, are observed. The crosscheck is conducted under common test condition (CTC) [2], and the results are tabulated below in Table 1 and Table 2.

Table 1 Coding performance of JCT3V-B0083 [1]

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | video 0 | video 1 | video 2 | video only | synthesized only | coded & synthesized |
| Balloons | 0.0% | 0.0% | 0.0% | 0.0% | -0.1% | -0.1% |
| Kendo | 0.0% | 0.0% | 0.0% | 0.0% | -0.1% | -0.2% |
| Newspapercc | 0.0% | 0.0% | 0.0% | 0.0% | -0.1% | -0.1% |
| GhostTownFly | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| PoznanHall2 | 0.0% | 0.0% | 0.0% | 0.0% | -0.3% | -0.3% |
| PoznanStreet | 0.0% | 0.0% | 0.0% | 0.0% | -0.2% | -0.2% |
| UndoDancer | 0.0% | 0.0% | 0.0% | 0.0% | -0.1% | -0.1% |
| 1024x768 | 0.0% | 0.0% | 0.0% | 0.0% | -0.1% | -0.1% |
| 1920x1088 | 0.0% | 0.0% | 0.0% | 0.0% | -0.1% | -0.1% |
| **average** | **0.0%** | **0.0%** | **0.0%** | **0.0%** | **-0.1%** | **-0.1%** |

Table 2 Runtime of JCT3V-B0083 [1]

|  |  |  |  |
| --- | --- | --- | --- |
|  | Complexity estimate (ratio to anchor) | | |
|  | Encoder Time, % | Decoder Time, % | Rendering Time, % |
| S01 | 99.0% | 108.9% | 109.1% |
| S02 | 100.6% | 98.2% | 95.7% |
| S03 | 96.5% | 100.6% | 106.0% |
| S04 | 100.3% | 94.8% | 91.7% |
| S05 | 96.6% | 97.9% | 107.6% |
| S06 | 100.3% | 101.0% | 95.4% |
| S08 | 105.7% | 99.3% | 103.0% |
| **Average** | **99.8%** | **100.0%** | **101.0%** |

# References

1. J.-L. Lin, Y.-W. Chen, Y.-W. Huang, and S. Lei, “3D-CE3.h related: Unconstrained motion parameter inheritance in 3D video coding,” JCT3V-B0083, Shanghai, CN, 13–19 Oct. 2012.
2. H. Schwarz and D. Rusanovskyy, “Common Test Conditions for 3DV experimentation,” JCT3V-A1100, Stockholm, SE, 16–20 July 2012.