[Claims]

1. An inter prediction method comprising:

determining a collocated block of a current block of a current image from among blocks of an image that is restored prior to the current image;

preferentially checking whether a first reference list from among reference lists of the collocated block is referred to and selectively checking whether a second reference list is referred to according to whether the first reference list is referred to;

based on a result of the checking, determining a single collocated reference list from among the first reference list and the second reference list;

determining a reference block of the current block by using motion information of the collocated reference list; and

performing inter prediction on the current block by using the determined reference block.

2. The inter prediction method of claim 1, wherein the first reference list comprises images that are positioned opposite to a direction from the current image to the collocated block.

3. The inter prediction method of claim 1, wherein the selective checking of the second reference list comprises:

when the first reference list is referred to for inter prediction, skipping an operation for checking whether the second reference list is referred to.

4. The inter prediction method of claim 1, wherein the determining of the collocated reference list comprises:

when a picture order count (POC) number of an image of the collocated block is always smaller than that of the current image, determining a reference list of the current block as the collocated reference list.

5. The inter prediction method of claim 1, wherein the selective checking of the second reference list comprises;

checking the first reference list or the second reference list according to whether motion information of the first reference list or the second reference list exists.

6. An inter prediction apparatus comprising:

a collocated reference list checking unit for determining a collocated block of a current block of a current image from among blocks of an image that is restored prior to the current image, and preferentially checking whether a first reference list from among reference lists of the collocated block is referred to and selectively checking whether a second reference list is referred to according to whether the first reference list is referred to;

a reference block determiner for, based on a result of the checking, determining a single collocated reference list from among the first reference list and the second reference list, and determining a reference block of the current block by using motion information of the collocated reference list; and

an inter prediction unit for performing inter prediction on the current block by using the determined reference block.

7. The inter prediction apparatus of claim 6, wherein the first reference list comprises images that are positioned opposite to a direction from the current image to the collocated block.

8. The inter prediction apparatus of claim 6, wherein, when the first reference list is referred to for inter prediction, the reference list checking unit skips an operation of checking whether the second reference list is referred to.

9. The inter prediction apparatus of claim 6, wherein, when a picture order count (POC) number of an image of the collocated block is always smaller than that of the current image, the reference block determiner determines a reference list of the current block as the collocated reference list.

10. The inter prediction apparatus of claim 6, wherein the collocated reference list checks whether the first reference list or the second reference list are referred to according to whether motion information of the first reference list or the second reference list exists.

11. A video decoding apparatus comprising:

a parser for performing entropy decoding on a bit string obtained by parsing a received bit stream to restore samples;

an inverse transformer for performing inverse quantization and inverse transformation on a quantized transformation coefficient from among the restored samples to restore samples;

an intra predictor for performing intra prediction on blocks in an intra prediction mode from among the samples restored by the inverse transformer; and

a motion compensator for preferentially checking whether a first reference list from among reference lists of a collocated block of the current block, selectively checking whether a second reference list is referred to according to whether the first reference list is referred to, determining a single collocated reference list from among the first reference list and the second reference list based on a result of the checking, and performing inter prediction on the current block by using a reference block of the current block based on motion information of the collocated reference list, for performing inter prediction on a current block in an inter mode from among the samples restored by the inverse transformer; and

a restorer for restoring an image by using blocks that are restored via the inter prediction or the intra prediction.

12. The video decoding apparatus of claim 11, wherein the first reference list comprises images that are positioned opposite to a direction from the current image to the collocated block, and

wherein, when the first reference list is referred to for inter prediction of the collocated block, the motion compensator skips an operation for checking whether the second reference list is referred to.

13. A video encoding apparatus comprising:

an intra predictor for performing intra prediction on blocks in an intra prediction mode from among blocks of a video;

an inter predictor for preferentially checking whether a first reference list from among reference lists of a collocated block of the current block is referred to, selectively checking whether a second reference list is referred to according to whether the first reference list is referred to, determining a single collocated reference list from among the first reference list and the second reference list based

on a result of the checking, and performing inter prediction on the current block by using a reference block of the current block based on motion information of the collocated reference list, for inter prediction of a current block in an inter mode;

a transformation quantizer for performing transformation and quantization on a result of the intra prediction or the inter prediction; and

an output unit for outputting a bitstream generated by performing entropy encoding on samples comprising a quantized transformation coefficient generated as a result of the transformation and the quantization.

14. The video encoding apparatus of claim 13, wherein the first reference list comprises images that are positioned opposite to a direction from the current image to the collocated block, and

wherein the inter predictor skips an operation for checking whether the second reference list is referred to when the first reference list is referred to for inter prediction of the collocated block.

15. A computer readable recording medium having recorded thereon a program for executing the inter prediction method of claim 1.

[Claims]

1. A method of video decoding, the method comprising:

when a reference picture of a collocated block of a current block is determined by using list L0, determining a motion vector predictor candidate using a motion vector according to the list L0 of the collocated block;

when a reference picture of the collocated block is determined by using list L1, determining the motion vector predictor candidate using a motion vector according to the list L1 of the collocated block;

when a reference picture of the collocated block is determined by using the list L0 and the list L1, and when reference pictures, which are available for prediction of the current block, are to be output prior to a current picture including the current block, determining the motion vector predictor candidate using a motion vector corresponding to a reference list of the current block, among the motion vector according to the list L0 and a the motion vector according to the list L1 of the collocated block; and

obtaining a motion vector predictor of the current bock among predictor candidates including the motion vector predictor candidate,

wherein the reference list of the current block is at least one of the list L0 and the list L1.

2. The method of claim 1, wherein the collocated block is a block is co-located with a block location of the current block, in a collocated picture which is determined among pictures decoded prior to the current picture.

3. The method of claim 1, wherein the current picture is split into a plurality of maximum coding units,

a maximum coding unit among the plurality of maximum coding units is hierarchically split into coding units of depths, including a current depth and a lower depth, according to split information,

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

when the split information indicates a non-split for the current depth, at least one prediction unit is obtained from the coding unit of the current depth is split, and

the current block is one of the at least one prediction unit.