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Abstract

This contribution reports the CE test results for CE8-1.2b, CE8-1.2c, and CE8-1.2d. In CE8-1.2b, binarization process for `abs_mvd_minus2` syntax, which is coded by Exp-Golomb order K equal to 1 (EG1), is changed to use EG3. In CE8-1.2c, four contexts are added for signaling the `abs_mvd_greater0_flag` and `abs_mvd_greater1_flag`. CE8-1.2d is combined test of CE8-1.2b and CE8-1.2c. From experiment results, following BD rate changes are observed over VTM-4.0 with IBC:

CE8-1.2b, (EG3 coding for `abs_mvd_minus2`)

AI: -0.01% (CTC), -0.21% (Class F), -0.58% (TGM)

RA: 0.00% (CTC), -0.21% (Class F), -0.25% (TGM)

CE8-1.2c, (+2 context models for `abs_mvd_greater0_flag` and `abs_mvd_greater1_flag`, respectively)

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LINKS

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<http://vexpertise.stbit.ru/documents/JVET-N0458>

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ABSTRACT

MEETING NOTES



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Document Information

Submitted by: Jungsik Nam

Title: CE8-1.2: Block vector coding for IBC

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Associated Resources

Comments



ARCHIVE

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XLS JVET-N0458_CE8-1.2b.XLSM

XLS JVET-N0458_CE8-1.2c.XLSM

XLS JVET-N0458_CE8-1.2d.XLSM

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MEETING NOTES

external meeting notes

https://www.itu.int/wftp3/av-arch/jvet-site/2019_03_N_Geneva/JVET-N_Notes_dF.docx

Joint Video Experts Team (JVET) of ITU-T SG21 WP3/21 and ISO/IEC JTC 1/SC 29

14th Meeting: Geneva, March 2019

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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-N0458](#) CE8-1.2: Block vector coding for IBC [J. Nam, J. Lim, S. Kim (LGE)]

In this test, coding method of block vector difference (BVD) for IBC will be evaluated. In VVC, motion vector difference (MVD) coding syntax which consists of four parts; `abs_mvd_greater0_flag[]`, `abs_mvd_greater1_flag[]`, `abs_mvd_minus2[]`, `mvd_sign_flag[]`. In this test, those syntaxes will be designed for IBC because BVD has different properties compared with normal MVD. Some syntaxes (e.g. `abs_mvd_greater0_flag` or `abs_mvd_greater1_flag`) could be modified or removed. In addition, binarization process of a syntax (e.g. `abs_mvd_minus2`) could be changed. Additional context models for some syntaxes (e.g. `abs_mvd_greater0_flag`, `abs_mvd_greater1_flag`) could be introduced.

CE8-1.2b: Binarization process for `abs_mvd_minus2` syntax

When prediction mode of current block is IBC mode, binarization process for `abs_mvd_minus2` syntax is signalled by Exp-Golomb order K equal to 3. However, when prediction mode of current block is inter mode, binarization process for `abs_mvd_minus2` syntax is signalled by Exp-Golomb order K equal to 1 as same as anchor.

CE8-1.2c: Context modeling for `abs_mvd_greater0_flag` and `abs_mvd_greater1_flag`

For IBC blocks, four contexts are additionally introduced for signalling the `abs_mvd_greater0_flag` and `abs_mvd_greater1_flag`. The contexts are separated from contexts of MVD coding. Two context models for `abs_mvd_greater0_flag` and `abs_mvd_greater1_flag` are used, respectively.

CE8-1.2d: Combination of CE8-1.2b and CE8-1.2c

CE8-1.2d is tested Combination of CE8-1.2b and CE8-1.2c tests.

CE9: Decoder motion vector derivation (8)

CITATION

J. Nam, J. Lim, S. Kim, "CE8-1.2: Block vector coding for IBC", JVET-N0458, 14th Meeting: Geneva, March 2019.

REFERENCES

1. [J. Nam, J. Lim, S. Kim, "Non-CE8: Coding on block vector difference", JVET-M0333, 13th Meeting: Marrakech, January 2019.](#)
2. [X. Xu, Y.-H. Chao, Y.-C. Sun, J. Xu, "Description of Core Experiment 8 \(CE8\): Screen Content Coding Tools", JVET-M1028, 13th Meeting: Marrakech, January 2019.](#)