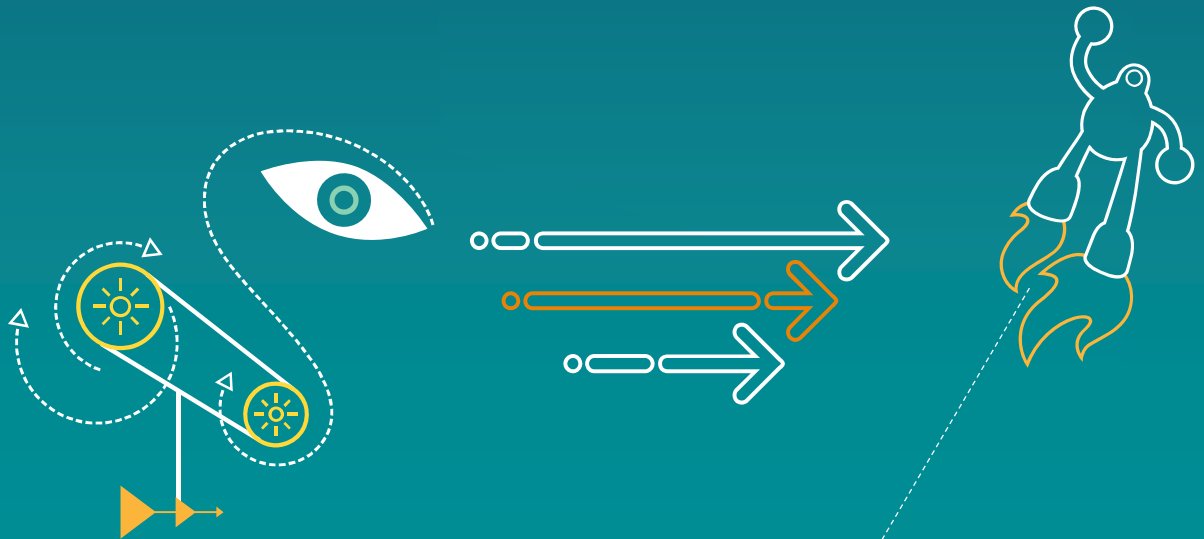V. Seregin, R. Joshi, and M. Karczewicz

JCTVC-V0044
Weighted prediction for intra block copy

QUALCOMM®

Weighted prediction for intra block copy

- It is proposed to restore WP for IBC

- The following encoder configuration was implemented:
  1. IBC picture is added to List 1 as a last reference picture
  2. Only uni-directional IBC search for List 1 is added, similar to current List 0
  3. WP is enabled only for the IBC picture in List 1, and only offset -8 is used

- Tests
  - Test 1: includes #1 and #2 and is used as anchor
  - Test 2: includes #1, #2, and #3

Test results (Test 2 vs Test1)

		Lossy Y BD rate			Lossless Y BD rate	
		4:4:4 FF	4:4:4 4CTU	4:2:0	4:4:4	4:2:0
AI	RGB, text & graphics with motion, 1080p & 720p	-0.4%	-0.2%		-0.1%	
	RGB, mixed content, 1440p & 1080p	-0.2%	-0.1%		-0.1%	
	RGB, Animation, 720p	0.0%	0.0%		0.0%	
	RGB, camera captured, 1080p	0.0%	0.0%		0.0%	
	YUV, text & graphics with motion, 1080p & 720p	-0.5%	-0.3%	-0.6%	-0.1%	-0.6%
	YUV, mixed content, 1440p & 1080p	-0.1%	-0.1%	-0.2%	0.0%	-0.1%
	YUV, Animation, 720p	0.0%	0.0%	0.0%	0.0%	0.0%
	YUV, camera captured, 1080p	0.0%	0.0%		0.0%	
RA	RGB, text & graphics with motion, 1080p & 720p	-0.1%	0.0%		0.0%	
	RGB, mixed content, 1440p & 1080p	0.0%	0.0%		0.0%	
	RGB, Animation, 720p	0.0%	0.0%		0.0%	
	RGB, camera captured, 1080p	0.0%	0.0%		0.0%	
	YUV, text & graphics with motion, 1080p & 720p	-0.1%	0.0%	-0.1%	0.0%	-0.1%
	YUV, mixed content, 1440p & 1080p	0.0%	0.0%	0.0%	0.0%	0.0%
	YUV, Animation, 720p	0.1%	0.0%	0.0%	0.0%	0.0%
	YUV, camera captured, 1080p	0.0%	0.0%		0.0%	
LB	RGB, text & graphics with motion, 1080p & 720p	0.1%	0.2%		0.0%	
	RGB, mixed content, 1440p & 1080p	-0.2%	0.1%		0.0%	
	RGB, Animation, 720p	0.0%	0.0%		0.0%	
	RGB, camera captured, 1080p	0.0%	-0.1%		0.0%	
	YUV, text & graphics with motion, 1080p & 720p	0.2%	0.1%	0.2%	0.0%	0.0%
	YUV, mixed content, 1440p & 1080p	0.2%	0.1%	0.2%	0.0%	-0.4%
	YUV, Animation, 720p	0.2%	0.2%	0.1%	0.0%	0.0%
	YUV, camera captured, 1080p	0.0%	0.0%		0.0%	