

CLAIMS

1. A video decoding method comprising:
 - obtaining information about an index of a first tile and information about an index of a last tile from a bitstream, wherein the first tile and the last tile are included in a first slice;
 - obtaining a column index of the first tile using the information about the index of the first tile;
 - obtaining a column index of the last tile using the information about the index of the last tile;
 - determining an index difference between the first tile and the last tile, based on whether the index of the first tile is greater than the index of the last tile and whether the column index of the first tile is greater than the column index of the last tile;
 - determining a number of tiles included in the first slice using the index difference between the first tile and the last tile and a number of tile columns included in a picture; and
 - decoding a plurality of tiles included in the first slice using the number of tiles included in the first slice.
2. A video decoding apparatus comprising:
 - a syntax element obtainer configured to obtain information about an index of a first tile and information about an index of a last tile from a bitstream, wherein the first tile and the last tile are included in a first slice; and
 - a decoder configured to obtain a column index of the first tile using the information about the index of the first tile, obtain a column index of the last tile using the information about the index of the last tile, determine an index difference between the first tile and the last tile, based on whether the index of the first tile is greater than the index of the last tile and whether the column index of the first tile is greater than the column index of the last tile, determine a number of tiles included in the first slice the index difference between the first tile and the last tile and a number of tile columns included in a picture, and decode a plurality of tiles included in the first slice using the number of tiles included in the first slice.
3. A video encoding method comprising:
 - when tiles included in a first slice are discontinuously located within a picture, sequentially encoding the tiles included in the first slice;
 - encoding information about an index of a first tile located at an upper left end from among the tiles included in the first slice; and
 - encoding information about an index of a last tile located at a lower right end from among the tiles included in the first slice,
 - wherein the information about the index of the first tile is used to obtain a column index of the first tile,
 - the information about the index of the last tile is used to obtain a column index of the last tile,
 - an index difference between the first tile and the last tile is obtained based on whether the index of the first tile is greater than the index of the last tile and whether the column index of the first tile is greater than the column index of the last tile,
 - a number of tiles included in the first slice is obtained using the index difference between the first tile and the last tile and a number of tile columns included in the picture.