

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

Document: JVET-O0797

MPEG: m49003

15th Meeting: Gothenburg, SE, 3-12 July 2019

Title: Crosscheck of JVET-O0129 on CCLM with Chroma Separate Tree

Status: Input document to JVET

Purpose: Proposal

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Source: InterDigital

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Abstract

This contribution reports cross-checking results for contribution JVET-O0129 (Non-CE2: CCLM with Chroma Separate Tree). Three tests were performed. The simulations were performed in AI configuration. The results reportedly match those provided by the proponents.

Introduction

JVET-O0668 proposes to introduce constraints on CCLM in separate tree case, to reduce the chroma prediction latency to $\frac{1}{4}$ luma VPDU reconstruction process (equals to 32x32 luma samples in VTM-5.0).

The JVET-O0668 contribution proposed to use VPDU level partitioning information for CCLM enabling condition checks. Table 1 to Table 3 list the valid combinations from method 1 to method 3. BT_H and BT_V represent horizontal BT split and vertical BT split, respectively. All methods are applied to all CTU size settings and reduce the CCLM chroma prediction latency to $\frac{1}{4}$ luma VPDU reconstruction process.

In method 1, the QT conditions guarantee the reconstruction scan order and achieve 32x32 latency. The no split condition is the same case as single tree, which provides coding gains. In method 2 luma QT with chroma no split case, it is asserted that chroma prediction can be executed just after each luma 32x32 by subpart processing, and the CCLM parameter can be derived without waiting additional luma block reconstruction. The BT_H case guarantees the scan order. In method 3, luma no split with chroma QT is further considered. If given more decoder complexity, luma VPDU could provide QT subpart reconstruction for chroma prediction. Note the luma subpart reconstruction does not affect CCLM parameter derivation. The case luma no split with chroma BT_H or BT_V is similar. The BT_H and BT_V are supported for luma VPDU size in the current VVC draft, so luma BT_H and BT_V are syntax-wise considered. Fig. 2 to Fig. 9 show the illustrations.

LINKS

JVET-O0797

<http://vexpertise.stbit.ru/documents/JVET-00797>

A screenshot of the JVET Search interface. At the top, there is a search bar with the text "JVET Search". Below the search bar, a search result is displayed. The author's name "Christopher Chevarie" is shown next to a small circular profile picture. To the right of the name is a button labeled "pdf(8003)". Below the author information, the title "Crosscheck of JVET-00129 on CCLM with Chroma Separate Tree" is displayed in bold. Underneath the title, the word "Authors:" is followed by a list of names. Below the authors, there are two sections: "ABSTRACT" and "MEETING NOTES". The "ABSTRACT" section contains a large block of text, and the "MEETING NOTES" section contains a smaller block of text. In the bottom right corner, there is a QR code.

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experts.org/doc_end_user/documents/15_Gothenburg/wg11/JVET-O0797-v1.zip

Archives

- XLS** JVET-00129_CCLM_Method1_V2_vs_VTM-5.0_Xcheck_ID_partial.xlsm
- XLS** JVET-00129_CCLM_Method2_vs_VTM-5.0_Xcheck_ID.xlsm
- XLS** JVET-00129_CCLM_Method3_V2_vs_VTM-5.0_Xcheck_ID.xlsm
- DOC** JVET-00797_Xcheck_O0129.docx



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Document Information

Submitted by

John Warner Olin

Title

Crosscheck of JVET-00120 on COLM with Chroma Separate Tone

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MEETING NOTES

external meeting notes

https://www.itu.int/wftp3/av-arch/jvet-site/2019_07_O_Gothenburg/JVET-O_Notes_dF.docx

  	
Joint Video Experts Team (JVET) of ITU-T SG21 WP3/21 and ISO/IEC JTC 1/SC 29 15th Meeting: Gothenburg, SE, July 2019	Document: JVET-00797
<i>Title:</i>	Meeting Report of the 41st Meeting of the Joint Video Experts Team
<i>Status:</i>	Report document from the chair of JVET
<i>Purpose:</i>	Report
1 Summary	
	

MEETING NOTES

JVET-O0797 Crosscheck of JVET-O0129 on CCLM with Chroma Separate Tree [C. Chevance (Interdigital)]

CITATION

C. Chevance, "Crosscheck of JVET-O0129 on CCLM with Chroma Separate Tree", JVET-O0797, 15th Meeting: Gothenburg, SE, July 2019.

REFERENCES

1. [C.-W. Kuo, J. Li, C. Lim, "Non-CE2: CCLM with Chroma Separate Tree", JVET-O0129, 15th Meeting: Gothenburg, SE, July 2019.](#)