

example, improvement in encoding efficiency, a reduction in amount of encoding/decoding, a reduction in circuit size, acceleration of encoding/decoding, appropriate selection of constituent elements/operations, such as filters, blocks, size, motion vectors, reference pictures, and reference blocks, in encoding and decoding.

[0006]

It should be noted that embodiments of the present disclosure include configurations or methods that can produce benefits other than the above. Examples of those include a configuration or a method that improves encoding efficiency while suppressing an increase in amount of processing.

SOLUTIONS TO PROBLEMS

[0007]

According to a first aspect of the present disclosure, there is provided an encoding method including: selecting a first table from among tables, each of the tables associates indexes with respective correction values, each of the tables to be used to change a motion vector of a current block included in a picture; writing a parameter into a bitstream, the parameter indicating a first index from among indexes in the first table; identifying a correction value associated with the first index; changing the motion vector by the correction value in a predetermined direction; and encoding the current block based on the changed motion vector, wherein a difference between two correction values among the correction values varies from table to table, the two correction values in each of the tables being associated with the same two indexes.

Disclosed herein is an encoder that includes circuitry and memory connected to the circuitry. In operation, the circuitry: selects a first table to be used for a current partition to be encoded in an image of a video, from among tables that are used to correct a base motion vector in a predetermined direction using a correction value specified by an index, the tables including correction values having varying differences between indexes; writes a parameter indicating a first index to be selected from among indexes included in the first table; and encodes the current partition using the base motion vector corrected using a correction value specified by the first index.

[0008]

According to a second aspect of the present disclosure, there is provided a decoding method including: selecting a first table from among tables, each of the tables associates indexes with respective correction values, each of the tables to be used to change a motion vector of a current block included in a picture; parsing a parameter indicating a first index selected from among indexes included in the

first table; identifying a correction value associated with the first index; changing the motion vector by the correction value in a predetermined direction; and decoding the current block based on the changed motion vector, wherein a difference between two correction values among the correction values varies from table to table, the two correction values in each of the tables being associated with the same two indexes.

Disclosed herein is a decoder that includes circuitry and memory connected to the circuitry. In operation, the circuitry: selects a first table to be used for a current partition to be decoded in an image of a video, from among tables that are used to correct a base motion vector in a predetermined direction using a correction value specified by an index, the tables including correction values having varying differences between indexes; parses a parameter indicating a first index to be selected from among indexes included in the first table; and decodes the current partition using the base motion vector corrected using a correction value specified by the first index.

[0009]

It should be noted that these general or specific aspects may be implemented by a system, a device, a method, an integrated circuit, a computer program, or a non-transitory computer-readable recording medium such as a compact disc read only memory (CD-ROM), or by any combination of systems, devices, methods, integrated circuits, computer programs, or recording media.

[0010]

Additional benefits and advantages of the disclosed embodiments will become apparent from the specification and drawings. The benefits and/or advantages may be individually obtained by the various embodiments and features of the specification and drawings, not all of which need to be provided in order to obtain one or more of such benefits and/or advantages.

ADVANTAGEOUS EFFECT OF INVENTION

[0011]

Embodiments of the present disclosure provide an encoding device, a decoding device, an encoding method, and a decoding method that are capable of improving coding efficiency.

BRIEF DESCRIPTION OF DRAWINGS

[0012]

FIG. 1 is a block diagram illustrating a functional configuration of an encoder according to an embodiment.

FIG. 2 is a flow chart indicating one example of an overall encoding