

**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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Title: [AHG15] On scaling list for JCCR

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Abstract

In the scaling process for transform coefficients in the current VVC draft specification, chroma QP offset Qp'CbCr is introduced to apply to the TU coded with JCCR. It is because the residual energy distribution of the transform block with JCCR might be different from that without JCCR. Nevertheless, the current draft specification does not support scaling list for the transform block coded with JCCR. This contribution proposes scaling list for transform blocks with joint coding of chroma residual (JCCR). When a given transform block is coded with JCCR and both `tu_cbf_cb` and `tu_cbf_cr` are equal to 1, scaling list for JCCR are used for the scaling process.

Introduction

In the last JVET meeting, inter chroma transform is introduced as an extension of joint coding of chroma residual (JCCR), where a total of three joint chroma coding modes are adaptively applied based on the coded block flag of chroma components. Specifically, residual signal of the chroma component with JCCR are reconstructed depending on `tu_cbf_cb` and `tu_cbf_cr` as shown in Table 1.

Table 1. specification of reconstruction of chroma residuals and TuCrResMode

Built from JVET-P0608r1-JCCRscalinglist.docx

LINKS

CARD

JVET-P0608

<http://vexpertise.stbit.ru/documents/JVET-P0608>

JVET Search

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Authors:

ABSTRACT

MEETING NOTES



SOURCE

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Associated Resources

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ARCHIVE

archive v2

https://jvet-experts.org/doc_end_user/documents/16_Geneva/wg11/JVET-P0608-v2.zip

Archive

DOC JVET-O2001-vE-JCCRscalinglist-method1.docx

DOC JVET-O2001-vE-JCCRscalinglist-method2.docx

DOC JVET-P0608r1-JCCRscalinglist.docx



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)
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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-P0608](#) [AHG15] On scaling list for JCCR [S. Iwamura, S. Nemoto, A. Ichigaya (NHK), P. de Lagrange, F. Le Leannec, E. François (InterDigital)]

In the scaling process for transform coefficients in the current VVC draft specification, chroma QP offset Qp'_{CbCr} is introduced to apply to the TU coded with JCCR. It is because the residual energy distribution of the transform block with JCCR might be different from that without JCCR. Nevertheless, the current draft specification does not support scaling list for the transform block coded with JCCR. This contribution proposes scaling list for transform blocks with joint coding of chroma residual (JCCR). When a given transform block is coded with JCCR and both `tu_cbf_cb` and `tu_cbf_cr` are equal to 1, scaling list for JCCR are used for the scaling process. An alternate solution is also proposed to avoid signalling of additional scaling lists. The solution consists in deriving the scaling factors in case of JCCR by averaging the scaling factors applying to the Cb and Cr components.

Not evident that there is really need to have a separate scaling list for mode 2 of JCbCr. For mode 2, there is some indication that both components are similar anyway.

This would require additional generating and storing the average of the two scaling lists which every decoder would need to implement, whereas only few encoders might use scaling lists and optimize wrt. JCbCr.

No action was taken on this.

CITATION

S. Iwamura, S. Nemoto, A. Ichigaya, P. de Lagrange, F. Le Leannec, E. Francois, "[AHG15] On scaling list for JCCR", JVET-P0608, 16th Meeting: Geneva, October 2019.