

CLAIMS

Claim 1

~~———— An image processing device comprising:~~
~~———— a decoding section configured to decode an encoded stream to generate~~
5 ~~quantized data;~~
~~———— a setting section configured to set, according to a parameter indicating~~
~~whether to copy another matrix, a quantization matrix to be used when inversely~~
~~quantizing the quantized data generated by the decoding section; and~~
~~———— an inverse quantization section configured to inversely quantize the~~
10 ~~quantized data generated by the decoding section using the quantization matrix set by~~
~~the setting section.~~

Claim 2

~~———— The image processing device according to claim 1, wherein~~
15 ~~———— in a case where the parameter indicates that another matrix is to be copied,~~
~~the setting section sets the quantization matrix by copying the another matrix.~~

Claim 3

~~———— The image processing device according to claim 2, wherein~~
20 ~~———— the setting section selects the another matrix to be copied according to~~
~~identification information for identifying a copy source matrix.~~

Claim 4

~~———— The image processing device according to claim 3, wherein~~
25 ~~———— the setting section selects the another matrix to be copied according to the~~
~~identification information which is different for each size of the quantization matrix.~~

Claim 5

~~———— The image processing device according to claim 3, wherein~~
30 ~~———— the setting section selects the another matrix to be copied according to the~~
~~identification information that distinguishes different classes of quantization matrices.~~

Claim 6

~~———— The image processing device according to claim 5, wherein~~
35 ~~———— the identification information distinguishes different classes of quantization~~
~~matrices by at least one of a prediction mode and a color component.~~

~~Claim 7~~

~~———— The image processing device according to claim 3, wherein~~
~~———— the setting section set a default matrix as the quantization matrix in a case~~
 5 ~~where the identification information for identifying a copy source matrix is~~
~~interpreted as indicating the quantization matrix itself which is to be set.~~

~~Claim 8~~

~~———— The image processing device according to claim 3, wherein~~
 10 ~~———— the identification information identifies one of the quantization matrices~~
~~previously set by the setting section as a copy source matrix.~~

~~Claim 9~~

~~———— The image processing device according to claim 1, wherein~~
 15 ~~———— the decoding section acquires the parameter from a picture parameter set of~~
~~the encoded stream.~~

~~Claim 10~~

~~———— An image processing method comprising:~~
 20 ~~———— decoding an encoded stream to generate quantized data;~~
~~———— setting, according to a parameter indicating whether to copy another matrix,~~
~~a quantization matrix to be used when inversely quantizing the generated quantized~~
~~data; and~~
~~———— inversely quantizing the generated quantized data using the set quantization~~
 25 ~~matrix.~~

~~Claim 11~~

1. An image processing device comprising:
 a quantization section configured to quantize image data using a
 30 quantization matrix to generate quantized data;
 a generating section configured to generate a parameter indicating whether
 to copy another matrix in order to set the quantization matrix to be used when
 inversely quantizing the quantized data; and
 an encoding section configured to generate an encoded stream by encoding
 35 the parameter generated by the generating section and the quantized data generated
 by the quantization section.

~~Claim 12~~

2. The image processing device according to claim ~~11~~ 1, wherein
 in a case where the quantization matrix can be set by copying another matrix,
 the generating section generates the parameter indicating that another matrix is to be
 5 copied.

~~Claim 13~~

3. The image processing device according to claim ~~12~~ 2, wherein
 the generating section generates identification information for identifying a
 10 copy source matrix, and
 the encoding section encodes the identification information generated by the
 generating section.

~~Claim 14~~

4. The image processing device according to claim ~~13~~ 3, wherein
 the generating section generates the identification information which is
 15 different for each size of the quantization matrix.

~~Claim 15~~

5. The image processing device according to claim ~~13~~ 3, wherein
 the generating section generates the identification information that
 20 distinguishes different classes of quantization matrices.

~~Claim 16~~

6. The image processing device according to claim ~~15~~ 5, wherein
 the identification information distinguishes different classes of quantization
 25 matrices by at least one of a prediction mode and a color component.

~~Claim 17~~

7. The image processing device according to claim ~~13~~ 3, wherein
 in a case where a default matrix is to be used as the quantization matrix, the
 generating section generates the identification information interpreted such that the
 30 quantization matrix itself which is to be set is indicated as a copy source.

~~Claim 18~~

8. The image processing device according to claim ~~13~~ 3, wherein
the identification information identifies one of the quantization matrices
previously used by the quantization section as a copy source matrix.

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~~Claim 19~~

9. The image processing device according to claim ~~14~~ 1, further comprising:
a transmitting section that transmits the parameter encoded by the encoding
section within a picture parameter set of the encoded stream.

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~~Claim 20~~

10. An image processing method comprising:
quantizing image data using a quantization matrix to generate quantized
data;

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generating a parameter indicating whether to copy another matrix in order to
set the quantization matrix to be used when inversely quantizing the quantized data;
and

generating an encoded stream by encoding the parameter and the generated
quantized data .