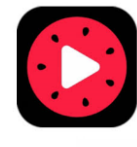


JVET-AE0109

Non-EE2: LIC flag derivation of merge candidates with template costs

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Summary

■ Motivation

- *In ECM, the LIC flag is inherited for a merge candidate.*
- *It may not be accurate in a region with illuminance change.*

■ Proposed method

- *It is proposed to derive the LIC flag of a merge candidate based on template costs.*

Proposed method

- The LIC flag of a merge candidate is derived by comparing two template costs: a SAD-based template cost, denoted as $C0$, and a Mean Removal SAD (MRSAD)-based template cost, denoted as $C1$
- The LIC flag is set to be false, if $C0 < C1$ and is set to be true, if $C0 \geq C1$
- To favor the inherited LIC flag
 - $C0 = \alpha \times C0$ if the inherited LIC flag is false
 - $C1 = \alpha \times C1$ if the inherited LIC flag is true
 - $\alpha < 1$.

Simulation results

	RA					LB				
	Y	U	V	EncT	DecT	Y	U	V	EncT	DecT
Class A1	-0.01%	-0.14%	0.06%	100%	100%					
Class A2	-0.01%	-0.04%	-0.06%	100%	100%					
Class B	-0.01%	0.05%	0.03%	99%	99%	-0.09%	0.03%	-0.26%	100%	101%
Class C	-0.01%	-0.17%	-0.09%	100%	99%	-0.08%	-0.30%	-0.20%	99%	101%
Class E						-0.21%	-0.12%	-0.34%	100%	99%
Overall	-0.01%	-0.06%	-0.01%	99%	99%	-0.12%	-0.12%	-0.26%	100%	101%
Class D	0.00%	-0.05%	0.09%	100%	100%	-0.14%	0.30%	-0.04%	100%	101%
Class F	-0.01%	-0.06%	0.02%	100%	99%	-0.13%	0.16%	-0.02%	100%	100%

Conclusion

- The proposed method can bring some coding gain with almost no coding time change
- Promising gain on LDB
 - *ECM-9.0 shows a higher gain on RA (~21%) than on LB (~17%) compared with VTM*
- It is recommended to further study this method in EE2