

Non-CE9: Merging candidate reordering

JCTVC-G181

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1. Overview

Overview

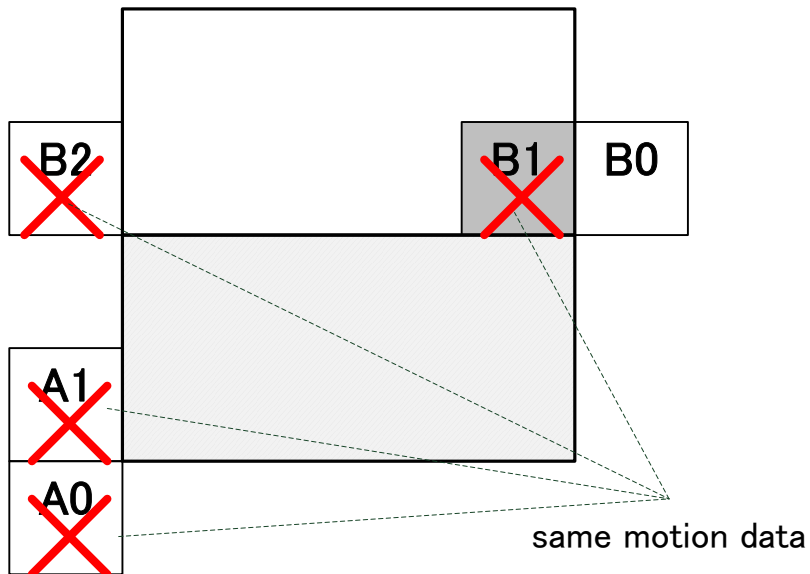
- Proposed technique
 - Reordering merging candidate based on partition type
- Algorithm
 - Not applied avoiding merging candidates process
 - Apply merging candidate reordering process
- Crosscheck
 - JCTVC-G468 by Mitsubishi
- Simulation results
 - Overall BD-rate gain 0.1% for RA and 0.1-0.2% for LD



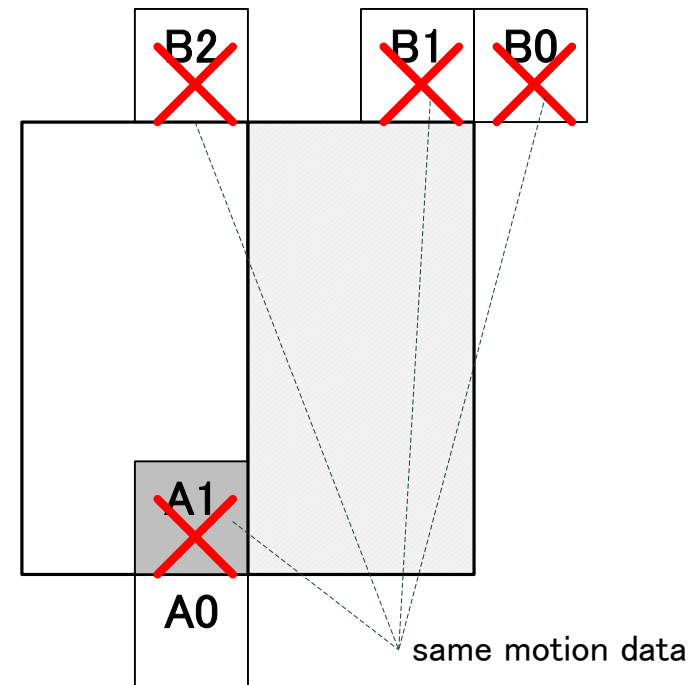
2. Algorithm

HM4.0 avoiding merging candidates process

- Invoked avoiding merging candidates process before 1st pruning process
- Need to compare all spatial candidates



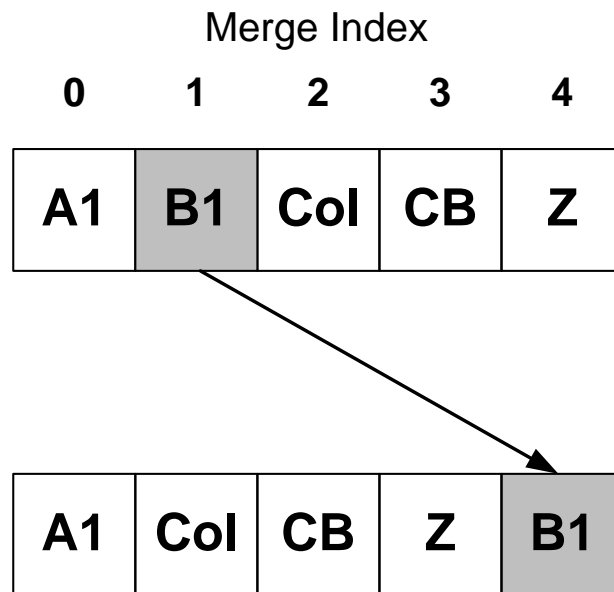
(a) 2NxN Partition1



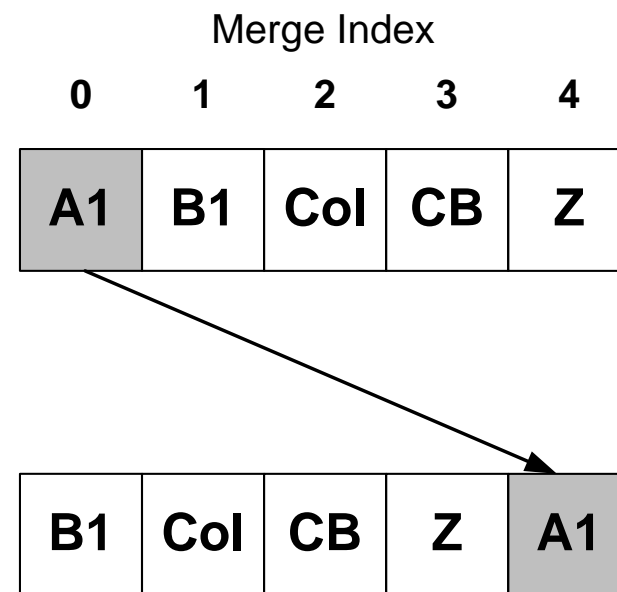
(b) Nx2N Partition1

Algorithm

- Not applying avoiding merging candidates process
- Identical availability with AMVP
- **Apply merging candidate reordering process**



(a) 2NxN Partition1



(b) Nx2N Partition1



3. Experiments

Experiments

- Overall BD rate gain
 - 0.1% for RA, 0.1%-0.2% for LD

| | Random Access HE | | | Random Access LC | | |
|-------------|------------------|--------------|--------------|------------------|--------------|--------------|
| | Y | U | V | Y | U | V |
| Class A | -0.1% | -0.3% | -0.3% | -0.1% | 0.0% | -0.1% |
| Class B | -0.1% | 0.0% | -0.1% | -0.1% | -0.1% | 0.0% |
| Class C | -0.1% | -0.1% | 0.0% | -0.1% | -0.1% | 0.0% |
| Class D | 0.0% | 0.0% | -0.1% | -0.1% | -0.2% | -0.1% |
| Class E | | | | | | |
| Overall | -0.1% | -0.1% | -0.1% | -0.1% | -0.1% | -0.1% |
| | -0.1% | -0.1% | -0.1% | -0.1% | -0.1% | -0.1% |
| Enc Time[%] | 99% | | | 99% | | |
| Dec Time[%] | 100% | | | 99% | | |

| | Low delay B HE | | | Low delay B LC | | |
|-------------|----------------|--------------|--------------|----------------|-------------|--------------|
| | Y | U | V | Y | U | V |
| Class A | | | | | | |
| Class B | -0.1% | -0.3% | -0.4% | -0.2% | -0.1% | -0.1% |
| Class C | -0.2% | -0.3% | 0.0% | -0.1% | -0.1% | -0.3% |
| Class D | -0.1% | 0.0% | 0.0% | -0.1% | 0.0% | 0.0% |
| Class E | 0.0% | 0.1% | 0.1% | -0.2% | 0.4% | -0.3% |
| Overall | -0.1% | -0.1% | -0.1% | -0.2% | 0.0% | -0.1% |
| | -0.1% | -0.1% | -0.1% | -0.2% | 0.0% | -0.1% |
| Enc Time[%] | 100% | | | 99% | | |
| Dec Time[%] | 100% | | | 99% | | |



4. Conclusion

Conclusion

- Algorithm
 - Not applied avoiding merging candidates process
 - Apply merging candidate reordering process
- Simulation results
 - Overall BD-rate gain 0.1% for RA and 0.1-0.2% for LD
- Suggestion
 - Adopted to the next WD and HM

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