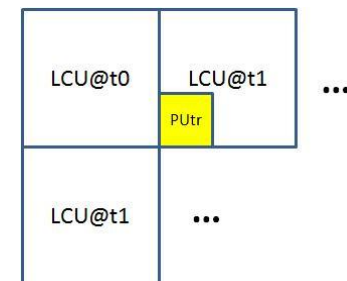


JCTVC-G516: Consideration on Spatial Motion Vector Prediction

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Introduction

- In HEVC, size of LCU is fixed throughout the sequence parallel processing as shown in the fig below is possible implementation.
- However motion info of TopRight PU (PUtr) is used for spatial MV prediction at LCU boundaries as well as inside LCU and it would become bottleneck for LCU-level parallelization.
- In this proposal it is tested to disable using TopRight PU motion info for MV coding (Moth AMVP and Merge).



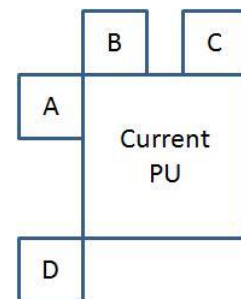
	Random Access HE			Random Access LC		
	Y	U	V	Y	U	V
Class A	0.2%	0.0%	0.1%	0.2%	0.2%	0.2%
Class B	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%
Class C	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%
Class D	0.1%	0.0%	0.1%	0.0%	-0.1%	0.1%
Class E						
Class F						
Overall	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%
	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%
Enc Time[%]	100%			100%		
Dec Time[%]	100%			101%		

	Low delay B HE			Low delay B LC		
	Y	U	V	Y	U	V
Class A						
Class B	0.2%	0.2%	0.1%	0.2%	0.2%	0.0%
Class C	0.1%	0.1%	-0.1%	0.1%	0.2%	-0.1%
Class D	0.1%	0.1%	0.1%	0.1%	-0.2%	0.1%
Class E	0.3%	0.6%	0.6%	0.2%	0.2%	0.5%
Class F						
Overall	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%
	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Enc Time[%]	100%			100%		
Dec Time[%]	100%			99%		

Thanks JVCKenwood for cross-checking! (JCTVC-G799)

Conclusion

- Average loss in coding efficiency with the proposed method is less than 0.2% for YUV components with RA/RA_Loco/LD/LD_Loco conditions.
- This loss would be compensated by changing neighboring PU definition as shown in the fig below only at the LCU boundaries.
- It is recommended that this proposal be studies in the core experiment.





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