CLAIMS

1. An image processing apparatus comprising:

an encoding mode setter adapted to determine whether or not a non-compression mode is to be selected as an encoding mode for encoding image data and to set, in units of coding units that are partial regions of an image of each picture and that have a hierarchical structure from a largest coding unit to a smallest coding unit, the non-compression mode being an encoding mode in which the image data is output as encoded data without encoding the image data, when the non-compression mode is to be selected;

a filter processing controller adapted to perform 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 after a deblocking filter; and

an encoder adapted to perform to arithmetic coding to encode the image data in units of the coding units using the locally decoded image in accordance with a mode set by the encoding mode setter.

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

a filter processor adapted to perform a 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.

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

a filter identification information generator adapted to generate filter identification information in units of blocks , which are units of the filter processing, the filter identification information indicating whether the filter processing is to be performed.

4. The image processing apparatus according to Claim 1, wherein,

the encoded data are accumulated in an accumulation buffer and the encoding mode setter is adapted to set, 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 accumulated in the accumulation buffer, an encoding mode of the current coding unit to be the non-compression mode.

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

an input data amount calculator adapted to calculate the amount of input data,

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

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

an identification information generator adapted to generate 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.

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

an identification information generator adapted to generate the 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.

8. The image processing apparatus according to Claim 6, wherein

the block constituted by the plurality of coding units is a largest coding unit, which is a coding unit of largest size.

9. An image processing method for an image processing apparatus, comprising the steps of:

determining, with an encoding mode setter, whether or not a non-compression mode is to be selected as an encoding mode for encoding image data and setting, in units of coding units that are partial regions of an image of each picture and that have a hierarchical structure from a largest coding unit to a smallest coding unit, the non-compression mode being an encoding mode in which the image data is output as encoded data without encoding the image data, when the non-compression mode is to be selected;

performing, with a filter processing controller, control of filter processing, on a coding unit for which the non-compression mode has been set, to skip filter processing in which filtering is performed on a locally decoded image after a deblocking filter; and

encoding, by arithmetic coding with an encoder, the image data in units of the coding units using the locally decoded image in accordance with a set mode.

CLAIMS:

1. An image processing apparatus comprising:

an encoding mode determiner that determines, in units of coding units having a hierarchical structure on a coding unit basis, 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;

a decoder that decodes, on the coding unit basis, the encoded data in units of the coding units in accordance with a mode determined by the encoding mode determiner; and

a controller that controls, on a coding unit for which the encoding mode determiner has determined that the non-compression mode has been selected, decoding in accordance with a bit depth which specifies a number of bits used to represent the image data encoded as the non-compression mode;

coding unit is formed by recursively splitting a largest coding unit into smaller coding units as block partitioning.

2. The image processing apparatus according to claim 1, wherein the controller further performs control, on the coding unit for which the encoding mode determiner has determined that the non-compression mode has been selected, to skip processing of changing a value of the bit depth.

3. The image processing apparatus according to claim 1, 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 on the coding unit basis.

4. The image processing apparatus according to claim 1, further comprising: a demultiplexer that demultiplexes a demodulated signal into an audio data and the video data.

5. The image processing apparatus according to claim 4, further comprising: a demodulating unit that demodulates a received signal and outputs the demodulated signal to the demultiplexer.

6. The image processing apparatus according to claim 5, further comprising:

a display converter that encodes the decoded data output from the decoder, into video data having a predetermined format, and converts a size of a screen of the video data into a size corresponding to a size of a monitor.

7. The image processing apparatus according to claim 6, further comprising:

a display controller that superposes an on screen display (OSD) signal onto the video data output from the display converter.

8. The image processing apparatus according to claim 1, wherein the coding unit is formed by splitting into prediction units and transform units.

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

determining, in units of coding units having a hierarchical structure on a coding unit basis, 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;

decoding on the coding unit basis. the encoded data in units of the coding units in accordance with a determined mode; and

controlling on a coding unit for which determination has been made that the noncompression mode has been selected. the decoding in accordance with a bit depth which specifies a number of bits used to represent the image data encoded as the noncompression mode;

wherein the coding unit is formed by recursively splitting a largest coding unit into smaller coding units as block partitioning.

10. The image processing method according to claim 9, further comprising:

performing control, on the coding unit for which the encoding mode determiner has determined that the non-compression mode has been selected, to skip processing of changing a value of the bit depth.

11. The image processing method according to claim 9, wherein the determination of whether the non-compression mode has been selected is made on the basis of identification information indicating whether the non-compression mode has been selected on the coding unit basis.

12. The image processing method according to claim 9, wherein the coding unit is formed by splitting into prediction units and transform units.

13. The image processing method according to claim 9, further comprising: demultiplexing a demodulated signal into an audio data and the video data.

14. The image processing method according to claim 13, further comprising:

demodulating a received signal and outputting the demodulated signal for demultiplexing.

15. The image processing method according to claim 14, further comprising:

encoding the decoded data, into video data having a predetermined format, and converting a size of a screen of the video data into a size corresponding to a size of a monitor.

16. The image processing method according to claim 15, further comprising:

superposing an on screen display (OSD) signal onto the video data.