

consideration of a view-direction correlation, a reference image disposed in the view direction can be inserted at a preferable position in the temporal list.

5 CITATION LIST

NON-PATENT DOCUMENT

[0007]

Non-Patent Document 1: Gerhard Tech, Krzysztof Wegner, Ying Chen, Miska Hannuksela, "MV-HEVC Draft Text2",

10 JCT3V-B1004, 2012,11,07

Non-Patent Document 2: Li Zhang, Ying Chen, Jewon Kang, "AHG5: MV-Hevc software for HTM", JCT3V-B0046, 2012,10,07

SUMMARY OF THE INVENTION

15 PROBLEMS TO BE SOLVED BY THE INVENTION

[0008]

However, in the technology disclosed in Non-Patent Document 2, also when it is not necessary to change the insertion position of the reference image disposed in the view direction in the temporal list, the slice header needs to be transmitted, and there is concern that the coding efficiency may decrease.

[0009]

25 ~~The present disclosure is in view of such a situation and is capable of improving~~ Embodiments of the present invention improve the coding efficiency in hierarchical coding or multi-viewpoint coding.

SOLUTIONS TO PROBLEMS

30 [0010]

According to an aspect of the present disclosure invention,

The above-described reference list setting unit may set the reference list by inserting the reference images that can be referred to in the layer direction in a direction L1 with order of the reference image that can be referred to in the layer direction being opposite to that of the case of a direction L0.

[0018]

The above-described reference list setting unit may include: a temporal list setting unit that sets a temporal list that is a temporary list used for setting the reference list by inserting the reference image that can be referred to in the layer direction between the plurality of reference images that can be referred to in the time direction; and a reference image list setting unit that sets the reference list based on the temporal list set by the temporal list setting unit.

[0019]

According to an another aspect of the present disclosureinvention, there is provided an image processing method implemented in an image processing device. The image processing method includes: generating an image by decoding a bit stream; setting a reference list being referred to when the generated image is predicted by inserting a reference image that can be referred to in a layer direction between a plurality of reference images that can be referred to in a time direction; and predicting the generated image by referring to the set reference list.

[0020]

According to another aspect of the present disclosureinvention, there is provided an image processing device including: a reference list setting unit that sets a

that can be referred to in the layer direction in a direction L1 with order of the reference image that can be referred to in the layer direction being opposite to that of the case of a direction L0.

5 [0028]

The above-described reference list setting unit may include: a temporal list setting unit that sets a temporal list that is a temporary list used for setting the reference list by inserting the reference image that
 10 can be referred to in the layer direction between the plurality of reference images that can be referred to in the time direction; and a reference image list setting unit that sets the reference list based on the temporal list set by the temporal list setting unit.

15 [0029]

According to another aspect of the present ~~disclosure~~invention, there is provided an image processing method implemented in an image processing device. The image processing method includes: setting a
 20 reference list being referred to when an image is predicted by inserting a reference image that can be referred to in a layer direction between a plurality of reference images that can be referred to in a time direction; predicting the image by referring to the set
 25 reference list; and generating a bit stream by performing coding using the predicted image.

[0030]

According to an ~~aspect~~embodiment of the present ~~disclosure~~invention, an image is generated by decoding a
 30 bit stream, and a reference list being referred to when the image generated is predicted is set by inserting a reference image that

can be referred to in a layer direction between a plurality of reference images that can be referred to in a time direction. Then, the generated image is predicted by referring to the set reference list.

5 [0031]

According to ~~another aspect~~embodiments of the present ~~disclosure~~invention, a reference list being referred to when an image is predicted is set by inserting a reference image that can be referred to in a layer direction between a plurality of reference images that can be referred to in a time direction. Then, the image is predicted by referring to the set reference list, and a bit stream is generated by performing coding using the predicted image.

15 [0032]

Here, the above-described image processing device may be an independent device or an internal block that configures one image encoding device or image decoding device.

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EFFECTS OF THE INVENTION

[0033]

According to ~~an aspect~~embodiments of the present ~~disclosure~~invention, an image can be decoded.

25 Particularly, the coding efficiency can be improved.

[0034]

According to ~~another aspect~~embodiments of the present ~~disclosure~~invention, an image can be coded. Particularly, the coding efficiency can be improved.

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BRIEF DESCRIPTION OF DRAWINGS

[0035]