[0007]

However, the quantization matrix adapted to quantization and inverse quantization differs according to the characteristics of each image included in a video. For this reason, the frequency of quantization matrix updates will rise if one attempts to encode video whose image characteristics change from moment to moment with optimal quantization matrices. In H.264/AVC, the quantization matrix is defined in the sequence parameter set (SPS) or the picture parameter set (PPS). Consequently, if the frequency of quantization matrix updates rises, the proportion of the encoded stream occupied by the SPS or the PPS will increase. This means that the encoding efficiency will decrease because of increased overhead. For HEVC, in which the quantization matrix size is further increased and in which several different quantization matrices may be defined for each picture, there is a risk that such decreases in the encoding efficiency accompanying the update of the quantization matrix may become even more significant.

[0008]

Consequently, it is desirable to provide a mechanism enabling moderation of the decrease in encoding efficiency accompanying the update of the quantization matrix.

Solution to Problem

[0009] According to a first aspect of the present invention, there is provided an image processing device comprising: a decoding section configured to decode an encoded stream to generate 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 quantized data generated by the decoding section using the quantization matrix set by the setting section.

[0009a] According to a second aspect of the present invention, there is provided an image processing method comprising: 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 matrix.

[0009b]

According to an embodiment of the present disclosure, there is provided an image processing device including an acquiring section configured to acquire quantization matrix parameters from an encoded stream in which the quantization matrix parameters defining a quantization matrix are set within a parameter set which is different from a sequence parameter set and a picture parameter set, a setting section configured to set, based on the quantization matrix parameters acquired by the acquiring section, a quantization matrix which is used when inversely quantizing data decoded from the encoded stream, and an inverse quantization section configured to inversely quantize the data decoded from the encoded stream using the quantization matrix set by the setting section.