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| *Title:* | **Crosscheck of JCTVC-O0183 (On Intra BC mode) Section 2.4 about BC vector coding** | | |
| *Status:* | Input Document to JCT-VC | | |
| *Purpose:* | Information | | |
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# Abstract

This document reports the crosscheck results for the motion vector coding of intra BC proposed in JCTVC-O0183 [1]. All the data matches the proponent’s result perfectly.

# Technical Description

Instead of the motion vector coding in HEVC RExt Draft 4, JCTVC-O0183 [1] proposed to change the block vector coding method. This is based on the fact that if the vertical block copy vector is greater than –CUsize, only left and bottom left area is available for current CU. Therefore, an offset is introduced to improve the coding efficiency. More specifically, if vertical block vector is greater than the –CUSize, encode horizontal block vector + CUSize; otherwise, encode horizontal block vector directly. Besides introducing the CU adaptive offset, a fixed offset 8 is also demonstrated in the proposal. Following tables further detail the simulation results.

Given that Class Optional data is not included for decision, all of them are removed in the following tables. Please also note that because of the heterogeneous computing nodes, timing information is not reliable here.

Table 1: Crosscheck result for fixed block copy vector coding (offset as 8) for lossless case







Table 2: Crosscheck result for fixed block copy vector coding (offset as 8) for lossy case



Table 3: Crosscheck result for CU adaptive block copy vector coding (offset = CUsize) for lossless case







Table 3: Crosscheck result for CU adaptive block copy vector coding (offset = CUsize) for lossy case



# Conclusion

This document reports the crosscheck results of Intra BC vector coding method proposed in [1]. Based on the available area, different horizontal encoding scheme is applied with offset. Both fixed offset (8) and CU size adaptive offset are evaluated. All simulation results are confirmed.

# References

1. B. Li, J. Xu, G. J. Sullivan, “On Intra BC mode”, JCTVC O0183, Geneva, CH, Oct. 2013
2. JCTVC-N1123, “HEVC Range Extensions Core Experiment 3 (RCE3): Intra Prediction techniques,” Vienna, Austria, 25 Jul. – 2 Aug. 2013.