

**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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Purpose: Proposal

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Abstract

This is a summary report of the HDR video verification test planning side activity. The activity took place during the 18th JVET meeting and included a teleconference on Tuesday April 21 16:30 – 17:30 UTC.

Activity

The goal of the side activity was to create recommendations and action items for a potential HDR verification test. This consisted of covering five general topics and related questions, which are captured in the notes below.

Timeline for evaluation

The group considered if the HDR verification process should be aligned with the SDR verification process.

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LINKS

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JVET-R0487

<http://vexpertise.stbit.ru/documents/JVET-R0487>

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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_04_R_Alpbach/JVET-R_Notes_dH.docx

Joint Video Experts Team (JVET)
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Meeting Report of the 41st Meeting of the Joint Video Experts Team

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Report document from the chair of JVET

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Report

1 Summary



MEETING NOTES

[JVET-R0487](#) Report of HDR verification test planning side activity [A. Segall, M. Wien]

Presented Wed 22, 1650-1710

This is a summary report of the HDR video verification test planning side activity. The activity took place during the 18th JVET meeting and included a teleconference on Tuesday April 21 16:30 – 17:30 UTC.

The group considered if the HDR verification process should be aligned with the SDR verification process.

It was commented that the SDR verification process is currently targeting completion by October.

Additionally, it was explained that the SDR schedule includes completing a dry run in July.

It was commented by one participant that it would be beneficial to have the HDR testing done sooner rather than later.

It was further suggested that the group should attempt to align with the SDR schedule. However, it was also commented that it was currently unclear if this could be accomplished given current local limitations and its impact on accessing display equipment.

The group agreed to align with the SDR schedule as a working direction, with an understanding that the work plan should include re-evaluating the schedule after initial testing.

The group considered if there is additional content that is available and could provide additional candidates for verification testing.

It was suggested by one participant that an initial target of 9-10 sequences would be ideal.

It was suggested by another participant to include an equal mixture of PQ and HLG content.

It was commented that JVET-E0121 provides some analysis of existing content that was not included in the CTC. Furthermore, another participating commented that JVET-E0086 also provided analysis for other content that could be available for verification testing.

It was further commented that SONY had generously provided additional sequences that were not included in the CTC.

Action Item: Create a summary of content available on the FTP site and solicit input from others not participating in the side-discussion.

The group then discussed if the current CTC sequences are useful and still relevant for verification testing.

One participant commented that including the CTC sequences in the verification tests may not be desirable.

Another participant commented that the VTM may not be specifically tuned for the HDR CTC sequences and so could be considered if needed.

One participant commented that even if the VTM was not tuned for the HDR CTC sequences, it might still be desirable to not include them in a verification test.

The group then discussed what monitor (or monitors) should be used for the visual evaluation. And, specifically, if it would be acceptable to use a consumer level monitor for evaluation.

One participant noted that we should be aware of two different sources of artefacts. The first would be coding artefacts and the second would be chroma artefacts, where coding artefacts would denote artefacts similar to those typically found in SDR content and chroma artefacts would denote chroma degradations that may be HDR specific.

Multiple participants commented that using a less than 4k nit display should be acceptable.

The group then discussed two general categories of displays. These categories are consumer and professional displays.

As a working direction, the group agreed to perform initial evaluation and verification testing using a consumer HDR display. A preference for an OLED display was expressed.

From discussion in track B:

Using consumer displays is preferable, as this is the real application case of HDR.

It is pointed out that, if the HDR test would be performed in different labs, same displays/settings should be used.

With PQ, the content could violate the range of certain displays, some re-grading/tone mapping might be necessary. This needs to be done carefully.

Wed 22 1710 Review of previous test plan:

Might HD be tested just with LB configuration?

Mathias, Yan and Andrew were requested to start an offline activity for updating the verification test plan, integrating relevant elements from JVET-R0484, JVET-R0487, naming the volunteers for sequence coding, listing sequences etc, defining a time line until the next meeting is the most important element that should be approved on Friday. This should include plans for teleconf meeting(s), dry run, and everything that is necessary before that. For SDR, HD part should be elaborated until the next meeting.

This Wednesday 22 April session ended at 1730.

Coding studies and tools on specific use cases (2)

CITATION

A. Segall, M. Wien, "Report of HDR verification test planning side activity", JVET-R0487, 18th Meeting: Teleconference, April 2020.

REFERENCES

1. [Andrey Norkin, Anne Aaron, "Netflix HDR and SDR test sequences \(AHG4 and AHG7 related\)", JVET-D0083, 4th Meeting: Chengdu, October 2016.](#)
2. [Shunsuke Iwamura, Atsuro Ichigaya, "New HDR 4K test sequences with Hybrid Log-Gamma transfer characteristics", JVET-E0086, 5th Meeting: Geneva, January 2017.](#)
3. [T. Lu, F. Pu, P. Yin, T. Chen, W. Husak, "AHG4: Evaluation report of Netflix HDR test sequences", JVET-E0121, 5th Meeting: Geneva, January 2017.](#)
4. [T. Tsukuba, M. Ikeda, T. Suzuki, "New Test Sequence of 4K Hybrid Log-Gamma", JVET-G0063, 7th Meeting: Torino, July 2017.](#)