|  |  |
| --- | --- |
| **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 February 2016 | Document: JCTVC-W0122 |

|  |  |  |  |
| --- | --- | --- | --- |
| *Title:* | **HDR CE2: cross-check report of JCTVC-W0097** | | |
| *Status:* | Input Document to JCT-VC | | |
| *Purpose:* | Information/Cross-check | | |
| *Author(s) or Contact(s):* | Taoran Lu, Fangjun Pu, Peng Yin  432 Lakeside Drive, Sunnyvale, CA 94085, USA | Tel: Email: | +1 408 330 3252  [tlu@dolby.com](mailto:lxiang@qti.qualcomm.com)  [pyin@dolby.com](mailto:cjianle@qti.qualcomm.com) |
| *Source:* | Dolby Laboratories, Inc. | | |

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

# Abstract

This report describes the cross check made by the Dolby for HDR CE2 Test 2.c from Qualcomm. Two sub tests are carried out. The data distributed by the proponent match with the ones recreated by the cross-checker.

# Introduction

According to CE2 description, this sub-test target evaluation of the chroma QP offset impact on the performance of HDR/WCG ETM, and potential for cumulative gain from applying jointly chroma QP offset and specified in ETM chroma processing.

The crosscheck contains two sub tests with different software packages and results.

1. Multi-range chroma reshaper with CE1 chroma QP offset

The original software package was delivered to CE2 participants on Feb. 3rd and results were delivered on Feb.4th. Software implementation is based on the current Exploratory Test Model (ETM\_RC\_r1, delivered on January 21, 2016). Code changes are clearly indicated by Macro settings.

1. Combination of W0097 chroma reshaper with W0084 joint luma reshaper/encoder optimization

The combined software package was delivered to CE2 participants on Feb. 17. HDRTools from W0084 and W0097 are combined to support both proposed chroma reshaping in W0097 and luma reshaping in W0084. Joint Optimization of reshaper/encoder from W0084 is also kept as-is. HM software and encoding configuration from W0084 are used in this sub-test.

# Simulation results

Software packages are compiled and executed on 64-bit linux (CentOS) systems. Simulation follows the common test condition. For both two sub-tests, the results match with the ones provided by the proponent.