【CLAIMS】

【Claim 1】

A method of processing a reconstructed picture, the method ~~removing blocking artifacts,~~ comprising:

~~determining a boundary strength for each 4-sample edge lying on 8x8 sample grid;~~

~~determining whether deblocking filtering is performed on the 4-sample edge or not if the boundary strength is not equal to zero;~~

~~selecting a deblocking filter if the deblocking filtering is performed on the 4-sample edge; and~~

~~filtering the 4-sample edge using the selected filter.~~ generating a prediction block based on prediction mode;

generating a quantization block by inverse-scanning quantization coefficient information;

generating a transform block by inverse-quantizing the quantization block using a quantization parameter;

generating a residual block by inverse-transform the transform block;

determining a boundary strength per each 4-sample edge which lies on 8x8 sample grid and is a boundary of quantization unit or a boundary of a prediction unit;

determining whether to apply deblocking filtering on the 4-sample edge or not when the boundary strength of the 4-sample edge is not zero;

selecting a deblocking filter to be applied on the 4-sample edge when it is determined to apply deblocking filter on the 4-sample edge;

filtering the 4-sample edge by using the selected deblocking filter; and

applying an edge offset when sample adaptive offset (SAO) type is edge offset,

wherein the quantization parameter is derived by using a residual quantization parameter and a quantization parameter predictor,

wherein the quantization parameter predictor is derived per quantization unit which includes at least one coding unit,

wherein, in the step of determining the boundary strength, the boundary strength is not determined for a 4-sample edge which does not lie on the 8x8 sample grid, and

wherein, in the step of filing the 4-sample edge, after 4-sample vertical edges are filtered, 4-sample horizontal edges are filtered.

【Claim 2】

The method of claim 1, wherein the boundary strength is set ~~equal~~ to zero when the 4-sample edge is neither a boundary of a transform unit nor a boundary of a prediction unit~~if the 4-sample edge is not a transform unit edge and the 4-sample edge is not a prediction unit edge~~.

【Claim 3】

The method of claim 1, wherein the boundary strength of the 4-sample edge is ~~set equal to~~ 0, 1 or 2.

【Claim 4】

The method of claim 1, wherein, by using boundary quantization parameter, it is determined whether to apply deblocking filtering on the 4-sample edge or not, and wherein, for a sample p0 and a sample q0 located on each side of the 4-sample edge, the boundary quantization parameter is set as an average of a quantization parameter of a block including the sample p0 and a quantization parameter of a block including the sample q0~~ vertical 4-sample edges are filtered first and then horizontal 4-sample edges are filtered~~.

【Claim 5】

The method of claim 4, wherein the deblocking filter is selected by using the boundary quantization parameter~~boundary strength is set equal to 2 if a prediction~~

~~unit containing the sample p0 or a prediction unit containing the sample q0 is intra-coded~~.

【Claim 6】

The method of claim ~~5~~1, wherein the quantization parameter is derived by using a residual quantization parameter and a quantization parameter predictor, and, when at least two of a left quantization parameter, an above quantization parameter and a previous quantization parameter are available, an average of two available quantization parameters selected in order of the left quantization parameter, the above quantization parameter and the previous quantization parameter is set as the quantization parameter predictor~~boundary strength is set equal to 1 or 0 if a prediction unit containing the sample p0 and a prediction unit containing the sample q0 are inter-coded~~.

【Claim 7】

The method of claim 6, wherein the average of the two available quantization parameters is rounded off.

【Claim 8】

The method of claim 6, wherein the previous quantization parameter is set as the quantization parameter predictor when both of the left quantization parameter and the above quantization parameter are unavailable.