

CLAIMS

1. A video decoding method comprising:

determining whether to split a coding block to comprise a first prediction unit and a second prediction unit;

determining a partition type of the coding block when it is determined to split the coding block;

determining an index of a second merge candidate based on a comparison between a value of second index information and a value of first index information;

deriving first motion information regarding the first prediction unit in the coding block and second motion information regarding the second prediction unit in the coding block; and

acquiring a prediction sample in the coding block on the basis of the first motion information and the second motion information,

wherein

the first motion information regarding the first prediction unit is derived from a first merge candidate specified by the first index information among a plurality of merge candidates included in a merge candidate list, and

the second motion information regarding the second prediction unit is derived from the second merge candidate specified by the second index information among the plurality of merge candidates included in the merge candidate list.

2. The video decoding method of claim 1, wherein when the value of the second index information is greater than or equal to the value of the first index information, the index of the second merge candidate is equal to the value of the second index information plus one.

3. The video decoding method of claim 1, wherein when the value of the second index information is smaller than the value of the first index information, the index of the second merge candidate is equal to the value of the second index information.

4. The video decoding method of claim 1, wherein when the prediction sample is included in a boundary region between the first prediction unit and the second prediction unit, the prediction sample is derived on the basis of a weighted-sum operation of a first prediction sample derived on the basis of the first motion information and a second prediction sample

derived on the basis of the second motion information.

5. The video decoding method of claim 4, wherein a first weight applied to the first prediction sample is determined on the basis of an x-coordinate and a y-coordinate of the prediction sample.

6. The video decoding method of claim 5, wherein a second weight applied to the second prediction sample is derived by subtracting the first weight from a constant value.

7. A video encoding method comprising:

- determining whether to split a coding block to comprise a first prediction unit and a second prediction unit;

- determining a partition type of the coding block when it is determined to split the coding block;

- determining an index of a second merge candidate based on a comparison between a value of second index information and a value of first index information;

- deriving first motion information regarding the first prediction unit in the coding block and second motion information regarding the second prediction unit in the coding block; and

- acquiring a prediction sample in the coding block on the basis of the first motion information and the second motion information,

- wherein

- the first motion information regarding the first prediction unit is derived from a first merge candidate among a plurality of merge candidates included in a merge candidate list,

- the second motion information regarding the second prediction unit is derived from the second merge candidate among the plurality of merge candidates included in the merge candidate list, and

- the first index information for specifying the first merge candidate and the second index information for specifying the second merge candidate are respectively encoded.

8. The video encoding method of claim 7, wherein when the value of the second index information is greater than or equal to the value of the first index information, the index of the second merge candidate is equal to the value of the second index information plus one.

9. The video encoding method of claim 7, wherein when the value of the second index information is smaller than the value of the first index information, the index of the second merge candidate is equal to the value of the second index information.

10. The video encoding method of claim 7, wherein when the prediction sample is included in a boundary region between the first prediction unit and the second prediction unit, the prediction sample is derived on the basis of a weighted-sum operation of a first prediction sample derived on the basis of the first motion information and a second prediction sample derived on the basis of the second motion information.

11. The video encoding method of claim 10, wherein a first weight applied to the first prediction sample is determined on the basis of an x-coordinate and a y-coordinate of the prediction sample.

12. The video encoding method of claim 11, wherein a second weight applied to the second prediction sample is derived by subtracting the first weight from a constant value.

13. A video decoder, comprising:

- a memory having stored instructions;

- a processor for executing the instructions to:

- determine whether to split a coding block to comprise a first prediction unit and a second prediction unit, determine a partition type of the coding block when it is determined to split the coding block, determine an index of a second merge candidate based on a comparison between a value of second index information and a value of first index information, derive first motion information regarding the first prediction unit in the coding block and second motion information regarding the second prediction unit in the coding block, and acquire a prediction sample in the coding block on the basis of the first motion information and the second motion information,

- wherein

- the first motion information regarding the first prediction unit is derived from a first merge candidate specified by the first index information among a plurality of merge candidates included in a merge candidate list, and the second motion information regarding the second prediction unit is derived from the second merge candidate specified by the second index information among the plurality of merge candidates included in the merge candidate list.

14. The video decoder of claim 13, wherein when the value of the second index information is greater than or equal to a value of the first index information, the index of the second merge candidate is equal to the value of the second index information plus one.

15. The video decoder of claim 13, wherein when the value of the second index information is smaller than a value of the first index information, the index of the second merge candidate is equal to the value of the second index information.

16. A video encoder, comprising:

- a memory having stored instructions;

- a processor for executing the instructions to:

- determine whether to split a coding block to comprise a first prediction unit and a second prediction unit;

- determine a partition type of the coding block when it is determined to split the coding block;

- determine an index of a second merge candidate based on a comparison between a value of second index information and a value of first index information;

- derive first motion information regarding the first prediction unit in the coding block and second motion information regarding the second prediction unit in the coding block; and

- acquire a prediction sample in the coding block on the basis of the first motion information and the second motion information,

- wherein

- the first motion information regarding the first prediction unit is derived from a first merge candidate among a plurality of merge candidates included in a merge candidate list,

- the second motion information regarding the second prediction unit is derived from a second merge candidate among the plurality of merge candidates included in the merge candidate list, and

- the first index information for specifying the first merge candidate and the second index information for specifying the second merge candidate are respectively encoded.

17. The video encoder of claim 16, wherein when the index of the second merge candidate is

greater than an index of the first merge candidate, the second index information is encoded with a value obtained by subtracting one from the index of the second merge candidate.

18. The video encoder of claim 16, wherein when the index of the second merge candidate is smaller than an index of the first merge candidate, the second index information is encoded with a value of the index of the second merge candidate.

19. A non-transitory computer-readable storage medium having stored therein computer executable instructions that when executed by a processor, implement the video decoding method of claim 1.

20. A non-transitory computer-readable storage medium having stored therein computer executable instructions that when executed by a processor, implement the video encoding method of claim 7.

21. The video decoding method of claim 1, wherein the value of first index information is in a first value range, and wherein the value of second index information is in a second value range, and wherein the first value range is different from the second value range.