Claims

1. A method of decoding a video by using data unit merging, the method comprising:

parsing a received bitstream to extract encoded video data and encoding information and extracting prediction mode information, merging related information, and prediction related information in the encoding information; and

analyzing an occurrence of merging with at least one neighboring data unit based on at least one of a prediction mode and an encoding mode according to data units based on the extracted prediction mode information and the extracted merging related information, and performing inter prediction and motion compensation by using prediction related information of the at least one neighboring data unit on a current data unit merged with the at least one neighboring data unit, to decode the encoded video data according to the data units determined based on the encoding information, wherein if the current data unit is merged with at least one neighboring data unit based on merging information in the merging related information, the analyzing comprises determining one data unit to be merged with the current data unit from among a plurality of left neighboring data units contacting a left boundary of the current data unit and a plurality of upper neighboring data units contacting an upper boundary of the current data unit based on merging index information in the merging related information.

2. The method of claim 1, wherein the determining the one data unit to be merged with the current data unit comprises determining the one data unit to be merged from among the plurality of left neighboring data units, the plurality of upper neighboring data units, and a plurality of corner neighboring data units comprising an upper left neighboring data unit, an upper right neighboring data unit, and a lower left neighboring data unit contacting corners of the current data unit.

3. The method of claim 2, wherein the determining the one data unit to be merged from among the plurality of left neighboring data units, the plurality of upper neighboring data units, and a plurality of corner neighboring data units comprises:

reading the merging index information and determining whether a neighboring data unit to be merged with the current data unit is a first candidate data unit from among the plurality of left neighboring data units, a second candidate data unit from among the plurality of upper neighboring data units, or a third candidate data unit from among the plurality of corner neighboring data units; and

searching for and determining the one data unit from among the plurality of left neighboring data units if the first candidate data unit is determined, from among the plurality of upper neighboring data units if the second candidate data unit is determined, and from among the plurality of corner neighboring data units if the third candidate data is determined as the one data unit to be merged,

wherein a method of the searching for and determining the one data unit to be merged from among the plurality of left neighboring data units, the plurality of upper neighboring data units, and the plurality of corner neighboring data units is preset.

4. The method of claim 1, wherein the parsing and extracting comprises extracting at least one of:

if a prediction mode of the current data unit is not a skip mode based on skip mode information indicating whether the prediction mode of the current data unit is the skip mode, skip/direct mode encoding information indicating whether direct mode information, indicating whether the prediction mode of the current data unit is a direct mode, is encoded;

coding unit merging determining information indicating whether an occurrence of merging with coding units that are obtained by splitting a picture for encoding the current picture is determined; and

prediction unit merging determining information indicating whether an occurrence of merging with prediction units that are obtained by splitting the picture for prediction encoding of the picture is determined.

Claims

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

obtaining, from a bitstream, a skip flag for a coding unit which indicates whether a encoding mode of the coding unit is a skip mode;

when the skip flag indicates a skip mode of the coding unit, obtaining, from the bitstream, a merge index indicating one block among a candidate block group; and

when the skip flag indicates a non-skip mode of the coding unit, obtaining, information about a partition type and merge information for a partition among the at least one partition,

wherein the candidate block group includes at least one candidate block among neighboring blocks of the coding unit,

the neighboring blocks include a lower-left block which is diagonally adjacent to a lower-left corner of the coding unit,

when the information about a partition type is obtained from the bitstream, at least one partition including the partition is determined from the coding unit based on the information about partition type, and

the merge information of the partition indicates whether the partition among at least one partition is in a merge mode.

2. The method of claim 1, wherein the merge index indicates one among a left block, a upper block, a upper-left block, a upper-right block and the diagonally lower-left block which are adjacent to the borders of the coding unit.

3. The method of claim 1 further comprises performing motion compensation on the coding unit using motion information of a block indicated by the merge index.

4. The method of claim 1 further comprises performing motion compensation on the partition using motion information of a block among blocks adjacent to the partition when the partition is in the merge mode.