

CLAIMS

What is claimed is:

1. ~~An inter prediction method, wherein the method comprises:~~
5 ~~constructing a merge candidate list of a current picture block;~~
~~adding HMVP candidate motion information to the merge candidate list, in a case that a~~
~~quantity of candidate motion information in the merge candidate list is less than a maximum~~
~~candidate quantity of the merge candidate list minus N, wherein N is a positive integer;~~
~~obtaining a merge index of the current picture block;~~
10 ~~obtaining motion information of the current picture block based on the merge candidate list~~
~~and the merge index; and~~
~~determining a predicted block of the current picture block based on the motion information~~
~~of the current picture block.~~

2. ~~The method according to claim 1, wherein the method further comprises: adding~~
15 ~~pairwise average candidate motion information to the merge candidate list, in a case that a~~
~~quantity of candidate motion information in the merge candidate list is equal to a maximum~~
~~candidate quantity of the merge candidate list minus N.~~

3. ~~The method according to claim 2, wherein the pairwise average candidate motion~~
~~information are generated by averaging a predefined pair of MVP candidates in the merge~~
20 ~~candidate list.~~

4. ~~The method according to any one of claims 1 to 3, wherein the obtaining motion~~
~~information of the current picture block based on the merge candidate list and the merge index~~
~~may comprise: the obtaining motion information from the merge candidate list by using the~~
~~merge index.~~

5. ~~The method according to any one of claims 1 to 3, wherein the obtaining motion~~
25 ~~information of the current picture block based on the merge candidate list may comprise:~~
~~determining the motion information from the merge candidate list using a rate distortion cost.~~

6. ~~An inter prediction apparatus comprising:~~
~~a processor; and~~

~~a memory coupled to the processor to store instructions, which when executed by the processor, cause the processor to perform operations, the operations comprising:~~

~~constructing a merge candidate list of a current picture block;~~

~~adding HMVP candidate motion information to the merge candidate list, in a case that a quantity of candidate motion information in the merge candidate list is less than a maximum candidate quantity of the merge candidate list minus N, wherein N is a positive integer;~~

~~obtaining a merge index of the current picture block;~~

~~obtaining motion information of the current picture block based on the merge candidate list and the merge index; and~~

~~determining a predicted block of the current picture block based on the motion information of the current picture block.~~

~~7. The apparatus according to claim 6, wherein the operations further comprises: adding pairwise average candidate motion information to the merge candidate list, in a case that a quantity of candidate motion information in the merge candidate list is equal to a maximum candidate quantity of the merge candidate list minus N.~~

~~8. The apparatus according to claim 7, wherein the pairwise average candidate motion information are generated by averaging a predefined pair of MVP candidates in the merge candidate list.~~

~~9. The apparatus according to any one of claims 6 to 8, wherein the operations of obtaining motion information of the current picture block based on the merge candidate list and the merge index may comprise: obtaining motion information from the merge candidate list by using the merge index.~~

~~10. The apparatus according to any one of claims 6 to 8, wherein the operations of obtaining motion information of the current picture block based on the merge candidate list may comprise: determining the motion information from the merge candidate list using a rate distortion cost.~~

~~11. An inter prediction apparatus comprising:~~

~~a construction unit, configured to: construct a merge candidate list of a current picture block; add HMVP candidate motion information to the merge candidate list, in a case that a~~

~~quantity of candidate motion information in the merge candidate list is less than a maximum candidate quantity of the merge candidate list minus N, wherein N is a positive integer;~~

~~a prediction unit, configured to: obtain a merge index of the current picture block; obtain motion information of the current picture block based on the merge candidate list and the merge index; and determine a predicted block of the current picture block based on the motion information of the current picture block.~~

~~12. The apparatus according to claim 11, wherein the construction unit, further configured to: add pairwise average candidate motion information to the merge candidate list, in a case that a quantity of candidate motion information in the merge candidate list is equal to a maximum candidate quantity of the merge candidate list minus N.~~

~~13. The apparatus according to claim 12, wherein the pairwise average candidate motion information are generated by averaging a predefined pair of MVP candidates in the merge candidate list.~~

~~14. The apparatus according to any one of claims 11 to 13, wherein the prediction unit, configured to: obtain motion information from the merge candidate list by using the merge index.—~~

~~15. The apparatus according to any one of claims 11 to 13, wherein the prediction unit, configured to: determine the motion information from the merge candidate list using a rate distortion cost.~~

1. An inter prediction method, wherein the method comprises:
constructing a merging candidate list of a current picture block;
adding at least one HMVP candidate to the merging candidate list to obtain a new merging candidate list, in a case that the number of merging candidates in the merging candidate list is less than a maximum number of candidates minus N, wherein N is a positive integer;

obtaining motion information of the current picture block based on the new merging candidate list; and
determining a predicted block of the current picture block based on the motion information of the current picture block.

2. The method according to claim 1, wherein the obtaining motion information of the

current picture block based on the new merging candidate list comprises:

adding a pairwise average merging candidate to the new merging candidate list to obtain a modified merging candidate list, in a case that the number of merging candidates in the new merging candidate list is equal to the maximum number of candidates minus N;

5 obtaining motion information of the current picture block based on the modified merging candidate list.

10 3. The method according to claim 2, wherein the pairwise average merging candidate is generated by averaging a predefined pair of merging candidates in the new merging candidate list.

15 4. The method according to any one of claims 2 to 3, wherein the obtaining motion information of the current picture block based on the modified merging candidate list comprises: obtaining a merging candidate index; obtaining motion information from the modified merging candidate list by using the merging candidate index.

20 5. The method according to any one of claims 2 to 3, wherein the obtaining motion information of the current picture block based on the modified merging candidate list comprises: determining the motion information from the modified merging candidate list using a rate-distortion cost.

25 6. An inter prediction apparatus comprising:
 a processor; and
 a memory coupled to the processor to store instructions, which when executed by the
 processor, cause the processor to perform operations, the operations comprising:
 constructing a merging candidate list of a current picture block;
 adding at least one HMVP candidate to the merging candidate list to obtain a new merging
 candidate list, in a case that the number of merging candidates in the merging candidate list is
 less than a maximum number of candidates minus N, wherein N is a positive integer;

30 obtaining motion information of the current picture block based on the merging candidate

list; and

determining a predicted block of the current picture block based on the motion information of the current picture block.

5 7. The apparatus according to claim 6, wherein the obtaining motion information of the current picture block based on the new merging candidate list comprises: adding a pairwise average merging candidate to the new merging candidate list to obtain a modified merging candidate list, in a case that the number of merging candidates in the new merging candidate list is equal to the maximum number of candidates minus N; obtaining motion information of the
10 current picture block based on the modified merging candidate list.

15 8. The apparatus according to claim 7, wherein the pairwise average merging candidate is generated by averaging a predefined pair of merging candidates in the new merging candidate list.

20 9. The apparatus according to any one of claims 7 to 8, wherein the operations of obtaining motion information of the current picture block based on the modified merging candidate list comprises: obtaining a merging candidate index; obtaining motion information from the merging candidate list by using the merging candidate index.

25 10. The apparatus according to any one of claims 7 to 8, wherein the operations of obtaining motion information of the current picture block based on the modified merging candidate list comprises: determining the motion information from the modified merging candidate list using a rate-distortion cost.

30 11. An inter prediction apparatus comprising:
a construction unit, configured to: construct a merging candidate list of a current picture block; add at least one HMVP candidate to the merging candidate list to obtain a new merging candidate list, in a case that the number of merging candidates in the merging candidate list is less than a maximum number of candidates minus N, wherein N is a positive integer;

a prediction unit, configured to: obtain motion information of the current picture block based on the new merging candidate list; and determine a predicted block of the current picture block based on the motion information of the current picture block.

5 12. The apparatus according to claim 11, wherein the construction unit, configured to: add a pairwise average merging candidate to the new merging candidate list to obtain a modified merging candidate list, in a case that the number of merging candidates in the new merging candidate list is equal to the maximum number of candidates minus N; obtain motion information of the current picture block based on the modified merging candidate list.

10 13. The apparatus according to claim 12, wherein the pairwise average merging candidate is generated by averaging a predefined pair of merging candidates in the new merging candidate list.

15 14. The apparatus according to any one of claims 12 to 13, wherein the prediction unit, configured to: obtain a merging candidate index; obtain motion information from the modified merging candidate list by using the merging candidate index.

20 15. The apparatus according to any one of claims 12 to 13, wherein the prediction unit, configured to: determine the motion information from the modified merging candidate list using a rate-distortion cost.

25 16. An inter prediction apparatus comprising processing circuitry for carrying out the method according to any of claims 1 to 5.

17. A computer program product comprising program code for performing the method according to any of claims 1 to 5 when executed on a computer or a processor.

30 18. A non-transitory computer-readable medium carrying a program code which, when executed by a computer device, causes the computer device to perform the method of any of

claims 1 to 5.

19. A non-transitory storage medium which includes an encoded bitstream obtained by performing the method of any of claims 1 to 5.