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

ABSTRACT

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 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, a numerical range of the unquantized image feature is not affected by a quantization step and is stable. Therefore, training on the first probability distribution estimation network based on the unquantized image feature is less difficult and stable, and a network with good performance can be obtained through training. This helps improve encoding and decoding performance.

Fig. 4