# CLAIMS

What is claimed is:

1. A decoding method, comprising:

acquiring first target motion information and second target motion information; wherein the first target motion information is target motion information of a first sub-block divided from a current block, and the second target motion information is target motion information of a second sub-block divided from the current block; wherein the first sub-block and the second sub-block are two triangle sub-blocks divided from the current block according to a partition line;

determining a first area, a second area and a third area included in the current block based on the first sub-block and the second sub-block divided according to the partition line, wherein the first area is located in the first sub-block, the second area is located in the second sub-block, the partition line is located in the third area, and there is an overlapping area between the third area and the first sub-block and there is an overlapping area between the third area and the second sub-block; and

storing motion information of the current block, wherein if the first target motion information and the second target motion information are derived from a same reference frame list, the second target motion information is stored as target motion information of the third area; if the first target motion information and the second target motion information are derived from different reference frame lists, the first target motion information and the second target motion information are merged into bidirectional motion information, which then is stored as the target motion information of the third area.

2. The method of claim 1, wherein, the motion information is stored in a unit of a 4*4 block.

3. The method of claim 1, wherein, a sub-block in the first area is a sub-block on which non-weighted prediction compensation is performed, and the first target motion information is stored as the target motion information of the sub-block in the first area; a sub-block in the second area is a sub-block on which non-weighted prediction compensation is performed, and the second target motion information is stored as the target motion information of the sub-block in the second area.

4. The method of claim 1, wherein, after determining a first area, a second area, and a third area included in a current block based on the first sub-block and the second sub-block divided according to the partition line, the method further comprises:

performing motion compensation on each sub-block in the first area based on the first target motion information, to obtain a prediction value of each sub-block in the first area;

performing motion compensation on each sub-block in the second area based on the second target motion information, to obtain a prediction value of each sub-block in the second area;

performing weighted motion compensation on each sub-block in the third area based on the first target motion information and the second target motion information, to obtain a prediction value of each sub-block in the third area;

determining a prediction value of the current block based on the prediction value of each sub-block in the first area, the prediction value of each sub-block in the second area, and the prediction value of each sub-block in the third area;

wherein, performing weighted motion compensation on each sub-block in the third area based on the first target motion information and the second target motion information, to obtain a prediction value of each sub-block in the third area comprises:

for each sub-block in the third area, determining a first prediction value of the sub-block based on the first target motion information, and determining a second prediction value of the sub-block based on the second target motion information;

performing weighted motion compensation on the sub-block based on the first prediction value, a first weight coefficient corresponding to the first prediction value, the second prediction value, a second weight coefficient corresponding to the second prediction value, to obtain the prediction value of the sub-block.

5. The method of claim 4, wherein,

if the sub-block in the third area is located in the first sub-block, the first weight coefficient corresponding to the first prediction value of the sub-block is greater than the second weight coefficient corresponding to the second prediction value of the sub-block;

if the sub-block in the third area is located in the second sub-block, the first weight coefficient corresponding to the first prediction value of the sub-block is smaller than the second weight coefficient corresponding to the second prediction value of the sub-block;

if the sub-block in the third area is located across the partition line, the first weight coefficient corresponding to the first prediction value of the sub-block is equal to the second weight coefficient corresponding to the second prediction value of the sub-block.

6. The method of claim 1, wherein, acquiring first target motion information and second target motion information comprises:

constructing a motion information list for the current block, wherein the motion information list includes multiple pieces of candidate motion information;

acquiring first target motion information of the first sub-block and the second target motion information of the second sub-block from the motion information list;

or wherein, the first target motion information is different from the second target motion information.

7. The method of claim 1, wherein, acquiring first target motion information and second target motion information comprises:

constructing a motion information list for the current block, wherein the motion information list includes multiple pieces of candidate motion information;

selecting one piece of candidate motion information corresponding to the first index value from the motion information list based on a first index value indicated by indication information, and determining the candidate motion information as the first target motion information;

selecting another piece of candidate motion information corresponding to the second index value from the motion information list based on a second index value indicated by indication information, and determining this candidate motion information as the second target motion information.

8. The method of claim 1, wherein, the steps in claim 1 are performed when a motion information mode of the current block, size information of the current block, a slice type of a current slice and sequence-level switch control information of the current

block meet specific conditions; wherein the motion information mode of the current block meeting the specific condition comprises that the motion information mode of the current block is a merge mode, and the motion information mode of the current block is not a regular merge mode, a sub-block-based merge mode or a combined inter-picture merge and intra-picture prediction mode; and wherein the slice type of the current slice meeting the specific condition comprises that the current slice where the current block is located is a B slice.

9. The method of claim 4, wherein, if the first prediction value is P1, the second prediction value is P2, the first weight coefficient is a, the second weight coefficient is b, then a prediction value after weighted motion compensation of the sub-block is P1*a+ P2*b; a value set of the first weight coefficient is {7/8, 6/8, 5/8, 4/8, 3/8, 2/8, 1/8}, and a sum of the first weight coefficient and the second weight coefficient is 1;

wherein, each sub-block in the third area comprises a luma component, and the set of weight coefficients for the brightness component is {7/8, 6/8, 5/8, 4/8, 3/8, 2/8, 1/8};

for any one brightness component, the first prediction value is a brightness prediction value determined based on the first target motion information, the second prediction value is a brightness prediction value determined based on the second target motion information, the prediction value after weighted motion compensation of the sub-block is a brightness prediction value after weighted motion compensation determined based on the first prediction value, the second prediction value, the first weight coefficient and the second weight coefficient.

10. The method of claim 9, wherein, each sub-block in the third area comprises a chroma component, for the chroma component, the first prediction value is a chroma prediction value determined based on the first target motion information, the second prediction value is a chroma prediction value determined based on the second target motion information, the prediction value after weighted motion compensation of the sub-block is a chroma prediction value after weighted motion compensation determined based on the first prediction value, the second prediction value, the first weight coefficient and the second weight coefficient.

11. The method of claim 1, wherein the two triangle sub-blocks are two triangle sub-blocks divided from the current block according to a partition method indicated by indication information.

12. A decoding apparatus, comprising:

a module configured for acquiring first target motion information and second target motion information; wherein the first target motion information is target motion information of a first sub-block divided from a current block, and the second target motion information is target motion information of a second sub-block divided from the current block ; wherein the first sub-block and the second sub-block are two triangle sub-blocks divided from the current block according to a partition line;

a module configured for determining a first area, a second area and a third area included in the current block based on the first sub-block and the second sub-block divided according to the partition line, wherein the first area is located in the first sub-block, the second area is located in the second sub-block, the partition line is located in the third area, and there is an overlapping area between the third area and the first sub-

block and there is an overlapping area between the third area and the second sub-block; and

a module configured for storing motion information of the current block, wherein if the first target motion information and the second target motion information are derived from a same reference frame list, the second target motion information is stored as target motion information of the third area; if the first target motion information and the second target motion information are derived from different reference frame lists, the first target motion information and the second target motion information are merged into bidirectional motion information, which then is stored as the target motion information of the third area.

13. The apparatus of claim 12, wherein, the motion information is stored in a unit of a 4*4 block.

14. The apparatus of claim 12, wherein, a sub-block in the first area is a sub-block on which non-weighted prediction compensation is performed, and the first target motion information is stored as the target motion information of the sub-block in the first area; a sub-block in the second area is a sub-block on which non-weighted prediction compensation is performed, and the second target motion information is stored as the target motion information of the sub-block in the second area.

15. The apparatus of claim 12, wherein the apparatus is further configured for:

performing motion compensation on each sub-block in the first area based on the first target motion information, to obtain a prediction value of each sub-block in the first area;

performing motion compensation on each sub-block in the second area based on the second target motion information, to obtain a prediction value of each sub-block in the second area;

performing weighted motion compensation on each sub-block in the third area based on the first target motion information and the second target motion information, to obtain a prediction value of each sub-block in the third area;

determining a prediction value of the current block based on the prediction value of each sub-block in the first area, the prediction value of each sub-block in the second area, and the prediction value of each sub-block in the third area.

16. The apparatus of claim 15, wherein performing weighted motion compensation on each sub-block in the third area based on the first target motion information and the second target motion information, to obtain a prediction value of each sub-block in the third area comprises:

for each sub-block in the third area, determining a first prediction value of the sub-block based on the first target motion information, and determining a second prediction value of the sub-block based on the second target motion information;

performing weighted motion compensation on the sub-block based on the first prediction value, a first weight coefficient corresponding to the first prediction value, the second prediction value, a second weight coefficient corresponding to the second prediction value, to obtain the prediction value of the sub-block.

17. An decoding device, comprising: a processor and a machine-readable storage medium, wherein the machine-readable storage medium stores machine executable instructions that are able to be executed by the processor;

the processor is configured to execute the machine executable instructions to implement the method according to any one of claims 1 to 11.

18. An electronic device, comprising:

a processor; and

a memory for storing processor executable instructions;

wherein the processor is configured to implement the method according to any one of claims 1 to 11.

19. A non-transitory storage medium on which instructions are stored, wherein the instructions implement the method according to any one of claims 1 to 11 when being executed by a processor.