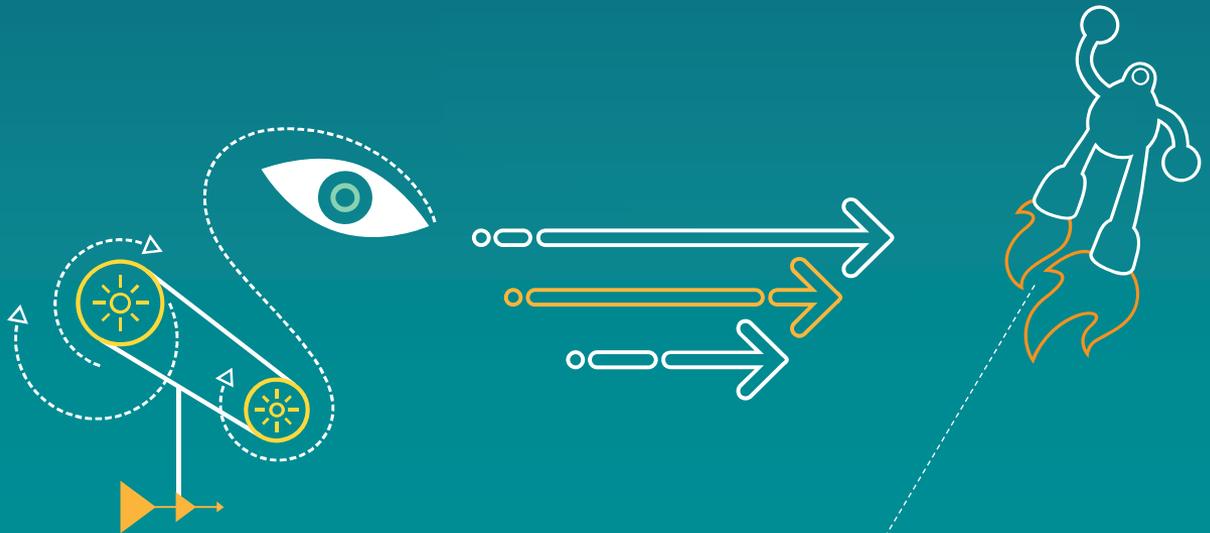


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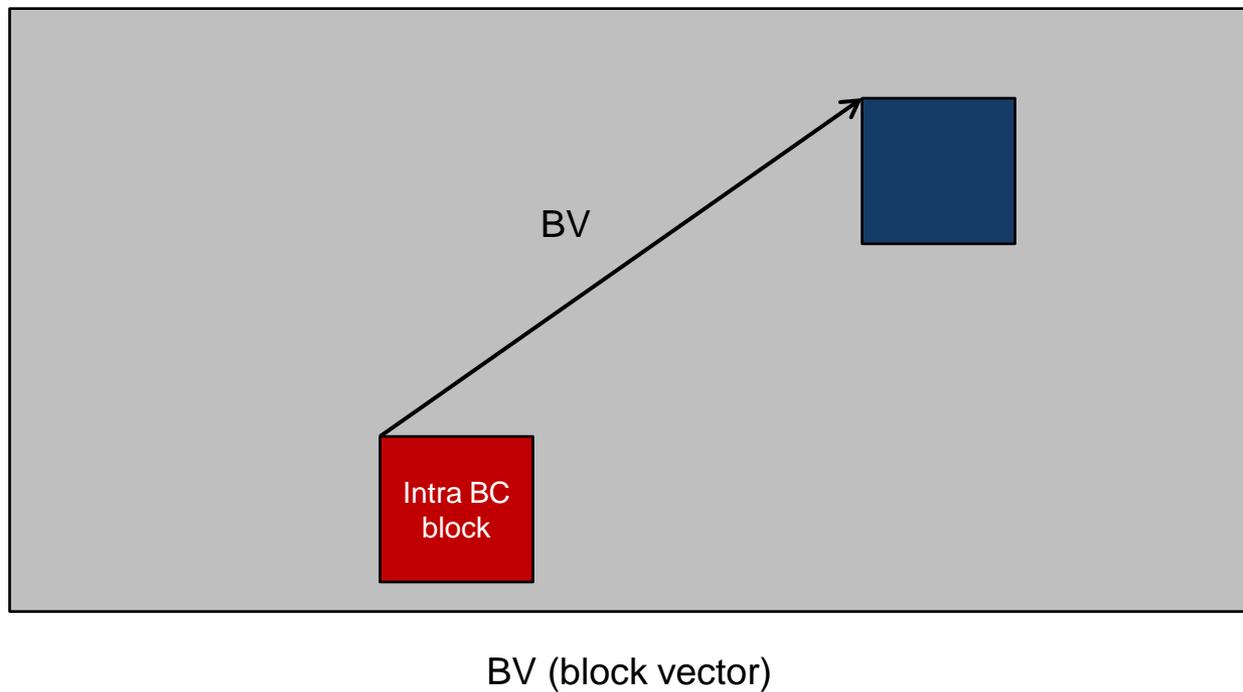
## JCTVC-R0189 Non-SCCE1: Intra block copy deblocking

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# Intra block copy (Intra BC)

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The search region for Intra BC is the entire frame for both intra- and inter- frames.

# Intra BC deblocking

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- Intra deblocking is used for Intra BC in SCM 1.0 ( $B_s = 2$ )
- The filter strength may be too strong for Intra BC
  - Intra BC usually work on sharp edges, e.g. texts
  - Two neighboring Intra BC blocks with same block vector
  - Like inter motion compensation

# Proposed

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- Intra BC is treated as Inter during the deblocking process;
- Intra BC block is converted to be a uni-directionally predictive Inter block
  - with the block vector being the motion vector
  - with the current picture being the reference picture
- **Deblocking module unchanged, with no extra implementation burden in SCC extension**

# Lossy results

	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	0.0%	-0.9%	-0.9%	-0.3%	-1.7%	-1.6%	-0.5%	-1.8%	-1.6%
RGB, text & graphics with motion,720p	0.0%	-0.7%	-0.6%	-0.1%	-1.0%	-1.0%	-0.2%	-1.1%	-1.1%
RGB, mixed content, 1440p	0.0%	-0.3%	-0.3%	-0.1%	-0.7%	-0.8%	-0.3%	-0.7%	-0.8%
RGB, mixed content, 1080p	0.0%	-0.5%	-0.5%	-0.1%	-1.0%	-1.1%	-0.3%	-1.6%	-1.7%
RGB, Animation, 720p	0.0%	0.0%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%	0.0%
RGB, camera captured, 1080p	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
YUV, text & graphics with motion, 1080p	0.0%	-0.7%	-0.7%	-0.1%	-1.3%	-1.3%	-0.3%	-1.6%	-1.3%
YUV, text & graphics with motion,720p	0.0%	-0.3%	-0.3%	0.0%	-0.7%	-0.8%	0.0%	-0.7%	-1.0%
YUV, mixed content, 1440p	0.0%	-0.4%	-0.4%	0.0%	-1.1%	-1.0%	-0.1%	-1.2%	-1.2%
YUV, mixed content, 1080p	0.0%	-0.8%	-0.7%	-0.1%	-1.7%	-1.6%	-0.3%	-3.5%	-3.4%
YUV, Animation, 720p	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.5%	-0.1%
YUV, camera captured, 1080p	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	-0.2%
Enc Time[%]	102%			100%			98%		
Dec Time[%]	99%			97%			100%		

# Conclusions

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- Intra BC is treated as Inter in deblocking process
- Deblocking module unchanged, resulting in no extra implementation cost and certain compression performance improvement

# Thank you

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