

CLAIMS

What is claimed is:

1. A method of decoding a video signal, the method comprising:
constructing a merge candidate list of a current block;
5 deriving motion information of the current block from the merge candidate list,
wherein the motion information comprises at least one of a prediction direction flag, a
reference picture index, or a motion vector; and
performing inter-prediction of the current block using the motion information,
10 wherein the merge candidate list comprises ~~at least one of a spatial merge
candidate, a temporal merge candidate, or a combined merge candidate~~ and at least one
of a spatial merge candidate or a temporal merge candidate,
the combined merge candidate is derived by combining n merge candidates
belonging to the merge candidate list, and
15 the ~~n combined merge candidate comprises~~ candidates comprise a first merge
candidate and a second merge candidate, and motion information of the combined
merge candidate is derived by a weighted average of motion information of the first
merge candidate and motion information of the second merge candidate,
20 wherein the first merge candidate corresponds to a first unidirectional predicted
motion vector, the second merge candidate corresponds to a second unidirectional
predicted motion vector, and directions of the first and second unidirectional predicted
motion vectors are the same.
2. The method according to claim 1, wherein the n merge candidates are merge
candidates corresponding to indices of 0 to (n-1) in the merge candidate list.
3. The method according to claim 1, wherein an index of the combined merge
25 candidate is larger than an index of the temporal merge candidate.
4. ~~The method according to claim 1,~~
~~wherein the motion information of the combined merge candidate is derived in
consideration of a prediction direction of the first merge candidate and a prediction~~

~~direction of the second merge candidate.~~

~~54.~~ The method according to claim 1, wherein a weight of the weighted average is any one of [1:1], [1:2], [1:3], or [2:3].

~~65.~~ The method according to claim 1, wherein the motion vector is derived in units
5 of sub-blocks of the current block.

~~76.~~ The method according to claim ~~65~~, wherein a size of a sub-block is a fixed size.

~~87.~~ The method according to claim ~~6 or 75 or 6~~, wherein a size of a sub-block is
4x4.

~~98.~~ The method according to claim 1, wherein performing inter-prediction of the
10 current block using the motion information comprises:

selecting a reference picture from a reference picture list based on the reference
picture index of the current block;

determining a reference block within the reference picture based on the motion
vector of the current block;

15 generating a prediction pixel of the current block using a pixel of the determined
reference block; and

reconstructing the current block by adding the prediction pixel of the current block
and a residual pixel.

~~109.~~ The method according to claim ~~98~~, further comprising:

20 deriving the residual pixel by performing at least one of inverse quantization or
inverse transformation on a residual coefficient signaled through a bitstream.

~~110.~~ An apparatus of decoding a video signal, the apparatus comprising:

a memory configured to store a program for performing inter-prediction; and

a processor configured to perform, when running the program, the method
25 according to any one of claims 1-~~109~~.

~~111.~~ A method of encoding a video signal, the method comprising:

constructing a merge candidate list of a current block;

deriving motion information of the current block from the merge candidate list, wherein the motion information comprises at least one of a prediction direction flag, a reference picture index, or a motion vector; and

performing inter-prediction of the current block using the motion information,

5 wherein the merge candidate list comprises ~~at least one of a spatial merge candidate, a temporal merge candidate, or a combined merge candidate~~ and at least one of a spatial merge candidate or a temporal merge candidate,

the combined merge candidate is derived by combining n merge candidates belonging to the merge candidate list, and

10 the ~~n combined merge candidate comprises~~ candidates comprise a first merge candidate and a second merge candidate, and motion information of the combined merge candidate is derived by a weighted average of motion information of the first merge candidate and motion information of the second merge candidate,

15 wherein the first merge candidate corresponds to a first unidirectional predicted motion vector, the second merge candidate corresponds to a second unidirectional predicted motion vector, and directions of the first and second unidirectional predicted motion vectors are the same.

1312. An apparatus of ~~decoding~~ encoding a video signal, the apparatus comprising:

20 a memory configured to store a program for performing inter-prediction; and

a processor configured to perform, when running the program, the method according to claim ~~12~~ 11.