parallel processing tool. Parallel decoding of picture units of each view using the dependent slice is possible.

Citation List

Non-Patent Literature

[0005]

Non-Patent Literature 1: Benjamin Bross, Woo-Jin Han, Jens-Rainer Ohm, Gary J. Sullivan, Thomas Wiegand, "High efficiency video coding (HEVC) text specification draft 8," JCTVC-J1003_d7, 2012.7.28

Summary of Invention

Technical Problem

[0006]

However, even when the dependent slice is used, it is difficult to decode pictures of a plurality of views in parallel because there is dependency of motion compensation between the views.

[0007]

Embodiments of the present invention disclose pictures of a plurality of views to be processed in parallel.

Solution to Problem

[0007a]

According to a first aspect, there is provided an image processing device comprising: circuitry configured to set an encoded stream that includes syntaxes in which motion vector (MV) range limit information is encoded, the MV range limit information including a flag indicating whether an inter-view MV corresponding to a current block for referring to a view different from a view of the current block has a range limit in a vertical direction that is less than a predetermined value in units of luma samples; generate the encoded stream based on the flag included in the MV range limit information; and transmit the encoded stream and the MV range limit information.

[0007b]

According to a second aspect, there is provided an image processing method comprising: setting an encoded stream that includes syntaxes in which motion vector (MV) range limit information is encoded, the MV range limit information including a flag indicating whether an inter-view MV corresponding to a current block for referring to a view different from a view of a current block has a range limit in a vertical direction that is less than a predetermined value in units of luma samples; generating the encoded stream based on the flag included in the MV range limit information; and transmitting encoded stream and the MV range limit information.

[0008]

Disclosed herein is an image processing device that includes a reception section configured to receive an encoded stream set in syntax of the encoded stream in which motion vector (MV) range limit information is encoded in units in which image data have a hierarchical structure and the MV range limit information, the MV range limit information being information about a limit of a value of a vertical direction of an MV for referring to a view different from a view of a current block in an inter-view MV corresponding to the current block, and a decoding section configured to decode the encoded stream received by the reception section using the MV range limit information received by the reception section.

CLAIMS

1. An image processing device comprising:

circuitry configured to

set an encoded stream that includes syntaxes in which motion vector (MV) range limit information is encoded, the MV range limit information including a flag indicating whether an inter-view MV corresponding to a current block for referring to a view different from a view of the current block has a range limit in a vertical direction that is less than a predetermined value in units of luma samples;

generate the encoded stream based on the flag included in the MV range limit information; and

transmit the encoded stream and the MV range limit information.

2. The image processing device according to claim 1, wherein the predetermined value is 56 samples.

3. The image processing device according to claim 1, wherein the MV range limit information further includes the value indicating the limit of the range in the vertical positive direction for the inter-view MV.

4. The image processing device according to claim 1, wherein the MV range limit information is set in a sequence parameter set (SPS).

5. The image processing device according to claim 1, wherein the circuitry is further configured to encode the MV range limit information.

6. An image processing method comprising:

setting an encoded stream that includes syntaxes in which motion vector (MV) range limit information is encoded, the MV range limit information including a flag indicating whether an inter-view MV corresponding to a current block for referring to a view different from a view of a current block has a range limit in a vertical direction that is less than a predetermined value in units of luma samples;

generating the encoded stream based on the flag included in the MV range limit information; and

transmitting encoded stream and the MV range limit information.

7. The image processing method according to claim 6, wherein the predetermined value is 56 samples.

8. The image processing method according to claim 6, wherein the MV range limit information further includes the value indicating the limit of the range in the vertical positive direction for the inter-view MV.

9. The image processing method according to claim 6, wherein the MV range limit information is set in a sequence parameter set (SPS).

10. The image processing method according to claim 6, wherein the method further comprises a step of encoding the MV range limit information.