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| *Title:* | **CE4.h related: Context model for illumination compensation flag** | | |
| *Status:* | Input Document | | |
| *Purpose:* | Proposal | | |
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# Abstract

In 3D-HEVC, illumination Compensation(IC) process is specified by IC CU flag. The conventional IC flag has been encoded by only one context model. In this contribution, the context model is separated to three context models derived from neighbour block. It has BD-rate change -0.10% compared to HTM-7.0r1 on synth-total result with 100.5% encoding time, and 99.8% decoding time.

# Introduction

The conventional IC flag[1] has been encoded by only one context model. In this proposal, the context model is separated to three context models derived from neighbour block. The context model index is determined with respect to IC flag on neighbour blocks.

# Proposed Method

The conventional IC flag has been encoded by only one context model. In this proposal, the context model is separated to three context models derived from neighbour block. The context model index is determined with respect to IC flag on neighbour blocks. Figure1 shows the neighbour blocks to determine the context model index. The context model index is set to the number of IC flags are true on A1, B1. For example, if both IC flags are true on A1 and B1, the context model index is set to 2.

Figure1. neighbour blocks to determine the context model index

The initial value of the context model is set as shown table1. They are set considering MPS(Most Probable Symbol)

Table1. The initial value of the IC context model

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Initialization**  **variable** | **ic\_flag** | | | | | |
| **0** | **1** | **2** | **3** | **4** | **5** |
| **InitValue** | 162 | 154 | 201 | 162 | 154 | 201 |

# Experimental results

The context model is integrated into HTM-7.0r1. The configuration of common test condition is applied. Table2 reportedly shows the experimental results.

Table2. results on proposed method integrated into HTM-7.0r1



# Conclusion

In this contribution, the context model is separated to three context models derived from neighbour blocks. It has BD-rate change -0.10% compared to HTM-7.0r1 on synth-total result with 100.5% encoding time, and 99.8% decoding time.

It is recommended that proposed method is adopted into 3D-HEVC.

# Reference

1. H. Liu, J. Jung, J. Sung*, etc.*, (LG), "3D-CE2.h : Results of Illumination Compensation for Inter-View Prediction", Joint Collaborative Team on 3D Video Coding Extension Development (JCT-3V) of ITU-T VCEG and ISO/IEC MPEG JCT3V-B0045, Shanghai, China, October, 2012.

# Patent rights declaration(s)

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