|  |  |
| --- | --- |
| **Joint Collaborative Team on Video Coding (JCT-VC)**  **of ITU-T SG16 WP3 and ISO/IEC JTC1/SC29/WG11**  4th Meeting: Daegu, KR, 20-28 January, 2011 | Document: JCTVC-D330 |

|  |  |  |  |
| --- | --- | --- | --- |
| *Title:* | **CE9: Cross-verification result of (3.1.j) by SKKU** | | |
| *Status:* | Input Document to JCT-VC | | |
| *Purpose:* | Information | | |
| *Author(s) or Contact(s):* | Jungyoup Yang Kwanghyun Won Byeungwoo Jeon  Sungkyunkwan University 300 Chunchun-dong, Jangan-gu, Suwon, Korea | Tel: Email: | +82-31-290-7186 [binbak1@ece.skku.ac.kr](mailto:binbak1@ece.skku.ac.kr) +82-31-290-7186 [wkh12345@skku.edu](mailto:wkh12345@skku.edu) +82-31-290-7144 [bjeon@skku.edu](mailto:bjeon@skku.edu) |
| *Source:* | Sungkyunkwan University | | |

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

# Abstract

This document contains a cross-verification result of motion vector coding (3.1.j) by SKKU.

Overview of Cross-verification

The software for the cross-verification was provided by HHI to SKKU on Nov. 15, 2010. SKKU reviewed the provided source codes which was based on HM 1.0, and found out that there was no software problem. The cross-verification was executed on a machine of 64-bit Windows OS.

Cross-verification was performed with following conditions as specified for (3.1.j) in [1]:

* For SKIP and DIRECT modes, “Modified AMVP 3” is applied.
* For Merge mode, “Modified CU based 1” is applied.

Note that the modifications for SKIP and DIRECT modes reduce the set of AMVP candidates, and the modified versions for Merge mode use more than two motion vectors which are located on left and above blocks.

Completion of whole cross-verification is scheduled by approximately Jan. 22, 2011. Thus revision of this document with its associated excel file will be available as soon as the cross-verification test results are available.

Procedure for Cross-verification

For the partial test results available up to this date, there was no mismatch between YUV data in encoder and decoder, and the rate-distortion results obtained by SKKU were identical to the results provided by HHI.

The result of cross-verification is compared to two different methods as follows:

1. HM 1.0 anchor result obtained by SKKU

* For SKIP and DIRECT modes, “AMVP based” is applied.

“AMVP based” is available for motions in left block, above one, corner one, collocated one, median motion and zero motion.

* For Merge mode, “CU based” is applied.

“CU based” is available for motions in left block and above one.

1. 3.1.j test result obtained by SKKU

* For SKIP and DIRECT modes, “Modified AMVP 3” is applied.

“Modified AMVP 3” is only available for motions in collocated block.

* For Merge mode, “Modified CU based 1” is applied.

“Modified CU based 1” is available for motions in left block, above one and corner one.

More detailed results for each test are included in *JCTVC-D330\_CE9-from-SKKU\_3.1.j-vs-anchor.xls*.

# References

1. J. Jung and B. Bross Core Experiment 9: Motion Vector Coding, JCTVC-C509, 3rd Meeting: Guangzhou, China, 7-15 October 2010.