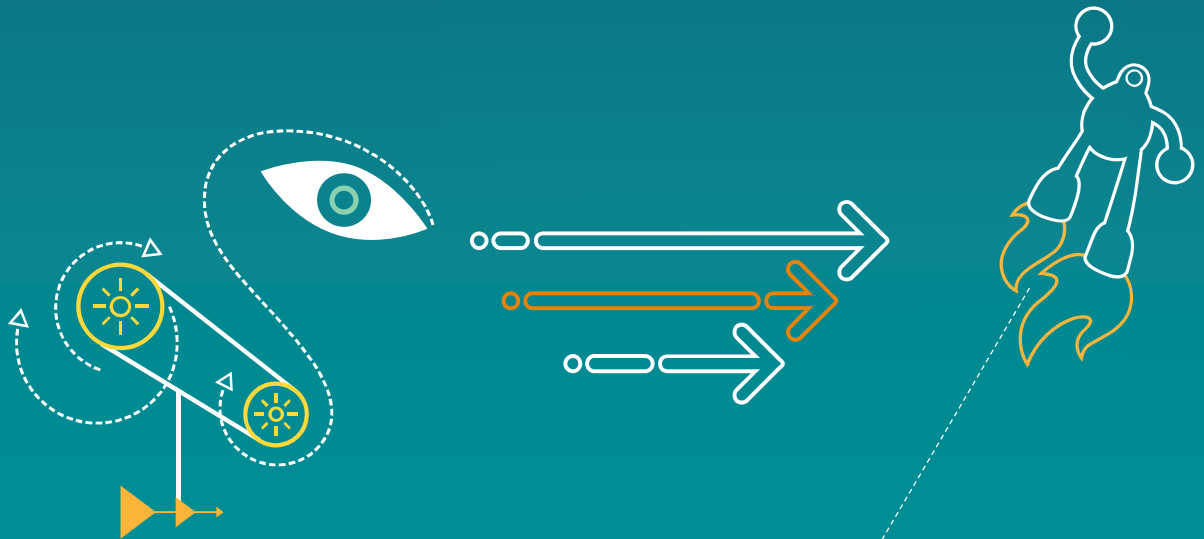


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JVET-D0126

Improvements on AMT for inter prediction residuals



Inter AMT in JEM-3.0

- One flag signaled per block (up to 64x64 size)
 - Indicating whether DCT-II is used
- If flag is 0, only DCT-II is applied
- Otherwise, for each of hor and ver transform, one flag to indicate if DST-7 or DCT-8 is applied

Proposal

Modification to inter AMT

- For 4-, 8- and 16-pt transform, replace DST-7 and DCT-8 with KLT
- Two 4x4, 8x8 and 16x16 KLT matrices are added

Test results

- Anchor: JEM-3.0
- Tested: JEM-3.0 + Proposal

	Random Access Main 10					Low delay B Main10					Low delay P Main10				
	Y	U	V	EncT	DecT	Y	U	V	EncT	DecT	Y	U	V	EncT	DecT
Class A1	-0.08%	-0.13%	0.05%	100%	100%										
Class A2	-0.06%	-0.04%	-0.11%	98%	98%										
Class B	-0.11%	0.06%	0.11%	99%	99%	-0.31%	-0.02%	0.21%	96%	94%	-0.27%	-0.18%	-0.29%	97%	95%
Class C	-0.18%	-0.16%	0.01%	101%	100%	-0.42%	-0.32%	-0.08%	101%	100%	-0.43%	-0.34%	0.05%	100%	100%
Class D	-0.16%	0.27%	0.16%	101%	100%	-0.45%	-0.67%	0.16%	100%	102%	-0.52%	-0.76%	-0.51%	101%	99%
Class E						-0.18%	-0.24%	-0.55%	101%	101%	-0.12%	0.02%	0.35%	102%	102%
Overall	-0.12%	0.00%	0.05%	100%	99%	-0.35%	-0.30%	-0.02%	99%	99%	-0.34%	-0.33%	-0.14%	100%	98%