

Non-CE2: Intra block copy and Inter signaling unification

JCTVC-T0227

Chao Pang, Ye-Kui Wang, Vadim Seregin,
Krishna Rapaka, Marta Karczewicz (Qualcomm)
Xiaozhong Xu, Shan Liu, Shawmin Lei (MediaTek)
Bin Li, Jizheng Xu (Microsoft)

Experimental results

Intra BC and Inter unification

	All Intra			Random Access			Low delay B		
	G/Y	B/U	R/V	G/Y	B/U	R/V	G/Y	B/U	R/V
RGB, text & graphics with motion, 1080p & 720p	0.6%	-0.8%	-0.8%	-1.0%	-2.7%	-2.7%	-1.3%	-2.7%	-2.7%
RGB, mixed content, 1440p & 1080p	0.0%	-0.8%	-0.9%	-0.1%	-1.8%	-1.8%	-0.5%	-2.0%	-2.1%
RGB, Animation, 720p	0.1%	0.1%	0.1%	0.0%	0.1%	-0.1%	0.1%	0.0%	-0.1%
RGB, camera captured, 1080p	0.1%	0.1%	0.1%	-0.2%	-0.1%	-0.1%	0.1%	0.0%	0.0%
YUV, text & graphics with motion, 1080p & 720p	1.0%	-0.3%	-0.5%	-1.0%	-2.6%	-2.9%	-1.3%	-2.8%	-3.1%
YUV, mixed content, 1440p & 1080p	0.3%	-0.8%	-0.9%	-0.2%	-2.1%	-2.2%	-0.8%	-3.3%	-3.2%
YUV, Animation, 720p	0.1%	0.1%	0.1%	0.0%	-0.2%	0.1%	0.1%	-0.1%	0.4%
YUV, camera captured, 1080p	0.1%	0.2%	0.2%	-0.2%	0.0%	0.0%	0.0%	0.1%	0.2%
Enc Time[%]	117%			100%			100%		
Dec Time[%]	104%			94%			100%		

Experimental results

If BVD is always signalled in $\frac{1}{4}$ pixel precision in the unification

	All Intra			Random Access			Low delay B		
	G/Y	B/U	R/V	G/Y	B/U	R/V	G/Y	B/U	R/V
RGB, text & graphics with motion, 1080p & 720p	3.4%	1.8%	1.9%	0.4%	-1.5%	-1.5%	-0.7%	-2.1%	-2.1%
RGB, mixed content, 1440p & 1080p	1.5%	0.5%	0.5%	0.7%	-0.9%	-1.0%	-0.1%	-1.6%	-1.9%
RGB, Animation, 720p	0.4%	0.5%	0.4%	0.2%	0.2%	0.1%	0.2%	0.0%	0.1%
RGB, camera captured, 1080p	0.1%	0.1%	0.2%	-0.1%	0.0%	-0.1%	0.1%	0.0%	0.0%
YUV, text & graphics with motion, 1080p & 720p	4.2%	2.9%	2.5%	0.5%	-1.2%	-1.6%	-0.6%	-2.2%	-2.3%
YUV, mixed content, 1440p & 1080p	2.3%	0.9%	0.8%	1.0%	-1.2%	-1.3%	-0.3%	-3.2%	-3.3%
YUV, Animation, 720p	0.7%	0.8%	0.6%	0.2%	0.1%	0.3%	0.2%	0.3%	0.0%
YUV, camera captured, 1080p	0.2%	0.4%	0.3%	-0.1%	0.1%	0.0%	0.0%	0.2%	0.3%
Enc Time[%]	118%			105%			104%		
Dec Time[%]	106%			97%			101%		