CLAIMS

1. A method for coding video data, the method comprising: obtaining values of luma motion vectors for a plurality of luma sub-blocks of a current block of the video data selected for coding using affine inter motion compensation; determining, based on values of luma motion vectors of a sub-set of the plurality of luma sub-blocks, a value of a chroma motion vector for a chroma sub-block that corresponds to the plurality of luma sub-blocks, wherein the value of the chroma motion vector is determined based on two diagonally positioned luma sub-blocks of the plurality of luma sub-blocks that are selected for coding using affine inter motion compensation; predicting, using affine motion compensation, respective samples of each luma sub-block of the plurality of luma sub-blocks based on respective values of the luma motion vectors; and predicting, using affine motion compensation, samples of the chroma sub-block based on the value of the chroma motion vector.

2. The method of claim 1, wherein the plurality of luma sub-blocks includes a top-left luma sub-block, a top-right luma sub-block, a bottom-left luma sub-block, and a bottom-right luma sub-block.

3. The method of claim 2, wherein the two diagonally positioned luma sub-blocks include the top-left luma sub-block and the bottom-right luma sub-block.

4. The method of claim 2, wherein the value of the chroma motion vector is determined based on either: the value of the luma motion vector of the top-right luma sub-block and the value of the luma motion vector of the bottom-left luma sub-block; or the value of the luma motion vector of the top-left luma sub-block and the value of the luma motion vector of the bottom-right luma sub-block.

5. The method of claim 1, wherein the luma sub-blocks are each 4×4 samples, and wherein the chroma sub-block is 4×4 samples.

6. The method of claim 1, wherein determining the value of the chroma motion vector comprises: determining the value of the chroma motion vector as an average of the values of the luma motion vectors of the sub-set of the plurality of luma sub-blocks.

7. The method of claim 6, wherein determining the average is the values of the luma motion vectors of the sub-set of the plurality of luma sub-blocks comprises: determining a sum of the values of the luma motion vectors of the sub-set of the plurality of luma sub-blocks; and right-shifting the determined sum to calculate the value of the chroma motion vector.

8. A device for coding video data; the device comprising: a memory configured to store the video data; and one or more processors implemented in circuitry and configured to: obtain values of luma motion vectors for a plurality of luma sub-blocks of a current block of the video data selected for coding using affine inter motion compensation; determine, based on values of luma motion vectors of a sub-set of the plurality of luma sub-blocks, a value of a chroma motion vector for a chroma sub-block that corresponds to the plurality of luma sub-blocks, wherein the value of the chroma motion vector is determined based on two diagonally positioned luma sub-blocks of the plurality of luma sub-blocks that are selected for coding using affine inter motion compensation; predict, using affine motion compensation, respective samples of each luma sub-block of the plurality of luma sub-blocks based on

respective values of the luma motion vectors; and predict, using affine motion compensation, samples of the chroma sub-block based on the value of the chroma motion vector.

9. The device of claim 8, wherein the plurality of luma sub-blocks includes a top-left luma sub-block, a top-right luma sub-block, a bottom-left luma sub-block, and a bottom-right luma sub-block.

10. The device of claim 9, wherein the two diagonally positioned luma sub-blocks include the top-left luma sub-block and the bottom-right luma sub-block.

11. The device of claim 9, wherein the one or more processors determine the value of the chroma motion vector based on either: the value of the luma motion vector of the top-right luma sub-block and the value of the luma motion vector of the bottom-left luma sub-block; or the value of the luma motion vector of the top-left luma sub-block and the value of the luma motion vector of the bottom-right luma sub-block.

12. The device of claim 8, wherein the luma sub-blocks are each 4×4 samples, and wherein the chroma sub-block is 4×4 samples.

13. The device of claim 8, wherein, to determine the value of the chroma motion vector, the one or more processors are configured to: determine the value of the chroma motion vector as an average of the values of the luma motion vectors of the sub-set of the plurality of luma sub-blocks.

14. The device of claim 13, wherein, to determine the average is the values of the luma motion vectors of the sub-set of the plurality of luma sub-blocks, the one or more processors are configured to: determine a sum of the values of the luma motion vectors of the sub-set of the plurality of luma sub-blocks; and right-shift the determined sum to calculate the value of the chroma motion vector.

15. A non-transitory computer-readable storage medium having stored thereon instructions that, when executed, cause one or more processors of a video coder to: obtain values of luma motion vectors for a plurality of luma sub-blocks of a current block of video data selected for coding using affine inter motion compensation; determine, based on values of luma motion vectors of a sub-set of the plurality of luma sub-blocks, a value of a chroma motion vector for a chroma sub-block that corresponds to the plurality of luma sub-blocks, wherein the value of the chroma motion vector is determined based on two diagonally positioned luma sub-blocks of the plurality of luma sub-blocks that are selected for coding using affine inter motion compensation; predict, using affine motion compensation, respective samples of each luma sub-block of the plurality of luma sub-blocks based on respective values of the luma motion vectors; and predict, using affine motion compensation, samples of the chroma sub-block based on the value of the chroma motion vector.

16. The non-transitory computer-readable storage medium of claim 15, wherein: the plurality of luma sub-blocks includes a top-left sub-block, a top-right sub-block, a bottom-left sub-block, and a bottom-right sub-block; the sub-set of the plurality of luma sub-blocks includes two diagonally positioned luma sub-blocks; and the two diagonally positioned luma sub-blocks include the top-left sub-block and the bottom-right sub-block.

17. The non-transitory computer-readable storage medium of claim 16, wherein the instructions that cause the one or more processors to determine the value of the chroma motion vector, comprise instructions that cause the one or more processors to: determine the value of the chroma motion vector as an average of the values of the luma motion vectors of the sub-set of the plurality of luma sub-blocks.

18. A device for coding video data, the device comprising: means for obtaining values of luma motion vectors for a plurality of luma sub-blocks of a current block of the video data selected for coding using affine inter motion compensation; means for determining, based on values of luma motion vectors of a sub-set of the plurality of luma sub-blocks, a value of a chroma motion vector for a chroma sub-block that corresponds to the plurality of luma sub-blocks, wherein the value of the chroma motion vector is determined based on two diagonally positioned luma sub-blocks of the plurality of luma sub-blocks that are selected for coding using affine inter motion compensation; means for predicting, using affine motion compensation, respective samples of each luma sub-block of the plurality of luma sub-blocks based on respective values of the luma motion vectors; and means for predicting, using affine motion compensation, samples of the chroma sub-block based on the value of the chroma motion vector.

19. The method of claim 7, wherein the determining the sum comprises rounding the sum of the values of the luma motion vectors of the sub-set of the plurality of luma sub-blocks.

20. The method of claim 1, wherein the chroma format of the chroma sub-block is 4:2:0 or 4:2:2.

21. The device of claim 14, wherein, to determine the sum, the one or more processors are configured to round the sum of the values of the luma motion vectors of the sub-set of the plurality of luma sub-blocks.

22. The device of claim 8, wherein the chroma format of the chroma sub-block is 4:2:0 or 4:2:2.

23. The non-transitory computer-readable storage medium of claim 17, wherein the instructions that cause the one or more processors to determine the value of the chroma motion vector as the average of the values of the luma motion vectors comprise instructions that cause the one or more processors to round a sum of the values of the luma motion vectors of the sub-set of the plurality of luma sub-blocks.

24. The non-transitory computer-readable storage medium of claim 15, wherein the chroma format of the chroma sub-block is 4:2:0 or 4:2:2.