

**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: Cross-check of JVET-D0098 Decoupling decoder-side intra mode derivation from entropy decoding

Status: Input document to JVET

Purpose: Proposal

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Source: Huawei

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Abstract

This contribution reports an evaluation of JVET-D0098 (EE8-related: Decoupling decoder-side intra mode derivation from entropy decoding). The performance of the proposal is assessed in terms of runtime and BD-rate. In addition, the source code is analyzed to highlight the proposed changes. The evaluation results presented in this contribution are reported to match those of the proponent.

Introduction

Contribution JVET-D0098 proposes an intra-prediction mode propagation technique to address the issue of parsing dependency caused by the DIMD design initially described in JVET-C0061 and considered in EE8 (decoder-side intra mode derivation). This DIMD-related technique reportedly uses the intra-prediction modes of normal intra blocks (i.e., being explicitly signaled) to generate the intra-prediction modes of DIMD blocks at the parsing stage. Thus, the intra-prediction modes of DIMD-coded blocks are not required to be derived during entropy decoding.

Software analysis

The software provided by the proponent has modification in 14 files in comparison with HM-16.6-JEM-3.0-EE8-DIMD revision 291.

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LINKS

CARD

JVET-D0165

<http://vexpertise.stbit.ru/documents/JVET-D0165>

JVET Search

Alamy Filippov

Vasily Rutitskiy

Haihao Yang

Cross-check of JVET-D0098 Decoupling decoder-side intra mode derivation from entropy decoding

Authors:

ABSTRACT

MEETING NOTES

ARCHIVE

archive v2

https://jvet-experts.org/doc_end_user/documents/4_Chengdu/wg11/JVET-D0165-v2.zip

Archive

XLS

JVET-D0098-TEST3a-full.xlsm

XLS

JVET-D0098-TEST3b-full.xlsm

DOC

JVET-D0165-v2.docx

SOURCE

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Joint Video Experts Team (JVET)

of ITU-T SG21 WP3/21 and ISO/IEC JTC 1/SC 29

4th Meeting: Chengdu, October 2016

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

Report document from the chair of JVET

Report

1 Summary

MEETING NOTES

[JVET-D0165](#) Cross-check of JVET-D0098 Decoupling decoder-side intra mode derivation from entropy decoding [Alexey Filippov, Vasily Rufitskiy, Haitao Yang (Huawei)] [late]

EE9: Adaptive Scaling for Extended Colour Volume (2)

Primary (2)

From summary report JVET-D0010:

This experiment studies an alternative to the residual scaling proposed in JVET-B0054. The motivation in JVET-B0054 is to remove the overhead of delta QP that is signalled by the encoder to compensate for the reshaping of quantization noise as a function of brightness in next generation containers such as ST 2084.

Questions recommended to be answered during EE tests:

[Q]: What is performance of JVET-C0066, JVET-C0095 and JVET-C0102 using the content and test conditions provided by the AhG 7 on JEM coding of extended colour material with:

- Results reported with the weighted BD-Rate and BD-PSNR metrics, where the weighting corresponds to the target luma-to-QP mapping function.
- Results reported with BD-Rate and BD-PSNR for the tPNSRY and deltaE metrics, where the metrics are computed from linear RGB
- Results reported for visual quality assessment

[A]: Only partial data available.

[Q]: What is the benefit of combining different aspects of the JVET-C0066, JVET-C0095 and JVET-C0102?

[A]: Not answered yet.

Conclusion from EE summary: The test procedure should be agreed first. AhG7 was discussing testing procedure.

BoG (coordinated by A. Segall) recommendation: Review EE results, and agree conversion method and test procedure

See further discussion under JVET-D0192: Both proposals are to be further investigated in new EE6.

CITATION

Alexey Filippov, Vasily Rufitskiy, Haitao Yang, "Cross-check of JVET-D0098 Decoupling decoder-side intra mode derivation from entropy decoding", JVET-D0165, 4th Meeting: Chengdu, October 2016.

REFERENCES

1. [X. Xiu, Y. He, Y. Ye, "Decoder-side intra mode derivation", JVET-C0061, 3rd Meeting: Geneva, May 2016.](#)
2. [X. Xiu, Y. He, Y. Ye, "EE8-related: Decoupling decoder-side intra mode derivation from entropy decoding", JVET-D0098, 4th Meeting: Chengdu, October 2016.](#)