

**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: On decoded picture buffer management for VVC

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Purpose: Proposal

**Author(s) or
Contact(s):** [Byung-Yoon Choi](#) | bychoi@kau.kr (Tencent)
[S. Wenger](#) | swenger@global.tencent.com (Tencent)
[Shan Liu](#) | shanl@global.tencent.com (Tencent)

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Abstract

This contribution proposes an explicit signaling of “unused reference pictures” for management of a decoded picture buffer. The proposed syntax elements in a tile group header indicate which reference pictures shall be removed from a decoded picture buffer before decoding the current picture (or tile group). This proposal is intended to separate the syntax elements and the decoding process for management of a decoded picture buffer from the syntax elements and the decoding process for constructing reference picture lists. Based on the proposed method, the overall syntax and the decoding process for reference picture list construction and decoded picture buffer management can be simplified. Especially, when the proposed method is jointly used with a direct reference picture list indication, a problem on the picture removal timing can be resolved.

Problem statement

In HEVC, the reference picture set (RPS) defines which reference pictures are stored in a decoded picture buffer (DPB) and which reference pictures are used for decoding the current picture or the subsequent pictures. By parsing and interpreting the RPS syntax elements, the reference picture lists to be used for decoding the current picture can be constructed. In this case, the reference pictures stored in DPB are explicitly determined from the RPS syntax elements. However, it is complicated to decode the RPS syntax elements to achieve the current reference picture lists and the decoded picture lists to be removed for a DPB.

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Byung-Yoon ChoiS. WengerShan Liu

AHG17: On decoded picture buffer management for VVC

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ABSTRACT

MEETING NOTES

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Document Information

Submitted by: Byung-Yoon Choi

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Authors: S. Wenger

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Associated Resources

Comments

ARCHIVE

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JVET-M0154-ProposedSpecTextBasedOnRPS.dOCX

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MEETING NOTES

external meeting notes

https://www.itu.int/wftp3/av-arch/jvet-site/2019_01_M_Marrakech/JVET-M_Notes_dH.docx

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

13th Meeting: Marrakech, January 2019

Document: JVET-M0154

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-M0154](#) AHG17: On decoded picture buffer management for VVC [B. Choi, S. Wenger, S. Liu (Tencent)]

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REFERENCES

1. [Y.-K. Wang](#), [Hendry](#), [S. Deshpande](#), [M. M. Hannusela](#), [G. Ryu](#), [W. Choi](#), [X. Wang](#), [Y.-W. Chen](#), [L. Zhang](#), [P. Wu](#), [M. Li](#), [S.-H. Kim](#), [J. Boyce](#), [A. M. Tourapis](#), [D. Singer](#), [F. Edouard](#), [P. Andrivon](#), [Y.-W. Huang](#), [C.-W. Hsu](#), [C.-Y. Chen](#), [T.-D. Chuang](#), [L. Chen](#), [K. Kawamura](#), [Y.-C. Sun](#), [J. Lou](#), "AHG17: On reference picture management for VVC", JVET-M0128, 13th Meeting: Marrakech, January 2019.