CLAIMS

1. An apparatus for processing video data, comprising:

memory; and

one or more processors coupled to the memory, the one or more processors being configured to:

determine that an overlapped block motion compensation (OBMC) mode is enabled for a current subblock of a block within a bi-directional slice (B-slice) of video data;

for at least one neighboring subblock adjacent to the current subblock:

determine that a first condition, a second condition, and a third condition are met,

the first condition comprising that a reference picture list for uni-prediction of the current subblock was used to predict the at least one neighboring subblock, the reference picture list including an indication of reference pictures that can be used for the uni-prediction of the current subblock;

the second condition comprising that identical one or more reference pictures are used to determine motion vectors associated with the current subblock and the at least one neighboring subblock; and

the third condition comprising that a first difference between horizontal motion vectors of the current subblock and the at least one neighboring subblock and a second difference between vertical motion vectors of the current subblock and the at least one neighboring subblock do not exceed a motion vector difference threshold, wherein the motion vector difference threshold is greater than zero; and

based on the determination that the OBMC mode is enabled for the current subblock and the determination that the first condition, the second condition, and the third condition are met, determine not to use motion information of the at least one neighboring subblock for motion compensation of the current subblock.

2. The apparatus of claim 1, wherein the one or more processors are configured to:

based on a determination to use a decoder side motion vector refinement (DMVR) mode, a subblock-based temporal motion vector prediction (SbTMVP) mode, or an affine motion compensation prediction mode for the current subblock, determine to perform a subblock-boundary OBMC mode for the current subblock.

3. The apparatus of claim 2, wherein, to perform the subblock-boundary OBMC mode for the current subblock, the one or more processors are configured to:

determine a first prediction associated with the current subblock, a second prediction associated with a first OBMC block adjacent to a top border of the current subblock, a third prediction associated with a second OBMC block adjacent to a left border of the current subblock, a fourth prediction associated with a third OBMC block adjacent to a bottom border of the current subblock, and a fifth prediction associated with a fourth OBMC block adjacent to a right border of the current subblock;

determine a sixth prediction based on a result of applying a first weight to the first prediction, a second weight to the second prediction, a third weight to the third prediction, a fourth weight to the fourth prediction, and a fifth weight to the fifth prediction; and

generate, based on the sixth prediction, a blended subblock corresponding to the current subblock.

4. The apparatus of claim 3, wherein each of the second weight, the third weight, the fourth weight, and the fifth weight comprises one or more weight values associated with one or more samples from a corresponding subblock of the current subblock, wherein a sum of weight values of corner samples of the current subblock is larger than a sum of weight values of other boundary samples of the current subblock.

5. The apparatus of claim 4, wherein the sum of weight values of the other boundary samples of the current subblock is larger than a sum of weight values of non-boundary samples of the current subblock.

6. The apparatus of claim 1, the one or more processors being configured:

determine to use a local illumination compensation (LIC) mode for an additional block of video data; and

based on the determination to use the LIC mode for the additional block, not signal information associated with an OBMC mode for the additional block.

7. The apparatus of claim 6, wherein, to not signal information associated with the OBMC mode for the additional block, the one or more processors are configured to:

signal a syntax flag with an empty value, the syntax flag being associated with the OBMC mode.

8. The apparatus of claim 1, the one or more processors being configured to:

receive a signal including a syntax flag with an empty value, the syntax flag being associated with an OBMC mode for an additional block of video data.

9. The apparatus of claim 8, wherein the one or more processors are configured to:

based on the syntax flag with the empty value, determine not to use the OBMC mode for the additional block.

10. The apparatus of claim 6, wherein, to not signal information associated with the OBMC mode for the additional block, the one or more processors are configured to:

based on the determination to use the LIC mode for the additional block, determine not to use or to enable OBMC mode for the additional block; and

not signal a value associated with the OBMC mode for the additional block.

11. The apparatus of claim 6, wherein the one or more processors are configured to:

determine whether the OBMC mode is enabled for the additional block; and

based on the determination of whether the OBMC mode is enabled for the additional block and the determination to use the LIC mode for the additional block, determine whether to skip signaling information associated with the OBMC mode for the additional block.

12. The apparatus of claim 1, wherein the one or more processors are configured to:

determine to use a coding unit (CU)-boundary OBMC mode for the current subblock of the block of video data; and

determine a final prediction for the current subblock based on a sum of a first result of applying a weight associated with the current subblock to a respective prediction associated with the current subblock and a second result of applying one or more respective weights to one or more respective predictions associated with one or more subblocks adjacent to the current subblock.

13. The apparatus of claim 1, wherein, to determine not to use motion information of the at least one neighboring subblock for motion compensation of the current subblock, the one or more processors are configured to:

not use motion information of the at least one neighboring subblock for motion compensation of the current subblock.

14. The apparatus of claim 1, wherein the apparatus includes a decoder.

15. The apparatus of claim 14, further comprising a display configured to display one or more output pictures associated with the video data.

16. The apparatus of claim 1, wherein the OBMC mode comprises a subblock-boundary OBMC mode.

17. The apparatus of claim 1, wherein the apparatus includes an encoder.

18. The apparatus of claim 17, further comprising a camera configured to capture pictures associated with the video data.

19. The apparatus of claim 1, wherein the apparatus is a mobile device.

20. A method for processing video data, comprising:

determining that an overlapped block motion compensation (OBMC) mode is enabled for a current subblock of a block within a bi-directional slice (B-slice) of video data;

for at least one neighboring subblock adjacent to the current subblock, determining that a first condition, a second condition, and a third condition are met,

the first condition comprising that a reference picture list for uni-prediction of the current subblock was used to predict the at least one neighboring subblock, the reference picture list including an indication of reference pictures that can be used for the uni-prediction of the current subblock;

the second condition comprising that identical one or more reference pictures are used to determine motion vectors associated with the current subblock and the at least one neighboring subblock; and

the third condition comprising that a first difference between horizontal motion vectors of the current subblock and the at least one neighboring subblock and a second difference between vertical motion vectors of the current subblock and the at least one neighboring subblock do not exceed a motion vector difference threshold, wherein the motion vector difference threshold is greater than zero; and

based on the determination to use the OBMC mode for the current subblock and the determination that the first condition, the second condition, and the third condition are met, determining not to use motion information of the at least one neighboring subblock for motion compensation of the current subblock.

21. The method of claim 20, further comprising:

based on a determination to use a decoder side motion vector refinement (DMVR) mode, a subblock-based temporal motion vector prediction (SbTMVP) mode, or an affine motion compensation prediction mode for the current subblock, determining to perform a subblock-boundary OBMC mode for the current subblock.

22. The method of claim 21, wherein performing the subblock-boundary OBMC mode for the current subblock comprises:

determining a first prediction associated with the current subblock, a second prediction associated with a first OBMC block adjacent to a top border of the current subblock, a third prediction associated with a second OBMC block adjacent to a left border of the current subblock, a fourth prediction associated with a third OBMC block adjacent to a bottom border of the current

subblock, and a fifth prediction associated with a fourth OBMC block adjacent to a right border of the current subblock;

determining a sixth prediction based on a result of applying a first weight to the first prediction, a second weight to the second prediction, a third weight to the third prediction, a fourth weight to the fourth prediction, and a fifth weight to the fifth prediction; and

generating, based on the sixth prediction, a blended subblock corresponding to the current subblock.

23. The method of claim 22, wherein each of the second weight, the third weight, the fourth weight, and the fifth weight comprises one or more weight values associated with one or more samples from a corresponding subblock of the current subblock, wherein a sum of weight values of corner samples of the current subblock is larger than a sum of weight values of other boundary samples of the current subblock.

24. The method of claim 23, wherein the sum of weight values of the other boundary samples of the current subblock is larger than a sum of weight values of non-boundary samples of the current subblock.

25. The method of claim 20, further comprising:

determining to use a local illumination compensation (LIC) mode for an additional block of video data; and

based on the determination to use the LIC mode for the additional block, not signaling information associated with an OBMC mode for the additional block.

26. The method of claim 25, wherein not signaling information associated with the OBMC mode for the additional block comprises:

signaling a syntax flag with an empty value, the syntax flag being associated with the OBMC mode.

27. The method of claim 20, further comprising:

receiving a signal including a syntax flag with an empty value, the syntax flag being associated with an OBMC mode for an additional block of video data.

28. The method of claim 27, further comprising:

based on the syntax flag with the empty value, determining not to use the OBMC mode for the additional block.

29. The method of claim 25, wherein not signaling information associated with the OBMC mode for the additional block comprises:

based on the determination to use the LIC mode for the additional block, determining not to use or to enable OBMC mode for the additional block; and

not signaling a value associated with the OBMC mode for the additional block.

30. The method of claim 25, further comprising:

determining whether the OBMC mode is enabled for the additional block; and

based on the determination of whether the OBMC mode is enabled for the additional block and the determination to use the LIC mode for the additional block, determining whether to not signal information associated with the OBMC mode for the additional block.

31. The method of claim 20, further comprising:

determining to use a coding unit (CU)-boundary OBMC mode for the current subblock of the block of video data; and

determining a final prediction for the current subblock based on a sum of a first result of applying a weight associated with the current subblock to a respective prediction associated with the current subblock and a second result of applying one or more respective weights to one or more respective predictions associated with one or more subblocks adjacent to the current subblock.

32. The method of claim 20, wherein determining not to use motion information of the at least one neighboring subblock for motion compensation of the current subblock comprises:

skipping use of motion information of the at least one neighboring subblock for motion compensation of the current subblock.

33. The method of claim 20, wherein the OBMC mode comprises a subblock-boundary OBMC mode.