

CLAIMS

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 least
 - 10 one of a spatial merge candidate or a temporal merge candidate,
 - the combined merge candidate is derived by combining a first merge candidate and a second merge candidate in the merge candidate list, and
 - wherein the first merge candidate and the second merge candidate correspond to unidirectional predictions,
 - 15 wherein the first merge candidate comprises a prediction referring to a reference picture list in a first prediction direction (L0), and the second merge candidate comprises a prediction referring to a reference picture list in a second prediction direction (L1), and the method further comprises:
 - deriving, according to a reference picture index of the reference picture list in the
 - 20 first prediction direction (L0) corresponding to the first merge candidate, a reference picture index of the reference picture list in the first prediction direction (L0) corresponding to the combined merge candidate;
 - deriving a prediction direction flag of the reference picture list in the first prediction direction (L0) corresponding to the combined merge candidate to be equal to 1; and
 - 25 deriving, according to a motion vector of the reference picture list in the first prediction direction (L0) corresponding to the first merge candidate, a motion vector of the reference picture list in the first prediction direction (L0) corresponding to the combined merge candidate.

2. The method according to claim 1, wherein the first merge candidate is a merge candidate with an index equal to 0 in the merge candidate list, and the second merge candidate is a merge candidate with an index equal to 1 in the merge candidate list.
3. The method according to claim 1, wherein an index of the combined merge
5 candidate is larger than an index of the temporal merge candidate.
4. The method according to claim 1, wherein the motion vector is derived in units of sub-blocks of the current block.
5. The method according to claim 4, wherein a size of a sub-block is a fixed size.
6. The method according to claim 4 or 5, wherein a size of a sub-block is 4x4.
- 10 7. The method according to claim 1, wherein performing inter-prediction of the 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
15 vector of the current block;
- 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.
- 20 8. The method according to claim 7, further comprising:
- deriving the residual pixel by performing at least one of inverse quantization or inverse transformation on a residual coefficient signaled through a bitstream.
9. An apparatus of decoding a video signal, the apparatus comprising:
- a memory configured to store a program for performing inter-prediction; and
- 25 a processor configured to perform, when running the program, the method according to any one of claims 1-8.
10. 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 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 a first merge candidate and a second merge candidate in the merge candidate list, and

- 10 wherein the first merge candidate and the second merge candidate correspond to unidirectional predictions,

wherein the first merge candidate comprises a prediction referring to a reference picture list in a first prediction direction (L0), and the second merge candidate comprises a prediction referring to a reference picture list in a second prediction direction (L1), and the method further comprises:

- 15 deriving, according to a reference picture index of the reference picture list in the first prediction direction (L0) corresponding to the first merge candidate, a reference picture index of the reference picture list in the first prediction direction (L0) corresponding to the combined merge candidate;

- 20 deriving a prediction direction flag of the reference picture list in the first prediction direction (L0) corresponding to the combined merge candidate to be equal to 1; and

deriving, according to a motion vector of the reference picture list in the first prediction direction (L0) corresponding to the first merge candidate, a motion vector of the reference picture list in the first direction (L0) corresponding to the combined merge candidate.

- 25 11. 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 10.