|  |  |
| --- | --- |
| **Joint Collaborative Team on Video Coding (JCT-VC)**  **of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC 29/WG 11**  23rd Meeting: San Diego, USA, 19–26 Feb. 2016 | Document: JCTVC-W0006 |

|  |  |  |  |
| --- | --- | --- | --- |
| *Title:* | **JCT-VC AHG report: SCC coding performance analysis (AHG6)** | | |
| *Status:* | Input Document to JCT-VC | | |
| *Purpose:* | Report | | |
| *Author(s) or Contact(s):* | Haoping Yu Huawei R&D USA  Robert Cohen Mitsubishi Electric Research Laboratories  Alberto Duenas NGCodec  Krishna Rapaka Qualcomm  Jizheng Xu Microsoft  Xiaozhong Xu MediaTek | Email: | haoping.yu@huawei.com  cohen@merl.com  alberto@ngcodec.com  krapaka@qti.qualcomm.com  [jzxu@microsoft.com](mailto:jzxu@microsoft.com)  xiaozhong.xu@mediatek.com |
| *Source:* | AHG6 | | |

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Abstract

This report summarizes the activities of the JCT-VC ad hoc group on SCC coding performance analysis (AHG6) between the JCT-VC 22nd meeting in Geneva, Switzerland, and the 23rd meeting in San Diego, USA.

# Mandates

# • Study test conditions and coding performance analysis methods for SCC coding performance

# • Analyze the coding performance of the draft SCC coding features

# Activities

## Email reflector activity

The kick-off message for AHG 6 was sent out on Dec. 1, 2015.

## Common test conditions and test results reporting templates

As decided in the last meeting, the test conditions described in JCTVC-U1015 remained valid during this meeting cycle. To facilitate new simulations that would be done with the new reference software SCM-6.0, the new test-results reporting templates with SCM-6.0 anchor data were uploaded in JCTVC-U1015-v4 on Dec. 2, 2015. This document is awaiting approval. These templates were also distributed via the AHG6 kick-off email.

.

## Related contributions

**JCTVC-W0104**: Comparison of Compression Performance of HEVC Screen Content Coding Extensions Test Model 6 with AVC High 4:4:4 Predictive profile [B. Li, J. Xu, G. J. Sullivan (Microsoft)]

This contribution is a study of the relative objective (i.e. PSNR-based) compression performance of HEVC Screen Content Coding (SCC) Test Model 5 (SCM 5) and AVC High 4:4:4 Predictive Profile. It builds upon the prior work reported in JCTVC-G399, JCTVC-H0360, JCTVC-I0409, JCTVC-J0236, JCTVC-K0279, JCTVC-L0322, JCTVC-M0329, JCTVC-O0184, JCTVC-P0213, JCTVC-R0101, JCTVC-S0084, JCTVC-T0042, JCTVC-U0051, and JCTVC-V0033 – updating the results by using the latest available reference software (JM-19.0, HM-16.7+SCM-6.0), profile and test model designs, and SCC common test conditions (CTC) test sequences. The overall results indicate that for screen content CTC sequences, the HEVC SCC Test Model 6 improves quite substantially over JM-19.0. For example, for RGB text and graphics with motion (TGM) 1080p&720 sequences, HEVC SCC Test Model 6 saves 86%, 81%, and 78% bits for AI, RA and LB lossy coding over JM-19.0, respectively (the corresponding numbers are also 86%, 81% and 78% in JCTVC-V0033, which compares HM-16.6+SCM-5.2 with JM-19.0).

# Recommendations

It is recommended to

* Continue to evaluate the coding performance of the draft SCC coding features in comparison with the existing HEVC tools in the Main profile and range extensions.