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| *Title:* | **Cross-check for JCTVC-L0150** | | |
| *Status:* | Input Document | | |
| *Purpose:* | Report | | |
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**Abstract**

This contribution reports the results of the evaluation of JCTVC-L0150, a proposal introducing deblocking between the boundaries of the two chroma square blocks for 4:2:2 content, part of CE1 Test 3. The results of the simulations are a perfect match with the proponents'. The proponents’ source code has been analysed and found to match the description of the proposed technique.

The proponents have subsequently integrated JCTVC-L0351, method 2 and the algorithm proposed in JCTVC-L0150. Simulations have been performed for the new code and the results are a perfect match with the proponents. The source code for the second proposal has been analysed and has been found to match the description provided in JCTVC-L0150, ie only deblocking for chroma components has been modified in the code for JCTVC-L0351, method 2.

# Description

CE1 Test 3 deals with the evaluation of square transform blocks for chroma components for 4:2:2 chroma format. When square transform blocks are used a new transform block boundary which is not deblocked is introduced. JCTVC-L0150 proposes to apply deblocking to this boundary between chroma square transform blocks. Deblocking is applied to chroma transform blocks of size 16x16 and 8x8. The conditions under which chroma deblocking occurs are not changed by L0150.

## Evaluation of the implementation

The proponents’ software is based on top of CE1 Test 3 software, introducing square transform blocks for chroma components for 4:2:2 chroma format. The implementation reflects the intention described in JCTVC-L0150, i.e., the additional application of deblocking to the horizontal boundary between chroma square transform blocks for 4:2:2 chroma format.

A subsequent addition to L0150 proposed the same technique applied on top of the proposal JCTVC-L0351, method 2. This implementation too reflects the intention of the proponents as described in JCTVC-L0150.

## Test conditions

The simulations were run on 4:2:2 test material only according to the common test conditions for HM range extensions [1]. A cluster of Linux computer running Debian 3.2.0 and GCC 4.7.0 were used for the simulations.

## Test Results

All test points are a perfect match with the proponents.

# References

1. D. Flynn, “Common Test Conditions and software reference configurations for HEVC range extensions”, JCTVC-K1006, 11th meeting, Shanghai, CN, October 2012.