

**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: **AHG18: BD-PSNR as alternative evaluation metric for ultra-low latency test scenario**

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Purpose: Proposal

Author(s) or [M. Sychev](mailto:sychev.maxim@huawei.com) | sychev.maxim@huawei.com | submitter (Huawei)

Contact(s): [K. Malyshev](mailto:malyshev.kirill@huawei-partners.com) | malyshev.kirill@huawei-partners.com (Huawei)

[S Ikonin](#) (Huawei)

[Elena Alshina](mailto:elena.alshina@huawei.com) | elena.alshina@huawei.com (Huawei)

Source: Huawei

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Abstract

This informational proposal provides an example of usage Bjontegaard (BD-PSNR) metric for ultra-low latency (ULL) test scenario investigated by AhG18 and test conditions proposed in JVET-AL0176. The BD-PSNR results comply with observed quality improvement for results obtained in ULL evaluation. Documents demonstrate the behavior of BD-PSNR and BD-rate for some corner cases.

Some test successfully passing video through the channel without freezes which leads to horizontal curves with similar value which is critical for BD-Rate calculation due to vertical integration, but BD-PSNR succeed in all of such cases. This allows to avoid “#VALUE” in excel tables and to obtain average single number of obtained results.

Introduction

Bjontegaard Delta-Rate (BD Rate) metric, proposed in 2001 by Gisle Bjontegaard, is a method for calculating the average difference between two rate-distortion (RD) curves [VCEG-M33]. Gisle Bjontegaard “propose to calculate either change in bitrate or change in PSNR”. The basic steps are: Fit a curve through several data points (see Rate-Distortion Curve).

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LINKS

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<http://vexpertise.stbit.ru/documents/JVET-AM0325>

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M. SychevK. MalyshevS. RoninElena Alshina

AHG18: BD-PSNR as alternative evaluation metric for ultra-low latency test scenario

Authors:

ABSTRACT

MEETING NOTES



SOURCE

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Authors: V. Sengul

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Comments

Associated Resources



ARCHIVE

archive

https://jvet-experts.org/doc_end_user/documents/39_Daejeon/wg11/JVET-AM0325-v1.zip

Archive

DOC

JVET-AM0325-v0.docx

XLS

JVET-AM0325-v0_ULL_Template_BDPSNR.xlsm



MEETING NOTES

external meeting notes

http://vexpertise.stbit.ru/meeting-notes/source/meeting_39_am

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

39th Meeting: Daejeon, KR, June 2025

Document: JVET-AM0325

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-AM0325](#) AHG18: BD-PSNR as alternative evaluation metric for ultra-low latency test scenario [M. Sychev, K. Malyshev, S Ikonin, E. Alshina (Huawei)] [late]

This informational proposal provides an example of usage Bjontegaard (BD-PSNR) metric for ultra-low latency (ULL) test scenario investigated by AhG18 and test conditions proposed in JVET-AL0176. The BD-PSNR results comply with observed quality improvement for results obtained in ULL evaluation. Documents demonstrate the behavior of BD-PSNR and BD-rate for some corner cases.

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For further study in AHG – see notes under JVET-AM0109 and JVET-AM0202.

CICP (2)

Contributions in this area were discussed during 1815–1900 on Monday 30 June 2025, and during 1215–1300 and 1450-1520 on Wednesday 2 July 2025 (chaired by JRO).

CITATION

M. Sychev, K. Malyshev, S Ikonin, E. Alshina, "AHG18: BD-PSNR as alternative evaluation metric for ultra-low latency test scenario", JVET-AM0325, 39th Meeting: Daejeon, KR, June 2025.