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| *Title:* | **Cross-check of JCTVC-L0279 on motion data compression** | | |
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# Abstract

This contribution reports cross-check results of JCTVC-L0279 on motion data compression. In SMuC 0.1.1, the motion compression process in 16x16 unit is executed after en/decoding of the base layer frame. However, this proposal performs the motion compression in 8x8 unit after en/decoding of a base layer frame, and 16x16 unit motion compression for the base layer frame is executed after en/decoding of an enhancement layer frame.

# Introduction

At the last meeting, TE5 [1] was set up for testing inter-layer syntax prediction tools for SHVC. To enhance coding efficiency, some TE5 proposals postpone the motion compression for a base layer frame after en/decoding an enhancement layer frame in an access unit. Therefore, merge or AMVP mode uses uncompressed co-located base layer motion vectors as candidates.

The proposal in JCTVC-L0279 [2] divides the motion compression process by two steps considering coding efficiency and motion data storage. In the first step, motion compression in 8x8 unit is executed after en/decoding a base layer frame, and the compressed motion data is used as candidates of merge or AMVP mode for enhancement layer. In the second step, motion compression in 16x16 unit for the base layer frame is executed after en/decoding an enhancement layer frame.

# Simulation results

The experiments are conducted on the 64-bit windows7 version.

Table 1 represents the simulation results of merge modification in TE5.2.3 [3].

Table 2 represents the simulation results of proposed method on top of merge modification in TE5.2.3.

Table 1. Merge modification in TE5.2.3 (postpone 16x16 motion compression)



Table 2. Proposed method on top of merge modification in TE5.2.3   


# Conclusions

The motion compression in 8x8 unit reduces motion data storage and gives similar gain compared to postponed motion compression method. The source code has been checked to verify the consistency with the description in JCTVC-L0279, and the simulation results in this document match with those provided by the proponents.

# Reference

1. V. Seregin, P. Onno, S. Liu, T. Lee, C. Kim, H. Yang “Description of Tool Experiment C5: Inter-layer syntax prediction using HEVC base layer”, JCTVC-K1105, Oct. 2012, Shanghai, China.
2. K. Sato, S. Lu, J. Xu “SHVC: On Motion Data Compression”, JCTVC-L0279, Jan. 2013, Geneva, Switzerland.
3. J. Lee, H. Lee, J. W. Kang, J. S. Choi “TE5: Results of test 5.2.3 on inter-layer motion vector prediction”, JCTVC-L0065, Jan. 2013, Geneva, Switzerland.