

CLAIMS

1. A picture coding method, applied to an encoder, the method comprising:

before coding processing is performed on a first coding block according to a matrix-based intra prediction, MIP, mode, setting initial right shift parameters corresponding to different sizes of coding blocks and different MIP mode numbers as a uniform offset parameter, wherein the offset parameter indicates a number of right shifting bits of a predicted value, the offset parameter being set to be 6 for all of the sizes and MIP mode numbers; and

when coding processing is performed on the first coding block according to the MIP mode to obtain the predicted value, applying the offset parameter to the predicted value to right-shift the predicted value by 6 bits.

2. The method of claim 1, wherein setting the initial right shift parameters corresponding to the different sizes of coding blocks and the different MIP mode numbers as the uniform offset parameter comprises:

when an initial right shift parameter is different from the offset parameter, modifying the initial right shift parameter to the offset parameter, to enable the numbers of right shifting bits of all predicted values corresponding to all sizes and all MIP mode numbers to be the same.

3. The method of claim 1, wherein after setting the initial right shift parameters corresponding to the different sizes of coding blocks and the different MIP mode numbers as the uniform offset parameter, the method further comprises:

modifying an initial weight matrix and an initial bias matrix according to a predefined calculation rule to obtain a modified weight matrix and a modified bias matrix, the initial weight matrix and the initial bias matrix corresponding to an initial right shift parameter subjected to unification modification; and

performing the coding processing according to the modified weight matrix and the modified bias matrix.

4. The method of claim 3, wherein modifying the initial weight matrix and the initial bias matrix according to the predefined calculation rule to obtain the modified weight matrix and the modified bias matrix comprises:

modifying all element values in the initial weight matrix by the same order of magnitude according to a rounding-down calculation rule to obtain the modified weight matrix; and

modifying all elements in the initial bias matrix by the same order of magnitude according to the rounding-down calculation rule to obtain the modified bias matrix.

5. The method of claim 3, wherein modifying the initial weight matrix and the initial bias matrix according to the predefined calculation rule to obtain the modified weight matrix and the modified bias matrix comprises:

modifying all the element values in the initial weight matrix by the same order of magnitude according to a rounding-up calculation rule to obtain the modified weight matrix; and

modifying all the elements in the initial bias matrix by the same order of magnitude according to the rounding-up calculation rule to obtain the modified bias matrix.

6. The method of claim 3, wherein modifying the initial weight matrix and the initial bias matrix according to the predefined calculation rule to obtain the modified weight matrix and the modified bias matrix comprises:

modifying all the element values in the initial weight matrix by the same order of magnitude according to a rounding calculation rule to obtain the modified weight matrix; and

modifying all the elements in the initial bias matrix by the same order of magnitude according to the rounding calculation rule to obtain the modified bias matrix.

7. A picture decoding method, applied to a decoder, the method comprising:

before decoding processing is performed on a first coding block according to a matrix-based intra prediction, MIP, mode, setting initial right shift parameters corresponding to different sizes of coding blocks and different MIP mode numbers as a uniform offset parameter, wherein the offset parameter indicates a number of right shifting bits of a predicted value, the offset parameter being set to be 6 for all of the sizes and MIP mode numbers; and

when decoding processing is performed on the first coding block according to the MIP mode to obtain the predicted value, applying the offset parameter to the predicted value to right-shift the predicted value by 6 bits.

8. The method of claim 7, wherein setting the initial right shift parameters corresponding to the different sizes of coding blocks and the different MIP mode numbers as the uniform offset parameter comprises:

when an initial right shift parameter is different from the offset parameter, modifying the initial right shift parameter to the offset parameter, to enable the numbers of right shifting bits of all predicted values corresponding to all sizes and all MIP mode numbers to be the same.

9. The method of claim 8, wherein after setting the initial right shift parameters corresponding to the different sizes of coding blocks and the different MIP mode numbers as the uniform offset parameter, the method further comprises:

modifying an initial weight matrix and an initial bias matrix according to a predefined calculation rule to obtain a modified weight matrix and a modified bias matrix, the initial weight matrix and the initial bias matrix corresponding to an initial right shift parameter subjected to unification modification; and

performing the decoding processing according to the modified weight matrix and the modified bias matrix.

10. An encoder, comprising a first processor, a first memory storing an instruction executable for the first processor, a first communication interface and a first bus configured to connect the first processor, the first memory and the first communication interface, wherein the instruction is executed by the first processor to implement the method of any one of claims 1-6.

11. A decoder, comprising a second processor, a second memory storing an instruction executable for the second processor, a second communication interface and a second bus configured to connect the second processor, the second memory and the second communication interface, wherein the instruction is executed by the second processor to implement the method of any one of claims 7-9.

12. A computer-readable storage medium having stored thereon a computer program, applied to an encoder and a decoder, wherein the program is executed by a processor to implement the method of any one of claims 1-9.