

Claims

1. A method for an encoder, the method comprising:
 - compressing video image comprising a luminance channel (Y), a first chroma channel (V) and a second chroma channel (U);
 - characterized by
 - using at least a luminance quantization parameter value, and a first image-region-dependent chroma quantization parameter bias value;
 - wherein the first chroma quantization parameter value is determined by subtracting the first image-region-dependent chroma quantization parameter bias value from the luminance quantization parameter value;
 - compressing an image region of the video image using the luminance quantization parameter value and the first chroma quantization parameter value,
 - signaling the compressed image region and the first image-region-dependent chroma quantization parameter bias value to a decoder;
 - wherein the first chroma quantization parameter value is less than or equal to a predetermined maximum value,
 - wherein the first chroma quantization parameter value is ~~no less~~ greater than one.
2. The method of claim 1, further comprising:
 - using a second image-region-dependent chroma quantization parameter bias value;
 - wherein the second chroma quantization parameter value is determined by subtracting the second image-region-dependent chroma quantization parameter bias value from the luminance quantization parameter value;
 - compressing the image region of the video image using at least the second chroma quantization parameter value,
 - signaling the second image-region-dependent chroma quantization parameter bias value to a decoder;
 - wherein the second chroma quantization parameter value is determined for the second chroma channel (U), and

wherein the first image-region-dependent chroma quantization parameter bias value used to determine the first chroma quantization parameter value for the first chroma channel differs from the second image-region-dependent chroma quantization parameter bias value used to determine the second chroma quantization parameter value for the second chroma channel (U).

3. The method of claim 2, further comprising setting the first chroma quantization parameter ~~chroma~~-value to one if adding the first image-region-dependent chroma quantization parameter bias value to the luminance quantization parameter value is lower than one.

4. The method of claim 2, further comprising setting the first chroma quantization parameter ~~chroma~~-value to the predetermined maximum value if adding the first image-region-dependent chroma quantization parameter bias value to the luminance quantization parameter value is larger than the predetermined maximum value.

5. A method for a decoder, the method comprising:
receiving a compressed video image comprising a luminance channel (Y), a first chroma channel (V) and a second chroma channel (U);

accessing, at the decoder, at least a luminance quantization parameter value;
characterized by

receiving a first image-region-dependent chroma quantization parameter bias value;

utilizing, with the decoder, the luminance quantization parameter value and the first image-region-dependent chroma quantization parameter bias value to determine a first chroma quantization parameter value by adding the first image-region-dependent chroma quantization parameter bias value to the luminance quantization parameter value; and

decompressing an image region of the video image using the luminance quantization parameter value and the first chroma quantization parameter value,

wherein the first chroma quantization parameter value is less than or equal to a predetermined maximum value,

wherein the first chroma quantization parameter value is no less~~greater~~ than one, and

wherein the first chroma quantization parameter value is determined for the first chroma channel (V).

6. The method of claim 5, further comprising:

receiving, at the decoder, a second image-region-dependent chroma quantization parameter bias value;

utilizing, with the decoder, the luminance quantization parameter value and the second image-region-dependent chroma quantization parameter bias value to determine a second chroma quantization parameter value by adding the second image-region-dependent chroma quantization parameter bias value to the luminance quantization parameter value; and

decompressing the image region of the video image using at least the second chroma quantization parameter value,

wherein the second chroma quantization parameter value is determined for the second chroma channel (U), and

wherein the first image-region-dependent chroma quantization parameter bias value used to determine the first chroma quantization parameter value for the first chroma channel differs from the second image-region-dependent chroma quantization parameter bias value used to determine the second chroma quantization parameter value for the second chroma channel (U).

7. The method of claim 6, further comprising setting the first chroma quantization parameter ~~chroma~~-value to one if adding the first image-region-dependent chroma quantization parameter bias value to the luminance quantization parameter value is lower than one.

8. The method of claim 6, further comprising setting the first chroma quantization parameter ~~chroma~~-value to the predetermined maximum value if adding the first image-region-dependent chroma quantization parameter bias value to the luminance quantization parameter value is larger than the predetermined maximum value.