

**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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19th Meeting, by teleconference, 22 June - 1 July 2020

Title: **JVET AHG report: Quantization control (AHG15)**

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Purpose: Proposal

**Author(s) or
Contact(s):** [Roman Chernyak](#) | chernyak@global.tencent.com
[Edouard François](#) | edouard.francois@interdigital.com
[Christian Helmrich](#) | christian.helmrich@hhi.fraunhofer.de
[Sean McCarthy](#) | sean.mccarthy@dolby.com
[Andrew Segall](#) | asegall@amazon.com
Jens-Rainer Ohm | ohm@ient.rwth-aachen.de | submitter

Source: R. Chernyak, E. François, C. Helmrich, S. McCarthy, A. Segall

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Abstract

This document summarizes the activity of AHG15: Quantization control between the 18th Meeting (teleconference, 15 – 24 April 2020) and the 19th Meeting (teleconference, 22 June – 1 July 2020).

Introduction

At the 18th JVET meeting, the AHG on Quantization control was established with the following mandates:

Identify methods for quantization step size control for luma and chroma, including spatially and frequency-adaptive approaches;

Develop methods for evaluating quantization step size control operation;

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CARD

JVET-S0015

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archive v1

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A screenshot of a document interface. At the top left, the word 'Archive' is written in a light blue font. Below it, a light blue rounded rectangle contains a dark blue square with the white text 'DOC' and the filename 'JVET-S0015.docx' in a dark blue font. In the bottom right corner, there is a black and white QR code.

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Document Information

Submitted by

John Palmer Chen

Title

JVET AHG report: Quantization control (AHG15)

Authors

V. Sengul

Document

JVET-S0015
original document

Associated Resources

Comments



MEETING NOTES

external meeting notes

http://vexpertise.stbit.ru/meeting-notes/source/meeting_19_s

  		
Joint Video Experts Team (JVET) of ITU-T SG21 WP3/21 and ISO/IEC JTC 1/SC 29 19th Meeting; by teleconference, June 2020		Document: JVET-S0015
<i>Title:</i>	Meeting Report of the 41st Meeting of the Joint Video Experts Team	
<i>Status:</i>	Report document from the chair of JVET	
<i>Purpose:</i>	Report	
1 Summary		
		

MEETING NOTES

[JVET-S0015](#) JVET AHG report: Quantization control (AHG15) [R. Chernyak, E. François, C. Helmrich, S. McCarthy, A. Segall]

This document summarizes the activity of AHG15: Quantization control between the 18th Meeting (teleconference, 15–24 April 2020) and the 19th Meeting (teleconference, 22 June – 1 July 2020).

There were no emails besides AHG kickoff message sent to the JVET reflector during the AHG period.

The following contribution was identified as related to AHG15.

- [JVET-S0130](#), On chroma QP mapping, L. Li, X. Li, B. Choi, S. Wenger, S. Liu (Tencent)

VTM Software related activities

The two following quantization control techniques from VTM were exercised:

1. Perceptual QP adaptation (perceptQPA).
2. R-D based QP adaptation.

Both methods allow to select and transmit CU level delta QP value and can be used in VTM 9.

Bitstreams generated by perceptual QP adaptation were submitted to VVC Conformance AhG.

The AHG recommended to review all related contributions.

It was asked how much gain is available from R-D optimized QP adaptation and whether that is used in the HM anchor. It was noted that this has a large runtime impact. It was commented that this is probably not being used in the HM anchors.

CITATION

R. Chernyak, E. François, C. Helmrich, S. McCarthy, A. Segall, "JVET AHG report: Quantization control (AHG15)", JVET-S0015, 19th Meeting: by teleconference, June 2020.

REFERENCES

1. [L. Li, X. Li, B. Choi, S. Wenger, S. Liu, "On chroma QP mapping", JVET-S0130, 19th Meeting: by teleconference, June 2020.](#)