

CLAIMS

1. A method of coding implemented by a decoding device or an encoding device, the method comprising:

- 5 obtaining a value of an angle parameter for a current block;
obtaining a value of a width of the current block and a value of a height of the current block;
calculating a sample distance value for a sample in the current block according to the value of the angle parameter and a ratio value between the value of the width and the value of height;
and
10 obtaining a prediction value for the sample in the current block according to the sample distance value.

2. The method of claim 1, wherein the calculating a sample distance value for a sample in the current block according to the value of the angle parameter and the ratio value comprises:

- 15 obtaining a first value according to the value of the angle parameter and the ratio value; and
calculating the sample distance value for the sample in the current block according to the first value.

3. The method of claim 2, wherein the calculating the sample distance value for the sample in
20 the current block according to the first value, comprises:

calculating the sample distance value for the sample in the current block according to the first value and the value of the angle parameter.

4. The method of claim 2, wherein the calculating the sample distance value for the sample in
25 the current block according to the first value, comprises:

calculating the sample distance value for the sample in the current block according to the first

value, the value of the angle parameter, a value of a distance index, the value of the width and the value of height.

5. The method of any one of claims 1 to 4, wherein the sample distance value represents the horizontal distance or the vertical distance, or a combination of the vertical and horizontal distance, of the sample to a separation line, wherein the separation line is used to divide a coding block into two subblocks.

6. The method of any one of claims 1 to 5, wherein the obtaining a prediction value for the sample in the current block according to the sample distance value comprises:
calculating two weighting factors according to the sample distance value;
obtaining the prediction value for the sample in the current block according to a first prediction value, a second prediction value and the two weighting factors.

7. The method of any one of claims 1 to 6, wherein the ratio value is obtained according to,
$$\text{whRatio} = (W \geq H) ? W/H : H/W,$$

wherein whRatio is the ratio value, W is the value of the width, H is the value of the height.

8. The method of any one of claims 1 to 7, wherein the value of angle parameter is an integer value, and a value range for the value of angle parameter is between 0 to 31, including 0 and 31.

9. The method of any one of claims 1 to 6 and 8, wherein the ratio value is obtained according to,

$$\text{whRatio} = (wIdx \geq hIdx) ? wIdx - hIdx : hIdx - wIdx,$$

where whRatio is the ratio value, W is the value of the width, H is the value of the height,

a value of wIdx is equal to $\log_2(W) - 3$, and a value of hIdx is equal to $\log_2(H) - 3$.

10. The method of any one of claims 2 to 9, wherein the sample distance value is calculated according to,

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$$\text{sample_dist} = ((2*x) - W + K)*f_1(\alpha) + ((2*y) - H + K)*f_2(\alpha) - \text{distanceIdx}*stepD*scaleStep,$$

wherein sample_dist is the sample distance value, $f_1()$ and $f_2()$ are functions, and α is the value of the angle parameter; stepD is the first value, a value of scaleStep is equal to either the value of the width W or the value of the height H; x and y are the coordinates of the sample
10 with respect to the top-left sample of the current block; and K is an integer offset value.

11. The method of any one of claims 2 to 9, wherein the sample distance value is calculated according to,

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$$\text{sample_dist} = ((2*x) - W + K)*f(\text{dispIdxN}) + ((2*y) - H + K)*f(\text{dispIdxS}) - \text{distanceIdx}*stepD*scaleStep,$$

where sample_dist is the sample distance value, $f()$ is a function, dispIdxN or dispIdxS are index values, stepD is the first value, a value of scaleStep is equal to either the value of the width W or the value of the height H, x and y are the coordinates of the sample with respect to the top-left sample of the current block, K is an integer offset value.

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12. The method of any one of claims 1 to 11, wherein the ratio value between the value of the width and the value of height is greater than 0, when the value of height is greater than the value of the width.

25 13. A decoder (30) or an encoder comprising processing circuitry for carrying out the method according to any one of claims 1 to 12.

14. A computer program product comprising a program code for performing the method according to any one of claims 1 to 12.

5 15. A decoder or an encoder, comprising:

one or more processors; and

a non-transitory computer-readable storage medium coupled to the processors and storing programming for execution by the processors, wherein the programming, when executed by the processors, configures the decoder to carry out the method according to any one of claims

10 1 to 12.

16. A computer-readable medium comprising a bitstream encoded/decoded by the method of any one of claims 1 to 12.