

**Joint Video Experts Team (JVET)
of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC
29/WG 11**

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16th Meeting: Geneva, October 2019

Title: Non-CE3: Removal of $2 \times N$ chroma intra blocks

Status: Input document to JVET

Purpose: Proposal

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Source: ByteDance

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Abstract

At the last JVET meeting, $1 \times N$ and $2 \times N$ intra prediction were removed from ISP, while 4×2 , 2×4 , 2×2 chroma intra blocks were removed from normal intra. This contribution proposes to remove the remaining $2 \times N$ chroma intra blocks in VVC to improve the worst-case hardware processing throughput. Test #1 is to just remove 2×8 chroma intra blocks, and Test #2 is to remove all $2 \times N$ chroma intra blocks. Simulation results under the CTC conditions reportedly show that the overall BD-rate changes for {Y, Cb, Cr} are listed as follows.

The encoding and decoding times are found to be similar with VTM6.0.

Problem statement

The local dual tree [1] was adopted at the last Gothenburg JVET meeting to improve the worst-case hardware processing throughput for single tree. With the local dual tree technique, the 4×2 , 2×4 , and 2×2 chroma intra blocks are disallowed in single tree by constraining the partitioning of chroma intra blocks.

Meanwhile, the removal of $1 \times N$ and $2 \times N$ subblocks intra prediction of ISP was adopted at last meeting, in order to remove the reconstruction dependency caused by the sequentially reconstruction of $1 \times N$ and $2 \times N$ subblocks in ISP.

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LINKS

CARD

JVET-P0531

<http://vexpertise.stbit.ru/documents/JVET-P0531>

JVET Search

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Non-CE3: Removal of 2xN chroma intra blocks

Authors:

ABSTRACT

MEETING NOTES

SOURCE

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Document Information

Submitted by: Jorma Paavola Ojan

Title: Non-CE3: Removal of 2xN chroma intra blocks

Authors: V. Sengul

Document: JVET-P0531, updated document

Associated Resources

Comments

ARCHIVE

archive v2

https://jvet-experts.org/doc_end_user/documents/16_Geneva/wg11/JVET-P0531-v2.zip

DOC JVET-P0531.docx

PDF JVET-P0531.pdf

DOC JVET-P0531_r1.docx

XLS JVET-P0531_Test1.xlsm

XLS JVET-P0531_Test1_DualTreeOff.xlsm

XLS JVET-P0531_Test2.xlsm

XLS JVET-P0531_Test2_DualTreeOff.xlsm

XLS JVET-P0531_Test3.xlsm

MEETING NOTES

external meeting notes

https://www.itu.int/wftp3/av-arch/jvet-site/2019_10_P_Geneva/JVET-P_Notes_dG.docx

Joint Video Experts Team (JVET)
of ITU-T SG21 WP3/21 and ISO/IEC JTC 1/SC 29
16th Meeting: Geneva, October 2019

Document: JVET-P0531

Title: Meeting Report of the 41st Meeting of the Joint Video Experts Team

Status: Report document from the chair of JVET

Purpose: Report

1 Summary

MEETING NOTES

[JVET-P0531](#) Non-CE3: Removal of 2×N chroma intra blocks [Z. Deng, L. Zhang, K. Zhang, H. Liu, Y. Wang (Bytedance)]

JVET-P0531, JVET-P0596 and JVET-P0641 are closely related; the proponent suggested to just present JVET-P0641.

CITATION

Z. Deng, L. Zhang, K. Zhang, H. Liu, Y. Wang, "Non-CE3: Removal of 2×N chroma intra blocks", JVET-P0531, 16th Meeting: Geneva, October 2019.

REFERENCES

1. [F. Bossen, J. Boyce, X. Li, V. Seregin, K. Sühning, "JVET common test conditions and software reference configurations for SDR video", JVET-N1010, 14th Meeting: Geneva, March 2019.](#)
2. [B. Bross, J. Chen, S. Liu, "Versatile Video Coding \(Draft 6\)", JVET-O2001, 15th Meeting: Gothenburg, SE, July 2019.](#)