CLAIMS

What is claimed is:

1. A method for coding or for decoding video data, comprising:

adapting a decoder-side motion vector refinement (DMVR) process to coding tools with an illumination change, wherein, for a block, the DMVR process includes:

determining that at least one coding tool, of the coding tools, is enabled; and

performing the DMVR process, wherein a distortion metric is selected based on the at least one coding tool.

2. The method of claim 1, wherein the selection of the distortion metric is between a sum of absolute differences (SAD) and a mean removed SAD (MRSAD).

3. The method of claim 1, wherein the at least one coding tool is a bi-prediction weight (BPW) tool, and wherein the selected distortion metric is a mean removed SAD (MRSAD) based on a BPW weight index indicating non-equal weights.

4. The method of claim 1, wherein the at least one coding tool comprises any of:

a bi-prediction weight (BPW) tool, a local illumination compensation (LIC) tool, or a weighted prediction (WP) tool.

5. The method of claim 1, wherein the at least one coding tool comprises a bi-prediction weight (BPW) tool and wherein a BPW weight index is inherited.

6. The method of claim 1, wherein the at least one coding tool for the block being enabled is determined based on any of:

a bi-prediction weight (BPW) weight index indicating non-equal weights,

a local illumination compensation (LIC) being enabled or an LIC flag being true, or

a weighted prediction (WP) being enabled for the block.

7. The method of claim 1, further comprising:

extracting gradients in reference picture predictions; and

computing a sum of absolute differences (SAD) using the extracted gradients.

8. The method of claim 1, wherein a bi-directional optical flow (BDOF) tool is not applied based on the at least one coding tool with the illumination change.

9. The method of claim 1, further comprising:

performing a DMVR adaptation based on a determination that a current coding unit (CU) size is smaller than or equal to a threshold.

10. The method of claim 1, further comprising:

performing a DMVR adaptation based on a determination that a current coding unit (CU) size is larger than or equal to a threshold.

11. The method of claim 1, further comprising applying a bi-prediction weighting with refined motion vector (MV).

12. The method of claim 1, further comprising deriving bi-prediction weighting parameters with the DMVR process.

13. An apparatus for coding or for decoding video data, comprising:

at least one processor; and

memory storing instructions that, when executed by the at least one processor, cause the apparatus to:

adapt a decoder-side motion vector refinement (DMVR) process to coding tools with an illumination change, wherein, for a block, the DMVR process includes:

determining that at least one coding tool, of the coding tools, is enabled, and

performing the DMVR process wherein a distortion metric is selected based on the at least one coding tool.

14. The apparatus of claim 13, wherein the selection of the distortion metric is between a sum of absolute differences (SAD) and a mean removed SAD (MRSAD).

15. The apparatus of claim 13, wherein the at least one coding tool is a bi-prediction weight (BPW) tool, and wherein the selected distortion metric is a mean removed SAD (MRSAD) based on a BPW weight index indicating non-equal weights.

16. The apparatus of claim 13, wherein the at least one coding tool comprises any of:

a bi-prediction weight (BPW) tool, a local illumination compensation (LIC) tool, or a weighted prediction (WP) tool.

17. The apparatus of claim 13, wherein the at least one coding tool comprises a bi-prediction weight (BPW) tool, and wherein a BPW weight index is inherited.

18. The apparatus of claim 13, wherein, when determining that the at least one coding tool for the block is enabled, the instructions further cause the apparatus to determine:

a bi-prediction weight (BPW) weight index indicating non-equal weights;

a local illumination compensation (LIC) being enabled or an LIC flag being true; or

a weighted prediction (WP) being enabled for the block.

19. The apparatus of claim 13, wherein the instructions further cause the apparatus to:

extract gradients in reference picture predictions; and

compute a sum of absolute differences (SAD) using the extracted gradients.

20. The apparatus of claim 13, wherein a bi-directional optical flow (BDOF) tool is not applied based on the at least one coding tool with the illumination change.

21. The apparatus of claim 13, wherein the instructions further cause the apparatus to:

perform a DMVR adaptation based on a determination that a current coding unit (CU) size is smaller than or equal to a threshold.

22. The apparatus of claim 13, wherein the instructions further cause the apparatus to:

perform a DMVR adaptation based on a determination that a current coding unit (CU) size is larger than or equal to a threshold.

23. The apparatus of claim 13, wherein the instructions further cause the apparatus to:

apply a bi-prediction weighting with refined motion vector (MV).

24. The apparatus of claim 13, wherein the instructions further cause the apparatus to:

derive bi-prediction weighting parameters with the DMVR process.