

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

Document: JVET-AC0051

MPEG: m61600

29th Meeting, by teleconference, 11-20 January 2023

Title: EE1-2.3: RPR-Based Super-Resolution Guided by Partition Information
Combined with GOP Level Adaptive Resolution

Status: Input document to JVET

Purpose: Proposal

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Abstract

This contribution reports the EE1-2.3 test results, which is a combination of JVET-AB0076 and JVET-JVET-AB0102 test 2.1.1. At each GOP, the encoder can adaptively select a scale factor from $\times 1.0$ and $\times 2.0$ and CNN-based super-resolution is utilized for the latter case. Compared with VTM-11.0-NNVC-3.0, the experimental results show $\{-4.78\%, 2.36\%, 4.53\%\}$ and $\{-0.72\%, 2.71\%, 4.27\%\}$ BD-rate changes on average (A1 and A2) for $\{Y, Cb, Cr\}$ under AI and RA configurations, respectively.

Introduction

JVET-AB0076 [1] shows significant coding gains by using the Convolutional Neural Network (CNN)-based super-resolution method combined with existing RPR functionality. In addition, the results shown in JVET-AB0102 [2] prove that RPR encoder control at GOP level may provide a better coding performance. This contribution tests the combination of JVET-AB0076 and JVET-AB0102 test 2.1.1.

Proposed method

GOP level encoding resolution decision

Built from JVET-AC0051-v2.docx

LINKS

CARD

JVET-AC0051

<http://vexpertise.stbit.ru/documents/JVET-AC0051>

JVET Search

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EE1-2.3: RPR-Based Super-Resolution Guided by Partition Information Combined with GOP Level Adap

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ABSTRACT

MEETING NOTES

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MEETING NOTES

external meeting notes

http://vexpertise.stbit.ru/meeting-notes/source/meeting_29_ac

Joint Video Experts Team (JVET)
of ITU-T SG21 WP3/21 and ISO/IEC JTC 1/SC 29
29th Meeting: by teleconference, DE, January 202

Document: JVET-AC0051

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-AC0051 EE1-2.3: RPR-Based Super-Resolution Guided by Partition Information Combined with GOP Level Adaptive Resolution [Q. Han, C. Jung (Xidian Univ.), Y. Liu, M. Li (OPPO), J. Nam, S. Yoo, J. Lim, S. H. Kim (LGE)]

This contribution reports the EE1-2.3 test results, which is a combination of JVET-AB0076 and JVET-JVET-AB0102 test 2.1.1. At each GOP, the encoder can adaptively select a scale factor from $\times 1.0$ and $\times 2.0$ and CNN-based super-resolution is utilized for the latter case. Compared with VTM-11.0-NNVC-3.0, the experimental results show $\{-4.78\%, 2.36\%, 4.53\% \}$ and $\{-0.72\%, 2.71\%, 4.27\% \}$ BD-rate changes on average (A1 and A2) for $\{Y, Cb, Cr\}$ under AI and RA configurations, respectively.

CITATION

Q. Han, C. Jung, Y. Liu, M. Li, J. Nam, S. Yoo, J. Lim, S. H. Kim, "EE1-2.3: RPR-Based Super-Resolution Guided by Partition Information Combined with GOP Level Adaptive Resolution", JVET-AC0051, 29th Meeting: by teleconference, DE, January 2023.