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| *Title:* | **Cross-check of JCTVC-R0135 on palette index coding using a universal entropy coding scheme (non-SCCE3)** | | |
| *Status:* | Input Document to JCT-VC | | |
| *Purpose:* | Report | | |
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# Abstract

This document reports the crosscheck results for non-SCCE3 proposal JCTVC-R0135. JCTVC-R0135 proposed a universal entropy coding scheme representing a syntax value by its most significant bit (MSB) index and refinement bits to encode palette index. It is compared with the fixed length coding method applied in the SCCE3 anchor software. The source code provided by the proponents was verified to be consistent with the description in JCTVC-R0135. The rate-distortion performance was evaluated for SCCE3 test conditions JCTVC-Q1123 and matches those provided in JCTVC-R0135.

# Introduction

JCTVC-R0135 [2] proposed a universal entropy coding scheme for palette index encoding. In SCCE3 anchor software [1], the palette index is coded with fixed length coding. The proposed method separates the palette index into two parts, one is MSB related index to indicate how many bits used representing the palette index, and it is binarized and each bin is context based coded. The second part is remaining refinement bits, and they are represented in the truncated binary code with the codeword length determined by the MSB index and palette size in the current coding unit.

# Simulation results

The results of R0135 are cross-checked according to SCCE3 test conditions [1] and based on the software provide by proponents. The detailed results can be found in the attached excel datasheets. It is reported that these coding results match those provided by the proponents.

# References

1. Y.-W. Huang, P. Onno, R. Joshi, R. Cohen, X. Xiu, Z. Ma, “HEVC Screen Content Core Experiment 3 (SCCE3): Palette mode”, JCTVC-Q1123, Apr. 2014.
2. S.-T. Hsiang, T.-D. Chuang, S. Lei, “Non-SCCE3: Palette index coding using a universal entropy coding scheme”, JCTVC-R0135, Jul. 2014.