|  |  |
| --- | --- |
| **Joint Collaborative Team on 3D Video Coding Extensions**  **of ITU-T SG 16 WP 3 and ISO/IEC JTC 1/SC 29/WG 11**  11th Meeting: Geneva, CH, 12–18 Feb. 2015 | Document: JCT3V-K0056 |

|  |  |  |  |
| --- | --- | --- | --- |
| *Title:* | **3D-CE1: Cross-check of Segmental prediction in 3D-HEVC (JCT3V-K0031)** | | |
| *Status:* | Input Document | | |
| *Purpose:* | Information | | |
| *Author(s) or Contact(s):* | Takeshi Tsukuba  1-9-2 Nakase, Mihama-ku, Chiba-shi, Chiba 261-8520, JAPAN | Tel: Email: | +81-43-299-8526 [tsukuba.takeshi@sharp.co.jp](mailto:tsukuba.takeshi@sharp.co.jp) |
| *Source:* | SHARP Corporation | | |

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Abstract

This contribution reports cross-check results for Test 2 of JCT3V-K0031 proposed by MediaTek. Experimental results exactly match with the results provided by the proponent. The source code and WD provided were also confirmed.

# Introduction

JCT3V-K0031 proposes a segmental prediction for depth coding.

It can be summarized as follows:

1. Derive a threshold T.
2. Classify the prediction block into two segments with T.
3. Derive the mode segPred [s] for each segments.

segPred[0] = segPred[1] = 1<<(BitDepthY-1);

**// CE1 Test 1**

for (y=0; y<nTbs; y++)

for (x=0; x<nTbs; x++){

**// CE1 Test 2 ( sub-sampling )**

for (yy=0; yy<nTbs/2; yy++)

for (xx=0; xx<nTbs/2; xy++){

x = xx<<1, y=yy<<1;

**// common process for CE1 Test 1/Test 2**

s = segIdx[x,y]

sampleCount[ s ][ p[x,y] ] ++;

if (sampleCount[ s ][ p[x,y] ] > sampleCount[ s ][ segPred[s] ] )

segPred [ s ] = p[x, y];

}

1. Derive a reconstructed sample value R[s] for each segment s.

R[s] = segPred [s] + dcOffset [s]

# Results

Simulations for CE1 Test 2 were performed under CTC described in JCT3V-I1101. The results shown in Table 1 exactly match with those provided by the proponent.

**Table 1: Results of CE1 Test 2 (CTC)**



# Reference

1. K. Zhang, J. An, X. Zhang, H, Huang, J. Lin, S. Lei, “3D-CE1: Segmental prediction in 3D-HEVC,” JCT3V-K0031, Feb. 2015.