

CE11-related: Subblock boundary filter at 8x8 Grid (JVET-M0339)

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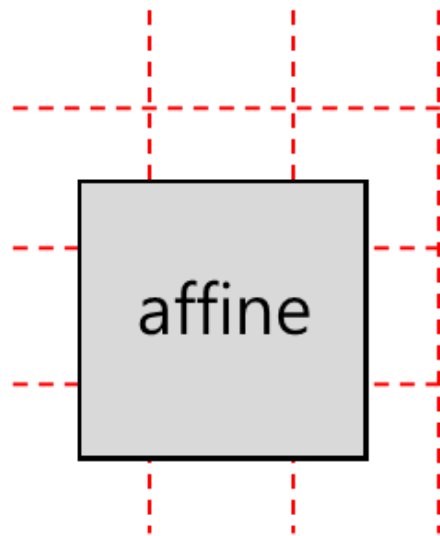
Summary

- It is suggested that follow understand and manner which had consensus at last JVET meeting regarding subblock edge deblock filtering.
 - Subblock edge should be handle same as CU edge.
 - Suggest that filtering to be allowed for all of block boundary on 8x8 grid.

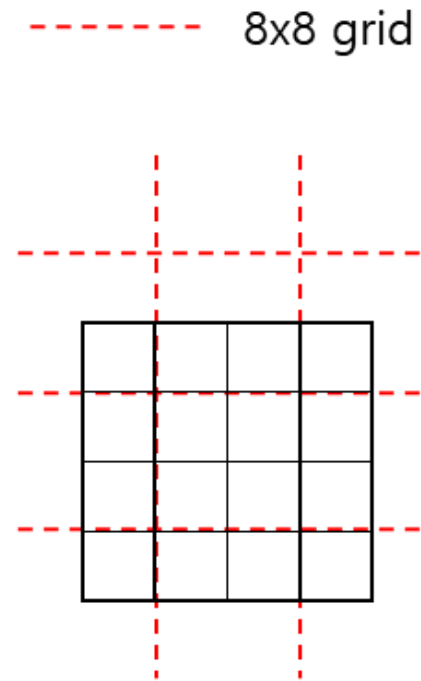
Issue

- At 12th JVET meeting,
 - Deblock filtering on subblock boundaries was proposed by JVET-L0074[1]
 - **Recommendation:** Apply the same logic to VVC (both ATMVP and affine) sub-blocks (on 8x8 grid) as to PU in HEVC deblocking. This means check the deblocking motion conditions for ATMVP and affine motion sub-block boundaries as if they were PUs in HEVC.
- Current VTM-3.0,
 - Only when CU block is aligned at 8x8 sample grid then its sub-block boundaries could be filtering.
 - This mean some sub-block boundaries at 8x8 sample do not be filtered.

Simple example case



(a) Affine coded block



(b) 4x4 Subblock of affine coded block

Experimental result

Random access Main10					
Over VTM 2.1					
	Y	U	V	EncT	DecT
Class A1	0.00%	-0.01%	0.03%	100%	100%
Class A2	0.00%	0.04%	0.04%	100%	100%
Class B	0.00%	-0.03%	-0.01%	100%	100%
Class C	0.02%	-0.01%	-0.01%	100%	100%
Class E					
Overall	0.00%	-0.01%	0.01%	100%	100%
Class D	0.00%	0.04%	0.03%	100%	99%
Class F	-0.01%	-0.02%	-0.01%	100%	100%

Low delay B Main10					
Over VTM 2.1					
	Y	U	V	EncT	DecT
Class A1					
Class A2					
Class B	0.02%	-0.22%	0.13%	100%	100%
Class C	-0.01%	0.18%	0.26%	100%	100%
Class E	0.06%	-0.25%	-0.16%	100%	102%
Overall	0.02%	-0.09%	0.10%	100%	100%
Class D	-0.02%	0.00%	-0.10%	100%	101%
Class F	-0.01%	-0.03%	-0.49%	100%	100%

Conclusion

- It is suggested that follow understand and manner which had consensus at last JVET meeting.