CLAIMS

1. A method of decoding an image, the method comprising:

determining a collocated block at a same location as a current block in an image restored before the current image;

when one of a reference picture of the collocated block or a reference picture of the current block is a long-term reference picture, determining that a motion vector of the collocated block is un-available;

when both the reference picture of the collocated block and the reference picture of the current block are long-term reference pictures, obtaining a temporal motion vector prediction candidate without scaling the motion vector of the collocated block;

when both the reference picture of the current block and the reference picture of the collocated block are short-term reference pictures, obtaining the temporal motion vector prediction candidate by scaling the motion vector of the collocated block;

determining a motion vector estimator of the current block from among motion vector prediction candidates including the temporal motion vector prediction candidate; and

generating a motion vector of the current block based on the motion vector estimator,

wherein the current image is split into at least one maximum coding unit,

the at least one maximum coding unit is hierarchically split into a coding unit of a depth including at least one of a current depth and a lower depth according to split information,

when the split information indicates a split for the current depth, a coding unit of the current depth is split into four coding units of the lower depth that are square independently from neighboring coding units, and

when the split information indicates a non-split of the current depth, at least one prediction unit including a current prediction unit is obtained based on the coding unit of the current depth.

2. The method of claim 1, further comprising:

storing the determined candidate motion vector in candidate motion vector list.

3. The method of claim 1, further comprising:

when one of the reference picture of the collocated block or the reference picture of

the current block is the long-term reference picture, determining that the motion vector of the collocated block is to be unreferenced.

4. An apparatus of decoding an image, the apparatus comprising:

a processor for determining a motion vector estimator of a current block among motion vector prediction candidates and generating a motion vector of the current block by using the motion vector estimator,

wherein the processor is configured to:

determine a collocated block at a same location as the current block in an image restored before a current image;

obtain a temporal motion vector prediction candidate without scaling a motion vector of the collocated block when both the reference picture of the collocated block and the reference picture of the current block are long-term reference pictures;

determine that the motion vector of the collocated block is un-available when one of the reference picture of the collocated block or the reference picture of the current block is the long-term reference picture;

obtain the temporal motion vector prediction candidate by scaling the motion vector of the collocated block when both the reference picture of the current block and the reference picture of the collocated block are short-term reference pictures; and

determine the motion vector estimator of the current block from among motion vector prediction candidates including the temporal motion vector prediction candidate,

wherein the current image is split into a plurality of maximum coding units,

the maximum coding unit is hierarchically split into a coding unit of a depth including at least one of a current depth and a lower depth according to split information,

when the split information indicates a split for the current depth, a coding unit of the current depth is split into four coding units of the lower depth that are square independently from neighboring coding units, and

when the split information indicates a non-split of the current depth, at least one prediction unit including a current prediction unit is obtained based on the coding unit of the current depth.