CLAIMS

What is claimed is:

1. A method of processing video data, comprising:

performing a conversion between a current video block of a video and a bitstream of the video,

wherein, during the conversion, a use of a geometric partitioning mode is allowed for the current video block, and the geometric partitioning mode includes multiple partition schemes,

wherein parameters of the multiple partition schemes of the geometric partitioning mode are computed using a set of angles including a first number of angles that is less than a first threshold value and a set of distances for the set of angles including a second number of distances that is less than a second threshold value,

wherein a number of distances for a vertical angle is equal to 2 and a number of distances for a horizontal angle is equal to 2, and

wherein in response to a width to height ratio or a height to width ratio of the current video block being greater than a fourth threshold, the geometric partitioning mode is not allowed for the current video block.

2. The method of claim 1, wherein the first threshold value is equal to 24.

3. The method of claim 1 or 2, wherein the first number is equal to 20.

4. The method of any of claims 1-3, wherein a number of the multiple partition schemes is less than a third threshold value, wherein the third threshold value is equal to 82.

5. The method of any of claims 1-4, further comprising determining, for the current video block, a first motion information and a second motion information,

wherein the conversion is based on the first motion information and the second motion information, wherein the conversion comprises applying a weighting process to generate a final

prediction for the current video block based on a weighted sum of prediction samples derived from the first motion information and the second motion information, and

wherein a calculation of a first variable used in the weighting process for the current video block depends on a total number of angle unit used in the geometric partitioning mode.

6. The method of claim 5, wherein the first variable denoted as displacementY is set to (displacementX+(the total number of angle unit used in the geometric partitioning mode >>2))) % the total number of angle unit used in the geometric partitioning mode, and wherein the displacementX is set to angleIdx specifying an angle index of a partition scheme of the geometric partitioning mode.

7. The method of claim 5 or 6, wherein a calculation of a second variable of shiftHor used in the weighting process depends on the total number of angle unit used in the geometric partitioning mode, whereby the shiftHor is set to 0 or 1.

8. The method of claim 7, wherein the shiftHor is set to 0 in a case that at least one of following conditions is met:

1) angleIdx % (the total number of angle unit used in the geometric partitioning mode /2) is equal to (the total number of angle unit used in the geometric partitioning mode >>2); or

2) angleIdx % (the total number of angle unit used in the geometric partitioning mode /2) is not equal to 0 and hwRatio $\geqslant$ 1, wherein hwRatio is set to H/W,

wherein angleIdx specifies an angle index of a partition scheme of the geometric partitioning mode, and H and W are height and width of the current video block, respectively.

9. The method of any of claims 1-8, wherein in response to a width or a height of the current video block being smaller than a fifth threshold, the geometric partitioning mode is not allowed for the current video block.

10. The method of any of claims 1-9, wherein when a syntax element for the geometric partitioning mode is not present in the bitstream, a value of the syntax element is inferred to be a default value equal to 0, wherein the syntax element includes at least one of a first syntax element

specifying a partition scheme of the geometric partitioning mode, a second syntax element specifying a first merging candidate index of the geometric partitioning mode, or a third syntax element specifying a second merging candidate index of the geometric partitioning mode.

11. The method of any of claims 1-10, wherein the conversion includes encoding the video into the bitstream.

12. The method of any of claims 1-10, wherein the conversion includes decoding the video from the bitstream.

13. An apparatus for processing video data comprising a processor and a non-transitory memory with instructions thereon, wherein the instructions upon execution by the processor, cause the processor to:

perform a conversion between a current video block of a video and a bitstream of the video,

wherein, during the conversion, a use of a geometric partitioning mode is allowed for the current video block, and the geometric partitioning mode includes multiple partition schemes,

wherein parameters of the multiple partition schemes of the geometric partitioning mode are computed using a set of angles including a first number of angles that is less than a first threshold value and a set of distances for the set of angles including a second number of distances that is less than a second threshold value,

wherein a number of distances for a vertical angle is equal to 2 and a number of distances for a horizontal angle is equal to 2, and

wherein in response to a width to height ratio or a height to width ratio of the current video block being greater than a fourth threshold, the geometric partitioning mode is not allowed for the current video block.

14. The apparatus of claim 13, wherein the first threshold value is equal to 24;

wherein the first number is equal to 20;

wherein a number of the multiple partition schemes is less than a third threshold value, wherein the third threshold value is equal to 82;

wherein in response to a width or a height of the current video block being smaller than a fifth threshold, the geometric partitioning mode is not allowed for the current video block; and

wherein when a syntax element for the geometric partitioning mode is not present in the bitstream, a value of the syntax element is inferred to be a default value equal to 0, wherein the syntax element includes at least one of a first syntax element specifying a partition scheme of the geometric partitioning mode, a second syntax element specifying a first merging candidate index of the geometric partitioning mode, or a third syntax element specifying a second merging candidate index of the geometric partitioning mode.

15. The apparatus of claim 13 or 14, wherein the processor is further caused to determine, for the current video block, a first motion information and a second motion information,

wherein the conversion is based on the first motion information and the second motion information, wherein the conversion comprises applying a weighting process to generate a final prediction for the current video block based on a weighted sum of prediction samples derived from the first motion information and the second motion information,

wherein a calculation of a first variable used in the weighting process for the current video block depends on a total number of angle unit used in the geometric partitioning mode;

wherein the first variable denoted as displacementY is set to (displacementX+(the total number of angle unit used in the geometric partitioning mode >>2))) % the total number of angle unit used in the geometric partitioning mode, and wherein the displacementX is set to angleIdx specifying an angle index of a partition scheme of the geometric partitioning mode;

wherein a calculation of a second variable of shiftHor used in the weighting process depends on the total number of angle unit used in the geometric partitioning mode, whereby the shiftHor is set to 0 or 1; and

wherein the shiftHor is set to 0 in a case that at least one of following conditions is met:

1) angleIdx % (the total number of angle unit used in the geometric partitioning mode /2) is equal to (the total number of angle unit used in the geometric partitioning mode >>2); or

2) angleIdx % (the total number of angle unit used in the geometric partitioning mode /2) is not equal to 0 and hwRatio $\geqslant$ 1, wherein hwRatio is set to H/W,

wherein angleIdx specifies an angle index of a partition scheme of the geometric partitioning mode, and H and W are height and width of the current video block, respectively.

16. A non-transitory computer-readable storage medium storing instructions that cause a processor to:

perform a conversion between a current video block of a video and a bitstream of the video,

wherein, during the conversion, a use of a geometric partitioning mode is allowed for the current video block, and the geometric partitioning mode includes multiple partition schemes,

wherein parameters of the multiple partition schemes of the geometric partitioning mode are computed using a set of angles including a first number of angles that is less than a first threshold value and a set of distances for the set of angles including a second number of distances that is less than a second threshold value,

wherein a number of distances for a vertical angle is equal to 2 and a number of distances for a horizontal angle is equal to 2, and

wherein in response to a width to height ratio or a height to width ratio of the current video block being greater than a fourth threshold, the geometric partitioning mode is not allowed for the current video block.

17. The non-transitory computer-readable storage medium of claim 16, wherein the first threshold value is equal to 24;

wherein the first number is equal to 20;

wherein a number of the multiple partition schemes is less than a third threshold value, wherein the third threshold value is equal to 82;

wherein in response to a width or a height of the current video block being smaller than a fifth threshold, the geometric partitioning mode is not allowed for the current video block; and

wherein when a syntax element for the geometric partitioning mode is not present in the bitstream, a value of the syntax element is inferred to be a default value equal to 0, wherein the syntax element includes at least one of a first syntax element specifying a partition scheme of the geometric partitioning mode, a second syntax element specifying a first merging candidate index of the geometric partitioning mode, or a third syntax element specifying a second merging candidate index of the geometric partitioning mode.

18. The non-transitory computer-readable storage medium of claim 16 or 17, wherein the processor is further caused to determine, for the current video block, a first motion information and a second motion information,

wherein the conversion is based on the first motion information and the second motion information, wherein the conversion comprises applying a weighting process to generate a final prediction for the current video block based on a weighted sum of prediction samples derived from the first motion information and the second motion information,

wherein a calculation of a first variable used in the weighting process for the current video block depends on a total number of angle unit used in the geometric partitioning mode;

wherein the first variable denoted as displacementY is set to (displacementX+(the total number of angle unit used in the geometric partitioning mode >>2))) % the total number of angle unit used in the geometric partitioning mode, and wherein the displacementX is set to angleIdx specifying an angle index of a partition scheme of the geometric partitioning mode;

wherein a calculation of a second variable of shiftHor used in the weighting process depends on the total number of angle unit used in the geometric partitioning mode, whereby the shiftHor is set to 0 or 1; and

wherein the shiftHor is set to 0 in a case that at least one of following conditions is met:

1) angleIdx % (the total number of angle unit used in the geometric partitioning mode /2) is equal to (the total number of angle unit used in the geometric partitioning mode >>2); or

2) angleIdx % (the total number of angle unit used in the geometric partitioning mode /2) is not equal to 0 and hwRatio $\geqslant$ 1, wherein hwRatio is set to H/W,

wherein angleIdx specifies an angle index of a partition scheme of the geometric partitioning mode, and H and W are height and width of the current video block, respectively.

19. A non-transitory computer-readable recording medium storing a bitstream of a video which is generated by a method performed by a video processing apparatus, wherein the method comprises:

generating the bitstream for a current video block of a video,

wherein, during the generating, a use of a geometric partitioning mode is allowed for the current video block, and the geometric partitioning mode includes multiple partition schemes,

wherein parameters of the multiple partition schemes of the geometric partitioning mode are computed using a set of angles including a first number of angles that is less than a first threshold

value and a set of distances for the set of angles including a second number of distances that is less than a second threshold value,

wherein a number of distances for a vertical angle is equal to 2 and a number of distances for a horizontal angle is equal to 2, and

wherein in response to a width to height ratio or a height to width ratio of the current video block being greater than a fourth threshold, the geometric partitioning mode is not allowed for the current video block.

20. The non-transitory computer-readable recording medium of claim 19, wherein the first threshold value is equal to 24;

wherein the first number is equal to 20;

wherein a number of the multiple partition schemes is less than a third threshold value, wherein the third threshold value is equal to 82;

wherein in response to a width or a height of the current video block being smaller than a fifth threshold, the geometric partitioning mode is not allowed for the current video block; and

wherein when a syntax element for the geometric partitioning mode is not present in the bitstream, a value of the syntax element is inferred to be a default value equal to 0, wherein the syntax element includes at least one of a first syntax element specifying a partition scheme of the geometric partitioning mode, a second syntax element specifying a first merging candidate index of the geometric partitioning mode, or a third syntax element specifying a second merging candidate index of the geometric partitioning mode;

wherein the method further comprises determining, for the current video block, a first motion information and a second motion information,

wherein the conversion is based on the first motion information and the second motion information, wherein the conversion comprises applying a weighting process to generate a final prediction for the current video block based on a weighted sum of prediction samples derived from the first motion information and the second motion information,

wherein a calculation of a first variable used in the weighting process for the current video block depends on a total number of angle unit used in the geometric partitioning mode;

wherein the first variable denoted as displacementY is set to (displacementX+(the total number of angle unit used in the geometric partitioning mode >>2))) % the total number of angle unit

used in the geometric partitioning mode, and wherein the displacementX is set to angleIdx specifying an angle index of a partition scheme of the geometric partitioning mode;

wherein a calculation of a second variable of shiftHor used in the weighting process depends on the total number of angle unit used in the geometric partitioning mode, whereby the shiftHor is set to 0 or 1; and

wherein the shiftHor is set to 0 in a case that at least one of following conditions is met:

1) angleIdx % (the total number of angle unit used in the geometric partitioning mode /2) is equal to (the total number of angle unit used in the geometric partitioning mode >>2); or

2) angleIdx % (the total number of angle unit used in the geometric partitioning mode /2) is not equal to 0 and hwRatio $\geqslant$ 1, wherein hwRatio is set to H/W,

wherein angleIdx specifies an angle index of a partition scheme of the geometric partitioning mode, and H and W are height and width of the current video block, respectively.