CLAIMS

【Claim 1】

A method of decoding an image, comprising:

determining a reference region for intra prediction of a current block;

deriving an intra prediction mode of the current block based on a predetermined MPM candidate group; and

performing the intra prediction on the current block based on the reference region and the intra prediction mode,

wherein the MPM candidate group is divided into a first group and a second group,

wherein the first group includes a default mode pre-defined in a decoding apparatus, and the second group includes an intra prediction mode of a neighboring block adjacent to the current block, and

wherein the intra prediction mode of the current block is derived by selectively using one of the first group or the second group.

【Claim 2】

The method of claim 1, wherein determining the reference region comprises:

selecting one of a plurality of pixel lines pre-defined in the decoding apparatus; and

determining the selected pixel line as the reference region,

wherein the plurality of pre-defined pixel lines may include at least one of a first pixel line adjacent to the current block, a second pixel line adjacent to the first pixel line, a third pixel line adjacent to the second pixel line or a fourth pixel line adjacent to the third pixel line.

【Claim 3】

The method of claim 1, wherein the default mode is composed of only a non-directional

mode, and

wherein the non-directional mode includes at least one of a planar mode or a DC mode.

【Claim 4】

The method of claim 3, wherein the second group further includes a mode derived by adding or subtracting an N value to the intra prediction mode of the neighboring block, and

wherein the N value is 1, 2, or 3.

【Claim 5】

The method of claim 2, further comprising:

obtaining a first flag from the bitstream,

wherein the first flag indicates whether the intra prediction mode of the current block is derived from the first group,

wherein when a value of the first flag is a first value, the intra prediction mode of the current block is set to an MPM belonging to the first group, and

wherein when the value of the first flag is a second value, the intra prediction mode of the current block is derived based on the second group and an MPM index.

【Claim 6】

The method of claim 5, wherein the first flag is signaled only when the reference region of the current block is determined to be the first pixel line.

【Claim 7】

The method of claim 1, further comprising:

dividing the current block into a plurality of sub-blocks,

wherein the intra prediction is performed in units of the sub-blocks, and

wherein the number of the sub-blocks is variably determined based on a size or a shape of

the current block.

【Claim 8】

A method of encoding an image, comprising:

determining a reference region for intra prediction of a current block;

determining an intra prediction mode of the current block;

performing the intra prediction on the current block based on the reference region and the intra prediction mode; and

encoding the intra prediction mode based on a predetermined MPM candidate group,

wherein the MPM candidate group is divided into a first group and a second group,

wherein the first group includes a default mode pre-defined in an encoding apparatus, and the second group includes an intra prediction mode of a neighboring block adjacent to the current block, and

wherein the intra prediction mode of the current block is encoded by selectively using one of the first group or the second group.

【Claim 9】

A non-transitory computer readable recording medium storing a bitstream that is generated by a method of encoding an image, the method comprising:

determining a reference region for intra prediction of a current block;

determining an intra prediction mode of the current block;

performing the intra prediction on the current block based on the reference region and the intra prediction mode; and

encoding the intra prediction mode based on a predetermined MPM candidate group,

wherein the MPM candidate group is divided into a first group and a second group,

wherein the first group includes a default mode pre-defined in an encoding apparatus, and the second group includes an intra prediction mode of a neighboring block adjacent to the current block, and

wherein the intra prediction mode of the current block is encoded by selectively using one of the first group or the second group.