ENCODER, DECODER, ENCODING METHOD, AND DECODING METHOD

ABSTRACT

An encoder (100) includes: circuitry (160); and memory (162) coupled to the circuitry (160). In operation, the circuitry (160): derives a prediction error of the image by subtracting, from the image, a prediction image generated using intra prediction or inter prediction; performs primary transform on the prediction error, and performs secondary transform on a result of the primary transform; performs quantization on a result of the secondary transform; and encodes a result of the quantization as data of the image. In the performing of the secondary transform, when a matrix weighted intra prediction included in the intra prediction and having prediction modes is used, the circuitry (160) uses, as a transform set for the secondary transform, a common transform set shared among the prediction modes. The matrix weighted intra prediction generates the prediction image by performing matrix calculation on a pixel sequence obtained from pixel values of surrounding pixels of a current block, and the transform set for the secondary transform is applied to primary transform coefficients obtained from the result of the primary transform.

Figure 51