

CLAIMS

~~{Claim 1}~~

1. An image processing apparatus comprising:

an encoding mode setter that sets, in units of coding units having a hierarchical structure, whether a non-compression mode is to be selected as an encoding mode for encoding image data, the non-compression mode being an encoding mode in which the image data is output as encoded data; and

an encoder that encodes the image data in units of the coding units in accordance with a mode set by the encoding mode setter.

~~{Claim 2}~~

2. The image processing apparatus according to Claim 1, further comprising:

a ~~shift processing~~ controller that performs control, on a coding unit for which the non-compression mode has been set by the encoding mode setter, to set a bit depth for encoding.~~skip shift processing in which a bit precision for encoding or decoding is increased;~~ and

~~— a shift processor that performs the shift processing on a coding unit of the image data, the coding unit being controlled by the shift processing controller so as to undergo the shift processing.~~

~~{Claim 3}~~

3. The image processing apparatus according to Claim 1, further comprising:

a ~~filter processing~~ controller that performs control, on a coding unit for which the non-compression mode has been set by the encoding mode setter, to skip filter processing of changing a bit depth for encoding.~~in which filtering is performed on a locally decoded image;~~

~~— a filter coefficient calculator that calculates a filter coefficient for the filter processing by using image data corresponding to a coding unit which is controlled by the filter processing controller so as to undergo the filter processing; and~~

~~— a filter processor that performs the filter processing~~

~~in units of blocks, which are units of the filter processing,
by using the filter coefficient calculated by the filter
coefficient calculator.~~

~~{Claim 4}~~

4. The image processing apparatus according to Claim 13,
further comprising:

a controller that performs control, on a coding unit
for which the non-compression mode has been set by the
encoding mode setter, to skip filter processing in which
filtering is performed on a locally decoded image.~~wherein
the filter processor performs the filter processing on only
pixels which are controlled by the filter processing
controller so as to undergo the filter processing, the
pixels being included in a current block which is a target
to be processed.~~

~~{Claim 5}~~

5. The image processing apparatus according to Claim 43,
wherein the controller performs control, on a coding unit
for which the non-compression mode has been set by the
encoding mode setter, to select whether to apply or skip the
filter processing in which filtering is performed on a
locally decoded image.~~further comprising:~~

~~— a filter identification information generator that
generates filter identification information in units of the
blocks, the filter identification information indicating
whether the filter processing is to be performed.~~

~~{Claim 6}~~

6. The image processing apparatus according to Claim 53,
further comprising:

a filter identification information generator that
generates filter identification information identifying
whether the filter processing is to be performed.~~wherein the
filter processor performs adaptive loop filtering on the
locally decoded image, the adaptive loop filtering being
adaptive filter processing using classification processing.~~

~~{Claim 7}~~

7. The image processing apparatus according to Claim 1, wherein, in a case where an amount of input data, which is a data amount of the image data corresponding to a current coding unit ~~as a target of encoding processing~~, is smaller than or equal to an amount of code of encoded data, which is obtained by encoding the image data corresponding to the current coding unit, the encoding mode setter sets an encoding mode of the current coding unit to be the non-compression mode.

~~{Claim 8}~~

8. The image processing apparatus according to Claim 7, further comprising:

an input data amount calculator that calculates the amount of input data,

wherein the encoding mode setter compares, regarding the current coding unit, the amount of input data calculated by the input data amount calculator with the amount of code.

~~{Claim 9}~~

9. The image processing apparatus according to Claim 1, further comprising:

an encoding mode identification information generator that generates encoding mode identification information ~~in units of the coding units~~, the identification information indicating whether the non-compression mode has been set by the encoding mode setter.

~~{Claim 10}~~

10 ~~The~~An image processing apparatus according to Claim 1,
~~method for an image processing apparatus, further~~
comprising:

an identification information generator that generates
identification information identifying that a block
constituted by a plurality of coding units includes a coding
unit for which the non-compression mode has been set.

~~setting, with an encoding mode setter, in units of~~
~~coding units having a hierarchical structure, whether a non-~~
~~compression mode is to be selected as an encoding mode for~~

~~encoding image data, the non-compression mode being an encoding mode in which the image data is output as encoded data; and~~

~~— encoding, with an encoder, the image data in units of the coding units in accordance with a set mode.~~

~~{Claim 11}~~

11. TheAn image processing apparatus according to Claim 10, wherein the block constituted by a plurality of coding units is a largest coding unit, which is a coding unit of largest size. comprising:

~~— an encoding mode determiner that determines, in units of coding units having a hierarchical structure, whether a non-compression mode has been selected as an encoding mode for encoding image data, the non-compression mode being an encoding mode in which the image data is output as encoded data; and~~

~~— a decoder that decodes the encoded data in units of the coding units in accordance with a mode determined by the encoding mode determiner.~~

~~{Claim 12}~~

12. AnThe image processing method for an image processing apparatus, apparatus according to Claim 11, further comprising:

setting, in units of coding units having a hierarchical structure, whether a non-compression mode is to be selected as an encoding mode for encoding image data, the non-compression mode being an encoding mode in which the image data is output as encoded data; and

encoding the image data in units of the coding units in accordance with a set mode.

~~a shift processing controller that performs control, on a coding unit for which the encoding mode determiner has determined that the non-compression mode has been selected, to skip shift processing in which a bit precision for encoding or decoding is increased; and~~

~~— a shift processor that performs the shift processing on a coding unit of the image data, the coding unit being controlled by the shift processing controller so as to~~

~~undergo the shift processing.~~

~~{Claim 13}~~

~~13. An~~The image processing apparatus according to Claim 11,
~~further comprising:~~

~~an encoding mode determiner that determines, in units of coding units having a hierarchical structure, whether a non-compression mode has been selected as an encoding mode for encoding image data, the non-compression mode being an encoding mode in which the image data is output as encoded data; and~~

~~a decoder that decodes the encoded data in units of the coding units in accordance with a mode determined by the encoding mode determiner.~~

~~a filter processing controller that performs control, on a coding unit for which the encoding mode determiner has determined that the non-compression mode has been selected, to skip filter processing in which filtering is performed on a locally decoded image; and~~

~~a filter processor that performs the filter processing on the image data in units of blocks, which are units of the filter processing,~~

~~wherein the filter processor performs the filter processing on only pixels which have been controlled by the filter processing controller so as to undergo the filter processing, the pixels being included in a current block which is a target to be processed.~~

~~{Claim 14}~~

~~14. The~~ image processing apparatus according to Claim 13,
~~further comprising:~~

~~a controller that performs control, on a coding unit for which the encoding mode determiner has determined that the non-compression mode has been selected, to perform decoding in accordance with a bit depth which is set at a time of encoding.~~

~~wherein the filter processor performs adaptive loop filtering on the locally decoded image, the adaptive loop filtering being adaptive filter processing using classification processing.~~

~~{Claim 15}~~

15. The image processing apparatus according to Claim 13, further comprising:

a controller that performs control, on a coding unit for which the encoding mode determiner has determined that the non-compression mode has been selected, to skip processing of changing a bit depth for decoding.
~~wherein the filter processor performs the filter processing, in a case where filter identification information indicating whether or not the filter processing has been performed indicates that the filter processing has been performed on image data corresponding to the current block which is a target to be processed, only when control is performed by the filter processing controller so as to perform the filter processing on all pixels included in the current block.~~

~~{Claim 16}~~

16. The image processing apparatus according to Claim 13~~11~~, further comprising:

a controller that performs control, on a coding unit for which ~~wherein the~~ encoding mode determiner has determined that ~~determines whether~~ the non-compression mode has been selected, to skip filter processing in which filtering is performed on an image decoded by the decoder.
~~on the basis of identification information indicating whether the non-compression mode has been selected in units of the coding units.~~

~~{Claim 17}~~

17. ~~The~~An image processing apparatus according to claim 13, ~~method for an image processing apparatus,~~ further comprising:

a filter processor that performs filtering on an image decoded by the decoder by using filter identification information identifying whether the filter processing is to be performed.

~~determining, with an encoding mode determiner, in units of coding units having a hierarchical structure, whether a non-compression mode has been selected as an encoding mode for encoding image data, the non-compression mode being an~~

~~encoding mode in which the image data is output as encoded data; and~~

~~decoding, with a decoder, the encoded data in units of the coding units in accordance with a determined mode.~~

18. The image processing apparatus according to Claim 13, wherein the encoding mode determiner determines whether the non-compression mode has been selected, on the basis of identification information indicating whether the non-compression mode has been selected in units of the coding units.

19. The image processing apparatus according to Claim 13, further comprising:

a filter processor that performs filtering on an image decoded by the decoder by using identification information identifying that a block constituted by a plurality of coding units includes a coding unit for which the non-compression mode has been set.

20. The image processing apparatus according to Claim 19, wherein the block constituted by a plurality of coding units is a largest coding unit, which is a coding unit of largest size.

21. An image processing method for an image processing apparatus, comprising:

determining, in units of coding units having a hierarchical structure, whether a non-compression mode has been selected as an encoding mode for encoding image data, the non-compression mode being an encoding mode in which the image data is output as encoded data; and

decoding the encoded data in units of the coding units in accordance with a determined mode.