

ENCODING METHOD AND APPARATUS, DECODING METHOD AND APPARATUS, DEVICE, STORAGE MEDIUM, AND COMPUTER PROGRAM PRODUCT

ABSTRACT

5 This application discloses an encoding method and apparatus, a decoding method and
apparatus, a device, a storage medium, and a computer program product, and belongs to the field
of encoding and decoding technologies. When probability estimation is performed in encoding and
decoding processes, probability distribution of an unquantized image feature is estimated based on
a hyperprior feature of the unquantized image feature via a first probability distribution estimation
10 network, and then probability distribution of a quantized image feature is obtained through
quantization. Alternatively, probability distribution of a quantized image feature is directly
estimated based on a hyperprior feature of an unquantized image feature via a second probability
distribution estimation network (a network obtained by performing simple processing on a network
parameter of a first probability distribution estimation network). Even in a multi-bit-rate scenario,
15 a numerical range of the unquantized image feature is not affected by a quantization step and is
stable. Therefore, training the first probability distribution estimation network by using the
unquantized image feature is less difficult and stable, and a network with good performance can
be trained. This helps improve encoding and decoding performance.

Fig. 4