

**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: AHG17: Illustration of the film grain characteristics SEI message for VVC

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Source: Dolby

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Abstract

This contribution describes a software implementation that illustrates the use of the film grain characteristics SEI message for VVC specified in H.SEI | ISO/IEC 23002-7. Specifically, the software illustrates the example of film grain synthesis specified in SMPTE RDD 5 and signalling of film grain characteristics syntax values using the SEI message.

Introduction

The film grain characteristics (FGC) SEI message for VVC specified in H.SEI | ISO/IEC 23002-7 [1] provides the decoder with a parameterized model for film grain synthesis. The syntax of the SEI message is shown in Table 1.

For example, an encoder may use the FGC SEI message to characterize film grain that was present in the original source video material and was removed by pre-processing filtering techniques. Synthesis of simulated film grain on the decoded images for the display process is optional and does not affect the decoding process specified in the draft VVC specification.

As another example, an encoder may use the FGC SEI message to simulate film grain on the decoded images when film grain was not present in the original source video material.

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LINKS

CARD

JVET-R0359

<http://vexpertise.stbit.ru/documents/JVET-R0359>

JVET Search

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AHG17: Illustration of the film grain characteristics SEI message for VVC

Authors:

ABSTRACT

MEETING NOTES



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Document Information

Submitted by: Jiaqi Ren Chen

Title: AHG17: Illustration of the film grain characteristics SEI message for VVC

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Comments

Associated Resources



ARCHIVE

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JVET-R0359-v1.pdf

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JVET-R0359-v2.docx

ZIP

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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)
of ITU-T SG21 WP3/21 and ISO/IEC JTC 1/SC 29
18th Meeting: Teleconference, April 2020

Document: JVET-R0359

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-R0359](#) AHG 17: Illustration of the film grain characteristics SEI message for VVC [S. McCarthy, F. Pu, T. Lu, P. Yin, W. Husak, T. Chen (Dolby)]

This was considered similarly in JCT-VC and the parent bodies.

This was an information and software contribution. A similar contribution had been submitted to JCT-VC as JCTVC-AM0023.

This contribution describes a software implementation that illustrates the use of the film grain characteristics SEI message for VVC specified in H.SEI | ISO/IEC 23002-7. Specifically, the software illustrates the example of film grain synthesis specified in SMPTE RDD 5 and signalling of film grain characteristics syntax values using the SEI message.

It was reported that the example software implementation and FGC SEI message function as expected.

This includes some schemes beyond what is documented in RDD 5, to adjust for higher bit depths.

The contributor said RDD was a very complete specification (and had been a referenced document for HD-DVD).

It was reported that the example software implementation and FGC SEI message function as expected.

A cross-check had been submitted to JVET as JVET-R0455. For JVET the experiments had used the VTM, whereas the results reported to JCT-VC were using HEVC.

The contribution of software, which was uploaded with a revision of the contribution, was appreciated. The software coordinator was suggested to review it.

CITATION

S. McCarthy, F. Pu, T. Lu, P. Yin, W. Husak, T. Chen, "AHG17: Illustration of the film grain characteristics SEI message for VVC", JVET-R0359, 18th Meeting: Teleconference, April 2020.