

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

Document: JVET-Q0137-v3

MPEG: m51726

17th Meeting: Brussels, January 2020

Title: CE3-related: Rice Parameter Derivation with Unified Lookup Table

Status: Input document to JVET

Purpose: Proposal

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Source: Sony

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Abstract

This contribution proposes a rice parameter derivation using a unified lookup table for regular residual coding and transform skip residual coding to simplify CE3-1.1-subset3.

It is reported that, at common QP condition, proposed method provides average BD-rate differences of (-0.01 %, 0.00 %, -0.02 %) for AI, (-0.02 %, -0.01 %, 0.02 %) for RA, and (-0.02%, -0.01%, 0.02%) for LB; For ClassF, (-0.16%, -0.17%, -0.04%) for AI, (-0.18%, -0.03%, -0.17%) for RA, and (-0.13%, -0.58%, 0.62%) for LB; For ClassTGM, (-0.39%, -0.30%, -0.32%) for AI, (-0.19%, -0.20%, -0.16%) for RA, and (-0.20%, -0.35%, -0.26%) for LB.

It is reported that, at low QP condition, proposed method provides average BD-rate differences of (-0.07%, -0.10%, -0.12%) for AI, (0.%, 0.%, 0.%) for RA, and (-0.02%, -0.02%, -0.01%) for LB; For ClassF, (-1.41%, -0.90%, -0.90%) for AI, (-1.84%, -0.73%, -0.86%) for RA, and (-0.63%, -0.55%, -0.70%) for LB; For ClassTGM, (-1.58%, -1.44%, -1.45%) for AI, (-2.13%, -1.40%, -1.39%) for RA, and (-1.44%, -1.17%, -1.20%) for LB.

It is reported that, at lossless condition, average bitrate differences of -5.08 % for AI, -3.73% for RA, and -2.58% for LB; For ClassF, -3.97% for AI, -3.06% for RA, and -2.78% for LB; For ClassTGM, -4.35% for AI, -6.33% for RA, -6.57% for LB.

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CE3-related: Rice Parameter Derivation with Unified Lookup Table

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ABSTRACT

MEETING NOTES

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MEETING NOTES

external meeting notes

https://www.itu.int/wftp3/av-arch/jvet-site/2020_01_Q_Brussels/JVET-Q_Notes_dI.docx

Joint Video Experts Team (JVET)
of ITU-T SG21 WP3/21 and ISO/IEC JTC 1/SC 29
17th Meeting: Brussels, January 2020

Document: JVET-Q0137

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-Q0137](#) CE3-related: Rice Parameter Derivation with Unified Lookup Table [T. Tsukuba, M. Ikeda, Y. Yagasaki, T. Suzuki (Sony)]

This contribution proposes a rice parameter derivation using a unified lookup table for regular residual coding and transform skip residual coding to simplify CE3-1.1-subset3.

It is reported that, at common QP condition, proposed method provides average BD-rate differences of (-0.01%, 0.00%, -0.02%) for AI, (-0.02%, -0.01%, 0.02%) for RA, and (-0.02%, -0.01%, 0.02%) for LB; For ClassF, (-0.16%, -0.17%, -0.04%) for AI, (-0.18%, -0.03%, -0.17%) for RA, and (-0.13%, -0.58%, 0.62%) for LB; For ClassTGM, (-0.39%, -0.30%, -0.32%) for AI, (-0.19%, -0.20%, -0.16%) for RA, and (-0.20%, -0.35%, -0.26%) for LB.

It is reported that, at low QP condition, proposed method provides average BD-rate differences of (-0.07%, -0.10%, -0.12%) for AI, (-0.02xx%, -0.02yy%, -0.04zz%) for RA, and (-0.02%, -0.02%, -0.01%) for LB; For ClassF, (-1.41%, -0.90%, -0.90%) for AI, (-1.84%, -0.73%, -0.86%) for RA, and (-0.63%, -0.55%, -0.70%) for LB; For ClassTGM, (-1.58%, -1.44%, -1.45%) for AI, (-2.13%, -1.40%, -1.39%) for RA, and (-1.44%, -1.17%, -1.20%) for LB.

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In v3, simulation results for ClassA2/RA at low QP condition were updated.

There was no need to consider this after the CE3 decision.

CITATION

T. Tsukuba, M. Ikeda, Y. Yagasaki, T. Suzuki, "CE3-related: Rice Parameter Derivation with Unified Lookup Table", JVET-Q0137, 17th Meeting: Brussels, January 2020.

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3. [M. G. Sarwer, R. L. Liao, J. Luo, Y. Ye, "AHG18: Residual coding method for lossless mode", JVET-P0463, 16th Meeting: Geneva, October 2019.](#)
4. [H. Wang, M. Karczewicz, Y.-H. Chao, M. Coban, "AHG18: Rice parameter derivation for coefficient level coding in lossless", JVET-P0559, 16th Meeting: Geneva, October 2019.](#)
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