

1. A video decoding method comprising the steps of:

generating a merge candidate list for a first block;

selecting one among merge candidates included in the merge candidate list; and

performing motion compensation for the first block based on motion information of the

5 selected merge candidate, wherein

an inter-region merge candidate included in an inter-region motion information list is added to the merge candidate list based on the number of spatial merge candidates and temporal merge candidates included in the merge candidate list,

10 wherein based on a result of determining whether one inter-region merge candidate included in the inter-region motion information list is the same as at least one merge candidate included in the merge candidate list, whether or not to add the one inter-region merge candidate to the merge candidate list is determined,

15 wherein the determination is performed by comparing at least one merge candidate of which the index value is smaller than or equal to a threshold value with the one inter-region merge candidate.

2. The method according to claim 1, wherein the inter-region motion information list includes an inter-region merge candidate derived based on motion information of a block decoded before the first block.

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3. The method according to claim 1, wherein when the first block is included in a merge processing area, a temporary merge candidate derived based on motion information of the first block is added to a temporary motion information list, and when decoding of all blocks included

in the merge processing area is completed, the temporary merge candidate is updated in the inter-region motion information list.

4. The method according to claim 1, wherein when it is determined that there is a merge candidate the same as the one inter-region merge candidate, the one inter-region merge candidate is not added to the merge candidate list, and based on a result of determining whether another inter-region merge candidate included in the inter-region motion information list is the same as at least one merge candidate included in the merge candidate list, whether or not to add the another inter-region merge candidate to the merge candidate list is determined, and no determination as to whether the another inter-region merge candidate is the same as the merge candidate that is the same as the one inter-region merge candidate is performed.

5. The method according to claim 1, wherein when an inter-region merge candidate the same as motion information of the first block exists in the merge candidate list, an index assigned to the inter-region merge candidate in the inter-region motion information list is updated to a largest value.

6. The method according to claim 1, wherein the determination is performed by comparing at least one merge candidate of which the index value is larger than a threshold value with the one inter-region merge candidate.

7. The method according to claim 1, wherein the determination is performed by comparing a merge candidate derived from a block at a specific position with the one inter-region merge

candidate, wherein the specific position includes at least one of a top-right neighboring block or a bottom-left neighboring block of the first block.

8. The method according to claim 1, wherein performing motion compensation for the first
5 block comprises:

performing motion compensation prediction for the first block using a plurality of merge
candidates.

9. The method according to claim 8, wherein
10 the plurality of merge candidates include a first merge candidate and a second merge
candidate, and the first merge candidate and the second merge candidate are included in the
merge candidate list for the first block;

a first prediction block is generated using the first merge candidate, a second prediction
block is generated using a second merge candidate, and a third prediction block is generated
15 based on the first prediction block and the second prediction block.

10. The method according to claim 9, wherein the third prediction block is generated based
on a weighted sum operation of the first prediction block and the second prediction block.

20 11. The method according to claim 9, wherein index information merge_idx of the first
merge candidate and index information merge_2nd_idx of the second merge candidate are
obtained by analyzing a bitstream.

12. The method according to claim 11, wherein

when a value of index information merge_2nd_idx is equal to or greater than a value of index information merge_idx, a value of an index of the second merge candidate is obtained by adding 1 to the value of index information merge_2nd_idx.

5 13. A video encoding method comprising the steps of:

generating a merge candidate list for a first block;

selecting one among merge candidates included in the merge candidate list; and

performing motion compensation for the first block based on motion information of the selected merge candidate, wherein

10 an inter-region merge candidate included in an inter-region motion information list is added to the merge candidate list based on the number of spatial merge candidates and temporal merge candidates included in the merge candidate list,

wherein based on a result of determining whether one inter-region merge candidate included in the inter-region motion information list is the same as at least one merge candidate included in the merge candidate list, whether or not to add the one inter-region merge candidate to the merge candidate list is determined,

15 wherein the determination is performed by comparing at least one merge candidate of which the index value is smaller than or equal to a threshold value with the one inter-region merge candidate.

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14. The method according to claim 13, wherein the inter-region motion information list includes an inter-region merge candidate derived based on motion information of a block encoded before the first block.

15. The method according to claim 13, wherein when the first block is included in a merge processing area, a temporary merge candidate derived based on motion information of the first block is added to a temporary motion information list, and when encoding of all blocks included in the merge processing area is completed, the temporary merge candidate updated in the inter-region motion information list.

16. The method according to claim 13, wherein when it is determined that there is a merge candidate the same as the one inter-region merge candidate, the one inter-region merge candidate is not added to the merge candidate list, and based on a result of determining whether another inter-region merge candidate included in the inter-region motion information list is the same as at least one merge candidate included in the merge candidate list, whether or not to add the another inter-region merge candidate to the merge candidate list is determined, and no determination as to whether the another inter-region merge candidate is the same as the merge candidate that is the same as the one inter-region merge candidate is performed.

17. The method according to claim 13, wherein when an inter-region merge candidate the same as motion information of the first block exists in the merge candidate list, an index assigned to the inter-region merge candidate in the inter-region motion information list is updated to a largest value.

18. The method according to claim 13, wherein the determination is performed by comparing at least one merge candidate of which the index value is larger than a threshold value with the one inter-region merge candidate.

19. The method according to claim 13, wherein the determination is performed by comparing a merge candidate derived from a block at a specific position with the one inter-region merge candidate, wherein the specific position includes at least one of a top-right
5 neighboring block or a bottom-left neighboring block of the first block.

20. The method according to claim 13, wherein performing motion compensation for the first block comprises:

performing motion compensation prediction for the first block using a plurality of merge
10 candidates.

21. The method according to claim 20, wherein

the plurality of merge candidates include a first merge candidate and a second merge candidate, and the first merge candidate and the second merge candidate are included in the
15 merge candidate list for the first block;

a first prediction block is generated using the first merge candidate, a second prediction block is generated using a second merge candidate, and a third prediction block is generated based on the first prediction block and the second prediction block.

22. The method according to claim 21, wherein the third prediction block is generated based
20 on a weighted sum operation of the first prediction block and the second prediction block.

23. The method according to claim 21, wherein information for specifying index information merge_idx of the first merge candidate and index information merge_2nd_idx of the second merge candidate is signaled through a bitstream, respectively.

5 24. The method according to claim 23, wherein

when a value of index information merge_2nd_idx is equal to or greater than a value of index information merge_idx, a value of an index of the second merge candidate is obtained by adding 1 to the value of index information merge_2nd_idx.

10 25. A video decoding apparatus, comprising a memory and a processor, wherein

the memory is configured to store a computer program capable of running in the processor;
and

the processor is configured to run the computer program to execute a video decoding method comprising the steps of:

15 generating a merge candidate list for a first block;

 selecting one among merge candidates included in the merge candidate list;

and

 performing motion compensation for the first block based on motion information of the selected merge candidate, wherein

20 an inter-region merge candidate included in an inter-region motion information list is added to the merge candidate list based on the number of spatial merge candidates and temporal merge candidates included in the merge candidate list,

 wherein based on a result of determining whether one inter-region merge

candidate included in the inter-region motion information list is the same as at least one merge candidate included in the merge candidate list, whether or not to add the one inter-region merge candidate to the merge candidate list is determined, wherein the determination is performed by comparing at least one merge candidate of which the index value is smaller than or equal to a threshold value with the one inter-region merge candidate.

26. A video encoding apparatus, comprising a memory and a processor, wherein the memory is configured to store a computer program capable of running in the processor; and the processor is configured to run the computer program to execute a video encoding method comprising the steps of:

generating a merge candidate list for a first block;
selecting one among merge candidates included in the merge candidate list;
and
performing motion compensation for the first block based on motion information of the selected merge candidate, wherein
an inter-region merge candidate included in an inter-region motion information list is added to the merge candidate list based on the number of spatial merge candidates and temporal merge candidates included in the merge candidate list,

wherein based on a result of determining whether one inter-region merge candidate included in the inter-region motion information list is the same as at least one merge candidate included in the merge candidate list, whether or not to

add the one inter-region merge candidate to the merge candidate list is determined,
wherein the determination is performed by comparing at least one merge candidate of which the index value is smaller than or equal to a threshold value with the one inter-region merge candidate.