Joint Video Experts Team (JVET) of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC 29/WG 11
12th Meeting: Macao, October 2018

Document: JVET-L0429-v2
MPEG: m44459

Title: **CE5-related: lookup table-free implementation of the probability update for tests CE5.1.4 and CE5.1.5**

Status: Input document to JVET

Purpose: Proposal

Author(s) or Contact(s):
S. Matlage | stefan.matlage@hhi-extern.fraunhofer.de (HHI)
Heiner Kirchhoffer | heiner.kirchhoffer@hhi.fraunhofer.de (HHI)
Paul Haase | paul.haase@hhi.fraunhofer.de (HHI)
Heiko Schwarz | heiko.schwarz@hhi.fraunhofer.de (HHI)
Detlev Marpe | detlev.marpe@hhi.fraunhofer.de (HHI)
Thomas Wiegand | thomas.wiegand@hhi.fraunhofer.de (HHI)

Source: HHI

HEADER EXCERPT FROM SOURCE DOCUMENT

Abstract

An extension to the stated-based probability estimator presented in is proposed. The proposed method introduces an optimized transition table and two parameters are added in order to allow for improved control of the state variable update.

Introduction

The transition table size is kept at 32 elements but is optimized with respect to the video compression application. Shift parameters for both state variables S0 and S1 are introduced to enable controlling the agility of the probability update behaviour of each state.

Proposed method

Similar to the method proposed in JVET-K430, two signed integer state variables S0 and S1 are stored per context model which require 8 and 12 bit, respectively. However, the state variable update after encoding or decoding a bin is slightly altered, according to the following pseudo code:

Built from JVET-L0429-v3.docx

LINKS

CARD

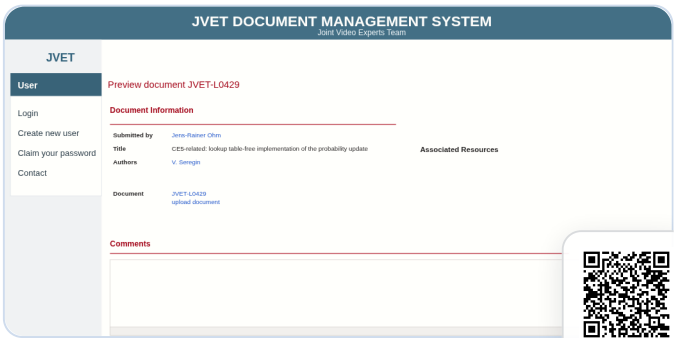
JVET-L0429

http://vexpertise.stbit.ru/documents/JVET-L0429

SOURCE

external source

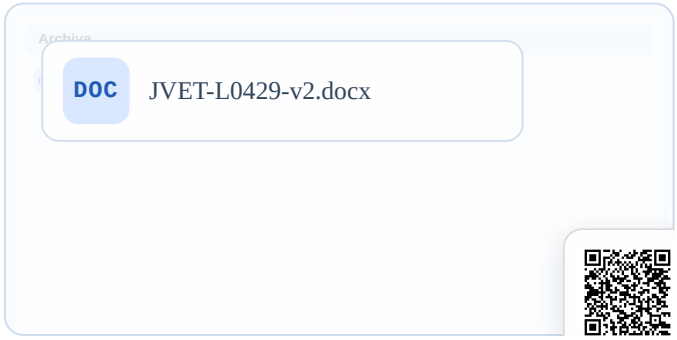
https://jvet-experts.org/doc_end_user/documents/12_Macao/pending/JVET-L0429-v3.zip



ARCHIVE

archive v2

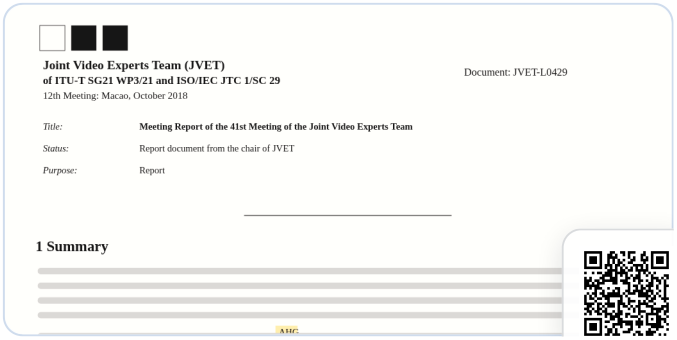
https://jvet-experts.org/doc_end_user/documents/12_Macao/pending/JVET-L0429-v3.zip



MEETING NOTES

external meeting notes

http://vexpertise.stbit.ru/meeting-notes/source/meeting_12_l



MEETING NOTES

JVET-L0429 CE5-related: lookup table-free implementation of the probability update for tests CE5.1.4 and CE5.1.5 [S. Matlage, H. Kirchhoffer, P. Haase, H. Schwarz, D. Marpe, T. Wiegand (HHI)]

> An extension to the stated-based probability estimator presented in JVET-K430 is proposed. The proposed method introduces an optimized transition table and two parameters are added in order to allow for improved control of the state variable update.

> This is a different implementation method which generates the same results as the probability update part in the CE contribution JVET-L0462 – is included in complexity analysis of BoG.

CITATION

S. Matlage, H. Kirchhoffer, P. Haase, H. Schwarz, D. Marpe, T. Wiegand, "CE5-related: lookup table-free implementation of the probability update for tests CE5.1.4 and CE5.1.5", JVET-L0429, 12th Meeting: Macao, October 2018.

REFERENCES

1. JVET-K430