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# Abstract

This report summarizes the activities of the JCT-VC ad hoc group on SCC extensions verification testing (AHG6) between the JCT-VC 24th meeting in Geneva, Switzerland, and the 25th meeting in Chengdu, China.

# Mandates

# Study test conditions and coding performance analysis methods for verification of SCC coding performance.

# Prepare the draft verification test plan for SCC X1006

# • Develop and propose further improvements of the test plan

# Activities

## Email reflector activity

The kick-off message for AHG 6 was sent out on Aug. 28, 2016.

There were a few emails on the reflector discussing the coding results of the new SCC sequences submitted in JVET-C0044. Basically these sequences are typical screen content that were captured from computer display. They exhibit text and graphics in motion that we commonly see in cloud/cloud-mobile computing, remote desktop, PC-over-IP, and interactive TV applications. More information about these sequences as well as the coding test results is available in JVET-C0044 and JCTVC-Y0036.

## SCC verification test plan

A draft test plan JCTVC-X1006 is submitted. It provides a list of the candidate sequences for the verification tests. These are all the non-CTC sequences available today for screen content. The final selection of test material is expected to be made in Chengdu. The draft test plan proposes the following test condition:

* Software: SCM-8.1, HM-16.12, JM-19.0
* 8 test cases: 4:4:4 lossless, 4:2:0 lossless, 4:4:4 AI/RA/LB, and 4:2:0 AI/RA/LB
* Test points: 4 QPs for SCM, i.e. QP=22, 27, 32, and 37.

It also provides a DCR-based procedure for subjection evaluation.

Open issues:

* Time line
* Test material selection
* Decision on color space, YUV only or RGB only or both
* Decision on color sampling format, 4:4:4 only or both 4:4:4 and 4:2:0
* Selection and decision on subjective evaluation test points. It may not be practical to run subjective test for all “Lossy” test points.
* Matching bit-rates or QP values for HM and JM?

## Related contributions

**JCTVC-X1006: Draft verification test plan for HEVC screen content coding extensions [H. Yu, V. Baroncini, R. Cohen, K. Rapaka, J. Xu]**

This contribution provides a draft test plan for verification of the coding performance of HEVC screen content coding extensions. It describes a set of test conditions under consideration and presents a preliminary work plan for test preparation.

**JCTVC-Y0036**: **AHG6: Compression Performance Comparison of Thirteen TGM Sequences [S. Wang, J. Guo, L. Zhao, T. Lin (Tongji Univ.)]**

This contribution provides the BD-rate based compression performance comparison betweem HEVC RExt HM16.4 and HEVC SCC SCM8.1 lossy coding for thirteen TGM YCbCr sequences including eight HEVC SCC CTC TGM sequences and five new (and hard to compress) TGM sequences proposed in JVET-C0044.

The overall Y BD-rate for the thirteen sequences is -66.70%, -63.12%, -52.42% for AI, RA, LB.

The overall Y BD-rate for the eight CTC sequences is -58.33%, -53.03%, -42.42% for AI, RA, LB.

The overall Y BD-rate for the five new sequences is -80.09%, -79.27%, -68.42% for AI, RA, LB.

# Recommendations

It is recommended to

* discuss the open issues above, select test material, provide recommendations for bitstream generation, subjective test points, and time-line.