CLAIMS

1. A picture encoding device that divides a picture into blocks and performs encoding for each of the divided blocks, the picture encoding device comprising:

a primary signal block divider structured to divide a primary signal of the picture into rectangles having a predetermined size, and generate a primary signal block;

a secondary signal block divider structured to divide a secondary signal of the picture into rectangles having a predetermined size, and generate a secondary signal block;

a primary signal predictor structured to predict a primary signal; and

a secondary signal predictor structured to predict a secondary signal,

wherein the primary signal block and the secondary signal block are divided individually with each other;

wherein the primary signal is a luminance signal and the secondary signal is a color difference signal; and

wherein the secondary signal predictor can perform luminance color difference intra prediction of predicting a secondary signal from an encoded primary signal, and the luminance color difference intra prediction is restricted if a size of the primary signal block is greater than or equal to a predetermined size.

2. A picture encoding method that divides a picture into blocks and performs encoding for each of the divided blocks, the picture encoding method comprising:

a primary signal block division step of dividing a primary signal of the picture into rectangles having a predetermined size, and generating a primary signal block;

a secondary signal block division step of dividing a secondary signal of the picture into rectangles having a predetermined size, and generating a secondary signal block;

a primary signal prediction step of predicting a primary signal; and

a secondary signal prediction step of predicting a secondary signal,

wherein the primary signal block and the secondary signal block are divided individually with each other;

wherein the primary signal is a luminance signal and the secondary signal is a color difference signal; and

wherein the secondary signal prediction step can perform luminance color difference intra prediction of predicting a secondary signal from an encoded primary signal, and the luminance color difference intra prediction is restricted if a size of the primary signal block is greater than or equal to a predetermined size.

3. A picture encoding program that divides a picture into blocks and performs encoding for each of the divided

blocks, the picture encoding program causing a computer to execute:

a primary signal block division step of dividing a primary signal of the picture into rectangles having a predetermined size, and generating a primary signal block;

a secondary signal block division step of dividing a secondary signal of the picture into rectangles having a predetermined size, and generating a secondary signal block;

a primary signal prediction step of predicting a primary signal; and

a secondary signal prediction step of predicting a secondary signal,

wherein the primary signal block and the secondary signal block are divided individually with each other;

wherein the primary signal is a luminance signal and the secondary signal is a color difference signal; and

wherein the secondary signal prediction step can perform luminance color difference intra prediction of predicting a secondary signal from an encoded primary signal, and the luminance color difference intra prediction is restricted if a size of the primary signal block is greater than or equal to a predetermined size.

4. A picture decoding device that performs decoding for each of blocks into which a picture is divided, the picture decoding device comprising:

a primary signal block divider structured to divide a primary signal of the picture into rectangles having a predetermined size, and generate a primary signal block;

a secondary signal block divider structured to divide a secondary signal of the picture into rectangles having a predetermined size, and generate a secondary signal block;

a primary signal predictor structured to predict a primary signal; and

a secondary signal predictor structured to predict a secondary signal,

wherein the primary signal block and the secondary signal block are divided individually with each other;

wherein the primary signal is a luminance signal and the secondary signal is a color difference signal; and

wherein the secondary signal predictor can perform luminance color difference intra prediction of predicting a secondary signal from a decoded primary signal, and the luminance color difference intra prediction is restricted if a size of the primary signal block is greater than or equal to a predetermined size.

5. A picture decoding method that performs decoding for each of blocks into which a picture is divided, the picture decoding method comprising:

a primary signal block division step of dividing a primary signal of the picture into rectangles having a

predetermined size, and generating a primary signal block;

a secondary signal block division step of dividing a secondary signal of the picture into rectangles having a predetermined size, and generating a secondary signal block;

a primary signal prediction step of predicting a primary signal; and

a secondary signal prediction step of predicting a secondary signal,

wherein the primary signal block and the secondary signal block are divided individually with each other;

wherein the primary signal is a luminance signal and the secondary signal is a color difference signal; and

wherein the secondary signal prediction step can perform luminance color difference intra prediction of predicting a secondary signal from a decoded primary signal, and the luminance color difference intra prediction is restricted if a size of the primary signal block is greater than or equal to a predetermined size.

6. A picture decoding program that performs decoding for each of blocks into which a picture is divided, the picture decoding program causing a computer to execute:

a primary signal block division step of dividing a primary signal of the picture into rectangles having a predetermined size, and generating a primary signal block;

a secondary signal block division step of dividing a

secondary signal of the picture into rectangles having a predetermined size, and generating a secondary signal block;

a primary signal prediction step of predicting a primary signal; and

a secondary signal prediction step of predicting a secondary signal,

wherein the primary signal block and the secondary signal block are divided individually with each other;

wherein the primary signal is a luminance signal and the secondary signal is a color difference signal; and

wherein the secondary signal prediction step can perform luminance color difference intra prediction of predicting a secondary signal from a decoded primary signal, and the luminance color difference intra prediction is restricted if a size of the primary signal block is greater than or equal to a predetermined size.