

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,
wherein the merge candidate list comprises a combined merge candidate and at
10 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
the n merge candidates comprise a first merge candidate and a second merge
candidate, and motion information of the combined merge candidate is derived by a
15 weighted average of motion information of the first merge candidate and motion
information of the second merge candidate,
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
20 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
candidate is larger than an index of the temporal merge candidate.
- 25 4. 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].
5. The method according to claim 1, wherein the motion vector is derived in units
of sub-blocks of the current block.

6. The method according to claim 5, wherein a size of a sub-block is a fixed size.
7. The method according to claim 5 or 6, wherein a size of a sub-block is 4x4.
8. The method according to claim 1, wherein performing inter-prediction of the current block using the motion information comprises:
- 5 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;
- generating a prediction pixel of the current block using a pixel of the determined
- 10 reference block; and
- reconstructing the current block by adding the prediction pixel of the current block and a residual pixel.
9. The method according to claim 8, further comprising:
- deriving the residual pixel by performing at least one of inverse quantization or
- 15 inverse transformation on a residual coefficient signaled through a bitstream.
10. 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 according to any one of claims 1-9.
- 20 11. 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
- 25 performing inter-prediction of the current block using the motion information,
- wherein the merge candidate list comprises 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

the n merge 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,

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.

12. An apparatus of encoding 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 according to claim 11.