

CLAIMS

[Claim 1]

A method of decoding a video, the method comprising:

obtaining, from a portion for a sequence parameter set of a bitstream, a number of reference picture sets included in a portion regarding a sequence parameter set of the bitstream;

determining whether an index of a current reference picture set is same as the number of reference picture sets;

when it is determined that a value of the index of the current reference picture set is the same as the number of reference picture sets, obtaining, from the bitstream, delta information about a difference between the index of the reference picture set and an index of a candidate reference picture set;

determining the index of the candidate reference picture set based on the delta information; and

determining the current reference picture set based on the index of the candidate reference picture set,

wherein a value of the index of the candidate reference picture set is smaller than a value of the index of the current reference picture set.

[Claim 2]

The decoding method of claim 1, wherein the reference picture sets are obtained from at least one of a first portion regarding the sequence parameter set of the bitstream and a second portion regarding a slice header of the bitstream.

[Claim 3]

The decoding method of claim 2, wherein a value of an index of the reference picture set determined based on the first portion of the bitstream is smaller than the number of reference picture sets, and a value of an index of the reference picture set obtained by using the second portion of the bitstream is equal to a number of the candidate reference picture sets.

[Claim 4]

The decoding method of claim 2, wherein the delta information indicates a value obtained by subtracting 1 from a difference between the index of the current reference picture

set and the index of the candidate reference picture set.

[Claim 5]

The decoding method of claim 2, wherein the candidate reference picture set is a reference picture set obtained from the first portion of the bitstream.

[Claim 6]

An apparatus of decoding a video, the apparatus comprising:

a receiving unit configured to obtain a bitstream of an encoded video;

a reference picture set (RPS) determination unit configured to obtain, from a portion for a sequence parameter set of the bitstream, a number of reference picture sets included in a portion regarding a sequence parameter set of the bitstream, determine whether an index of a current reference picture set is same as the number of reference picture sets, when it is determined that a value of the index of the current reference picture set is the same as the number of reference picture sets, obtain, from the bitstream, delta information about a difference between the index of the reference picture set and an index of a candidate reference picture set, determine the index of the candidate reference picture set based on the delta information, and determine the current reference picture set based on the index of the candidate reference picture set, wherein a value of the index of the candidate reference picture set is smaller than a value of the index of the current reference picture set.

[Claim 7]

A method of encoding a video, the method comprising:

determining reference picture sets available to predict a current image;

generating information regarding the number of reference picture sets included in a portion for a sequence parameter set;

generating delta information about a difference between an index of a current reference picture set and an index of a candidate reference picture set;

generating a bitstream including the information regarding the number of reference picture sets included in the portion for the sequence parameter set and the delta information,

wherein the information regarding the number of the reference picture sets is included in the portion for a sequence parameter set of the bitstream,

wherein the delta information is generated to be used to determine the current reference picture set when the index of the current reference picture set is equal to the number of the reference picture sets included in the sequence parameter set, and

wherein a value of the index of the candidate reference picture set is smaller than a

value of the index of the current reference picture set.

[Claim 8]

An apparatus of encoding a video, the apparatus comprising:

a reference picture set (RPS) determination unit configured to determine reference picture sets available to predict a current image;

an output unit configured to generate information regarding the number of reference picture sets included in a portion for a sequence parameter set, generate delta information about a difference between an index of a current reference picture set and an index of a candidate reference picture set, generate a bitstream including the information regarding the number of reference picture sets in the portion for the sequence parameter set and the delta information,

wherein the information regarding the number of the reference picture sets is included in the portion for a sequence parameter set of the bitstream,

wherein the delta information is generated to be used to determine the current reference picture set when the index of the current reference picture set is equal to the number of the reference picture sets included in the sequence parameter set, and

wherein a value of the index of the candidate reference picture set is smaller than a value of the index of the current reference picture set.